

EUROPEAN TRADE BEADS FROM SIX SITES IN NATCHITOCHE PARISH,
LOUISIANA

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This preliminary report concerns the European trade bead varieties from six Indian village sites in Natchitoches Parish (County), bordering Red River in the Northwestern Portion of Louisiana. The collections from these sites also include vessels or sherds of native pottery and various other objects, native and trade. Attempts will be made to correlate the bead types with these associated objects, which with some assurance can be assigned to the period between 1714 and 1820.

The establishment of the French post at Natchitoches, by Louis Juchereau de St. Denis in 1714 (La Harpe, 1831), marked the first European settlement west of the Mississippi in the Louisiana Purchase area. Good documentary evidences (Swanton 1942) indicate continuous French trade contacts with the Natchitoches Indians from this time until this tribe moved up Red River about the time of the Louisiana Purchase in 1803, eventually to join other Caddos in their migration to Texas in 1840. There had been brief contacts with the Natchitoches prior to establishment of the post, by Henri de Tonti in 1690 (Swanton 1942) and by Bienville and St. Denis in 1700 (1810), but it is probable that no trade of consequence occurred until 1714.

None of the Natchitoches villages for any specific segment of this time has been identified but they and the related Doustionary are known to have lived during this period on the islands south of the present town, between the varying channels of Red River: Old River, the farthest west and the main channel until 1765; Cane River, the middle course and the main channel between 1765 and 1832; and Rigolette de Bon Dieu, the "north" or east branch and the main channel from 1832 to the present time (Walker 1935). Three of our sites are on the island between Old and Cane Rivers, two in the outskirts of the present town and $\frac{1}{2}$ to 1 mile from the presumed location of the French fort, the third 7 miles south (Map 1). All of these had Natchitoches pottery types. The Wilkinson site with similar wares is about 20 miles northwest of the town and in the general locale where the Natchitoches are stated (Williams 1964) to have moved by 1805.

Also available to us are beads and other materials from the Presidio de los Adaes, definitely located and now a park,
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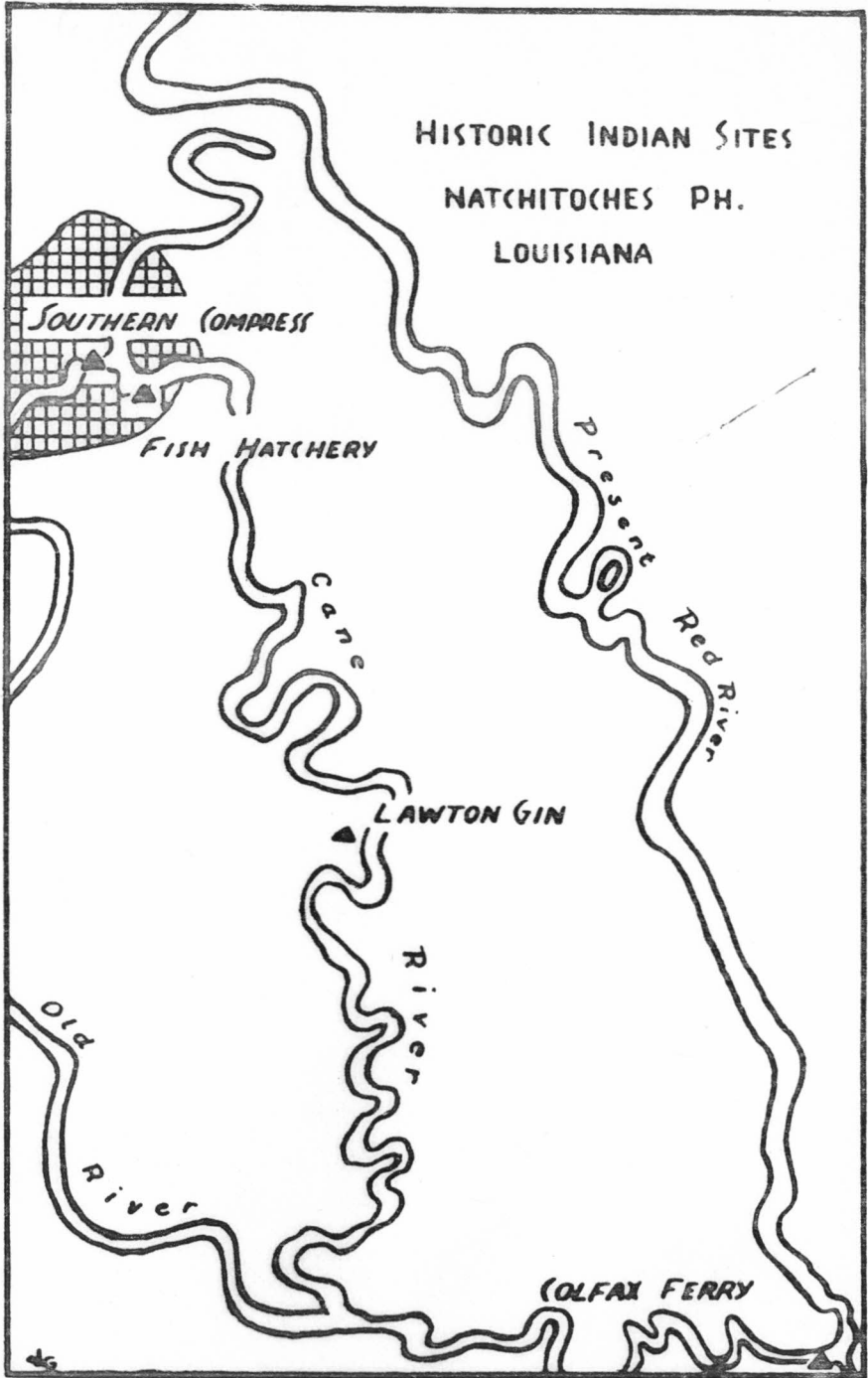
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where the Spanish established a counterpost only 12 miles west of the French at Natchitoches, in 1717 (Swanton 1942). The Adai tribe of Caddo Indians lived here and at the nearby ~~Los~~ Los ~~Adaes~~ Mission from this date until shortly before 1805, whence they moved 20 miles northward to a site located by Sibley (1832) as Lake Macdon. Their trade contacts at Los ~~Adaes~~ were both Spanish and French, between whom friendly relations generally existed. There is evidence (Swanton 1942) that throughout most of this period the Spanish posts and missions among the Hasinai in East Texas and at Los Adaes were isolated from the Spanish government in Mexico and poorly supplied. Most of the trade goods in northwestern Louisiana and eastern Texas were supplied by French traders, even after cession of Louisiana to Spain in 1762.

The sixth site from which we have trade materials is in Lower Natchitoches Parish, on a chain of hills fronting the junction of Cane River and Red River at Colfax Ferry, about 30 miles southeast of Natchitoches (Map 1). The native pottery found with burials here, associated with a wealth of trade goods, included none of the distinctive Natchitoches ware and is undercoated. Official records (Louisiana State Land Office Archives: Indian Claims Papers) place the Pascagoula and possibly a few Biloxi Indians in several villages along these hills from 1787 until 1805-10, although unofficial accounts (Sanson, Emerick, Personal communication 1964) indicate that some remained until after 1820.

The objects described herein are from the Williamson Museum, Northwestern State College, in Natchitoches, The Louisiana State Exhibit Museum in Shreveport, and the private collections of the authors. Readers who recognize identities or similarities with beads from their areas are requested to correspond with us.

I. Southern Cotton Oil Compress Site, 16-Na-14, is immediately south of the town of Natchitoches, west of Cane River and in the angle between this stream and Old River (Chaplin's Lake) (Map 1). In 1946 workmen found two burials, with a small stone pipe, a polished stone problematical object, and two shell tempered pottery vessels, one plain, the other curvilinear incised. Through courtesy of Clarence Deblieux, Jr., further excavation by Webb with Monroe Dodd, Jr., Michael Beckman and Robert L. Scott cleared two additional burials, one of which had in association 3 shell tempered pottery vessels, two plain and one of type Natchitoches Engraved (Suhm and Jelks 1962), two iron bracelets, fabric, a brass or copper band and our present sample of 320 European trade beads. Presumably these are Natchitoches Indian burials within the period 1714-1803 A.D.



Map 1. Location of sites on river channels.

Bead varieties from Southern Compress Site, total sample 320.

(1) Large white elongate or irregularly ovoid (7 specimens, Fig. 1,1). These are opaque beads, often called "porcelain" although they are of opaque white glass (Woodward, 1959). Length 14-17 mm., diameter 7-8 mm., perforation 2.5 mm. Shape varies from ovoid to subcylindrical to egg or peanut shape, with irregular rounded or protruding ends. Minute air holes in ends, seldom on outer surface.

(2) Large white elongate ovals (9 specimens, Fig. 1,3). Similar in finish to the above, porcelain-looking, of opaque white glass. Distinctive football-like pointed oval outline, the ends barely larger than the perforation. Length 10-13 mm., diameter 6-7 mm., perforation 2-2.5 mm.

