DAACS Cataloging Manual: Beads

DAACS Cataloging Manuals document how artifacts, contexts, features, objects and images are cataloged into the DAACS database. They provide information not only about artifact identification but also about how each database field is used and how data should be entered into that field.

The DAACS database was developed by Jillian Galle and Fraser Neiman, in collaboration with members of the DAACS Steering Committee. Jillian Galle and DAACS Staff, Leslie Cooper, Lynsey Bates, Jesse Sawyer, and Beatrix Arendt, led the development of cataloging protocols. In addition to DAACS staff and steering committee members, Monticello current and former Archaeology Department staff, Fraser Neiman, Jennifer Aultman, Sara Bon-Harper, Derek Wheeler, Donald Gaylord, Karen Smith, and Nick Bon-Harper also contributed to the development of cataloging protocols. Jennifer Aultman and Kate Grillo produced the initial versions of these DAACS manuals in 2003. They have been substantially revised by Cooper, Galle, and Bates in the intervening years.

INTRODUCTION

Many aspects of a bead's manufacture, decoration, etc. are apparent only under magnification. Therefore, DAACS analysts examine every bead with a microscope in order to accurately record manufacturing technique and decoration details.

Much of the information in this document is summarized from the following two publications. They should be consulted for further information:

Karklins, Karlis.
1994 "A Classification System for Drawn Glass Beads." Paper presented at Society for Historical Archaeology Conference on Historical and Underwater Archaeology, Vancouver, B.C. Revised Dec. 1998.

Karklins, Karlis.
1985 "Glass Beads: Guide to the Description and Classification of Glass Beads." Parks Canada.

1. MAIN BEAD TABLE

1.01 ARTIFACT COUNT
Do **not** batch beads or bead fragments.

1.02 COMPLETENESS
Choose either "Complete" or "Incomplete." The default is "Incomplete."

1.03 MATERIAL
The default is "Glass." Other options listed are:
> **"Bone"**
> **"Clay"**
> **"Copper/Copper Alloy"**
> **"Gold"**
> **"Leather"**
> **"Plastic"**
> **"Porcelain"**
> **"Shell"**
> **"Silver"**
> **"Stone"**

1.04 MANUFACTURING TECHNIQUE
Choose from the following list of manufacturing techniques:

> **"Blown"**: Blown beads were made in one of three ways:

1. Blowing a bubble of glass with slight hollow projections at either end. These projections were broken off when the bubble cooled, creating the bead perforation, and the jagged edges were usually fire-polished.
2. Essentially the same way as above, except that the bubble was blown into a two-piece mold in order to create a design or special shape.
3. A series of bubbles was blown into a heated glass tube, which was then broken into individual beads. The edges of the beads were often then fire-polished.

"Cut/Carved": Use Cut/Carved for bone, shell, or stone beads.

"Drawn": Drawn beads are also known as tube, cane, and hollow-cane beads. Drawn beads were made by drawing out a long tube from a hollow gather of molten glass. When cooled, the tube of glass was broken into individual beads. The broken ends were then often heat rounded or tumbled. Several decorative techniques were used for drawn beads. For example, beads were often made out of several differently colored layers of glass, and rods or lumps of colored glass were often used to create stripes. Spiraled beads were created by twisting the long tube of glass during the drawing process. Various shapes were created by using molds or grinding facets into the surface of beads.

"Mold Pressed": Mold-pressed beads were made in one of two ways:
1. A glass rod was heated and then pinched in a tong-like two-piece mold. Any excess glass was forced out at the seam, while a pin pierced the glass to create the perforation.
2. Two halves of melted glass were pressed together and fused in a two-piece mold. Mold seams were often ground smooth, although the "orange peel" surface is often seen on these beads.

   Note: This category does not include beads that were made by blowing glass into molds. These should be cataloged as Blown beads.

