DAACS Cataloging Manual: General Artifacts

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 led the development of cataloging protocols, with significant help from DAACS Staff, Elizabeth Bollwerk, Leslie Cooper, Lynsey Bates, Jesse Sawyer, Beatrix Arendt, and Sarah Platt. 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, Elizabeth Sawyer, 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, Bollwerk, and Bates in the intervening years.

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INTRODUCTION

The **General Artifacts** table in DAACS provides a catch-all cataloging schema for those artifacts not included in the Bead, Buckles, Button, Ceramic, Faunal, Glass Vessel, Lithics, Tobacco Pipe, and Utensil Tables.

Note that some material types overlap between the **General Artifacts** table and the other main artifact tables. For instance, window glass should always be entered into the General Artifacts Table. Even though there is a **Glass Vessel** table, which is also for the entry of glass artifacts it is intended only for vessels such as tablewares and bottles. Likewise, ceramic fragments of floor and roofing tiles, porcelain dolls, and ceramic marbles and doorknobs should be entered into the **General Artifacts** table, while ceramic vessels such as plates or mugs should be entered into the **Ceramics** table. Finally, the **Lithics** table is designed to collect information about knapped and ground stone objects and the debitage that results from their production. Architectural elements made of stone should all be cataloged as **General Artifacts**. This includes objects like slate roofing tiles, marble elements, sandstone or limestone blocks, and architectural debitage. It also includes stone fragments that lack obvious evidence of human modification (entered using size classifications -- granule, pebble, cobble, boulder) but are cataloged as quarried because the type of stone does not naturally occur in the area of the site. All stone entered using size classifications (whether cataloged as quarried or natural) should also be entered into the General Artifacts table. Entering both modified and natural stone into the General Artifacts table allows all potential architectural materials to be captured in one place. Finally, writing slate and slate pencils are cataloged in the General Artifacts Module.

Another possible point of confusion is the relationship between the **General Artifacts** table and the **Faunal** table. Ecofacts such as shell and eggshell are cataloged into the General Artifacts table. Mammal, fish, and reptile bones are cataloged into the Faunal Table.

This manual is divided into three sections. It begins with a summary of the fields in the three different interfaces (Gold, Silver, and Bronze) and explains the different protocols for entering records into each interface. The second section outlines the cataloging protocols for common general artifacts. Note that each general artifact is cataloged as one of the following material categories: Ceramic, Composite, Glass, Metal, Mineral, Organic, or Stone. The cataloging protocols for this section are loosely organized by these different Category types. For example, to find the protocols for cataloging nails, one should look under the subheading for Metal Artifacts. There is also a section for Miscellaneous Artifacts that includes instructions for cataloging modern artifacts and others that do not intuitively fall under any of the aforementioned categories.

TABLE 1: FIELDS IN THE DIFFERENT GENERAL ARTIFACT INTERFACES

	Bronze	Silver	Gold
Main	Artifact Count	Artifact Count	Artifact Count
	Category	Category	Category
	Form	Form	Form
	Brick Color	Brick Color	Brick Color
	Completeness	Completeness	Completeness
	Mended?	Mended?	Mended?
		Decoration?	Decoration?
	Coin Date	Coin Date	Coin Date
	Material	Material	Material
	ManuTech	ManuTech	ManuTech
Measurements		Length	Length
		Width	Width
		Height	Height
	Weight	Weight	Weight
			Diameter
			Brick Size
Nail Information			Nail Head
			Nail End
			Nail Modification
		Nail Length	Nail Length

Decoration		Marks	Marks
		Marks Notes	Marks Notes
		DecTech	DecTech
		Applied Color	Applied Color
		Dec Notes	Dec Notes
Condition		Burned	Burned
		PMM	PMM
		No conservation	No conservation

1.0 Gold Cataloging Protocols for General Artifacts

Batching rules for General Artifacts vary by category. See batching rules for particular artifact types in **Section X**, below.

2.0 Silver Cataloging Protocols for General Artifacts

2.1 Batching rules for General Artifacts vary by category. See batching rules for particular artifact types in **Section X**, below.

2.2 The biggest difference in cataloging protocols for General Artifacts between Gold and SIlver interface is the level of detail recorded for objects like nails, straight pins, and tacks. For the Gold level interface the most specific terms: Head, Head and Partial Shank, etc. are used. For Silver and Bronze batching and data entry use "Complete or Incomplete".

bricks -- where size and color are recorded in Gold and not in Silver or Bronze.

Nails can be batched in the Silver interface by:
Completeness: Complete/Incomplete
Nail Information: Nail Length

Batching rules for bricks for silver module:

Do not separate brick by color, or size. All brick can be batched together by form (brick/daub, brick frag, brick bat etc.)

3.0 Bronze Cataloging Protocols for General Artifacts
Batching rules for General Artifacts vary by category. See batching rules for particular artifact types in Section X, below.

The biggest difference between the Bronze interface and Silver and Gold is that measurement fields -- length, width, height, and diameter are not included. In the Bronze module weight is the only measurement that can be recorded. Similarly, artifacts with or without decoration can be batched because decoration is not recorded.

1. GENERAL ARTIFACT ENTRY

Below are descriptions and cataloging rules for the various fields in the general artifacts table.

1.1 ARTIFACT COUNT

Generally refers to the number of individual objects being cataloged in an entry. Note that for some artifact types the count does not always include every single small artifact fragment in the batch. See batching rules for particular artifact types in **Section X**, below.

1.2 CATEGORY

The general material class, such as "Ceramic" or "Organic," to which the artifact belongs.

1.3 GENERAL ARTIFACT FORM

We infer a Form for each artifact that essentially describes what the object is (for example, a Nail, a Walnut Shell, or a fragment of Window Glass). Many artifacts will have Unidentified forms. Please see specific artifact sections for more detail on Form.

1.4 COMPLETENESS

For most artifacts, choose "Complete," "Incomplete," or "Unidentifiable." Nails, Spikes, and Straight Pins have different cataloging protocols for the Completeness field. See those particular sections for specific cataloging instructions.

Note: In addition, "Blade" ,"Foot", "Handle", "Spout", and "Stopper" are available as terms. Use these options if you have a fragment that corresponds to one of these completeness categories and record the larger object as the appropriate Form. For example, if you have an unidentified tool handle, record Form as "Tool, unidentified", and Completeness as "Handle."

1.5 FLOTATION SAMPLES (MICRO-ARTIFACTS)

Artifacts identified during picking should be cataloged according to the appropriate material type and form, and **should be batched**. The only measurements that need to be taken are count and weight. Only pieces larger than 4 mm should be *counted* for the batched record; however, all artifacts should be *weighed* for the batched record.

1.6 MENDED?

The default for this field is "No." If the artifact fragment is actually glued to another fragment, enter "Yes, Physically Mended." If fragments mend together, but are not physically glued enter "Yes, Mends But Not Physically" in this field. If it is important to know the Artifact ID of the fragment that mends, add it to the Notes field.

1.7 DECORATED?

Only record here whether the artifact has decoration or not. Choose "Yes" or "No" (do not use N/A or Uni). If the artifact has decoration, record the detailed information in the Decoration tab (see **Section 3**).

1.8 Coin Date

If the artifact is a coin with a legible date, enter the date in this field.

1.9 Material and Manufacturing Technique

The material and manufacturing technique fields are recorded in a separate, related data table that allows us to record multiple types of materials and manufacturing techniques for a single artifact. If, for example, a cataloger has a bone-handled jackknife, they would be able to record "Iron" and "Forged" for the blade, and "Bone" and "Carved" for the handle.

Note on "Indeterminate" and "Unidentified" Manufacturing Techniques:
Indeterminate is recorded as the manufacturing technique for the following Forms:
> Form "Charcoal" (Material = "Organic")
> Form "Window Glass" (Material = "Glass")
> Form "Cinder" (Material = "Unidentified")
> Form "Fire-Cracked Rock" (Material = As appropriate)
> Form "Shatter" (Material = As appropriate)

In general, for iron and other metal artifacts, "Indeterminate" is used when it cannot be determined if the artifact was "Wrought/Forged" or "Cast." In addition, for some stone and organic artifacts, "Indeterminate" is used when the source of the modification cannot be determined between natural and human modification; otherwise, use the term "Unidentified." See specific protocols for artifacts below (**Section 7**). Also, see section 7.2.11 for specific uses of manufacturing technique terms regarding nails.

1.10 Notes

Record any additional notes about the artifact in this box. If the protocols call for specific notes to be added for that artifact type (e.g., plate glass), enter them here.

2. General Artifact Measurements

2.1 Object Length, Width, Height, and Weight

For most artifacts, length, width, and height should be measured and recorded only if they are complete measurements, with original surfaces intact (one exception to this is in the case where Form is "Unidentified." See below.) Keep in mind that any given artifact may only have one complete measurement that can be recorded; in these cases, enter information in that/those fields only.

Nails and several other artifact forms have separate measurement protocols. See Section 7 for details regarding these protocols.

If the General Artifact Form is "Unidentified," record the artifact's length, width and height even if the measurements are incomplete.

Weight should be taken for all artifacts. See batching rules for specific artifact types, including charcoal, modern artifacts, and window glass, in Section 7.

2.2 OBJECT DIAMETER

This measurement applies only to straight pin and needle shanks, marbles, shot, and other circular or round general artifacts. It does not apply to nails, screws, bolts, or other hardware.

Measure the diameter of a pin or needle shank as close to the middle of the shank as possible. Record the widest diameter of a marble or shot, with the calipers and enter the value in the Diameter field. In this case, do not use the Height field for the diameter measurement.

3. GENERAL ARTIFACTS DECORATION

3.1 MARKS

Record any manufacturer's marks observed on the artifact, even if individual letters or numbers are not discernible.

3.2 DECORATION

Identify and record any decoration applied to the artifact.

If applied color is part of the decoration, identify each color using the **Basic Colors** section of the DAACS Color Book, and enter that information into the Applied Color field. Keep in mind that these represent ranges of color, not exact matches. In addition, the colors "Copper," "Silver/Tin," "Bronze," and "Gold" may be used to identify decoration color. When recording color, choose the chip that most closely matches the artifact as a whole. Brief descriptions of the colors found in the Basic Colors section are found below.

"Amber":	Medium golden-brown
"Amethyst":	Very light purple
"Blue":	A "mid-range" or "medium" shade of blue
"Brown":	This color is used to describe modern, machine made bottle glass. Do not confuse with amber glass, which is redder and lighter in color.
"Colorless":	Clear
"Dark Blue":	Generally a deep, cobalt blue
"Grey":	From a light gray tint to a dark, nearly black tint
"Green/ Olive Green":	Encompasses medium green and dark green
"Light Blue":	The lightest of the three shades of blue on the Basic Color Sheet

"Light Green/
Aqua":   Light greenish-blue/Seafoam or sage green
"Bright Green": Bright green glass, similar in color to Sprite™ bottle glass.
"Orange":   Brighter in color than amber
"Pink":   Pale red
 "Purple":   Note that this color is darker than Amethyst
"Red":   Encompasses medium to dark reds
"Unidentifiable": Too burned, patinated, or otherwise altered for color to
                be determined
"White":   Opaque
"Yellow":   Any range of light-to-medium yellows

Note: If the decorative technique has no applied color, enter "No Applied Color" in this field. Do not use "Not Applicable."

Be sure to add any additional observations to the Decoration Notes field.

4. GENERAL ARTIFACTS CONDITION

4.1 BURNED?
The default for this field is "No." If any part of an object is burned, enter "Yes" in this field.

4.2 POST-MANUFACTURING MODIFICATION
Use this field when an artifact appears to have been physically modified in order to change its original function. Examples include knapped bottle glass, drilled coin made into a pendant. Other examples include hand-etched window glass and repair marks.

Catalog the object as it would be cataloged in its original form. For example, if you have a drilled Spanish Real, catalog it is as "Coin, Spanish" for Form with the Manufacturing Technique as "Stamped." Enter "Yes" under Post-Manufacturing Modification and describe in the Notes that the coin has been drilled. Do not catalog the coin as "Pendant" for Form or "Drilled" for Manufacturing Technique. However, objects made from organic materials such as bone or shell should be entered as their current form, without post-manufacturing modification.

4.3 CONSERVATION?
The default for this field is "No Conservation". If an object has been conserved, enter "Yes" in this field and enter the conservation information into the Notes field.

5. IMAGE

Please see manual on Image capture and entry into the database. Add some common language about when to image.

