Glass Beads from the Early 18th Century Portland Site, Mississippi

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Forward

The Portland Site (22-M-12) is located on the loess bluff hills of Warren County, Mississippi overlooking the Yazoo River. It is approximately twelve miles northeast of the city of Vicksburg. Preliminary excavations in the summer of 1974 uncovered a series of five trash pits, a diagram of which can be seen on page 303 (Figure 6). These pits contained a great deal of historic aboriginal and European artifacts. On the basis of the analysis of the assemblage, it is believed that the trash pits were the product of a Tunica Indian occupation dating between 1698 and 1706.

A full report on the Portland Site has been presented in my M.A. Thesis, "Archaeological Investigations at the Historic Portland and St. Pierre Sites in the Lower Yazoo Basin, Mississippi." For the interested student, copies of this manuscript are filed at the Department of Archives and History, Jackson, Mississippi; at the Department of Anthropology of Brown University; at the Michigan State Museum; and at the Lower Mississippi Survey, Peabody Museum, Harvard University.

Cognizant of the time involved in getting books published, and wary of sitting too long on my data, I have decided to at least get some of the information out in the form of xeroxing. Hopefully the material will be of some value to current research. The following pages deal only with the glass beads found at the Portland Site. A colored slide of the beads, corresponding to the plate referred to in the text, has been enclosed with the manuscript (See page 55).

Glass Beads

A total of eighty-nine beads, comprising twenty varieties, were found at the Portland Site. The purpose of this chapter is to present a short summary of the history and use of the glass bead in the New World and the various forms of its manufacture. A detailed discussion of the technology involved shall not be attempted here. Others, much more qualified, have dealt with the above, and the reader is directed to their works (Murray 1964; Woodward 1965; Kidd and Kidd 1970; and Good 1972). The classification employed in this report is taken directly from the Trudeau Site (Brain nd). As the Portland Site is believed to have been a Tunica component also and, as most of the beads were similar to those in the 'Tunica Treasure', it was considered appropriate to follow Brain's classification.

Glass Beads and the Indian

Glass beads were one of the most important items in the Indian trade of the 17th and 18th centuries. They are found on virtually every historic aboriginal site, and often in considerable numbers. There were generally three bead sizes. The large ones, called by the French olive-shaped beads (Thwaites 1959:143) or rassades (Swanton 1911:56), were greater than 6mm in diameter, and were primarily used on necklaces.

Medium (between 4 and 6mm) and small (less than 4mm) beads were sewn on skins, garters, etc. (Harris and Harris 1965: 307). It was common for the Indians of the Mississippi Valley to decorate their hair by interlacing strings of blue, white, green, or black glass beads (Swanton 1911:51). Small round white beads, 2 to 3 mm in diameter, seem to have been not only the most abundant trade bead (Chapman 1959:48,54), but also the most popular (Le Page du Pratz 1972:315).

Most of the beads sent to the New World up until the 19th century were from Venice (Woodward 1965:4,6), though a large bead manufacturing operation was also in existence in Amsterdam after 1613 (Sleen 1967:108). Beads were generally sent in casks, barrels, or boxes. Large casks of beads were reported to have still been in storage in Italy (DeJarnette and Hansen 1960:55). Other beads were strung, particularly the smaller kind. Woodward (1965:9) stated that the bead strings were commonly sold by the mass, or by what the French traders called the brasse. The latter originally measured 5.318 feet, but in the 18th century this was reduced to 18 inches. A mass of beads usually contained a dozen strands. According to Orchard (1929:87), the small 'seed' beads were sold in bunches of five or six strings, each of which were six inches long and weighed four or five bunches to the pound. He indicated that one bunch of 'seed' beads was equivalent in value to one beaver skin.

The expenses incurred in the French war with the Fox Indians

in 1715-1716 also included beads, thus offering an idea of the value of this trade item in the early 18th century. The expense list included 22,000 porcelain beads ('seed' beads) at 10 livres per thousand and 2 pounds of rassade beads at 4 livres, 10 sols (Quimby 1966:65,6).* There is some indication that glass beads were not always so highly regarded by the Indians. The fact that an Illinois fur trader in 1688 carried with him an enormous quantity of trade material, but took only five livres (pounds) of glass beads (Bauxar 1959:47), suggests that the latter were not the most lucrative trade items for where he was going. If one is to seriously delve into the study of glass trade bead chronology, he must take the changing desires of the recipients into account. As suggested above, certain people at certain times may not have wanted beads at all. Others, such as the Indians who utilized the St. Ignace Ossuary and totally neglected to deposit polychrome or brightly colored monochrome beads with the burials (Quimby 1966:136), may have selected certain bead types over others for different purposes. Thus, to take a single site and assume it to be typical of the period is, as has been shown often in the past, bound to lead the investigator down the wrong path.

* As a monetary unit a livre equaled a shilling or a franc of later times. As a unit of weight it equaled either 3/4 (Wedel 1974:159) of or one (Quimby 1966:65) English pound.

Technology

There were two basic ways in which glass beads were made. The first manner was called the drawn or tube bead method. Drawn beads were derived from the stretching of a large hollow globule of glass and subsequently cutting or snapping the long filaments into small pieces after cooling. If round beads were desired, the small glass tubes were reheated and tumbled in a mixture of ground charcoal and fine sand. Decoration was applied in several ways. One method was to add layers by dipping the globule into different batches of glass metal. To add stripes one would place the globule in a pail lined with different colored glass rods. The globule, with the glass rods sticking to it, would then be placed in the fire and subsequently stretched. The second technique of bead manufacture was called the wire or mandrel-wound method. This method consisted of wrapping a heated glass rod around a chalk-covered iron or copper rod. Each bead would then be manipulated (molded, faceted, etc.) individually until the desired shape was achieved. Different glass filaments were also applied as decoration.

Classification

Wire-wound and drawn beads were well represented at the Portland Site, particularly the latter. As stated earlier, the material was analyzed according to Brain's classification of the beads in the 'Tunica Treasure' (Brain nd). As the latter work has not yet been published, the structure of the classification shall be presented here. All the classes and associated types shall be described, but only those varieties which were represented at Portland shall be included. Following Kidd and Kidd's (1970) typology, the drawn beads were divided into four classes, based upon their structure. Structure was defined as to whether the beads were rounded or not and whether they were of simple, compound, complex, or composite construction. The latter terminology was taken directly from Stone (1971:29). Simple construction consisted of one layer of glass. Compound was two or more layers. Complex beads had a simple construction with the addition of surface decoration, and composite beads had compound construction with surface decoration.

Wire-wound beads were divided into three classes. The first consisted of simple shape and construction and monochrome. The second class was similar, but the beads were modified in some way (faceting, pinching, etc.). Beads of the third class consisted of more than one layer of glass. Also included in this last class were colored insets, incising, etc.

The breakdown of the classes into types was based upon

whether the beads were monochrome or polychrome, their average shape, and any further physical manipulation. Decorative elements were described according to shape, color, number, and size. Finally, varieties were formed upon differences in color, degree of opacity or translucency, and the color and form of decoration.

In describing the beads of each variety, several already existing classifications were drawn from. Kidd and Kidd's (1970:66) criteria for bead diameter was applied - very small (under 2mm), small (2-4mm), medium (4-6mm), large (6-10mm), and very large (over 10mm). In presenting the proportions of the beads, Sleen's (1967:32) classification was adopted - a standard bead was one in which the length and diameter were equal; a long bead was one in which the length was greater than the diameter; and a short bead consisted of a diameter greater than the length. Finally, Stone (1971:291) was again referred to in classifying the bead form as to whether it was round, oval, barrel, spheroidal, tubular, or donut-shaped.

Drawn Beads

Class I

This class consisted of tubular beads which had not been subjected to rounding by reheating and tumbling. Only 370 beads of this class were represented in the 'Tunica Treasure' from Trudeau, constituting two types and nine varieties. As

no beads from the Portland Site fit the above criteria, the breakdown of this class shall not proceed any farther.

Class II

The beads of Class II were identical to those of Class I, except they had been rounded on the ends. The beads were either monochrome or had surface decoration.

Type A

Type A consisted of monochrome beads of simple construction and no surface decoration. This was equivalent to Kidd and Kidd's (1970) Type II1.

Variety IIA1 (Pl.5:1,11)

Definition

Almost all opaque white beads of simple construction were included in variety IIA1. Size ranged from very small to large, and the shapes represented were round, oval, donut, and barrel. Stone (1971:296) called these beads 'convex' or 'convexo-elongate' and described them as being snapped instead of cut. Included within this variety were Stone's (1971) CI,SA,T2,Va; T3,Va; and T4,Va, and Kidd and Kidd's (1970) Types IIa13,14, and 15.

Dimensions

Length - 1-19mm

Diameter - 1-10mm

Perforation Diameter - .5-3mm

Portland

Sample - 44

Provenience - $Y505A_2$, $Y505D_2(2)$, Y506A, Y506B(16), Y506C(2), $Y506C_1(11)$, $Y506C_{1-1}$, $Y506C_2(3)$, $Y506C_3(4)$, Y510B(3).

Dimensions

Length - 2-15mm
Diameter - 3-8.5mm
Perforation Diameter - .5-2.5mm

Comments - Eight of the above beads had a simple construction, but a compound appearance (pl.5:11). Good set up a separate type (102) at the Guebert Site for this kind of bead, and indicated that the compound appearance was probably due to the tumbling process (Good 1972:118).

