



DEPARTMENT OF ARCHAEOLOGY

A Guide to Ceramic Identification and Artifact TPQ

2019

TABLE OF CONTENTS

CERAMIC CLASSIFICATION AND IDENTIFICATION	4
Vessel Forms	5
Utilitarian	5
Teawares	6
Table/dinner wares	6
Ware Types	7
Earthenwares	7
Coarse earthenwares	7
Refined earthenware	14
Stonewares	18
Porcelain.....	23
Other “Finely Turned” English Stonewares, Earthenwares, and Porcelains	25
CERAMIC WARE TYPES AND DECORATIONS FLOW CHARTS	28
GLOSSARY OF CERAMIC TERMS	30
GLOSSARY OF CERAMIC DECORATION	34
Common Molded Edge Decoration	34
Shell Edge Rim Patterns	35
Banded Decoration.....	37
Hand-painted Motifs and Genres	39
FACTORY-MADE SLIPWARE.....	41
Transfer-Printed Patterns	42
Blue Willow	43
Pinwheel.....	43
Wild Rose.....	43
Other Motifs and Patterns	44
Chinese Porcelain.....	44
Bands and Lines	46
MANUFACTURING DATE RANGES	49
Ceramic Wares	49
Coarse Earthenware	49
Tin-Enameled Wares.....	49
Whieldon-Type Wares	49
Creamware	49
Pearlware.....	49

Whiteware	50
American Stoneware	50
German Stoneware	50
British Stoneware	50
White Salt Glazed Stoneware	50
Chinese Porcelain.....	51
English Porcelain	51
Other English finely-turned Stonewares, Earthenwares, and Porcelains.....	52
Decoration on Refined Earthenwares	52
Glass.....	53
Tableware.....	53
Bottles and Containers	54
Miscellaneous Glass.....	55
Metals.....	56
Metal Objects and Metalworking Technologies	56
Ammunition	57
Colonial and United States Coinage	57
Synthetics/Rubber	59
Camera-related	60
Miscellaneous.....	60
SELECTED REFERENCES.....	62
NOTES.....	64

CERAMIC CLASSIFICATION AND IDENTIFICATION

This overview surveys the pottery, or ceramic ware types, commonly encountered on historic period sites of the eastern United States from the colonial and early Federal periods. Most of these wares were used for the preparation, storage, or consumption of food and beverages. More specifically, we examine those ware types found in areas colonized by England, rather than regions of initial French or Spanish settlement such as Canada or Florida. Emphasis is placed on ceramic wares most common from about the 1750s through the first quarter 19th century, the time frame that encompasses Thomas Jefferson's plantation. This overview represents a compilation of knowledge garnered by historical archaeologists over a period of decades; the majority of ware descriptions presented below derive from William Pittman's "Ceramic Identification" checklist, used by the Colonial Williamsburg Foundation's Department of Archaeological Research in Williamsburg, Virginia.

Ceramic sherds are ideal artifacts for a number of reasons. Because they are easily broken, ceramics are readily discarded, and although breakable, ceramic sherds prove to be virtually indestructible once they become part of the archaeological record. They might break into still smaller pieces, but the fragments remain. Pottery has long assumed a variety of uses, from industrial crucibles and sewage drains to smoking pipes and fine dinner services; hence ceramic sherds are found in one form or another on nearly all historic period archaeological sites. Finally, most ceramic wares produced during the colonial and Federal periods are datable, i.e., we can affix them chronologically in time. We know approximately when certain types of pottery began to be produced, how long they were in production, and about when production ceased. In the case of some wares (e.g., most utilitarian wares), the range of production and use stretches for a century or more, and the chronological date is a relative marker at best. Other wares, however, are more tightly dateable; this is especially true of the refined earthenwares and stonewares produced in England from about the 1720s through the 1820s. During that period, revolutions in technology and consumer practices combined to create a series of distinct, but relatively short-lived, ware types that have become reliable dating tools for the archaeologist.

Determining the sequences of occupation on a site involves many different variables, and usually a number of dating techniques are used to sift through the archaeological evidence. However, the TPQ dating concept most often provides a base upon which all other inferences are built, and against which other evidence is weighed. This concept derives from knowledge of ceramic and other artifact chronologies. TPQ stands for *terminus post quem*, the "date after which" a stratigraphic layer was deposited: this date cannot be earlier than the beginning date of manufacture for the most recent artifact found within the layer (Noel Hume 1969:68-69). For example, a depositional layer containing fragments of white salt-glazed stoneware (beginning manufacture date: 1720), English soft-paste porcelain (1744), and pearlware (1775) has a TPQ

date of 1775, because, logically, the layer could not have been deposited before pearlware was made.

Following is a brief checklist of ceramic vessel forms, followed by a description of the ware types that generally comprise a large part of the archaeological record on historic period sites. Form categories are functional groupings based on characteristics of vessel shape. This checklist is simply meant to acquaint you with some of the terminology you will encounter. Ware types are based on physical characteristics of fabric and glaze, and include groupings such as coarse earthenware, refined earthenware, stoneware, etc. Make use of the **Glossary of Ceramic Terms** (pp. 29-32) for an explanation of terms found throughout this manual.

Vessel Forms

Traditional archaeological nomenclature for pottery vessels includes utilitarian wares, tea wares, and table/dinner wares. These groups overlap, but there are general definitions for each that are useful.

Utilitarian

Utilitarian vessels are used for food production and, to a lesser extent, food storage. They include bowls, milk pans, storage jars and bottles, and pipkins:

- **MILK PANS** are wide, shallow bowl forms with flat bases, sloping walls and wide, flat rims; the latter have pouring spouts that often are simple thumb impressions. The bases sometimes have a simple rounded heel. These pans were used to separate cream from milk.
- **STORAGE JARS** are tall, wide-mouthed vessels with flat bases. Eighteenth-century jars usually expand below the mouth into a rounded shoulder before tapering to a slightly smaller base; straight-sided (cylindrical) shapes are most common during the nineteenth century.
- **STORAGE BOTTLES** have a short, constricted neck, a narrow mouth with thick lip or rim, and shoulders that taper to a flat base. There is sometimes a single loop handle at the neck and shoulder.
- **PIPKINS** are relatively small, wide-mouthed cooking vessels that stand on three legs and have a single cylindrical, usually hollow handle projecting at a right angle from the body or rim. Think of a deep bowl with three legs and a handle.

Milk pans are most often seen in coarse earthenwares; storage bottles and jars usually are stoneware. Pipkins are most often made of coarse earthenware, but stoneware examples are not uncommon.

Teawares

Teawares include teapots, tea bowls, saucers, slop bowls, sugars, and cream jugs; there are also demitasse cups, coffee pots and chocolate pots. Mugs and tankards are considered to be Tavernwares, which are a category of Tableware. Teawares were made in porcelain, delftware, refined earthenwares, white salt-glazed stoneware, and other finely-turned stonewares and earthenwares.

- **TEA POTS** are most often globular in shape; lids have a hole to let steam escape and usually a seating ring.
- **TEA BOWLS** are handle-less cups with low foot rings, used almost exclusively throughout the seventeenth and eighteenth centuries for imbibing tea.
- **SAUCERS** of the seventeenth and most of the eighteenth century tend to be deep, often resembling shallow bowls; period examples do not have cup rings (that circular indentation where the cup rests).
- **SLOP BOWLS** were used to rinse the tea bowl free of tea fragments between servings, and are simple, small to medium-sized bowl forms.
- **HANDLED TEA CUPS** began to appear during the third quarter of the eighteenth century.
- **SUGARS** are often small imitations of the accompanying teapot, minus the handle and without a steam hole in the lid. Some also had two small handles. **CREAMERS** are small pitchers, usually pear-shaped. Sugars, creamers, and teapots were sold in sets by the mid-eighteenth century (before the advent of matched dinner services in the last quarter of the eighteenth century).
- **COFFEE AND CHOCOLATE POTS** tend to be tall and straight sided or pear shaped. Spouts are longer than those for teapots.

Table/dinner wares

Tablewares include vessels used for food service and consumption. They include plates, soup bowls, and serving vessels (anything from fish and meat platters to pitchers and lidded tureens). "Tavernwares" such as mugs and tankards are also considered to be Tablewares. Tablewares range from coarse earthenwares and stonewares to refined earthenwares and porcelain. Matched dinner services do not appear until the last quarter of the eighteenth century.

Finally, remember that there are trinket trays, chamber pots, small salve pots and other miscellaneous forms as well as fragments of ceramic figurines and toys that are occasionally recovered from archaeological sites.

Ware Types

Ceramic wares usually are broken down into three main categories: *earthenware*, *stoneware*, and *porcelain*. Earthenwares have a clay body that is more or less porous and requires some sort of glaze, or surface coating, to render it impervious to moisture and liquids. Stonewares and porcelains, by contrast, have dense, highly fired clay bodies that are impervious to moisture and do not require a glaze, though they usually are glazed for decorative purposes. This difference in porosity results both from the type of clay used and from the firing temperature in the kiln. What this means in practical terms to the archaeologist during identification is that the broken, dry edge of a sherd will stick to the tongue if it is an earthenware and will not stick if it is stoneware or porcelain.

With the notable exceptions of Chinese porcelain and German stoneware, almost all ceramic wares used during the colonial and Federal periods were made in England. There were a few American potters who produced utilitarian earthenware and stoneware vessels during the colonial period, but this was only on a limited scale—though by the beginning of the nineteenth century, American stonewares had supplanted English utilitarian wares.

Earthenwares

Historical archaeologists generally divide earthenwares into three groups: *coarse earthenwares*, *delft or tin-enameled earthenwares*, and *refined earthenwares*.

Coarse earthenwares, or coarsewares, are almost always found in the form of utilitarian vessels, although coarse earthenware porringers, pitchers, platters, and shallow dishes are not uncommon. Many coarse earthenware vessels were only glazed on the interior. By and large, they were cheap, strictly functional containers, and the potter expended no more time and material on each than was necessary. These vessels usually were thick-walled and, in the case of milk pans, often warped. Nevertheless, one often finds stylish rims and bases, incised lines, and simple slip-trailed designs that suggest some consideration of aesthetic quality.

The lead glaze used to coat coarse earthenware vessels causes the underlying reddish body to appear warm brown in color. Often bits of ground iron or manganese are suspended in the glaze and these appear as brown or black dots or streaks. Sometimes metallic oxides were used to color the glaze. Depending on the ware, one might find spots of brown or green, a translucent, tinted glaze, or an opaque, solid black glaze. Some coarse earthenwares were decorated with white slip, which appears yellow beneath the lead glaze.

- **RED AGATE.** A finely potted red clay body wedged with buff-colored clay; the resultant marbled, or agatized effect shows through as brown and yellow beneath a clear lead glaze. Vessel rims sometimes have a rouletted band of white slip that appears yellow beneath the glaze; bowls are often decorated with linear and checkerboard patterns of

white slip that appears yellow beneath the lead glaze. Bowls, shallow dishes, platters.
Date Range: 1750-1810.

- **BUCKLEY.** Produced in the Buckley district of Wales. This coarse earthenware has a brick red body mixed with a smaller amount of buff-colored clay that appears as thin streaks, less often as tiny nodules; look for the distinctive, agatized body. The opaque lead glaze is black or very dark brown; on rare examples the glaze is translucent and caramel-colored. Milk pans typically have a thick rim with a unique double-lipped exterior profile; the ware is otherwise undecorated. Also comes in storage jars, bowls and other utilitarian forms. **Date Range: 1720–1775.**



- **REDWARE.** A generic name used for lead-glazed, red-bodied coarse earthenwares. For a sherd to be identified as Redware at Monticello, the body color must match one of the following four Munsell color codes: 2.5YR 5/6, 5YR 6/6, 5YR 5/10, and 2.5YR 4/10. This allows us to standardize the manner in which reddish-color ceramics are identified. The body is not agatized like Buckley.

Red earthenware vessels were produced primarily in England before the 18th century; however by the later 18th and throughout the 19th centuries, red earthenwares were produced in both England and America.

Most of the above types are also red-bodied, but differ in their clay composition.

Locally produced redwares include those from Tidewater Virginia, such as the distinctive wares of Yorktown potter William Rogers are common. Redware made in Pennsylvania and the mid-Atlantic colonies often includes green, red, and yellow slips or glazes. Shenandoah Valley or Piedmont area redwares have attributes such as inclusions of quartz and hematite. Redwares decrease in popularity during the Monticello occupation because by the late 18th and early 19th centuries American stonewares are more readily available. **Date Range: 1600–1900.**



Most redware is catalogued as just “Redware,” but a few specific types include:

- Red Sandy Ware. The grainy, clay body of this English coarse earthenware is red to orange in color; in thick-walled vessels it often has a grey core. There are no visible inclusions in the paste despite its texture. The clear lead glaze usually appears scratched or abraded, with these worn areas of glaze appearing yellow in color. Undecorated utilitarian wares. **Date Range: 1600–1800.**



- Flowerpot. Not a discrete ware type, but a term for unglazed garden vessels. Usually undecorated, though fluted rims and scored shoulders are sometimes seen on sites. Date Range: post 1600–present.