(3) Medium white oblate-spheroidal (23 specimens, Fig. 1,5). Compact shiny white opaque beads, barrel-shaped to globular with flat ends, surface appearance like above, but air bubbles less often seen. Length 5-6 mm., diameter 6.5-7.5 mm., perforation 1.7-2 mm.

(4) Smaller white oblate-spheroidal (9 specimens, Fig. 1,6). Similar to (3) in shape and finish, barrel to doughnut, flat ends. Length 3.5-5 mm., diameter 5.5-6.5 mm., perforation 1.5 mm.

(5) Very small white oblate-spheroidal (42 specimens, Fig. 1,7). Also opaque white beads, doughnut shaped, with rougher surface and less compact than (3) or (4) above, often showing absorbed and grayish areas. Length 2-2.3 mm., diameter 4-4.5 mm., perforation 1.5 mm.

(6) Large white oblate-spheroidal, faceted (1 specimen, Fig. 1,10). This is the largest bead from these sites, 12.5 mm. long and 14 mm. in diameter, with 4 mm. perforation. Dull opaque white surfaces with numerous air-bubble pits; transverse striations suggest that the glass might have been "wire-wrapped" around a mandrel in the process of manufacture (Murray, 1964). Ends are irregularly square and concave; facets are flat to depressed, probably pressed rather than ground. Eight facets and the ends produce a decahedral shape.

(7) Colorless elongate-spheroidal (3 specimens, Fig. 1, 11). Transparent glass ovoid or football shaped beads, large and showing moderate wear. Lengths 11-14 mm., diameters 7.5-8 mm., perforation 2 mm.

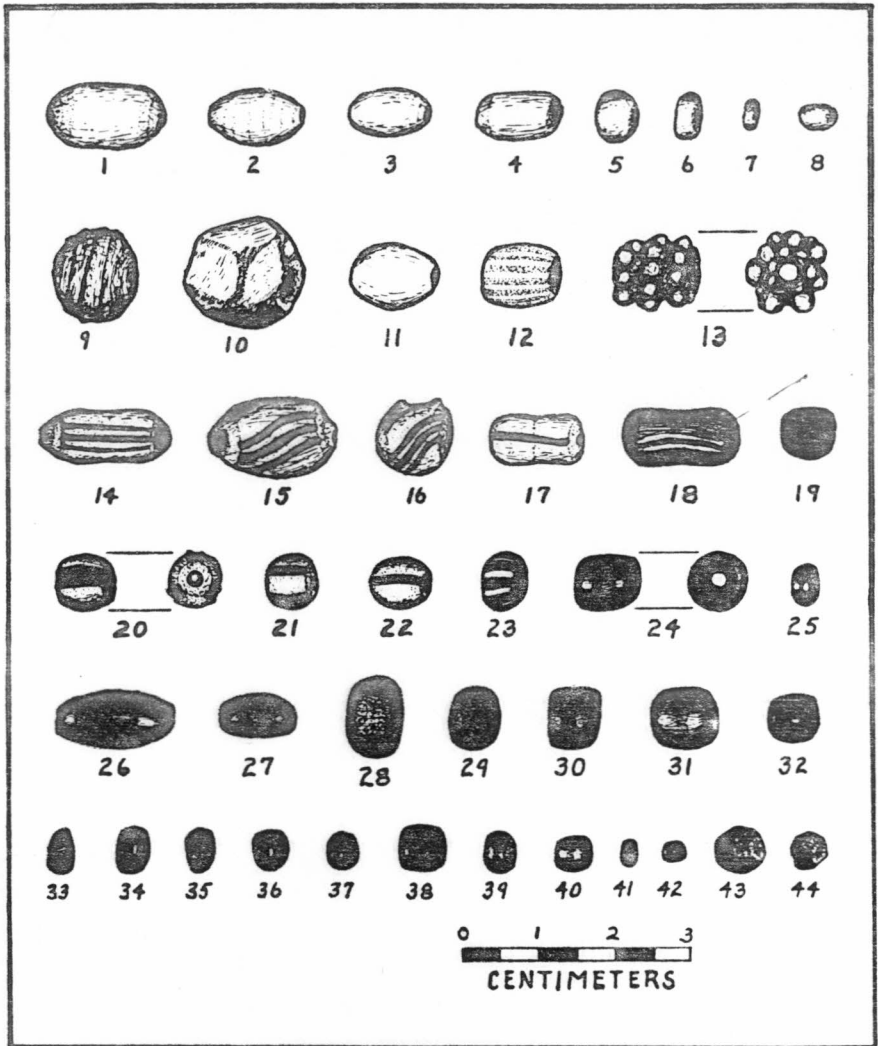


Fig. 1. Trade beads from presumed Natchitoches Indian sites. Nos. 1-8, opaque white (No. 2 is mandrel wound). 9-13, unusual varieties. 14-23, white and blue with stripes. 24-25, Cornaline d'Aleppo. 26-33, 38-42, various shades of blue. 34-37, blue-green. 43-44, ruby red faceted. Sources: Southern Compress, Nos. 1-3, 10, 11, 13, 21-25, 34-37, 43, 44. Fish Hatchery, Nos. 4, 6, 7, 9, 14-17, 28. Lawton, Nos. 5, 12, 18-20, 29-33, 38-40, 42. Wilkinson, Nos. 8, 26, 27, 41.

(8) Colorless knobby or "raspberry" shaped (13 specimens, Fig. 1,13). Made of clear glass, with three rows of projecting knobs encircling the outside. Length 9-10 mm., diameters 10 mm., perforation 3 mm. Probably made by wrapping around a mandrel, folding to produce the knobs. Moderate white patina.

(9) Medium white oblate-spheroidal with red and green stripes (72 large and 18 small specimens, Fig. 1,20). Subglobular or barrel shaped complex beads (Duffield and Jelks, 1961, pp 48-50) with flat ends, made of opaque dull white glass, into the surface of which are pressed 3 groups of 3 longitudinal rods; in each group the two lateral rods, projecting above the surface, are salmon red, the central rod pale green. Two sizes, the larger 6-7 mm. long, 7.5-8 mm. diameter, with 2 mm. perforation; the smaller 4-5 mm. long, 5.5-6.5 mm. diameter, with 1.5 mm. perforation.

(10) As above, with single red and green stripes (1 specimen, Fig. 1,21). This is a variant of (9), 6.5 mm. long and 7.5 mm. diameter, white opaque with two opposed single salmon red stripes, and 4 green stripes, 2 between the reds on each side. The red rods are elevated, the green flush with the surface.

(11) As above, with single green, blue and brown rods, (1 specimen, Fig. 1,22) one of each impressed longitudinally into the white bead. Length 8 mm., diameter 7 mm., perforation 1.7 mm.

(12) Blue oblate-spheroidal with white stripes (1 specimen, Fig. 1,23). Doughnut-shaped bead with rounded edges and flattened ends, 5 mm. length and 7.5 mm. diameter, perforation 2.5 mm. Deep blue glossy translucent glass with 8 white rods inset at equal distance, longitudinally, flush with the surface and curving over the ends.

(13) Red oblate-spheroidal, dark green core (20 large, 61 small, Fig. 1,24 and 25). Typical Cornaline d'Aleppo beads (Woodward 1959) in two sizes, the larger 5.5-7 mm. long, 6-7 mm. diameter, with perforation 1.8 to 2 mm.; the smaller 2.5-3 mm. long, 4-4.5 mm. diameter, with perforation 1 mm. barrel shaped, with flat ends. The core is dark green, but on transillumination is translucent; the red outer layer is opaque. Colors are well preserved, except for white patina on some specimens.

(14) Blue elongate-spheroidal (5 specimens, Fig. 1,27). Deep blue, translucent, long oval beads which retain their colors well except for moderate patina on some. Lengths

9-11., diameters 5-7 mm., perforations 2 mm.; one exception is 7.5 mm. long. A few pits and air streaks may be seen.

(15) Small "robin's egg" blue oblate-spheroidal (1 specimen, same shape as Fig. 1,37). Small barrel-shaped bead, length 3 mm., diameter 4.5 mm., perforation 1 mm. light blue with heavy white patina.

(16) Green oblate-spheroidal, small (6 larger specimens, 8 smaller size, Fig. 1, 35,37). Small, shiny, opaque green doughnuts in two sizes: 3-3.5 mm. long, 6 mm. diameter, with perforation 1-1.3 mm.; and 2.5 mm. long, 4 mm. diameter, with 1 mm. perforation. Occasional specimen is bluish green.

(17) Green or blue-green oblate-spheroidal, translucent (larger size 6 specimens, smaller size 12 specimens, Fig. 1, 34,36). Better made than (16), barrel or doughnut shaped with flat ends, the smaller ones having a lighter green color, the larger a darker blue-green. Sizes of larger: length 4-5 mm., diameter 5.5-6.5 mm., perforation 1-1.3 mm.; the smaller: length 4-4.5 mm. diameter 5-6 mm., perforation 1-1.3 mm.