6. OBJECT

Please see manual on Object entry into the database.

7. CATALOGING PROTOCOLS FOR COMMON GENERAL ARTIFACTS

7.1 GLASS ARTIFACTS

Glass vessels, such as bottles, tablewares, jars, etc., should be cataloged into the Glass Vessel Table, not the General Artifacts Table. Other objects made of glass (excluding beads, which are in the Bead Table) such as window glass and paste jewels are entered into the General Artifacts Table.

7.1.1 LAMP CHIMNEY

Lamp Chimney is a glass tube that surrounds the flame on an oil lamp. It is used to control air drafts. It can be identified by its cylindrical shape and by its relative thinness.

Catalog as follows:

Category:	"Glass"
Form:	"Lamp Chimney"
Material:	"Glass"
Manu Tech:	Almost always "Blown." If you have seam lines or other visible evidence of molding, record Manufacturing Technique as "Molded."

7.1.2 WINDOW GLASS AND VARIOUS TYPES OF FLAT GLASS

Flat glass is batched according to Form, except for plate glass, which should be further subdivided by color.

- **"Plate Glass"**

Plate glass is a strong, cast, and polished glass containing few impurities. It was used for mirrors and large windows. The following discussion applies to plate glass used for windows. See the next section on **Mirror Glass** for how to catalog plate glass with evidence of mirroring.

DAACS uses the following three criteria to define plate glass:

1. **Thickness**: Plate glass is always at least 2.6mm thick.
2. **Matteness**: Any sherd thicker than 2.6mm whose surface is matte in appearance (as opposed to shiny) should be cataloged as plate glass. If the surface of a thick sherd

is very shiny, the glass is probably a modern piece of plate glass. In that case, we will catalog a shiny, thick sherd as Window Glass.

3. **Color**: Once thickness and matteness have been identified, plate glass should be separated into two color categories: "Gray," and "Clear to Light Green," as identified on the **Basic Color** section of the DAACS Color Book.

Use the following protocols when cataloging plate glass:

Category:	"Glass"
Form:	"Glass, plate"
Material:	"Glass"
Manu Tech:	"Cast"

If the plate glass is gray, enter the following into the Notes field (Main tab):
"These gray sherds are equal to or thicker than 2.6mm. They are either mirror or window glass. However, they have no diagnostic mirror attributes, such as foil or silvering."

If the plate glass is clear to green in color, enter the following into the Notes field (Main tab):
"These clear-to-light green sherds are equal to or thicker than 2.6mm."

Plate glass can be batched, unless the sherds have diagnostic attributes such as finished edges or incising/writing. The only measurement that needs to be taken for any type of window or plate glass is weight.

● **"Mirror Glass"**

Mirror glass appears identical to plate glass, except that mirror glass has evidence of foil or silvering on one surface.

Catalog as follows:

Category:	"Glass"
Form:	"Mirror"
Material:	"Glass"
Manu Tech:	Usually "Cast." Modern mirror glass should be "Machine Made."

Note: There is no need to include the metal silvering as a separate Material type or Decoration.

● **"Window Glass, crown"**

"Crown glass was made by blowing a sphere of glass on a blowpipe. An iron rod, called a pontil, was attached to the sphere opposite the blowpipe. The blowpipe was then broken off the sphere and the sphere was rotated on the pontil rod while it was reheated. The hole left by the blow pipe would open due to centrifugal force, would gradually assume a bell shape, and

eventually flatten into a disk called a 'table of glass'." (Colonial Williamsburg Standard Operating Manual).

"Crown glass has a smooth surface due to the fire-polishing caused by the reheating. In cross section, the surfaces will not be parallel. The center portion of the disk will always be thicker, tapering to the edges. The center of the disk was the least salable as it contained the scar, or 'bull's eye,' left by the pontil rod. Tables of glass were relatively small in diameter and would yield a limited number of small panes" (Colonial Williamsburg Standard Operating Manual).

Catalog as follows:
        Category: "Glass"
        Form: "Window Glass, crown"
        Material: "Glass"
        Manu Tech: "Blown"

- **"Window Glass, cylinder"**

"Cylinder glass was made by blowing an elongated, closed tube of glass. The ends of the tube were cut off first and the open-ended tube was then cut lengthwise. Reheating on an iron table allowed the cylinder to relax and flattened into a rectangle of glass. Cylinder glass did not have the smooth, fire-polished surface of crown glass, but it could be cut into larger pieces, thus yielding more panes of glass than was possible from the crown glass method" (Colonial Williamsburg Standard Operating Manual).

Catalog as follows:
        Category: "Glass"
        Form: "Window Glass, cylinder"
        Material: "Glass"
        Manu Tech: "Blown"

- **"Window Glass, privacy"**

Privacy glass has been frosted, colored, or heavily molded to prevent people from seeing through it.

Catalog as follows:
        Category: "Glass"
        Form: "Window Glass, privacy"
        Material: "Glass"
        Manu Tech: "Machine Made"

- **"Window Glass, safety"**

Safety glass has wire mesh running through its interior. Sometimes the wire mesh is absent, but the glass still retains impressions from the mesh in it.
Catalog as follows:

Category:	"Glass"
Form:	"Window Glass, safety"
Material:	"Glass"
Manu Tech:	"Machine Made"

Note: There is no need to include the wire mesh as a separate material.
● **"Window Glass" (General)**

Unless there is strong evidence that a sherd is crown, cylinder, privacy, safety, or plate glass, catalog flat glass as follows:

Category:	"Glass"
Form:	"Window Glass"
Material:	"Glass"
Manu Tech:	"Indeterminate"

Batching: All window glass can be batched by type regardless of color or decomposition, unless the sherds have distinctive characteristics such as finished edges or incising/writing. If you have hand-incising or writing, catalog separately and list as Post-Manufacturing Modification. For both batched and single sherds, the only measurements that need to be taken are count and weight.

Note**:** Plate glass should not be cataloged as window glass. It is distinguished from window glass because it is greater than 2.6mm thick and has a matte finish. See the above section on "Plate Glass**"** for a more detailed discussion of this artifact class.

7.2 METAL ARTIFACTS

7.2.01 ALUMINUM FOIL
Aluminum foil should be cataloged as follows:

Category:	"Metal"
Form:	"Foil"
Completeness:	"Incomplete"
Material:	"Aluminum"
Manu Tech:	"Machine Made"

Aluminum foil can be batched. The only measurements that need to be taken are count and weight.

7.2.02 BRIDLE BITS

A bit is a type of horse furniture that is placed in the mouth of a horse to assist the rider in communicating with the animal. See Noel Hume 1969:239-241 and Figure 75; http://www.jefpat.org/diagnostic/SmallFinds/BridleBosses/BitGuide.pdf, and Berkebile 1978:414-417 for illustrations and additional discussion. The following descriptions are based on information from these sources.

Specific bit forms:
● **"Bit, curb"**

A curb bit consists of elongated cheek pieces (either straight or curved) extending above and below the mouthpiece. The cheekpieces are linked together with a lip strap, a chain below the chin, and sometimes a bar to hold the cheekpieces apart. The curb bit is a leverage bit, meaning that it multiplies the pressure applied by the rider. The curb can amplify rein pressure several times over, depending on the length of the curb bit's shank. Curb bits can have solid (a single bar), jointed (two pieces that join together), or V-shaped mouthpieces (see Noel Hume 1969:Figure 75). It also has rings or loops upon the lower arms/shank for receiving the driving reins. In the sixteenth through eighteenth centuries curb bits often had cast metal bridle bosses that were anchored to the cheekpiece to conceal its junction with the mouthpiece.

Curb bit with solid mouthpiece

Catalog as follows:
        Category: "Metal"
        Form: "Bit, curb"
        Material: Usually "Iron".
        Manu Tech: Usually "Wrought/Forged" but can be "Cast".

Record any complete measurements on measurements tab.

- **"Bit, snaffle"**

A snaffle bit consists of a pair of rod-like cheekpieces having a central loop or ring for a single rein, to which was attached a jointed bit. The cheekpieces did not have a shank (unlike a curb bit). Note - Not all bits with jointed mouthpieces are snaffle bits. Snaffle bits can have jointed, stiff, twisted or double mouth pieces. Curb bits can also have jointed mouthpieces. If you only have the mouthpiece fragment of a bit, use the more general term "Bit, harness, unid.".

Snaffle bit with jointed mouthpiece

Catalog as follows:
        Category: "Metal"
        Form: "Bit, snaffle"
        Material: Usually "Iron".
        Manu Tech: Usually "Wrought/Forged" but can be "Cast".

Record any complete measurements on measurements tab.

- **"Bit, bridoon"**

A small bit, having loose rings, and either a solid or jointed mouth and no cheekpieces. Often used as a second bit in conjunction with a curb bit. Also called bradoon.

Bridoon Bit

Catalog as follows:
>**Category**: "Metal"
>**Form**: "Bit, Bridoon"
>**Material**: Usually "Iron".
>**Manu Tech**: Usually "Wrought/Forged" but can be "Cast".

Record any complete measurements on measurements tab.

- **"Bit, harness unid."**

Note that you can only record a bit fragment as one of the more specific types outlined above when both the cheekpiece/shank and mouthpiece are present. Otherwise, use the more general term "Bit, harness". If there are attributes that suggest it is one of these more specific types, include that information in the notes.

Catalog as follows:
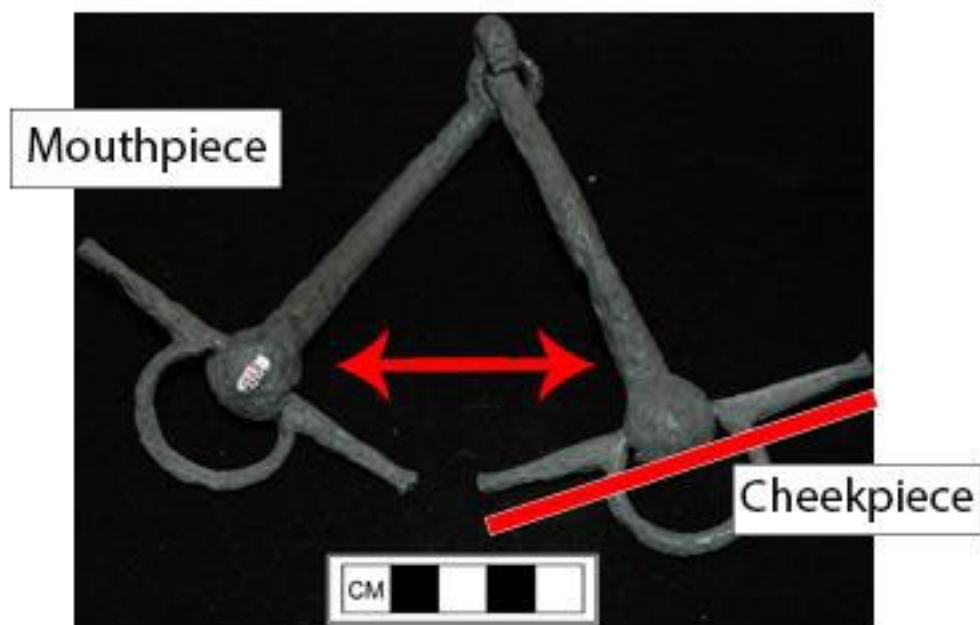>**Category**: "Metal"
>**Form**: "Bit, harness unid."
>**Material**: Usually "Iron".
>**Manu Tech**: Usually "Wrought/Forged" but can be "Cast".

Record any complete measurements on measurements tab.

7.2.03 COINS
>**Category**: "Metal"
>One of the following **Forms**:
>>"Coin, American"

> "Coin, Danish"
> "Coin, Dutch"
> "Coin, English"
> "Coin, Irish"
> "Coin, Jamaican"
> "Coin, Spanish"
> "Coin, unid"
> "Coin, Virginia"

Completeness: As Appropriate
Material: As Appropriate
Manu Tech: "Stamped"

Describe the coin as thoroughly as possible in the Notes field. Include date, denomination, any designs seen on the coin, etc. Note that in addition to Length, Width, Height, and Weight, Diameter should also be recorded in the Gold interface.

7.2.04 CORROSION/RUST

Often, one will be faced with cataloging unidentifiable lumps of rust with no discernible parts left intact. Form should be "Corrosion/Rust," with the manufacturing technique as "Indeterminate." Material should be cataloged as appropriate, e.g. "iron" or "pewter" as appropriate. The only measurement that needs to be taken is weight.