- Yorktown-type/Rogers. Produced by William Rogers of Yorktown, VA, and restricted primarily to the Tidewater/Chesapeake region. Pinkish buff to red clay body with varying amounts of hematite temper. The clear lead glaze ranges from brown to a soft caramel color, and is often dotted or streaked with dark brown or purplish flecks. Undecorated utilitarian wares, tankards, pitchers. Rogers also made stoneware, discussed later. **Date range: 1720–1750.**



- Black-glazed redware. The body is brick-red, usually covered by a glossy black or sometimes a very dark brown lead glaze. Forms range from bowls and other utilitarian wares to tavern and tea wares, including strap-handled pitchers, chamber pots, mugs and teapots. Undecorated save for rudimentary cordoning on some tavern and tea wares. This is not a ware type in the DAACS database, but is a term used by scholars and collectors. **Date Range: 1700– 1900.**

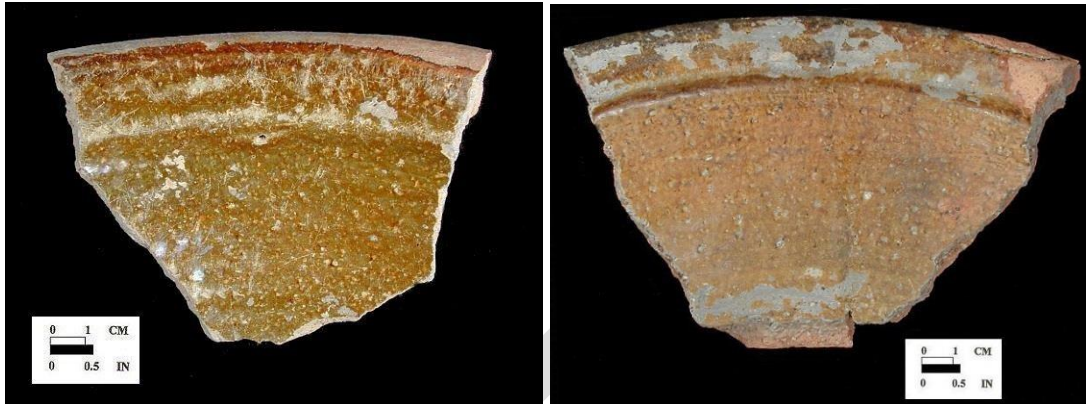


- **COLONOWARE.** An unglazed, low-fired ware with burnished exterior surfaces. The soft clay body ranges in color from tan to grey hues on examples from the Chesapeake. Less-studied Piedmont sherds appear to range from a dark grey to reddish-brown. Colonoware is tempered with crushed shell, sand, or hematite, and the tempering agent often varies according to region. In Virginia, general forms are of English origin. Occurs in utilitarian wares as well as plates, bowls, and cups. Bowls and dishes frequently have scalloped or cut rims. Handles are attached by inserting a tenon-like “plug” into the body wall. The debate rages whether the makers were Native Americans or African Americans or both. Colonoware is seldom seen at Monticello, but fragments have been recovered from Shadwell. **Date Range: 1650–1830.**



- **IBERIAN WARE.** Most often seen in the form of large (e.g., 3 feet tall), undecorated storage jars used to transport olive oil and dried goods. The body is thick with obvious potting rings on interior surfaces; it is dusty red to pinkish brown in color and usually includes granules of a white, chalk-like temper or, less often, sand. Exterior surfaces are not typically glazed, but often have traces of what appears as a chalky, white wash. Low, crescent-shaped handles are found on the shoulders. Interior surfaces are sometimes treated with a dark brown lead glaze, indicating that the vessel was used to transport liquids. This glaze is almost always heavily spalled on recovered sherds. Iberian jars have wide mouths with thick rims, no neck, expand at the shoulder and taper to a flat or conical base. Lids, rarely recovered, are unglazed slabs of clay that are roughly circular. Smaller Iberian jars (e.g., 18 inches in height) are also found; body walls are noticeably thinner than in their larger counterparts. **Date Range: 1600–1780.** Flat bases are more common after 1745. Conical bases tend to be earlier.
- **BIOT.** Biot is a French coarse earthenware. It was primarily exported in the form of very large storage jars with round rims, typically handbuilt with coils. They often have white slip, producing a glaze that may appear opaque, in buff to pale yellow or olive green color. Vessels are typically glazed on the interior only, with some spillover onto the exterior. The paste is buff to pink, sometimes with faint marbling, and may exhibit uneven oxidation layers in cross-section. Sherds are very thick (>10mm). There are abundant inclusions such as large hematite and limestone (white rock) nodules. **Date Range: 1700- 1800.**
- **NORTH DEVON GRAVEL TEMPERED.** Produced in and around North Devonshire, England; the locality is sometimes referred to as “West of England.” The clay body is pink to grey in color, soapy-smooth in texture, and with frequent and obvious inclusions of angular

particles of gravel. This gravel temper is often visible on exterior and interior surface. The translucent lead glaze is usually dark olive green- to brown-tinted. The ware is undecorated and is most often seen in milk pans, bowls, storage jars. **Date Range: 1600– 1775.**



- **SLIPWARE.** This term colloquially denotes a range of slip-decorated coarse earthenwares; they occur throughout the colonial and early Federal periods.

- Red-bodied vessels with slip-trailed decoration, some having splotches of color beneath the glaze (which usually bear no relation to the slip design): splashes of green (copper oxide) is seen most frequently. Pennsylvania slipware in particular is characterized by colorful additions of copper green, or by marbled slips and sgraffito-decorated slip. Bowls, plates, and other utilitarian wares. Slipwares from Pennsylvania and the Valley of Virginia continue well into the 19th century.



- Red-bodied vessels with marbled or “joggled” slip decoration. Usually seen in platters and shallow bowls whose interior surfaces are covered with fields of white and red slip that have been combined (“marbled” or “joggled”) to produce a pattern not unlike the pieces of a puzzle; the slips of course appear brown and yellow beneath the lead glaze. Rims or edges often are “crimped,” that is, cut in a sharply scalloped design that resembles a piecrust edge.

- Staffordshire/North Midlands Slipware. This distinctive yellow coarse earthenware is sometimes referred to as “combed,” “combed and dotted,” or “dotware.” The lead-glazed, buff body includes a sparse peppering of dark inclusions; it is covered with a white slip (engobe), into which trails and/or dots of red slip (appearing brown beneath the lead glaze) have been introduced. The most common forms are combed platters and shallow bowls, usually having crimped edges, and handled cups or mugs. The latter usually have dotted rims (the dots are about 1 cm in diameter); several thin, parallel trails of slip encircle the bulbous bodies of these drinking vessels, and the lead glaze usually does not extend to the foot. A seldom-seen variant of this buff-bodied ware is covered with a dark brown engobe decorated by yellow (white) dots of slip. Another variant is a red clay body agatized with lesser amounts of buff-colored clay; these vessels are covered with a white engobe through which trails of slip are combed, and flat form vessels usually have crimped rims. “Dot” wares range from 1600–1770, and combed dishes from 1670–1795.



- **MANGANESE MOTTLED.** A fine, buff-bodied ware covered by a yellowish lead glaze mottled with dark streaks or speckles, although coarser body fabrics were also produced. Vessels are often tankards or other table wares, but other forms were made as well. Documentary evidence suggests that this ware was being produced in Staffordshire by the mid-1670s. Archaeologists originally assigned to Manganese Mottled a manufacture range in Staffordshire of ca. 1680 – 1750, but more recent evidence suggests that it was still being made at least as late as 1780. (www.jefpat.org)



Coarse earthenwares that are restricted in date to the seventeenth century and are not likely to be recovered in the (then-unsettled) Piedmont region include:

- **NORTH DEVON PLAIN**—same as North Devon Gravel Tempered but without the gravel.
Date range: 1600–1710.

- **NORTH DEVON SLIPPED/SGRAFFITO WARE**—red bodied covered with a white slip into which patterns are incised, revealing the underlying, darker body. **Date range: 1600–1710.**
- **WHITE SANDY WARE**—cream or pale tan body with hematite inclusions and a lead glaze that appears light tan to mustard-yellow with forms that include thick utilitarian bowls and pans. **Date range: 1600–1800.**
- **TUDOR GREEN/SURREY WARE**—cream to pale grey body with apple-green glaze.
- **NORTH ITALIAN SLIPWARE**—red body with green, yellow, brown marbled slip, lead glazed: finely-potted forms. **Date range: 1610–1675.**
- **METROPOLITAN SLIPWARE**—red body decorated with white slip, lead glazed.
- **WROTHAM SLIPWARE**—red body with dark brown glaze, with sprig-molded and thick slipped decoration.

See Noel Hume (1969) for additional descriptive and chronological information on these ware types.

Tin-enameled earthenware includes vessels from England and Holland commonly referred to as delftware, as well as faience from France and Italy, and majolica from the Iberian Peninsula. Punchbowls, tea wares, plates, bowls, chamber pots, drug jars and salve pots are common; tankards, pitchers, and posset pots are less frequently encountered. The lead glaze is made an opaque white by the addition of tin oxide, hence the name tin-enameled or tin-glazed earthenware. The glaze color is typically grayish- white or grayish-blue, but can also be very pale pink or purple. The glaze is fragile and readily flakes off. The clay body is low-fired and easily scored with a fingernail. The popular or collectors' term "Delft" comes from the Dutch town of that name where a lot of the ware was produced during the second half of the eighteenth century. From that stems the more accurate term "delftware," which collectively refers to tin-enameled ware from England and the Netherlands.

- **DELFT OR DELFTWARE.** The soft clay body is most often buff or pinkish-buff in color, but can range from salmon to pale yellow. The opaque white glaze usually has a pale blue tint; it can also be a grayish white. Cobalt blue, painted designs are most frequent, but polychrome painted decoration is not uncommon. In addition, a distinctive palette of pastel colors referred to as *Fazackerly* enjoyed a brief period of popularity. Decorative motifs range from



floral to landscape designs. Occasionally one sees admonitions and commemorative statements. Almost all tin-enameled earthenware encountered on historic period sites is assumed to be English in origin. **Date Range: 1600–1802; Fazackerly, 1750–1770.**

- **FAIENCE.** French; the grainy body is most often buff in color, but like most tin-enameled wares, it can range from deep salmon to nearly cream. Two readily identifiable varieties are Rouen and Nevers. Rouen has a bluish-white tin-enameled glaze on interior surfaces, and a deep brown lead glaze on the exterior. Usually seen in platters, bowls, and mugs. “Debased” Rouen comes in very thick body forms, with a narrow blue and black border on interior rims; platters often have scalloped edges. Nevers-type wares have a deep blue glaze decorated with white or bluish-white and/or polychrome painted designs. **Date Range: 1700–1800; debased Rouen, 1775–1800.**



Refined earthenware was developed in the mid-eighteenth century by English potters, the most influential being Thomas Whieldon and Josiah Wedgwood, who worked in partnership during the 1750s before Wedgwood struck out on his own. These refined earthenwares had a “cream-colored,” or off-white to white, clay body that, while still porous, was harder and denser than coarse earthenwares and could be thinly potted. “Cream-colored” and “off-white” bodies just look white. Refined earthenwares most often took the form of tea wares, table/dinner wares (plates and serving vessels), and chamber pots. Earlier types sported colored glazes, decorative sprigging, and molded rims (pp. 30-31; most of these early “wares” actually describe decorative techniques. Later wares, such as creamware, pearlware, and whiteware, generally had molded rims and were painted or transfer-printed. Making a distinction between these later wares is often problematic; however, decorative techniques of the late-eighteenth and nineteenth centuries proliferated, and they are datable (see **Manufacturing Date Range List**). When present, decorations of this time period are far more useful for establishing chronological context than the ware itself.

These decorative techniques include (see also **Glossary of Ceramic Decoration**, pp. 33-48:

- ❖ *annular decoration*, consisting of linear or geometric patterns of colored slips; annular patterns were often applied in combination with
- ❖ *engine-turning*, by which linear or geometric patterns were lathe-cut into the clay body
- ❖ *common cable polychrome slips* that mimic finger-painted trails and circles, and which usually were combined with annular decoration
- ❖ *dendritic motifs*, i.e., branching, fern or feather-like patterns usually bordered by annular decoration; and
- ❖ *luster decoration*, referring to metallicized glazes on pearlwares, whiteware, and finely-potted redware; sometimes termed “luster ware.”

Contemporary potters called annular wares, with or without common cable and dendritic patterns, “dipt” wares.

Early refined wares:

- **WHIELDON-TYPE WARE: CLOUDED and TORTOISESHELL WARE.** Associated with Thomas Whieldon’s factory. The lead glaze is splashed with transparent colors. Clouded ware sported a mixture of steel or grayish blue, green, yellow, and brown tints; Tortoiseshell ware had splotches of brown over the cream body. Tea and tablewares with molded vessel rims borrowed from the white salt-glazed stoneware repertoire (see pp. 23). **Date Range: 1740–1775.**



- **REFINED AGATEWARE.** Rare. Also associated with Whieldon. The cream-colored clay body is wedged with strands of red and/or blue clay to produce an agatized body, so the pieces are basically off-white with thin red and blue marbling. Tea services and tablewares, including cutlery handles. **Date Range: 1740–1775.**



- **GREEN-GLAZED.** Also called **WEDGWOOD'S GREEN GLAZE**; developed in partnership by Whieldon and Wedgwood. The same creamcolored body as above but covered with a lustrous green lead glaze. Tea and tablewares with molded vessel rims borrowed from the white salt-glazed stoneware repertoire (see pp. 23). **Date Range: 1759–1775.**



- **CAULIFLOWER WARE.** Another product of the Whieldon/Wedgwood partnership. Creamcolored body molded in the shapes of fruits and vegetables, especially pineapples and cauliflowers. The lead glaze is tinted green, yellow, and/or a light caramel brown to correspond to the appropriate sections of the molded vessel. Most often used for tea wares. **Date Range: 1760–1775.**

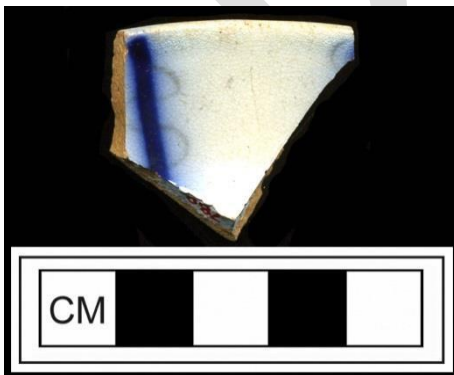


Later refined wares:

- **CREAMWARE.** Successfully marketed by Josiah Wedgwood as “Queens Ware.” Creamcolored body covered by clear lead glaze that, *in puddled areas such as foot rings, appears yellow or olive-yellow.* Overall, early creamware tends to be a deeper yellow or darker cream color than in later years. Molded rims, including “feather edged” and neoclassical borders, are common decorative techniques in early vessels (see pp. 30-31). Hand painted overglaze enamel colors, over and underglaze transfer-printing, and annular style decoration are also seen, particularly in later years. Engine-turned bodies and sprig molding are seen throughout the span of this ware type. Forms include tea and table services as well as chamber pots and other utilitarian wares. **Date Range: overall, 1762– 1820; darker cream-colored wares, 1762– ca.1780; paler ware, ca.1775–1820.** See **Manufacturing Date Range List** for dating by decorative technique.