(18) Ruby red oblate faceted (1 specimen, Fig. 1,43). Intensely red translucent bead with heavy white patina; breaks easily and the glass seems grainy, not well fused. Length 5 mm., diameter 6 mm., perforation 2.5 mm. ends flat, five-sided, with 10 facets on the surface, hence dodecahedral in shape.

II The Fish Hatchery site at Natchitoches was first investigated in 1916 by the late Professor George Williamson. Later Winslow Walker (1935) reported burials with pottery and trade goods. In the collections at Northwestern State College are beads, knife blades, and a brass bracelet wrought from a musket butt plate. The plate bracelet dates approximately 1725 (R.K. Harris, personal communication 1964) Shell tempered pottery included Natchitoches Engraved and Keno Trailed (Suhm and Jelks 1962). It may be assumed that these are Natchitoches Indian burials made early in the period of French contact.

Bead varieties from the Fish Hatchery Site (16-Na-9), Total Sample 668.

(1) White irregularly elongate-spheroidal opaque (142 specimens, Fig. 1,1). This bead ranges 10-15 mm. length, 6-8 mm. diameter, the perforation 2 mm. Often has central compression, peanut-shaped. Identical with beads at the Southern Compress and Lawton sites.

(2) White elongate-spheroidal opaque (39 specimens, Fig. 1,4). Remarkably uniform in shape, color and size, 10-14 mm. in length, 7 mm. in diameter, perforation 1.5-2 mm. They have much in common with the white elongate-spheroidal beads: faint grooves at ends, bubbles, and longitudinal air streaks.

(3) White oblate-spheroidal opaque (globular) (95 specimens, Fig. 1,5). Globular beads, also very uniform. They show air bubbles, streaks and end grooves. Length 7 mm., diameter 7 mm., perforation 1.5 mm.

(4) White oblate-spheroidal opaque (doughnut) (148 specimens, Fig. 1,6). The dominant variety in the Williamson collection from this site. No burial data are catalogued with these beads, but they are so consistent in morphology, that they are easily segregated into "strings." Length 4-5 mm. diameter 5-7 mm., perforation 1.5-2 mm. The ends are incurving toward the perforation. They appear to have a lighter glass outer layer around an opaque white core and may be compound beads (Duffield and Jelks, 1961). Streaks and bubbles were left by air. Perhaps all of these white opaque beads were manufactured by almost identical methods.

(5) White oblate-spheroidal opaque (small globular), (16 specimens, Fig. 1,5). Identical to the white globular bead (No.3) except for smaller size. They are 4-5 mm. long, 4.5-5 mm. wide and have 1.5 mm. perforations. It is not infrequent, in any of these collections from Natchitoches Parish, to find a range in sizes of beads of similar colors and shapes. Whether this indicates different varieties or is merely the result of inconsistency in manufacture is presently uncertain.

(6) White seed, opaque (doughnut), (12 specimens, Fig. 1,7). These tiny beads are 2-2.5 mm. long, 3.5 mm. wide, with 1.5 mm. perforation. Otherwise their characteristics are as in the larger beads. The paucity of these "seed" beads and the smaller globular beads may indicate either that they were rarely used at this period at Natchitoches, or that recovery techniques were faulty. We have no indication of field methods. However, had these seed beads been abundant it would seem that more would have been present in the available collections.

(7) White (milky) spheroidal-translucent, (34 specimens, Fig. 1,9). This variety exhibits a spun or spiralled appearance on interior and exterior, indicating that they were "wire-wrapped" about a steel mandrel. One specimen was elongate, all others spheroidal. Length 8-12 mm., diameter 10-13 mm., perforation 3-4 mm. Most of these beads have a

heavy white patina.

(8) White elongate - spheroidal opaque (60 specimens, Fig. 1,2). These oval beads, also exhibiting the spirals of "wire-wrapped" beads, are composed of a dull core, spiralled, and a white, shiny, glazed. exterior. Length 11-11.5 mm., diameter 6-7 mm. One exceptional specimen is 30 mm. long by 10 mm. wide. Perforation 2 mm.

(9) Blue elongate-spheroidal translucent (3 specimens, Fig. 1,27). Taper to very thin edges on the ends and are translucent. The surfaces are badly pitted. Identical sizes: 10 mm. long, 6.5 mm. diameter, perforations 2.5 mm.

(10) Greenish-blue elongate-spheroidal opaque (2 specimens, also similar to Fig. 1,27). Similar in shape and manufacture to the blue elongate-spheroidals, except that the green-blue are opaque, not translucent. Length 9 mm., diameter 6 mm., perforations 2 mm.

(11) Blue oblate-spheroidal (doughnut), translucent (3-specimens, Fig. 1,28). Dark blue, with heavy silver patina in rough places. Surfaces streaked with longitudinal line and/or air bubbles. Length 6 mm., diameter 8.5 mm., perforation 3 mm.

(12) Colorless, white striped spheroidal transparent (2 specimens, Fig. 1,12). Referred to in the trade lists as "Gooseberry Beads." Each has 14 longitudinal white rods set in clear glass. Length 6.5 mm., diameter 7 mm., perforation 1.5 mm.

(13) White joined with blue rods elongate-spheroidal (32 specimens, Fig. 1,17). Made by impressing four single longitudinal blue glass rods into an opaque white glass matrix. Length 10-12 mm., diameter 5-6 mm., perforation 1.5 mm.

(14) White with spiralled blue rods elongate-spheroidal opaque (22 specimens, Fig. 1,15 and 16). This complex variety was formed by adding a pale blue veneer to a bluish glass core and then inlaying three groups of 3 dark blue rods each in the veneer. These lines spiral across the slick surface of the bead. One example (Fig. 1,16) is an odd shape. Length 15-19 mm., diameter 8-10 mm., uniformly 2 mm. perforations.

(15) Blue-white elongate-spheroidal with blue rods opaque (57 specimens, Fig. 1,14). Formed as were the above blue-white variety, except that the inlaid glass rod sets

were longitudinal. Length 10-18 mm., diameter 7-8 mm., perforation 2 mm.

(16) Ruby red faceted (fragment) - (1 specimen, similar to Fig. 1,44). Interior bright red glass, exterior heavily pitted with red-gray patina.

III. Lawton Site, 16-NA-13, is on the A.G. Lawton Plantation, on the west bank of Cane River, 7 miles southeast of Natchitoches (Map 1). Burials were uncovered in July, 1944, during excavation by Mr. Lawton for construction of a cotton gin foundation, and subsequently, through his courtesy, 3 additional burials were excavated and reported by Webb (1945). There were eight native pottery vessels, all shell tempered, of which 3 were Natchitoches Engraved type, two Keno Trailed, 1 untyped incised and two plain. 3 sets of beads with Burials, a total of 56, were available for our study.

Bead varieties from Lawton Plantation, total sample 56.

(1) White elongate spheroidal (1 specimen, Fig. 1). Similar to Southern Compress (1), an opaque white peanut-shaped bead, 12 mm. long, 6.5 mm. diameter, perforation 2mm. Dull streaked surfaces, minute air holes at ends.

(2) White elongate-spheroidal (2 specimens, Fig. 1,4). Opaque dull white beads, barrel-shaped, smaller size than most of the white barrels. One is 8 mm. long, 6.5 mm. diameter; the other 5.5 mm. long and 6 mm. diameter; perforations 1.5 mm. Rings of air bubbles at ends.

(3) White globular or spheroidal (1 specimen, Fig. 1,5). Opaque white glass, smooth surfaces, better finish than above opaque white beads. Length 6 mm., diameter 7 mm., perforation 1.5 mm.

(4) Colorless elongate spheroidal (1 specimen, Fig. 1, 11). Clear glass long oval, football shaped, 13 mm. long, 7 mm. diameter, 1.7 mm. perforation. Thin cloudy patina.

(5) Transparent oblate-spheroidal with white stripes (1 specimen, Fig. 1,12). Well constructed barrel-shaped bead of clear glass with 14 thin longitudinal white stripes, so-called "Gooseberry" bead. Length 9 mm., diameter 9 mm., perforation 1.3 mm.

(16) Blue oblate-spheroidal with red and white stripes (1 specimen, Fig. 1,18). Elongate, peanut-shaped opaque complex bead with rounded ends, almost dumbbell shape. Three

sets of three longitudinal rods inset in the outer blue matrix but projecting slightly above the surface. In each set, the central rod is bright red, the lateral rods white or faded green. Blue surfaces are paled by white patina. Length 15 mm., diameter 6.5 mm., perforation 2 mm.

(7) Dark blue oblate-spheroidal with red and white stripes (3 specimens, Fig. 1,19). Almost globular barrel-shaped bead with flat ends, well made, 6 mm. long, 6 mm. diameter, 1.5-2 mm. perforation. Navy blue color, two opaque, one translucent. 3 sets of 3 rods, red and white as in (6); the red rods are level with the blue surface, the lateral white rods depressed. Few pits.