Batching: Due to the high fragmentation of metal artifacts, "Corrosion/Rust" should not be counted. A count of "0" should be entered in the count field. Although using "0" is not ideal, it provides a clear sign that the number of pieces in the batch have not been counted.

A common form of corrosion is the spalling of large sheets of rust from the surface of flat objects. This corrosion will be characterized by being relatively thin and flat, with one side appearing newly broken off and the other rusted over. If one sees corrosion breaking off of an artifact while in the process of being cataloged, batch the corrosion and the original artifact together and note what has happened.

7.2.05 ESCUTCHEON AND KEYHOLE COVERS

Escutcheons are decorative metal accents, usually copper alloy, that surround a keyhole and are often used on furniture or doors. They can be very elaborate or a simple brass frame placed around a keyhole. They can lay flat or extend above the surface. A keyhole cover is a solid metal decorative element (usually copper alloy) that swings to cover the open space of the keyhole. Some archaeologists and historians include the keyhole cover when discussing escutcheons. In DAACS, these two elements should be cataloged separately UNLESS the keyhole cover is still attached to the escutcheon, in which case it will be cataloged as an escutcheon.

7.2.06 GROMMETS

Grommets are metal or plastic rings used to reinforce eyelets, common on both clothing and shoes. They can be identified by their characteristic flattened ring shape. Most are small clothing or shoe grommets, although larger grommets are seen on tarps, tents, etc. There is sometimes an indented ridge evident along the outside of the ring, where the grommet was attached to the cloth or leather.

The majority of grommets found on historical sites are Copper Alloy, although Iron, Aluminum, and Plastic grommets have all been recovered.

For Manufacturing Technique, most Copper Alloy grommets will be "Stamped." However, if the grommet appears to be modern, list the Manufacturing Technique as Machine Made. Plastic grommets are, of course, Machine Made.

Batching: Grommets can be batched by diameter. The only measurements that need to be taken are count, weight, and diameter.

7.2.07 GUNS AND GUNPARTS

Protocols established in August 2021. Gun parts recovered on seventeenth century sites reflect a period in which gun technology was rapidly evolving in Europe and migrating to North America. Many of the major changes were related to small technological innovations that resulted in the modification, addition, or subtraction of particular small metal parts to rifle lock mechanisms, improving the efficiency and ease with which these weapons were fired. Despite the changing technology, some of the principle components of muskets and rifles carried over into new designs with little or no modifications.

Many of the archaeologically recovered elements of early firearms are small metal fragments from lock mechanisms. Prior to the early 18th century, when the flintlock became the predominant firearm technology in British North America, there were several different types of gun lock mechanisms. Each unique lock mechanism had numerous moving parts. Some of those parts were unique to specific lock types (e.g. a wheel is unique to a wheel lock mechanism) while others gun lock parts were common across lock types (e.g. mainsprings are found on wheel locks, dog locks, and flint locks; cocks are found on dog locks and flint locks). Although there are a number of different lock technologies, identifying and dating the individual common lock parts to a specific gunlock type is very difficult without having the larger gunlock mechanism. Additionally, some lock mechanisms (e.g. dog locks) are associated with multiple gun types. Consequently, without the entirety of the lock mechanism it is nearly impossible to identify the type of firearm (i.e. musket, caliver, arquebus) from individual lock mechanism parts or even complete lock mechanisms.

However, there are distinct morphological differences in a handful of lock mechanism parts (i.e. flash pans, batteries, sear springs) that we can use to distinguish between different lock

mechanism technologies. The evolving lock technologies can offer important temporal and spatial insights, especially in the seventeenth century.

Gun lock mechanism type is used in the Form field in DAACS because it is a critical component for identifying gun type. When a lock part could be from multiple types of locks (i.e. the mainspring, which does not seem to change much through time) we identify the lock mechanism type as "unidentifiable" and describe the possible lock mechanism in the Notes field. If you have good evidence that the artifact came from a specific gun type (i.e. musket, pistol), put your reasoning in the notes.

Count: 1 (Do not batch gun parts)
Category: Metal, in most cases.
Form: If the part is from a lock mechanism:

Identify the artifact type: Gun
Identify the lock mechanism: For example, doglock
Identify the part of the lock mechanism: For example, sear spring

The resulting form authority term in this example would be "Gun, doglock, sear spring"

Lock mechanism terms currently in the database include:

Gun, doglock, buffer
Gun, doglock, sear spring
Gun, flintlock, hammer/cock
Gun, LM, unid., frizzen
Gun, LM, unid., frizzen spring
Gun, LM, unid., hammer/cock
Gun, LM unid., mainspring
Gun, snaphaunce, flash pan
Gun, snaphaunce, hammer/cock
Gun, snaphaunce, lock plate
Gun, wheellock, safety catch

If the part is not from a lock mechanism:
Identify the artifact type: Gun
Identify the specific part: For example, barrel

Non-lock mechanism gun terms currently in the database include:

Gun, barrel
Gun, barrel cleaning attachment
Gun, barrel wrench

Gun, breech plug
Gunflint
Gun, lock plate
Gun Part, unidentified
Gun, plate
Gun, trigger
Gun, trigger guard

Material: Iron (in most cases). For exceptions see below:

Most of the working parts of a firearm are iron or iron alloys. Although there is a strong possibility that certain parts of the lock mechanism are manufactured of steel, or case hardened with steel surfaces and iron cores, it is impossible to tell without specialized equipment. The default material should be "Iron." Decorative elements are often manufactured out of other metals and metal alloys, such as silver and copper alloy.

Manu Tech: Wrought/Forged (in most cases). For exceptions, see below:

Most of the iron (or steel) lock mechanism parts would have been wrought/forged into shape and filed into their final form. The default for iron elements should be "wrought/forged." For other metals such as silver and copper alloy the default should be "cast."

Measurements: Take height, length, and width measurements of the artifact if cataloging into the Silver or Gold interfaces. Weigh each artifact (even if incomplete). Record exterior diameter measurement for gun barrels, and the interior bore diameter of the barrel opening in the notes.

For more information on common gun lock mechanisms in the 17th and 18th centuries, see:
John P. McCarthy, Jeffrey B. Snyder, Billy R. Roulette, Jr., "Arms from Addison Plantation and the Maryland Militia on the Potomac Frontier," *Historical Archaeology*, 1991, 25: 66-79; Harold L. Peterson, *Arms and Armor in Colonial America 1526-1783*. Harrisburg: Stackpole Company, 1956 (A more recent edition published in 2000 by Dover Publications, Inc.); T.M. Hamilton, *Colonial Frontier Guns*. Tennessee: Pioneer Press, 1987.; Bruce Larson, *An Interpretation of Firearms in the Archaeological Record in Virginia 1607-1625*. College of William and Mary Dissertations, Theses, and Masters Projects, 2003. https://dx.doi.org/doi:10.21220/s2-y2em-kn42

Common Lock Mechanisms Encountered on 17th and 18th Century North American Sites

Although a variety of terms (arquebuses, cavaliers, and muskets) were used interchangeably in the 16th century to describe a range of firearms, by the 17th century "caliver" began to designate a wheel lock as opposed to a matchlock, and a weapon lighter than a musket (Peterson 1956: 13). Musket has always referred to a heavy military firearm requiring a rest in order to be fired, though by the middle of the 17th century the average weight had decreased substantially (Peterson 1956: 14). Matchlock weapons, and lock mechanisms in general, exhibited a gradual, though uneven, technological evolution up through the 17th century developing into the flintlock weapons that were common in the 18th century (Peterson 1956; McCarthy et. al. 1991). Peterson (1956: 18) emphasizes that multiple components of any individual weapon need to be considered when assigned a date, as firearms with different technological mechanisms share individual parts and characteristics.

Snaphaunce (16th - 17th century)

Image: (Peterson 1956: 20)

Although a variety of terms are used now to distinguish between the different evolutionary stages of the flintlock, the term of "snaphaunce" (a Dutch term - "snapping cock") was widely used to describe any weapon where the needed spark was produced via a piece of flint held in a cock (Peterson 1956: 26). The snaphaunce as described today is the earliest form of a flintlock, developed in Scandinavia in the mid-16th century. It was quickly superseded by the English lock, and its popular variant, the dog lock.

Matchlock (17th Century)

Image: (Peterson 1956: 13)

Most popular prior to the mid-1620s, matchlock rifles had considerable drawbacks that resulted in their decline in popularity by the third quarter of the 17th century, when lighter and more efficient flintlock rifles were introduced. Matchlock rifles were slow and "clumsy", requiring the maintenance of a lit match that was both logistically difficult (i.e. if it rained, if the user was caught by surprise) and a dangerous liability for the user frequently causing accidental injury. (Peterson 1956:19). However, given that it was much cheaper and much less

technologically complex, matchlock rifles remained common although superior technology was available.

Early Dog Lock (17th Century)

Image: (Peterson 1956: 22)

Late Dog Lock (Late 17th Century and Early 18th Century)

Image: (Peterson 1956: 23)

The English/Dog lock mechanism was first developed in the first decades of the 17th century, and experienced a long evolution with minor alterations to individual parts over the next century (Peterson 1956: 29). One primary modification serves as a temporal marker, the shift from the lateral moving to vertical moving sears around mid-seventeenth century, visible in the difference between the early and late diagrams below (Peterson 1956: 31). From archaeological

data, it appears the dog lock is the most common mechanism in use in North America for the bulk of the 17th century (Peterson 1956: 31).

Flint Lock (18th Century)

Image: (Peterson 1956: 32)

The first "true" flintlocks were developed in early-seventeenth-century France, and by the third quarter of the century had fully replaced the dog lock as the primary weapon mechanism in England (Peterson 1956: 35). Flintlock rifles likely reached America in recognizable quantities by 1660 (Peterson 1956: 35). Like the doglock, there are subtle changes that distinguish a 17th-century mechanism from an 18th-century mechanism, including the addition of a bridle on the tumbler and as support for the pivot of the battery (or "frizzen"). The flintlock had fully supplanted the doglock in the British army in 1718.

Less Common Lock Mechanisms (Predominantly 17th Century)

Image: (Peterson 1956: 17)

A much faster mechanism than the matchlock developed in Germany as early as 1520, and temporally the first improvement upon the earlier technology. In a wheel lock mechanism, "the spark was produced by holding a piece of pyrites against a revolving rough-edged wheel" (Peterson 1956: 22). It is more difficult to discern the presence of wheel locks in the documentary record, unlike matchlocks which are usually distinguishable by the need for a lit match or a rest, and they are often referred to as "firelocks" which is a term also used to describe early flintlocks (Peterson 1956: 24). Although some scholars previously argued they were too expensive a weapon to be commonly found in the colonies, they have been located archaeologically.

7.2.07 HARDWARE

Hardware encompasses items generally made of metal - that serve to hold together or provide a means of grasping multi-component items such as furniture or cabinetry (e.g. screws, hinges, handles, brackets, etc.). Hardware is part of a finished product.

"Hardware, unidentified" is a form category for those items that seem to be hardware, but cannot be identified to exact form. "Hardware, electrical", "Hardware, vehicle", and "Furniture Hardware" are additional, more specific, choices.

For Form "Screw," Completeness should reflect the parts of the screw including Head, Shank, Tip, and Complete. You can batch screws of the same completeness together. Unlike nails, the only measurement you need to record is Count and Weight.

7.2.08 HORSE FURNITURE

Occasionally, one finds hardware associated with horses that cannot be classified as Buckles, Horseshoes, or any other specifically defined category. These artifacts should be cataloged as Horse Furniture. For example, the strap retainer pictured below is listed as Horse Furniture:

Note: The term Horse Furniture does not include carriage parts.

7.2.09 HORSESHOES

The earliest horseshoes are "Wrought/Forged." Machine-made horseshoes became popular in the mid-1800s. If nails remain in the horseshoe, record any information about them (e.g. number, size, head type) in the Notes field. Do not catalog these nails separately.

7.2.10 LEAD SHOT

Starting around 1782, shot was made by dropping molten lead from the top of a shot tower. Lead shot 6 mm or less in diameter and smooth (no cast lines) should be cataloged as "Shot, Bird" and can be batched. Only record count and weight. Note that Manufacturing Technique is "Dropped."

- **"Shot, Bird"**
  - **Category**: "Metal"
  - **Form**: "Shot, bird"
  - **Completeness**: "Complete"
  - **Material**: "Lead"
  - **Manu Tech**: "Dropped"

Shot larger than 6 mm could have been either dropped or cast and should be cataloged separately as "Shot Round" with the appropriate Manufacturing Technique recorded. Record Weight and Diameter.