- PEARLWARE.** An off-white clay body with a clear lead glaze that has a slightly bluish tint, most evident where the glaze has pooled, as in foot rings, etc. Decoration includes molded rims, with “shell-edged” the most common. These rims were painted blue and, to a slightly lesser extent, green. Other colors are rare, but were manufactured. By the nineteenth century, vessel rims often were unmolded, with edging merely painted on, or the painting consisted of a hastily applied band of color that did not follow the molded rim pattern. Blue and polychrome hand painted designs, transfer-printed patterns, and annular, common cable, and dendritic motifs are very common, often in combination with engine-turned bodies and sprig molded elements. Table and tea wares, chamber pots and some utilitarian forms. **Date Range: 1775–1830.** See **Manufacturing Date Range List** for dating by decorative technique.



- WHITEWARE.** Refined earthenware that more or less evolved from pearlware. The body is very dense and white with a clear glaze that often appears thick and glassy, with overall, large-patterned crazing. When pooled, whiteware glazes sometimes appear blue tinted, but note that the overall surface is more or less white and be aware of the crazing. In general, note all characteristics of the sherd, especially decorative technique, when distinguishing between whiteware and pearlware. Transfer-printed designs are the most commonly seen form of decoration up to c.1860, undecorated pieces after that. Polychrome, hand-painted decorations in the cool color palette were used on some table and tea wares c. 1829–1920. Embossed (molded, unpainted) vessel rims are common; sponged and annular decoration are also found on whiteware. Vessels include all tea, table, and utilitarian forms. **Date Range: post 1820.** See **Manufacturing Date Range List** for dating by decorative technique.

- **IRONSTONE AND WHITE GRANITE WARES.** The clay body is harder and less porous than whiteware. Vessels are often thick and clunky, particularly in the case of ironstone and white granite. The appearance of these wares is usually very white, sometimes grayish white. applied to white refined wares in addition to yellow wares. Ironstone and white granite had alkaline glazes. Vessels include all tea, table, and utilitarian forms. **Date Range: post 1840.** See **Manufacturing Date Range List** for dating by decorative technique.



- **YELLOW WARE.** American yellow ware has a dense, yellow to buff colored body with a clear alkaline glaze. English variety has a cream to buff body with yellow-tinted glaze. Annular decoration is most often seen, though sponge-printed and Rockingham glazes are not uncommon. Utilitarian (kitchen) and some serving vessels. Rockingham glaze (sometimes called Bennington, after one location of manufacture) has inclusions of clear manganese that creates a “runny,” caramel-spotted effect; it is seen on molded hollowware vessels, with low relief scenes such as “Rebecca at the Well,” and includes coffee pots, pitchers, jugs, spittoons. Flint-enamel colors appear identical but were applied to white refined wares in addition to yellow wares. **Date Range: 1825–early 20th c.; Rockingham-type glaze, 1830-1940; flint-enameled colors, 1848-1940.** See **Manufacturing Date Range List** for dating by decorative technique.

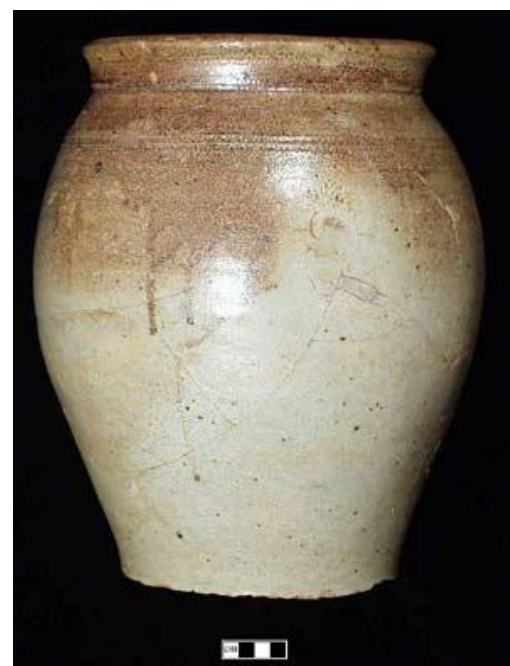


Stonewares

Throughout the seventeenth and much of the eighteenth century, up until the American Revolution, the majority of stonewares were imported from England and Germany. Though American potters began producing stonewares during the 18th century, with William Rogers’s 1725 Yorktown pottery being one of the most prolific in the Tidewater region, they are rarely seen in the archaeological record until the fourth quarter of the 18th century. Documents indicate that stoneware potteries were established in Virginia’s Shenandoah Valley as early as the 1750s, though most did not appear until the fourth quarter of the century. By c.1800, they

were supplying local needs for utilitarian wares, having taken the place of British coarse earthenwares. Stonewares are almost always salt-glazed, which is colorless and imparts a pitted, “orange-peel” effect to vessel surfaces. This effect is more pronounced on the exterior of hollow forms than on interior surfaces. Some later wares employed alkaline glazes, which have a thick, glassy, and runny appearance and, while they can be different colors, green is the most prevalent.

- **WESTERWALD, OR RHENISH BLUE AND GREY.** German saltglazed stoneware with a very dense clay body, light to medium grey in color. Decorated with incised and stamped flower motifs, checks, and abstract designs that are usually filled with a rich cobalt blue. Manganese (purple) is found along with the cobalt blue in earlier vessels. Sprig molding is also common; usually a blue ring of color encircles the grey sprig. Tankards and mugs usually cordoned above the base and below the rim. “Chatter” marks (sharp, narrow, slightly raised parallel lines) from the potter’s tool are often evident on exterior surfaces of bulbous-bodied chamber pots. Most often seen in tankards, mugs, chamber pots, and, in earlier contexts, reeded, cylindrical-necked serving jugs. **Date Range: post 1600–c.1775; blue and purple, 1650–c.1725.**
- **BRITISH STONEWARE.** This broad term is used to encompass any stonewares that are identifiable as British, but unidentifiable as any specific types such as Fulham. These are typically brown, salt-glazed vessels, although the brown color may not cover the entire vessel; some areas may appear more grey-tan. **Date Range: 1671-1915.**



- **BRISTOL-GLAZE STONEWARE.** These vessels are decorated by dipping pale, tan-colored bottles in two glazes, one clear and the other a pale yellow color. The bottles were then fired to stoneware temperatures, but were not salt-glazed. This process resulted in a two-tone, vitreous glaze. Most commonly found on beverage bottles, such as ginger beer and soda water bottles. Developed by Anthony Amatt at the William Powell pottery in Bristol. **Date Range: 1835-1915.**



- **FULHAM.** English brown, salt-glazed stoneware most commonly encountered on eighteenth century colonial sites. Vessels are dipped in iron oxide (brown), which often covers *only* the upper half of the body. The brown exterior has a pronounced stippled appearance. The clay body is medium gray in color and appears darker and somewhat grainier than German stoneware. A salmon-colored wash usually coats interior surfaces. Forms include storage jugs, bottles, tankards and mugs. The latter two forms are cordoned above the base. Government capacity stamps impressed in many pieces. Produced in Fulham, Southwark, and Bristol. **Date Range: 1671–1800.**



- **NOTTINGHAM.** English brown stoneware having an even, lustrous or metallic brown-slipped exterior. A thin layer of white slip that can be seen only in crosssection lies between the brown exterior and the tan, compact clay body. Finely potted tavern vessels such as mugs, tankards, pitchers, as well as bowls, coffee and teapots. Rustication, or tiny fragments of clay applied to exterior surfaces, resulting in an appearance not unlike grated coconut, is a common decorative technique. The ware is salt-glazed, though the characteristic pitted effect is not evident here. **Date Range: 1683–1810.**

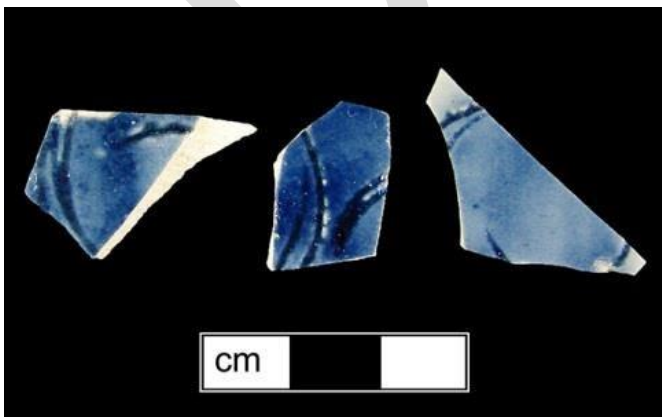
- **STAFFORDSHIRE BROWN.** Virtually identical to Nottingham stoneware save for the absence of an underlying white slip. The clay body is tan to medium gray in color. Forms are the same as in Nottingham. **Date Range: 1700–1800.**



- **DIPPED, or SLIPPED WHITE SALT-GLAZE.** A light grey to tan -bodied stoneware that is dipped in white slip, or engobe. Hollowware rims, spouts, and the tops of handles often are covered with brown oxide slip. The pitting associated with salt glazing is not always evident here. Seen in rather thick-bodied tavern wares and initially thought to be an early version of White Salt-Glazed Stoneware. **Date Range: 1715–1775.**
- **WHITE SALT-GLAZED STONEWARE.** English stoneware with a nearly white, dense clay body; the salt glaze produces a finely pitted surface. White salt-glazed stoneware (“wsg”) could be finely potted and was used extensively for table and tea wares, as well as for tavern ware and chamber pots. Molded vessel rims, including a distinctive repertoire of plate rims, are very common as are sprigged decorations. Overglaze polychrome enamel colors are also seen. **Date Range: 1720–1805.**

Several distinctively decorated versions include:

- **Scratch Blue and Scratch Brown.** White salt-glazed stoneware with incised designs, usually floral, filled with cobalt or iron oxide slip; in “debased” versions the potter did not completely wipe the excess slip from the surrounding surfaces, resulting in color outside the incised designs. Tavern wares, chamber pots. **Date Ranges: Scratch Brown, 1720-1730; Scratch Blue, 1744–1775; Scratch Blue Debased, 1765–1790.**



Debased scratch blue



Scratch blue

- **Little's Blue.** White salt-glazed stoneware hollow forms with exteriors entirely covered by a solid blue slip. Occasionally decorated by gilded designs. The color is uniform and surfaces are smooth; seen in tea wares. **Date Range: 1750–1765.**



- **Slip-casting.** The slip-casting process allowed for crisp, finely detailed molded patterns; which are visible in reverse on the interiors of these extremely thin-bodied vessels. Seen in tea wares and small serving vessels such as sauceboats. **Date Range: 1745-1805.**

- **Transfer-printed.** Black transfer-printed designs were used for only a brief period. b
- **Molded plate rim patterns.** Include Dot, Diaper, and Basket weave; Bead and Reel; Barley; Queen's shape; Royal pattern; and Feather-edged. **See page 30.** **Date Range: 1740-1775.**



- **Enameled colors.** Overglaze hand painted designs, usually floral motifs. **Date Range: 1746-1805.**

AMERICAN STONEWARE. The dense clay body is light brown to brown, or medium to dark grey in color. Surfaces are usually salt-glazed, but during the nineteenth century a dark, glossy brown engobe, called Albany Slip, often was applied to interiors of hollow forms. Alkaline glazes became common after the mid-19th century, originating with potters in the Carolinas. Hand painted or stenciled designs in cobalt blue are usually simple floral or stylized motifs. Some simple decorations, such as dots, on early vessels were applied with slip, using a slip-cup. However, many vessels are undecorated. Forms are utilitarian, such as storage jars and bottles, butter churns, bowls, and chamber pots. In the Chesapeake region, William Rogers of Yorktown, VA (1720–1750) produced stoneware that tends to have a dark grey body, partially dipped in a brown to dark brown iron oxide and salt-glazed. Elsewhere in the state, dark grey and brown stonewares from the Shenandoah Valley commonly are seen beginning late in the eighteenth and early nineteenth century, continuing until the early 20th.

Date Range for non-Yorktown: post-1750



Porcelain

Porcelains are impervious to liquids, are nearly vitrified, and are generally translucent. Technically they are classified as soft-paste and hard-paste, though there are a number of variations that fall in-between. Hard-paste porcelain matures at higher temperatures and the pieces will be translucent when held up to the light. Chinese porcelain is hard paste porcelain, and it accounts for nearly all of the porcelain found on colonial and early Federal periods archaeological sites. After the Revolution, hard-paste Continental porcelain made its way to

America. Porcelains produced during the later nineteenth and twentieth centuries in England, America, and abroad are fired to hard-paste consistency but are usually referred to as 'porcellaneous' wares.



CHINESE PORCELAIN. Composed of kaolin clay and petuntse (a finely ground feldspathic rock), which produce an extremely dense, hard-paste body that is white in color. The hard, very glossy, transparent feldspathic glaze fuses to the body and has a bluish tint. Blue underglaze painted floral and landscape designs are most common. The cobalt blue ranges

from dark to medium to light hues. Overglaze colors include red, black, green, pink ("famille rose"), pale green ("famille verte") and gilding and are often used in combination with underglaze blue. Low-relief molding ("An Hua") is sometimes seen. A chocolate-brown slip covered the exterior surfaces of "Batavian" wares. Rarely one sees a pale, jade-green slip referred to as "Ceyledon" and white, underglaze slip-trailed designs ("bianco sopra bianco"). By the nineteenth century, vessel forms were often quite thick and designs had a heavy-handed quality. Madsen (1995) has identified a number of border designs and decorative motifs that are extremely useful for dating sherds recovered from archaeological excavations. Forms include tea and tablewares and, occasionally, some utilitarian wares (e.g., thick-walled bakers). **Date Range: post 1600.** See **Manufacturing Date Range List** for dating by decorative technique.