(8) White oblate-spheroidal with red and green stripes (2 specimens, Fig. 1,20). Identical with Southern Compress #9. Length 8 mm., diameter 8 mm., perforation 2 mm.

(9) Blue elongate-spheroidal (2 specimens, shape similar to Fig. 1,17). These are irregular, peanut or "joined" shape, with considerable patination. One is darker blue, 13 mm. long, 6.5 mm. diameter, 2.3 mm. perforation; the other is a lighter blue (near "robin's egg" but almost white from patination), 11 mm. long, 5.5 mm. perforation. Both are opaque and eroded.

(10) Red on dark green core, oblate-spheroidal (6 large, 10 small specimens, Fig. 1,24,25). These are typical opaque red on translucent green Cornaline d'Aleppo beads, identical with those described under Southern Compress Site, #13.

(11) Blue elongate-spheroidal (2 specimens, Fig. 1,27). Long oval beads similar to Southern Compress Bead #14. One is darker blue, translucent, 8.5 mm. long, 6 mm. diameter, with 2.5 mm. perforation. The other is lighter, almost opaque, has numerous longitudinal air streaks, and has a smaller perforation than others of the oval blue beads, 1.3 mm. length. Length 9 mm., diameter 6.5 mm.

(12) Blue oblate-spheroidal (1 specimen, Fig. 1,29). Large navy blue bead, opaque, doughnut shaped with mildly concave ends. Well made, glossy surface with no air streaks or pits. Length 6.5 mm., diameter 9 mm., perforation 2.3 mm.

(13) Blue to blue-green oblate-spheroidal (4 specimens, Fig. 1,30). Moderately large beads, varying shades of blue to blue green (1 dark blue, 2 light blue, 1 blue green), all translucent, barrel-shaped with flat ends, sometimes cut at an angle. Some pitting and wear but interior seems well fused with no air streaks. Length 6.5 mm., diameter 8 mm.,

perforation 2-2.5 mm.

(14) Blue oblate-spheroidal (2 specimens, Fig. 1,31). Similar to above, but ends rounded, is a china-blue color, opaque. Air streaks on the surface and pits at ends give roughened appearance. Length 6.5-7.5 mm., diameter 8 mm., perforation 2.5 mm.

(15) Smaller blue oblate-spheroidal (5 specimens, Fig. 1,32). Medium sized barrel-shaped bead, flat ends, shade of blue between #14 and #13. Length 5-6 mm., diameter 6-6.5 mm., perforation 2 mm. Surface is dull, with air streaks and white patina.

(16) Small "robin's egg" blue oblate-spheroidal (4 specimens, Fig. 1,33). Light blue, doughnut shaped, translucent beads, often irregular in shape, perforations off-center, considerable white patina and surfaces pitted and eroded. Length 3-3.5 mm., diameter 5 mm., perforation 1.5-2 mm.

(17) Blue-black oblate-spheroidal (1 specimen, Fig. 1, 38). Well made opaque barrel-shaped bead, medium size, flat ends, few air pits. Length 6 mm., diameter 7.5 mm., perforation 1.5 mm.

(18) Smaller blue oblate-spheroidal (2 specimens, Fig. 1,39). Translucent light blue doughnut with flat ends, well made, with moderate pitting of surface and ends. Length 4-5 mm., diameter 6.5-7mm., perforation 2 mm.

(19) Light blue oblate-spheroidal (1 specimen, Fig. 1, 40). Well made, small shiny translucent sky-blue barrel. Longitudinal air streaks and rough air pits on ends. Length 4 mm., diameter 4 mm., perforation 2 mm.

(20) Tiny blue oblate-spheroidal (2 specimens, Fig. 1, 42). Sky-blue translucent barrel-shaped "seed" bead, nicely made. Length 2 mm., diameter 2.5 mm., perforation 1 mm.

(21) Ruby red faceted (2 specimens, Fig. 1, 43,44) . Medium and small faceted beads, made of grainy ruby red glass which has a heavy white or gray patina. Larger is 6 mm. long, 6 mm. diameter, 1.7 mm. perforation; the smaller 4 mm. long, 5 mm. diameter, 2 mm. perforation. Ends are 5-sided, 10 facets on body, hence dodecahedral shape.

IV. Wilkinson Site, 16-NA-1. This is a village site on a small stream 20 miles northwest of Natchitoches. Surface sherd collections indicate two occupation periods, most

of the sherds being of Alto Focus affiliation but some of Late Natchitoches wares. One vessel of Natchitoches Engraved type was excavated with a burial, and European trade beads found on the surface of this and the adjoining hillside, 14 beads constituting our sample. This site is in the vicinity where the Natchitoches and Adai Indians are reported (Williams, 1964) to have moved between 1803 and 1805; they were probably gone by 1820.

Bead varieties from Wilkinson site, total sample 14.

(1) White elongate-spheroidal (1 specimen, Fig. 1,1). A large, irregular opaque white bead, elongated and constricted in the middle. Dull surface with some air streaks and pits at ends. Length 16 mm., diameter 8.5 mm., perforation 2 mm.

(2) White elongate-spheroidal (oval) (7 specimens, Fig. 1,3). Similar opaque white glass beads with dull surfaces, dark spots, fine air streaks and air pits at the ends. These often produce a circle around the ends suggesting double layered or compound beads, although they probably are simple in manufacture. Six are uniform size, 10-12 mm. long, 6-6.5 mm. diameter, perforations 1.5 mm. One is larger, 13 mm. long, 7.5 mm. diameter. Long ovals or football-shaped with pointed ends which are barely larger than the perforations.

(3) White spheroidal (1 specimen, Fig. 1,5). A similarly made opaque white bead, almost globular but nearer barrel-shaped, 8 mm. long, 7 mm. diameter, 2 mm. perforation. Air streaks along the surfaces and heavy air pitting at the ends.

(4) Small white elongate-spheroidal (1 specimen, Fig. 1,8). Small opaque white barrel, similar to (3) except in size. Length 5 mm., diameter 4 mm., perforation 1 mm.

(5) Blue-green elongate-spheroidal with red and white stripes (1 specimen, similar to Fig. 1,18 except in shape). Long oval complex bead, opaque, with glossy blue-green surface and core, having 3 sets of longitudinal stripes, the central red, the laterals white, as described for Lawton #6. The colors are well preserved, the stripes are wavy, and the rods are flush with the surface.

(6) Blue elongate-spheroidal (2 specimens, Fig. 1,26, 27). Translucent blue glass beads, long oval or football-shaped, varying in size, the larger 15 mm. long, 7.5 mm. diameter and 2 mm. perforation; the smaller 10 mm. long, 6 mm. diameter, 2.5 mm. perforation. Both are asymmetrical.

(7) Blue oblate spheroidal "seed" bead (1 specimen, Fig. 1,41). Tiny light blue opaque doughnut-shaped bead, 1.5 mm. long, 3 mm. diameter, 1 mm. perforation.

V. The site of the Spanish Presidio and Mission located among the Adaes, 12 miles west of Natchitoches, is now a public park. Collections of European goods at the University of Texas indicate that the site included an additional area south of the present park. These sites occupy both sides of a narrow flood plain and sit on the crests and slopes of higher hills.

The collections discussed here are all from the park area, as the southern portion of the site is either obliterated or covered by a sawmill. The beads and other artifacts are in the collection of Gregory or that of R. King Harris of Dallas, Texas.

Indian pottery sherds are the most abundant artifacts and the midden exposures are filled with these. The dominant types are Emory Engraved (Harris, R.K., Unpublished Mss) and Natchitoches Engraved (Suhm and Jelks 1962). Nearly all sherds are shell tempered and most are extremely soft and eroded.

European artifacts contain both French and Spanish goods. Easily dated are French bottle necks (1725-30) and a brass button of the period 1700-1765 (Olsen 1963). Various majolica types of Mexican origin, especially a variety of blue on white with geometric and/or floral patterns, are common. Thin walled bottles and jars of blue-green blown glass are also of possible Mexican origin. Other objects include copper tinkles, a jews-harp, nails, spikes, gun parts and flints, lead shot (bird and rifle shot), lead bottle seals, pipestems of kaolin, "horse cult" bridle trappings, a stirrup, a gold saddle pommel mount (at Louisiana State University), a brass finger ring, a French military buckle, and sherds of olive jars and jug wares.

Bead varieties from the Los Adaes Site (16-NA-16), total sample 65.

(1) White elongate-spheroidal opaque (1 specimen, Fig. 2,1). Identical to those found at Lawton, Wilkinson, the Southern Compress, and the Fish Hatchery, where opaque white beads were one of the dominant varieties. The paucity of these beads at Los Adaes is notable. Dull porcelain-like white glass exhibiting faint longitudinal grooves and tiny air bubbles. Length 14 mm., diameter 6.5 mm., 2 mm. perforation.

