

# DIAKHITÉ: A STUDY OF THE BEADS FROM AN 18TH-19TH-CENTURY BURIAL SITE IN SENEGAL, WEST AFRICA

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*It is the intention of this paper to place the Diakhité beads into a historical and archaeological perspective, and by so doing examine a period in Senegambian history that roughly extends from the 18th century to around the middle of the 19th century. The beads serve as a focal point to describe the trade that brought them from Europe and elsewhere to Senegambia. They also help portray some aspects of the lives of a particular ethnic group which inhabited the Thiès area during this period — the Serer Nones.*

## INTRODUCTION

The Diakhité sand pit is situated northeast of the relatively large town of Thiès, some 70 km east of Dakar, the coastal capital of Senegal, West Africa (Fig. 1). The "plateau" of Thiès disappears under sand formations in this area which represent the continuation of a vast system of dunes covering the whole area and extending north across the Senegal River into Mauritania.

In operation for the past fifty years or so, Diakhité came to the attention of archaeologists in 1941, when R. Mauny discovered archaeological material in a sand/clay level dating to the neolithic period, indicating that the site has been an important living area for man since prehistoric times (Lame 1982:2). Even today, individual garden plots thrive in the rich yet fragile soil once the overlying sand layer (which reaches over 5 m in depth where it is being excavated) is removed. Water is still plentiful and close to the soil's surface.

Within the last five years, workers at the sand pit have uncovered many thousands of beads, which they claim to find primarily in clay pots or near the shards of broken pots. Along with the glass, stone, amber and shell beads, they have also exposed numerous rings,

bracelets and earrings made of brass and copper. The workers also claim to have found skeletal remains that "fall apart" when touched, suggesting that the area once served as a burial ground.

The artifacts are situated about one meter below the surface where graves have been discovered. Unfortunately, we were unable to observe an untouched grave, and only two intact pots were recovered, one with its contents held in place by dried sand.

We were unable to observe and inventory all of the beads and other artifacts recovered from the site during numerous visits there from 1986-88. Aside from a small quantity of artifacts sold by the workers, we were able to inventory everything the men pulled from the sand pit. We feel confident that the types and quantities of artifacts reported in this study are accurate enough to provide a valid representation of the beads and other adornments worn in past centuries by the indigenous population.

## THE STATE OF TRADE

The perception of trade in "gewgaws" to precolonial Africa is similar to that long held for North America during the same period in that it conjures up an image of the noble savage duped by European powers into accepting cheap or dangerous wares such as beads, liquor and firearms in exchange for articles of noteworthy value in their own countries (Curtin 1975: 309). Despite the fact that this notion is not altogether inappropriate, the state of trade prior to the colonization of Senegal by the French in the mid-19th century was much more sophisticated than this simplified idea suggests. In fact, to a very large extent it was