"Molded, Prosser": Prosser-molded beads are similar in manufacture to Prosser-molded ceramic buttons. Two types have been recorded. As Karklins describes: "One is spherical with a broad, raised band about the equator; the other is in the form of a short cylinder. On both, one end is rounded and smooth, while the other is flat and rough or pebbled. The perforation tapers toward the rounded end" (1985:104). Material is Porcelain. Date Range: post 1840

"Wound": Wound beads were made by winding a melted rod or strand of glass around a metal mandrel. After cooling, the beads were stripped from the

mandrel. Wound beads were often decorated with inlays or appliqués, or pressed to impart a design or uniform shape. The surface of a wound bead usually exhibits swirl marks around the bead's axis.

1.05 BEAD STRUCTURE

There are two options for Bead Structure in DAACS:

"Compound": Two or more layers of glass

"Simple": A single layer of glass

Note: Some bead classification systems list "complex" and "composite" as Bead Structure types. These are described as simple or compound beads with decoration. DAACS, however, uses only compound and simple, and describes decoration in the Decoration table.

1.06 BEAD FORM

Bead form is determined from the bead's cross-section and whether or not the bead was twisted during the drawing process. DAACS uses these terms to describe not only drawn beads, but other types as well (images taken from Karklins, 1985).

"Straight Curvilinear": Beads with a round or oblate cross-section and straight bodies.

IIIb   IIa
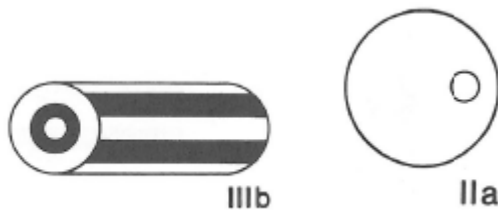
"Straight Polyhedral": Beads with a polyhedral cross-section and straight bodies.

IIIc   If

"Twisted Curvilinear": Beads with a round or oblate cross-section and twisted bodies.

IIIb'

"Twisted Polyhedral": Beads with a polyhedral cross-section and twisted bodies.

IIIc'

Note: Almost all wound beads will be "Straight Curvilinear." Occasionally, a round bead will have facets ground into its surface – in this case, the Bead Shape should be "Round" and the Bead Form should be "Straight Polyhedral."
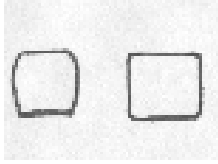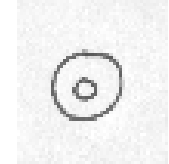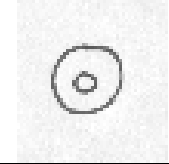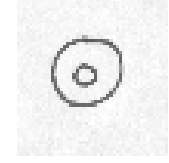
Some bead classification systems include "Ribbed or Ridged Curvilinear" and "Ribbed or Ridged Polyhedral" as Bead Forms. DAACS only uses the above-described "Straight" or "Twisted" forms, record any ribbing or ridging in the Decoration table.
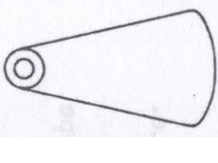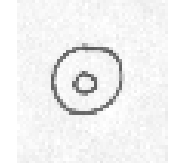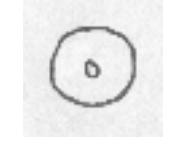
1.07 BEAD SHAPE
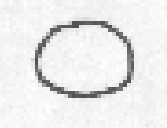
This field records the two-dimensional shape of the bead. If the bead is faceted this field is simply recorded as "faceted." Choose from the following list of bead shapes:

"Barrel"	**"Disc"**	**"Oval"**	**"Triangular"**
"Biconical"	**"Faceted"**	**"Spherical"**	**"Tubular"**
"Collared Sphere"	**"Not Recorded"**	**"Square"**	**"Unidentifiable"**
"Conical"	**"Cylindrical"**	**"Sub-Spherical"**	**"Waisted"**

We discovered that catalogers had difficulty consistently and uniformly identifying the differences between disc-, sub-spherical-, and spherical-shaped beads. In order to guarantee accurate identification of these bead shapes, we developed a bead length-to-width ratio measure to determine these bead shapes. See entries for these bead shapes below:

Basic Bead Shape	Description	Other Information	Basic Shape Length View	Basic Shape Diameter View
"Barrel"	Diameter of the bead is most often wider than its length. The sides of the bead are relatively uniform in diameter although they may bulge slightly. The ends of the bead are flattened (most often cut/sawn/ground flat).	Barrel shape beads are primarily of drawn manufacture although wound barrel beads were produced. Wound barrel-shape beads are rare.		
"Biconical"	Biconical beads are roughly diamond shaped in length profile.			
"Collared Spheriod"	A spheroid bead with short raised collars at both perforations. The bead looks like it has a "turtleneck" at both perforations.	Primarily of drawn manufacture.		
"Conical"	A conical bead will taper with one end (at the perforation) having a larger diameter than the other.			
"Disc"	Disc beads have a diameter that is great that its length. **A disc-shaped bead has a length-to-width ratio of 0.45 or less.**	Using calipers, measure the length and the width of the bead. Calculate the length-to-width ratio (length/width). The bead is disc-shaped if the length-to-width measurement if less than or equal to 0.45.		
"Faceted"	A faceted bead has ground, molded, or paddled facets.	May be of drawn, wound, or molded manufacture.		
Basic Bead Shape	**Description**	**Other Information**	**Basic Shape Length View**	**Basic Shape Diameter View**

Basic Bead Shape	Description	Other Information	Basic Shape Length View	Basic Shape Diameter View
"Oval"	An oval-shaped bead has a length greater than its width. However, the ends of the bead are narrower than the center diameter of the bead, giving the length view an oval appearance.	This is unlike a tubular bead whose ends are basically the same diameter as the center of the bead.		
"Spherical"	Spherical beads are almost entirely circular. **A spherical-shaped bead has a length-to-width ratio 0.95 or greater.**	Using calipers, measure the length and the width of the bead. Calculate the length-to-width ratio (length/width). The bead is spherical if the length-to-width measurement if greater than or equal to 0.95.		
"Square"	Square beads are square in their length and width views.			
"Sub-spherical"	Sub-spherical beads have a diameter that is only slightly greater that its length. A sub-spherical bead has a length-to-width ratio between 0.46 and 0.94.	Using calipers, measure the length and the width of the bead. Calculate the length-to-width ratio (length/width). The bead is sub-spherical if the length-to-width measurement is less than 0.95 but greater than 0.45 (see Disc and Spherical above).		

Basic Bead Shape	Description	Other Information	Basic Shape Length View	Basic Shape Diameter View

"Triangular"	The bead is triangular in its length view.			
"Tubular"	A tubular bead has a length that is greater than its width. The ends of this bead are often cut/ sawn/ground flat. The ends of the bead are also usually the same diameter as the center of the bead. It can occasionally be difficult to tell the difference between a barrel-shaped bead and a tubular bead but the length-greater-than-width rule is a good guide.	Primarily of drawn manufacture.		
"Unidentifiable"	Shape of the bead is unidentifiable due to burning, post-depositional processes, or any other condition that makes the basic bead shape unidentifiable.			
"Waisted"	Tube-shaped bead (length is greater than its diameter) that has been pinched in the middle. This makes the bead look like it has a waist. Its ends are also often rounded or heat-treated.	Primarily of drawn manufacture.		

1.08 COMPLEX SHAPE

If the "bead shape" is recorded as "faceted," this field allows for a further elaboration.
Choose from the following list of complex bead shapes:

"Cornerless Heptagonal"	**''Cornerless Hexagonal"**
"Raspberry"	**"Cornerless Octagonal"**
"Scarab"	**"Square"**
"Heptagonal"	**"Triangular"**
"Hexagonal"	**"Tear Drop, flat"**
"Not Applicable"	**"Tear Drop, inverted"**