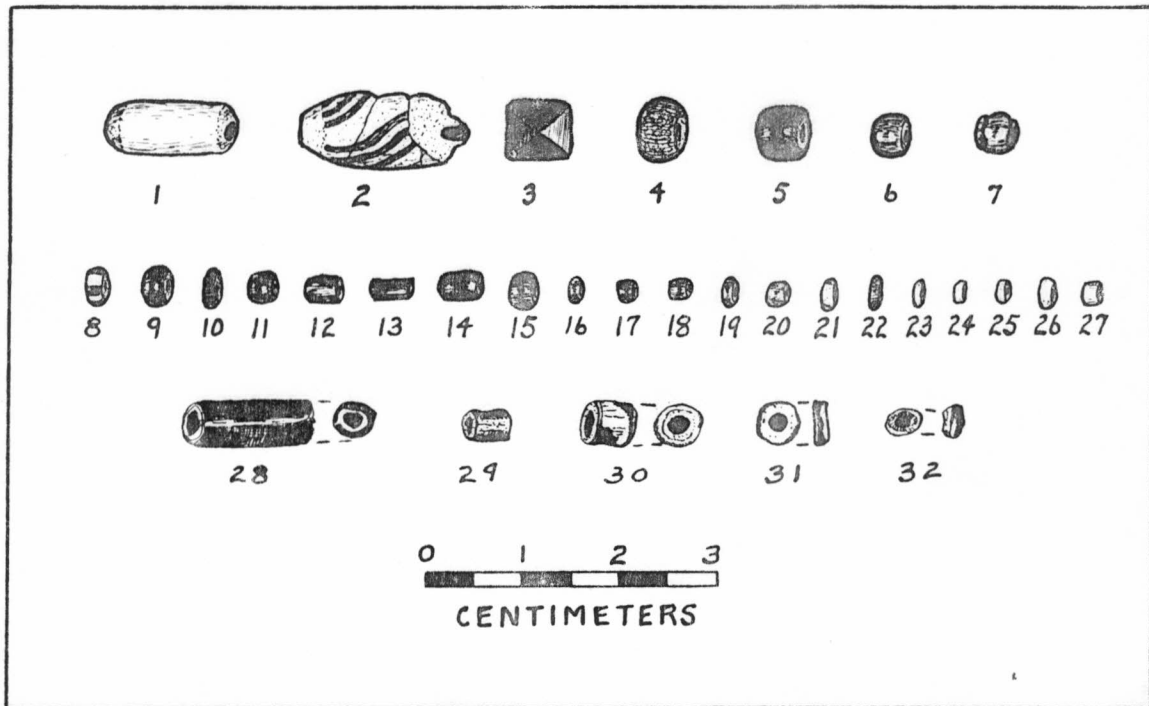


Fig. 2. Trade Beads from Los Adaes. No. 1, opaque white. 2, white with blue stripes. 3, black rosary bead. 4,5, blue. 6, Cornaline d'Aleppo. 7, amber twisted. 8, blue with white stripes. 9-11, black "seed". 12, amber faceted. 13,14, red, black tubular. 15-18, blue, black, red, blue-green. 19-21, blue, blue-green. 22, purple. 23,24, yellow, white discs. 24-27, blue, clear, yellow-white. 28, Cornaline d'Aleppo "bugle" tubular. 29-30, white tubular. 31,32, white, green "seed".

(2) White with spiralled blue rods elongate-spheroidal, opaque (1 specimen, Fig. 2,2). This complex bead was formed by adding a pale blue veneer to a bluish glass core and then ~~embedding~~ ^{embedding} three spiralling blue glass rods in the veneer. Length 17 mm., diameter 8 mm., 2 mm. perforation. Common at the Fish Hatchery Site (#14; Fig. 1,15,16).

(3) Black square jet bead - (1 specimen, Fig. 2,3). This bead has four diagonal perforations (1 mm. each). It is faceted on both faces which are 6.5 mm. by 6.5 mm. square. In all probability this is a rosary bead. It appears to be real jet as it is rather easily scratched.

(4) Blue oblate-spheroidal opaque (7 specimens, Fig. 2, 4). "Doughnut" shaped, greenish-blue with minute grooves and air bubbles. Four sizes of this bead occur at this site and, as they differ only in size, they are included in 1 variety. Sizes are: 7 mm. long, 9 mm. wide, 2 mm. perforation; 4 mm. long, 8.5 mm. wide, 2 mm. perforation; 2 mm. long, 5 mm. wide, 1.3 mm. perforation; and 2 mm. long, 2 mm. wide, 1 mm. perforation ("seed" bead).

(5) Blue oblate-spheroidal translucent (1 specimen, Fig. 2,5). Dark blue bead with a few streaks and air bubbles, but is rather unblemished to the naked eye. Barrel-shaped, 5mm. long, 6 mm. diameter, 2.5 mm. perforation.

(6) Opaque red on translucent green or white oblate spheroid (10 specimens, Fig. 2,6). Cornaline d'Aleppo beads. A vivid red exterior veneer is overlaid upon a core of dark green translucent glass. In later beads the core may be white, clear or yellow (Woodward 1959). Of the Los Adaes sample only one bead has a clear glass core. Closely related to those found at Lawton and Southern Compress sites, except a tendency to smaller size in the Los Adaes sample. Two sizes; 3.5 mm. long by 5 mm. wide, 2 mm. perforation; 2.5 mm. long by 2 mm. wide, 1 mm. perforation.

(7) Purple-amber twisted, wear faceted (3 specimens, Fig. 2,7). These small beads exhibit a peculiar spiralled appearance and seem to have been formed by stamping the spiralled bead into shape. 3.5 mm. in length and diameter, 1.5 mm. perforation. Facets appear as if by rubbing one bead upon another.

(8) Translucent blue oblate-spheroid "seed" with white stripes (1 specimen, Fig. 2,8). This little complex form is related to #12 from Southern Compress (Fig. 1,23). The Los Adaes specimen is 2 mm. long, 3.5 mm. diameter, with 1 mm. perforation.

(9) Black oblate-spheroidal opaque "seed" - (6 specimens, Fig. 2,9-11,16). These tiny black doughnut and barrel-shaped beads range from 1 mm. to 2.5 mm. long, and 2.5 to 3 mm. diameter, 1 mm. perforations. Identical to Colfax Ferry #25 (Fig. 3, 28-31).

(10) Purple rectangular, beveled, translucent "seed" - (1 specimen, Fig. 2,12). This little bead has square ends with 8 beveled faces, all highly polished. Similar beveled beads are numerous at the Colfax Ferry Site. Length 3 mm., diameter 2 mm., perforation 1.5 mm.

(11) Dark red tubular translucent "seed" - (1 specimen, Fig. 2,13). This small tube, 4 mm. long; 2 mm. wide, with a 1 mm. perforation, was made by simply snapping a hollow tube of drawn glass. Fine streaks, resulting from the "drawing" of the tube, are visible upon magnification. The ends are still sharp from the breaking.

(12) Purple-black oblate spheroidal, opaque - (3 specimens, Fig. 2,14). Smooth shiny surface and is tubular to rounded barrel in shape. 3 mm. long, 2.5 mm. wide, 1 mm. perforation.

(13) Blue "seed" oblate-spheroidal translucent (1 specimen, Fig. 2,15). This bead differs from #5 only in smaller size and lighter color. It has rather severe pitting on the surfaces. 2 mm. long, 3.5 mm. diameter, 1 mm. perforation.

(14) Red oblate-spheroidal translucent "seed" - (2 specimens, Fig. 2,17). These beads reflect light easily and have a slightly granular surface. Length 1.5 mm., diameter 2 mm., perforation 1 mm. Duplicated at the Colfax Ferry site.

(15) Blue-green "seed" translucent - (1 specimen, Fig. 2,18). This barrel-shaped bead appears to have been originally tubular with the ends slightly rounded while the tube was still molten. Length 1.5 mm., diameter 2 mm., perforation 1.3 mm.

(16) Blue oblate-spheroidal, translucent (1 specimen, Fig. 2,19). These tiny doughnut-shaped seeds were separated because of their shiny, clear blue color. 1 mm. length, 2.5 mm. width, 1 mm. perforation.

(17) Blue-green oblate-spheroid translucent (barrel-shaped) - (1 specimen, Fig. 2,20). This bead is damaged, but seems to be rather granular form. Length 1.7 mm., diameter 2.5 mm., perforation 1 mm.

(18) Blue "seed" oblate-spheroidal translucent - (3 specimens, Fig. 2,21). This is one variety of the tiny blue seed beads that were popular at Los Adaes. They are clear and with some darkening of the granular surface due to patina. Length 0.7 mm., diameter 2.8 mm., perforation 1 mm.

(19) Sky blue oblate-spheroidal opaque - (1 specimen, not illustrated, but similar to Fig. 2,18 in shape). This "seed" bead has a shiny surface with some very tiny air bubbles towards the perforation. 3 mm. long, 2 mm. wide, 1 mm. perforation.