- **ENGLISH SOFT-PASTE PORCELAIN.** Uncommon. The clay body seems "chalky," both in color and texture. Only the thinnest of sherds are translucent, but most sherds recovered archaeologically are not. The glaze is just semi-glossy, and on vessels produced at the Bow factory it tends to deteriorate into a matte, light rust-colored surface. The underglaze blue hand painted designs are a navy hue (think indigo blue as opposed to the Chinese cobalt blue). Overglaze polychrome colors and gilding less common. Tea and tableware. **Date Range: 1745–1795.**



- **ENGLISH BONE CHINA.** The dense, white clay body is fluxed with calcined bone, hence the name. It is translucent. The glossy to semi-glossy glaze is minutely crazed and can have a yellowish tint. The porcelain paste can stain/discolor over time, much like earthenwares. Decorative motifs include hand painted, overglaze gilt and enamel colors, underglaze cobalt blue, transfer-printed patterns, and decalcomania; also sprig-molded. Tea and tableware. **Date Range: post 1794.**

PORCELLANEOUS, OR ENGLISH/CONTINENTAL HARD-PASTE. Produced in England, Europe, and by the mid-19th century, America. A very dense, hard porcelain body, translucent. Vessels are dead white in color and the clear alkaline glaze is glassy in appearance. Molded forms, sprig molding, transfer-printed designs, and hand painting all are seen, but twentieth century vessels are almost exclusively decorated over the glaze with decalcomania and liquid gold. Forms are table and tea wares. **Date Range: post 1820.**



Other “Finely Turned” English Stonewares, Earthenwares, and Porcelains

- **BLACK BASALT.** Wedgwood’s name for a dry-bodied (unglazed), black to charcoal-gray stoneware, very dense and relatively thin-walled. Occasionally lids will have a clear, lead glaze on the interior. Usually has sprigged decoration; sometimes molded or engine-turned, or hand painted in polychrome colors or gilding. Tea services, pitchers, vases. Made by a number of Staffordshire potteries; essentially the same ware as Rosso Antico (see below) but fired in a reducing atmosphere to produce the black clay body. Also referred to as **DRY-BODIED BLACK STONEWARE.** **Date Range: 1750–1820.**



- **JASPER WARE.** Dry-bodied (unglazed) stoneware dyed a pastel color such as pale blue, olive green, or pink with white sprigged Classical figures, medallions, etc. Most often seen as trinket or cosmetic boxes, wall plaques, and vases. Occasionally, the interior will have a clear, lead glaze. Produced by Wedgwood. **Date Range: post 1775.**



SHAW. Dense, brown to purplish-black stoneware body with very dark brown exterior slip, and white interior slip; salt-glazed. White sprig molding and white slipped linear designs are common decorative devices. Tankards, pitchers, and jugs. **Date Range: 1733–1750.**

- **Rosso ANTICO.** Rosso Antico was Josiah Wedgwood's name for a dry-bodied (unglazed), red stoneware, very dense and thinly potted. Occasionally lids will have a clear, lead glaze on the interior. Usually sprigged but sometimes molded or engine-turned. Tea and coffee services. Also called **ELERS' BODY** or **ELERS' WARE** and produced by a number of Staffordshire potters. All of it may simply be referred to as **DRY-BODIED RED STONEWARE**. **Date Range: 1690–1772.**



- **ASTBURY/ASTBURY-TYPE.** Dense, red-bodied, highly fired earthenware covered with clear lead glaze, and usually having a white-slipped rim; white sprig molding and engine-turning also found. Tea services, bowls. A lot like the red-bodied agateware described earlier, but with a homogenous paste. **Date Range: 1725–1750.**



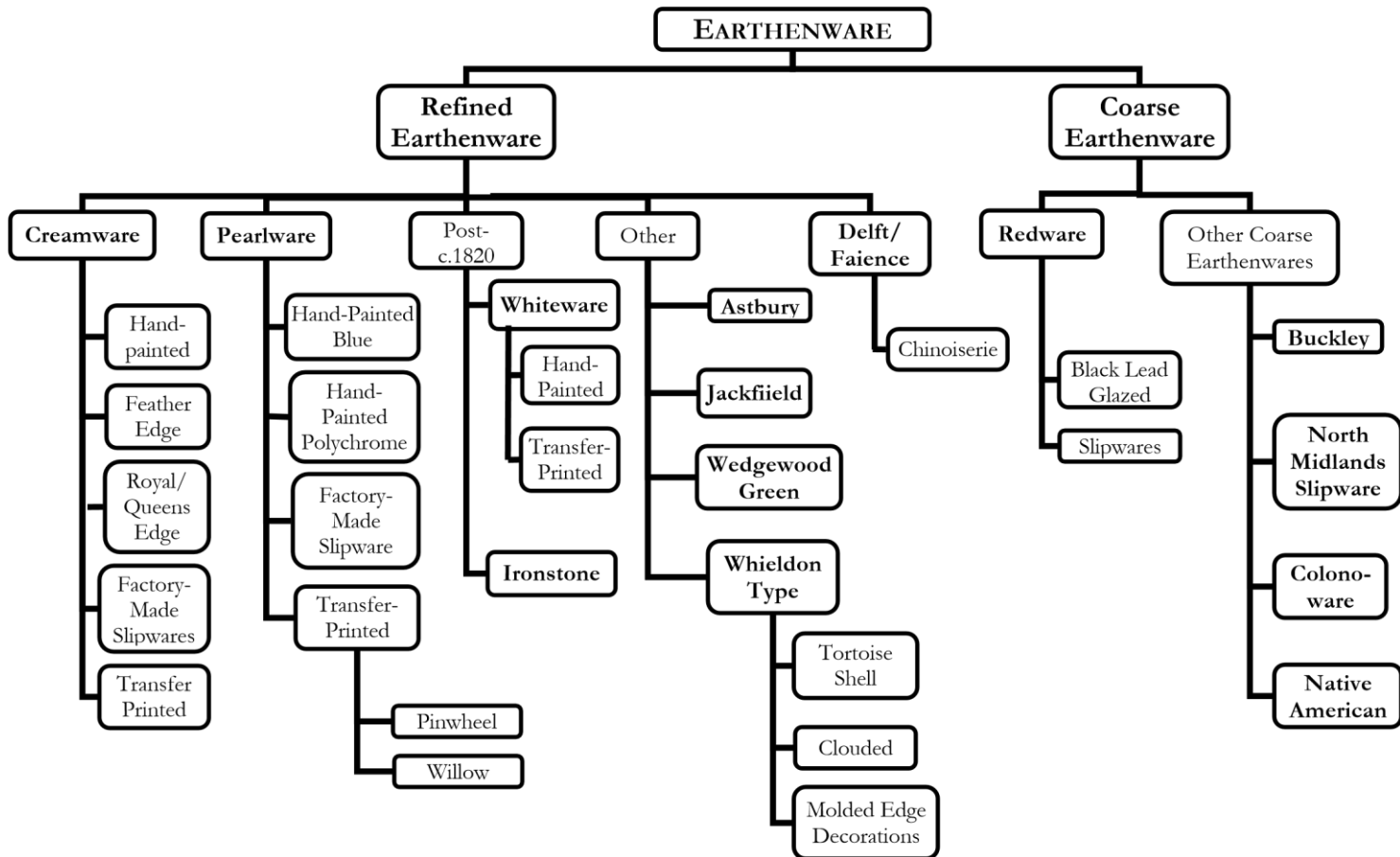
- **JACKFIELD/JACKFIELD-TYPE.** A dense, purplish-black to gray refined earthenware body, highly fired, with a glossy black lead glaze. Molded spouts and handles common; some vessels have oil-gilded designs over the glaze. Thomas Whieldon's Jackfield wares had a slightly redder body. Tea wares, pitchers. **Date Range: 1745–1790.**

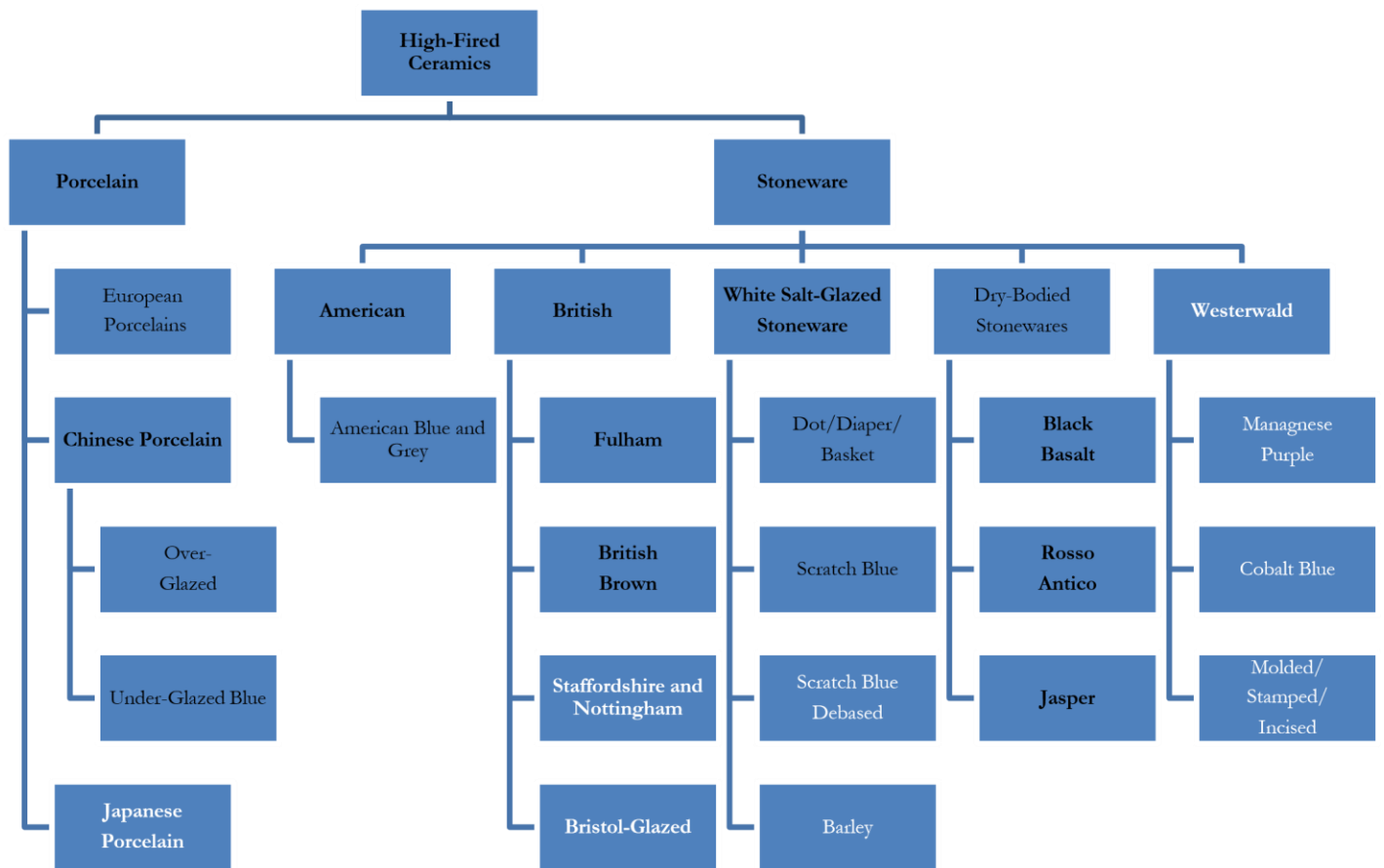


DERBYSHIRE-TYPE. A buff to pink body with black flecking and occasional bits of calcined material with a deep brown to black, lustrous lead glaze. The clay body is fired to stoneware hardness and has a grainy appearance. Almost exclusively seen in plates that are often decorated on the marley, or rim, by groupings of slipped dots. The general appearance of this ware is similar to North Midland slipware, the difference being that the Derbyshire type is clearly stoneware. **Date Range: unknown other than 18th century.**

- **TURNER'S BODY.** Uncommon. English. A semi-porcelain body; exterior surfaces are ecru or off-white in color and have a matte finish; interiors appear creamy under a glossy glaze. Vessels are engine-turned and decorated with sprig molding; bases and rims painted over the glaze with contrasting, dark enamel color. Pieces often were originally fitted with silver rims and lids. Mostly ewers, mugs. **Date Range: 1785–1825.**

CERAMIC WARE TYPES AND DECORATIONS FLOW CHARTS





GLOSSARY OF CERAMIC TERMS

- Agatized:* Marbled effect created by wedging two or more differently colored clays, slips, or glazes together.
- Alkaline Glaze:* Glaze fluxed with alkaline materials, such as sodium or potassium. Thick, glassy, appearance.
- Annular:* Sets of bands and checkerboard patterns on refined earthenwares and stonewares. Commonly found on factory-made slipwares. This style of decoration was popular in the late eighteenth and early nineteenth centuries and was often used in combination with common cable and dendritic motifs. Also see Annular in the Glossary of Ceramic Decoration and Refined Earthenware in the WARE TYPES section.
- Bisque:* Pottery fired once without glaze, or the stage of firing a vessel before it is glazed. This term is used only with certain ceramic ware types including delft, refined earthenwares, and porcelain.
- Burnishing:* A method of producing a luster on an unfired clay surface by rubbing it while leather-hard with a hard, smooth object, such as a smooth stone, to compact and align the surface particles.
- Calcined:* Burned, calcium-based material. The residue from this burning is a white calcium compound.
- Ceramic:* Formed from clay and made durable through exposure to heat.
- Chinoiserie:* A term used to describe decoration in the style of hand-painted Chinese export porcelain. Primarily seen on pearlware and delftware.
- Crazing:* A network of cracks in the glaze.
- Decalcomania:* A printed decorative pattern applied over the glaze of ceramic vessels that developed in the closing years of the nineteenth century. It has an appearance like that of model airplane “decals.”
- Engobe:* A coating of slip applied to a ceramic vessel before glazing to impart a desired color or smooth texture to the surface.

