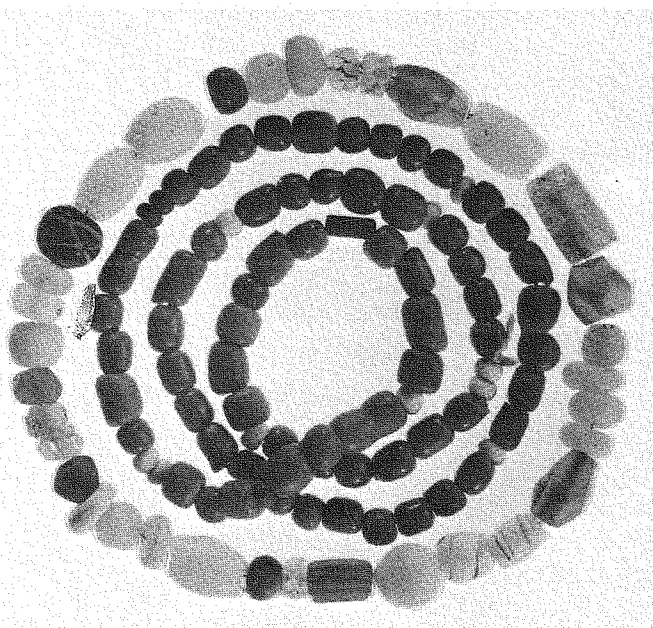


GLASS BEADS

FROM THE TUNICA TREASURE

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LMS

LOWER MISSISSIPPI SURVEY

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History

The glass trade beads brought to the New World by the European explorers and traders were manufactured for the most part in Murano (Venice) and Amsterdam. The modern European glass industry, including the production of beads, began in the eleventh century in Venice and was transplanted to Amsterdam by the seventeenth century (Sleen 1963, 1967, p. 108; Karklins 1975, p. 64; Made 1978, pp. 3, 4). At about the same time, England, France, and some parts of Eastern Europe began producing glass beads (Murray 1964, p. 13), and glassmaking in the Iberian Peninsula also may have contributed to the production (Goggin n.d., p. 7; Fairbanks 1968, p. 8). But in the eighteenth century, Venice and Amsterdam controlled the market for inexpensive glass trade beads, although Holland was beginning to decline as a major production center. Stylistically, it is often difficult to distinguish beads from these two sources, as Italian craftsmen in Amsterdam were making the same varieties as their countrymen in Venice (Sleen 1963, 1967). However, recent analysis (Karklins 1975) gives sufficient encouragement that identifications will ultimately be possible.

Glass beads were brought to the Americas by Christopher Columbus, who traded them to the Indians at his very first landfall in San Salvador on October 12, 1492 (Quimby 1966, p. 81; Landström 1966,

p. 68). From that point on, explorers, traders, and colonists of all nationalities found that beads were valued highly by the Indians and could be exchanged for food, furs, and friendship (Brain 1975b).

The Indians adapted the European beads to their own costumes and personal adornment. Natives of the Lower Mississippi Valley were observed to braid their hair in tresses that were "ordinarily interlaced by way of ornament with strings of blue, white, green, or black beads [made of glass]" (Dumont quoted in Swanton 1911, p. 51). Le Page du Pratz further noted that,

When they have beads (rassade) they make necklaces composed of one or many rows. They make them long enough for the head to pass through. The rassade is a bead of the size of the end of the finger of a small infant. Its length is greater than its diameter. Its substance is similar to porcelain. There is a smaller one, ordinarily round and white. They value it more than the other. There is a blue one and one of another style which is banded (bardelée) with blue and white. The medium-sized and the smallest are strung to ornament skins, garters, etc. (Swanton 1911, p. 56).

The beads in the Tunica collection closely correspond to those found at other sites from the Middle Historic period, 1670

to 1760 (Quimby 1966, p. 86). The "Cornaline d'Aleppo," "raspberry," "gooseberry," and elongate white beads with blue stripes (*bardelée*) are the most common diagnostic varieties early in the period. The large wire-wound beads, including the so-called "pigeon eggs," which became popular later in the period, do not appear until after 1700 (Wray and Schoff 1953, p. 60).

The beads from the Late Historic period, after 1760, tend toward the more complicated constructions and more frequently are polychrome. However, there are fewer varieties present than before. This trend is illustrated at Fort Michilimackinac where there is a perceptible decline in the introduction of new beads during the late French occupation from 1751 to 1760, and no new varieties seem to appear during the British occupation of 1760 to 1781 (Stone 1971, p. 54).

It has been estimated that approximately 600 varieties of glass beads were brought to this continent during four centuries of exploration, trade, and colonization (Wray and Schoff 1953, p. 58). If this is a reasonably accurate estimate, then the 96 varieties in the Tunica collection are an impressive sample. However, that early estimate will undoubtedly have to be raised. For example, there are 20 unique varieties in the collection, more than a fifth of the sample, that have not yet been found at any other sites.

Technology

The two major methods of glass bead manufacture are referred to as "drawn" and "wire-wound." Both methods were practiced during the eighteenth century and are represented in the Tunica collection.

Drawn beads are made from a bubble of molten glass that is stretched into a long, hollow tube. When the bubble consists of a single kind of glass the construction is referred to as "simple." However, one or more additional layers of glass, often of contrasting colors and/or opacities, can be applied to the bubble before it is drawn out. Such layered beads are referred to as "compound." Sometimes, decoration is added in the form of stripes of contrasting color(s). These stripes are glass inlays which are applied to the molten bubble of the core before it is drawn out. Beads of simple construction with this kind of decoration are referred to as "complex." Compound beads so decorated are referred to as "composite." (See Kidd and Kidd 1970 for a fuller exposition of the techniques outlined above.)

Whatever the method of construction, once the drawn glass has hardened the tube is broken into smaller bead-sized segments, either by cutting or snapping by controlled fracture (Goggin n.d., p. 15). The resulting beads may be left at this stage, or they may be further finished by rounding off the broken ends to remove the sharp edges and, in the case of layered beads, to produce a colorful design. The rounding process is accomplished by tumbling the beads in sand to which ash, graphite, or some other substance has been added to keep the beads from collapsing when they are reheated during the operation and to prevent them from sticking to each other (Murray 1964, p. 14). This precaution is not always successful, however, as there are many examples of beads in the Tunica collection that fused together during the tumbling process.

Wire-wound beads are made from a ribbon of molten glass that has been wound around a chalk-coated iron or copper wire. The simplest way of producing a ribbon is to pour molten glass very slowly from a

crucible or ladle (Hodges 1964, p. 61). Another way to make a ribbon is to stick a gathering of molten glass to an iron post or a plate on the wall and then simply pull out a length. Whichever method is used, the ribbon then is attached to the wire which is swiftly revolved, winding the glass around it until the bead has assumed the desired dimensions (Orchard 1929, p. 83). The size of the perforation, of course, conforms to the diameter of the wire.

Glass filaments of different colors may be applied to the surface while the bead is still on the wire and somewhat molten, making stripes, dots, and other surface decoration. Also, while the wire-wound bead is still molten, but after removal from the wire, the surface may be shaped into facets, knobs, or ridges by molding, pressing, pinching, or other manipulation.

Upon cooling, the beads are sometimes polished by tumbling in a mixture of sand and ash (Stone 1971, p. 290). Nevertheless, wire-wound beads generally show circumferential striations, which tend to become more pronounced with age and corrosion.

The wire-wound method would seem to be more time-consuming than drawing, because each bead is individually made. However, there is evidence that wire-wound beads could be made in quick succession (Murray 1964, p. 16). Furthermore, a whole string of beads could sometimes be made simultaneously on the same wire. Evidence for such multiple manufacture may be found on some examples in the Tunica collection that show evidence of breaking, as though they had been joined to other beads and, indeed, there are several beads which are still attached to one another. But the great majority of wire-wound beads in the collection appear to have been individually made.

Aside from actual methods of construction, there are other physical properties of glass beads that are common to both categories and are important criteria in the formulation of the classification given in the following pages. These criteria are size, shape, color, and degree of opacity. The description or scaling of each of these characteristics is given below.

Bead size, following Kidd and Kidd (1970, p. 66) is determined by diameter as follows:

Very small:	less than 2 mm
Small:	2 to 4 mm
Medium:	4 to 6 mm
Large:	6 to 10 mm
Very large:	more than 10 mm

If the length and diameter of the bead are equal, it is referred to as a "standard" bead; if the length is greater than the diameter, it is a "long" bead; and if the diameter is greater than the length, it is a "short" bead (Beck 1927, p. 6; Sleen 1967, p. 32). Drawn beads are most often long ("tubular" or "cane"), but may be standard or short ("round"). Simple, unaltered wire-wound beads may be short ("donut"), standard ("spheroidal" or "round"), or long ("oval" or "barrel").

Bead colors were obtained from mineral pigments: blue came from cobalt, red from gold, yellow from antimony, and green from copper (Tunnel and Ambler 1967, p. 49). Black beads were formerly colored with iron, but about 1700 permanganate began to be used (Sleen 1967, p. 113). The "black" beads in the Tunica collection are actually a deep burgundy when observed under a microscope, indicating that they must have been made after 1700.

Opacity in glass may be due to the presence of tin oxide or other minerals. Or, it may result from some recrystallization or from the presence of minute air bubbles in the bead (Hodges 1964, p. 56), all of which give differing degrees of opacity. Some dense opaque beads are described as "porcelainlike," but they are really colored enamels made of a vitreous paste or composition (Woodward 1965, pp. 4, 5). They are composed of the same substance as ordinary glass, but to this are added other mineral ingredients to give desired density, opacity, and solidity of the enamels. These qualities also depend on the degree of continuous heat to which the composition is subjected during its fusion.

Classification

The 186,200 glass beads in the Tunica collection are divided into two basic groups, according to whether they are wire-wound or drawn. The groups are further divided into classes, types, and varieties. In structure, this system is similar to that of Kidd and Kidd (1970), but the identifications of the varieties differ in no-

menclature—a decision which we deemed necessary and appropriate for our unique sample in the early stages of analysis (see Spector 1978 for recommendation of similar procedure). For comparative purposes, whenever possible, the Kidds' designations are correlated with ours.

Four classes of drawn beads can be dis-

tinguished on the basis of whether or not they are rounded and whether their construction is simple, compound, complex, or composite. As described above, a simple bead has one layer of glass only. A compound bead has two or more layers of glass. A complex bead is a simple bead with surface decoration, and a composite bead is a

compound bead with surface decoration. Types distinguish various combinations of these criteria. In each of the four classes (indicated by roman numerals), there are two types (lettered A and B) as follows:

- IA rough ends, simple construction
- IB rough ends, complex construction
- IIA rounded ends, simple construction
- IIB rounded ends, complex construction
- IIIA rough ends, compound construction
- IIIB rough ends, composite construction
- IVA rounded ends, compound construction
- IVB rounded ends, composite construction

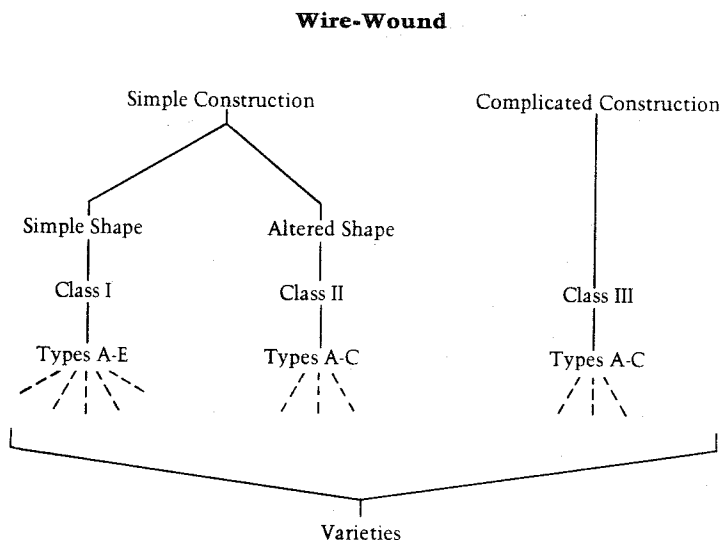
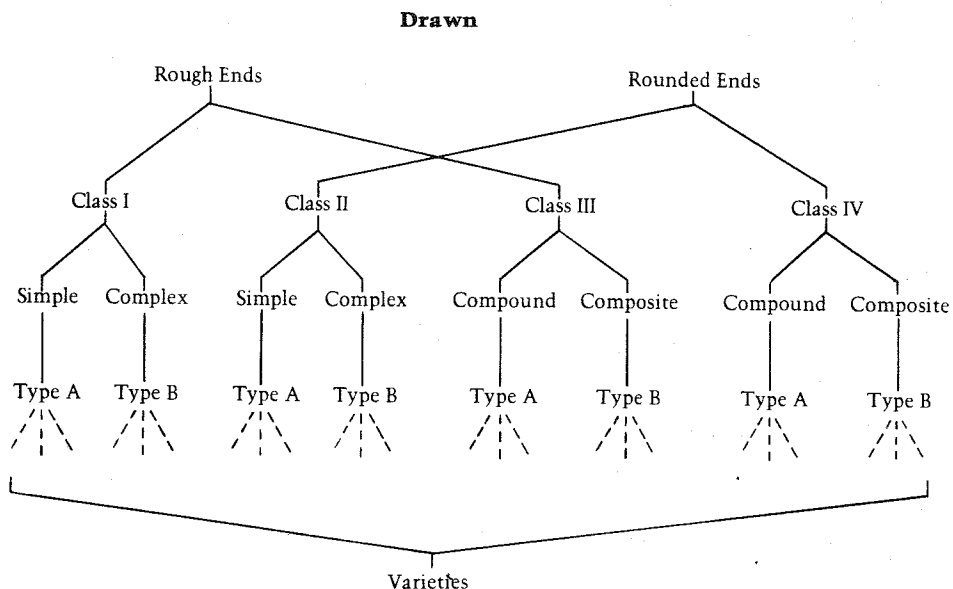
Wire-wound beads, distinguished nomenclaturally by the prefix "W," are divided into three classes (I-III) on the basis of construction, shape, and additional decoration:

- WI simple construction, simple shape
- WII simple construction, altered shape (faceted, molded, etc.)
- WIII complicated construction (layered, inlaid, and other forms of decoration)

These classes are further broken down into unequal numbers of types which define more closely details of shape and decoration.