(20) Blue-purple oblate-spheroidal, translucent (1 specimen, Fig. 2,22). Deep color, "seed" doughnut, smooth. Length 0.7 mm., diameter 2.8 mm., perforation 1 mm.

(21) Pale blue oblate-spheroidal "seed" opaque - (1 specimen, Fig. 2,25). This tiny bead has a grainy feel with a number of minute pits. 1 mm. long, 2.5 mm. wide, 1 mm. perforation.

(22) Yellow or white thin disc "seed" - (2 specimens, Fig. 2,23,24). Very thin translucent granular wafers, 0.5 mm. long, 1.8-2 mm. wide, 1 mm. perforations.

(23) Translucent colorless oblate-spheroid "seed" (doughnut) - (4 specimens, Fig. 2,26,27). Some of these beads patinate until they are a dirty whitish, quartz-like color, others are still colorless. Some variation, in size, length 1-1.5 mm., diameter 1.5-2.5, perforation about 1 mm.

(24) Opaque red on translucent green tubular - (1 specimen, Fig. 2,28). This is a broken "bugle" bead of typical Cornaline d'Aleppo form. Opaque bright red outer layer, dark green translucent core. Along one side a thin lateral streak shows the core. Similar to but larger than tubular Cornaline d'Aleppos from Colfax Ferry, which are so small as to be in the "seed bead" class. Length 12 mm., diameter 3 mm., perforation 1 mm.

(25) White tubular opaque "seed" - (1 specimen, Fig. 2, 29). This little bead is 3 mm. long, 2 mm. diameter with 1 mm. perforation. The surface is streaked and has air bubbles; granular texture.

(26) Clear white over opaque core tubular "seeds" (2 specimens, Fig. 2,30). These are white on white compound beads. The cores are gritty, full of tiny air holes; the exteriors are clear shiny white veneers. Length 4 mm., diameter 3 mm., perforation 1 mm.

(27) White oblate-spheroidal opaque "seed" - (5 specimens, Fig. 2,31). Clear white glass with smooth, shiny, surface. Length and diameter 2 mm., perforation 1.5 mm.

(28) Green oblate-spheroidal translucent "seed" (2 specimens, Fig. 2,32). Dark green color and a slightly cracked surface. 2 mm. long, 1.5 mm. diameter, 1 mm. perforation.

VI. Colfax Ferry site, 16-Na-15, 30 miles southeast of Natchitoches and slightly less distant from Alexandria, La., is on a hill fronting the junction of Cane River and Red River (Map 1). Burials were located in 1960 by Mitchell Smith, of Hessmer, La., and subsequently excavated by Smith, Webb and several friends. 24 burials or artifact deposits assumed to be burials were found. The artifact inventory included undecorated native pottery, European crockery, glass bottles, a variety of silver ornaments, gun flints and metal parts of flintlock guns, brass C- bracelets, bullet molds and round lead bullets, various iron tools, knives, spoons, scissors, nails, tripod pots, a long-handled skillet, clay pipes and pipestem beads. Identifiable French items are the tripod pots and amber wine bottles. A crockery plate bears the English stamp "Castleford pottery" and a saucer is stamped "Phillips-Longport". Silver ornaments show remains of Spanish coin imprints, including one which has the date 1803 or 1808; an 1820 American dime was found about 10 inches below the surface; the pipestems average perforation size of 4/64 inch, which indicates post 1780 dating (Binford, 1961; South, 1961). These items correspond well with the historic records which place the Pascagoula and possibly a few Biloxi Indians here from 1787 until 1805-10, possibly as late as 1820. The bead sample from the site, from 13 burials, totals approximately 42,000; about 700 of these are larger than "seed" bead size and presumably for necklaces, the remainder were found in layers or masses of 600 to over 6000 per burial and presumably were attached to garments or ornamental bands.

Bead varieties from Colfax Ferry site, total sample approximately 42,000.

(1) Large blue ovate-spheroidal with red and white stripes (4 specimens, Fig. 3,1). Barrel-shaped opaque bead of dark blue matrix with 5 sets of 3 rods each, the central a clear red and the laterals white. As shown on end view, this is a complex bead, with pale blue core and darker blue cortex into which the rods are set. Length 9 mm., diameter 7 mm., perforation 2 mm. One specimen has green instead of blue matrix.

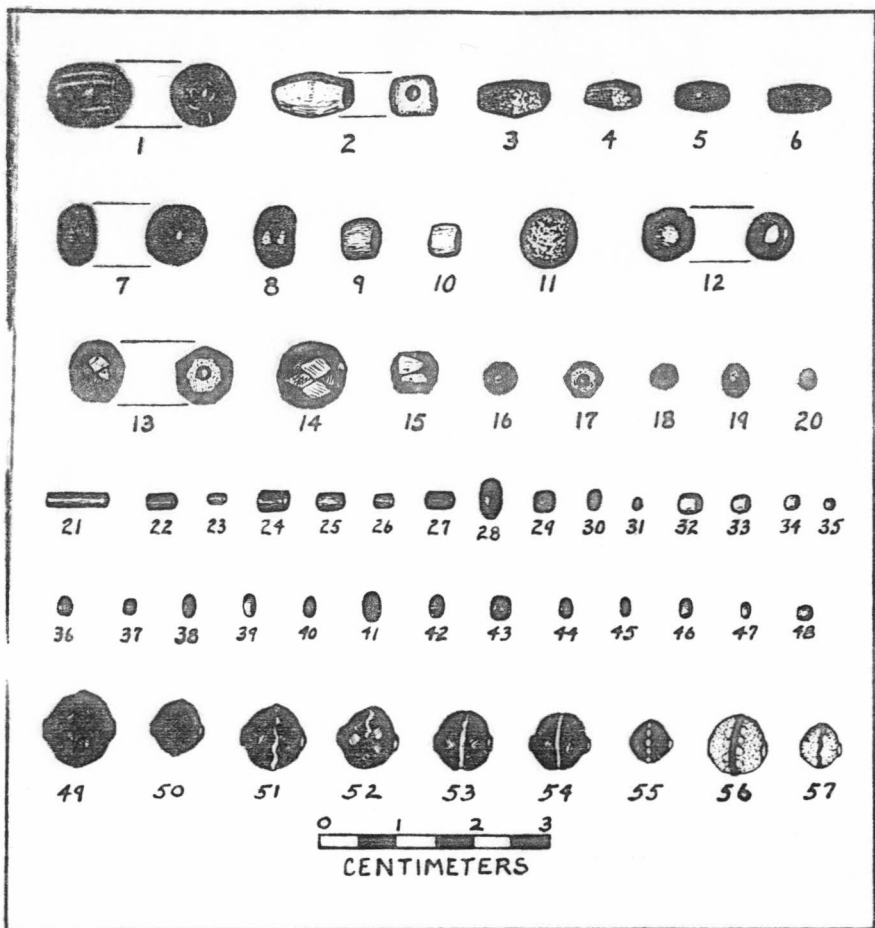


Fig. 3 Trade beads from Colfax Ferry. No. 1, blue with red, white stripes. 2, 3, 4, white, ruby red elongate faceted. 5, 6, black, gray ovals. 7, 8, black, blue doughnuts. 9, 10, yellow, colorless barrels. 11, ruby red globular. 12, amber twisted or helix. 13-20, faceted: purple, amber, colorless, dark red, green, blue, blue-green, tiny blue, black. 28-31, black "seed". 32-35, white. 36, 37, red "seed". 38, Cornaline d'Aleppo. 39, clear. 40, dull purple-black. 41-46, blues. 47, clear. 48, yellow. 49-57, blown, faceted shells: 49, 50, green with black equators; 51-55, red with white equators; 56, white with green intaglio equator.

(2) White elongate-spheroidal fluted (12 specimens, Fig. 3,2). Elongated, 4-sided opaque white bead with glossy surface, 8 flutes or facets. Spiral irregularities indicate manufacture of wrapping around a mandrel. Length 8-9 mm., diameter 6 mm., perforation 1.5 mm.

(3) Ruby red elongate-spheroidal, faceted or fluted (9 specimens, Fig. 3,3,4). Material similar to the ruby red faceted of other sites (fig. 1,43,44), translucent, with speckled white patina on surfaces. 4 sided, with 8 flutes or facets, similar to (2) above. Two sizes, the larger 8 mm. long, 4-5 mm. diameter; the smaller 5 mm. long, 3-4 mm. diameter; perforation 1.5 mm.

(4) Black elongate-spheroidal (225 specimens, Fig. 3,5). Medium size, shiny black opaque oval bead, with spirals which indicate solid wires of glass wrapped around a mandrel, then smoothed. Sizes uniform, 6 mm. long, 3.5 mm. diameter, 1.5 mm. perforation.

(5) Gray elongate-spheroidal (about 250 specimens, Fig. 3,6). Almost identical in shape and size to the shiny black ovals (#4), also probably mandrel-wound. Dark gray, grainy surfaces opaque. Length 7 mm., diameter 3.5 mm., perforation 1.7 mm.