<i>Finely Turned:</i>	Also called “finely potted” and generally means a thin-walled, carefully made vessel with a relatively dense clay body.
<i>Firing:</i>	Baking or curing of ceramic objects in a kiln or open fire.
<i>Flat Form:</i>	Flat vessels for food consumption and serving, such as plates, platters, and saucers.
<i>Flux:</i>	Compounds or materials that lower the proper firing temperature for clays, glazes, and colors.
<i>Glaze:</i>	A glass-like surface coating for ceramics composed of silica that is fluxed, or mixed, with varying compounds so that it vitrifies at a temperature compatible with the maturation point (proper firing temperature) of the clay body. Lead-fluxed glazes were called galena and applied in powder form to the vessel. The result was a sometimes-uneven coating. The development of liquid glazes in the mid-eighteenth century allowed for a more even or uniform coating. Refined earthenwares took advantage of liquid glaze.
<i>Glost Firing:</i>	Stage of vessel firing after glaze has been applied.
<i>Hollow Form:</i>	All bulbous, spherical, or cylindrical vessels of capacity, such as bowls, jars, jugs, cups, mugs, tankards, primarily used to hold liquids.
<i>Lead Glazed:</i>	Glaze fluxed with a lead compound. Smooth, shiny appearance.
<i>Leather Hard:</i>	The stage at which unfired clay vessels have dried enough to be handled without distorting the shape. At this point, handles and sprigged decoration are applied.
<i>Liquid Gold:</i>	Also called bright gold. A type of gilding devised ca.1870 that is glossy and bright. It is used extensively on refined earthenwares and porcelains during the late nineteenth and throughout the twentieth centuries.
<i>Luster: Decoration</i>	A type of decoration that adds metal to the glaze, resulting in a lustrous, metallic appearance. Copper or silver-toned lusters are the most common.
<i>Overglaze:</i>	Painted or printed designs applied on top of the glaze and after the glazed vessel is fired. This decoration requires an additional, low-temperature firing to set the design, or cause it to adhere to the glazed surface.
<i>Pooling:</i>	Refers to areas especially on creamware and pearlwares where the glaze has built up, or puddled, in foot rings or other crevasses, such as points of

attachment for handles or feet. Tints, such as yellow or blue, to the glaze are visible in these pooled areas.

- Rouletting:* A method of decoration in which a small wheel with a pattern is rolled along the vessel surface to create an even, usually linear design. Think of a pizza cutter with a wide edge.
- Salt Glazed:* Glaze created by the introduction of common salt into the kiln at the peak of firing. The resultant gases adhere to the exposed surfaces of clay vessels in the kiln and form a glass-like coating. Salt glazing typically creates a pitted texture sometimes likened to that of an orange peel.
- Sgraffito:* Decoration produced on pottery by cutting through a glaze or slip to reveal the underlying clay body. Derives from an Italian word meaning “scratched.”
- Slip:* A fluid suspension of fine clay and water often used to coat vessels before firing.
- Slip Casting:* Technique of forming vessels by which slip is poured into a multi-piece, Plaster-of-Paris mold. When the mold absorbs enough moisture from the clay so that the walls of a vessel are formed, the liquid remaining in the middle is poured out. The plaster mold continues to absorb liquid until the clay is leather-hard, at which point the mold is opened and the vessel is removed for firing. What this allows for is the creation of thin-walled, often rectangular vessels with detailed molding. Used extensively with White Salt Glazed Stoneware.
- Slip-Trailed:* Decorative technique by which a thin line or trail of slip of contrasting color is applied free hand to a vessel surface.
- Spalling:* A condition in which areas of the vessel surface have popped off. Spalling can occur during vessel firing, as in lime spalling, or during use, as in heat spalling.
- Sprig Molded:* A molded clay decorative device, usually small and often of low relief, applied to the ceramic vessel by means of a small amount of slip prior to firing.
- Temper:* Non-plastic inclusions deliberately added to clay to give added strength or plasticity, such as gravel or crushed oyster shell.
- Tin Glazed:* A glaze to which tin oxide has been added to make it opaque and white. Also referred to as tin-enameled.

Transfer Print: A printed pattern or scene applied to refined earthenwares and porcelains. In this process, enamel paint mixed with resin or oil is applied to a copper plate engraved with a design or scene. The excess enamel is wiped away leaving the color only in the engraved lines. Tissue-thin, unsized paper was laid on the copper plate to lift the design, and then transfer it to the ceramic vessel. The

paper was then discarded, and the vessel fired. Prior to ca.1787, the enamel could not withstand the heat of a glost firing and had to be applied over the glaze, necessitating a separate firing. Improvements in the late 1780s allowed potters to transfer the design to the bisque-fired vessel, which was then dipped in liquid glaze and fired. This greatly reduced the cost of transfer-printed wares and lead to the proliferation of it.

Underglaze: Refers to painted or transfer-printed designs applied to the clay body beneath the coating of glaze.

Vitrified: Literally means glass-like. A glaze vitrifies in the kiln when it changes to a glasslike coating. Porcelain bodies, unlike other clay bodies, are vitrified.

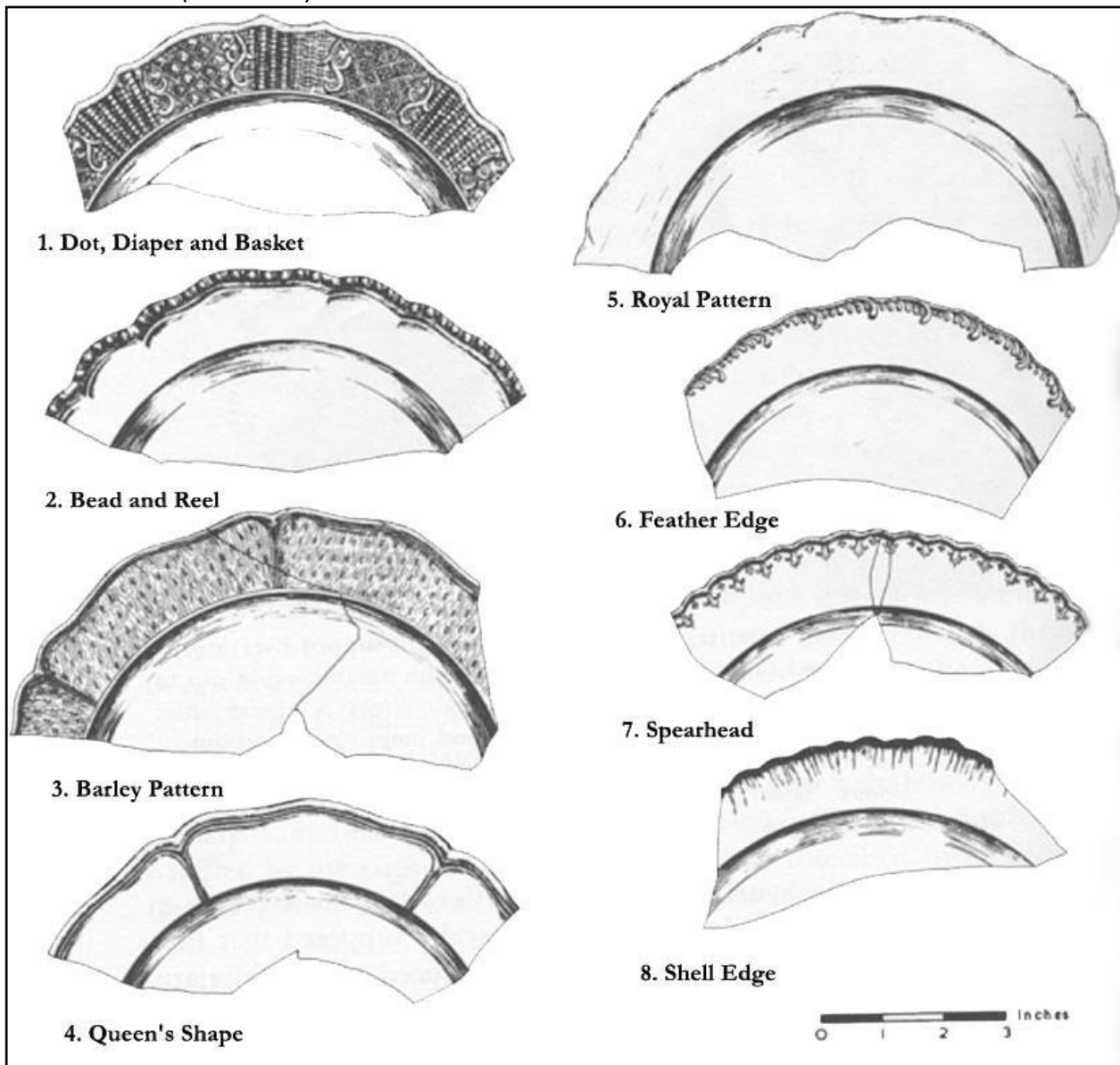
GLOSSARY OF CERAMIC DECORATION

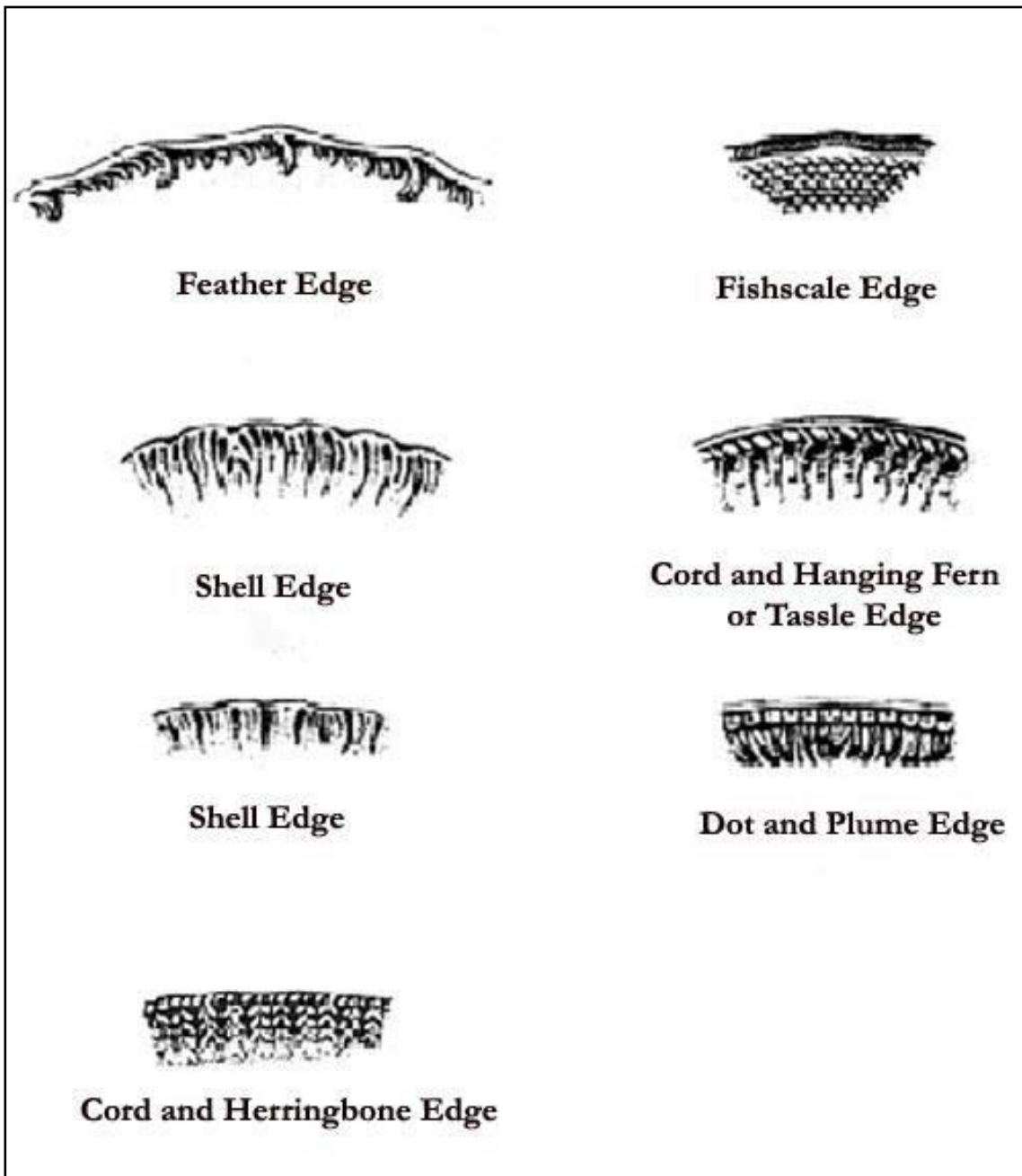
This glossary is designed as a basic reference guide and aid for the beginning student, one who is becoming familiar with common terminology and generally established dates for decorative styles or techniques. Although the terminology used here differs from that used in the DAACS cataloging system, the following terms are most closely related to DAACS genres. *The following does not replace, in any way, the extant cataloging protocols used by DAACS.*

Common Molded Edge Decoration

Seen on White Salt-Glaze Stoneware, Creamware, and Pearlware:

From Noel Hume (1969: 116)





Shell Edge Rim Patterns

Shell-edge borders are found on pearlware and, later, on whiteware. Shell-edged creamware is rare. This decorative style primarily decorates flatwares, for which the types below apply. These decorative wares were the cheapest available for the period. The following examples are

variations for which we have solid date ranges for manufacture. Be aware that there are many more identified in the DAACS cataloguing system.

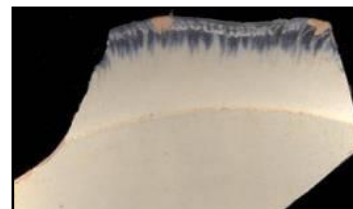
Shell Edge 1

This style is also known as Rococo Shell Edge. The rococo style is the earliest of the shell edge designs. It includes an undulating rim and incised, wavy lines around the edge, both of which are carefully painted in blue or green. The shell design might or might not incorporate a molded 'bud' at intervals among the wavy lines. This style is almost exclusively found on pearlware. The date range is 1780–1810. *The DAACS Stylistic Genre is Shell Edge, color specified.*



Shell Edge 2

The rim on *Shell Edge 2* is evenly scalloped and the molded lines are wavy. This edge is found primarily on pearlware. The date range is 1800–1830. *The DAACS Stylistic Genre is Shell Edge, color specified.*



Shell Edge 3

The rim of this shell edge is evenly scalloped, and the molded lines are straight. The painting around the edge is sometimes only a simple band of color, with no attempt to following the impressed lines of the motif. The date range is 1810–1830. *The DAACS Stylistic Genre is Shell Edge, color specified.*



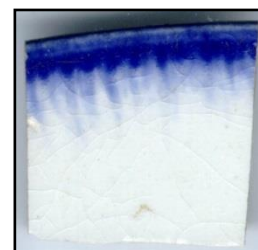
Shell Edge 4

The *Shell Edge 4* rim is unscalloped with a simple, lightly impressed pattern. The painting around the edge can be simply a band of color, not following the impressed lines of the motif. The date range is 1840–1860. *The DAACS Stylistic Genre is Shell Edge, color specified.*



Shell Edge 5

This edge is unscalloped and unmolded. The shell motif is painted to mimic the pattern of molded lines. The date range is 1865–1895. *The DAACS Stylistic Genre is Shell Edge, color specified.*

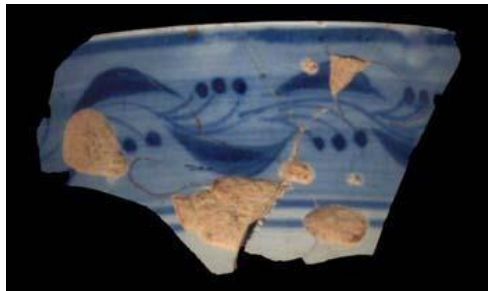


Banded Decoration

The following designs are most often found on vessel rims and marleys, though they also may appear on wells and bases as borders that encircle central motifs. These designs can be found on a variety of refined wares, including Chinese Porcelain, Delftware, Creamware and Pearlware, and can be painted over the glaze, under the glaze, or molded. This is only a selection from a wide variety of band categories; see the DAACS Stylistic Element Glossary for a complete list.