Distribution (Tables 5,6; Figures 3-5)

Variety IIA1 beads were perhaps the most common beads found on historic sites. Although present at Chicoutimi, they were much smaller than the specimens recovered at Portland (J-F Blanchette - pers. comm.). Ridley (1954:49) noted the appearance of this variety at the Frank Bay Site, and it has also been found at St. Ignace Ossuary

(Quimby 1966:135); Bell (Wittry 1963:31,2); Fatherland (MDAH Collections); International Paper (LMS Collections); Womack, where it comprised more than half of the 2,123 beads recovered, and corresponded to Harris and Harris' (1965:308,13) types 1,2,3,6,44, and 45; Fort St. Joseph (Good 1972:118); Chota (Gleeson 1970:93,6); Childersburg (DeJarnette and Hansen 1960:57); Gilbert (Jelks et al 1966:99); Angola Farm (LSU Collections); Port Dauphin (N. Read Stowe - pers. comm.); Gros Cap Cemetery (Quimby 1966:125); Lawton Plantation (Gregory and Webb 1965:24; fig.1:1,3-8); Fish Hatchery (Ibid:21,2); Southern Compress (Ibid:18); Fort Michilimackinac (Stone 1971:295); Fort Toulouse (Heldman 1973:132,4;fig.55c); Los Adaes (Gregory and Webb 1965:28); Fort St. Pierre (MDAH Collections) Guebert (Good 1972:118); Trudeau (LMS Collections); Pearson (Duffield and Jelks 1961:43); Colfax Ferry (Gregory and Webb 1965:37); Wilkinson (Ibid:27); Kipp's Post (Woolworth and Wood 1960:280); and Conesoga (Good 1972:118).

Discussion

With the exception of Los Adaes, variety IIA1 was virtually absent at sites associated with Spanish occupation. Though it was so common in areas traversed by French traders, it was not represented at all at Haynes Bluff or Russell, two sites close to Portland and believed to have been of comparable age. It was well represented in the 'Tunica

Treasure' from Trudeau, though constituted only 8.7% of the varieties listed in Table 6 and Figure 5, as compared to 49.4% at Portland. As shown in Figure 3, this variety is believed to have had its heaviest distribution between 1706 and 1763. Its appearance at Chicoutimi indicates that it was being traded at least as early as 1663.

Variety IIA4 (Pl.5:2)

Definition

The beads of this variety ranged from small to large, were opaque and light blue. The smaller specimens were donut-shaped and the larger ones oval. This variety corresponded to Kidd and Kidd's (1970) types IIa46 and 47. It appears to have been the same as Good's (1972) type 88.

Dimensions

Length - 2-13mm

Diameter - 3-8mm

Perforation Diameter - .5-2mm

Portland

Sample - 1

Provenience - Y506B

Dimensions

Were not calculated.

Distribution (Tables 5,6; Figures 3-5)

In addition to Portland and Trudeau, variety IIA4 has been found at Fatherland (Good 1972:116); Haynes Bluff (LMS Collections); Russell (Ibid); Chota (Gleeson 1970:93,6); Gilbert (Jelks et al 1966:103); Los Adaes (Gregory and Webb 1965:32); Guebert (Good 1972:116); Colfax Ferry (Gregory and Webb 1965:38); and at Wichita sites dating between 1700 and 1767 (Good 1972:116).

Discussion

Variety IIA4 does not seem to have been well represented on historic sites. A considerable amount has been found in the 'Tunica Treasure' from Trudeau (Table 6, Figure 5), but this was still a small representation in terms of the overall collection. As seen in Figure 3, its distribution was mostly between 1700 and 1800. As variety IIA4 was found at the Portland Site, it was being traded at least by 1706.

Variety IIA6 (Pl.5:3)

Definition

This was a small to large, translucent, dark blue variety. The beads ranged in form from square to oval to donut-shaped. This variety included Kidd and Kidd's (1970) types IIa55,56, and 57, and corresponded to Stone's (1971)

CI,SA,T2,Vb; T3,Ve; T4,Vc; and T11Va, and to Good's (1972) Type 56.

Dimensions

Length - 2-13mm

Diameter - 2-8mm

Perforation Diameter - ,5-2mm

Portland

Sample - 16

Provenience - Y501BF.1, Y502AF.1(3), $Y505A_2$, Y506B(3), $Y506C_1(5)$, $Y506C_2(3)$.

Dimensions

Length - 7-13mm
Diameter - 6-9.5mm
Perforation Diameter - 2-2.5mm

Comments - As can obviously be seen, the Portland sample was at the larger end of the varietal range established for the 'Tunica Treasure', the diameter of the bead and its perforation diameter often exceeding the limits set forth.

Distribution (Tables 5,6; Figures 3-5)

Variety IIA6 had an extremely wide distribution, being reported from at least the following sites: Hiwassee Island (Lewis and Kneberg 1970:133); Goodnow (Griffin and Smith 1948:12); Factory Hollow (Good 1972:113); Chicoutimi, where the beads were considerably smaller

than the Portland specimens (J-F Blanchette - pers. comm.); Bell (Wittry 1963:30); International Paper (LMS Collections); Haynes Bluff (Ibid); Womack, where it corresponded to Harris and Harris' (1965:308,13) types 13,14, and 48; Chota (Gleeson 1970:93,6), Childersburg (DeJarnette and Hansen 1960:58); Gilbert (Jelks et al 1966:100); Angola Farm (LSU Collections); Port Dauphin (N. Read Stowe - pers. comm.); Lawton Plantation (Gregory and Webb 1965: 25;fig.1:26,27,28); Fish Hatchery (Ibid:23); Southern Compress (Ibid:20); Fort Toulouse (Heldman 1973:132,4); Los Adaes (Gregory and Webb 1965:30); Fort St. Pierre (MDAH Collections); Guebert (Good 1972:113); Presidio Ahumada (Tunnell and Ambler 1967:49); Mission San Lorenzo (Ibid:60); the San Xavier Missions (Gilmore 1969:98); San Juan (Schuetz 1969:59); Trudeau (LMS Collections); Fort Ligonier (Grimm 1970:49); Pearson (Duffield and Jelks 1961:44); Colfax Ferry (Gregory and Webb 1965:37); Wilkinson (Ibid:27); Kipp's Post (Woolworth and Wood 1960:279); and Cooks Ferry (LMS Collections).

Discussion

An extremely large number of beads of this variety was isolated in the 'Tunica Treasure' (Table 6). This variety outnumbered variety IIA1, the opaque white beads of simple construction, by more than two to one. At Portland the above two varieties were the most representative

in the sample, but the ratio was just the inverse. Perhaps this indicates that by the second quarter of the 18th century the translucent dark blue beads surpassed the opaque ones in popularity.

Whatever the case, the heaviest distribution of variety IIA6 seems to have occurred between 1706 and 1800 (Table 5 and Figure 3). According to Tunnell and Ambler (1967:59), dark blue translucent beads were commonly found on sites dating from 1700 to 1740, but decreased in the period from 1740 to 1767, disappearing after the latter date. Variety IIA6 was at least in existence by 1615, as shown by its discovery at the Factory Hollow Site.

Variety IIA7 (Pl.5:4)

Definition

The beads of this variety were opaque turquoise blue. Their size ranged from very small to very large and their shapes from donut to square to oval. Many of the beads had an irridescent patination. This variety corresponded to Kidd and Kidd's (1970) types IIa31,40,41, and 42, and to Good's (1972) types 90, 90a, and 92.

Dimensions

Length - .5-17mm

Diameter - .5-12mm

Perforation Diameter - .25-4mm

Portland

Sample - 1

Provenience - Y506B

Dimensions

Length - 6mm
Diameter - 6mm
Perforation Diameter - 1mm

Comments - This bead was oval in shape and was of medium to large size. It corresponded to Good's (1972) type 90.

Distribution (Tables 5,6; Figures 3-5)

Variety IIA7 was widely dispersed, though not to the degree of varieties IIA1 and IIA6. It has been found at the following sites: Goodnow (Griffin and Smith 1948:12); Albert Ibaugh (Kinsey 1960:91); Chicoutimi, where the specimens were on the smaller end of the measurement range (J-F Blanchette - pers. comm.); Dann (Good 1972:117); St. Ignace Ossuary (Quimby 1966:135); Fatherland (Ibid:192); International Paper (LMS Collections); Pumpkin Lake (Ibid); Haynes Bluff, where thirty-eight specimens of the same size as those found at Portland were discovered in a breast pouch in Burial #2 (Ibid); Russell (Ibid); Fort St. Joseph (Quimby 1966:192); Chota (Gleeson 1970:93,6); Childersburg (DeJarnette and Hansen 1960:58); Gilbert

(Jelks et al 1966:99); Angola Farm, where most of which were 'seed' beads, thirty-five being of the size encountered at Portland (LSU Collections); Gros Cap Cemetery (Quimby 1966:126); Fort Michilimackinac (Stone 1971:299); Guebert (Good 1972:117); Presidio Ahumada (Tunnell and Ambler 1967:50); the San Xavier Missions (Gilmore 1969:97); Trudeau (LMS Collections); Pearson (Duffield and Jelks 1961:44); Conesoga (Good 1972:117); Cooks Ferry (LMS Collections); Tallapoosa (Burke 1936:54); Mabin (LMS Collections); and sites in northeast (Tunnell and Ambler 1967:50) and central (Watt 1938:63) Texas.

Discussion

Variety IIA7 requires further breakdown. The 31,367 specimens represented in the'Tunica Treasure' from Trudeau (Table 6) were virtually all 'seed' beads, so percentage comparisons between the various sites (Figure 5) are not extremely worthwhile for this variety. As seen in Figure 3, the period of greatest distribution of Variety IIA7 appears to have been between 1700 and 1764. It had been in existence at least by 1663.