(6) Large black ovate-spheroidal (73 specimens, Fig. 3, 7). Large, shiny opaque black doughnut, often irregular in outline. Ends concave. Length 3-4 mm., diameter 7 mm., perforation 2 mm.

(7) Blue ovate-spheroidal (1 specimen, Fig. 3,8). Translucent, well made, light blue, doughnut-shaped bead, with concave ends. Few pits and bubbles. Length 5 mm., diameter 7.5 mm., perforation 2 mm.

(8) Yellow ovate-spheroidal (23 specimens, Fig. 3,9). Dull yellow translucent barrel-shaped, medium size, very bubbly and streaked on surfaces. Ends flat. Length 3-4 mm., diameter 5 mm., perforation 2 mm.

(9) Colorless ovate-spheroidal (1 specimen, Fig. 3,10). Clear glass, medium size, transparent barrel-shaped bead, with flat ends. Few air bubbles. Length 4 mm., diameter 5 mm., perforation 2 mm.

(10) Ruby red globular (3 specimens, Fig. 3,11). Differs from the red faceted (#3) described above only in shape, which is globular with flattened ends. Sizes vary from 3.5 by 4 to 6 by 6.5 mm.; perforations 1.5 mm.

(11) Amber ovate-spheroidal, spiralled (31 specimens, Fig. 3,12). Medium size bead, amber translucent, spiralled or twisted with irregular ends. Length 5-7 mm., diameter 6-7 mm., perforation 3 mm.

(12) Large purple ovate-spheroidal, faceted (3 specimens, Fig. 3,13). Dark purple, almost black, translucent, with flat ends, cartwheel shape. Ground facets, large around the center, smaller triangular around the margins, a total of 28 facets; ends are heptagonal. Length 5-7 mm., diameter 7-8 mm., perforation 2.3 mm.

(13) Large amber ovate-spheroidal, faceted (2 specimens, Fig. 3,14). Large, well made, with smooth surfaces and ground facets, 24 in number. Half of these are diamond shaped, half triangular, on edges. Ends are mildly concave, hexagonal. Translucent. Length 7 mm., diameter 9 mm., perforation 2.5 mm.

(14) Colorless faceted, transparent (23 specimens, Fig. 3,15). Clear glass beads, flat ends with 5 or 6 angles; generally 18 facets. Length 5.5 mm., diameter 6 mm., perforation 1.5 mm.

(15) Small red faceted, translucent (94 specimens, Fig. 3,16,17). Glossy dark red, well ground facets, 18 in number, with hexagonal ends. Length 4-4.5 mm., diameter 4-4.5 mm., perforation 2 mm.

(16) Small rose faceted, translucent (32 specimens, Fig. 3,18). Delicate rose color, well made with ground facets, as in #15. Length 3 mm., diameter 3 mm., perforation 1.2mm.

(17) Dark red irregularly faceted (6500-7000 specimens, Fig. 3,19-20). Small, irregularly faceted, glittering translucent beads, mostly from a single burial. Two sizes: 2.5 mm. long, 3-3.5 mm. diameter, and a tiny which is 2x2.5 mm., perforations 1.3-2 mm.

(18) Red tubular with green core, small (150 specimens, Fig. 3,21). Cornaline d'Aleppo "bugle" beads, with opaque red surface layer, translucent green core. No stripes. Length 7-8 mm., diameter 2 mm., perforation 0.7 mm.

(19) Dark red tubular, (10 specimens, Fig. 3,22). Dark red polished translucent tube, ends smooth but often diagonal. Two sizes: Length 2.8 - 3.5 mm., diameter 2.5 mm., perforation 1 mm., and length 3-3.5, diameter 3.5, perforation 1.8 mm.

(20) Green tubular (6 specimens, Fig.,3,23). Tiny tubes, green translucent, sharply broken ends. Length 2.5 mm., diameter 2.3 mm., perforation 1 mm.

(21) Dark blue tubular (25 specimens, Fig. 3,24). Larger dark blue translucent tubes, with rounded ends, polished surfaces. Length 3-3.5 mm., diameter 3 mm., perforation 1.5 mm.

(22) Blue-green tubular (106 specimens, Fig. 3,25). Similar smooth tubes with rounded ends, translucent. Length 3-3.5, diameter 3.5 mm., perforation 1 mm.

(23) Tiny blue tubular (1 specimen, Fig. 3,26). Shiny translucent blue tube with rounded ends. Length 1.8 mm., diameter 2 mm., perforation 0.7 mm.

(24) Black tubular (4 specimens, Fig. 3,27). Larger shiny opaque black tubular with rounded, smooth ends. Length 3 mm., diameter 3 mm., perforation 1 mm.

(25) Black "seed" beads (23,000 or more specimens, Fig. 3,28-31). Small black opaque doughnut "seed" beads, most with smooth, shiny surfaces, irregular shapes in some, others quite symmetrical. Ends are flat to concave, no air bubbles seen. Some gradation in size, but largely fall into 4 categories as illustrated: tiny, length 1.5 mm., diameter 2 mm.; slightly larger, length 2 mm., diameter 3 mm.; next larger 2.5 mm. length, diameter 3.5 mm.; largest with length 2-2.5 mm., diameter 4.5 mm., perforations 1-1.2 mm.

(26) White "seed" beads, (approximately 2800 specimens, Fig. 3,32-35). Similar range of size to the black, not nearly so numerous, also opaque. Included are tiny doughnut to barrel shapes, some with dull white surfaces, others with glistening polished surface, lengths 1-1.5, diameters 1.5-1.8 mm., perforations 0.5-0.8 mm. (some requiring special needle to thread); medium sizes dull or shiny, barrel-shaped 2-2.5 mm., doughnut-shaped 1.5 long and 2.5 mm. diameter; larger, all with shiny surfaces, barrel-shaped 2.5-3 mm. long and 3.5 mm. diameter, and doughnut-shaped, 1.5-1.8 mm. long and 3-4 mm. diameter; perforations of the larger 0.7mm.

(27) Red "seed" beads (3300 or more specimens, Fig. 3, 36,37). Glossy translucent red seed beads in two sizes, also in barrel and doughnut shapes. Larger 2 mm. long, 3-3.5 mm. diameter, 1.5 mm. perforation; smaller 1-1.5 mm. long, 1.5-2 mm. diameter, 1 mm. perforation.

(28) Red on green "seed" bead (127 specimens, Fig. 3,38).

Tiny Cornaline d'Aleppo beads, doughnut-shaped, smooth, Cores are translucent, pale green; cortex opaque red. Length 2 mm., diameter 3.5 mm., perforation 1 mm.

(29) Colorless "seed" bead (8 specimens, Fig. 3,39). In the larger range of "seed" beads, transparent glass with some wear and bubbles on surface; ends flat; doughnut shaped. Length 2.5 mm., diameter 4 mm., perforation 1.3 mm.

(30) Pale blue "seed" bead (300-400 specimens each size, Fig. 3,42,46). Opaque pale blue, small and tiny sizes, surfaces shiny in the larger, dull in the smaller from patina. Sizes: 2 mm. long, 3 mm. diameter, with 1.5 mm. perforation; 1.7 mm. long, 2 mm. diameter, 1 mm. perforation.

(31) Blue translucent "seed" beads (900 or more specimens, 100-300 each size, Fig. 3,41,43,44,45). Varying shades of blue to blue-purple translucent small to tiny beads, doughnut and occasionally barrel-shaped, glossy. Generally graded into 4 sizes, lengths 1 to 2 mm., diameters 2 to 4 mm. perforations 1-1.5 mm.

(32) Tiny colorless "seed" beads (225 or more specimens, Fig. 3,47). Clear shiny glass beads, length 1.5 mm., diameter 1.8 mm., perforation 0.5-0.7 mm.

(33) Tiny yellow "seed" (445 specimens, Fig. 3,48). Slightly larger than above, opaque dull yellow, length 1.5-1.8, diameter 1.8 mm., perforation 0.8 mm.

Subsequent to presentation of this paper at the Historic Sites Conference, the discoverer of this site, Mitchell Smith, has found additional burials, containing trade objects, including a metal button datable at 1812-20 (Olsen 1963). European glass trade beads were with these, most of types described above but additionally including 266 purple faceted tubular seeds similar to Los Adaes #10 (Fig. 2,12), 13 green doughnut seeds, and one each of large and medium size blue and green translucent faceted. A new group of bead varieties was found, shown in Fig. 3,49-57. These are blown beads, thin walled and hollow, globular with protrusions at the ends. All have a patterned equatorial band which is usually slightly elevated, and are pressure faceted, the facets crossing or imposing on the central band which is usually slightly elevated, and are pressure faceted, the facets crossing or imposing on the central band diagonally. The larger beads have 10 facets on each side of the equation, with an equal number lateral to each, a total of 40 facets. The medium size and smaller have 7 to 8 facets on either side and the lateral facets may or may not be present.