Botanical Bands

A linear pattern of botanical elements painted horizontally around a vessel.



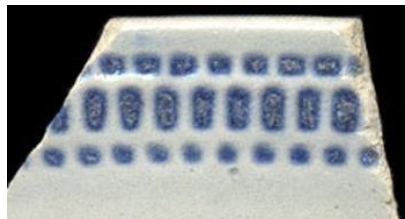
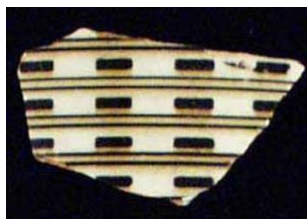
Circle Bands

A linear pattern consisting of circles.



Dash Bands

A linear pattern circling a vessel consisting of dashed lines.



Dogtooth Bands

A linear pattern consisting of a saw tooth motif, and may include other elements such as a straight line or dots.



Fish Roe

A row or rows of circles with dots in the middle.



Geometric Bands

A variety of bands that consist of repeated geometric elements encircling the vessel.



Husk Chain Bands

Husk chain bands are characterized by a series of arrow-shaped elements—which may or may not be connected—encircling the vessel.



Plain Bands

Plain bands consist of solid stripes of colors, either singularly or in combination.



Scallop Bands

Scallop bands consist of a repeated series of half-circles that protrude downwards. They are not to be confused with Half-Circle bands, which protrude upwards, or Swag bands, which tend to have other elements suspended from the half-circles.



Spearhead Bands

The spearhead is a geometric shape that generally consists of three “petals.” The spearhead can appear botanical with two flaring petals and one center bud, can be rounded, or may be pointed.



Trellis Bands

Trellis bands are characterized by the crossed lines that form one or more levels of diamond- or square-shaped lattice.



Hand-painted Motifs and Genres

The following decorative styles can be found on creamware, pearlware, and whiteware and can aid in refining the broad date ranges for those ware types (creamware ca. 1762–1820;

pearlware ca. 1775–1830; whiteware ca. 1820+). Most of the following is based on George Miller’s research (see references).

Chinoiserie landscapes/motifs

This blue underglaze painted design features oriental landscape scenes or motifs borrowed from Chinese porcelain and is typically seen on Pearlware. The date range is 1775–1810. *The DAACS Stylistic Genre is Handpainted Blue.*



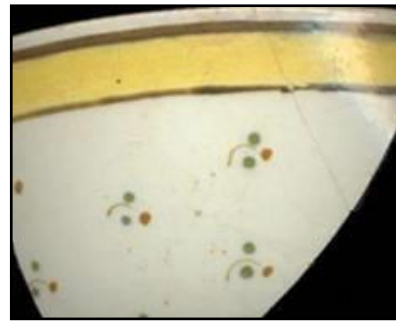
Neoclassical motifs

Sprig-like floral borders and spare floral motifs are applied under the glaze in blue. The date range is 1795–1830. *The DAACS Stylistic Genre is Handpainted Blue.*

Polychrome painted, warm palette

These colorfully painted teawares use a palette of “warm” hues that include slightly yellowish green, olive, caramel or mustard yellow, deep yellow, brown, and blue. Though bright, the colors seem soft rather than harsh. Floral motifs predominate and often with spare border designs. Larger floral motifs frequently are paired with bands of color (‘neoclassical’ designs). The slender stems of flowers are brown or blue. The date range is 1795–1830. *The DAACS Stylistic Genre is Polychrome, warm.*



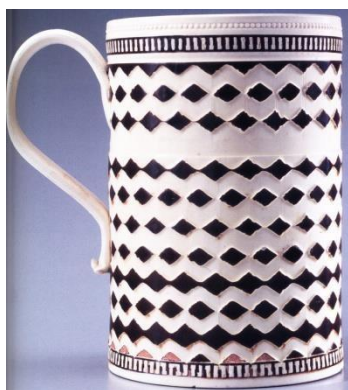


Polychrome painted, cool/metallic hues

This decorative style is seen only on whiteware. The color palette here is 'cool' and harsh rather than soft and 'warm.' Greens, magentas, and light blues dominate the palette. Flowers stems often are black. The date range is 1829–1920. *The DAACS Stylistic Genre is Polychrome, cool.*



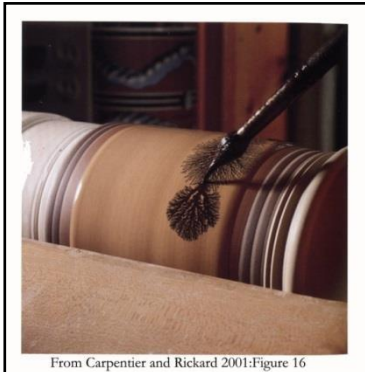
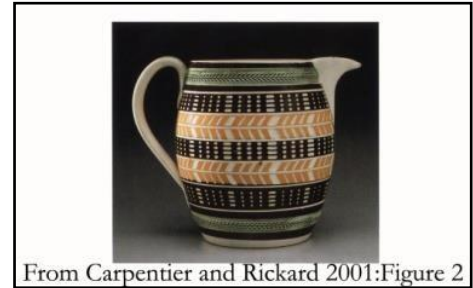
FACTORY-MADE SLIPWARE



The term *Factory-Made Slipware* refers to a set of decorative techniques wherein geometric cut patterns and the slip are applied with the aid of the engine-turning lathe. A variety of terms, such as Dipt (dipped, 'variegated') Wares, Annual Wares, and Mocha Wares, is used to discuss and describe *factory-made slipware*, making a review of the literature potentially confusing. Further conflating the terminology is the fact that these various decorative techniques are often used in combination with one another on a single vessel. The annular technique, for example, is used in conjunction with the mocha design (see pictures on the following page). For these reasons, we use the more inclusive term *Factory-Made Slipware*, and the following sections describe the decorative techniques that together comprise *Factory-Made Slipwares* of the late 18th to early 19th centuries.

Annular

Annular, also known as banded, is a very colorful, geometric style of decoration seen on hollow forms. The annular decoration was applied with the aid of a lathe and refers to the bands and geometric patterns cut into the leather-hard body of the vessel and then colored with various slips. The date range is 1785–1825. *The DAACS Stylistic Genre is Slipware, Factory Made.*



Mocha

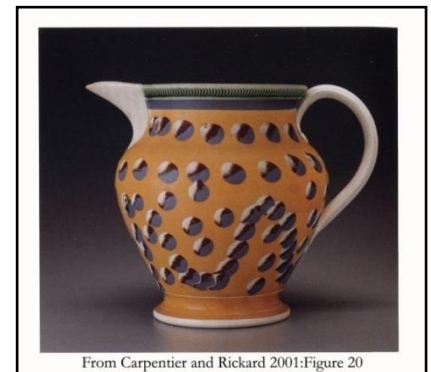
Mocha also is known as dendritic for the spreading, tree- or foliage-like design (dark brown/black) created by dropping a solution of tobacco juice and urine onto slipped body. This decorative technique often is combined with banded, or annual, decoration around rim and base. The date range is 1795– 1830, though a late variety is seen on yellowware from 1840-1900, where the dendritic design



usually is blue and is applied onto a white band. *The DAACS Stylistic Genre is Slipware, Factory Made.*

Common Cable

This decorative technique also is termed worming or finger trailed and generally is seen with banded patterns on rim and base. The technique produces a central field decorated with multiple colored slips that have been trailed together to produce a slightly marbled effect not unlike finger-painting. Cat's eye is a variant of this method, whereby the two or three slips are confined to a circle of color. The date range is 1811–1830. *The DAACS Stylistic Genre is Slipware, Factory Made.*



Transfer-Printed Patterns

There are a wide variety of transfer-printed patterns found on the sites at Monticello, so many that only a handful are specifically identified when cataloguing artifacts into the DAACS database system. Typically, Pearlware is decorated with a dark-blue print underneath the glaze, while Whiteware can feature a range of colors. On rare occasions, archaeologists find Creamware that has been printed with a black ink over the glaze. Due to the ability to massproduce transfer-printed ceramics and sell the copper plates, most patterns were not sold by one manufacturer exclusively, but were produced in multiple factories. The following are examples of common patterns found on Monticello, but are by no means meant to be exhaustive.

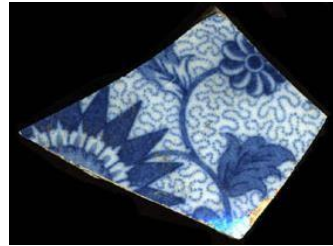
Blue Willow

One of the most widely recognized patterns, and is still produced today.



Pinwheel

The exact origins of this pattern are unknown, though it can be traced back to Britain. It is not known to be found at any other sites in the region, but is found in vast quantities at Monticello.



Wild Rose

Unlike Blue Willow and Pinwheel, Wild Rose is a border pattern that is found in combination with a variety of central scenes. There is variation in the details of the pattern from various manufacturers, but it is still fairly recognizable.



Other Motifs and Patterns

This section consists of major designs that are found on 18th-century archaeological sites, but are more rare at Monticello. While you may recognize some of these elements in your excavations—and should be aware that these patterns exist—the terminology used in this section is not as relevant to that which we use at Monticello or in the DAACS cataloguing process.

Chinese Porcelain

The following four borders have been variously referred to as Canton, Fitzhugh, and Nanking, in differing combinations by various collectors. The names used here standardize, at least for the archaeologist, these late-18th century border patterns.

Nanking I

This underglaze blue border features a combination butterfly, scroll and diaper motif. The stylized butterfly has multi-lobed wings and the “scroll” is a squared, double character. Diapered fields infill areas between the scroll and butterfly, and other motifs such as flowers are usually interspersed within the border. The whole series is repeated around vessel rims and centers. A single line of fish roe borders the upper edge. Madsen (1995) describes this border as ‘butterfly, scroll and diaper.’ The date range is 1764–1800. *The DAACS Stylistic Genre is Handpainted Blue.*

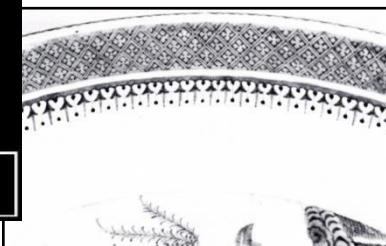
Nanking II

Madsen (1995) describes this border as 'butterfly, scroll and diaper with scales.' *Nanking II* is identical to *Nanking I* except that the diapered fields have been dotted; that is, each diamond shape contains a blue dot in one corner, thus forming 'scales.' This underglaze blue border pattern is especially familiar, as it was reproduced in transfer-printed designs. Remember, though, a different date range applies to the transfer-printed wares. The date range is 1785–1800. The *DAACS Stylistic Genre is Handpainted Blue*.



Nanking III

This border is Madsen's 'shaded trellis diaper with spearheads,' an underglaze blue border that differs entirely from the above two patterns. *Nanking III* consists of a wide, dark blue trellis band that is shaded with a lighter blue. The trellis pattern is the same as *Blue Trellis*, differing in that it is several rows in width and is, of course, shaded. Suspended from the lower edge of the shaded trellis band are alternating spearheads and dumbbells, or daggers alternating with double dots. It is commonly paired with a *Blue*



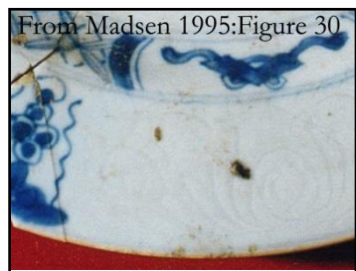
Willow-like scene, or a landscape incorporating a pagoda, bridge, boat, and a pair of figures, and can be gilded. The date range is 1765–1820. The *DAACS Stylistic Genre is Handpainted Blue*.

Canton

Canton also is an underglaze blue border motif and is similar to *Nanking III* in that it incorporates a shaded blue band. The *Canton* band, however, features a very plain diaper pattern, with a "+" at the corner of each diamond. A lighter blue wash colors the band. Extending from the lower edge of the band are short diagonal



lines enclosed by a scalloped line not unlike a cartoon depiction of a cloud. Like *Nanking III*, Canton is commonly used with *Blue Willow*-type scenes, although they generally are painted with less precision than the *Nanking III* versions. Canton decorated vessels were never gilded. Later examples can be quite heavy-handed in execution and the vessels themselves thick and clunky. The date range is 1785–1853. *The DAACS Stylistic Genre is Handpainted Blue.*



Grape and Bamboo

This mid-18th century border pattern was executed in underglaze blue and features a repeated grape cluster motif with winding tendrils, suspended from or flanked by sections of bamboo. Each grape within the bunch is highlighted by a large dot of blue. Occasionally a small rodent perches on the bamboo; sometimes, however, bamboo branches are not included in the design at all. This is a large pattern and on plates takes up

the entire marley. It can be paired with a narrow rim border such as *Blue Trellis*. The date range is 1730–1760. *The DAACS Stylistic Genre is Handpainted Blue.*

This group of motifs dates from the early Federal period and was produced for the American market. All are simple, linear designs in overglaze enamels; two or more can be combined on a single vessel and all have recognizable variants.