- **"Shot, Round"**
  - **Category**: "Metal"
  - **Form**: "Shot, round"
  - **Completeness**: "Complete"
  - **Material**: "Lead"
  - **Manu Tech**: "Cast"

7.2.11 BULLETS

If only the projectile (live portion):

Category: "Metal"
Form: "Bullet"
Completeness: "Incomplete"
Material: "Lead" or "Lead Alloy"
Manu Tech: "Machine Made"

Modern bullets should just be weighed. The type of bullet (0.38, 0.22, etc.) should be recorded in the Notes. Non-discharged bullets should be cataloged and then disposed of properly. One method is to soak it in oil for at least twenty-four hours.

Bullet can also refer to just the casing and/or the projectile, if both are intact. Catalog a projectile as follows:
Category: "Metal"
Form: "Bullet"
Completeness: "Complete"
        Material: "Lead" or "Lead Alloy"
Manufacturing Technique: "Machine Made"

Catalog a casing as follows:

Category: "Metal"
Form: "Bullet casing"
Completeness: "Complete"
Material: "Copper Alloy"
Manufacturing Technique: "Machine Made"

7.2.12 Nails/Spikes

A Nail with length greater than 120mm is cataloged as a Spike. Nails and spikes are cataloged in the same way, with the difference being recorded in the Form as either "Nail" or "Spike," accordingly.
The following fields are recorded (see Nail Batching Protocols, below):

Main Tab
    Completeness (Select either "Complete" or "Incomplete" for wrought, machine cut, and
        "Not a Wire" nails. For wire nails, enter "Not Recorded.")
    Material
    Manufacturing Technique

Measurements
    Object Weight (Record weight of the batch in grams.)

Nail Information

Nail Length (Batch complete nails/spikes by their length in 5 mm increments. Do not record for incomplete nails.)

Nail Batching Protocols
    To facilitate cataloging nails, we recommend the following sorting steps.

1)   Sort nails by material.
2)   Sort material batches by manufacturing technique: Wrought/Forged, Machine Cut, Not a Wire (indeterminate between wrought and cut), and Drawn/Wire.

For Gold Interface cataloging:
3)   For incomplete nails:
      i. For Wrought/Forged, Machine Cut, and Not a Wire batches, sort by Completeness -- Head, shank, or Tip. All Wire nails can be batched, with completeness as "Not Recorded."
4)   For complete nails:
      i. For Wrought/Forged, Machine Cut, and Not a Wire batches, cataloged using the sort nails by their length in 5 mm increments.

For Silver Interface cataloging:
5)   For incomplete nails:
    a. For Wrought/Forged, Machine Cut, and Not a Wire batches, sort by Completeness using "Complete" or "Incomplete." <u>Do not</u> sort by Head, Shank, or Tip, because these fields are not recorded in the Silver interface.
    b. All Wire nails can be batched with completeness as "Not Recorded".

6)   For *complete* Wrought/Forged, Machine Cut, and Not a Wire batches, sort nails by their length in 5 mm increments.

Corroded Nails and Spikes

On 5/4/2021 DAACS staff added a term to the database -- **Corroded metal, likely nail**. This term should be used when a metal artifact's surface is completely covered by corrosion and there are no diagnostic attributes present that allow the catalog to discern if the object was a nail. DAACS considers the presence of a head or a head and shank necessary to be able to catalog a fragment as a nail. Use "Corroded metal, likely nail" even if the block of corrosion has a squared core present.

7.2.14 NAIL ROD

Nail Rod refers to the long, rectangular rods of iron from which wrought nails were forged. Nail rod can be batched. Binders, the twisted pieces of nail rod used to hold bundles of nail rod together, should be cataloged individually, with Form as "Nail Rod Binder."

7.2.15 Pots

Cast iron pot fragments should be cataloged as follows:

Category: "Metal"
Form: "Pot
Completeness: "Incomplete"
Material: "Iron"
Manu Tech: "Cast"

7.2.16 Sheeting

Very thin, flat pieces of iron should be cataloged as "Sheeting," usually with "Rolled/Sheet" as the manufacturing technique. Iron sheeting is sometimes "Wrought/Forged" – this sheeting is usually thicker and more irregular. Occasionally materials other than iron are identified as sheeting. Lead, for example, can be cast into very thin sheets. Copper Alloy sheeting (again, usually "Rolled/Sheet") is also common.

Batch according to material type. The only measurements that need to be taken are count and weight.

7.2.17 Straight Pins

Straight pins (Form "Pin, Straight") have a fairly complicated set of cataloging protocols.

Cataloging in the Gold Interface:

For Completeness, use the same entries as one would for nails (i.e. Head and Partial Shank, Tip and Partial Shank, Shank, etc.). Complete straight pins should be cataloged individually. Head and Partial Shank straight pins, or tip and partial shank, can be batched together if the material and manufacturing technique are the same. Only the weight is recorded for incomplete straight pins.

Most are either "Copper Alloy," or "Tinned Copper Alloy," although some iron pins have been found. For Manufacturing Technique, all are "Drawn/Wire."

Determine whether the head has been hand-made or stamped. This may require looking under a microscope. Hand-made pin heads were made by wrapping an extra little bit of wire around the end of the shank. According to Hume, machine-stamped heads were invented in 1824 and were made by simply stamping flat the end of the shank. Enter this information in the Notes field.

Take the following measurements for complete straight pins (length should be measured using calipers, not the ruler on the cataloguing mat):

Length: Length of the pin.
Width: Do not record.
Height: Do not record.
Weight: Weight of the pin.
Diameter (if applicable, mm): Thickness of the pin shaft. Be sure to measure the diameter of a pin shank as close to the middle of the shank as possible.

7.2.18 STRAPPING AND HOOP IRON

Iron strapping is thin, flat, and rectangular.

Some iron strapping is made from "Tinned Iron," which appears, under any corrosion, to be a slightly dull, silvery gray (rather than the solid reddish-brown of regular iron).

Manufacturing Technique for iron strapping is often "Rolled/Sheet." Strapping can be distinguished from "Sheet Metal" in a few ways, the most obvious being its rectangular shape. The two longer edges on strapping are also usually finished. Some strapping is "Wrought/Forged." This strapping is slightly thicker than rolled/sheet strapping, and is slightly more irregular in shape and thickness.

Iron strapping can be batched based on width. For both individual and batched fragments, only width and weight need to be measured. Only record width if the measurement is complete.

"Barrel Hoop" is a specific use for iron strapping. Strapping should be cataloged as such in the Form field if it meets one or both of the following two criteria:
> 1. The fragment of strapping has a definite barrel-sized curve. This can usually only be seen on longer pieces of strapping.
> 2. The fragment of strapping includes the two ends that are riveted together.
> Barrel Hoop is also thicker and wider than most other iron strapping.

"Bucket Hoop" is generally the same as barrel hoop, only thinner and with a bucket-sized curve.

7.2.19 TOOLS

Tools are those objects used to shape or assemble items generally made of wood (e.g. chisels, hammers, planes, etc.). Tools are not part of the finished product. "Tool, unidentified" is a category used for items that appear tool-like, but cannot be identified to exact form. "Tool, fireplace" consists of tools arrayed around a fireplace; poker, tongs, etc. "Tool, other" is used for otherwise unidentified stone tools as well as identified tools too uncommon to justify a specific form, such as a tire iron.

Note: Keep in mind that "Handle" is a Completeness option. Use this option if you have the handle of a tool, and record the tool Form as appropriate.

A useful reference for identifying specific iron tools is R.A. Salaman's *Dictionary of Woodworking Tools Revised Edition*, Astragal Press, New Jersey, 1997.

7.2.20 TACK, UNIDENTIFIED

DAACS distinguishes upholstery tacks by the presence of a cast copper alloy head. If there is no cast copper alloy head, or the head is wrought iron, record the tack as "Tack, Unidentified." Complete unidentified tacks and incomplete tacks have separate cataloging protocols. Unidentified tacks are dealt with in a similar fashion to nails; however, no information is recorded in the Nail Information tab. All tack information is recorded in the Measurements tab or in the Notes field.

Complete Tacks:

Complete tacks should not be batched. Record the length and weight of each individual tack on the Measurements tab. If a tack is bent, clinched, or pulled, record this in Notes field.

Incomplete Tacks:

Incomplete tacks can be batched according to completeness (heads and partial shanks, tip and partial shanks, and shanks). Record the count and weight only for both individual and batched incomplete tacks. No other information needs to be recorded.

7.2.21 TACK, UPHOLSTERY

Upholstery tacks found on historical sites have cast copper alloy heads attached to wrought shanks. We recognize that not all upholstery tacks had cast heads, but ones with wrought heads were used for a variety of other purposes. Record the Completeness for these as either "Complete" or "Incomplete."

Complete Tacks:
Complete tacks should not be batched.
Record the Manufacturing Technique as "Wrought" for complete tacks; however, when recording an upholstery tack head only, Manufacturing Technique should be recorded as "Cast."
Incomplete Tacks:
Incomplete upholstery tacks can be batched. Record Count and Weight. Manufacturing technique for shanks (recorded as "Incomplete) should be "Wrought." Tack heads should be recorded as "Cast."

7.2.22 HOOK, CLOTHING AND EYE, CLOTHING

Record Manufacturing Technique as "Drawn/Wire." If complete, record Length, Width, Height, and Weight accordingly.

7.2.23 FASTENER, CORSET

This term applies to parts of corsets unique to their design. Corsets in the late 19th century included long, thin iron straps called busks at the point of attachment to provide stability. Copper alloy slots and studs were attached to the busks on either side for closure. Parts of busks should be recorded as Material "Iron" and Manufacturing Technique "Rolled/Sheet", while the slots and studs should be recorded as Material "Copper Alloy" and Manufacturing Technique "Stamped."
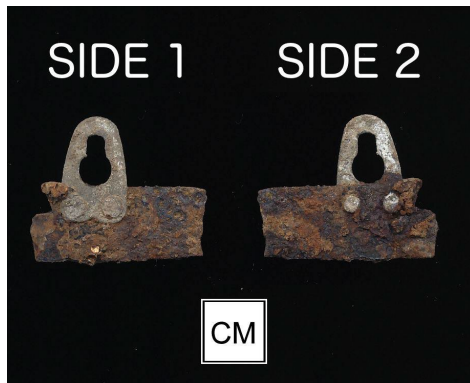
Corset busk and slot fragment recovered from East Cabin at Andrew Jackson's The Hermitage.

Corset busk and slot fragments and period corset with slot and stud closure (image courtesy of the Maryland Archaeological Conservation Laboratory).

7.2.24 UNIDENTIFIABLE FRAGMENTS

Other than nails, the majority of iron to be cataloged is non-diagnostic and unidentifiable. Occasionally, one can identify a fragment as a tool or hardware, but heavy corrosion often prevents any sort of identification. In this case, list the Form as "Unidentified," the Completeness as "Incomplete," and describe the artifact in the notes. Unidentified iron fragments that measure less than 20mm can be batched together. No measurements besides count and weight need to be taken. Keep in mind that there is a "Corrosion/Rust" in Form as well; fragments of corrosion should not be cataloged as "Unidentified." Miniscule fragments less than 10mm do not need to be cataloged and can be discarded. Fragments greater than 20mm need to be cataloged separately and all measurements need to be taken.

Manufacturing technique is often difficult to determine for unidentified iron fragments. If you cannot determine the technique, use "Indeterminate." Check for uniformity of thickness across the fragment; thicker, uniformly flat iron fragments are usually "Cast." More irregular fragments are most likely "Wrought/Forged."

Keep in mind that there are more specific catch-all Form categories for unidentified objects if you have any diagnostic markers. For example, "Hardware, unidentified"; "Hook, unidentifiable"; "Machinery, unidentified"; and "Tool, unidentified."

7.2.25 WIRE

Unidentified fragments of wire should be cataloged under Form as "Wire." Wire is usually Iron or Copper Alloy. While Manufacturing Technique is often "Drawn/Wire," iron wire can be "Wrought/Forged." Check for the irregularity typical of most wrought artifacts.
All non-diagnostic wire should be batched. The only measurements that need to be taken are count and weight.

"Barbed Wire" is usually Iron or Iron Alloy. List the Manufacturing Technique as Machine Made.
Batch all barbed wire together. The only measurements that need to be taken are count and weight.