(34) Green blown faceted with black band (35 specimens, Fig. 3,49,50). Aqua green beads with small patches of white patina; a black band encircles the center, 1.5 mm. wide in the larger, 1 mm. in the smaller, projecting slightly above the surface and apparently inset in an encircling trough. Facets as described above. Sizes: Length and diameter of larger 10 mm.; of smaller 6-7 mm.; perforations vary in size 1 to 2 mm.

(35) Red blown faceted with white/brown or white/black bands (2 specimens, Fig. 3,51,52). Blown and faceted glass shells as above, with equatorial bands slightly elevated, combining an undulating white line outlined with brown-black background; on one, half of the circumference has this combination, the remaining half has alternating diagonal white and brown lines (Fig. 3,52). Diameters 8.5-9 mm.; perforation 2 mm.

(36) Red blown faceted with white band (3 specimens, Fig. 3,53-55). Bright red translucent hollow shells with white equatorial bands inset in a trough as described above. White bands on two larger are straight (53,54) and depressed or intaglio. On the smaller are joined white ovals (55). Facets as noted above. Two sizes, 8 and 5 mm. diameters, 1.5 to 2 mm. perforations.

(37) White blown faceted with red band (1 specimen, Fig. 3,56). Thin blown shell with dull opaque white surface and red equatorial band. The facets are indistinct except on the equating band, 9 on each side. Diameter 8 mm.

(38) White blown faceted with intaglio green band (1 specimen, Fig. 3,57). Small white glass shell, blown and faceted as above, but facets very indistinct. Central band depressed and pale green. Diameter 5.5 mm.

Summary

Limitations of space and present experience do not justify extensive summarization; moreover, we prefer to compare these varieties with collections from elsewhere in the lower valley and other parts of the country before suggesting firmer types and making comparisons. Evident differences exist, however, between beads from the presumed Natchitoches Indian sites, Southern Compress, Fish Hatchery, Lawton and Wilkinson, and those from the Spanish dominated site, Los Adaes, and the late site of the French-American period, Colfax Ferry.

sites feature the simple opaque white beads (Fig. 1,1-8) in a variety of sizes and shapes, but predominantly large to medium; simple blue beads (Fig. 1,26-33,38-42) in a variety of shapes, sizes and shades of blue, more often translucent than opaque, with slightly smaller green and blue-green (Fig. 1, 34-37) from the Southern Compress site; and a variety of white or blue complex striped beads, generally opaque (Fig. 1,14-23), in the usual elongate, oval, barrel and globular shapes. The striped vary in distribution within the four sites: the large white or pale blue with longitudinal or curving dark blue stripes (Fig. 1,14-17) have appeared only at the Fish Hatchery (and Los Adaes), whereas the opaque white globular and barrel forms with salmon red and green stripes (Fig. 1,20-22) have been found only from Southern Compress and Lawton.

The famous and ubiquitous red on green Cornaline d'Aleppo beads (Fig. 1,24-25) are found in medium and small barrel shapes at Southern Compress and Lawton, but not at Fish Hatchery or Wilkinson. At Los Adaes the Cornaline d'Aleppos are small (Fig. 2,6) or tubular ("bugle"), Fig. 2, 28); at the late Colfax Ferry site, they appear in the tiny tubular (Fig. 3,21) and "seed" (Fig. 3,38) varieties.

Unusual and well known beads from the four Natchitoches Indian sites include the "gooseberry" bead (Fig. 1,12), one from Lawton and two from the Fish Hatchery; the group of knobby "raspberry" (Fig. 1,13) from Southern Compress; the single huge white faceted (Fig. 1,10) from this site; the milky white large sphericals (Fig. 1,9) from the Fish Hatchery; and the clear glass ovals (Fig. 1,11) from Lawton and Southern Compress.

Notable for scarcity or absence at these four sites are faceted beads, limited to two ruby red (Fig. 1,43,44) at Lawton, one each from Southern Compress and Fish Hatchery, and the large white "pressed" (Fig. 1,10) from Southern Compress; tubular beads; mandrel "wire" wound beads, limited to the large "milky-white" sphericals (Fig. 1,9) and the white ovals (Fig.1,2) from the Fish Hatchery; blown beads; pressed glass beads; intaglio or gold inlay beads; black, amber, yellow, pink, and brown colors. "Seed" garment beads are limited to 1 blue from Wilkinson, 3 blue from Lawton, 12 white from Fish Hatchery, and a larger assortment from the Southern Compress site, including 1 sky-blue, 8 green, 41 white ("pony beads") (DeJarnette and Hansen, 1960) and 61 small Cornaline d'Aleppo's. Most of these are in excess of 4 mm. in diameter, in comparison with the thousands from the late Colfax Ferry site which were 4 mm. or less in diameter.

The bead assemblage from these 4 Natchitoches Indian sites can be duplicated in most respects in the collections of French trade beads of the 1700's described by Quimby (1942, 1957) from the Bayou Goula and Angola sites in southern Louisiana, the Fatherland site at Natchez, Mississippi (all three on the lower Mississippi River) and Fort St. Joseph in Michigan. Quimby (1942) gives the occupation dates at Bayou Goula as 1699 to 1706 certainly and probably until 1758; at Natchez from 1699 to 1730; and at Ft. St. Joseph from 1700 to 1760. A similar variety of opaque whites, blue beads in various shapes and shades, blue-green, Cornaline d'Aleppo, and white with straight and curved blue rods, was described by Duffield and Jelks (1961) from the Pearson site on Sabine River in northeastern Texas, and these authors quote Woodward and Kidd to the effect that most of these beads are found on sites dating from mid- or late 1600's to 1750-75. Kidd dated the medium sized Cornaline d'Aleppo with opaque red surface and translucent green core about 1600-1725, the tubular Cornaline d'Aleppo at 1600-1775, and the white beads with blue stripes from sites in Alabama, Illinois, Georgia, Missouri, Michigan, Tennessee and New York in the 17th and 18th centuries.

From the Childersburg site in Alabama, DeJarnette and Hansen (1960) describe and date several varieties of beads identical with the Natchitoches beads. They include, with the authors' suggested dates: "gooseberry", 1700-1800; knobby "raspberry", 1730-1760; large "milky" white (Fig. 2,9), 1700-1800; large pressed faceted white (Fig. 1,10), 1700; blue stripes on white oval, 1600-1800; white transparent and blue translucent oval, 1775-1800; Cornaline d'Aleppo barrel, medium size, 1695-1825.

The bead varieties from Los Adaes and Colfax Ferry show considerable differences from the other four sites. Larger beads are less numerous and varied, while garment "seed" beads are frequent at Los Adaes and abundant (over 40,000) in the Colfax Ferry burials. Los Adaes has a carry-over of large white opaque, white with blue stripes, large blue doughnuts, and blue barrels. Cornaline d'Aleppos are small, tiny "seed" and tubular or "bugle beads" from both sites. Garment or "seed" beads include tubular, twisted, doughnut and barrel shapes in a wide variety of colors and sizes, with black, red, white and blue the most frequent in this order. There is one ground faceted bead from Los Adaes (Fig.2,12) but a variety of faceted in large and small sizes from Colfax Ferry, including amber, purple, ruby red, dark red, rose, blue, green, and clear. "Wire wrapped" or mandrel wound beads are more frequent, blown glass shells with facets and intaglio or equatorial bands are unique for these

sites, yellows are present in small numbers, elongate white and red fluted or faceted appear, and small black and gray long ovals are unique for the late period. It is surprising that the Los Adaes samples seem to be intermediate between the varieties at the French contact Natchitoches sites and the late Colfax Ferry site, since the time of occupation at Los Adaes was presumably identical with the former, but it is possible that the site has not been fully sampled and that only the latter part of the occupation is represented. The shift of varieties from the Natchitoches Indian sites of the 1700's and the Colfax Ferry site of the early 1800's is almost absolute. Although many bead varieties were made for long periods of time, it is probable that varieties available to traders may have been limited at any one time, also that different Indian groups had distinct preferences.

Some of the bead varieties from Colfax are duplicated from a burial at the Watson site in Fisher County, Texas, dated by Ray and Jelks (1964) at 1820-40. Ruby red ovals and mandrel-wrapped white opaque ovals in three sizes are quite similar, and "seed" beads (over 19,000) were white, amber, blue-green and blue. The trade beads in Fort Laramie National Historic Site (Murray 1964), totalling over 25,000 and thought to represent trade in Wyoming for the period 1834-1875, are comparable in some respects. Pressed faceted and blown shells, the latter including opaque white with raised equatorial belt, are represented. Mandrel-wound in a variety of colors, some faceted, include white opaque ovals, amber twisted, and deep red faceted elongate beads, similar to our Fig. 3,2,3,12. Small and tiny tubular, faceted, doughnut and barrel-shaped are in a variety of colors, similar to the sample from Colfax Ferry. However, the Cornaline d'Aleppo had changed to the late form with red translucent exterior and white opaque core.

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