Variety IIA8 (Pl.5:5)

Definition

This was a large, opaque, turquoise variety. The beads

had an oval shape, the ends of which appear to have been pinched off after being rounded. This variety corresponded to Kidd and Kidd's (1970) type IIa42, and presumably also to Good's (1972) type 88. The surface of this bead was shiny, and wavy longitudinal lines appeared on many, seemingly due to impurities in the glass.

Dimensions

Length - 9-12mm

Diameter - 6-9mm

Perforation Diameter - 2mm

Portland

Sample - 6

Provenience - $Y505D_2$, Y506B(2), Y506C, $Y506C_{1-1}$, $Y506C_2$.

Dimensions

Length - 8-12mm
Diameter - 6-8mm
Perforation Diameter - 1.5-2.5mm

Distribution (Tables 5,6; Figures 3-5)

Only 179 specimens of this variety were found in the enormous 'Tunica Treasure' from the Trudeau Site. They have also been discovered at Childersburg (DeJarnette and Hansen 1960:58); Gilbert (Jelks et al 1966:100); and at Tallapoosa (Burke 1936:58).

Discussion

It is strange that this variety should have been

so sparsely represented at Trudeau when variety IIA7, which was very similar, had such a high representation. The situation was reversed at Portland, though of course the size of the sample was not the most ideal. Though the bracketing procedure of the various sites at which this variety was found placed its heaviest distribution between 1700 and 1825 (Figure 3), its rarity at Trudeau suggests that it was most heavily dispersed in the first quarter of the 18th century. Its appearance at Portland indicates that it was part of the trade assemblage at least by 1706.

Variety IIA13 (Pl.5:6)

Definition

This was a large, translucent, turquoise blue bead with an oval shape. It corresponded to Kidd and Kidd's (1970) type IIa32. Tiny semi-circular fracture marks on the surface of the beads of this variety were common.

Dimensions

Length - 11mm

Diameter - 6mm

Perforation Diameter - 3mm

Portland

Sample - 3

Provenience - Y506A, $Y506C_2$, $Y506C_3$

Dimensions

Length - 9-13mm
Diameter - 5.5-8mm
Perforation Diameter - 1.5-2mm

Distribution (Tables 5,6; Figures 3-5)

Only two specimens of this variety were found in the 'Tunica Treasure' from the Trudeau Site. It has also been recovered at Southern Compress, though the beads were smaller and more barrel or donut-shaped than those from Trudeau and Portland (Gregory and Webb 1965:21;fig.1:34,36); and at Pearson (Duffield and Jelks 1961:45).

Discussion

The probability of finding three beads of variety IIA13 in such a small collection as Portland's would be rather low, unless this particular variety was fairly popular at the time this site was occupied (1698-1706). Conversely, the discovery of only two beads of this variety at Trudeau, a site with over a quarter million beads, suggests that the popularity of this variety had decreased by the occupation of Trudeau (1730-1760). Its absence at Fatherland, Angola Farm, and the early historic sites along the Red River indicates that its popularity may have centered around the turn of the 18th century. Bracketing the sites at which this variety has been found gives a range for the heaviest distribution between

1714 and 1764 (Figure 3), and the bead was at least in existence by 1706, as shown by its discovery at Portland.

Variety IIA15 (Pl.5:7)

Background

This particular variety was not represented at the Portland Site, but was found at St. Pierre. It was felt to be appropriate to keep the bead classification together, rather than spreading it out over the two site reports, especially as so few beads were found at the St. Pierre Site.

Definition

This was a very small to large translucent dark green bead, corresponding to Kidd and Kidd's (1970) type IIa27, described as "circular, clear, emerald green," or "oval, clear, dark palm green," and to Good's (1972) types 36 and 37. The small 'seed' beads were donut-shaped while the larger beads were square and oval. A white surface patination occurred on many of these beads.

Dimensions

Length - 1-17mm

Diameter - 1-8mm

Perforation Diameter - .5-2mm

St. Pierre

Sample - 1

Provenience - Y572-12

Dimensions

Length - 12mm
Diameter - 7mm
Perforation Diameter - 2mm

Comments - The bead of this variety was of the larger kind, similar to Good's (1972) type 36.

Distribution (Tables 5,6; Figure 3-5)

This variety was represented by 1,107 beads in the 'Tunica Treasure", but only two of these were of the larger kind. The variety has also been found at Goodnow (Griffin and Smith 1948:12); Bell (Wittry 1963:30); Chota (Gleeson 1970:93,6); Childersburg (DeJarnette and Hansen 1960:58); Gilbert (Jelks et al 1966:103); Southern Compress (Gregory and Webb 1965:21;fig.1:35,37); Los Adaes (Ibid:33); Guebert (Good 1972:110); Pearson (Duffield and Jelks 1961:46); Colfax Ferry (Gregory and Webb 1965:38); Kipp's Post (Woolworth and Wood 1960:281); Cooks Ferry (LMS Collections); Tallapoosa (Burke 1936:58); Mabin (LMS Collections); and on Wichita sites dating between 1740 and 1767 (Good 1972:110).

Discussion

The absence of variety IIA15 at Fatherland, Portland,

and Angola Farm suggests that it was not too popular in the early years of the 18th century. Unfortunately, most of the sites it had been discovered at had long occupation spans (Figure 3), thus making it difficult to narrow down the time at which this variety was most popular. It was in existence at least by 1729, as evinced by its appearance at St. Pierre, and, according to the bracketing procedure, had its greatest popularity between 1717 and 1820.

Type B

The beads of Type B had a complex construction, consisting of a single layer of glass with the addition of surface decoration. The latter could either be simple (one color against a background of a different color) or compound (more than one color against a background of a different color). Type B corresponded to Kidd and Kidd's (1970) types IIb, IIb', and IIbb.

Variety IIB2 (Pl.5:8)

Definition

The beads of this variety were large, opaque, and white, with four dark blue longitudinal stripes. Their

shapes were round and oval. This variety corresponded to Kidd and Kidd's (1970) types IIb25 and 26, and to Good's (1972) type 142.

Dimensiond

Length - 6-15mm

Diameter - 5-8mm

Perforation Diameter - 1-2mm

Portland

Sample - 1

Provenience - Y505A$_2$

Dimensions

Length - 13mm
Diameter - 7mm
Perforation Diameter - 1.5mm

Comments - This particular bead had an oval shape.

Distribution (Table 5,6; Figures 3-5)

In addition to Portland and Trudeau, variety IIB2 has been found at Haynes Bluff (LMS Collections); Womack, as represented by Harris and Harris' (1965:308,13) type 2; Fish Hatchery (Gregory and Webb 1965:23;fig.1:17); Guebert (Good 1972:124); sites in Central Texas (Watt 1938:66); and on Wichita sites dating between 1700 and 1740 (Good 1972:124).

Discussion

The rarity of this variety at Trudeau (Table 6; Figure 5)

in comparison to its abundance at Fish Hatchery, suggests that the greater part of this varietal distribution occurred prior to 1730, the estimated date for the beginning of Trudeau's occupation. That this bead had a wide dispersal in the Red River watershed, suggests that it may have been carried by some of the early 18th century expeditions up this river - for example Bénard, Sieur de la Harpe, who, in 1719, journeyed up the Red River with 2,000 livres of merchandise to trade to the Wichita and other aboriginal groups along the route (Wedel 1971:42). Its discovery at Portland indicates that the variety was around at least by 1706, and the bracketing procedure placed its heaviest distribution between 1700 and 1764.

Variety IIB15 (Pl.5:9)

Definition

This was a newly defined variety, not being found in the 'Tunica Treasure' from the Trudeau Site. The variety consisted of large translucent dark blue beads with eight longitudinal white stripes. The beads were barrel-shaped.

Dimensions

Length - 6-7mm

Diameter - 7-8mm

Perforation Diameter - 2mm

Portland

Sample - 2

Provenience - $Y505C_2$, $Y506C_1$

Distribution (Tables 5,6; Figures 3-5)

Variety IIB15 has also been found at the Womack Site, where it corresponded to Harris and Harris' (1965: 308,13) type 34, and at Southern Compress (Gregory and Webb 1965:20;fig.1:23).

Discussion

This variety was quite rare and it is difficult to say much about it. The heaviest (!) distribution seems to have occurred between 1700 and 1730, and, as it was found at Portland, it was at least being traded by 1706.

Variety IIB16 (Pl.5:10)

Definition

This too was a new variety, not being represented at Trudeau. This was a medium-sized compound bead with an opaque white background. Decoration consisted of three thick wavy green lines, with a single thin red stripe upon each green line. The bead shape was oval. It corresponded to Kidd and Kidd's (1970) type IIbb17.

Dimensions

Length - 10mm

Diameter - 4.5mm

Perforation Diameter - 1.5mm

Portland

Sample - 1

Provenience - Y502AF.1

Distribution (Tables 5,6; Figures 3-5)

Similar beads have been found at Lawton Plantation (Gregory and Webb 1965:25;fig.1:20) and Southern Compress (Ibid:20).

Discussion

Little can be said about this variety. As it was only found at three sites, the bracketing procedure placed its period of heaviest distribution between 1714 and 1803. The absence of this variety at Trudeau suggests that this bead may have been more confined to the lower portion of the above range. It was at least in existence by 1706.