Bands and Lines

Bands and Lines I

This linear design (Madsen’s “Husk Chain”) features a chain of more-or-less arrowhead-shaped motifs and encircles vessel rims, bases, etc. The triangular elements can be directly joined together or interspersed with dots. The date range is 1780–1810. *The DAACS Stylistic Genre is Overglaze, handpainted.*



Bands and Lines II

This design is Madsen’s “Wavy Band,” or a wavy *line*, sometimes solid, more often formed by dots. The band can be combined with another, simple repeating motif such as a floral sprig and usually adorns rims. The date range is 1780–90. *The DAACS Stylistic Genre is Overglaze, handpainted.*



From Litzenburg 2003:Plate 116

Bands and Lines III

This is Madsen's "Dogtooth" motif, or a band of repeated waves or points that resembles the edge of a saw blade. The date range is 1765–95, though it was most popular from 1780–1795. *The DAACS Stylistic Genre is Overglaze, handpainted.*

Bands and Lines IV

This band design is Madsen's "Blue Band with Stars," a simple motif consisting of a blue band on which is painted a single line of gilt stars, not too close together. The stars sometimes look like asterisks. Variants include stars that interrupt the band. The date range is 1785–1805. *The*

DAACS Stylistic Genre is Overglaze, handpainted.

From Litzenburg 2003:Plate 118



From Litzenburg 2003:Plate 147

Bands and Lines V

Madsen's "Half Circle and Dot" features repeating half circles suspended from a single line, with a dot in the center of each half circle. Usually the half circles are open and suspended from the apex of their arc. A variant features the half circles inverted, with the curve outward and the dot on the arc—think of half a diamond ring. The date range is 1780–1800. *The DAACS Stylistic Genre is Overglaze, handpainted.*



Bands and Lines, General

This is a final category for designs that cannot be judged a variant of any of the above named types but nonetheless fall into this style of linear, Federal-period border. The date range is 1765–1810. *DAACS Stylistic Genre is Overglaze, handpainted.*

All-Over Designs

The following designs refer to entire vessel patterns, not designs restricted to framing or borders.

Famille Verte

The "green family" color palette used in overglaze painted designs was popular between 1700 and 1720. The definitive characteristic of the famille verte palette is the thin, watercolor like quality of the overglaze enamel colors. The greens that give their name to this decorative class occur in several different shades, among them apple-green. Other watery colors found in this palette include yellow, purple, blue and brown. Found along side these translucent colors, however, are matte black outlining and an opaque coral red. The color palette was often used in combination with underglaze blue and gilding. The date range is 1680–1730. *The DAACS Stylistic Genre is Famille Verte.*



Famille Rose

The “pink family” of colors supplanted that of *famille verte* in popularity. Unlike its predecessor, the *famille rose* palette employed thick, opaque enamels. A bright, rose-pink color is



the defining hue, with a complement of shades; other colors, including white, are thick and opaque. From 1720–

1730, *famille rose* and *famille verte* enamels often were combined in the decoration of a single vessel (*rose-verte*).

Opaque yellow is seen only from about 1720–1734. Pairing the *famille rose* palette with underglaze blue designs rarely occurred. The date range is 1720–1800. The DAACS Stylistic Genre is *Famille Rose*.



From Madsen 1995: Figure 25

Imari

This decorative style combines underglaze blue painting with overglaze red enamel and gilding. The red tends to be a “tomato” red and the gilding, though often watery, is a key element of this style. *Imari* can also be combined with *Batavian* exteriors (see below). The date range is 1700–1760, with a peak in popularity from 1715–1735. The DAACS Stylistic Genre is *Imari*.



From Madsen 1995: Figure 28

An Hua

This decorative technique differs from the others in that it is not an applied decoration, but



From Madsen 1995: Figure 30

rather consists of a pattern shallowly engraved into the vessel body while still in the leatherhard state, before glazing and firing. The extra glaze that fills the inscribed pattern reveals, albeit subtly, the “secret decoration,” the translation of an *hua*.

Patterns are floral or stylized motifs. An Hua designs were often paired with over- and underglaze painted designs, which were

applied to separate areas of the vessel. Notice the *Grape and Bamboo* motif combination in the image (left). The date range is 1710–1760. The DAACS Stylistic Genre is *An Hua*.

Batavian

Batavian denotes an opaque, brown engobe on vessel exteriors. This style is used in combination with other interior under- and overglaze designs. The date range is 1740–1780.

The DAACS Stylistic Genre is Batavian.

MANUFACTURING DATE RANGES

Ceramic Wares

Coarse Earthenware

1600	1710	North Devon Plain
1600	1710	North Devon Slipped/Sgraffito
1600	1775	North Devon Gravel Tempered
1610	1675	Italian Slipware
1630	1660	Metropolitan Slipware
1670	1795	Staffordshire/North Midlands Combed Slipware
1700	1900	Black-Glazed Redware
1720	1775	<u>Buckley</u>
1720	1750	Yorktown (Wm. Rogers, potter)

Tin-Enameled Wares

1600	1802	<u>Delftware</u>
1700	1802	Undecorated ointment/salve pots with everted rims
1700	1800	Faience
1710	1740	Mimosa-style decoration
1750	1770	'Fazackerly' palette
1775	1800	Debased Rouen decoration

Whieldon-Type Wares

1740	1775	Clouded/Tortoiseshell
1740	1775	Refined Agateware
1759	1775	Green-glazed ('Wedgwood's Green Glaze')
1760	1775	Cauliflower

Creamware

1762	1820	<u>Creamware</u>
1765		Feather-edged rims
		*see also <u>Decoration on Refined Earthenwares</u> (below)

Pearlware

1775	1830	<u>Pearlware</u>
		*see also <u>Decoration on Refined Earthenwares</u> (below)

Whiteware

1820		<u>Whiteware</u>
1840		Ironstone
1805	1840	“Stonechina” mark (by Spode)
1813	1900	“Ironstone China” mark (by Mason)
1842		“White Granite” mark
*see also <u>Decoration on Refined Earthenwares</u> (below)		

Yellow Ware

1825	1940	American Yellow Ware
1830		Rockingham (Bennington) glaze
1860	1940	Molded
*see also <u>Decoration on Refined Earthenwares</u> (below)		

American Stoneware

1750		<u>American stoneware</u>
1720	1750	Yorktown stoneware
1805	1930	Albany slip
1820		Brown stoneware bottles for ink, beer, etc.
1840		Smear-glazed stoneware

German Stoneware

1620	1700	Bellarmines with stylized masks and medallions
1650	1725	<u>Westerwald with manganese and cobalt decoration</u>
1690		Hohr grey
1700	1775	<u>Westerwald with cobalt, often stamped and sprigged</u>

British Stoneware

1671	1800	Fulham
1683	1810	Nottingham
1700	1800	Staffordshire Brown
1835	1915	‘Ginger beer’ bottles (Bristol-glaze)

White Salt Glazed Stoneware

1720	1805	<u>White Saltglazed Stoneware (wsg)</u>
1715	1775	Dipped wsg (white slip over buff/grey body)
1720	1730	‘Scratch Brown’ decoration

1740	1775	Molded plate rims (dot, diaper & basket; barley; queens pattern, etc.)	1744
	1775	'Scratch Blue' decoration	
1745	1805	Slip-casting	
1746	1805	Enameled colors (overglaze)	
1750	1765	Littler's Blue	
1756	1765	Transfer-print, black overglaze	
1765	1790	'Debased' Scratch Blue	

Chinese Porcelain

1600		<u>Chinese porcelain</u>	
1680	1730	Famille Verte	
1690	1790	Blue Trellis	
1700	1760	Imari	
1710	1760	An Hua	
1720	1800	Famille Rose	
1730	1760	Grape & Bamboo	
1735	1770	Blue Spearhead	
1740	1780	Batavian	
1750	1765	Fish Roe	
1764	1800	Nanking/Fitzhugh I	
1785	1800	Nanking/Fitzhugh II	
1765	1820	Nanking/Fitzhugh III	
1785	1853	Canton	
1780	1810	Bands & Lines I (husk chain)	
1780	1790	Bands & Lines II (wavy band)	
1765	1795	Bands & Lines III (dog tooth)	
1785	1805	Bands & Lines IV (blue band with stars)	
1780	1800	Bands & Lines V (half circle with dot)	

English Porcelain

1745	1795	Soft-paste
1794		Bone China
1820		Hard-paste

Porcellaneous

1820	<u>Porcellaneous</u>
1875	Ivory body, introduced by Spode
1870	Bright/Liquid Gold gilding
1880	Decalcomania

Other English finely-turned Stonewares, Earthenwares, and Porcelains

1690	1772	Rosso Antico
1725	1750	Astbury-type
1733	1750	Shaw
1745	1790	Jackfield-type
1750	1810	Red Agate
1750	1820	<u>Black Basalt</u>
1775		Jasper Ware
1785	1825	Turner's Body

Decoration on Refined Earthenwares

Painted Design (Underglaze):

1775	1810	Blue painted Chinese landscapes, Chinese motifs in pearlware
1785	1825	Annular
1795	1900	Mocha
1811	1830	Common Cable
1795	1830	Polychrome painted, warm hues ('classical')
1829	1920	Polychrome painted, cool/metallic hues
1820	1835	Large, dark blue floral motifs (rare)
1780	1810	Shell edge, rococo with or without bud
1800	1830	Shell edge, even scallop with wavy lines
1810	1830	Shell edge, even scallop with straight lines
1840	1860	Shell Edge, unscaloped with simple, lightly impressed pattern
1865	1895	Shell Edge, unscaloped and unmolded
1845	1925	Sponged/cut sponge

Transfer-Printed (Underglaze):

[NOTE! does not show up in quantity until after War of 1812]

1785		Transfer-printing (underglaze)
1790		Black color
1795		Blue Willow pattern
1800		Pinwheel pattern
1810		Brown color
1810		Wild Rose pattern
1810		Stippling in pattern
1818	1830	Very dark blue
1820	1830	Negative patterns
1830		Cool colors (red, green, purple) and light blue
1840	1860	Flow Blue

Other Decoration

1763		Engine-turned designs on pottery
1780	1835	Bright yellow-glazed ware ('canary ware')
1788		Rockingham glaze on English ware
1825	1925	Rockingham & flint-enameled on American ware
1790	1840	Luster
1820		Carinated or 'London' shaped teacup
1820		Embossed rims
1870		"Bright/Liquid Gold" gilding
1880		Decalcomania

Maker's Marks

1800		Royal coat of arms included in maker's marks
1810		Printed pattern names as part of maker's mark
1850		"Royal" as part of maker's marks
1861		"Ltd." as part of maker's marks
1862		"Trade Mark" as part of maker's marks
1884		"Rd. No..." as part of maker's marks
1891		"Made In..." as part of maker's marks

Glass

Tableware

1550	1650	"Crystallo" colorless table glass with hollow molded stems(lion mask)
1550	1690s	"Crystallo" colorless table glass (flugelglas) with applied polychrome handles
1600	ca. 1700	Italian or Dutch "Crystallo" colorless table glass (Soda-Lime glass)
1600	ca. 1700	"Waldglas" table glass with prunt and/or applied "drawn thread" decoration
ca. 1650		Mold blown English tableware
1676		English leaded "Crystal" (Potash-Lead glass)
ca. 1680	ca. 1720	Quatrefoil, hollow stems on English wine glasses
ca. 1690	ca. 1725	Heavy Baluster stems on English wine glasses
ca. 1715	ca. 1765	Molded Pedestal wine glass stems, "Silesian-style"
ca. 1725	ca. 1770	"Air Twist" stems in English wine glasses
ca. 1725	ca. 1755	Lighter Balustroid stems on English wine glasses
ca. 1735	ca. 1765	Light Newcastle Baluster stems on English wine glasses
1739		American colored and colorless glass
1743		Opaque white glass

ca. 1750	ca. 1780	"Opaque Twist" stems in English wine glasses
1750		Cut-glass decoration in English wine glass stems
ca. 1760	ca. 1800	"Faceted" stems on English wine glasses
1780s		Pressed glass stoppers and glass feet
1783		Irish (Waterford) cut glass
1827		Pressed Leaded glass tableware in America (Robinson/Jarves)

Bottles and Containers

1600	ca. 1900	Case bottles
ca. 1650	ca. 1730	Free-blown round beverage bottles
ca. 1700	ca. 1840	Blowpipe pontils in bottles
1730	ca. 1865	Dip-mold blown English dark green bottles
ca. 1750		Lead glass commercial containers
ca. 1750		Two-piece hinged bottle mold
ca. 1750		Embossed lettering
1821	ca. 1920s	Ricketts' style three-piece mold
1822		Figured Historical Flasks first advertised in America (Dr. Thomas W. Dyott)
1824		"Lafayette" Flasks made by Dr. Dyott at Philadelphia
ca. 1825		Post bottom molds for bottles
ca. 1825	ca. 1930	Lipping tool finish on bottles
1835		Bottled soda water produced in America
1840s	1880s	"Improved" or "Ground Pontil" most common on bottles, jars, and table glass
1845		Bare iron pontils on American bottles
ca. 1850	ca. 1920s	Snap case held bottles (no pontil scar)
1858		Screw top canning jars, ground lip (Mason jar)
1863		Lug finish on mouth-blown canning jars
1864		Colorless non-lead (soda-lime) glass
1867		Plate molds for embossed lettering on bottles (other than base plates)
1869		Opaque white canning jar lid liners
ca. 1870	1920s	Turn paste molds
1873	ca. 1915	Cod's patent Ball Stopper on American bottles
1874		Vented bottle molds
1876		Heinz ketchup bottle
1876		U.S. Trademark Act prohibiting refilling trademark-stamped bottles
1879	ca. 1920	Hutchinson spring stopper, "blob top" finish
1881	ca. 1920	Semi-automatic machine molded wide mouth jars, hand finished
1882	ca. 1915	Bail and yoke "Lightning" stopper
ca. 1885	ca. 1915	"Solarized" glass with magnesium dioxide
1886		Milk bottles
1889		Semi-automatic machine production of narrow-mouth containers
1892		Crown stopper finish