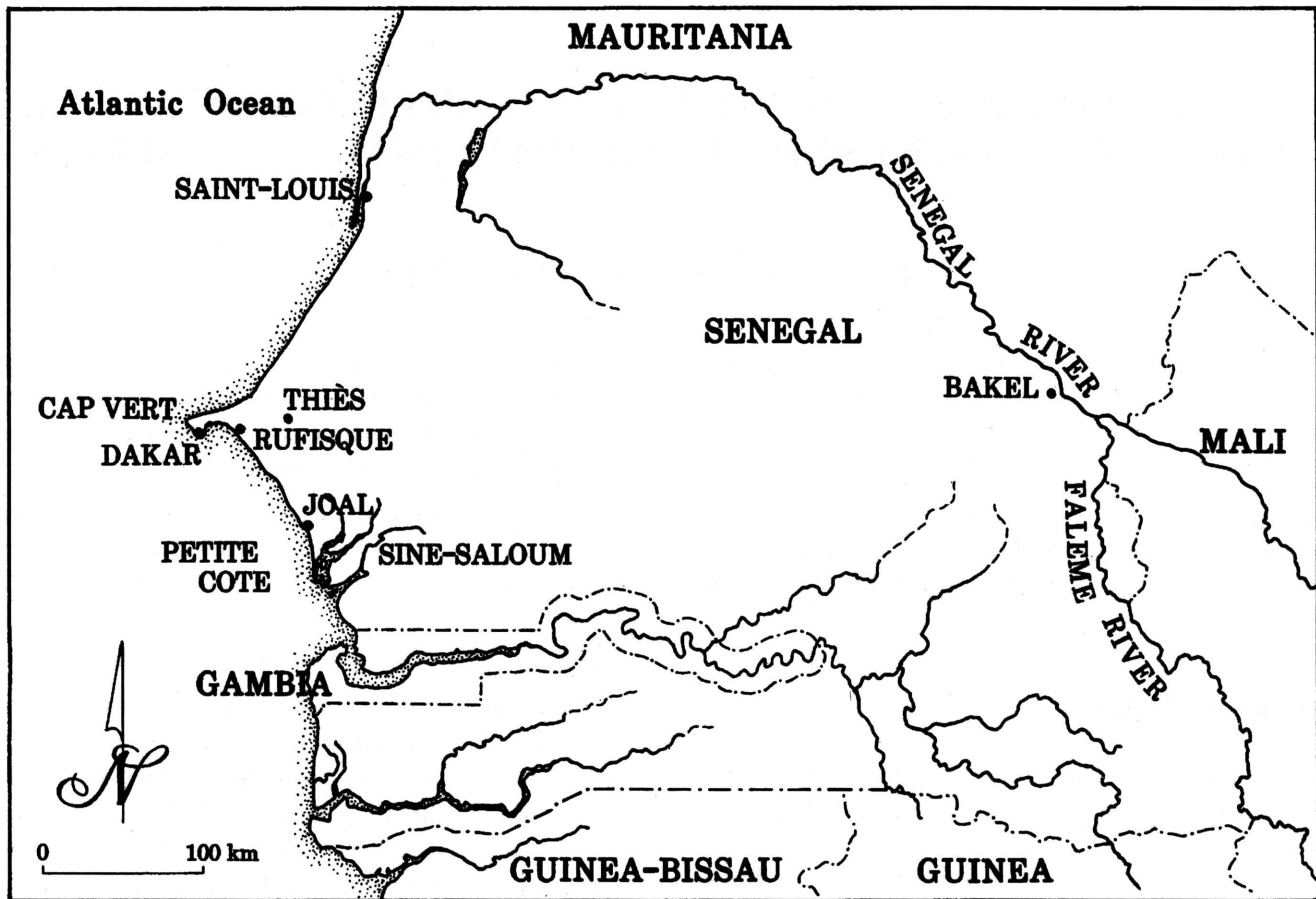


Figure 1. Map of Senegambia showing the location of Thiès, near which lies the Diakhité burial ground (drawing by D. Kappler).

the demand created by ever changing tastes and desires within Africa and *not* what the trading powers determined to be tradeworthy that decided which goods would be imported and well received (Curtin 1975: 314).

External trade in the Senegambia region existed well before the arrival of the Europeans. The Ghana Empire, which flourished from the 8th to the 11th centuries and was located in what is now northern Senegal, southern Mauritania and western Mali, established caravan trade routes which linked it to North Africa and the Middle East. Even at that time beads figured as a major import. As was the case then, the European trading powers of the precolonial period were also lured to the area chiefly for the gold being found further south along the Falémé River.

Until the 17th century, Spain and Portugal were the powers to be reckoned with in the overseas trade, with the Portuguese holding influence over coastal

Senegambia. The Dutch became very active in the region shortly after 1600, and had replaced the Portuguese by the 1670s. The English and French, in turn, sought to expel the Dutch, and, from the 1690s to the 1710s, the English joined forces with the Hollanders to remove the French from the picture (Curtin 1975: 102). When the French and English finally established themselves firmly in the Senegambia later on in the century, they found that some commodities (including certain beads) introduced by the Dutch and Portuguese were still popular.

Within precolonial Senegambia, enormous amounts of foodstuffs such as millet, meat, fish and salt were traded between different geographic zones to satisfy local tastes or alleviate shortages. Although little documentation concerning this well-established trade pattern exists, the Europeans did keep good records of commodities acquired for the European market. "Captives" were easily the most important

commercial export, especially in the late 17th and 18th centuries. Even though the gold trade never did match up to its anticipated potential, Europeans in general were more interested in it than in the slave trade (Curtin 1975: 198). Other major exports to Europe included iron (which became an import later on), cotton textiles, gum, cattle and hides, beeswax and salt (Curtin 1975: 197-228).

Probably as a direct cause of the area's growing need for iron and its dwindling supplies, a currency system was established by the trading powers utilizing this important metal. By the middle of the 17th century, the "bar" had become the standard for trade, one bar being a section of flat wrought iron 3 m long, 5 cm wide, and 9 mm thick. It was frequently cut up into pieces about 20 cm in length that were suitable for manufacturing a hoe blade. (Curtin 1975: 241)

Curtin (1975: 242) provides the following relative values for several categories of beads:

Amber:	8 bars per lb. for large stones, shifting to .5 bar per stone in 1728
Glass beads:	.5 bar per lb.
Crystal:	10 bars per 1,000 after the 1720s
Carnelian:	5 bars per 100 after 1718
Cowries:	.33 bar per lb. in 1666, becoming a stable .5 bar per lb. from at least 1683 onward

Sophisticated external trade had been practiced for many centuries in Senegambia, causing fierce commercial competition among the European trading powers ultimately bent on colonizing the area. The tastes of the Senegambian peoples, which continue to vary greatly, presented a challenge to foreign merchants whose wares were not always desired or in demand.

## BEADS IN THE TRADE

Common European glass beads were very inexpensive, the price varying from £80 to £120 per metric ton. These were traded by the "mass," one of which was composed of twelve "branches" which were further divided into ten "strings" (Curtin 1975: 317-319).

Not all beads imported into Senegambia and the rest of West Africa were the inexpensive kind. Examples of four different time-honored and costly beads appear at Diakhité: carnelian, cut crystal, coral and

amber. Carnelian, called *cornaline* in French and *ar-rangoes* in Gambian English, were purchased in Europe for up to £.43 per piece at the beginning of the 18th century. Cut crystal was also expensive, ranging from £1.50 to £2 per thousand for better quality stones. Coral was clearly luxury-class material, costing between £5 and £10 per kilogram (Curtin 1975: 319). Although only a small number of amber beads were found at Diakhité, they did figure prominently in the trade for a relatively short period of time and were also among the most expensive of trade articles (Curtin 1975: 242).

Certain French documents, including ships' manifests and inventories, have proved to be extremely instructive in looking at beads in the precolonial trade of Senegambia. For example, a 1678 trading voyage to the west coast of Africa led by Jean Barbot representing the Compagnie du Sénégal aboard the *Soleil d'Afrique* ("African Sun") carried three barrels of *ras-sade* or simply *rasse*, French words originating from the Italian verb *rassare*, meaning to shine (Dictionnaire Paul Robert 1874). They were broken into packets, masses or branches for retailing, and the colors mentioned are blue, white, yellow, green, red, and gray-white. It is interesting to note that Barbot goes on to describe *ras-sade* as being melted down by Africans in order to create desired sizes and forms. These beads were traded for ivory, gold, slaves, and also served as payment for services rendered (Debien, Delafosse and Thilmans 1978: 245-246). *Contre-quadré*, another common bead exported by the French, appeared aboard the *Soleil d'Afrique* in two colors: yellow and black. They, too, were used in trade for ivory and gold. Also mentioned are *margriettes*, large transparent glass beads of various colors made in Venice. Barbot lamented the fact that he was unable to obtain either *margriettes* or cowries before sailing, as they were highly prized trade articles (Debien, Delafosse and Thilmans 1978: 385).