Class III

This class consisted of hollow cane beads having a compound structure (two or more layers of glass). Also included under this class were composite beads (compound beads with surface decoration). These beads had neither been reheated nor tumbled

to round the ends. As no beads from this class were found at Portland, a discussion of the various types and varieties set up by Brain must await the final publication on the 'Tunica Treasure' (Brain nd).

Class IV

These were compound or composite beads identical to the above, except that their ends had been rounded by reheating and tumbling.

Type A

Type A consisted of compound beads (two or more layers) with no surface decoration. It corresponded to Kidd and Kidd's (1970) type IVa. Beads of this type have not been found at Portland, though it was originally felt that eight of the beads classified under variety IIA1 (See p.58) should have been discussed at this point. As Good (1972:118) indicated, the compund appearance of the above beads was probably the result of the tumbling process.

Type B

The beads of this type had two or more layers of glass with the addition of glass insets on either the surface or between the layers. It corresponded to Kidd and Kidd's (1970) type IVb.

Variety IVB1 (Pl.5:12)

Definition

This was a small to large bead variety, with longitudinal white stripes lodged between two layers of clear glass. The beads were barrel-shaped, the smaller ones having between fourteen and eighteen stripes and the larger ones having seven. Kidd and Kidd (1970) did not consider these composite beads, giving them the typological designation of IIb18. It corresponded to Good's (1972) types 154 - 159. The beads of this variety were commonly called 'Gooseberry' because of their resemblance to the ribbed fruit of this name.

Dimensions

Length - 8-9mm

Diameter - 8-10mm

Perforation Diameter - 1-3mm

Portland

Sample - 1

Provenience - $Y506C_2$

Dimensions

Length - 7mm
Diameter - 7mm
Perforation Diameter - 1.5mm

Comments - The Portland specimen was broken in half and had five stripes (ten originally). It corresponded to Good's (1972) type 157.

Distribution (Tables 5,6; Figures 3-5)

The so-called 'Gooseberry' beads probably had the widest distribution of any decorated bead. In addition to Portland and the 'Tunica Treasure' from the Trudeau Site, variety IVB1 has been found at Seven Oaks (Goggin nd:50); Wayland Smith (Good 1972:100); Goodnow (Griffin and Smith 1948:13); Chicoutimi (J-F Blanchette - pers. comm.); Fatherland (Quimby 1966:194); International Paper (LMS Collections); Haynes Bluff (Ibid); Fort St. Joseph (Good 1972:100); Chota (Gleeson 1970:93,6); Childersburg (DeJarnette and Hansen 1960:58); Lawton Plantation (Gregory and Webb 1965:24;fig.1:12); Fish Hatchery (Ibid:23); Guebert (Good 1972:126); True Mound (Goggin nd:50); Parrish Mound I (Ibid); Lake Butler (Ibid); Fountain of Youth Park (Ibid); Mabin (LMS Collections); Wichita sites dating between 1700 and 1740 (Good 1972:100); English sites in Georgia and Alabama; and even as far away as Brazil in a Portuguese context (Goggin nd:50).

Discussion

Not only did variety IVB1 have a large distribution spatially, but it also did temporally (Figure 3). The bracketing procedure placed its heaviest distribution between 1698 and 1750, but it had at least been in existence by 1595, by virtue of its discovery at Wayland Smith. The fact that this variety was found on so many sites in Florida, some of which definitely dated to the 16th and 17th centuries, suggests that this variety was a fairly common Spanish trade item in this early period. It was not characteristic of Spanish-related sites of the 18th century however, being totally absent from the mission sites in Texas. French-related sites of the 18th century (Fatherland, Portland, Fort St. Joseph, Trudeau,etc.) did have this variety, and, as stated above, it seems as if Englishmen were also trading this bead at this time. Though variety IVB1 beads had been around for a considerable period, it seems as though there may have been a major change as to who was trading them.

Variety IVB2 (Pl.5:13)

Definition

A bead of this variety was large and had a shiny off-white layer of glass over a core of blue-gray glass. Three sets of three thin blue longitudinal stripes formed

the decoration. The shape of this bead was oval. It corresponded to Good's (1972) type 140.

Dimensions

Length - 12-16mm

Diameter - 5-7mm

Perforation Diameter - 1mm

Portland

Sample - 2

Provenience - Y502F.1, $Y506C_3$

Dimensions

Length - 14-15mm
Diameter - 6-7mm
Perforation Diameter - 2mm

Comments - The two Portland specimens differed slightly from the above definition. The first had thin lines, but the core was off-white in color, like the outer layer. The second had a blue-gray core, but had thick stripes.

Distribution (Tables 5,6; Figures 3-5)

Only seven beads of this variety were found at Trudeau. It has also been recorded at International Paper (LMS Collections); Womack, where it corresponded to Harris and Harris' (1965:308,13) type 23; Angola Farm (LSU Collections); Fish Hatchery (Gregory and Webb 1965:23,4;fig.1:14); Guebert (Good 1972:124); Pearson

(Duffield and Jelks 1961:49); and Lake George (LMS Collections).

Discussion

This bead variety seems to have been primarily associated with French sites, and even then it was somewhat of a rarity. It was at least in existence by 1706, as it was found at Portland, and its heaviest distribution probably occurred between 1714 and 1764. The large collection of this variety at Fish Hatchery (Table 6) and its negligible presence at Trudeau suggests that it may have been more confined to the first quarter of the 18th century.

Variety IVB9 (Pl.5:14)

Definition

This was a new variety, not present in the 'Tunica Treasure' from the Trudeau Site. The beads of this variety were large, oval, and very similar to variety IVB2, in that a blue-gray glass core was covered by a layer of off-white glass. The difference between the two varieties was in the form of decoration. Instead of three sets of three blue lines, the beads of this variety had four sets of two. The shape of these beads was oval.

Dimensions

Length - ?

Diameter - 7mm

Perforation Diameter - 2mm

Portland

Sample - 1

Provenience - $Y506C_2$

Comments - This bead was broken in half, thus making a length measurement impossible. The stripes were thick.

Distribution

To our knowledge, this variety has not been found beyond the Portland Site.

Variety IVB10 (Pl.5:15)

Definition

This was a new variety, not being represented in the 'Tunica Treasure' from the Trudeau Site. The beads were large, with a light gray-blue core covered by a dark gray-blue layer of glass. The decoration consisted of three sets of two white stripes. Contained between each set of the latter was a single red stripe. This variety corresponded to Stone's (1971) CI,SC,T8,Va.

Dimensions

Length - 11mm

Diameter - 7.5mm

Perforation Diameter - 2mm

Portland

Sample - 1

Provenience - Y506C_3

Comments - One of the sets of two white lines had two red stripes between indicating that some lines which appear to be single may have been made by applying more than one glass rod. According to Good (1972:96), it was a common practice to group minute glass rods together so that the design would appear solid when the glass was drawn out.

Distribution (Tables 5,6; Figures 3-5)

In addition to Portland, variety IVB10 has been found at Womack, where it corresponded to Harris and Harris' (1965:308,13) type 30; Angola Farm (LSU Collections); Gros Cap Cemetery (Quimby 1966:133); and Lawton Plantation (Gregory and Webb 1965:24;fig.1:18).

Discussion

This variety was being traded by at least 1706, as it was found at Portland. The bracketed dates for its heaviest distribution were 1706 and 1760.

Variety IVB11 (Pl.5:16)

Definition

This variety was not included in the 'Tunica Treasure' from the Trudeau Site. The beads were large, dark blue, and translucent, with a core and outer layer of the same color. The beads were decorated with five twisted S-shaped white stripes. It corresponded to Good's (1972) type 30.

Dimensions

Length - 9mm

Diameter - 8mm

Perforation Diameter - 2.5mm

Portland

Sample - 1

Provenience - Y502AP.1

Dimensions - see above

Distribution (Tables 5,6; Figures 3-5)

This variety has been found at Fatherland (Good 1972:109); Womack, where it corresponded to Harris and Harris' (1965:308,13) type 31; Fort St. Joseph (Good 1972:109); Guebert (Ibid); and Wichita sites dating between 1700 and 1740 (Ibid).

Discussion

Variety IVB11 seems to have been largely associated with French-related sites, though the sample size is of course to small to be able to state this with any firmness. The variety was at least in existence by 1706, as it was found at Portland. The heaviest distribution seems to have occurred between 1700 and 1730.

Wire-Wound Beads

Class WI

The beads of this class were monochrome and had a simple shape and construction. The glass was porcelain-like in texture and was of poor quality. The surface of these beads were pocked with tiny circular fracture marks and streaks, seemingly because the glass had both a high soda content and was blown at too low a temperature (Sleen 1967:111). Beads of this class were not found at Portland, so the associated types and varieties are of no concern to the present discussion.

Class WII

The beads of Class WII were monochrome and of simple construction. They had more elaborate shapes than Class WI, due to pressing, molding, or other manipulation.

Type A

These were faceted beads, formed by pressing the glass beads, while still in a plastic state, against a flat surface. Most of these beads had eight facets and two flat ends. This type corresponded to Kidd and Kidd's (1970) type WIIc and to Stone's (1971) CII,SA,T1.

Variety WIIA3 (Pl.5:17)

Definition

This was a very large, translucent, dark blue bead with eight five-sided facets. It corresponded to Kidd and Kidd's (1970) type WIIc12, to Stone's (1971) CII,SA,T1,Va, and to Good's (1972) type 7.

Dimensions

Length - 8-13mm

Diameter - 11-17mm

Perforation Diameter - 2-5mm

Portland

Sample - 1

Provenience - Y501B

Dimensions

Length - 9mm
Diameter - 10.5mm
Perforation Diameter - 3mm

Comments - Unlike the specimens in the 'Tunica Treasure', the Portland bead of this variety did not have a white surface patination. It was very carefully made, each facet regular in its dimensions.