"Octagonal"
"Pentagonal"   **"Unidentifiable"**

Complex Bead Shape	Description	Complex Shape Length View	Complex Shape Diameter View
"Cornerless Heptagonal"	A facetted bead that has seven angles and no corners in diameter/cross-section profile. The majority of cornerless heptagonal beads have a manufacturing technique of "Drawn."		
"Cornerless Hexagonal"	A facetted bead that has six angles and no corners in diameter/cross-section profile. The majority of cornerless hexagonal beads have a manufacturing technique of "Drawn."	Similar to above	Similar to above
"Cornerless Octagonal"	A facetted bead that has eight angles and no corners in diameter/cross-section profile. The majority of cornerless octagonal beads have a manufacturing technique of "Drawn", however we have encountered a number of wound cornerless octagonal beads as well.	Similar to above	Similar to above
"Heptagonal"	A seven- sided bead, with corners. The majority of heptagonal beads have a manufacturing technique of "Drawn".	Similar to above	Similar to above
"Hexagonal"	A six- sided bead, with corners. The majority of hexagonal beads have a manufacturing technique of "Drawn".	Similar to above	Similar to above
"Not Applicable"	Many beads do not have a complex shape; simply enter "Not Applicable".		
Complex Bead	**Description**	**Complex Shape**	**Complex Shape Diameter**

Shape		Length View	View
"Octagonal"	An eight- sided bead, with corners. Octagonal beads can have a manufacturing technique of either "Drawn or "Wound".	Similar to above	Similar to above
"Pentagonal"	A five- sided bead, with corners. Pentagonal beads can have a manufacturing technique of either "Drawn or "Wound" and, in the case of shell beads, "Cut/Carved".		
"Raspberry"	Raspberry beads are most often wound beads with applied, rounded prunts.		
"Scarab"	Faience or glass beads in the shape of a scarab beetle.		
"Square"	Square beads of most often mold pressed or prosser molded.		
"Teardrop, flat"	Flat teardrop shaped beads are most often of mold pressed manufacture.		
"Teardrop, inverted"	Inverted teardrop shaped beads are most often of Drawn manufacture.		

"Triangular"	Can be either flat triangular or pyramidal in shape.		
"Unidentifiable"	Use "unidentifiable" if you believe the bead has a complex shape but that specific shape is unidentifiable.		

1.09 KIDD AND KIDD TYPE

DAACS uses the bead classification developed by Kidd and Kidd to describe bead manufacture. Refer to this schema for recording this field. A scanned digital version of Karlins 1985 is available under the Tools menu (Tools > Readings > Syllabus and Readings > Bead Module).

1.10 BEAD COLOR

Match the bead the nearest color range using the Detailed Color Groups section of the DAACS Color Book. It is advised to view the bead in close proximity to a light source when identifying the color since patination and wear can often obscure bead color. If the bead is eroded, dull, or lightly patinated, wet the surface of the bead before trying to determine color.

1.11 END TREATMENT

Choose from the following list of options:

"Cut/Sawn/Ground Flat": Cutting/sawing/grinding will produce flat ends and sharp corners, unless the corners have been heat treated and slightly rounded. Saw marks and grinding marks are both sometimes visible. Grinding tends to produce finer marks on the ends, while saw marks can look like file marks across the ends.

"Rounded": Rounded edge, usually the result of heat treatment or fire polishing.

"Unfinished": Rough ends.

1.12 HEAT TREATED

Beads were often heat treated to smooth their edges. Remember to look at each bead under the microscope – if the edges of a bead look at all smoothed, enter "Yes" for Heat Treated. For many of these beads, the End Treatment will be "Rounded" and Heat Treated will be "Yes." Occasionally, one sees beads that have clearly been heat treated in some drastic fashion – ex. when beads have melted together or have melted into irregular shapes. If you can identify a particular method of heat-treating, such as heating

in a pan with charcoal and sand or heating using the "a speo" method, enter this information into the Notes field.

1.13 DIAPHANEITY

Diaphaneity is the amount of light that can pass through the body of the bead. Only measure diaphaneity for glass beads.

"Opaque":   Light does not pass through the body of the bead. Some light may pass through along the edges of the bead, but only to a small extent.

"Translucent":   Light easily passes through the body of the bead, but the glass is not clear.

"Transparent":   Very clear. Objects can be seen through the bead.