During a trading expedition in 1724, along the Senegal River less than 200 km north of Thiès, the total value of merchandise carried by the traders was £14,299. The total value of the beads carried was £1,324 (Delcourt 1952: 382), representing about 9.5% of the total cargo value. According to Delcourt (1952: 382-386), the following beads figured in the trade:

- 1) For 180,000 lbs. of gum, paid £6,369 of which 3 lbs. of yellow amber was included valued at £144.
- 2) For 50 "captifs," paid £2,259 of which:
  - 8 "cords" (strings) round carnelian @ £48
  - 12,000 *galet rouge* @ £48
  - 5 oz. average amber @ £10
  - 9 cords of fake (glass) faceted amber @ £38
- 3) For 131 cattle, paid £884 of which:
  - 12,000 *galet rouge* @ £48
  - 2 cords of fake (glass) faceted amber @ £8
- 4) For 120 hides, paid £100 of which:
  - 20,000 *galet rouge* @ £80

From the same source, the following list shows prices for specific beads, circa 1724:

Large yellow amber	48£/lb.
Medium amber	2£/oz.
<i>Galet rouge</i>	4£/1,000
Fake faceted amber	1£/cord
<i>Pezant vert</i>	4£/1,000
"Round" carnelian	6£/cord
Fine coral	12£/oz.
<i>Margriettes</i>	1£/cord
Yellow glass	2£/lb.

From 1740-41, the British Royal African Company paid with a "bundle" consisting of some 24 different commodities for 180 slaves. Weighing 11,476 kg, a bundle contained the following beads: 15,195 stones of carnelian weighing 30 kg, 1,996 kg of glass beads, and 60,700 stones of faceted crystal weighing 131 kg (Curtin 1975: 172). Thus, some 2,157 kg or 18.8% of the total weight of a bundle consisted of beads. Further extrapolation of the figures shows that 64 kg of goods were traded for each slave, of which 12 kg were beads. Interesting but sad testimony to the perceived value of a human life.

The French National Archives (Colonies C6, 14) offer a rather comprehensive look at the various beads inventoried at the trading concession on Gorée Island. In 1754, the inventory was divided into three categories which were based on the popularity of beads at the time. Among those glass beads considered currently in style and essential to the trade were fake crystal, "snow-white" beads, *contrebordé* with flower designs, beads "painted" golden or with white arabesques, oval beads with white lines, faceted blue *loquis*, *rassade*, and various "common" glass beads, especially red ones. Beads at the concession which were

no longer in style (thus worth less) were accepted by obliging merchants in partial payment for goods or given out by them as payment for services rendered. Included in this category were "gold gilded" *contrebordé*, long carnelians, crystal, striped *galets*, "common" *loquis*, starry and striped *margriettes*, and red ovals with flower designs. In the third and final category, the archives indicate projected needs for the coming year by listing beads to be ordered: round average yellow amber, coral, carnelian, faceted blue *loquis*, *galet rouge*, red and blue *contrebordé* with yellow and white flower designs, respectively, and large clear "common" glass beads (Colonies C6, 14).

Among articles of trade listed in a 1784-85 manifest entitled "Cargo of a 120 ton ship destined for the gum trade along the Senegal River" were the following beads (Labarthe 1802: 183-184):

Red and white <i>galet</i>	600 lbs.
"Fake" coral	150 masses
Red, white, black and yellow <i>rassade</i>	600 lbs.
Coral, no. 2 and 3	10 lbs.
Black, yellow, red and clear <i>charlotte</i>	150 masses
Fine amber, no. 3 and 4	25 lbs.
"Fake" amber, no. 2 and 3	25 lbs.

Labarthe (1802: 98) indicates that the price of one slave in 1784 was 130 bars, or £650, one bar being worth £5. Among the goods that made up the 130-bar total were three branches of amber and three pounds of coral. From the slave trade in 1789, he points out several specific beads used as payment: opaque amber traded by the branch, coral, red and white *galet*, blue *loquis* with diamond-shaped facets, faceted crystal by the cord (string), blue and red *contrebordé*, and white and yellow oval glass beads by the mass (Labarthe 1802: 227-228).

The amount of beads imported into Senegambia declined as the West African trade developed and new goods were introduced. In fact, looking at the percentage of total imports during the precolonial period in Senegambia, a marked decrease can be observed: from 39.9% of total imports in the 1680s, beads dropped to 18.0% in the 1730s, and then to 8.8% in the 1830s (Curtin 1975: 318). Once again, shifting demand compelled traders to modify their stock: "changes between the... periods are nevertheless significant — a conti-

nued fall in raw iron, a rise in silver and firearms, and a shift of luxury exports from beads to textiles" (Curtin 1975: 312).