Varieties of all bead types, drawn and wire-wound, take into account variations in size, degree of opacity versus translucency, color, and, where appropriate, qualities of surface decoration (see pls. I-IV). In these respects, the wire-wound types account for the greatest variation within the collection. Although less than three percent of the beads are wire-wound, there are 49 varieties versus 47 varieties of drawn beads. These proportions reflect the increasing popularity of wire-wound beads during the eighteenth century, presumably because they could be produced in a greater range of forms and surface decorations.

The varieties are the basic units of description, comparison, and interpretation in the following pages. Therefore, included after the definition of those varieties for which the information is available is: (1) a list of every other site in eastern North America known to have examples of that bead; (2) the temporal range expressed by the combined occupation dates of those same sites, and a mean date derived from the average mean dates of the sites; and (3) any additional comments pertinent to the description, origin, history, or interpretation of that variety. The occasional gaps in the numerical sequence of varieties for each type indicate the absence in the collection of closely related varieties known from other North American contexts.



Schematic diagram of the classification of glass beads.

DRAWN BEADS

Class I. Class I comprises tubular beads cut from hollow canes of glass. They have not been rounded by reheating and tumbling; however, a few are slightly smoothed on the ends, which may mean that they were reheated very briefly.

The beads may be monochrome or may have surface decoration. They are long beads, the length being greater than the diameter (Sleen 1967, p. 33), and are sometimes called "bugle" or "pipe" beads. They occur most frequently during the seventeenth century (Watt and Meroney 1937, p. 55).

TYPE A (Kidd: Ia₋)

Type A includes monochrome beads of simple construction (Stone 1971, p. 291). No surface decoration has been added.

VARIETY IA1 (Kidd: Ia4)

Definition. Small, translucent, white. Lengths are 3 mm; diameters 2 mm; and perforations 1 mm.

Sample: 120.

Distribution. Chota (Gleeson 1970, pp. 93-96) 1729-1799.

Comments. The beads are corroded longitudinally along the drawn lines.

VARIETY IA2 (Kidd: Ia16)

Definition. Medium, opaque, blue-gray. Lengths range from 7 to 17 mm; diameters from 4 to 5 mm; perforations are 1 mm.

Sample: 90.

Distribution. Tallapoosa (Burke and Burke 1936, p. 56) about 1725.

Comments. The beads are in good condition.

VARIETY IA3 (Kidd: Ia20)

Definition. Medium, dark blue, translucent. Generally, the beads are not rounded on the edges and are cylindrical in shape. Lengths range from 7 to 12 mm; diameters are 4 mm; and perforations 1 mm.

Sample: 112.

Distribution. Fort Michilimackinac (Stone 1974, p. 95) 1715-1781; Bell (Wittry 1963, p. 32) 1680-1730; Childersburg (DeJarnette and Hansen 1960, p. 57) 1700-1825; Summer Island (Brose 1970, p. 212) about 1650-1690; Goodnow (Griffin and Smith 1948, p. 13) about 1700; Chota (Gleeson 1970, pp. 93-96) 1729-1799; Gros Cap (Quimby 1966, p. 125) 1700-1760; Guebert (Good 1972, p. 121) 1719-1833; Lasanen (Cleland 1971, p. 78) 1670-1715; Womack (Harris et al. 1965, p. 309) 1700-1729.

Chronology. Temporal range 1650-1833; mean date 1726.

Comments. A few of the beads are slightly smoothed on the ends.

VARIETY IA4

Definition. Small, translucent, amber. Lengths range from 3 to 5 mm; diameters are 3 mm; and perforations 1 mm.

Sample: 6.

Distribution. No proveniences are known outside of the Tunica collection.

VARIETY IA5 (Kidd: Ia7)

Definition. Small, translucent, yellow. Lengths range from 7 to 10 mm; diameters are 3 mm; and perforations 1 mm.

Sample: 16.

Distribution. Deer Creek (Sudbury n.d., p. 141) 1730-1760.

Comments. White surface corrosion is present on all the beads.

VARIETY IA6 (Kidd: Ia9)

Definition. Medium, opaque, green. Lengths range from 7 to 10 mm; diameters from 3 to 5 mm; and perforations are 1 mm.

Sample: 16.

Distribution. No proveniences are known outside of the Tunica collection.

Comments. White surface corrosion is present on all the beads. Owing to the corrosion, the longitudinal drawn lines are evident.

TYPE B (Kidd: Ib₋, Ibb₋)

Type B beads are complex because they have surface decoration (Stone 1971, p. 291).

VARIETY IB1 (Kidd: Ib10)

Definition. Medium, opaque, white, with three sets of evenly spaced red-brown stripes. The first inlay consists of one longitudinal stripe; the second has three stripes; and the third has two stripes. The length is 14 mm; diameter 5 mm; and perforation 2 mm.

Sample: 1.

Distribution. No proveniences are known outside of the Tunica collection.

VARIETY IB2 (Kidd: Ibb4)

Definition. Medium, opaque, blue, with three sets of longitudinal compound stripes. Each inlay consists of a red stripe between two white stripes. Lengths range from 9 to 12 mm; diameters from 3 to 5 mm; and perforations from 1 to 2 mm.

Sample: 8.

Distribution. No proveniences are known outside of the Tunica collection.

VARIETY IB3

Definition. Small, translucent, dark burgundy (black in appearance), with four evenly spaced white stripes. The length is 4 mm; diameter 3 mm; and perforation 1 mm.

Sample: 1.

Distribution. No proveniences are known outside of the Tunica collection.

Class II. Class II beads are similar to the tubular beads of Class I, but they have been rounded on the ends by reheating and tumbling. The beads may be monochrome or may have surface decoration.

TYPE A (Kidd: Ila₋)

Type A includes monochrome beads of simple construction. No surface decoration has been added.

VARIETY IIA1 (Kidd: Ila13, 14, 15)

Definition. Very small to very large, opaque, white. The beads are either round, oval, or donut- or barrel-shaped. Lengths range from 1 to 19 mm; diameters from 1 to 10 mm; and perforations from .5 to 3 mm.

Sample: 5,887.

Distribution. Fort Michilimackinac (Stone 1974, p. 89) 1715-1781; Gilbert (Jelks 1967, p. 99) 1740-1770; Tallapoosa (Burke and Burke 1936, p. 53) about 1725; Huron and Petun (Quimby 1966, p. 186) 1600-1650; Fatherland (Neitzel 1965, pl. 15) 1699-1730; Bayou Goula (Quimby 1957, p. 162) 1699-1740; Angola Farm (Peabody Museum Collections) 1700-1731; San Juan Capistrano (Schuetz 1969, p. 58) 1731-1836; Southern Compress (Gregory and Webb 1965, p. 18) 1714-1803; Fish Hatchery (Gregory and Webb 1965, p. 21) 1714-1820; Lawton (Gregory and Webb 1965, p. 24) 1700-1836; Wilkinson (Gregory and Webb 1965, p. 27) 1803-1820; Los Adaes (Gregory and Webb 1965, p. 28) 1700-1765; Colfax Ferry (Gregory and Webb 1965, p. 37) 1787-1820; Pearson (Duffield and Jelks 1961, p. 43) 1700-1835; Childersburg (DeJarnette and Hansen 1960, p. 57) 1700-1825; Kipp's Post (Woolworth and Wood 1960, p. 280) 1826-1830; Albert Ibaugh (Kinsey 1960, p. 91) 1600-1625; Chota (Gleeson 1970, pp. 93-96) 1729-1799; Bell (Wittry 1963, p. 31) 1680-1730; Womack (Harris et al. 1965, p. 309, nos. 12, 13) 1700-1729; Portland (I. Brown 1975a, p. 59) 1699-1706; St. Pierre (I. Brown 1975a, p. 166) 1719-1729; Gros Cap (Quimby 1966, p. 125) 1700-1760; Guebert (Good 1972, p. 118) 1719-1833; Lasanen (Cleland 1971, p. 78) 1670-1715; Deer Creek (Sud-

bury n.d., p. 119) 1730–1760.

Chronology. Temporal range 1600–1836; mean date 1739.

Comments. Some beads are slightly yellowed, and some have shiny surfaces. They are called “convex” or “convexo-elongate” by Stone (1971, p. 296), who also notes that many are lopsided and may have small glass protrusions where they were snapped apart during manufacture.

These white beads are comparable to beads found at many sites that date between 1700 and 1820 (ibid., p. 346) and seem to have a terminal date of 1836 (Schuetz 1969, p. 58). The French trade list for the colony of Louisiana in 1734 lists an order for 1,500 lb of “the smallest white beads from Holland” (“Munitions and Commodities for the Colony of Louisiana, 1734,” see appendix B). Beads of this variety are believed to have been manufactured in Amsterdam (Karklins 1975, p. 69).

VARIETY IIA2 (Kidd: IIA18, 19)

Definition. Very small to large, translucent, yellow. Lengths range from 1 to 7 mm; diameters from 1 to 6 mm; and perforations from .5 to 1 mm.

Sample: 1,686.

Distribution. Pearson (Duffield and Jelks 1961, p. 46) 1700–1835; Fort Berthold (Smith 1953, p. 47) 1845–1890; Childersburg (DeJarnette and Hansen 1960, p. 58) 1700–1825; Goodnow (Griffin and Smith 1948, p. 12) about 1700; Hiwassee Island (Lewis and Kneberg 1946, p. 133) late seventeenth century to early eighteenth; Chota (Gleeson 1970, pp. 93–96) 1729–1799; Womack (Harris et al. 1965, p. 313) 1700–1729.

Chronology. Temporal range 1700–1890; mean date 1763.

Comments. Most of the beads have rough, white surface corrosion.

VARIETY IIA3 (Kidd: IIA9)

Definition. Small to large, transparent, clear. The smaller beads are donut-shaped; the larger are more barrel-shaped. Lengths range from 2 to 12 mm; diameters from 2.5 to 10 mm; and perforations from .5 to 3 mm.

Sample: 853.

Distribution. Gilbert (Jelks 1967, p. 101) 1740–1770; Fatherland (Quimby 1966, p. 192) 1699–1730; Fort St. Joseph (Quimby 1966, p. 192) 1700–1781; San Xavier (Gilmore 1969, p. 98) 1746–1755; Colfax Ferry (Gregory and Webb 1965, p. 38) 1787–1820; Fort Berthold (Smith 1953, p. 45) 1845–1890; Childersburg (DeJarnette and Hansen 1960, p. 58) 1700–1825; Goodnow (Griffin and Smith 1948, p. 12) about 1700; San Juan Capistrano (Schuetz 1969, p. 59)

1731–1836; Pearson (Duffield and Jelks 1961, p. 46) 1700–1835; Chota (Gleeson 1970, pp. 93–96) 1729–1799; Lasanen (Cleland 1971, p. 78) 1670–1715; Deer Creek (Sudbury n.d., p. 127) 1730–1760; Angola Farm (LMS files) 1700–1731.

Chronology. Temporal range 1670–1890; mean date 1756.

Comments. These beads have slightly yellow or iridescent patination.

VARIETY IIA4 (Kidd: IIA46, 47)

Definition. Small to large, opaque, light blue. The smaller beads are donut-shaped; the larger ones are oval. Lengths range from 1 to 13 mm; diameters from 3 to 8 mm; and perforations from .5 to 2 mm.

Sample: 694.

Distribution. Gilbert (Jelks 1967, p. 103) 1740–1770; Tallapoosa (Burke and Burke 1936, p. 56) about 1725; Russell (Peabody Museum Collections) 1700–1730; Los Adaes (Gregory and Webb 1965, p. 32) 1700–1765; Bayou Goula (Peabody Museum Collections) 1699–1740; San Juan Capistrano (Schuetz 1969, p. 59) 1731–1836; Colfax Ferry (Gregory and Webb 1965, p. 38) 1787–1820; Haynes Bluff (Peabody Museum Collections) 1699–1736; Fort Berthold (Smith 1953, p. 47) 1845–1890; Chota (Gleeson 1970, pp. 93–96) 1729–1799; Portland (I. Brown 1975a, p. 60) 1699–1706; Womack (Harris et al. 1965, p. 313) 1700–1729; Deer Creek (Sudbury n.d., p. 119) 1730–1760; Angola Farm (LMS files) 1700–1731.