"Not Applicable":   Use for non-glass beads.

1.14 MENDED?

Enter "Yes" if the bead has been repaired. The default is "No." Disregard the "N/A" option.

1.15 DECORATION?

Enter "Yes" if the bead has casing or any type of decoration (including cut facets) that will be entered in the Decoration tab. The default is "No." Disregard the "N/A" option.

2. MEASUREMENTS

Length is defined as the distance from perforation to perforation.
Width is the measurement of the other axis on the bead. In order to take the Height measurement, rotate the bead ninety degrees from where Width was taken in order to capture variation since the Width and Height measurements are often on the same axis.
Measure the size of each perforation using spreading-jaw calipers.
Always record Weight.

2.1 NUMBER OF FACETS

Count the number of facets on the bead. If the bead is not facetted, enter "0" in this field.

3. CONDITION

3.1 CONDITION SPECIFICS

Enter either "Yes" or "No" as appropriate for each of the following fields:

Burned?
Patination?
Weathered/Eroded?

The default is "No." Disregard the "N/A" and "N/R" options.

3.2 POST-MANUFACTURING MODIFICATION

Enter "Yes" or "No." The default is "No." Disregard the "N/A" option.

Post-Manufacturing Modification is a field seen in all of the different artifact categories. Use this field when an artifact appears to have been physically modified in order to change its original function. Karklins describes how a bead can be ground to remove its exterior layer or to modify its form (1998:4). Note: Burning should not be cataloged as Post-Manufacturing Modification.

Catalog the object as it would be cataloged in its original form. Enter "Yes" under Post-Manufacturing Modification, and describe in the Notes field how the object has been modified.

3.3 CONSERVATION

The default is "No Conservation." If a bead has been conserved, enter "Yes" into this field and describe the conservation in the Notes field.

4. CASING INFORMATION

DAACS has defined "casing" differently than Karklins does in his Classification for Glass Beads. Karklins describes casing as follows: "Beads made by the hand-drawn method were often cased in clear glass to increase their brilliance. This was frequently done for translucent graying white and opaque Indian-red beads but apparently never for transparent blue, opaque black or opaque white beads. The presence of this layer, often microscopic, should be noted but does not qualify an otherwise monochrome bead for inclusion in one of the four multilayered categories described above" (1998:8).

DAACS uses casing to describe any of the layers one might see on a bead. **Therefore, all compound beads should be described in the Casing Information Table.** The type of bead cased in the manner Karklins describes above should be listed as a simple bead, with the clear casing described in the Casing Information Table.
For example, a bead with a green interior layer and a red exterior layer should be cataloged as follows:

Bead Casing Layer	Bead Casing Color
1 (interior)	Green, muted medium
2	Red, intense medium

Identify the color using the **Detailed Color Groups** section of the DAACS Color Book.

5. DECORATION

If multiple decoration types or colors are present on a single bead, enter a new line for each decoration.

5.1 DECORATION

Choose one of the following. If bead has more than one type, enter an additional line:

"Combed Designs"	**"Monochrome Stripes"**
"Crumbs"	**"Multi-colored Stripes"**
"Eyes"	**"Plated"**
"Facets, ground/cut"	**"Rings"**
"Facets, paddle pressed"	**"Swirls"**
"Floral Designs"	**"Trailed Decoration"**
"Insets"	**"Unidentifiable"**
"Interwoven Lines"	**"Wavy Lines"**

5.2 COLOR

Identify the color of the decoration using the **Detailed Color Groups** section of the DAACS Color Book. It is advised to view the bead in close proximity to a light source when identifying the color since patination and wear can often obscure bead color otherwise. If there is more than one decoration color on a bead, enter a different record for each color.

5.3 DESCRIPTION

Write a brief description of the decoration. Include, for example, the number of stripes on a bead or where the facets on a bead have been ground.

6. IMAGE

Image each notable or unusual bead. If possible, take both a front/back and a side view picture. Please see manual on Image capture and entry into the database.

7. OBJECT

Please see manual on Object entry into the database.