"Wire, reinforcing" is the structural wire seen at the edge of metal cans. It is also occasionally seen along the edges of tin and pewter cups. For modern cans, the Manufacturing Technique should be Machine Made. For tin or pewter cups, the Manufacturing Technique should be Wrought/Forged.

7.2.26 FURNITURE CASTERS

Two terms apply to furniture casters. The wheels on objects like trays and tables should be recorded as "Furniture, caster." The sleeve that served as the attachment for the wheel to the

base of the furniture leg should be recorded as "Furniture, caster socket sleeve." See images below.

"Furniture, caster" recovered from the East Cabin of Andrew Jackson's The Hermitage.

"Furniture, caster socket sleeve" (hardwaretree.com)

7.2.27 Window Came

Category: "Metal"
Form: "Window Came"
Completeness: As appropriate
Material: Lead
Manu Tech: "Milled"

For many centuries, flat glass panes could not be produced in the sizes needed for windows. As a result glass windows in 17th and early 18th century structures were mainly composed of multiple smaller diamond or square-shaped glass panes, called "quarries". Quarries were mounted in a framework of lead strips known as "cames". These cames were supported by wrought iron bars and set in an iron or wooden frame.

During the Medieval period, window cames were cast in H-shaped molds. Originally, they were carved or cut to the correct size but by the late 15th century, the cast H-shaped rods began to be milled through a "glazier's vise" or "lead-mill". The H-shaped cast rod would be squeezed through "a channel consisting of cheeks and transporting wheels, whereby the cheeks determine the size and shape of the flanges, and the width of the wheels determine the height of the [heart]" (Strobl 2019:). The result is a thinner, lengthened rod that is a uniform size and shape. Grooves are cut into the wheels to aid in pushing the lead through the mill and leave corresponding marks on the hearts of the cames (see image below). Indicate if these marks are visible in the notes.

Example of milling marks on window came from PG92, Flowerdew Hundred Plantation

The default manufacturing technique for window came in DAACS is "Unidentifiable" unless milling marks are present, in which case use "Milled". Un-milled, cast window came continued to be used after the development of the glazier's vise, particularly in stained glass. Cast window came is heavier, thicker, and like will have different dimensions than milled window came (see image below). If the cataloger is unsure of the stage of manufacture, they should enter the manutech as "Unidentifiable" and indicate in the notes that the came may be cast. If you believe you have an example of cast window came, enter the manu tech as "Cast" and contact the DAACS team directly.
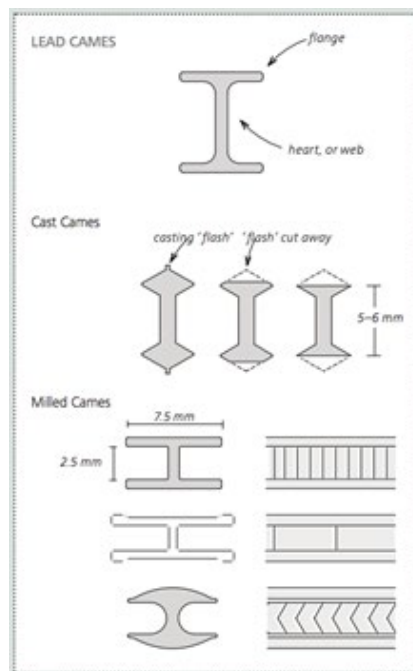
From Historic England "Glass & Glazing" *Practical Building Conservation* **p.101**
Shows the average height and width of window

cames and the types of milling marks.

Each artifact should be cataloged individually. Record length and weight. Length should be measured with the soft measuring tape to record the entire length of the fragment as if it had been straightened out. The width should reflect the width of the flange as best as possible and the height should reflect the height of the heart.

Sometimes cross-shaped joints are found (see images below). In this instance record the length measurement of the longest stretch of the window came in the measurements tab and indicate that the artifact includes a cross-shaped joint and record the length of the shorter stretch in the notes.

Window came joints from PG92, Flowerdew Hundred Plantation

Count: Catalog each came piece individually. Do not batch.
Category: Metal
Form: Window came or Window came joint
Completeness: Mostly likely incomplete but as appropriate
Material: Lead
Manutech: Enter "Milled" if indentations from milling process are present. If milling marks are absent, enter "Unidentifiable" or Cast
Measurements: Record length and weight for each came. If you have a came joint, record the longest length of came.
Notes: If the groove is open/visible check for any markings. Record markings in the notes. If you can tell pane shape from a came joint (diamond or square), add this to notes. Add shorter length(s) of a came joint to notes. Also record in the notes if any pieces of glass are still present in the window came.

Manufacturers would often stamp the date and the maker's name at even intervals down the lead came. These dates and names are sometimes found by archaeologists on the interior bar of the H-shaped came. If a date and maker's name are discernable provide a detailed description in the Marks and Marks Notes fields on the Decoration tab.

7.2.28 TENTERHOOKS

In England, tenterhooks were used primarily by the textile industry to stretch cloth as it was drying. These hooks have a characteristic head that bends away from the shank at 90 degrees.

This shape allowed the tenterhook to support the edge of cloth/material it was used to stretch. The exterior angle of the head is 90 degrees while the interior angle is less than 90 degrees due to the thickening of each angle piece at the interior corner. The head tapers to a pointed tip. The pointed tip allowed for easy punctuation of the fabric or material that was to be fastened to it. The shank also tapers towards the tip. Tenterhooks found at Jamestown and at Flowerdew Hundred are generally 1-2 in (4-5 cm) in length.

Catalog as follows:

Category: Metal
Form: Tenterhook
Completeness: Complete or Incomplete
Material: Iron
Manutech: Wrought/forged

If the tenterhook demonstrates some form of post manufacturing modification (i.e. clinching) describe in the notes and select "yes" for post manufacturing modification on the condition tab.

TENTERHOOKS FROM PG65 FLOWERDEW HUNDRED PLANTATION

7.3 Miscellaneous Artifacts

7.3.1 BRICK, DAUB, AND CHINKING

All brick, daub, and chinking get the Category of "Ceramic." There are many specific brick Forms but follow these guidelines for most general brick:

Count:	The total number in the batch
Category:	"Ceramic" (Use this for all Brick, Daub, and Chinking)
Form:	See specific Form descriptions below
Brick Color:	As appropriate, usually Orange, Red, Reddish Brown
Completeness:	"Complete" or "Incomplete"
Material:	Either "Brick", "Brick/Daub", "Daub" or "Chinking"
Manu Tech:	Either "Hand-made" or "Machine Made"

The following are the five most common brick-related Forms:

- **"Brick/Daub Fragment":** Most commonly used Form when cataloging brick materials. Use when you have brick fragments or daub/chinking fragments that do not meet the other criteria; for example, bricks that do not have an original side, or possible daub fragments which have no discernible evidence of lathe or twig impressions.
  Category: "Ceramic"
  Form: "Brick/Daub"
  Material: "Brick/Daub"
  Manu Tech: "Hand-made"

Brick/Daub is weighed and batched. No other measurements need to be taken.

- **"Brick Bat":** Use when the brick has two or more complete/original measurable dimensions. These original dimensions should be recorded in the Measurements Tab. For incomplete Length, Width, or Height measurements, leave those fields blank. Always record Weight. The default Material is "Brick, red", although other colors exist and should be chosen as appropriate. Do not batch.
  Category: "Ceramic"
  Form: "Brick Bat"
  Material: "Brick"
  Manu Tech: Either "Hand-made" or "Machine Made"

- **"Brick Fragment":** Use when the brick has part of at least one original side. The default material is Brick, red, although other colors exist and should be chosen as appropriate. Do not batch those bricks that have one complete measurable dimension. Take the measurement and record in the appropriate field. Those fragments that do not have an original complete measurable side can be weighed and batched according to material. No other measurements need to be taken for batched brick.
  Category: "Ceramic"
  Form: "Brick Fragment"
  Material: "Brick"

Manu Tech: Either **"**Hand-made" or "Machine Made"
Manufacturing Technique will frequently be "Hand-made." Occasionally, one sees modern, machine-made bricks. These are more regular and homogenous than hand-made bricks, and do not have the sandy surfaces often seen on hand-made bricks. Manufacturing Technique for modern, machine-made bricks should be "Machine Made."

- **Daub:** Clay/Brick-like material that has twig or lathe impressions. Occasionally one will have a tremendous amount of daub from one context, including some fragments without twig or lathe impressions that are still clearly daub. Go ahead and catalog these fragments as daub, even if they do not all have impressions. See below for batching rules.
  Category: **"**Ceramic"
  Form: "Daub"
  Material: **"**Daub"
  Manu Tech: **"**Hand-made"

- **Chinking:** Clay/Brick-like materials that have log impressions. Occasionally one will have a tremendous amount of chinking from one context, including some fragments without log impressions that are still clearly chinking. Go ahead and catalog these fragments as chinking, even if they do not all have impressions. See below for batching rules.
  Category: **"**Ceramic"
  Form: "Chinking"
  Material: **"**Chinking"
  Manu Tech: **"**Hand-made"

Brick Color: This field is used to capture the color of brick. Use Paste Color sheets in the DAACS Color Book to group batches of brick forms into different color categories (usually Orange, Red, Reddish Brown etc).

Batching Rules for Daub and Chinking:
First, divide the fragments into groups based on the number of sides each has with log impressions.

For each group, batch all chinking fragments 60mm and smaller, recording only count and weight. Indicate in the Notes the number of sides with log impressions.

All chinking fragments 65mm and larger are cataloged separately, with all measurements recorded. When fragments of chinking have two or more sides with log impressions, record in the Notes the general shape (wedge, etc.) and any information about the spatial relationship between the impressions (parallel or perpendicular). Any evidence of finger impressions should also be recorded in the Notes.

Specific Brick Forms:
There are several types of specific bricks whose forms are listed separately in DAACS. Note: The images below are examples of what each brick type might look like – not all bricks will appear exactly like those pictured.

- **"Brick, bullnose"**
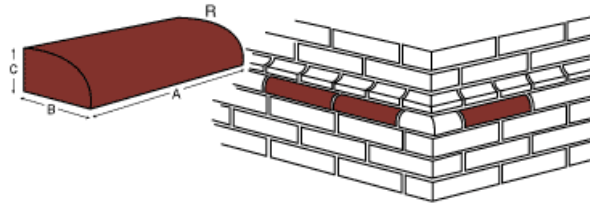
- **"Brick, column 1"**
(Pie-slice or wedge-shaped brick)

- **"Brick, column 2"**
(Brick with one curved long edge, one straight long edge)

- **"Brick, coping"**
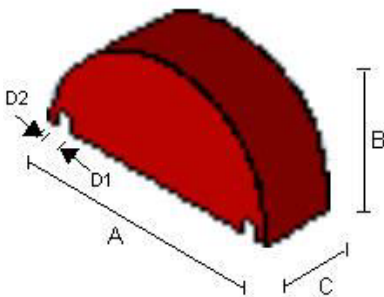
- **"Brick, cornice"**
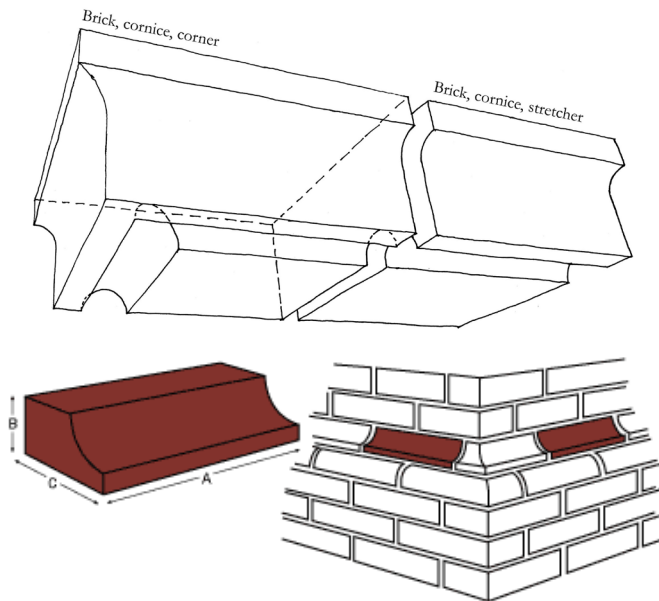
- **"Brick, water table"**

- **"Brick, specialty unid."**: Use this term when you cannot determine the exact type of specialty brick form.

For bricks, Category will usually be "Ceramic." If there is mortar still attached to the brick, list Category as Composite, and then record both brick and mortar in the Material field.