Chronology. Temporal range 1699–1890; mean date 1748.

Comments. The French trade list for Louisiana in 1734 lists an order for 1,000 lb of “sky-blue beads from Holland” (“Munitions and Commodities for the Colony of Louisiana, 1734,” see appendix B).

Beads of this variety are believed to have been manufactured in Amsterdam (Karklins 1975, p. 71).

VARIETY IIA5 (Kidd: IIA7)

Definition. Small to large, opaque, dark burgundy (black in appearance). The beads are either oval or donut-shaped. Lengths range from 2 to 9 mm; diameters from 3 to 8 mm; and perforations from 1 to 3 mm.

Sample: 12,116.

Distribution. Tallapoosa (Burke and Burke 1936, p. 55) about 1725; Presidio Ahumada (Tunnell and Ambler 1967, p. 52) 1756–1771; Old Fort Albany (Quimby 1966, p. 191) 1680–1715; San Xavier (Gilmore 1969, p. 98) 1746–1755; San Juan Capistrano (Schuetz 1969, p. 59) 1731–1836; Los Adaes (Gregory and Webb 1965, p. 31) 1700–1765; Colfax Ferry (Gregory and Webb 1965, p. 37) 1787–1820; Pearson

(Duffield and Jelks 1961, p. 45) 1700–1835; Haynes Bluff (Peabody Museum Collections) 1699–1736; Fort Berthold (Smith 1953, p. 48) 1845–1890; Childersburg (DeJarnette and Hansen 1960, p. 57) 1700–1825; Kipp's Post (Woolworth and Wood 1960, p. 281) 1826–1830; Albert Ibaugh (Kinsey 1960, p. 91) 1600–1625; Goodnow (Griffin and Smith 1948, p. 12) about 1700; Hiwassee Island (Lewis and Kneberg 1946, p. 133) late seventeenth century to early eighteenth; Chota (Gleeson 1970, pp. 93–96) 1729–1799; Guebert (Good 1972, p. 127) 1719–1833; Lasanen (Cleland 1971, p. 78) 1670–1715; Angola Farm (LMS files) 1700–1731; Bayou Goula (Quimby 1966, p. 87) 1699–1740; Rosebrough Lake (Miroir et al. 1973, p. 134) 1719–1778; Deer Creek (Sudbury n.d., p. 126) 1730–1760; Womack (Harris et al. 1965, p. 313) 1700–1729; Fort Michilimackinac (Stone 1974, p. 90) 1715–1781.

Chronology. Temporal range 1600–1890; mean date 1745.

Comments. Many of the beads in this variety have a shiny, iridescent patination. Faint rings encircle the ends.

They date from the period between 1700 and 1740 (Bell, Jelks, and Newcomb 1967; see also Stone 1971, p. 295). The French trade list for Louisiana in 1734 lists an order for 1,000 lb of “black beads from Holland” (“Munitions and Commodities for the Colony of Louisiana, 1734,” see appendix B). Beads of this variety are believed to have been manufactured in Amsterdam (Karklins 1975, p. 71).

VARIETY IIA6 (Kidd: IIA55, 56, 57)

Definition. Small to large, translucent, dark blue. The beads are either square, oval, or donut-shaped. Lengths range from 2 to 13 mm; diameters from 2 to 8 mm; and perforations from .5 to 2 mm.

Sample: 10,745.

Distribution. Gilbert (Jelks 1967, p. 100) 1740–1770; Tallapoosa (Burke and Burke 1936, p. 58) about 1725; Presidio Ahumada (Tunnell and Ambler 1967, p. 49) 1756–1771; Hiwassee Island (Lewis and Kneberg 1946, p. 133) late seventeenth century to early eighteenth; Mission San Lorenzo (Tunnell and Ambler 1967, p. 60) about 1760; San Xavier (Gilmore 1969, p. 98) 1746–1755; San Juan Capistrano (Schuetz 1969, p. 59) 1731–1836; Southern Compress (Gregory and Webb 1965, p. 20) 1714–1803; Lawton (Gregory and Webb 1965, p. 25) 1700–1836; Wilkinson (Gregory and Webb 1965, p. 27) 1803–1820; Los Adaes (Gregory and Webb 1965, p. 30) 1700–1765; Colfax Ferry (Gregory and Webb 1965, p. 37) 1787–1820; Pearson (Duffield and Jelks 1961, p. 44) 1700–1835; Fort Berthold (Smith 1953, p. 46) 1845–1890; Childersburg (DeJarnette and Hansen 1960,

p. 58) 1700–1825; Rosebrough Lake (Miroir et al. 1973, p. 132) 1719–1778; Fort Ligonier (Grimm 1970, p. 49) 1758–1766; Haynes Bluff (Peabody Museum Collections) 1699–1736; Kipp's Post (Woolworth and Wood 1960, p. 279) 1826–1830; Albert Ibaugh (Kinsey 1960, p. 91) 1600–1625; Old Birch Island Cemetery (Greenman 1951, p. 54) 1750–1800; Summer Island (Brose 1970, p. 212) about 1650–1690; Kaskaskia (Perino 1967, p. 128) 1700–1832; Goodnow (Griffin and Smith 1948, p. 12) about 1700; Chota (Gleeson 1970, pp. 93–96) 1729–1799; Bell (Wittry 1963, p. 31) 1680–1730; Portland (I. Brown 1975a, p. 61) 1699–1706; St. Pierre (I. Brown 1975a, p. 167) 1719–1729; Guebert (Good 1972, p. 113) 1719–1833; Womack (Harris et al. 1965, p. 309) 1700–1729; Bayou Goula (Quimby 1966, p. 87) 1699–1740; Angola Farm (LMS files) 1700–1731.

Chronology. Temporal range 1600–1890; mean date 1749.

Comments. Many of the beads have an iridescent patination.

This variety occurs commonly in sites dated from 1700 to 1740 and, to a lesser extent, in sites dated from 1740 to 1767. It disappears altogether from the trade around 1767 (Tunnell and Ambler 1967, p. 59, quoting R. K. Harris). Beads of this variety are believed to have been manufactured in Amsterdam (Karklins 1975, p. 71).

VARIETY IIA7

(Kidd: Ila40, 41, 42)

Definition. Very small to very large, opaque, turquoise blue. The beads are either square, or oval, or donut-shaped. Lengths range from .5 to 17 mm; diameters from .5 to 12 mm; and perforations from .25 to 4 mm.

Sample: 31,367.

Distribution. Fort Michilimackinac (Stone 1974, p. 93) 1715–1781; Gilbert (Jelks 1967, p. 99) 1740–1770; Lawton (Stone 1971, p. 346) 1700–1836; Presidio Ahumada (Tunnell and Ambler 1967, p. 50) 1756–1771; Tallapoosa (Burke and Burke 1936, p. 54) about 1725; Fatherland (Quimby 1966, p. 192) 1699–1730; Fort St. Joseph (Quimby 1966, p. 192) 1700–1781; San Xavier (Gilmore 1969, p. 97) 1746–1755; Pearson (Duffield and Jelks 1961, p. 44) 1700–1835; Haynes Bluff (Peabody Museum Collections) 1699–1736; Childersburg (DeJarnette and Hansen 1960, p. 58) 1700–1825; Albert Ibaugh (Kinsey 1960, p. 91) 1600–1625; Goodnow (Griffin and Smith 1948, p. 12) about 1700; Chota (Gleeson 1970, pp. 93–96) 1729–1799; Portland (I. Brown 1975a, p. 64) 1699–1706; Guebert (Good 1972, p. 117) 1719–1833; Lasanen (Cleland 1971, p. 76) 1670–1715; Womack (Harris et al. 1965, p. 313) 1700–1729; Deer Creek (Sudbury n.d., p. 123) 1730–1760; Angola Farm (LMS files) 1700–1731; Rosebrough Lake (Miroir et al. 1973,

p. 132) 1719–1778; San Juan Capistrano (Schuetz 1969, p. 58) 1731–1836; Alamo (Greer 1967, p. 54) 1740–1815; Los Adaes (Gregory and Webb 1965, p. 30) 1700–1765; Hiwassee Island (Lewis and Kneberg 1946, p. 133) late seventeenth century to early eighteenth.

Chronology. Temporal range 1600–1836; mean date 1737.

Comments. Many of the beads in this variety have an iridescent patination. Others have shiny to dull surfaces. This variety includes the smallest beads in the collection. Approximately 30,000 of these small beads were found in a copper vessel with a burial. Evidently, they had been strung on fine thread or hair, and the thread was formed into a tassel.

VARIETY IIA8

Definition. Small to large, opaque, light powder blue. The smaller beads are donut-shaped; the larger beads are round. Lengths range from 2 to 6.5 mm; diameters from 2.5 to 9 mm; and perforations from .5 to 2 mm.

Sample: 43.

Distribution. Chota (Gleeson 1970, pp. 93–96) 1729–1799; Guebert (Good 1972, p. 117) 1719–1833; Womack (Harris et al. 1965, p. 313) 1700–1729; Deer Creek (Sudbury n.d., p. 120) 1730–1760; Angola Farm (LMS files) 1700–1731.

Chronology. Temporal range 1700–1833; mean date 1743.

VARIETY IIA9

(Kidd: Ila34)

Definition. Small, translucent, aqua blue. The beads are donut-shaped. Lengths are 2 mm; diameters 3 mm; and perforations 1 mm.

Sample: 800.

Distribution. Guebert (Good 1972, p. 113) 1719–1833; Lasanen (Cleland 1971, p. 79) 1670–1715; Rosebrough Lake (Miroir et al. 1973, p. 136) 1719–1778.

Chronology. Temporal range 1670–1833; mean date 1739.

VARIETY IIA10

(Kidd: Ila42)

Definition. Large, opaque, aqua blue. The beads are oval. Lengths range from 9 to 12 mm; diameters from 6 to 9 mm; and perforations are 2 mm.

Sample: 179.

Distribution. Gilbert (Jelks 1967, p. 100) 1740–1770; Tallapoosa (Burke and Burke 1936, p. 59) about 1725; Childersburg (DeJarnette and Hansen 1960, p. 58) 1700–1825; Portland (I. Brown 1975a, p. 66) 1699–1706; Guebert (Good 1972, p. 117) 1719–1833; Rosebrough Lake (Miroir et al. 1973, p. 132) 1719–1778.

Chronology. Temporal range 1699–1833;

mean date 1747.

Comments. The ends of the beads appear to have been pinched off after being rounded. The surfaces are shiny. Wavy, lengthwise, white lines appear on many, perhaps the results of impurities in the glass.

VARIETY IIA12

Definition. Medium, translucent, amber. The shape is oval. The length is 7 mm; diameter 4 mm; and perforation .5 mm.

Sample: 1.

Distribution. No proveniences are known outside of the Tunica collection.

Comments. Although it has a small hole in its side, this bead is in good condition.

VARIETY IIA13

(Kidd: Ila32)

Definition. Large, translucent, medium blue. The shape is oval. Lengths are 11 mm; diameters 6 mm; and perforations 3 mm.

Sample: 2.

Distribution. Pearson (Duffield and Jelks 1961, p. 45) 1700–1835; Portland (I. Brown 1975a, p. 68) 1699–1706; Angola Farm (LMS files) 1700–1731.

Chronology. Temporal range 1699–1835; mean date 1729.

Comments. There are tiny semicircular fracture marks on the surface.

VARIETY IIA14

(Kidd: Ila25)

Definition. Large, opaque, light green. The shape is round. Lengths are 7 mm; diameters 8 mm; and perforations 2 mm.

Sample: 7.

Distribution. No proveniences are known outside of the Tunica collection.

Comments. The surfaces have an iridescent patination.

VARIETY IIA15

(Kidd: Ila26, 27, 28, 29)

Definition. Very small to large, translucent, dark green. The smaller beads are donut-shaped; the larger beads are either square or oval. Lengths range from 1 to 17 mm; diameters from 1 to 8 mm; and perforations from .5 to 2 mm.

Sample: 1,107.

Distribution. Gilbert (Jelks 1967, p. 103) 1740–1770; Tallapoosa (Burke and Burke 1936, p. 58) about 1725; Southern Compress (Gregory and Webb 1965, p. 21) 1714–1803; Los Adaes (Gregory and Webb 1965, p. 33) 1700–1765; Colfax Ferry (Gregory and Webb 1965, p. 38) 1787–1820; Pearson (Duffield and Jelks 1961, p. 46) 1700–1835; Fort Berthold (Smith 1953, p. 47) 1845–1890; Childersburg (DeJarnette and Hansen 1960, p. 58) 1700–1825; Kipp's Post (Woolworth and Wood 1960, p. 281) 1826–

1830; Goodnow (Griffin and Smith 1948, p. 12) about 1700; Chota (Gleeson 1970, pp. 93–96) 1729–1799; Bell (Wittry 1963, p. 31) 1680–1730; St. Pierre (I. Brown 1975a, p. 70) 1719–1729; Guebert (Good 1972, p. 110) 1719–1833; Angola Farm (LMS files) 1700–1731.

Chronology. Temporal range 1680–1890; mean date 1762.

Comments. White surface patination is evident on many of the beads.

VARIETY IIA17

(Kidd: IIA31)

Definition. Large, translucent, turquoise blue. The bead is round, with slightly flattened ends. The length is 9 mm; diameter 9 mm; and perforation 3 mm.