Distribution (Tables 5,6; Figure 3-5)

In addition to Portland and Trudeau, variety WIIA3 has been found at: Bell (Wittry 1963:32); Fatherland (Quimby 1966:195); Womack, where it corresponded to Harris and Harris' (1965:308,13) type 40; Fort St. Joseph (Quimby 1966:195); Chota (Gleeson 1970:93,8); Childersburg (DeJarnette and Hansen 1960:57); Gilbert (Jelks et al 1966:100); Gros Cap Cemetery (Quimby 1966:125); Guebert (Good 1972:106); Kipp's Post (Woolworth and Wood 1960:279); Whiteshell Provincial Park (Quimby 1966:195); Tallapoosa (Burke 1936:59); an unknown Oneida Iroquois site dating from 1710 (Good 1972:106); sites in central Texas (Watt 1938:63); and at Wichita sites dating between 1700 and 1820 (Good 1972:106).

Discussion

The beads of this variety were traded throughout most of the 18th century, their heaviest distribution seemingly occurring between 1700 and 1781. The variety was at least in existence by 1706, as shown by its discovery at Portland.

Variety WIIA11 (Pl.5:18)

Definition

This was a new variety, not being found in the 'Tunica Treasure' from the Trudeau Site. The beads were large, clear to light gray, and had eight five-sided facets. It corresponded to Kidd and Kidd's (1970) type WIIc2, to Stone's (1971) CII,SA,T1,Vh and Vi, and to Good's (1972) type 6.

Dimensions

Length - 9mm

Diameter - 10.5mm

Perforation Diameter - 3mm

Portland

Sample - 1

Provenience - $Y505B_2$

Dimensions - see above

Comments - The facets on this bead were pressed in, giving

the bead a lopsided appearance. The bead was broken in half longitudinally and the impression of the rod on which the glass was wrapped showed up clearly, with W-shaped incisions.

Distribution (Tables 5,6; Figures 3-5)

In addition to being found at Portland, variety WIIA11 has been discovered at Mulberry Mound (Smith 1956:51); Fatherland (Good 1972:105); Site 1Ds53 (Thompson 1974:2); Womack, where it corresponded to Harris and Harris' (1965:308,13) type 41; Fort St. Joseph (Good 1972:105); Angola Farm (Ibid); Southern Compress (Gregory and Webb 1965:18;fig.1:10); Fort Michilimackinac (Good 1972:105); and Conesoga (Ibid).

Discussion

This variety seems to have had its heaviest distribution between 1700 and 1730 and, being found at Portland, it was in existence at least by 1706.

Variety WIIB2 (Pl.5:19)

Definition

This bead was shaped like a raspberry, and has been referred to by that name. It was large, clear, and transparent. It corresponded to Stone's (1971) CII,SA,T2,Vf, and to Good's (1972) type 26.

Dimensions

Length - 3-12mm

Diameter - 7-10mm

Perforation Diameter - 3-4mm

Portland

Sample - 3

Provenience - Y502AF.1, Y506B, Y510B

Dimensions

Length - 7mm
Diameter - 7-8mm
Perforation Diameter - 3-4mm

Comments - These particular specimens were clear, unlike the frosted ones in the 'Tunica Treasure'. The latter were apparently the more common on historic sites (Good 1972:109).

Distribution (Tables 5,6; Figures 3-5)

In addition to Portland and Trudeau, variety WIIB2 has been discovered at Fatherland (Quimby 1966:196); Womack, where it corresponded to Harris and Harris' (1965:308,13) type 42; Fort St. Joseph (Quimby 1966:133, 96); Chota (Gleeson 1970:93,6); Childersburg (DeJarnette and Hansen 1960:57); Gros Cap Cemetery (Quimby 1966:133); Southern Compress (Gregory and Webb 1965:20;fig.1:13); Guebert (Good 1972:109); Conesoga (Ibid); and at Tallapoosa (Burke 1936:58).

Discussion

The heaviest distribution of variety WIIB2 seems to have occurred between 1700 and 1781. There is some evidence that there might have been a change within this variety through time, the clear specimens being earlier in the range and the frosted ones later. The variety was at least in existence by 1706, by virtue of its discovery at Portland.

Variety WIIB3 (Pl.5:20)

Definition

The beads of this variety were large, clear, and transparent. Eight longitudinal spiral ridges gave it a corrugated effect (Harris and Harris 1965:312). These beads have often been called 'melon' beads. This variety corresponded to Kidd and Kidd's (1970) type WIIe1.

Dimensions

Length - 7mm

Diameter - 9mm*

Perforation Diameter - 4mm

* Diameter was measured to the crest of the ridges.

Portland

Sample - 1

Provenience - Y502F.1

Dimensions

Length - 9mm
Diameter - 11mm
Perforation Diameter - 3mm

Distribution (Tables 5,6; Figures 3-5)

Variety WIIB3 was represented by one specimen in the 'Tunica Treasure' from the Trudeau Site. It has also been found at Womack, as represented by Harris and Harris' (1965:308,13) type 43.

Discussion

This bead variety was very rare, and little can be said of it. It was at least being distributed by 1706, and its date range for 'heaviest' trade has been calculated at 1700 to 1730.

Class WIII

Beads of this class had a variety of shapes. They were polychrome, having either surface decoration or inlays of contrasting colors.

Type A

These beads were large, round, or spheroidal, with surface designs of a different color from the background. Wire-wound marks and air bubbles were not evident, making it difficult to determine the method of manufacture. Beads of this type were probably made in Amsterdam (Sleen 1967:53).

Variety WIIIA4 (Pl.5:21)

Definition

This was a large, round, opaque, black (actually dark burgundy with a black appearance) bead, having white wavy lines upon its surface. It somewhat resembles Good's type 75 bead, except that she classified the above as a drawn bead of complex construction and described its color as opaque black (Good 1972:115).

Dimensions

Length - 11mm

Diameter - 13mm

Perforation Diameter - 3mm

Portland

Sample - 1

Provenience - $Y5C6C_3$

Dimensions

Length - 9mm

Diameter - 12mm
Perforation Diameter - 4mm

Comments - The white glass inlays upon this specimen were not set deeply into the glass.

Distribution (Tables 5,6; Figures 3-5)

In addition to Trudeau and Portland, WIIIA4 beads have been found at Womack, where it seems to have corresponded to Harris and Harris' (1965:308,13) type 39; Tallapoosa (Burke 1936:56); and Lake George (LMS Collections). According to Fairbanks (1955:18), black, spherical, inlaid beads have also occurred at the Ocmulgee Old Fields and various Coosa and Chattahoochee Valley sites of the early 18th century.

Discussion

Sleen (1967:111) described "quite a few black beads often ornamented with two interweaving wavy lines" as being made in Amsterdam. This variety was not terribly abundant on historic sites, but where it occurred, the contexts were generally early 18th century. The bracketed dates for the heaviest distribution of variety WIIIA4 were 1700 and 1730. Its discovery at Portland indicates that it was being traded at least by 1706.

Conclusion

Nineteen bead varieties and eighty-nine beads were discovered at the Portland Site.* Though this site, on the basis of the aboriginal collection and the historic accounts, is believed to have been an early Tunica occupation, six of the bead varieties were not represented in the 'Tunica Treasure' from the Trudeau Site (IIB15, IIB16, IVB9, IVB10; IVB11, WIIA11). The latter site, which possed over a quarter million beads, was separated from Portland's occupation by about twenty-five years. It seems probable that some of the varieties discussed may be allocated to very narrow date ranges, thus providing an excellent date indicator for sites with questionable occupation spans.

Sixty-one of the eighty-nine beads in the Portland collection were found within the trash pits (Figure 6). A total of twenty-three were recovered in Y506B, eighteen in $Y506C_1$, eight in $Y506C_2$, and five in $Y506C_3$. In terms of numbers and kind, there appears to be a correlation between Y506B and $Y506C_1$, and between $Y506C_2$ and $Y506C_3$. The first pair each had high representation of variety IIA1 and all but one bead in each pit were monochrome and of simple construction. Type IIA beads were also most common in pits $Y506C_2$ and $Y506C_3$, but not by nearly as much. Both of these last pits had a fair representation of composite beads. Unfortunately, the numbers

* Variety IIA15 was found only at St. Pierre.

were too small to test the significance of the sample.

A summary of the bracketed dates for the heaviest distribution of Portland's varieties is illustrated in Figure 4. The two varieties which were most popular at Portland (IIA1 and IIA6) were also the most frequently found at other historic sites. Their time ranges were also quite long, both of which were being distributed in the first half of the 17th century (possibly as early as the 16th century) up to the mid 18th century. The bead with the greatest heritage was variety IVB1, or the 'Gooseberry' bead. As stated earlier, it is believed that this particular bead was commonly distributed by Spanish traders in the 16th and 17th centuries, but became a part of the French and English merchandise in the 17th and 18th centuries.

Three of the six varieties represented at Portland, but absent in the 'Tunica Treasure' (IVB9, IIB15, IVB11) all seem to have clustered together between 1700 and 1730, as did the wire-wound varieties WIIA11, WIIB3, and WIIIA4.* However, for at least four of the Portland bead varieties (IVB9, IIB15, WIIB3, WIIIA4) the samples were hardly good enough. With the exception of varieties IIA13 and IIB16, the remaining bead varieties, which proceeded through much if not all of the 18th century, were well encugh represented at sites to establish

* As mentioned earlier, it is felt that variety IIA8, contrary to the results attained from the bracketing procedure, also had its heaviest distribution in the first quarter of the 18th century.

fairly reliable bracketing dates. The postulated date ranges require further testing against sites with short occupation spans.