1893		Semi-automatic machine production of wide-mouth containers
1894		"Coca-Cola" available in glass bottles with Hutchinson "blob-top" closure
1898		"Pepsi-Cola" introduced
1901	1970s	Milk bottles with paper disc closures
1903		Owens scar on machine made bottles/Owens automatic bottle blowing machine
1906		Lug finish on machine-made containers
1909		Safety glass (Triplex trademark)
1910		"Carnival" glass (iridescent and/or polychrome)
1915		Hobble-skirt Coke bottles
1916		Pyrex glass
1918	1962	"Clorox" bleach available in glass bottles
1920s		"7-Up" tradename registered
1931		"Depression Glass"
1933		"Federal law prohibits sale or reuse of this bottle" blown into glass containers
1935		Applied color label on commercial containers
1935		Non-returnable lightweight beer bottles
1939		Non-returnable lightweight beer bottles with stippled base
1941		"Coke" brand name appeared on glass bottles
1945		"Pepsi-Cola" spiral molded bottles
1948		Non-returnable soft drink bottles
1959		"Stubby-shaped" non-returnable beer bottle
1970		Corelle dinnerware
1971		Heinz 32-ounce ketchup bottle

Miscellaneous Glass

1846	ca. 1900	Hand-made glass marbles
1860		Kerosene oil lamps
1865		Glass electrical insulators with internal threads
ca. 1870		Hand-crimped lamp chimney rims
1879		Machine-crimped lamp chimney rims
1879	ca. 1895	Hand-made electric light bulbs
1880s		"Security" plate glass with wire
1895		Electric light bulbs, machine-made
1901		Machine-made glass marbles
1825	1940s	Press molded glass doorknobs

Metals

Metal Objects and Metalworking Technologies

ca. 1660	ca. 1840	Shoe buckles
1732	ca. 1850	Pinchbeck invented by Christopher Pinchbeck
1742		Introduction of Sheffield (silver) Plate
ca. 1750		"Nickel Silver" (German silver) introduced into England from Germany
1799	ca. 1900	Enameled cast-iron pots
1820		Seamless lead pipes introduced
1825		Tin-plated iron cans patented in America
1828		Steel slip-in pen nibs
1836		Practical method of galvanizing iron developed in England
1837		Canned foods commercially produced in U.S.
1840		Electroplating process patented in England
1840s		Brass keyhole covers and sleeves on iron padlocks
1848		Cylinder locks (pin tumbler) patented
1856		Condensed milk can patented
1862		Yale combination locks introduced
1867		Enameled tinware commercially produced
1869		Galvanized iron
1874		Copper alloy clothing rivets (Levi-Strauss)
1875		Corned beef packed in tapered cans (Arthur Libbey & William Wilson)
1877		Side-seam soldered cans introduced
1880s		Fountain pens
1880s		Platinum used in jewelry (peak of popularity in the 1920s)
1883		"Sprinkle-top" perforated Talcum Powder tinned iron cans
1891		Aluminum household items become common
1893		Metal zippers for clothing
1897		Crown-type bottle caps (-present)
1898		Crimped top tin can
1902		Disposable razor blades: Gillette
1906		Gold content (9 to 24 carat) required by law to be stamped into gold objects
1913		Stainless steel
1925		Coiled innerspring mattress springs
1928		Key-opened vacuum-packed coffee can
1935		Cone-top steel beverage and oil cans with metal screw caps introduced
1947		Aluminum foil
1953		Canned soft drinks (flat top)
1962	1974	Pull-tabs on drink cans
1965		Tin-free steel cans developed (cemented seams not soldered)

1965		"Pilfer-proof" resealable screw caps introduced (break-away collar on cap)
1967		"Seamless" one-piece aluminum cans introduced
1971		"Necked-in" seamless aluminum cans introduced
1974		Non-detachable tabs on drink cans
1978		"Paper Can" introduced (plastic-coated, foil-lined, fiberboard container)

Ammunition

1814	1816	Percussion caps, iron or pewter
1816		Percussion caps, copper
1846		Brass or copper cartridge cases
1850		Shotgun cartridges, center-fire (12 gauge and .410)
1852		Minie ball (introduced in France)
1866		Rim-fire cartridge
1870		Peters Cartridge Company ("P" on base of cartridge case)
1871		Bottle-necked cartridges
1890		Union Metallic Cartridge Company ("U" on base of cartridge case)

Nails, Pins, Spikes, Etc.

1554		Wrought iron nails, hand-headed
1554 ca. 1824		Straight pins, hand-made with ball heads
ca. 1790 ca. 1810		Cut nails, hand-headed
1796		Jefferson's nail-making machine
ca. 1805		Cut nails, machine-headed
1824		Straight pins, machine-made
1839		Machine-made railroad spikes
1846		Wood screws with machine-cut threads and self-starting gimlet points
ca. 1850		Wire nails, small sizes only until 1860
1857		Safety Pins with protected points
1860		Wire nails, larger size
1874		Clothespins with steel springs
1886		Barbed wire

Colonial and United States Coinage

Use these date ranges only when the mint date of the coin is illegible.

Copper

1773		Virginia Halfpenny struck at the Tower in London
1775		Virginia Halfpenny put in circulation in February at Williamsburg
1793	1857	"Large Cent" one-cent coin
1856		"Small Cent" one-cent coin

1856	1858	"Flying Eagle" one-cent coin
1864	1873	Two-cent coin
1909	1982	"Lincoln" one-cent coin (copper)
1982		"Lincoln" one-cent coin (aluminum/zinc allow with copper anodized surface)

Nickel

1865	1889	Three-cent coin
1866	1883	"Shield" five-cent coin
1883	1913	"Liberty Head" five-cent coin
1913	1938	"Buffalo" five-cent coin
1938		"Jefferson" five-cent coin

Silver

1794	1893	"Half Dime" silver coin
1794	1795	"Flowing Hair" half dollar coin
1794	1795	"Flowing Hair" dollar coin
1795	1804	"Draped Bust" dollar coin
1796	1807	"Draped Bust" ten-cent coin
1796	1807	"Draped Bust" quarter coin
1796	1797	"Draped Bust" half dollar coin
1807	1839	"Liberty Cap" half dollar coin
1809	1837	"Liberty Cap" ten-cent coin
1815	1838	"Liberty Cap" quarter coin (Liberty facing left)
1836	1873	"Seated Liberty" dollar coin
1837	1891	"Seated Liberty" ten-cent coin
1838	1891	"Seated Liberty" quarter coin
1839	1891	"Seated Liberty" half dollar coin
1851	1873	Three cent silver coin
1873	1885	"Trade" dollar coin
1875	1878	Twenty cent silver coin
1878	1921	"Morgan" (Liberty Head) dollar coin
1892	1916	"Barber" ten-cent coin (Liberty facing right)
1892	1916	"Barber" quarter coin (Liberty facing right)
1892	1915	"Barber" half dollar coin
1916	1947	"Walking Liberty" half dollar coin
1917	1945	"Mercury" ten-cent coin
1917	1930	"Standing Liberty" quarter coin
1921	1935	"Peace" (Liberty Head) dollar coin
1932	1964	"Washington" quarter coin
1945	1964	"Roosevelt" ten-cent coin
1948	1963	"Franklin" half dollar coin

1964		"Kennedy" half dollar coin
1971	1978	"Eisenhower" dollar coin
1980		"Anthony" (Susan B. Anthony) dollar coin
2000		"Sacajawea" (simulated gold) dollar coin
2007		"Presidential Series" (simulated gold) dollar coin

Miscellaneous

1945		Clad coinage in Europe (planchet composed of layered metals)
1965		Clad coinage in the U.S. (copper nickel with copper core)

Synthetics/Rubber

1839		Vulcanized rubber
1846		Cellulose Nitrate
1851		Hard rubber (buttons, combs)
1863		Linoleum floor covering (F. Walton patent for linseed oil treated canvas)
1866		ca. 1920 Celluloid plastic/"French Ivory:" imitates ivory, tortoiseshell, amber, motherof-pearl
1871		Asphalt roadway paving (first used in Philadelphia)
1871		Bubble gum
1872		"Celluloid" tradename registered
1880		Rubber garden hoses
1884		Rayon
1885		Coca-Cola (Coke)
1900		Flat disk records (invented Germany 1895; overtook cylinders by 1900)
1902		Pepsi-Cola
1907		Bakelite plastic--black and brown, very hard: electrical parts, phone parts, pot handles
1913	1976	Cellophane wrapping
1915		Pyralin plastic (toothbrushes, combs, pens, baby toys, kitchen gadgets)
1927		Molded acetate objects (soap dishes, bathroom tumblers)
1927		Plastic caps for bottles and jars
1928		Vinyl (tablecloths, garment bags, shower curtains)
1932		Neoprene
1933		Plexiglass
1937		Melmac plastic (dinnerware): Navy use, WWII; commercial use: post-war
1938		Formica (kitchen countertops)
1938		Scotch tape
1939		Nylon used in toothbrush handles, bristles, and stockings
1940		Saran wrap (discovered by accident in 1933)

1940	Polyethylene
1940	Polyester (clothing)
1948	Tupperware
1955	Velcro in production
1958	Disposable ballpoint pen (Bic)
1961	Plastic milk containers
1961	Teflon-coated cookware
1962	Styrofoam cups (Dow Chemical lab invention of styrofoam 1944)
1962	"Clorox" bleach available in white polyethylene bottles
1970	Clear plastic soft drink bottles introduced

Camera-related

1889	Transparent roll film
1913	35 mm roll film (on market)
1925	Flash bulb
1935	Kodachrome color film
1940	35 mm safety film (replaces nitrate film)
1947	"Instant" black and white film (Polaroid)
1950	2½ x 1¼ film
1963	"Instant" color film (Polaroid)
1966	flash cube
1977	flash bar

Miscellaneous

1820	Machine-molded brick
1824	Macadam
1834	Concrete
1848	Terra cotta drainpipes
1859	Drake drills first oil well, making possible cheap kerosene and causing increase in lamp and lamp chimney production
1865	Glass electrical insulators with internal threads
1870	Bricks stamped with manufacturers' name
1870	"Vaseline Petroleum Jelly" introduced in glass jars
1876	Portland Cement first produced, but not significant quantities until 1899
1879	Light bulbs with carbon fiber filament
1880	"Milk of Magnesia" tradename registered
1882	Electric clothes irons patented
1884	Machine-made paper bags with flat bottoms and pleated sides
1887	Standardized commercial brick size (8-1/4 x 4 x 2-1/2")
1888	Invention of ceramic portion of spark plug
1891	"Lysol" disinfectant tradename registered
1893	Paper napkins

1895		Machine-made electric light bulb
1896		Paper matchbooks
1898		Paper napkins with printed decoration
1899		Portland cement introduced in 1876 but not common until invention of rotary kiln
ca. 1900		Ceramic drain pipes (stoneware hardness)
1901		Pencil sharpener patented in America
1902		"Fisheye" cut into mother-of-pearl buttons
1905		Aspirin marketed in U.S. (invented in Germany 1899)
1906		Dry-cell storage batteries with carbon poles (invented in London in 1901)
1913	1918	"Clorox" bleach available in stoneware jugs with cork closures
1917		Asphalt roofing shingles
1921		Band-Aids
1922		Popsicles on a stick
1924		Kleenex
ca. 1924		Easter Bunny marketed
ca. 1925		Zipper on clothing (patented 1891)
ca. 1925		Dixie paper cups
ca. 1930		Asbestos/concrete shingles
1938		"Nescafe" instant coffee introduced
1941		"Coke" brand name introduced
ca. 1950		Cigarette filters (paper wrapped/fiber filled)
1959		Barbie
1960		Disposable felt-tip pen introduced by Pentel
1982		"Diet Coke" introduced

SELECTED REFERENCES

Barker, David

2001 "The Usual Classes of Useful Articles": Staffordshire Ceramics Reconsidered. In *Ceramics in America, 2001*, edited by R. Hunter, pp. 72–93. Chipstone Foundation, Hanover.

Carpentier, Donald, and Jonathan Rickard

2001 Slip Decoration in the Age of Industrialization. In *Ceramics in America, 2001*, edited by R. Hunter, pp. 115–134. Chipstone Foundation, Hanover.

Godden, Geoffrey A.

1975 *British Pottery: An Illustrated Guide*. Clarkson N. Potter, Inc., New York.

Liebowitz, Joan

1985 *Yellow Ware: The Transitional Ceramic*. Schiffer Publishing Ltd., Atglen, Pennsylvania.

Litzenburg, Thomas V, Jr.

2003 *Chinese Export Porcelain in the Reeves Center Collection at Washington and Lee University*. Third Millennium Publishing, London.

Madsen, Andrew

1995 "All Sorts of China Ware . . . Large, Noble and Rich Chinese Bowls": Eighteenth-Century Chinese Export Porcelain in Virginia. Unpublished Master's Thesis, College of William and Mary, Anthropology Department.

Miller, George L.

1988 Classification and Economic Scaling of Nineteenth-Century Ceramics.

1990 English Shell Edged Earthenware: Alias Leeds Ware, Alias Feather Edge. In *The 35th Annual Wedgwood International Seminar*, pp. 107–136.

1993 Terminus Post Quem List. Unpublished manuscript on file at Greiner, Inc., Florence, New Jersey.

Miller, George L., and Robert Hunter

2001 How Creamware Got the Blues: The Origins of China Glaze and Pearlware. In *Ceramics in America, 2001*, edited by R. Hunter, pp. 135–161. Chipstone Foundation, Hanover.

Noel Hume, Ivor

1969 *A Guide to Artifacts of Colonial America*. Alfred A. Knopf, New York.

1972 Creamware to Pearlware: A Williamsburg Perspective. In *Ceramics in America*, edited by I. M. G. Quimby, pp. 217–254. The University Press of Virginia, Charlottesville, Virginia.

Pittman, William E.

n.d. Ceramic Identification. Unpublished manuscript prepared for the Department of Archaeological Research, Colonial Williamsburg Foundation, Williamsburg, Virginia.

Samford, Patricia M.

1997 Response to a Market: Dating English Underglaze Transfer-Printed Wares. *Historical Archaeology* 31(2):1–30.

Straube, Beverly

2001 European Ceramics in the New World: The Jamestown Example. In *Ceramics in America*, 2001, edited by R. Hunter, pp. 47–72.

NOTES

[illegible]

[illegible]

[illegible]