Sample: 1.

Distribution. Chota (Gleeson 1970, pp. 93–96) 1729–1799; Guebert (Good 1972, p. 116) 1719–1833; Angola Farm (LMS files) 1700–1731.

Chronology. Temporal range 1700–1833; mean date 1752.

Comments. The bead is in very good condition.

Beads of this variety are believed to have been manufactured in Amsterdam (Karklins 1975, p. 71).

TYPE B

(Kidd: IIB_a, IIB_b, IIB_c)

Type B beads have surface decoration, either simple or compound and thus are of complex construction.

VARIETY IIB1

(Kidd: IIB12)

Definition. Small to large, opaque, dark burgundy (black in appearance), with longitudinal white stripes. The small beads have four white stripes; the medium have six; and the large have eight. These beads are round with flattened ends. Lengths range from 3 to 6 mm; diameters from 4 to 8 mm; and perforations from 1 to 3 mm.

Sample: 990.

Distribution. Pearson (Duffield and Jelks 1961, p. 50) 1700–1835; Chota (Gleeson 1970, pp. 93–96) 1729–1799; Guebert (Good 1972, p. 126) 1719–1833; Lasanen (Cleland 1971, p. 80) 1670–1715; Womack (Harris et al. 1965, p. 312) 1700–1729.

Chronology. Temporal range 1670–1835; mean date 1743.

Comments. The inlaid stripes on each bead are composed of from five to seven thin, white filaments of glass. Occasionally, a few of the filaments may be missing, giving the inlay the appearance of multiple thin stripes.

VARIETY IIB2

(Kidd: IIB25, 26)

Definition. Medium to large, opaque, white, with four longitudinal dark blue stripes. The beads are either round or oval. Lengths range from 6 to 15 mm; diameters from 5 to 8 mm; and perforations from 1 to 2 mm.

Sample: 14.

Distribution. Bayou Goula (Quimby 1957, p. 135) 1699–1740; Angola Farm (LMS files) 1700–1731; Fish Hatchery (Gregory and Webb 1965, p. 23) 1714–1820; Kaskaskia (Perino 1967, p. 128) 1700–1832; Portland (I. Brown 1975a, p. 72) 1699–1706; Guebert (Good 1972, p. 124) 1719–1833; Womack (Harris et al. 1965, p. 310) 1700–1729.

Chronology. Temporal range 1699–1833; mean date 1737.

Comments. The stripes vary in width. On one example the individual stripes are compound.

VARIETY IIB3

Definition. Large to very large, opaque, white, with six longitudinal blue spiral stripes. All beads are oval. Lengths range from 13 to 15 mm; diameters from 6 to 11 mm; and perforations from 2 to 3 mm.

Sample: 9.

Distribution. Gilbert (Jelks 1967, p. 100) 1740–1770; Bayou Goula (Quimby 1957, p. 135) 1699–1740; Fatherland (Quimby 1966, p. 193) 1699–1730; Fort St. Joseph (Quimby 1966, p. 193) 1700–1781; Childersburg (DeJarnette and Hansen 1960, p. 58) 1700–1825; Kaskaskia (Perino 1967, p. 128) 1700–1832; Guebert (Good 1972, p. 125) 1719–1833; Womack (Harris et al. 1965, p. 311) 1700–1729; Angola Farm (Quimby 1942, p. 546) 1700–1731.

Chronology. Temporal range 1699–1833; mean date 1740.

VARIETY IIB4

(Kidd: IIB31)

Definition. Large, opaque, white, with four longitudinal, alternating red and blue stripes. The bead is round. The length is 6 mm; diameter 6 mm; and perforation 1 mm.

Sample: 1.

Distribution. Chota (Gleeson 1970, pp. 93–96) 1729–1799; Guebert (Good 1972, p. 129) 1719–1833; Lasanen (Cleland 1971, p. 81) 1670–1715; Womack (Harris et al. 1965, p. 310) 1700–1729.

Chronology. Temporal range 1670–1833; mean date 1737.

VARIETY IIB5

(Kidd: IIB13)

Definition. Large, opaque, white, with three inlays of compound stripes. The first example has three sets of stripes, each with a blue stripe between two red stripes. On the other two beads, each inlay is composed of green, red, black, blue, black, and

green stripes. The beads are oval. Lengths range from 11 to 13 mm; diameters from 6 to 7 mm; and perforations are 1 mm.

Sample: 3.

Distribution. Fatherland (Quimby 1966, p. 195; Robert S. Neitzel, personal communication) 1699–1730; Fort St. Joseph (Quimby 1966, p. 195) 1700–1781; Fort Michilimackinac (Stone 1974, p. 97) 1715–1781; Lawton (Gregory and Webb 1965, p. 24) 1700–1836; Chota (Gleeson 1970, pp. 93–96) 1729–1799; Guebert (Good 1972, p. 109) 1719–1833; Womack (Harris et al. 1965, p. 310) 1700–1729; Rosebrough Lake (Miroir et al. 1973, p. 134) 1719–1778.

Chronology. Temporal range 1699–1836; mean date 1747.

VARIETY IIB6

Definition. Large, opaque, blue, with four longitudinal red stripes. The length is 12 mm; diameter 7 mm; and perforation 2 mm.

Sample: 1.

Distribution. Tallapoosa (Burke and Burke 1936, p. 55) about 1725.

Comments. It appears that this bead was originally two beads which fused together during cooling. There is an indentation in the middle, and at that point the stripes are broken. The drawn lines are visible.

VARIETY IIB7

(Kidd: IIBb25)

Definition. Large, opaque, turquoise blue, with three sets of longitudinal compound stripes, each having a red stripe between two white stripes. The beads are oval. Lengths range from 10 to 15 mm; diameters from 7 to 9 mm; and perforations are 2 mm.

Sample: 4.

Distribution. Bayou Goula (Quimby 1966, p. 87) 1699–1740; Angola Farm (LMS files) 1700–1731; Tallapoosa (Burke and Burke 1936, p. 55) about 1725; Lawton (Gregory and Webb 1965, p. 24) 1700–1836; Wilkinson (Gregory and Webb 1965, p. 27) 1803–1820; Fatherland (Quimby 1966, p. 193) 1699–1730; Fort St. Joseph (Quimby 1966, p. 193) 1700–1781; Haynes Bluff (Peabody Museum Collections) 1699–1736; Hiwassee Island (Lewis and Kneberg 1946, pl. 87a) late seventeenth century to early eighteenth; Bell (Wittry 1963, p. 31) 1680–1730; Womack (Harris et al. 1965, p. 311) 1700–1729; Rosebrough Lake (Miroir et al. 1973, p. 134) 1719–1778.

Chronology. Temporal range 1680–1836; mean date 1733.

Comments. The beads are corroded along the drawn lines. Some of the red stripes have worn off.

Similar beads were manufactured in Amsterdam (Sleen 1967, p. 105).

VARIETY IIB8

Definition. Medium, translucent, amber, with three longitudinal white stripes. The beads are oval. Lengths range from 8 to 10 mm; diameters from 4 to 5 mm; and perforations are .5 mm.

Sample: 56.

Distribution. No proveniences are known outside of the Tunica collection.

Comments. All the beads have white to iridescent surface patination. Some are broken.

VARIETY IIB10

(Kidd: IIB27)

Definition. Large, opaque, blue-gray with three sets of three thin, longitudinal blue stripes. The beads are oval. Lengths are 16 mm; diameters 7 mm; and perforations 2 mm.

Sample: 25.

Distribution. Guebert (Good 1972, p. 124) 1719–1833; Womack (Harris et al. 1965, p. 310) 1700–1729; Angola Farm (LMS files) 1700–1731; Rosebrough Lake (Miroir et al. 1973, p. 134) 1719–1778.

Chronology. Temporal range 1700–1833; mean date 1739.

Comments. Occasionally, there are four stripes in one of the inlays.

Beads of this variety are believed to have been manufactured in Amsterdam (Karklins 1975, p. 72).

VARIETY IIB13

Definition. Large, opaque, white, with three inlays of three longitudinal blue stripes, each of which makes a one-third turn around the bead. The beads are generally oval or peanut-shaped. Lengths range from 13 to 18 mm; diameters are 7 mm; and perforations are 2 mm.

Sample: 6.

Distribution. Guebert (Good 1972, p. 125) 1719–1833; Womack (Harris et al. 1965, p. 311) 1700–1729; Angola Farm (Quimby 1942, p. 546) 1700–1731; Rosebrough Lake (Miroir et al. 1973, p. 134) 1719–1778; Fatherland (R. Neitzel, personal communication) 1699–1730.

Chronology. Temporal range 1699–1833; mean date 1734.

Comments. Beads of this variety are believed to have been manufactured in Amsterdam (Karklins 1975, p. 70).

VARIETY IIB14

Definition. Large, opaque, white, with four longitudinal, alternating blue and green stripes. The bead is oval. The length is 8 mm; diameter 6 mm; and perforation 2 mm.

Sample: 1.

Distribution. Tallapoosa (Burke and Burke 1936, p. 53) about 1725.

Class III. This class is composed of drawn beads with compound structure. It includes composite forms, combinations of compound and complex beads. These beads have not been reheated or tumbled to round the ends.

TYPE A

(Kidd: IIIa₋)

Type A has a compound structure, but there is no surface decoration. These are long beads, the length being greater than the diameter.

VARIETY IIIA1

(Kidd: IIIa3)

Definition. Medium, opaque, made up of three layers of glass. The innermost layer is translucent, light green glass; the middle layer is an opaque, brick-red glass; and the outer layer is a thin, clear glass veneer. Lengths range from 9 to 15 mm; diameters from 3 to 4 mm; and perforations are 1 mm.

Sample: 60.

Distribution. Childersburg (DeJarnette and Hansen 1960, p. 58) 1700–1825; Colfax Ferry (Gregory and Webb 1965, p. 36) 1787–1820; Los Adaes (Gregory and Webb 1965, p. 32) 1700–1765; Presidio Ahumada (Tunnell and Ambler 1967, p. 53) 1756–1771; Gilbert (Jelks 1967, p. 101) 1740–1770; Lawton (Stone 1971, p. 347) 1700–1836; Fort Michilimackinac (Stone 1974, p. 97) 1715–1781; Tallapoosa (Burke and Burke 1936, p. 55) about 1725; Summer Island (Brose 1970, p. 212) about 1650–1690; Dutch Hollow (Ritchie 1954) 1590–1615; Kaskaskia (Perino 1967, p. 128) 1700–1832; Hiwassee Island (Lewis and Kneberg 1946, p. 133) late seventeenth century to early eighteenth; Guebert (Good 1972, p. 121) 1719–1833; Lasanen (Cleland 1971, p. 81) 1670–1715; Womack (Harris et al. 1965, p. 313) 1700–1729; Deer Creek (Sudbury n.d., p. 132) 1730–1760; Rosebrough Lake (Miroir et al. 1973, p. 135) 1719–1778.

Chronology. Temporal range 1590–1836; mean date 1735.

Comments. Some of the beads in this variety have a longitudinal stripe, which may or may not have been intentional.

This bead is called a "Cornaline d'Aleppo" (Brannon 1936a, p. 52). It was distributed widely throughout North America and has been found in several parts of the Old World (Orchard 1929, p. 88). The bead is also referred to as a "bugle" bead and a "Hudson Bay" bead. The Hudson Bay Trading Company found these beads to be very popular with the Indians. The exchange value of these beads was six beads for one "made" beaver (a dried skin ready for shipment to the tannery—see Orchard 1929, p. 88). Beads of this variety are believed to have been man-

ufactured in Amsterdam (Karklins 1975, p. 74).

VARIETY IIIA2

Definition. Small to medium, opaque, white, with an outer layer of clear glass. The beads are long and tubular. Lengths range from 3 to 12 mm; diameters from 3 to 5 mm; and perforations are 1 mm.

Sample: 49.

Distribution. Fort Michilimackinac (Stone 1974, p. 97) 1715–1781; Pearson (Duffield and Jelks 1961, p. 48) 1700–1835; Childersburg (DeJarnette and Hansen 1960, p. 57) 1700–1825; Summer Island (Brose 1970, p. 212) about 1650–1690; Chota (Gleeson 1970, pp. 93–96) 1729–1799; Guebert (Good 1972, p. 120) 1719–1833; Rosebrough Lake (Miroir et al. 1973, p. 135) 1719–1778.

Chronology. Temporal range 1650–1835; mean date 1748.

TYPE B

(Kidd: IIIb₋)

Type B is composite, a combination of compound and complex. There are two or more layers of glass with inlays either on the surface or between the layers.

VARIETY IIIB1

Definition. Medium, transparent, clear, with 14 thin, longitudinal white stripes which are between the two clear layers of glass. The length is 5 mm; diameter 4.5 mm; and perforation 1 mm.

Sample: 1.

Distribution. Tallapoosa (Burke and Burke 1936, p. 57) about 1725; Guebert (Good 1972, p. 126) 1719–1833; Haynes Bluff (LMS files) 1699–1736.

Chronology. Temporal range 1699–1833; mean date 1742.

Comments. The bead is referred to as a "gooseberry," although most gooseberry beads are rounded at the ends.

Class IV. The beads are either compound or composite and have been rounded by reheating and tumbling.

TYPE A

(Kidd: IVa₋)

The beads are compound with no surface decoration.