Beads, nonetheless, continued as important elements in the trade, as revealed by the following passage written by the Frenchman Abbot Demanet during a voyage to Senegambia in 1763-64:

Beads of all types are the merchandise which works best for the traders, and that which brings them the biggest profits: consequently, they must give out as much as is demanded. Without beads the colony could not exist because without them it would not be able to acquire food and other articles necessary to life which the country provides. It is inconceivable for inexperienced Europeans to imagine how many beads are consumed along all the coasts of Africa. Men and women alike wear prodigious belts of them, which are sometimes one foot wide by three or four rows thick. The finer beads are for those who are wealthy; the common ones are for their slaves. A woman would not consider herself dressed if she didn't have a certain number of sufficient necklaces and belts of coral, amber, loquis, galets, carnelian and crystal beads, and gold ear pendants which they make themselves (Walckenaer 1842, Tome V: 182).

## OF THIÈS AND THE SERER NONES

In order to illustrate the life and times of the people who utilized the Diakhité burial ground, it will be beneficial to take a brief look at the Thiès region prior to the period of French colonization and the specific ethnic group which lived there: the Serer Nones.

A map of Senegambia dated 1751 shows a town called Kamina which is situated very close to, if not in, present-day Thiès (Curtin 1975: 97). Trade routes shown on the map place Kamina along the east-west route joining the Portuguese settlement at Rufisque, a port-town located less than 20 km east of Dakar, with the interior. The town is also placed at the southernmost point of the major north-south route connecting Saint-Louis and the lower Senegal River with Rufisque to the west. As early as the 17th century, Kamina

served the Portuguese as a kind of "market enclave" situated along the frontier of two regions under different local control. It was "a major center for buying textiles and hides, and a way-point on the important trade route leading eastward" (Curtin 1975: 99).

The strategic location of Thiès did not escape the French in the middle of the 19th century during the initial period of colonization of Senegal. The period 1861-65 is referred to as the "era of pacification" by the French during which the military cleared out small pockets of resistance and established their own form of law and order which made the area secure for further exploration. The opening of the rail line in 1885 joining Dakar with Saint-Louis clinched the importance of the town as a major relay point between the two cities (Savonnet 1955: 174). The period at Diakhité with which we are concerned ends around the time the French began to pacify the region.

Little is known about the origins of the Serer ethnic group to which the Serer Nones are presumed to be related. They are, however, acknowledged to have inhabited the same areas in the Thiès and Sine-Saloum regions longer than any other group in Senegal, with the exception of the Casamance region south of the Gambia. Based on similar oral traditions and current associations with the Toucouleur and Peul ethnic groups, it is highly possible that they all occupied areas of the Senegal River valley and possibly north into present-day Mauritania. They are presumed to have migrated south sometime during the downfall of the medieval-period Ghana Empire, around the 11th and 12th centuries. Those who remained independent and were not absorbed by the dominating Wolof (who to this day hold the political and economic power in Senegal) finally settled what was then forested country south (Sine-Saloum) and east (Thiès) of Cap Vert (U.S. Government Printing Office 1974: 68-69). Actually, the historical place of the Nones within the Serer family which comprises some five separate groups is somewhat obscure as witnessed by the fact that they stand apart linguistically from the others.

Beads in the area are mentioned as early as 1635, in the description of the death of a married woman who lived in the region of Thiès. In a testament she made before dying, she bequeathed her coral, crystal and "other objects of adornment" to the friends she liked best. About the same time, the men of the region were not at all timid about approaching the Portuguese

or French and asking them for coral, crystal and other wearable objects for their wives (Walckenaer 1842, Tome II: 318).

In 1697, André Brüe, then governor of the *Compagnie du Sénégal, Cap Nord et Cote d'Afrique*, described at length his observations of the Serer ethnic group:

These Serers, who are found principally around Cap Vert are a free and independent nation which has never acknowledged a sovereign. They form, within their boundaries, many small republics where they have no other laws than those of Nature. They eat a large number of animals. This author believes that most of them have no concept of a supreme being, believing that the spirit perishes with the body. They are completely naked. They have no commercial links with the other groups. If they receive an insult, they never forget it. Their hatred is handed down to their descendents, and sooner or later it produces a vigorous vengeance. Their neighbors treat them as savages and barbarians. It is an outrage to give the name Serer to another Negro. However, this nation is simple, honest, gentle, generous, and very charitable toward strangers. They do not use strong liquor. Serers bury their dead away from their villages, in round huts which are as well constructed as those in which they actually live. After placing the body on a sort of bed, they block the entrance of the hut with sodden earth which they continue to use as a plaster to cover the reeds which serve as walls, to a thickness of one foot. The edifice terminates in a point, giving the burial grounds the appearance of a second village, and the tombs of the dead are more numerous than the houses of the living. As Serers have no industry to make inscriptions or other marks on these monuments, they content themselves by placing on the summit a bow and some spear points on those of men and a mortar with pestle on those of women. The first marks the occupation of men, which is almost uniquely hunting, and the other that of women, whose continual work is to pound rice or corn. There are no Negroes who cultivate their land with as much competence as the Serers. If their neighbors treat them as savages, they are much better

off in regarding other Negroes as madmen who would rather live in misery and suffer hunger than work to their own betterment (Walckenaer 1842, Tome II: 392).

A somewhat different picture of Serer burial rites emerges from an 1814 description which indicate that only the thatch roof of the hut projects from the ground. It is covered with earth, forming a kind of mound. Within the tomb, care is taken to place a pipe, tobacco, a water jar and a bowl half full of food (couscous) at the feet of the deceased. In this version, it is believed that the soul lives on for a given amount of time near its old habitat before finally inhabiting another body (R.G.V. 1814: 127). An engraved depiction of Serer tombs in this work shows thatched roofs covering a large area of ground with a mortar and pestle mounted on top for women, and a bow and arrow for men.