Bricks

Specimens - 4

Provenience - Y500A, Y502A, Y506B, $Y506C_3$

Description

It is possible that the small pieces of orange-brown clay found at Portland were daub of Indian origin, but some were curiously rectangular in shape and of a different consistency. They have tentatively been classified as brick.

	IIA1	IIA4	IIA6	IIA7	IIA8	IIA13	IIA15	IIB2	IIB15	IIB16	IVB1	IVB2	IVB9	IVB10	IVB11	WIIA3	WIIA11	WIIB2	WIIB3	WIIIA4
Hiwassee Island (1540-1818)			X																	
Seven Oaks (1550-1700)											X									
Mulberry Mound (1564-1703)																	X			
Wayland Smith (1570-1595)											X									
Goodnow (16th-17th)			X	X			X				X									
Factory Hollow (1590-1615)			X																	
Albert Ibaugh (1600-1625)			X																	
Chicoutimi (? -1663)	X		X	X							X									
Frank Bay (1650-1670)	X																			
Dann (1650-1675)				X																
St. Ignace Ossuary (1650-1700)	X			X																
Shepardson (1677-1710)																				
Bell (1680-1730)	X		X				X									X				
Fatherland (1682-1729)	X	X		X	X						X				X	X	X	X		
International Paper (1682-1729)	X		X	X							X	X								
Pumpkin Lake (1682-1729)				X																
Portland (1698-1706)	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
Haynes Bluff (1698-1750)		X	X	X				X			X									
Russell (1698-1750)		X		X																
Site 1Ds53 (1700-1725)																				
Womack (1700-1730)	X		X					X	X					X	X	X	X	X	X	X
Fort St. Joseph (1700-1781)	X			X							X				X	X	X	X		
Chota (1700-1800)	X	X	X	X			X				X					X		X		
Childersburg (1700-1825)	X		X	X	X		X				X					X		X		
Gilbert (1700-1850)	X	X	X	X	X		X									X				
Angola Farm (1706-1720)	X		X	X								X		X			X	X		
Fort Dauphin (1702-1760)	X		X																	
Gros Cap Cemetery (1710-1760)	X			X										X		X		X		
Lawton Plantation (1714-1803)	X		X							X	X			X						
Fish Hatchery (1714-1803)	X		X					X			X	X								
Southern Compress (1714-1803)	X		X			X	X		X	X							X	X		
Fort Michilimackinac (1715-1781)	X		X	X													X	X		
Fort Toulouse (1717-1763)	X		X																	
Los Adaes (1717-1805)	X	X	X				X													
Fort St. Pierre (1718-1729)	X						X													
Guebert (1719-1833)	X	X	X	X	X		X	X			X	X			X	X		X		
Presidio Ahumada (? -1766)			X	X																
Mission San Lorenzo (18th)			X																	
San Xavier Missions (1716-1755)			X	X																
San Juan (18th)			X																	
Trudeau (1731-1764)	X	X	X	X	X	X	X	X			X	X				X		X	X	X
Alamo (1740- ?)																				
Fort Ligonier (1758-1766)			X																	
Pearson (1760-1830)	X		X	X		X	X					X								
Colfax Perry (1787-1820)	X	X	X				X													
Wilkinson (1803-1820)	X		X											X						
Three Forks Area (1806-1838)																				
Kipp's Post (1826-1831)	X		X				X									X				
Fort Laramie (1834-1875)																				
Conestoga (? -1838)	X	X	X	X	X												X			
Cooks Ferry (?)			X	X			X													
True Mound (?)											X									
Parrish Mound I (?)											X									
Lake Butler (?)											X									
Fountain of Youth Park (?)											X									
Whiteshell Provincial Park (?)																X				
Tallapoosa (?)				X	X		X									X		X		X
Mabin (?)				X			X													
Lake George (?)												X								X

Table 5 - Beads: Distribution of Varieties

	Portland (1698-1706)			Fish Hatchery (1714-1803)			Southern Compress (1714-1803)			Trudeau (1731-1764)		
	1	2	3	1	2	3	1	2	3	1	2	3
IIA1	44	49.4	49.4	452	82.3	67.7	90	38.3	28.1	4193	8.7	
IIA4	1	1.1	1.1							694	1.4	
IIA6	16	18	18	6	1.1	.9	5	2.2	1.6	10745	22.2	
IIA7	1	1.1	1.1							31367	64.7	
IIA8	6	6.7	6.7							179	.4	
IIA13	3	3.4	3.4				18	7.8	5.6	2	.0	
IIA15							14	6	4.4	2	.0	
IIB2	1	1.1	1.1	32	5.8	4.8				14	.0	
IIB15	2	2.2	2.2				1	.4	.3			
IIB16	1	1.1	1.1				90	38.8	28.1			
IVB1	1	1.1	1.1	2	.4	.3				532	1.1	
IVB2	2	2.2	2.2	57	10.4	8.5				7	.0	
IVB9	1	1.1	1.1									
IVB10	1	1.1	1.1									
IVB11	1	1.1	1.1									
WIIA3	1	1.1	1.1							120	.2	
WIIA11	1	1.1	1.1				1	.4	.3			
WIIB2	3	3.4	3.4				13	5.6	4.1	256	.5	
WIIB3	1	1.1	1.1							1	.0	
WIIIA4	1	1.1	1.1							360	.7	
Total*	89		100	549		82.2	232		72.5	48472		
Total**	89			668			320			~1/4 MILLION		

1 - Actual number of specimens
2 - Varietal % of only those varieties listed
3 - Varietal % of total bead assemblage
* - Total of the above varieties
**- Total beads from site

Table 6

Beads at Various Sites
(See Figure 5)

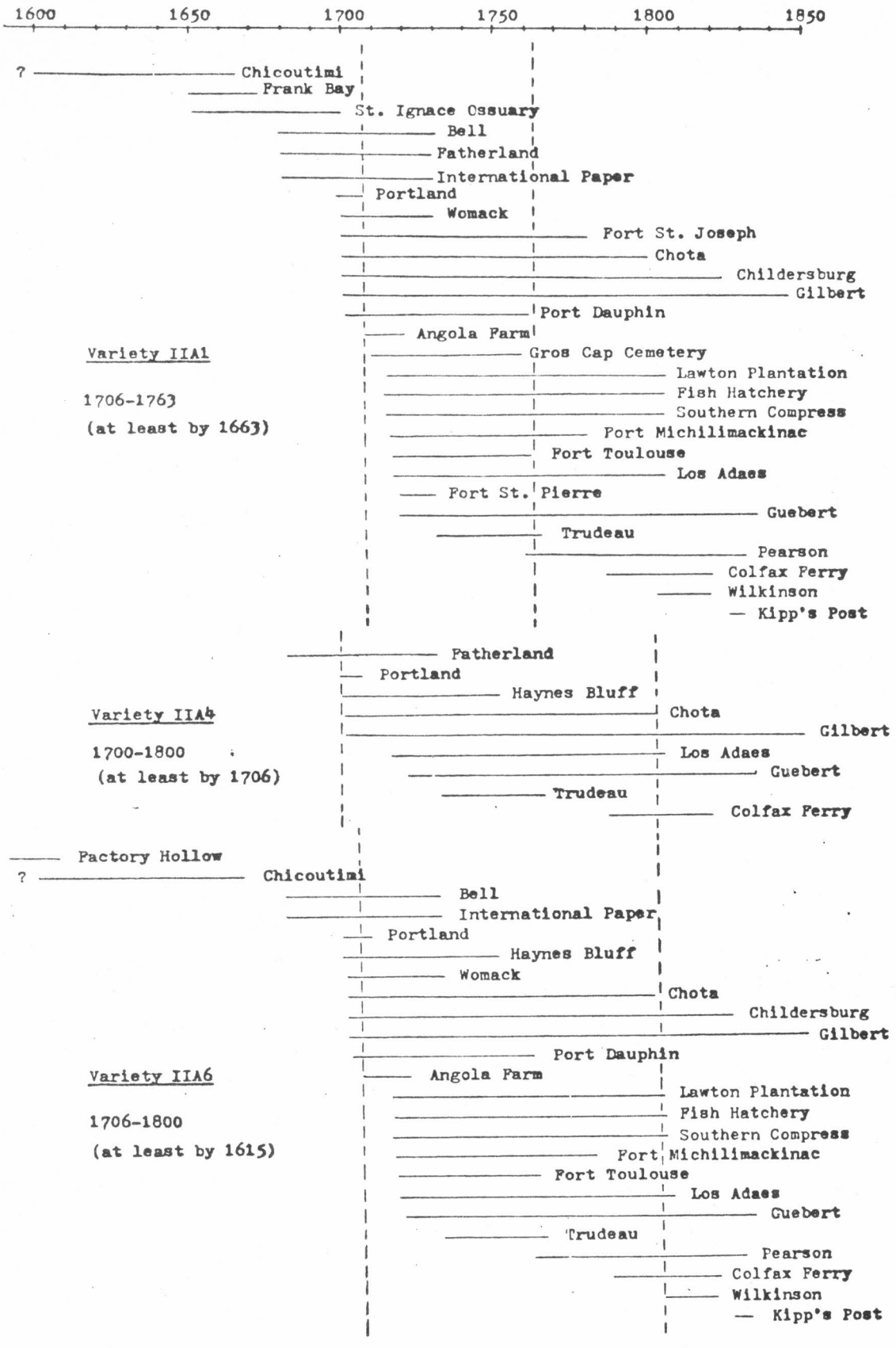

Figure 3

Beads - Hypothesized Dates of Heaviest Distribution
(Bracketing procedure from South 1972)