Manufacturing Technique will be either "Hand-made" or "Machine Made." Machine made bricks can be identified as more regular and homogenous than hand-made bricks, and do not have the sandy surfaces often seen on hand-made bricks. Manufacturing Technique for modern, machine-made bricks should be "Machine Made."

When batching brick fragments, catalog burned and unburned fragments separately. Glazed brick should also be cataloged separately by Form. Note that the fragments are "glazed" in the Notes field. See also "Mortar" (Section 7.3.3).

7.3.XX Roof and Floor Tiles

Ceramic roofing and flooring tiles have been recovered from 17th and 18th century households in the Colonial-era American and the Caribbean. The most common forms of roofing tiles were generally rectangular, roughly 10" x 6" x ½" and relatively flat. Both surfaces are unglazed. Roof tiles have two perforations through which nails or pegs would be inserted to anchor the tile to the roof frame (Noel Hume 1969:294-5).

The primary differentiating factor between roofing and floor tiles is thickness. Roofing tiles are typically no thicker than about ½" and floor tiles are as thick as and thicker than 1."

Additionally, floor tiles have holes in the corners, but the holes do not completely perforate both surfaces of the tile.

Mended complete roof tile from PG65 Flowerdew Hundred Plantation

Roof tile fragments PG92, Flowerdew Hundred Plantation

If fragment has two finished surfaces and thickness is equal to or less than ½" thick catalog it as follows:

Count: 1 or as appropriate (Do not batch tiles or tile fragments where thickness can be measured)
Category: Ceramic
Form: Tile, Roof
Completeness: As Appropriate
Material: Earthenware
Manutech: Molded
Measurements: Record thickness in height field and weight
Notes: If the tile has perforations mention the number of perforations in the notes and that the perforation goes completely through the body of the tile

If a fragment is thicker than 1" catalog it as follows:
Count: 1 or as appropriate (Do not batch tiles or tile fragments where thickness can be measured)
Category: Ceramic
Form: Tile, Floor
Completeness: As Appropriate
Material: Earthenware
Manutech: Molded
Measurements: Record thickness in height field and weight
Notes: If the tile has perforations mention the number in the notes and that the perforation does not go completely through the body of the tile

For mended tiles: Include mend artifact numbers and overall length in the notes. Include the dimensions of the mended object if they are complete. For example: "This fragment mends to XX and XX. The overall complete dimensions of the mended object are: Length: XXmm; Width: XXmm; Height (or thickness): XXmm. Mended Weight: XXg"

7.3.2 GASTROLITHS

A piece of small, heavily eroded stones is a gastrolith, also called stomach stone or gizzard stone. Non-glass, non-ceramic gastroliths are cataloged in the General Artifact Table with the form as "Gastrolith." Record Category as Stone. Material should be identified accordingly, while Completeness and Manufacturing Technique should be Unidentifiable.

All measurements should be taken and a brief description should be noted with the following statement: "Currently, there is a debate about whether these stones are gastroliths (a.k.a. gizzard stones) or gaming pieces."

PLEASE NOTE: Glass gastroliths should be cataloged in the Glass Table while and Ceramic gastroliths should be cataloged in the Ceramic Table.

7.3.3 MARBLES, TOY

Toy marbles can be divided into three categories based on material:

- **Ceramic marbles**
  These include marbles made from the following materials:
  Earthenware (clay), Stoneware, and Porcelain

  Category: **"**Ceramic"
  Form: "Marble, toy"
  Material: **"**Earthenware"(please note: do not use "Clay"), "Stoneware" or
  "Porcelain" as appropriate
  Manu Tech: **"**Hand-made"

- **Stone marbles**
  Stone marbles were manufactured from many stones including marble, agate,
  limestone, and flint (recorded as "Chert/Flint, other" in DAACS).

  Category: **"**Stone"
  Form: "Marble, toy"
  Material: **"**Marble", "Limestone", "Chert/Flint, other", "Stone, unidentified" as
  appropriate
  Manu Tech: "Ground"

- **Glass marbles**
  Category: **"**Glass"
  Form: "Marble, toy"
  Material: **"**Glass"
  Manu Tech: **"**Machine made" or "Molded" as appropriate (Note that molded marbles
  should have evidence of a pontil mark.)

Take the following measurements for complete marbles:

Length: Do not record.
Width: Do not record.
Height: Do not record.
Weight: Weight of the marble.
Diameter: Diameter of marble (mm).

7.3.4 MODERN ARTIFACTS

From September 2004, we began batching all modern artifacts, regardless of category, form, material, and manufacturing technique. This decision was made because a large area of one site at Monticello (Site 8) was used as a modern dumping ground and certain quadrats contained large quantities of modern artifacts. The PI or DAACS Research Consortium Partner should

decide on a site-by-site basis whether to follow these protocols or to catalog modern artifacts individually.

Batched modern artifacts should be cataloged as follows:

Count: The total number of modern artifacts in the batch.
Category: "Modern"
Form: "Modern Artifacts"
Completeness: "Not Recorded"
Material: "Not Recorded"
Manu Tech: "Not Recorded"
Notes: Provide a brief list of the batched artifacts. If there is an easily identifiable artifact that provides the latest TPQ (such as pull tabs, plastic straws, etc.), record that specific form in the Notes.
Weight: Weigh batched artifacts in grams.
Burned?: "N/R"
Post-Manufacturing Modification: "N/R"

Fragments of modern "**Road Paving**" should be catalogued as follows:

Category: "Composite"
Form: "Road Paving"
Material: "Asphalt"
Manu Tech: "Machine Made"

Road paving can be batched. The only measurement that needs to be taken is weight.

Due to the high fragmentation of tar paper, it should not be counted, only weighed. A count of "0" should be entered in the count field. Although using "0" is not ideal, it provides a clear sign that the number of pieces in the batch have not been counted.

Fragments of modern "**Tar Paper**" should be catalogued as follows:

Count: 0
Category: "Synthetic"
Form: "Tar Paper"
Material: "Tar"
Manu Tech: "Machine Made"

7.3.5 MORTAR, PLASTER, CEMENT AND CONCRETE

While similar in composition, these four artifact types are different in their use and composition and should be cataloged accordingly. Plaster is spread on walls and ceilings forming a hard surface when dried and can have smooth surfaces and lath impressions. This differs from chinking in that plaster is tan to white in color, friable, and a more refined paste. For more on Chinking, please refer to section 7.3.1 of this manual.

Plaster is spread on walls and ceilings forming a hard surface when dried. There are three types of plaster: scratch coat, brown coat and finishing coat. Scratch coat plaster is a fairly thick layer applied to a brick and mortared wall or lath work. It is tan to brown in color, moderately friable, and tempered with fine grit. Monticello examples have very small clear quartz inclusions, and can include horsehair. Brown coat plaster is a denser, secondary application applied to the scratch coat resulting in a smoother surface upon which a finishing coat plaster or whitewash is applied. Brown coat plaster is tan to brown in color, normally tempered with fine grit, occasionally including small lime inclusions and can be as hard as cement. Without the lath impressions or a smoothed side, rough-coat plaster appears practically indistinguishable from mortar in its composition. Finishing coat is a thin layer of fine, lime-tempered plaster applied to brown coat plaster. It is often white and chalky in appearance.

Mortar tends to be very friable and its composition includes a considerable amount of lime.

Cement is denser, grittier and has more variable inclusions, while Concrete is cement with large inclusions. Concrete is not listed as a separate form, rather the form should be cataloged as "Cement, unidentified."

Mortar and plaster should always be cataloged as following:

Count:	Record Count
Category:	"Composite"
Form:	"Mortar"
Completeness:	"Incomplete"
Material:	"Mortar"
Manu Tech:	"Hand-made"

Category:	"Composite"
Form:	"Plaster"
Completeness:	"Incomplete"
Material:	"Plaster"
Manu Tech:	"Hand-made"

If the fragment has evidence of lath impression and/or has a smoothed, finished side, it should be cataloged as Plaster. If it does not have either, it should be cataloged as Mortar. In the Notes, please record if any of the following attributes:

A finished surface (i.e. wall impressions);
Lathe impressions;
Whether the mortar is comprised mainly of lime or shell

If there are any brick fragments, plaster fragments, etc. still attached to the mortar, add these as separate entries in the General Artifact Material table , with the appropriate manufacturing technique. In these cases, the majority of an artifact should influence the attribution of Form in the General Artifacts table, i.e. if mortar has fragment of brick then Form is "Mortar," if brick fragment retains mortar, then Form is "Brick, fragment."

For example, if a piece of mortar has brick fragments attached it would be cataloged as follows:

Quantity: Record Count
Category: "Composite"
Form: "Mortar"
Completeness: "Incomplete"
Material: "Mortar"
Manu Tech: "Hand-made"

Material: "Mortar" ManuTech: "Hand-made" AND
Material: "Brick, fragment" ManuTech: As appropriate

If mortar is whitewashed – add this as an additional material, and record the manufacturing technique as "Hand-made."

Batching: Mortar and plaster fragments can be batched by form (i.e. all Mortar can be batched; all plaster can be batched). The only measurements that need to be taken for mortar are Count and Weight. If the mortar or plaster fragments have diagnostic attributes, such as unusual shapes, log impressions, etc., then they should be batched together according to these attributes. Be sure to record the attribute in the Notes section.

Do not use the Form or Material type "Plaster/ Mortar."

Cement should always be cataloged as following:
Quantity: Record Count
Category: "Composite"
Form: "Cement, unidentified"
Completeness: "Incomplete"
Material: "Cement/Concrete" or "Cement, possible TJ"
Manu Tech: "Indeterminate"

Portland cement should be cataloged as following:
Quantity: Record Count
Category: "Composite"
Form: "Cement, portland"
Completeness: "Incomplete"
Material: "Cement/Concrete"
Manu Tech: "Machine Made"

Concrete should be cataloged as following:
Quantity: Record Count
Category: "Composite"
Form: "Cement, unidentified"
Completeness: "Incomplete"
Material: "Cement/Concrete"

Manu Tech: "Indeterminate" if it is unclear whether it was laid by hand or machine or "Machine-Made" if you have evidence of the aggregator.

7.3.6 MUSICAL INSTRUMENTS

There are several types of musical instruments listed in DAACS, including Harmonicas, Accordions, and Jew's Harps.

Harmonicas and Accordions both have several types of parts listed under Form (for example, "Harmonica, Plate" and "Harmonica, Plate and Reed"). If the part you have fits one of these categories, list it as such. If not, enter in simply "Harmonica" and describe in the notes what parts you have.

Jew's Harps, also known as Jaw Harps and Mouth Harps, are listed in DAACS as "Jews/Jaw Harp." When found archaeologically, the metal tang that one plucks to play the harp is almost always missing. Enter into the Notes whether or not the harp still has its tang.

For any other musical instruments not specifically listed in DAACS, catalog as "Musical Instrument, unid." for Form and then describe the artifact in the Notes.

7.3.7 PENCILS

Catalog slate pencils as follows:

Material:	"Stone"
Form:	"Pencil, slate"
Completeness:	"Incomplete" or "Complete" as appropriate
Material:	"Slate"
Manu Tech:	"Carved"

Indicate any use wear in the Notes.

Occasionally, one finds the graphite part of modern pencils. This "pencil lead" should be cataloged as follows:

Material:	"Mineral"
Form:	"Pencil, lead"
Completeness:	"Incomplete" or "Complete" as appropriate
Material:	"Graphite"
Manu Tech:	"Machine Made"

7.3.8 PIGMENT, UNPROCESSED

Follow these protocols when recording pigment raw material that was used to alter the color of a substance to create paint.

Material:	Mineral
Form:	"Pigment, Unprocessed"

Completeness: "Incomplete"
Material: "Lead, red"
Manu Tech: "Natural"

7.3.9 SCRAP/WASTE

Scrap/Waste should be used to define any scrap or waste from a manufacturing process. This could include scrap sheet iron with shear marks on it, casting waste, forging waste, or remnants of bone from the production of a bone tool.

Scrap is defined as metal with clear attributes indicating it has been removed and discarded from a larger piece of metal. Diagnostic attributes of scrap include straight or jagged/snipped edges that suggest the metal has been cut, sliced, or otherwise removed from a larger whole.

Scrap is not waste, which DAACS defines as puddles or drops of molten metal from the casting process.