From the documents of l'Institut Fondamental d'Afrique Noire (IFAN) in Dakar comes a somewhat different description of Serer burial customs in which a deep pit is excavated to receive the body which is accompanied by a tobacco pouch and a live rooster. The body is then laid on a bed placed in the pit which is filled in and then covered by the hut that belonged to the person being buried. In older times, precious objects such as bracelets, beads and pottery were buried with the body, but this custom is rarely practiced today and then only in complete secrecy (Documentation IFAN n.d.: XIII-3, no.71).

Brüe's previously-mentioned 17th-century portrayal of Serers is echoed almost one hundred years later by a French naval officer. He identifies the Serer people as the original inhabitants of the area, and describes them as living independently, cultivating only that amount of land necessary to sustain them. "They have a language particular to them, they flee other people, do very little external trading and go around almost totally naked" (Labarthe 1802: 110).

#### **DESCRIPTIVE INVENTORY OF THE DIAKHITÉ BEADS AND ASSOCIATED ADORNMENTS**

Approximately 13,500 beads were recovered from the Diakhité sand pit between 1986 and 1988. Materials include rock crystal, carnelian, amber, shell, cop-

per alloy, and glass. The glass specimens are classified using the system devised by Kenneth and Martha Kidd (1970) as expanded by Karklins (1985). Bead classes I-IV are of drawn manufacture; those with a W prefix are wound. Complex bead shapes are identified using the terminology provided by Beck (1928) and van der Sleen (1967).

### Plate IA: Stone, Shell and Metal Beads

*Row 1: Rock crystal (quartz); 1,195 specimens.*

The vast majority of the specimens are oblate, exhibiting pentagonal facets around the middle. Depending on size, the average number of facets is 24-32. The beads range from 4.8-12.2 mm in length and 7.1-18.3 mm in diameter. In almost all cases, one end is relatively flat, while the other shows a concave depression. Extensive battering and abrasion of the ends and facets reveal that these beads were worn strung together. Another 17 beads display spiral faceting and are among the largest of the oblate-shaped specimens. Eight others are barrel-shaped, the length ranging from 11.9-19.8 mm and the diameter from 8.5-12.6 mm.

*Rows 2-3 and row 4, no. 1: Carnelian; 343 specimens.*

Six distinct forms are represented:

- 1) Long hexagonal prism (row 2, no. 1); 63 specimens. Length: 19.8-39.1 mm; diameter: 6.4-13.3 mm.
- 2) Long tapered hexagonal prism (row 2, no. 2); 25 specimens. The longest specimen measures 37.2 mm with a diameter of 13.1 mm at one end tapering to 8.1 mm at the other.
- 3) Lozenge (row 3, no. 1); 7 specimens. Length: 11.9-16.3 mm; diameter: 7.7-13.2 mm.
- 4) Standard and short truncated bicones (row 3, nos. 2 & 3); 242 specimens. Four to six facets on each side of the equator. Crude faceting and overall non-uniform manufacturing technique. Ends of no. 3 in row 3 are flattened closer to the equator than no. 2 in the same row. It is interesting to note that the flatter specimen resembles a form found in tumuli dating to the 14th century in Senegal, the distinction being that the older form displays eight facets on either side of the equator, and the equator itself is also faceted (Mauny 1950: 76). Length: 6.2-14.3 mm; diameter: 8.1-14.9 mm.

- 5) Octagonal prism (row 3, no. 4); 4 specimens. Drilled from either end, the perforations show great wear and battering. These beads were probably taken from centuries-old burial sites somewhere in Senegal which somehow found their way to Diakhité. Taking beads from such burial sites has been practiced in Senegal and throughout West Africa for a very long time. Length: 14.0-19.9 mm; diameter: 11.5-15.6 mm.
- 6) Long truncated octagonal bicone (row 4, no. 1); 2 specimens. The hole is drilled from both ends. Same as the octagonal prisms; it is most likely that these beads were recovered from ancient tombs. Longest bead is 36.8 mm with 11.6 mm diameter at the equator, tapering to 9.3 mm at the ends.

*Row 4, nos. 2-3: Amber; 5 specimens.*

The specimens are oblate and have a deep red-brown patina covering the originally transparent to translucent amber. Length: 4.7-12.2 mm; diameter: 9.1-13.3 mm.

*Row 5: Shell; 76 specimens.*

- 1) *Conus* (no. 1); 1 specimen. The largest of the shell beads, it is 32.8 mm in diameter.
- 2) *Arca senilis* (no. 2, top); 2 specimens. Similar beads were found by us at protohistoric and prehistoric sites near Nouakchott, Mauritania.
- 3) Cowrie (no. 2, bottom); 76 specimens. Unlike the other shell beads from Diakhité, the cowrie beads were not of local manufacture. They are still found in large quantities at markets in Senegal. Average length: 18 mm.
- 4) Unidentified shell (no. 3, top and bottom); 7 specimens. Lasnet (1900: 141) illustrates a young Serer woman wearing this triangular-shaped shell bead strung through a strand of hair suspended over the forehead. These locally manufactured beads are still found at Senegalese markets.
- 5) Two large shell beads/pendants with etched designs, reported to us in 1989; 2 specimens (not illustrated).

*Row 6: Metal; 2 specimens.*

- 1) Round copper-alloy bead with gold foil overlay (no. 1); 1 specimen. Length: 12.9 mm; diameter: 18.4 mm.

- 2) Flat brass pendant with stamped design (no. 2); 1 specimen.

### Plate IB: Glass Beads

*Rows 1 and 2: Type IIIk "chevron" beads; 189 specimens.*

The most numerous chevron beads from Diakhité are typical four-layered faceted barrels. The colors of the four starry layers from the exterior inward are: translucent (tsl.) bright navy, opaque (op.) white, op. redwood, and op. white. In many of these beads, the rays are deformed, creating a "hurricane" pattern. Six flat facets are ground at the ends to enhance the chevron pattern. The ends are flat, and on many beads the outer layer is very eroded.