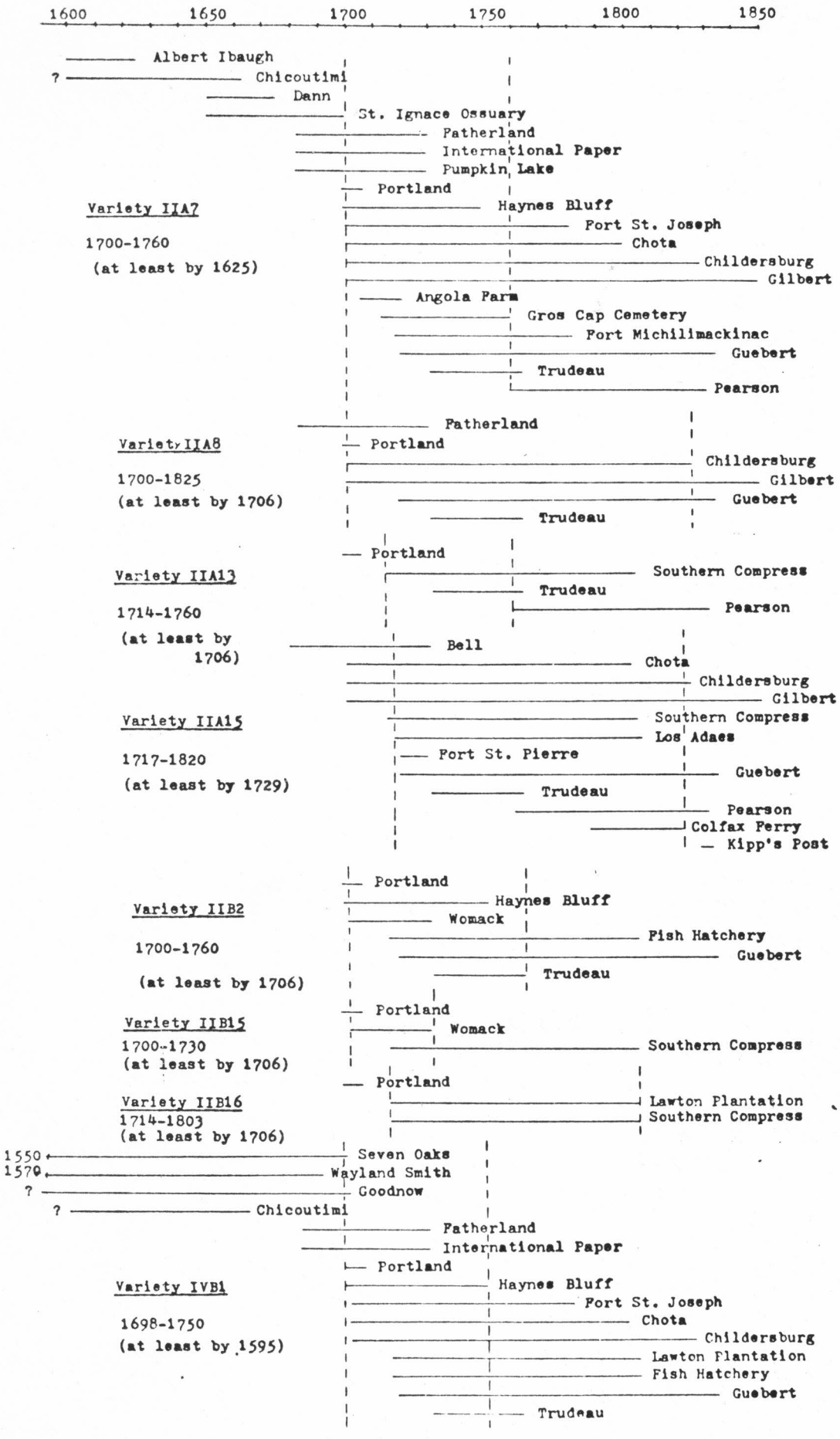

Figure 3 (cont.)

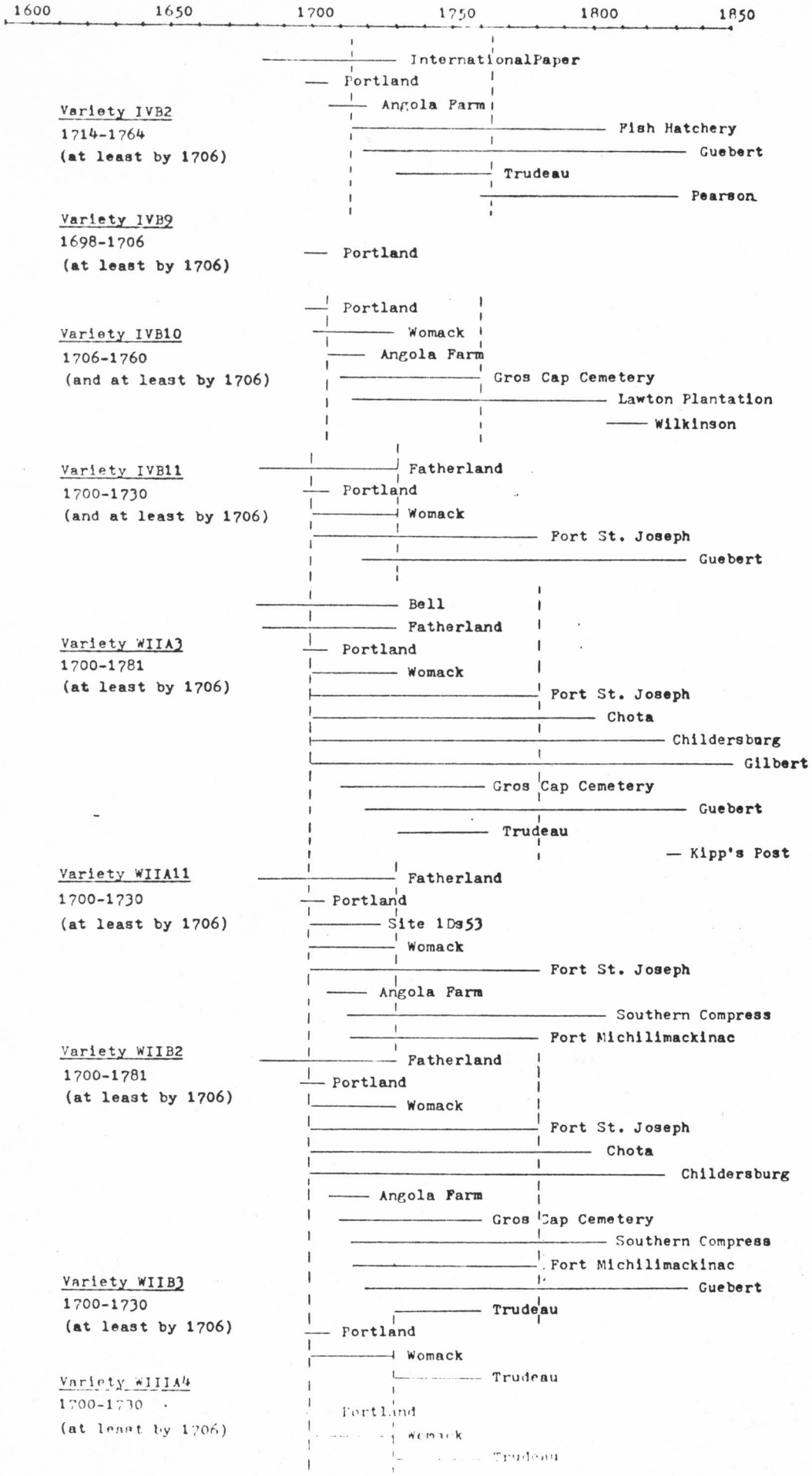

Figure 3 (cont.)