7.3.10 Sprue

The term "Sprue" is used to describe lead that solidified in the pouring channel portion of a mold cavity during the casting process. The majority of sprue in DAACS comes from molds used to make lead shot. Sprue from gang shot molds (molds capable of casting several shot at once) is linear in shape and has a narrow width. Sprue from gang molds may also have nibs (see images below). Nibs are remnants of lead that solidified in the smaller channels that attached the spherical casting chamber to the central mold cavity. Each nib corresponds to one piece of shot.

Two different types of sprue forms are distinguished in DAACS – sprue without any attached shot and sprue with attached shot.
- "**Sprue, gang mold**"

If you have a remnant of the casting of the pouring channel portion of a mold cavity without any attached shot (see image below) use the following:

Sprue, gang mold with no shot attached from PG92, Flowerdew Hundred Plantation

Count: 1
Category: Metal
Form: Sprue, gang mold
Completeness: Mostly likely incomplete but as appropriate
Material: Lead
Manutech: Cast (do not use molded)
Measurements: Take length and weight, do not take width, do not take diameter
Notes: Put no. of nibs in the notes because this can be used to calculate the number of shot produced

- **"Sprue, gang mold with attached shot"**

Use the following if you have individual shot that are **adhered to the casting of the pouring channel portion of a mold cavity** (see image below):

Sprue, gang mold with shot attached from PG92, Flowerdew Hundred Plantation

Count: 1 (Entire piece of sprue)
Category: Metal
Form: Sprue, gang mold with shot attached
Completeness: Mostly likely incomplete but as appropriate
Material: Lead
Manutech: Cast (do not use molded)

Measurements -- Take length, width take average diameter of shot, put average in
      diameter field

Notes: Describe # of shot still attached and # of nibs that are present without shot

If you have a fragment that has both shot and empty nibs catalog it as Sprue, gang mold with shot attached

7.3.11 SLAG

Slag should always be cataloged as follows:

        Category: "Composite"
        Form: "Slag"
        Completeness: "Incomplete"
        Material: "Unidentified"
        Manu Tech: "Indeterminate"

If you are 100% positive that a piece of slag is iron or coal related, record this in the notes (not in the Material table). Almost all slag, however, should be considered unidentified.

Slag is always batched. The only measurement that needs to be taken is weight.

Cinder and Casting Waste should be cataloged as such and not as types of slag.

If the manufacturing process in question is casting, then choose "Casting Waste" as the Form, otherwise choose "Scrap/Waste." Casting waste, or sprue, is often seen in the form of either little drops or irregular, elongated lumps. It is almost always lead, although pewter casting waste has been found. If the "Scrap/Waste" is identified as lead, the manufacturing technique should be cast.

7.3.12 Waste

Waste is a subcategory of scrap/waste that is designated using a separate term because of its distinctive shape and the fact that it is a product of a particular process -- casting. It is almost always lead, although pewter waste from the casting process has been found. The term "Casting waste" is used to describe the remnants of lead that were made molten during the casting process, dripped out of the mold, and then solidified on the ground or some other flattened surface. Waste from the casting process often takes the form of small droplets, irregular, elongated lumps, or larger solidified blobs of lead. Often these blob-like fragments will have one flattened side (created from molten lead dripping onto a flat surface). In contrast the opposite side is uneven or undulating because it was exposed to air while it solidified

instead of another hard surface. The solidified mass may also have voids because the lead did not spread out evenly during the hardening process.

Note that waste from the casting process with a more amorphous shape should be distinguished from waste that was clearly cast into a channel, which is known as sprue (see Sprue description in section 7.3.XX).

Waste can be batched. The only measurement that needs to be taken is weight.

> **Category:** Metal
> **Form:** Casting Waste
> **Completeness:** Incomplete
> **Material:** Lead
> **Manutech:** Cast (do not use molded)

7.3.13 WINDOW GLAZING

The components that hold window glass in place and seal out weather are referred to as window glazing. Modern window glazing is a compound made from petroleum and gypsum whereas historic glazing was a gypsum/clay, plaster-like mixture. Since it is difficult to tell the difference between the two visually, catalog window glazing as follows:
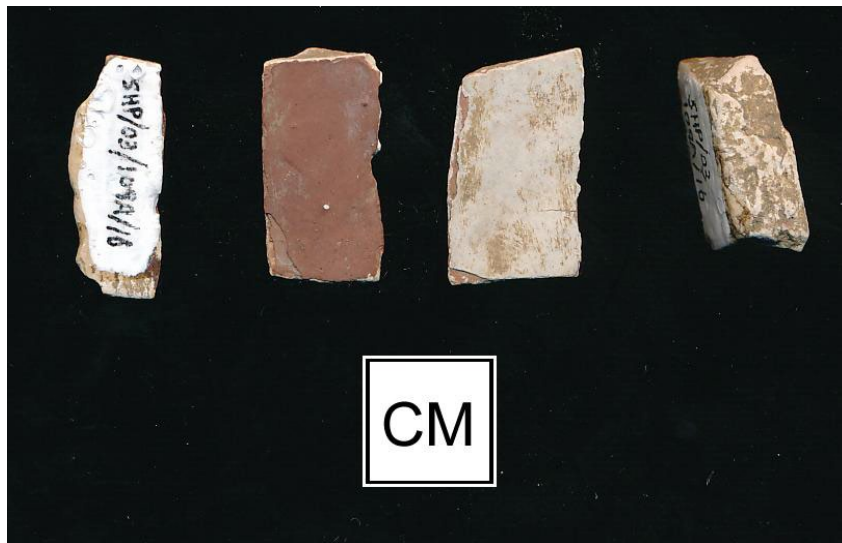
> **Category**: "Composite"
> **Form**: "Window Glazing"
> **Completeness**: "Incomplete"
> **Material**: "Window/glazing putty"
> **Manu Tech**: "Indeterminate"

Fragments of window glazing from West Garden site, Stratford Hall Plantation

7.3.12 Shoe Parts: Metal, Leather, and Rubber

This section summarizes how parts of shoes are cataloged with respect to the forms in DAACS.

- **"Shoe, guard"**

Historically, this term referred to additional pieces of fabric, rubber, or leather that were fastened over shoes to protect them. "Shoe, guard" should only be used if you have a finished edge or seam of a shoe fragment that shows no evidence of attachment to a sole.

- **"Shoe, tip"**

Stamped metal fragments with nail holes that extended out over the tip of the shoe from the sole, between the shoe upper and shoe sole. As far as our research has shown, these plates were exclusive to the tip of the shoe and were not used on the heel. These are predominantly copper alloy.

A) Brogue work shoe with shoe tip   B) Child's shoe with shoe tip

A) http://www.metmuseum.org/art/collection/search/158071

B) http://www.metmuseum.org/art/collection/search/104091

Shoe tips recovered from Andrew Jackson's The Hermitage plantation are stamped with the patent date Nov. 29 1859. Part of this patent states: : "A shoe tip, as an article of manufacture, formed into shape in such a manner as to allow of its being applied and fastened to the toe part of shoes or boots by sewing or pegging it between the upper and the sole."

(https://patents.google.com/patent/USRE1339E/en?q=shoe&q=silverthorn&q=tip&before=19000101)

- **"Shoe, tap"**

Stamped metal fragments, typically iron, nailed to the sole or heel for reinforcement. Shoe taps did not extend beyond the shoe sole.

Shoe taps recovered from the East Cabin at Andrew Jackson's The Hermitage.

- **"Shoe Upper"**

This term applies to pieces of rubber or leather that are complete enough to determine that the fragment was part of a shoe upper rather than a shoe sole, or that have evidence of grommets for laces.

- **"Shoe Sole"**

Material should be rubber, leather, or plastic (modern). Term used for any fragment of shoe sole with evidence of nail holes. Sole is also encompassing for shoe fragments when you cannot determine whether the leather is part of an upper or sole. In addition, fragments with evidence of shoe sole and heel are cataloged as "Shoe sole," and presence of heel recorded in the Notes (see heel definition below).

- **"Shoe, heel"**

Material should be rubber or leather. Term should be used when the shape of the heel is discernible and no other part of the shoe sole is intact. If there is no evidence of heel shape (typically a rounded U), then fragments are cataloged as "Shoe sole."

7.3.14 PARASOL/UMBRELLA PARTS

This section summarizes how parts of parasols are cataloged with respect to the forms in DAACS.

- **"Parasol/Umbrella, other"**

This term encompasses handle parts, finials, and ferrules.

- **"Parasol/Umbrella, stretcher/rib"**

Stretchers and ribs are visually similar to each other and it can be difficult to differentiate between them when the tip or end is not present. This term encompasses stretchers and ribs that can be identified as such and fragments that cannot be identified to either form. Please record in the Notes if you can identify definitively as a stretcher or rib. Stretcher tips have a single hole through the end for attachment. Rib tips are more decorative and have an attachment hole closer to the attachment with the rib shaft.

End of stretcher that attached to rib, recovered from East Cabin at Andrew Jackson's The Hermitage.

Stretcher tip, recovered from East Cabin at Andrew Jackson's The Hermitage.

Rib tip, recovered from Bowles' Lot site Albemarle County, VA.

- **"Parasol/Umbrella, slider/top-notch"**
This term includes complete or fragmented parasol sliders that connected to stretcher tips and top-notches that held the end of the ribs. Top-notches look similar to sliders, but they are smaller and have an iron pin across the center. Use this term if they had either a slider or a top-notch, or a fragment that was clearly one of these but they could not definitively say was in either category

Slider or top-notch fragment.

Top-notch with iron pin intact.

Recovered from East Cabin at Andrew Jackson's The Hermitage.

Antique parasol with slider and stretchers in place (image courtesy of Maryland Archaeological Conservation Laboratory).

7.4 ORGANIC ARTIFACTS

Category: Organic

Completely unidentifiable organic material should be cataloged under Form as "Misc. Organic." At Monticello, this designation has also been applied to the currently unidentified organics recovered from waterscreen and flotation samples. Use "Unidentified" for form, with material as Organic.

Organic artifacts are batched by Form. The only measurements that need to be taken are count and weight, unless otherwise specified below.

7.4.01 BEANS

There are two types of beans specifically listed under Form: "Bean, lima" and "Bean, pea." If another type of bean can be positively identified, ask the DAACS administrator to add it to the list. Unidentified beans should be cataloged as "Bean, unid." Material is "Organic."
[*Beans, Seeds, and Nuts will be moved to the Macrobotanical Module beginning Sept 2018.*]

7.4.02 CHARCOAL

Due to the high fragmentation of charcoal, it should not be counted, only weighed. A count of "0" should be entered in the count field. Although using "0" is not ideal, it provides a clear sign that the number of pieces in the batch have not been counted.

Charcoal should be cataloged as follows:

Count:	0
Category:	"Organic"
Form:	"Charcoal"
Completeness:	"Incomplete "
Material:	"Charcoal"
Manu Tech:	"Indeterminate"
Burned?:	"No" (Condition tab)

7.4.03 CINDER

Cinder is burned-out coal. It is much lighter in weight than coal and has a much rougher surface (often characterized by the appearance of many tiny air pockets). Even though cinder is a waste product from a burning process, do not catalog it as slag or scrap/waste.

Use the following protocols for cataloging cinder:

Category:	"Organic"
Form:	"Cinder"
Completeness:	"Incomplete"
Material:	"Unidentifiable"
Manu Tech:	"Indeterminate"
Burned?:	"No" (Condition tab)

7.4.04 COAL

Coal should be cataloged as follows:

Category:	"Organic"
Form:	"Coal"
Completeness:	"Incomplete"
Material:	"Coal"
Manu Tech:	"Natural"

7.4.05 CORN COB AND CORN KERNEL

These are listed as specific, separate Forms. Category and Material are "Organic."

7.4.06 EGGSHELL

Eggshell should be batched; only count and weight need to be recorded.

Category: "Organic"
Form: "Eggshell"
Material: "Eggshell"
Manu Tech: "Natural"

7.4.07 MUD WASP NEST

Occasionally excavators will come across fragments of mud wasp nests, also called mud dauber nests. Mud wasp nest fragments can be batched; only count and weight need to be recorded.

Category: "Organic"
Form: "Mud Wasp Nest"
Material: "Clay"
Manu Tech: "Natural"

7.4.08 NUTS

"Walnut Shell," "Pecan Shell," and "Nut, acorn" are listed as specific Forms in DAACS. If another type of nut can be positively identified, ask the DAACS administrator to add it to the list. Unidentified nut fragments should be recorded as "Nutshell, unid." with material as "Organic."