Two seven-layered chevrons (row 1, nos. 1 & 4) were also recovered. They are both standard-barrel shapes; one large, the other small. These have the transparent core typical of the earliest types. These small seven-layered chevrons are still seen in the markets of Senegal and Mauritania and are considered expensive luxury items.

The collection also contains one four-layered barrel-shaped chevron with a brick-red exterior, and another one with a "black" outer layer (row 1, nos. 2 & 3), as well as four unfaceted short-barrel forms (row 2, nos. 1 & 2). The latter were reheated in order to make them round (Jamey D. Allen 1989: pers. comm.). Several short barrel-shaped beads (oblate with flat ends), as well as a small number of long-faceted barrels, have five layers (row 2, no. 3): tsl. bright navy/op. white/op. redwood/op. white/tsl. bright navy. On one example, the two inner-most layers are reversed.

*Row 3: Decorated wound beads.*

- 1) WIIIB; round; op. black body; one spiral stripe composed of op. white and tsp. ruby filaments twisted together (most of the red glass has disintegrated), and one spiral stripe of aventurine; 2 specimens.
- 2) WIIIB; round; op. white body; a thin op. apple green stripe on a broad wavy stripe of aventurine encircles the equator; 3 op. ruby flower patterns are situated on either side of the equator; 1 specimen.

- 3) WIIIB; round; op. black body; combed design of alternating op. white and aventurine; distinctly flattened ends; 12 specimens.
- 4) WIIIB; round; tsl. bright navy body; op. white floral wreath encircling equator; distinctly flattened ends; 34 specimens.
- 5) WIIIB; round; tsl. surf green body; op. white floral wreath encircling equator; flattened ends; decomposed condition; 3 specimens.
- 6) WIIIB; oval; tsl. bright navy body; op. white floral wreath encircling equator; flattened ends; 7 specimens.
- 7) WIIIB; round; tsp. ruby body; op. lemon yellow floral wreath encircling equator. Most examples are heavily patinated and the wreaths have turned white; flattened ends; 9 specimens.

*Row 4: Decorated wound beads.*

Nos. 1-6: Type WIIIB "eye" beads with simple or compound dots.

- 1) Round; op. white body; 12 compound eyes of op. mustard tan on op. robin's egg blue; 1 specimen.
- 2) Round; op. surf green body; 15 compound eyes of tsp. ultramarine on op. white; 2 specimens.
- 3) Round; op. black body; 36 compound eyes of tsp. ruby and op. bright blue on op. white or tsp. ruby on op. white or op. bright blue on op. white (schemes vary); 19 specimens. Similar varieties (not illustrated) exhibit 15 eyes (7 specimens) and 9 eyes (2 specimens), respectively.
- 4) Round; op. black body; 51 compound eyes (most of them run together) of op. turquoise green or tsp. ruby on op. white; 5 specimens.
- 5) Round; tsl. light gray body; 15 compound eyes: the five around the equator are tsp. ruby on op. white, while those around the ends are tsp. bright navy on op. white; 1 specimen.
- 6) Round; op. white body; 21 tsp. bright navy eyes; 1 specimen.
- 7) WIIIB; oval; op. white body; 4 tsp. bright navy floral wreaths parallel to the perforation; 1 specimen.

*Row 5: Decorated drawn and wound beads.*

- 1) IIB; barrel-shaped; tsl. ultramarine body with 26 op. white stripes; 6 specimens.
- 2) IIB; barrel-shaped; op. black body with 8 op. white stripes; 2 specimens.



- 3) IIb; round; tsp. aqua blue body with 6 alternating op. white and op. redwood stripes; 7 specimens.
- 4) WIIIb; round; tsp. aqua blue body with 12 op. white eyes; distinctly flattened ends; 1 specimen.
- 5) WIIIb; round; tsp. aqua blue body with 9 eyes; the three around the equator are op. white, while those around either end are op. mustard tan on op. white; 1 specimen.
- 6) Ib; tubular; tsp. light surf green body with an average of 17 op. white stripes; "gooseberry" beads; 52 specimens.
- 7) IIb; barrel-shaped; tsp. colorless body with 8 tsl. white stripes; 1 specimen.

*Row 6: Faceted and striped drawn beads.*

- 1-4) If; elongate multi-faceted beads with flattened ends. There are four varieties:
  - a) tsp. palm green; 38 facets; 1 specimen.
  - b) tsp. ultramarine; 40 facets; 2 specimens.
  - c) tsp. amber; 36 facets; 1 specimen.
  - d) op. cobalt blue; 45 facets; 1 specimen.
- 5) IIb; oval; tsp. colorless body with 7 op. white curved stripes; 1 specimen.

*Row 7, nos. 1-6: Type If and IIIf multi-faceted beads.*

These consist of hexagonal to octagonal tube segments with a facet cut on each corner.

- 1) If; tubular, cornerless heptagonal; tsp. colorless; 21 facets; ends distinctly flattened; 67 specimens.
- 2) If; tubular, cornerless heptagonal; tsp. light gray; 18 facets; distinctly flattened ends; 256 specimens.
- 3) IIIf; tubular, cornerless octagonal; tsp. light gray outer layer; tsl. oyster white middle layer (glass is opalescent); tsp. light gray core; 40 facets; ends flattened; 9 specimens.
- 4) IIIf; tubular, cornerless heptagonal; op. bright Dutch blue outer layer; op. copen blue core; 21 facets; ends distinctly flattened; slightly dull surface; 179 specimens.
- 5) If; similar in all respects to the preceding bead, except that this one is monochrome bright Dutch blue; 97 specimens.
- 6) IIIf; similar to no. 4 but the colors are a bit "deeper;" 1 specimen.
- 7) WIIIb; op. black body with op. white undulating lines; 2 specimens.