VARIETY IVA1

(Kidd: IVa13)

Definition. Small to very large, with an opaque, white core covered by a layer of either opaque, white, or transparent, clear glass. The beads are oval, with rounded

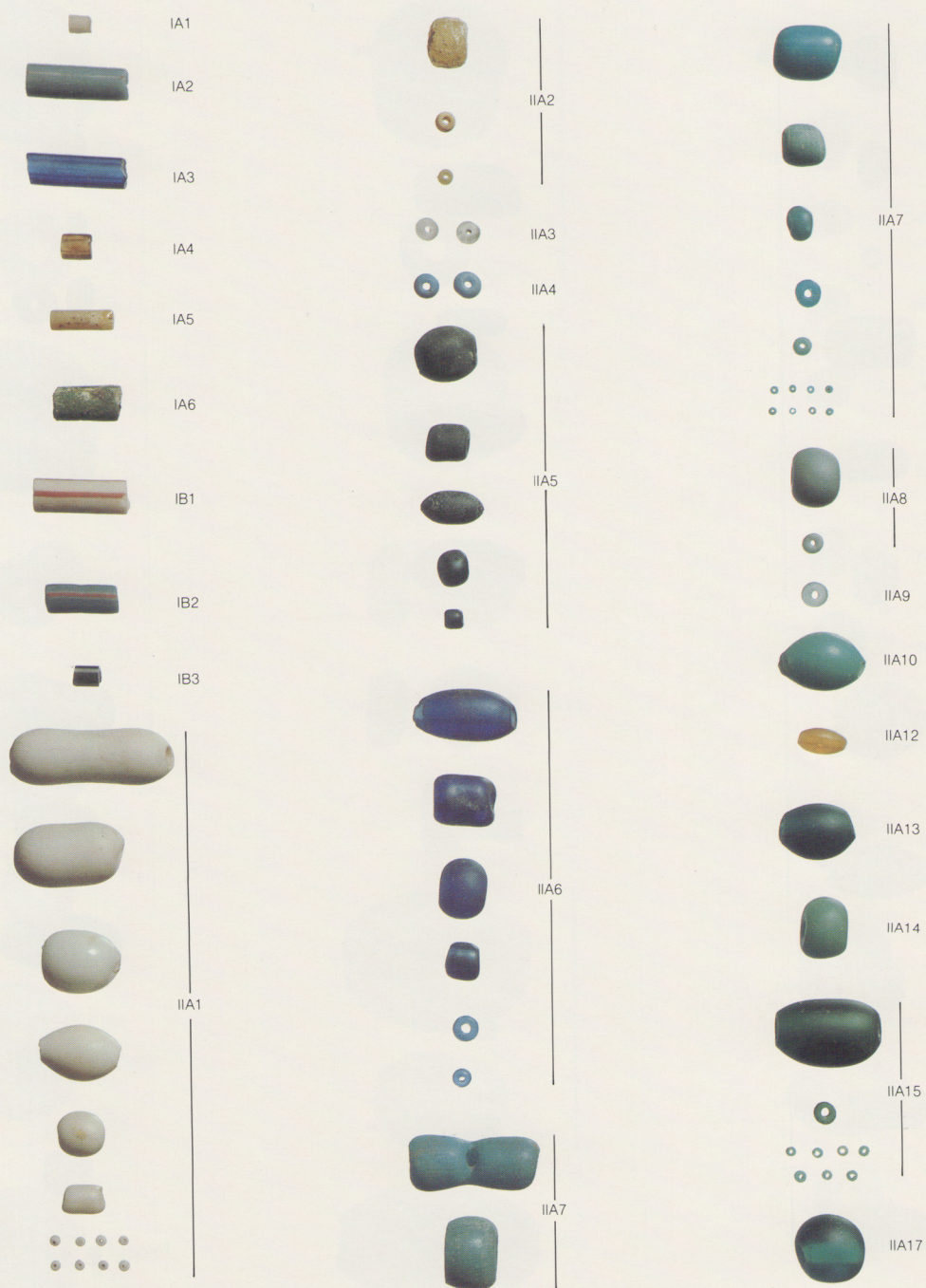
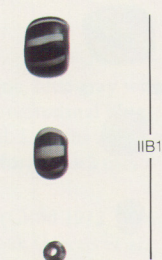
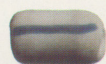


Plate II. Drawn Glass Beads (IIB1-IVB8).

1:1



IIB1



IIB2



IIB3



IIB4



IIB5



IIB6



IIB7



IIB8



IIB10



IIB13



IIB14



IIIA1



IIIA2



IIIB1



IVA1



IVA1



IVA2



IVB1



IVB2



IVB3



IVB4



IVB6



IVB7



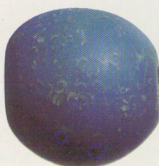
IVB8



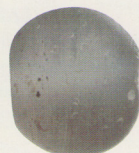
WIA1



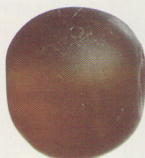
WIA6



WIA2



WIA7



WIA3



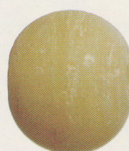
WIB1



WIB2



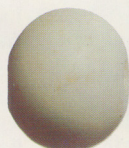
WIB3



WIA4



WIC1



WIA5



WIC2



WID1



WID2



WID3



WID4



WID5



WID6



WIE1



WIE2



WIE3



WIE4



WIE5



WIIA1



Plate IV. Wire-wound Glass Beads (WIIA2-WIIIC1).

1:1



WIIA2



WIIA3



WIIA4



WIIA5



WIIA6



WIIA7



WIIA8



WIIA9



WIIA10



WIIIB1



WIIIB2



WIIIB3



WIIIC1



WIIIA1



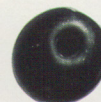
WIIIA2



WIIIA3



WIIIA4



WIIIA5



WIIIA6



WIIIA7



WIIIA8



WIIIB1



WIIIB2



WIIIB3



WIIIC1

ends. Lengths range from 2 to 15 mm; diameters from 3 to 8 mm; and perforations from .5 to 2 mm.

Sample: 113,501.

Distribution. Gilbert (Jelks 1967, p. 99) 1740–1770; Presidio Ahumada (Tunnell and Ambler 1967, p. 55) 1756–1771; San Xavier (Gilmore 1969, p. 98) 1746–1755; Fort Laramie (Murray 1964, p. 16) 1834–1875; Alamo (Greer 1967, p. 54) 1740–1815; Fish Hatchery (Gregory and Webb 1965, p. 22) 1714–1820; Los Adaes (Gregory and Webb 1965, p. 32) 1700–1765; Pearson (Duffield and Jelks 1961, p. 48) 1700–1835; Fort Ligonier (Grimm 1970, p. 49) 1758–1766; Haynes Bluff (Peabody Museum Collections) 1699–1736; Fort Berthold (Smith 1953, p. 46) 1845–1890; Childersburg (DeJarnette and Hansen 1960, p. 57) 1700–1825; Kipp's Post (Woolworth and Wood 1960, p. 280) 1826–1830; Kaskaskia (Perino 1967, p. 128) 1700–1832; Albert Ibaugh (Kinsey 1960, p. 91) 1600–1625; Goodnow (Griffin and Smith 1948, p. 12) about 1700; Hiwassee Island (Lewis and Kneberg 1946, p. 133) late seventeenth century to early eighteenth; Guebert (Good 1972, p. 119) 1719–1833; Lasanen (Cleland 1971, p. 80) 1670–1715; Womack (Harris et al. 1965, p. 312) 1700–1729; Deer Creek (Sudbury n.d., p. 124) 1730–1760; Angola Farm (Quimby 1942, p. 546) 1700–1731.

Chronology. Temporal range 1600–1890; mean date 1754.

Comments. The ends of the beads appear to have been pinched off. The small beads comprise most of this variety.

Large examples occur frequently in Norteño Focus sites between 1740 and 1767. The variety is found infrequently after 1767 and disappears about 1836 (Schuetz 1969, p. 58).

VARIETY IVA2

(Kidd: IVA6)

Definition. Small to medium "Cornaline d'Aleppo" bead, consisting of three layers. The inner layer is translucent, light green glass; the second layer is opaque, brick-red glass; and the outer layer is a veneer of transparent, clear glass. Lengths range from 2 to 3 mm; diameters from 3 to 6 mm; and perforations from .5 to 2 mm.

Sample: 306.

Distribution. San Xavier (Gilmore 1969, p. 98) 1746–1755; Huron and Petun (Quimby 1966, p. 186) 1600–1650; Ossosane Ossuary (Quimby 1966, p. 184) 1624–1636; Presidio Ahumada (Tunnell and Ambler 1967, p. 53) 1756–1771; Gilbert (Jelks 1967, p. 104) 1740–1770; Tallapoosa (Burke and Burke 1936, p. 55) about 1725; Ste. Marie I (Quimby 1966, p. 183) 1639–1649; Fatherland (Quimby 1966, p. 192) 1699–1730; Fort St. Joseph (Quimby 1966, p. 192) 1700–1781; Old Fort Albany (Quimby 1966, p. 190) 1680–1715; Kaskaskia (Perino 1967, p. 128) 1700–1832; Albert Ibaugh

(Kinsey 1960, p. 93) 1600–1625; Guebert (Good 1972, p. 122) 1719–1833; Womack (Harris et al. 1965, p. 313) 1700–1729; Deer Creek (Sudbury n.d., p. 125) 1730–1760; Angola Farm (Quimby 1942, p. 546) 1700–1731; Rosebrough Lake (Miroir et al. 1973, p. 135) 1719–1778; Southern Compress (Gregory and Webb 1965, p. 20) 1714–1803; Lawton (Gregory and Webb 1965, p. 25) 1700–1836; Los Adaes (Gregory and Webb 1965, p. 30) 1700–1765; Colfax Ferry (Gregory and Webb 1965, p. 37) 1787–1820; Pearson (Duffield and Jelks 1961, p. 48) 1700–1835; Haynes Bluff (Peabody Museum Collections) 1699–1736; Chota (Gleeson 1970, pp. 93–96) 1729–1799; Fort McPherson (Orchard 1929, p. 89) about 1749.

Chronology. Temporal range 1600–1836; mean date 1727.

Comments. The medium-sized "Cornaline d'Aleppo" has been dated from about 1600 to 1725; the tubular "Cornaline d'Aleppo" from 1600 to 1775 (Gregory and Webb 1965, p. 41). The clear layer of glass is not as evident in the rounded bead as it is in the unaltered, tubular examples (IIIA3).

Beads of this variety are believed to have been manufactured in Amsterdam (Karklins 1975, p. 77).

TYPE B

(Kidd: IVb₋)

The beads are composite, with two or more layers of glass with inlays either on the surface or between the layers.

VARIETY IVB1

(Kidd: IIb18)

Definition. Large, transparent, with longitudinal white stripes between two layers of clear glass. The smaller beads have from 14 to 18 stripes; the larger have seven. They are barrel-shaped. Lengths range from 8 to 9 mm; diameters from 8 to 10 mm; and perforations from 1 to 3 mm.

Sample: 532.

Distribution. Bayou Goula (Quimby 1957, p. 135) 1699–1740; Angola Farm (Quimby 1942, p. 546) 1700–1731; Fish Hatchery (Gregory and Webb 1965, p. 23) 1714–1820; Lawton (Gregory and Webb 1965, p. 24) 1700–1836; Childersburg (DeJarnette and Hansen 1960, p. 58) 1700–1825; Goodnow (Griffin and Smith 1948, p. 13) about 1700; Chota (Gleeson 1970, pp. 93–96) 1729–1799; Portland (I. Brown 1975a, p. 78) 1699–1706; Guebert (Good 1972, p. 126) 1719–1833; Womack (Harris et al. 1965, p. 312) 1700–1729.

Chronology. Temporal range 1699–1836; mean date 1741.

Comments. Some of the beads are slightly yellow, and the larger beads have a frosty appearance.

These are "gooseberry" beads. This is a common bead in the Middle Historic period (1670–1760) (Quimby 1966, p. 87).

VARIETY IVB2

Definition. Large, with layer of dull, opaque, white glass over a gray-white layer. There are four longitudinal thick blue stripes. The beads are either oval or peanut-shaped. Lengths range from 11 to 15 mm; diameters from 6 to 7 mm; and perforations are 1.5 mm.

Sample: 2.

Distribution. Fatherland (R. Neitzel, personal communication) 1699–1730.

VARIETY IVB3

Definition. Large, with a shiny, off-white layer of glass over a core of pale blue-gray glass. The beads have three sets of longitudinal stripes, each set consisting of three thin blue stripes. The beads are either oval or peanut-shaped. Lengths range from 12 to 16 mm; diameter from 5 to 7 mm; and perforations are 1 mm.

Sample: 7.

Distribution. Pearson (Duffield and Jelks 1961, p. 49) 1700–1835; Portland (I. Brown 1975a, p. 80) 1699–1706; Guebert (Good 1972, p. 124) 1719–1833; Womack (Harris et al. 1965, p. 310) 1700–1729; Deer Creek (Sudbury n.d., p. 122) 1730–1760; Angola Farm (LMS files) 1700–1731; Rosebrough Lake (Miroir et al. 1973, p. 134) 1719–1778.

Chronology. Temporal range 1699–1835; mean date 1739.