[*Beans, Seeds, and Nuts will be moved to the Macrobotanical Module beginning Sept 2018.*]

7.4.09 PITS

There are two types of fruit pits specifically listed under Form: "Pit, cherry" and "Pit, peach." If another type of pit can be positively identified, ask the DAACS administrator to add it to the list. Unidentified pits should be cataloged as "Pit, unid." with material as "Organic."

[*Beans, Seeds, Pits, and Nuts will be moved to the Macrobotanical Module beginning Sept 2018.*]

7.4.10 SEEDS

There are two types of seeds specifically listed under Form "Seed, gourd" and "Seed, watermelon." If another type of seed can be positively identified, ask the DAACS administrator to add it to the list. Unidentified seeds should be cataloged as "Seed, unidentified" with material as "Organic."

[*Beans, Seeds, Pits, and Nuts will be moved to the Macrobotanical Module beginning Sept 2018.*]

7.4.11 SHELL

Shell should be batched based on form; only count and weight need to be recorded.

Category: "Organic"
Form: "Shell, [as appropriate]"
Material: "Shell"
Manu Tech: "Natural"

Mother-of-pearl is listed under Material, rather than Form. Since a mother-of-pearl fragment might have been part of an inlay or piece of jewelry, the form is often unidentifiable. In this case, Form should be "Unidentified," rather than "Shell, unidentified."

7.4.12 BLANK, BUTTON

This term applies to material, usually bone, that has been modified to create button blanks (solid bone disks to be covered with fabric) or buttons, as indicated by missing circular "voids" that have been punched out.

Record any modification in the Notes field. For example, "This object is a bone fragment that has been used for making bone buttons. There is evidence for at least one button being punched out."

If you have a button blank (solid bone disk to be covered with fabric), enter that into the Button table.

7.4.13 WOOD

For pieces of wood that are only partially burned, catalog as follows:

Category: "Organic"
Form: "Wood"
Completeness: "Incomplete"
Material: "Wood"
Manu Tech: See below
Burned?: "Yes"

Manufacturing Technique for pieces of wood that have saw marks, finished edges, or other such diagnostic attributes should be listed as "Milled." When a piece of wood has clearly *not* been milled, list the Manufacturing Technique as "Natural." Most pieces of wood are "Indeterminate."

The only specific type of wood listed under Material is Southern Yellow Pine. If you can positively identify any other type of wood, enter that information into the Notes field. If possible, ask a DAACS administrator to add the new type of wood.

If only a sample of wood was taken during excavation, enter this information into the Notes field.

7.5 STONE/MINERAL ARTIFACTS

7.5.1 FERRICRETE/BOG IRON

Category: "Stone"
Form: Classify by size category:
                "Granule (2-4mm)"
                "Pebble (4-64mm)"
                "Cobble (64-250mm)"
                "Boulder (>250mm)"
Completeness: "Incomplete"
Material: "Ferricrete/Bog Iron"
Manu Tech: "Natural"

7.5.X GUNFLINT

Protocols established January, 2008. Form "Gunflint" is used generically to encompass all spall-type/gunspall, flake-type, and blade-type gunflints. See Honerkamp and Harris 2005 (Figs. 6, 7) and Hamilton 1980 (p. 138, 147) for examples of artifacts that fall into these categories. Artifacts that are made from imported, European chert/flint-like material, but lack the size, shape, edge angle, or flaking/use wear properties of gunflint should not be cataloged as "Gunflint" (rather they should be "Flake" or "Tool, unidentified" as appropriate).

Note on Form: The form category "Strike-a-Light" should not be used for stone artifacts. It should only be used to describe metal strike-a-lights. If you have a chert/flint fragment that may have been used as a "Strike-a-Light," record its form as "Tool, unidentified" and note wear and/or secondary flaking in the notes.
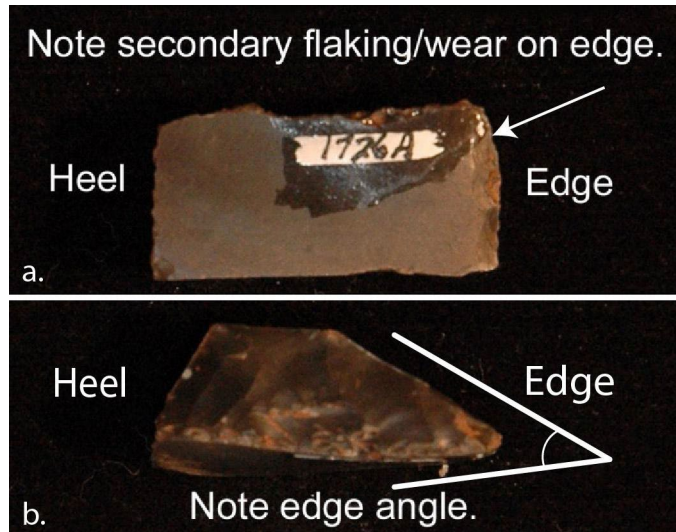
a. Bottom or bed of broken gunflint, b. Cross section of broken gunflint

Note on Measurements: Length refers to the distance between the "striking" edge, or bevel, (the side that struck the frizzen and that usually has the most acute angle,) and the heel (the end opposite the edge). This is the "axis parallel to the gun when the gunflint is mounted," following Honerkamp and Harris (2005:101). There are two ways to identify the edge of a gunflint. First, the edge angle often will be more acute that the angles of the other three sides, although the heel angle also can be acute. Second, the edge on a used gunflint can exhibit flake scars on the bed, or bottom, as well as the face, or top, whereas the other sides often have secondary flaking on the face only.

Count:	Incomplete gunflints can be batched.
Category:	"Stone"
Form:	"Gunflint"
Completeness:	Select "Complete" if all three prepared edges and the striking edge are present and the finished dimensions can be recorded, even if the striking edge is heavily worn. Select "Incomplete" when one or more original edges are missing.
Material:	Record color as either "Chert/Flint, honey/brown" (falls within the Yellow-Red, Muted Medium range of DAACS Detailed Color Groups) or "Chert/Flint, grey/black" (falls within the Neutrals range of DAACS Detailed Color Groups or "Chert/Flint, other" (gunflints whose color does not fall into the grey/black or honey/brown categories).
Manu Tech:	"Flaked"
Measurements:	Only complete measurements should be recorded in the measurements tab.
	Notes: Record the presence of cortex and possible thermal shock damage, such as spalling and discoloration, in the notes.

For more information, see Nicholas Honerkamp and Norma Harris, "Unfired Brandon Gunflints from Santa Maria de Galve," *Historical Archaeology*, 2005, 39(4): 95-111;
T. M. Hamilton, *Colonial Frontier Guns*. Tennessee: Pioneer Press, 1987.

7.5.5 MISCELLANEOUS ROCKS

Unmodified pieces of rock that should not be considered artifacts often end up in artifact bags. They are generally not cataloged into DAACS. Each site will differ slightly based on geological formation; therefore it is important for the cataloger to have a general understanding of naturally occurring materials as opposed to materials that may have been transported to the site.

Category:	"Stone"
Form:	Each rock should be classified by size. Choose one of the following size categories: "Granule (2-4mm)" "Pebble (4-64mm)" "Cobble (64-250mm)" "Boulder (>250mm)"
Completeness:	"Incomplete"
Material:	Identify the type of stone, if possible. Unidentified stone should be cataloged as "Stone, unidentified," unless it can be identified as sedimentary, igneous, or metamorphic. In these cases, use the term "Stone, unid sedimentary," "Stone, unid igneous," or "Stone, unid metamorphic."
Manu Tech:	"Natural"

Rocks of the same material and that fall under the same size classification can be batched together. The only measurements that need to be taken are count and weight.

Certain stones found at Monticello near the house are known not to appear naturally; however, due to mostly to size, there is limited evidence for architectural use. This includes Alaskite, Limestone, Phylite and Slate. These stones should be cataloged with the Manufacturing Technique as "Quarried."

Catalog **"Mica"** as follows:

Category:	"Mineral"
Form:	Classify by size category: "Granule (2-4mm)" "Pebble (4-64mm)" "Cobble (64-250mm)" "Boulder (>250mm)"
Completeness:	"Incomplete"
Material:	"Mica/Micaceous"

Manu Tech: "Natural"

Catalog **"Lime"** as follows:

    Category: "Mineral"
    Form: Classify by size category:
               "Granule (2-4mm)"
               "Pebble (4-64mm)"
               "Cobble (64-250mm)"
               "Boulder (>250mm)"
    Completeness: "Incomplete"
    Material: "Lime"
    Manu Tech: "Indeterminate"

Mica and lime can be batched. The only measurements that need to be taken are count and weight.

7.5.6 PETRIFIED WOOD

Petrified wood can be batched. The only measurements that need to be taken are count and weight.

    Category: "Stone"
    Form: "Wood, petrified"
    Completeness: "Incomplete"
    Material: "Wood, petrified"
    Manu Tech: "Natural"

7.5.9 SLATE

    Category: "Stone"
    Forms: One of the following
        "Architectural, unid.": Larger pieces of slate used for roofing or other architectural construction. These pieces should have diagnostic attributes such as finished edges. Record the manufacturing technique as Quarried.

        "Tile, roofing": Use for pieces of slate that have clear evidence of being used as roofing tile, including as nail holes. Record manufacturing technique as "Quarried."

        Pieces of slate with no diagnostic attributes and occurs in geographical proximity to the site should be cataloged either as:
            "Granule (2-4mm)"
            "Pebble (4-64mm)"

> **"Cobble (64-250mm)"**
> **"Boulder (>250mm)"**
> Record the manufacturing technique as "Quarried."

> Pieces of slate with no diagnostic attributes but occur naturally at the site should be cataloged either as:
> **"Granule (2-4mm)"**
> **"Pebble (4-64mm)"**
> **"Cobble (64-250mm)"**
> **"Boulder (>250mm)"**
> Record the manufacturing technique as "Natural," but indicate in the notes if the pieces may be architectural.

> **"Slate, writing"**: Use for pieces of slate with evidence of writing.
> Record the manufacturing technique as Quarried. The color of this slate is often dark grey or black; it is often shiny rather than matte in appearance.

> **Completeness**: "Incomplete"
> **Material**:   "Slate"
> **Manu Tech**:   Determined by Form (see above)

Pieces of slate with no diagnostic attributes can be batched. The only measurements that need to be taken are count and weight.

See Section 7.3.5 on how to catalog Slate Pencils.

7.5.14 St. Bee's Sandstone

> **Category:**   "Stone"
> **Form:**   "Architectural, unid."
> **Completeness:** "Incomplete"
> **Material:**   "Sandstone, red, St. Bees"
> **Manu Tech:**   "Quarried"

In the Notes section, record that the stone(s) is/are "St. Bee's sandstone from Cumbria, England." Measure thickness if the "top" and "bottom" surfaces are intact. Batch if only one or none of these surfaces are present.

7.5.15 Red Sandstone

> **Category:**   "Stone"
> **Form:**   "Architectural, unid."
> **Completeness:** "Incomplete"
> **Material:**   "Sandstone, red, unid."

Manu Tech:	"Quarried"

Term applies to red sandstone that cannot be identified as St. Bee's, or that are known not to be St. Bee's. Encompasses all reddish-purple sandstones that were used for many architectural purposes.

7.5.16 BLUESTONE

Category:	"Stone"
Form:	"Architectural, unid."
Completeness:	"Incomplete"
Material:	"Bluestone"
Manu Tech:	"Quarried"

Bluestone encompasses all blue-gray sandstones that were used for many architectural purposes. For example, at Drayton Hall in South Carolina, the Curator of Historic Architectural Resources believes that the bluestone was used in construction of the house basement.

7.5.17 TUFF, DIFFERENTIALLY CRYSTALLIZED

Category:	"Stone"
Form:	"Architectural, unid."
Completeness:	"Incomplete"
Material:	"Tuff, Differentially Crystallized"
Manu Tech:	"Quarried"

Rock from the vicinity of Asheboro, North Carolina, formed when ash deposits became silicified. The materials in this deposit vary in color and quality. It is also sometimes called Welded Vitric Tuff, which occurs within the same formation in a variety of colors such as: green, brown, and blue or dark blue. This DCT variety is differentially crystallized, which when weathered produces a distinctive speckled appearance as small pockets chemically break down and sometimes erode faster than the surrounding matrix. When freshly broken, the material appears dark blue or grey and weathers to a lighter grey with the small pockets appearing as white speckles.