*Row 8: Ruby-colored wound beads; 17 specimens.*

Nos. 1 and 3-8 belong to the style called "cornaline d'Aleppo." The outer layer is often pitted and covered with a white patina. In many cases the core is almost completely decomposed.

- 1) WIIa; round; tsp. ruby outer layer; op. light yellow core.
- 2) WIIb; round; tsp. ruby.
- 3-8) WIIa; round, oval and cylindrical; tsp. ruby over op. white.

*Row 9: Assorted wound and drawn beads.*

- 1) WII; hexagonal truncated bicone; tsp. light gray; 1 specimen.
- 2) WII; hexagonal truncated bicone; tsp. ultramarine; 2 specimens.
- 3) IIa; barrel-shaped; op. white body cased in clear glass; 4,548 specimens. Beads are non-uniform in size with rounded ends, resembling small pebbles. Surfaces of most beads are crackled. This is the bead previously described as *galet blanc*, cousin to the *galet rouge*.
- 4) IVa; barrel-shaped; op. brick red outer layer cased in clear glass; tsl. light to dark green core; 587 specimens. Called *galet rouge*.
- 5) IVbb; barrel-shaped; op. brick red outer layer with four op. black on op. white stripes; tsl. light green core; 7 specimens.
- 6) IIbb; barrel-shaped; op. black body decorated with six op. brick red on op. white stripes; surface eroded; 1 specimen.

*Row 10: Drawn multi-layered beads.*

Strand of circular type IIa / IVa beads; average diameter: 4.6 mm. Two varieties are represented:

- a) IIa; circular; op. white cased in clear glass; irregular shape; often has a crackled surface and dull luster; 174 specimens. The *galet blanc*.
- b) IVa; circular; op. brick red outer layer cased in clear glass; tsl. dark green core; irregular shape; 608 specimens. The *galet rouge*.

*Row 11: Drawn "seed" beads.*

Strand of "seed" beads including cornaline d'Aleppo (10 specimens), tsp. colorless (328 specimens) and variously colored, opaque monochrome beads (417 specimens). Smallest recorded diameter:

2.4 mm. Beads of this size were worn in strands suspended over the forehead, as were the triangular-shaped shell beads (Lasnet 1900: 63).

### Plate IC: Glass Beads and Metal Ornaments

#### Row 1: Monochrome wound beads.

- 1-3) Type WIIC faceted "five-sided" or "pentagonal" beads exhibiting eight pentagonal pressed facets. There are three varieties:
- tsp. amethyst; ends pressed flat; bead is almost doughnut-shaped; facets are incomplete; 3 specimens.
  - tsp. amber; as no. 1; surface slightly eroded with thin white patina; 1 specimen.
  - tsp. light gray; elongated body; slight erosion and white patina on most beads; 47 specimens; average size: 16.5 mm in diameter, 21.2 mm in length.
- 4) WIA; short cylindrical; tsl. opalescent milky white; the seam around the middle is where two beads fused together during manufacture. Relatively large hole; flat ends; 1 specimen.
- 5) WIC; irregular-oval; tsp. light gray; very crude; large perforation; rounded ends; 1 specimen.

#### Row 2: Monochrome wound beads.

The beads in this row range from tsp. opalescent light gray to op. milky white; 161 specimens.

- WIA; short cylindrical; flat ends.
- WIB; oblate; flat ends; two conjoined beads.
- WIIC; pentagonal-faceted; squat specimens with flat ends.
- 5) WIB; oblate; flat ends.
- 6) WIC; irregular-oval.

#### Row 3: Monochrome wound beads.

Nos. 1-2 and 4 are doughnut or annular beads. These are among the most numerous of all the types recovered at Diakhité.

- WID; doughnut-shaped; tsp. colorless; ridges at the edge of the perforation show where it had been joined to other beads on the mandrel. Probably more modern than the other annular beads. Numerous.
- WID; doughnut-shaped; tsp. colorless; a heavy patina and decomposition have rendered the glass opaque. The specimen consists of four beads that

fused together during manufacture. There are many examples of such fused annular beads at Diakhité. Numerous.

- 3) WIIC; pentagonal-faceted; tsp. colorless; 1 specimen.
- 4) WID; doughnut-shaped; tsp. amber; 60 specimens.
- 5) WIIF; ridged tube (pentagonal-sectioned); tsl. bright navy; ends ground flat; 53 specimens.
- 6) WIB; round; tsl./op. ultramarine; ends flattened; surface patinated and decomposed; 133 specimens.

#### Row 4: Monochrome wound beads.

- 1) WIB; round; tsp. colorless with a distinct amethyst tint; ends ground flat; 124 specimens.
- 2-3) WIIC; pentagonal-faceted; color as no. 1; ends ground flat; 123 specimens.
- 4-7) WIID; "raspberry" or "mulberry" beads; two rows of nodes; ends ground flat. There are four varieties:
  - tsp. amethyst; 119 specimens.
  - tsp. colorless; 39 specimens.
  - tsp. light gray; 5 specimens.
  - tsp. dark green; 6 specimens (not illustrated).

#### Row 5: Monochrome wound beads.

- 1-2) WIB; tsp. colorless to light gray (no. 2 exhibits a very light greenish tint); numerous internal bubbles; the ends of no. 1 have been ground flat; 328 specimens.
- 3) WIC; oval; tsp. bright navy; patinated surface; 2 specimens.