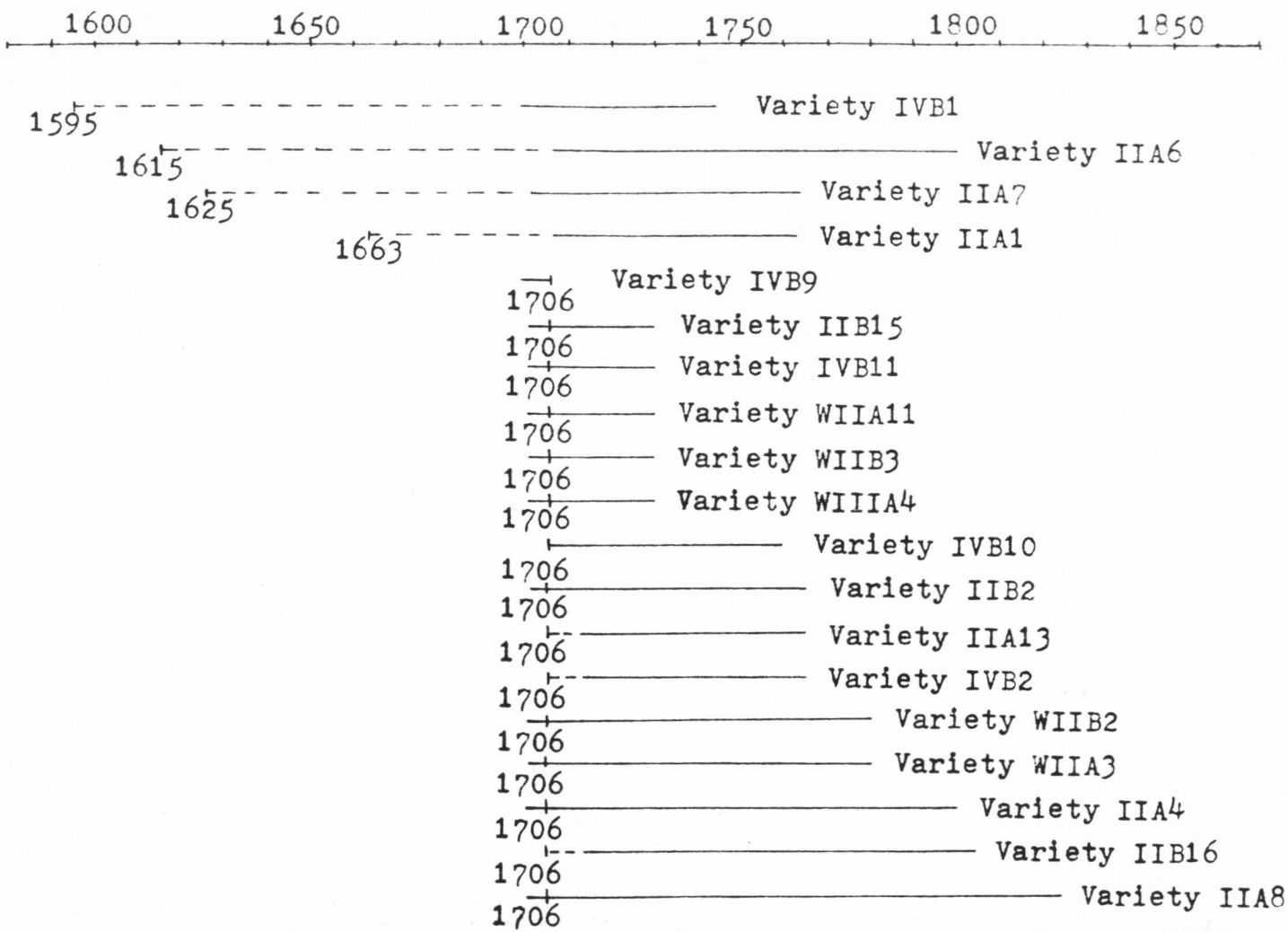

Figure 4

Beads - Bracketed Date Ranges for Varieties in Figure 3

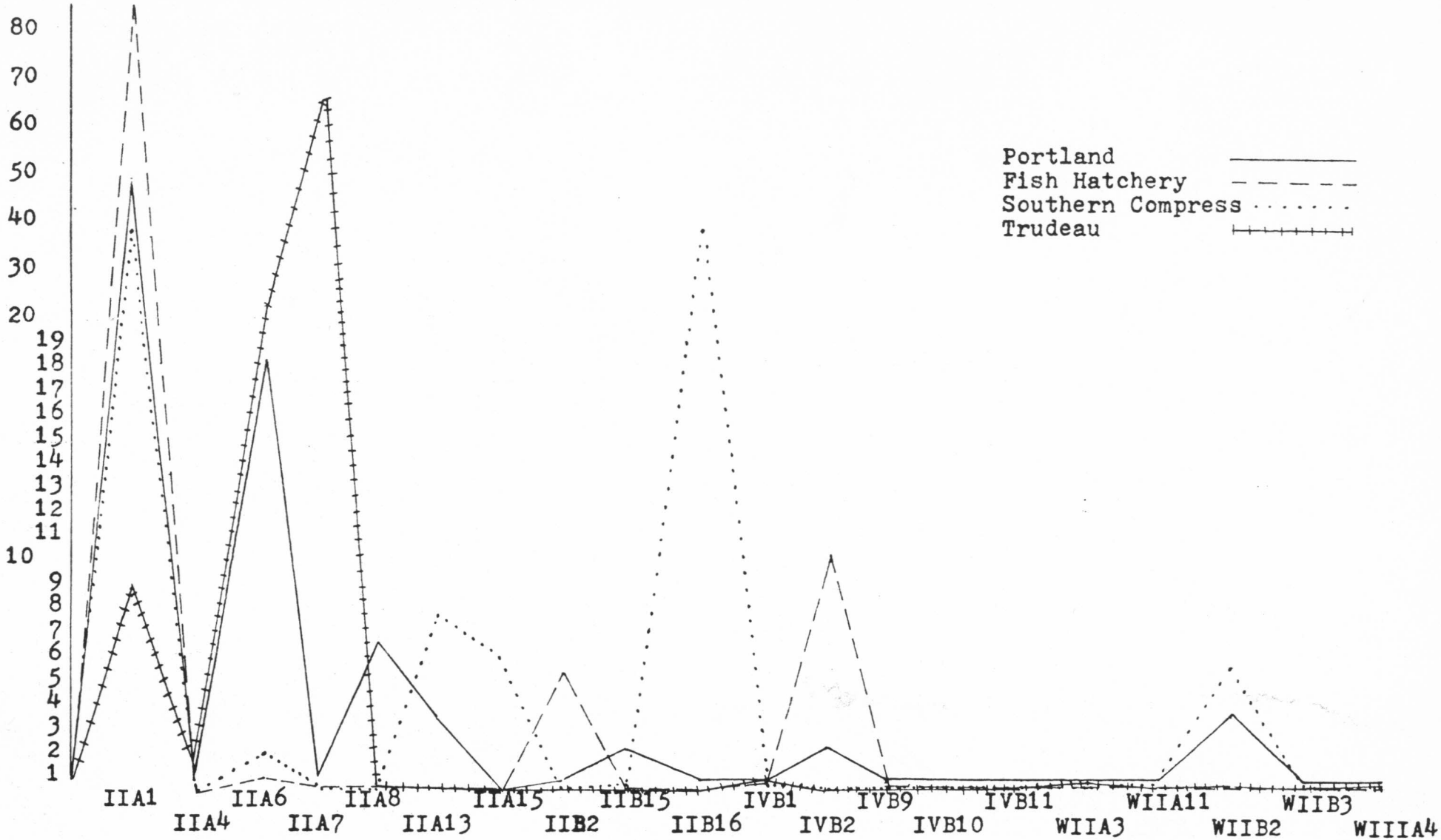

Figure 5

Bead Percentages at Various Sites
(See Table 6)

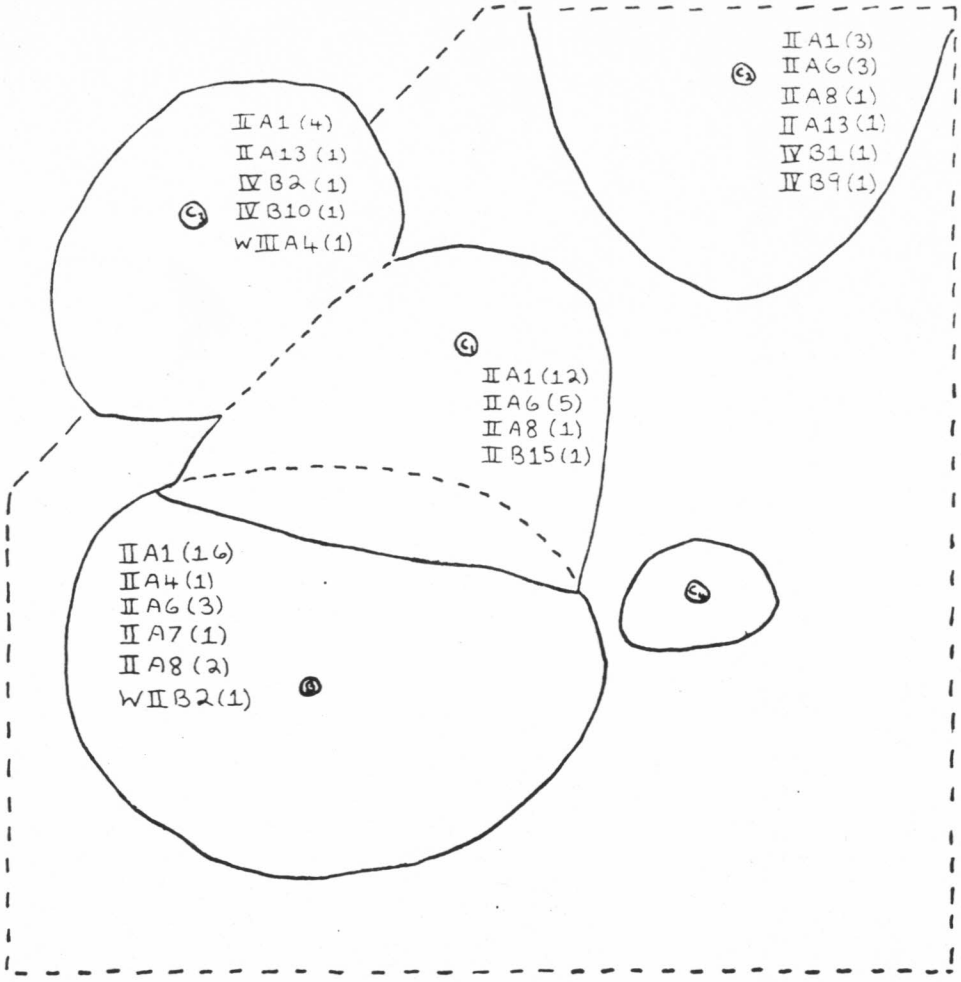

Figure 6

Portland - Bead Distribution in Trash Pits

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