VARIETY IVB4

Definition. Large, with a dull, opaque, white layer of glass over a core of blue-gray glass. The surface design consists of three inlays of three longitudinal blue spiral stripes. The bead is oval. Lengths range from 6 to 25 mm; diameters from 6 to 8 mm; and perforations are 2 mm.

Sample: 82.

Distribution. Bayou Goula (Quimby 1957, p. 87) 1699–1740; Fatherland (LMS files) 1699–1730; Angola Farm (LMS files) 1700–1731; Fish Hatchery (Gregory and Webb 1965, p. 23) 1714–1820; Los Adaes (Gregory and Webb 1965, p. 30) 1700–1765; Pearson (Duffield and Jelks 1961, p. 50) 1700–1835; Bell (Wittry 1963, pp. 30, 31) 1680–1730; Guebert (Good 1972, p. 124) 1719–1833.

Chronology. Temporal range 1680–1835; mean date 1737.

Comments. Not all references mention the double layer of glass. This was a common bead in the Middle Historic period (Quimby 1966, p. 87). Beads of this variety are believed to have been manufactured in Amsterdam (Sleen 1967, p. 109; Karklins 1975, p. 74).

VARIETY IVB6

Definition. Large, with a layer of dull, opaque, white glass over a core of gray-white glass. The surface decoration consists of three sets of compound longitudinal stripes. Each set has a red stripe between two blue stripes. The bead is oval, or peanut-shaped, with flat ends. The length is 13 mm; diameter 6 mm; and perforation 1.5 mm.

Sample: 1.

Distribution. Fort St. Joseph (Quimby 1966, p. 194) 1700–1781; Chota (Gleeson 1970, pp. 93–96) 1729–1799; Fatherland (R. Neitzel, personal communication) 1699–1730.

Chronology. Temporal range 1699–1799; mean date 1740.

VARIETY IVB7

Definition. Large, composite, with three opaque layers of glass. The core is dark blue; the middle layer is thin, white glass; and the outer layer is dark blue. The surface design consists of six sets of longitudinal stripes. Each set has a white stripe between two red stripes. The bead is barrel-shaped. Lengths range from 5 to 9 mm; diameters are 7 mm; and perforations are 2 mm.

Sample: 3.

Distribution. No proveniences are known outside of the Tunica collection.

Comments. The outer layer has slight iridescent patination. Each white stripe is made up of three thin, white filaments of glass.

VARIETY IVB8

Definition. Small, with a thin, transparent layer over a core of opaque, white glass. The beads have six longitudinal reddish-brown stripes. Lengths are 2 mm; diameters 3 mm; and perforations .5 mm.

Sample: 21.

Distribution. Tallapoosa (Burke and Burke 1936, p. 54) about 1725.

Comments. The stripes appear to be solid, but each is composed of two or three thin stripes of pink or red filaments.

WIRE-WOUND BEADS

Class I. These monochrome beads have both a simple shape and a simple construction. The larger sizes predominate, and the common form varies from round to oval. Many are corroded, and differential deterioration of the glass filaments clearly shows the technique of winding. The glass is generally of poor quality, often incompletely fused, and full of streaks (perhaps because of a high soda content). Small, circular fracture marks are common on the surfaces. These marks probably resulted from the beads knocking against

each other while inside the barrels in which they were shipped.

The beads date from the Middle Historic period in North America (Quimby 1966, p. 86). In the middle of the eighteenth century the trade value of large beads of this class at a Hudson Bay post was one bead for two beaver skins (Orchard 1929, p. 89).

TYPE A

(Kidd: Wlb₋)

Type A beads are large and round. They are standard beads, in that the length and diameter are nearly equal.

VARIETY WIA1

(Kidd: Wlb3-5, 10)

Definition. Large to very large, translucent, pale blue. The larger specimens have an almost opaque appearance. Lengths range from 9 to 20 mm; diameters from 10 to 20 mm; and perforations from 3 to 4 mm.

Sample: 629.

Distribution. Fort Michilimackinac (Stone 1974, p. 103) 1715–1781; Bell (Wittry 1963, p. 31) 1680–1730; Fish Hatchery (Gregory and Webb 1965, p. 22) 1714–1820; Gilbert (Jelks 1967, p. 99) 1740–1770; Bayou Goula (Quimby 1957, p. 135) 1699–1740; Fort Ligonier (Grimm 1970, p. 50) 1758–1766; Fort McPherson (Orchard 1929, p. 89) about 1749; Fort Berthold (Smith 1953, p. 52) 1845–1890; Childersburg (DeJarnette and Hansen 1960, p. 57) 1700–1825; Kipp's Post (Woolworth and Wood 1960, p. 279) 1826–1830; Peachtree (Setzler and Jennings 1941, pl. 12) 1700–1831; Kaskaskia (Perino 1967, p. 128) 1700–1832; Chota (Gleeson 1970, pp. 93–96) 1729–1799; Guebert (Good 1972, p. 112) 1719–1833; Angola Farm (LMS files) 1700–1731.

Chronology. Temporal range 1680–1890; mean date 1764.

Comments. Approximately 100 of the beads are broken. Many are corroded and clearly show wire marks as well as tiny circular fractures.

Beads of this variety are believed to have been manufactured in Amsterdam (Karklins 1975, p. 79).

VARIETY WIA2

(Kidd: Wlb16)

Definition. Large to very large, opaque, dark blue. The smaller specimens border on translucency. Lengths range from 7 to 17 mm; diameters from 7 to 19 mm; and perforations from 3 to 4 mm.

Sample: 154.

Distribution. Fort Berthold (Smith 1953, p. 52) 1845–1890; Kipp's Post (Woolworth and Wood 1960, p. 280) 1826–1830; Chota (Gleeson 1970, pp. 93–96) 1729–1799; Guebert (Good 1972, p. 112) 1719–1833; Rosebrough Lake (Miroir et al. 1973, p. 136) 1719–1778.

Chronology. Temporal range 1719–1890; mean date 1797.

Comments. Most of the beads of this variety have a pale blue to white appearance owing to surface corrosion.

Beads of this variety are believed to have been manufactured in Amsterdam (Karklins 1975, p. 80).

VARIETY WIA3

(Kidd: Wlb7)

Definition. Large to very large, translucent, amber. Lengths range from 8 to 18 mm; diameters from 10 to 20 mm; and perforations from 3 to 5 mm.

Sample: 12.

Distribution. Fort Michilimackinac (Stone 1974, p. 103) 1715–1781; Kipp's Post (Woolworth and Wood 1960, p. 279) 1826–1830; Womack (Harris et al. 1965, p. 313) 1700–1729.

Chronology. Temporal range 1700–1830; mean date 1764.

Comments. The smaller beads have white patination on their surfaces. Some of the larger beads are broken.

VARIETY WIA4

(Kidd: Wlb6)

Definition. Very large, translucent, yellow. The ends of the beads are somewhat flattened. Lengths range from 10 to 15 mm; diameters from 11 to 18 mm; and perforations from 4 to 5 mm.

Sample: 6.

Distribution. No proveniences are known outside of the Tunica collection.

Comments. Heavy white patination is evident on the surfaces. As a result of corrosion, the wire-wound marks are quite pronounced, and air bubbles are evident.

VARIETY WIA5

(Kidd: Wlb2)

Definition. Very large, opaque, white. Lengths range from 16 to 17 mm; diameters from 19 to 20 mm; and perforations from 3 to 4 mm.

Sample: 28.

Distribution. Gilbert (Jelks 1967, p. 101) 1740–1770; Childersburg (DeJarnette and Hansen 1960, p. 57) 1700–1825; Guebert (Good 1972, p. 113) 1719–1833; Womack (Harris et al. 1965, p. 313) 1700–1729.

Chronology. Temporal range 1700–1833; mean date 1752.

Comments. The surfaces of the beads are dull and porcelainlike.

VARIETY WIA6

Definition. Large to very large, opaque, black. Lengths range from 9 to 18 mm; diameters from 10 to 20 mm; and perforations from 3 to 5 mm.

Sample: 15.

Distribution. Tallapoosa (Burke and

Burke 1936, p. 55) about 1725; Fort Ligonier (Grimm 1970, p. 50) 1758–1766; Fort Berthold (Smith 1953, p. 52) 1845–1890; Childersburg (DeJarnette and Hansen 1960, p. 57) 1700–1825; Chota (Gleeson 1970, pp. 93–96) 1729–1799; Guebert (Good 1972, p. 111) 1719–1833.

Chronology. Temporal range 1700–1890; mean date 1781.

Comments. Corrosion and wire-wound marks are evident. The four larger beads have many tiny, circular fracture marks and small air bubbles on their surfaces.

Beads of this variety are believed to have been manufactured in Amsterdam (Karklins 1975, p. 79).

VARIETY WIA7

Definition. Very large, transparent, clear. Lengths are 18 mm; diameters 20 mm; and perforations 4 mm.

Sample: 4.

Distribution. Bell (Wittry 1963, pp. 30, 31) 1680–1730; Guebert (Good 1972, p. 113) 1719–1833.

Chronology. Temporal range 1680–1833; mean date 1741.

Comments. Many tiny, circular fracture marks are evident, as well as slight patination.

TYPE B

(Kidd: WId₁)

Type B beads are large and donut-shaped. Considered short beads, as the diameter is greater than the length, they are relatively flat with large center perforations.

VARIETY WIB1

Definition. Large to very large, translucent, pale blue. Some of the specimens are less flat and more dome-shaped than others. Stone (1971, p. 327) refers to these beads as "modified donut." Lengths range from 7 to 9 mm; diameters from 7 to 13 mm; and perforations are 3 mm.

Sample: 165.

Distribution. Fort Michilimackinac (Stone 1974, p. 103) 1715–1781; Lawton (Gregory and Webb, 1965, pp. 25, 26) 1700–1836; Gilbert (Jelks 1967, p. 99) 1740–1770; Childersburg (DeJarnette and Hansen 1960, p. 57) 1700–1825; Chota (Gleeson 1970, pp. 93–96) 1729–1799; Bell (Wittry 1963, pp. 30, 31) 1680–1730; Guebert (Good 1972, p. 111) 1719–1833.

Chronology. Temporal range 1680–1836; mean date 1754.

Comments. Beads of this variety are believed to have been manufactured in Amsterdam (Karklins 1975, p. 80).

VARIETY WIB2

Definition. Very large, translucent, dark

blue. Lengths range from 4 to 6 mm; diameters from 11 to 18 mm; and perforations from 3 to 4 mm.

Sample: 53.

Distribution. Fort Michilimackinac (Stone 1974, p. 105) 1715–1781.

Comments. Most of the beads have iridescent surface patination.

VARIETY WIB3

(Kidd: WId₁)

Definition. Very large, translucent, amber. Stone (1971, p. 327) refers to these beads as "modified donut." Lengths are 5 mm; diameters range from 11 to 12 mm; and perforations from 3 to 4 mm.

Sample: 4.

Distribution. Fort Michilimackinac (Stone 1974, p. 105) 1715–1781; Childersburg (DeJarnette and Hansen 1960, p. 57) 1700–1825; Guebert (Good 1972, p. 112) 1719–1833.

Chronology. Temporal range 1700–1833; mean date 1762.

Comments. All of the beads have white surface patination.

Beads of this variety are believed to have been manufactured in Amsterdam (Karklins 1975, p. 80).

TYPE C

(Kidd: WId₁)

Type C beads are large and oval. They are similar to the large, round, wire-wound beads (WIA) in all respects but shape. These are long beads, the length being greater than the diameter.

Wire-wound marks and surface corrosion are evident, as are many tiny, circular fracture marks.

Sleen (1967, p. 111) describes this type of bead, as well as the large, round-wire wound bead, as being manufactured in Amsterdam.

These oval beads are also similar to the round beads in their great trade value with the Indians (see comment under WIA).

VARIETY WIC1

(Kidd: WId₂, 3, 10)

Definition. Large to very large, translucent, pale blue. Some of the larger beads are almost opaque. Lengths range from 12 to 23 mm; diameters from 9 to 17 mm; and perforations from 3 to 5 mm.

Sample: 281.

Distribution. Fort Michilimackinac (Stone 1974, p. 103) 1715–1781; Whitney (Pratt 1961, p. 15) 1710–1745; Brewer (Pratt 1961, p. 16) about 1710; Perkins (Stone 1971, p. 348) early eighteenth century; Gilbert (Jelks 1967, p. 99) 1740–1770; Fish Hatchery (Gregory and Webb 1965, p. 23) 1714–1820; Bayou Goula (Quimby 1957, p. 134) 1699–1740; Fort McPherson (Or-

chard 1929, p. 89) about 1749; Childersburg (DeJarnette and Hansen 1960, p. 57) 1700–1825; Peachtree (Setzler and Jennings 1941, pl. 12) 1700–1831; Santa Rosa Pensacola (Smith 1965, p. 101) 1719–1763; Chota (Gleeson 1970, pp. 93–96) 1729–1799; Bell (Wittry 1963, pp. 30, 31) 1680–1730; Angola Farm (Quimby 1942, p. 546) 1700–1731.

Chronology. Temporal range 1680–1831; mean date 1741.

Comments. The beads are worn or weathered, and most are now nearly opaque.

Among the items requested for the Louisiana Indians from France in 1713 was an order for 50 lb of "white olive-shaped glass beads" (Rowland and Sanders 1927–1932, vol. 2, p. 154). Some of these beads may have been part of that order. Beads of this variety are believed to have been manufactured in Amsterdam (Sleen 1967, p. 111; Karklins 1975, p. 80).

VARIETY WIC2

Definition. Very large, opaque, dark blue. Lengths range from 18 to 28 mm; diameters from 15 to 18 mm; and perforations are 4 mm.

Sample: 16.

Distribution. Chota (Gleeson 1970, pp. 93–96) 1729–1799; Guebert (Good 1972, p. 113) 1719–1833.

Chronology. Temporal range 1719–1833; mean date 1770.

Comments. Wire-wound marks are pronounced, and a few of the beads have white surface patination.

TYPE D

(Kidd: WId₁)

Type D beads range in size from small to large and are oval. They differ from Type C mainly in size. Most are corroded or broken.

VARIETY WID1

(Kidd: WId₁)

Definition. Small to medium, opaque, white. Lengths range from 7 to 10 mm; diameters from 4 to 6 mm; and perforations are 1 mm.

Sample: 769.

Distribution. Childersburg (DeJarnette and Hansen 1960, p. 58) 1700–1825; Kipp's Post (Woolworth and Wood 1960, p. 280) 1826–1830; Guebert (Good 1972, p. 111) 1719–1833.

Chronology. Temporal range 1700–1833; mean date 1789.

Comments. Most of the beads have a brown surface corrosion. Many are broken.

VARIETY WID2

Definition. Medium to large, opaque, pinkish-buff. The original lengths are impossible to discern; the diameters are 9 mm; perforations 2 mm.

Sample: 35 fragments (comprising no more than ten beads originally).

Distribution. No proveniences are known outside of the Tunica collection.

Comments. The specimens are all broken and badly corroded to a buff color. The original color may have been pink or red.

VARIETY WID3

Definition. Medium, translucent, red. Lengths are 8 mm; diameters 5 mm; and perforations 2 mm.

Sample: 25 fragments (comprising no more than five beads originally).

Distribution. No proveniences are known outside of the Tunica collection.

Comments. All specimens are broken, and their surfaces, sometimes even the whole bead, are corroded to a pink-brown color.

Beads of this variety may be among those found at Childersburg (DeJarnette and Hansen 1960), but the poor preservation of the Tunica beads makes certain identification very difficult.

VARIETY WID4

Definition. Small, opaque, black. When examined closely, the color is actually a dark burgundy which appears black. One end of each bead is rounder and wider than the other. Lengths are 6 mm; diameters 4 mm; and perforations 1 mm.

Sample: 14.

Distribution. Guebert (Good 1972, p. 111) 1719-1833.

Comments. Wire-wound marks are evident, and most of the beads have iridescent surface patination.

VARIETY WID5

Definition. Medium, opaque, pale green. The length is 7 mm; diameter 6 mm; and perforation .5 mm.

Sample: 1.

Distribution. No proveniences are known outside of the Tunica collection.

Comments. The bead is very badly corroded, and the glass has almost been reduced to powder. The original color may have been a light blue or blue-green.

VARIETY WID6

Definition. Small, opaque, pink. The length is 6 mm; diameter 3 mm; and perforation 1.5 mm.

Sample: 1.

Distribution. No proveniences are known outside of the Tunica collection.

Comments. Possibly the bead originally was a translucent red color, and then, as a result of corrosion, turned opaque pink. The form, however, is significantly different from WID3.

TYPE E

These are spheroidal beads. They are not as flat as Type B (a donut-shaped bead), but they are considered short beads because the length is less than the diameter.

VARIETY WIE1

Definition. Large, translucent, clear. Lengths are 6 mm; diameters 8 mm; and perforations 2 mm.

Sample: 2.

Distribution. No proveniences are known outside of the Tunica collection.

Comments. The beads are probably examples of "raspberry" beads which did not go through final molding. They are in good condition.

VARIETY WIE2

Definition. Large, translucent, light green. The length is 6 mm; diameter 9 mm; and perforation 2 mm.

Sample: 1.

Distribution. No proveniences are known outside of the Tunica collection.

Comments. The bead has white surface patination, and some air bubbles are evident.

VARIETY WIE3

Definition. Small, opaque, deep burgundy. The length is 3 mm; diameter 4 mm; and perforation 1 mm.

Sample: 1.

Distribution. No proveniences are known outside of the Tunica collection.

Comments. The bead has white surface patination, and wire-wound marks are evident.

VARIETY WIE4

Definition. Very large, opaque, white. The perforation is large and off-center. The length is 6 mm; diameter 11 mm; and perforation 4 mm.

Sample: 1.

Distribution. Angola Farm (LMS files) 1700-1731.

VARIETY WIE5

Definition. Very large, transparent, clear. The bead is barrel-shaped and flat on the

ends. The length is 12 mm; diameter 14 mm; and perforation 4 mm.

Sample: 1.

Distribution. Tallapoosa (Burke and Burke 1936, p. 57) about 1725; Kipp's Post (Woolworth and Wood 1960, p. 279) 1826-1830; Guebert (Good 1972, p. 112) 1719-1833.

Chronology. Temporal range 1719-1833; mean date 1787.

Comments. The bead has many tiny, circular fracture marks on the surface.

Class II. These beads have more elaborate shapes as a result of pressing, molding, or some other manipulation. They are monochrome and are of simple construction.

TYPE A (Kidd: WIIC-)

These are faceted beads. While the bead was still somewhat molten, it was pressed against a flat surface to make various facets. Another way to make these surfaces is by using a grinding tool. Many of these beads have eight facets, each facet having five sides. According to Quimby (1966, p. 86), "decahedrals with 8 facets and 2 flat ends" are characteristic of the Middle Historic period in this country (1670 to 1760). The most common faceted beads are "standard," having nearly equal length and diameter. Faceted beads are divided into three categories: (1) molded, irregular facets occur during the sixteenth, seventeenth, and early eighteenth centuries; (2) irregular cut facets occur from the late eighteenth century to mid-nineteenth (1800 to 1860); and (3) those with regular pressed facets appear from the late nineteenth century to the present. The Tunica examples fall into the first category.

VARIETY WIIA1

Definition. Medium to very large, opaque, pearl white, with eight five-sided facets. Lengths range from 4 to 17 mm; diameters from 5 to 15 mm; and perforations from 1 to 5 mm.

Sample: 14.

Distribution. Colfax Ferry (Gregory and Webb 1965, p. 35) 1787-1820; Childersburg (DeJarnette and Hansen 1960, p. 57) 1700-1825; Chota (Gleeson 1970, pp. 93-96) 1729-1799.

Chronology. Temporal range 1700-1825; mean date 1777.

Comments. The beads are very friable.

VARIETY WIIA2

Definition. Very large, transparent, clear, with eight five-sided facets. Lengths range

from 8 to 19 mm; diameters from 11 to 21 mm; and perforations from 3 to 4 mm.

Sample: 75.

Distribution. Fort Michilimackinac (Stone 1974, p. 102) 1715-1781; Fatherland (Stone 1974, p. 108) 1699-1730; Fort St. Joseph (Stone 1971, p. 348) 1700-1781; Tallapoosa (Burke and Burke 1936, p. 57) about 1725; Childersburg (DeJarnette and Hansen 1960, p. 57) 1700-1825; Kipp's Post (Woolworth and Wood 1960, p. 279) 1826-1830; Angola Farm (Quimby 1942, p. 546) 1700-1731; Kaskaskia (Perino 1967, p. 128) 1700-1832; Santa Rosa Pensacola (Smith 1965, p. 101) 1719-1763; Guebert (Good 1972, p. 105) 1719-1833; Womack (Harris et al. 1965, p. 312) 1700-1729.

Chronology. Temporal range 1699-1833; mean date 1749.

Comments. The beads have a slight iridescent patination. The larger ones have tiny, circular fracture marks on the surface.

These beads are characteristic of the Middle Historic period in this country (Quimby 1966, p. 86) and are believed to have been manufactured in Amsterdam (Karklins 1975, p. 80).

VARIETY WIIA3

(Kidd: WIIc12)

Definition. Very large, translucent, dark blue, with eight five-sided facets. Lengths range from 8 to 13 mm; diameters from 11 to 17 mm; and perforations from 2 to 5 mm.

Sample: 120.

Distribution. Bell (Wittry 1963, p. 32) 1680-1730; Gilbert (Jelks 1967, p. 100) 1740-1770; Tallapoosa (Burke and Burke 1936, p. 59) about 1725; Fort St. Joseph (Quimby 1966, p. 195) 1700-1781; Fatherland (Quimby 1966, p. 195) 1699-1730; Bayou Goula (Quimby 1957, p. 134) 1699-1740; Childersburg (DeJarnette and Hansen 1960, p. 57) 1700-1825; Kipp's Post (Woolworth and Wood 1960, p. 279) 1826-1830; Summer Island (Brose 1970, p. 212) about 1650-1690; Kaskaskia (Perino 1967, p. 128) 1700-1832; Chota (Gleeson 1970, pp. 93-96) 1729-1799; Portland (I. Brown 1975a, p. 87) 1699-1706; Gros Cap (Quimby 1966, p. 125) 1700-1760; Guebert (Good 1972, p. 106) 1719-1833; Womack (Harris et al. 1965, p. 312) 1700-1729.

Chronology. Temporal range 1650-1833; mean date 1739.

Comments. The smaller beads have white surface patination.

These beads are characteristic of the Middle Historic period in this country (Quimby 1966, p. 86) and are believed to have been manufactured in Amsterdam (Karklins 1975, p. 80).

VARIETY WIIA4

(Kidd: WIIc5)

Definition. Large to very large, translucent, amber, with eight five-sided facets. Lengths range from 9 to 14 mm; diameters from 10 to 16 mm; and perforations from 3 to 5 mm.

Sample: 54.

Distribution. Bell (Wittry 1963, p. 31) 1680-1730; Tallapoosa (Burke and Burke 1936, p. 59) about 1725; San Xavier (Gilmore 1969, p. 98) 1746-1755; Childersburg (DeJarnette and Hansen 1960, p. 58) 1700-1825; Kaskaskia (Perino 1967, p. 128) 1700-1832; Chota (Gleeson 1970, pp. 93-96) 1729-1799; Guebert (Good 1972, p. 106) 1719-1833.

Chronology. Temporal range 1680-1833; mean date 1752.

Comments. All beads of this variety have white surface patination.

These beads are characteristic of the Middle Historic period in this country (Quimby 1966, p. 86) and are believed to have been manufactured in Amsterdam (Karklins 1975, p. 80).

VARIETY WIIA5

(Kidd: WIIc11)

Definition. Large, translucent, light green, with eight five-sided facets. The length is 7 mm; diameter 9 mm; and perforation 3 mm.

Sample: 1.

Distribution. Fort Michilimackinac (Stone 1974, p. 103) 1715-1781; Bell (Wittry 1963, p. 31) 1680-1730; Tallapoosa (Burke and Burke 1936, p. 60) about 1725; Kaskaskia (Perino 1967, p. 128) 1700-1832; Chota (Gleeson 1970, pp. 93-96) 1729-1799.

Chronology. Temporal range 1680-1832; mean date 1743.

Comments. The surface of the bead is slightly patinated.

Beads of this variety are characteristic of the Middle Historic period in this country (Quimby 1966, p. 86) and are believed to have been manufactured in Amsterdam (Karklins 1975, p. 80).

VARIETY WIIA6

Definition. Small, opaque, dark green (appearing black). The beads appear to have eight four-sided facets. Lengths are 5 mm; diameters 3 mm; and perforations 1 mm.

Sample: 2.

Distribution. No proveniences are known outside of the Tunica collection.

Comments. The beads are so badly corroded that the color and number of facets are difficult to determine.

VARIETY WIIA7

(Kidd: possibly WIIc1)

Definition. Small to medium, translucent, dark burgundy (appearing black).

The beads have three to five facets. Lengths range from 3 to 7 mm; diameters from 3 to 6 mm; and perforations from 1 to 2 mm.

Sample: 1,229.

Distribution. Los Adaes (Gregory and Webb 1965, p. 31) 1700-1765; Fort Berthold (Smith 1953, p. 47) 1845-1890; Colfax Ferry (Gregory and Webb 1965, p. 35) 1787-1820.

Chronology. Temporal range 1700-1890; mean date 1801.

Comments. Many of the beads have white or iridescent patination, and many are broken.

VARIETY WIIA8

Definition. Very large, translucent, milky white, with eight five-sided facets. Lengths are 9 mm; diameters 12 mm; and perforations 3 mm.

Sample: 3.

Distribution. Gilbert (Jelks 1967, p. 100) 1740-1770; Chota (Gleeson 1960, pp. 93-96) 1729-1799; Bell (Wittry 1963, p. 31) 1680-1730; Conestoga (Fenstermaker 1974, p. 7) 1673-1763.

Chronology. Temporal range 1673-1799; mean date 1736.

VARIETY WIIA9

Definition. Small, opaque, pink. The facets are irregular; most have four or five facets. Lengths are 3 mm; diameters 3 mm; and perforations 1 mm.

Sample: 200.

Distribution. Fort Berthold (Smith 1953, p. 47) 1845-1890.

Comments. Possibly, the original beads were translucent and red. The beads are corroded and very friable. Many are broken.

VARIETY WIIA10

Definition. Medium, translucent, red, with eight facets. Lengths are 5 mm; diameters 5 mm; and perforations 1 mm.

Sample: 2.

Distribution. Lawton (Gregory and Webb 1965, p. 26) 1700-1836; Colfax Ferry (Gregory and Webb 1965, p. 35) 1787-1820.

Chronology. Temporal range 1700-1836; mean date 1786.

Comments. The surfaces of the beads are corroded and pink; therefore, verification of the color is difficult.

TYPE B

(Kidd: WIIc₁ and WIIc₂)

These are "raspberry" (or "mulberry") and "melon" beads. Like the "gooseberry" and "corn" beads, they were probably made to resemble food (Orchard 1929, p. 87).

While the glass was still hot, the bead was manipulated to take on a knobby or ridged appearance. The Kidds suggest

(1970, p. 50) that the beads were pressed in a two-part mold, but these particular beads show no seam. Instead, they appear to have been rolled on a sculptured surface while still molten. The knobs generally occur in two or three circumferential rows.

Quimby (1966, p. 86) claims that "raspberry" beads were abundant in this country's Middle Historic period (1670 to 1760).

According to Sleen (1967, p. 110), these beads were made in Amsterdam.

VARIETY WIIB1

(Kidd: WIID6)

Definition. Large, translucent, dark blue. It is a "raspberry" bead with two rows of knobs. The length is 8 mm; diameter 8 mm; and perforation 2 mm.

Sample: 1.

Distribution. Tallapoosa (Burke and Burke 1936, p. 59) about 1725; Bayou Goula (Quimby 1957, p. 134) 1699-1740; Fatherland (Quimby 1966, p. 196) 1699-1730; Fort St. Joseph (Quimby 1966, p. 196) 1700-1781; Santa Rosa Pensacola (Smith 1965, p. 101) 1719-1763; Chota (Gleeson 1970, pp. 93-96) 1729-1799; Guebert (Good 1972, p. 108) 1719-1833; Angola Farm (Quimby 1942, p. 546) 1700-1731.

Chronology. Temporal range 1699-1833; mean date 1738.

Comments. White patination is evident on the surface.

VARIETY WIIB2

(Kidd: WIID1)

Definition. Large, transparent, clear. This is a "raspberry." Lengths range from 3 to 12 mm; diameters from 7 to 10 mm; and perforations from 3 to 4 mm.

Sample: 256.

Distribution. Fort Michilimackinac (Stone 1974, p. 101) 1715-1781; Lawton (Stone 1971, p. 348) 1700-1836; Tallapoosa (Burke and Burke 1936, p. 58) about 1725; Southern Compress (Gregory and Webb 1965, p. 20) 1714-1803; Fatherland (Quimby 1966, p. 196) 1699-1730; Fort St. Joseph (Quimby 1966, p. 196) 1700-1781; Childersburg (DeJarnette and Hansen 1960, p. 57) 1700-1825; Kaskaskia (Perino 1967, p. 128) 1700-1832; Chota (Gleeson 1970, pp. 93-96) 1729-1799; Portland (I. Brown 1975a, p. 90) 1699-1706; Guebert (Good 1972, p. 109) 1719-1833; Womack (Harris et al. 1965, p. 313) 1700-1729; Angola Farm (Quimby 1942, p. 546) 1700-1731; Keller (Fenstermaker 1974, p. 7) 1550-1575.

Chronology. Temporal range 1550-1836; mean date 1730.

Comments. Some of the specimens have turned slightly purple; others are more of a milky shade.

The early—1550-1575—provenience is questionable.

VARIETY WIIB3

(Kidd: WIIE1)

Definition. Large, transparent, clear. The bead has eight longitudinal spiral ridges. The length is 7 mm; diameter 9 mm; and perforation 4 mm.

Sample: 1.

Distribution. Womack (Harris et al. 1965, p. 312) 1700-1729; Tallapoosa (Burke and Burke 1936, p. 58) about 1725; Portland (I. Brown 1975a, p. 92) 1699-1706; Guebert (Good 1972, p. 105) 1719-1833.

Chronology. Temporal range 1699-1833; mean date 1730.

Comments. The bead is not a standard "melon" bead, as it is spirally grooved (Burke and Burke 1936, p. 58; Harris et al. 1965, p. 312).

TYPE C

(Kidd: WIIF₁)

This type of bead is very large and has five longitudinal facets, which create a pentagonal cylinder form. Sleen (1967, p. 111) describes these beads as examples of "primitive" Amsterdam manufacture: they are made of bad, low temperature glass which is often full of streaks.

VARIETY WIIC1

Definition. Very large, translucent, pale blue. The beads are tubular and have five pressed longitudinal facets. Lengths range from 21 to 26 mm; diameters from 14 to 15 mm; and perforations from 4 to 5 mm.

Sample: 4.

Distribution. Fort Michilimackinac (Stone 1974, p. 102) 1715-1781; Childersburg (DeJarnette and Hansen 1960, p. 57) 1700-1825; Guebert (Good 1972, p. 105) 1719-1833.

Chronology. Temporal range 1700-1833; mean date 1762.

Comments. Some corrosion is present, and the wire-wound marks are evident.

Beads of this variety are believed to have been manufactured in Amsterdam (Karklins 1975, p. 81).

Class III. These beads vary in shape.

They are not monochrome and may have surface inlays of contrasting colors.

TYPE A

Type A beads are large and either round or spheroidal. While the glass was still hot, filaments of a contrasting color were applied to the surface. Wire-wound marks and air bubbles are not evident, and it is difficult to determine the method of manufacture.

Many of these beads were probably manufactured in Amsterdam (cf. Sleen 1967, p. 53).

VARIETY WIHIA1

Definition. Large, translucent, dark green, with seven longitudinal white stripes. The ends of the bead have been flattened. The length is 8 mm; diameter 10 mm; and perforation 2 mm.

Sample: 1.

Distribution. Fatherland (Quimby 1966, p. 195) 1699-1730; Fort St. Joseph (Quimby 1966, p. 195) 1700-1781; Bayou Goula (Quimby 1957, p. 134) 1699-1740; Angola Farm (LMS files) 1700-1731; Haynes Bluff (LMS files) 1699-1736; Rosebrough Lake (Miroir et al. 1973, p. 134) 1719-1778.

Chronology. Temporal range 1699-1781; mean date 1726.

Comments. There is a gap where the eighth stripe was probably meant to be.

VARIETY WIHIA2

Definition. Very large, translucent, dark blue, with eight longitudinal white stripes. The ends have been flattened until they are nearly concave. Lengths range from 7 to 8 mm; diameters from 11 to 12 mm; and perforations from 3 to 4 mm.

Sample: 4.

Distribution. Southern Compress (Gregory and Webb 1965, p. 20) 1714-1803; Guebert (Good 1972, p. 126) 1719-1833.

Chronology. Temporal range 1714-1833; mean date 1767.

Comments. The bead has slight white patination.

VARIETY WIHIA3

Definition. Large, opaque, dark burgundy, with eight white spiral stripes. The ends have been flattened. Lengths are 7 mm; diameters 10 mm; and perforations 3 mm.

Sample: 2.

Distribution. Santa Rosa Pensacola (Smith 1965, p. 100) 1719-1763; Guebert (Good 1972, p. 126) 1719-1833; Angola Farm (Quimby 1942, p. 546) 1700-1731.

Chronology. Temporal range 1700-1833; mean date 1744.

VARIETY WIHIA4

Definition. Very large, round, opaque, dark burgundy, with irregular, white, wavy, anastomosing lines around the circumference. Lengths are 11 mm; diameters 13 mm; and perforations 3 mm.

Sample: 360.

Distribution. Tallapoosa (Burke and Burke 1936, p. 56) about 1725; Portland (I. Brown 1975a, p. 94) 1699-1706; Guebert (Good 1972, p. 115) 1719-1833; Angola Farm (Quimby 1942, p. 546) 1700-1731.

Chronology. Temporal range 1699-1833; mean date 1730.

Comments. The white inlay was not set deeply into the black glass. It chips off eas-

ily, and many beads of this variety are now entirely black.

Beads of this variety are believed to have been manufactured in Amsterdam (Sleen 1967, p. 111; Karklins 1975, p. 81).

VARIETY WIIIA5

Definition. Very large, opaque, dark burgundy, with white, wavy, anastomosing lines around the circumference. Lengths range from 7 to 11 mm; diameters from 10 to 13 mm; and perforations from 3 to 4 mm.

Sample: 83.

Distribution. Fort Michilimackinac (Stone 1974, p. 99) 1715–1781; Tallapoosa (Burke and Burke 1936, p. 56) about 1725; Fatherland (Quimby 1966, p. 195) 1699–1730; Fort St. Joseph (Quimby 1966, p. 195) 1700–1781.

Chronology. Temporal range 1699–1781; mean date 1733.

Comments. This variety differs from WIIIA4 in that the bead is flattened on the ends (not rounded) and the white design is set more deeply into the black surface of the beads.

Beads of this variety are believed to have been manufactured in Amsterdam (Karklins 1975, p. 81). These are referred to as "drawn" beads by Stone (1974, p. 99).

VARIETY WIIIA6

Definition. Very large, opaque, dark burgundy, with yellow, wavy, anastomosing lines around the circumference. Lengths range from 6 to 9 mm; diameters from 9 to 11 mm; and perforations from 2 to 3 mm.

Sample: 34.

Distribution. Tallapoosa (Burke and Burke 1936, p. 56) about 1725; Bayou Goula (Quimby 1957, p. 134) 1699–1740; Fatherland (Quimby 1966, p. 195) 1699–1730; Fort St. Joseph (Quimby 1966, p. 195) 1700–1781; Chota (Gleeson 1970, pp. 93–96) 1729–1799.

Chronology. Temporal range 1699–1799; mean date 1734.

Comments. This variety is very similar to WIIIA5. The bead is flattened on the ends, and the yellow design is set deeply and does not chip off.

Beads of this variety are believed to have been manufactured in Amsterdam (Karklins 1975, p. 81).

VARIETY WIIIA7

Definition. Very large, round, translucent, burgundy, with gold and turquoise blue surface decoration. The turquoise design is a thin, continuous, circumferential spiral, encircling the bead twice. The rest of the bead is covered with a clear glass containing golden particles. Lengths are 12 mm; diameters 11 mm; and perforations 2 mm.

Sample: 16.

Distribution. Place Royale, Quebec (M. Gaumont, personal communication, 1979) 1752–1830.

Comments. On most beads of this variety, portions of the clear glass veneer have chipped off, taking elements of the decoration with them.

These beads were made in Venice.

VARIETY WIIIA8

Definition. Large, round, deep burgundy, with gold surface decoration. The length is 10 mm; diameter 8 mm; and perforation 4 mm, at the widest point.

Sample: 1.

Distribution. No proveniences are known outside of the Tunica collection.

Comments. Most of the gold surface decoration has chipped off.

TYPE B

These beads vary in size from medium to large, with leaf-shaped designs around the centers. Designs were probably cut into the beads, then filled with contrasting colors of glass. The decoration is called "alafaja" inlay, a compound word form (*ala* and *faja*) from the Spanish, meaning fasciated with a winged or leaf-shaped motif. Plain glass surfaces may be decorated by cutting with a lap wheel or engraving with a diamond point (Hodges 1964, p. 59).

VARIETY WIIIB1

Definition. Medium to large, round, translucent, turquoise blue. Around the center is an alafaja yellow inlaid design. Lengths range from 5 to 8 mm; diameters from 6 to 8 mm; and perforations from 1 to 3 mm.

Sample: 21.

Distribution. Ada (Herrick 1958, fig. 47) 1800–1850; Tallapoosa (Burke and Burke 1936, p. 63) about 1725.

Chronology. Temporal range 1725–1850; mean date 1792.

Comments. Although most of these beads are badly corroded, the inlaid patterns can still be seen.

This variety has been identified as Venetian in origin. Burke and Burke (1936, p. 52) describe similar beads found in Alabama, but with a metal inlay (Herrick 1958, p. 19).

VARIETY WIIIB2

Definition. Large, translucent, turquoise blue. The bead is elongated, one end being wider and rounder than the other. Around the center is the alafaja pattern, which is composed of inlaid white glass. Lengths are 13 mm; diameters 8 mm; and perforations 2 mm.

Sample: 4.

Distribution. Childersburg (DeJarnette and Hansen 1960, p. 57) 1700–1825.

VARIETY WIIIB3

Definition. Large, opaque, buff. There is a blue inlaid alafaja design around the center. The length is 11 mm; diameter 7 mm; and perforation 2 mm.

Sample: 1.

Distribution. Childersburg (DeJarnette and Hansen 1960, p. 57) 1700–1825.

Comments. The bead has corroded to a buff color; the original color may have been white or pink. Such beads are found in Venetian catalogues in the British Museum which date from 1704 to the mid-nineteenth century (Lamb and York 1972, p. 112).

TYPE C

This type of bead has a filigree design. Glass filigree may be made by fusing rods of different colored glasses, which are then reheated and drawn out, and sometimes twisted or interlaced at the same time (Hodges 1964 p. 60).

VARIETY WIIIC1

Definition. Very large, round, opaque, white, with a blue filigree design throughout. Lengths are 17 mm; diameters 17 mm; and perforations 4 mm.

Sample: 7.

Distribution. No proveniences are known outside of the Tunica collection.

Comments. Broken specimens show the filigree design on the inside as well as on the surface.