#### Row 6: Metal ornaments.

The bracelets, earring and finger ring are made of copper and brass, and are typical of others found at Diakhité.

### OBSERVATIONS ON THE BEADS OF DIAKHITÉ

Among the Diakhité beads are several distinct kinds that merit special attention because of their historical significance and/or the high value placed on them. They include carnelian, cut crystal, amber, cowries and other shell beads, and certain glass beads.

Amber and faceted crystal beads were among the most expensive items traded in precolonial Senegambia. They were very popular back then, and, in the case of amber, remain so today. Because of their high value, they were traditionally worn by dignitaries and wealthy people. Given the economic and social structure of the Serer Nones, it is not surprising to find only a modest number of these beads at Diakhité.

A sense of the value of amber and crystal beads, and how they were utilized early in the trade comes from Abbot Demanet's account of his 1763-64 voyage to Senegal:

Yellow amber is a must; and in order not to be obliged to weigh it, seven pieces are traded for one bar. Coral and amber serve to make necklaces and belts for kings, their wives, and for all who can afford them. They intersperse these necklaces and belts, made in the form of a rosary, with beads of coral, amber, fine crystal and fancy glass beads... (Walckenaer 1842, Tome V: 182).

An account written in 1800 reveals that "amber is gathered along the coasts of Prussia and Pomerania, and is formed into beads in Holland" (Pelletan 1800: 35-36).

Compared to the scarcity of amber beads at Diakhité (only five were found), the relatively large number of faceted crystal beads poses a problem for which we can offer no valid solution. During our two and a half years in Senegal, we found less than a handful of these beautiful beads at other sites. Furthermore, with one exception, we never saw them offered for sale by bead traders at any markets in the country. We know that "cut" crystal beads appeared in Senegal at least as early as the beginning of the 1600s, and remained a part of the trade through the 18th century. Why, then, are these beads found only at Diakhité in such significant numbers?

Carnelian beads appear at Diakhité in relatively large quantities, reflecting a popularity which has endured for centuries. Despite the two large faceted barrel-shaped beads that are reminiscent of the German style, all the others show forms and workmanship that can be connected to an industry existing in India

well before the Germans learned to copy their technique (Dubin 1987: 113, 184).

Among the shell beads, cowries are present at Diakhité in small but significant numbers. Cowries were and continue to be popular in Senegal, but never took on the distinction attached to them elsewhere in Africa. Shell beads of local manufacture have also been found at Diakhité and represent a form of adornment that spans the centuries from prehistoric to modern times.

Cornaline d'Aleppo beads of both drawn and wound manufacture which have a thin transparent red layer over an opaque white core were uncommon at Diakhité, whereas their forerunners, the drawn green-cored varieties, show up in significant quantities. Beck tells us that the latter were exported to Africa in the 18th and 19th centuries "by the shipload" (Caton-Thompson 1970: 238). This long-lived popularity is further evidenced by their constant appearance in ships' manifests of the period in great quantities.

The historic French name for the green-cored beads is *galet rouge*. They are mentioned as an important part of the trade with Africa as early as the 1680s when they are described as large red-glass beads arranged in seven or eight strands worn around the waist (Cultru 1910: 107). Interviews with Senegalese women confirm the fact that wearing *galet rouge* beads in this fashion is a time-honored tradition that goes back many generations (personal observation). Cousin to the *galet rouge* is another bead very popular throughout Africa, the *galet blanc*, or white "galet" with its opaque white body and crackled, thin, colorless outer layer.

Finally, the chevron beads deserve mention due to their significant numbers at Diakhité. For the most part they are small barrel-shaped beads with four layers: tsl. bright navy on opalescent white on redwood on white. These are equivalent to no. 647 in the Venetian Bead Book (Karklins 1985: 77). Other chevron beads exhibit five layers, while two are shaped differently and have seven layers, the innermost one being transparent, indicating that they are an early variety. Descriptions of these beads during the precolonial period indicate that the French called them *margriette étoilée*.

## BEAD ASSEMBLAGES AT DIAKHITÉ

Most of the beads recovered from the Diakhité sand pit were found loose in the soil so it is uncertain which varieties are associated with each other. This makes it very difficult to determine whether the site was occupied for a long time (as suggested by the early seven-layered chevrons and the crystal and carnelian beads) or if these beads are heirloom pieces. Fortunately, the contents of two intact pots found at the site in 1987-88 provide much useful information concerning bead associations and help to date the burial ground.

The contents of the larger vessel were "loose" in the pot so it was impossible to determine how the various beads were strung at the time of burial. Mr. Ibou Sarr, a worker at the sand pit who conveyed both pots to us, assured us that he found them intact and that other than removing sand and dirt from the larger pot, the contents had not been tampered with. We have no reason to doubt him as he understood our interest in recovering such articles untouched. The second pot leaves no doubt whatever as to the authenticity of its contents; the beads and metal ornaments were still cemented in place with dried sand, thus allowing us to observe exactly how the beads had been strung. In both cases, the fragile pots are made of local, fine-sand-tempered red clay, and exhibit simple decoration.

### The Larger Pot and its Contents

The globular pot (*see* cover illustration) is 19.3 cm high and 24.2 cm in diameter. The mouth measures 10.8 cm across and the flat-lipped rim is 7 mm thick. The rim is decorated with five wavy incised lines which encircle the orifice. The body and the rounded bottom exhibit diagonal cord impressions.

The larger pot contained 2,693 beads of the following types:

- 1) Crystal (quartz); oblate; faceted (62 specimens).
- 2) Carnelian; standard/short hexagonal bicones (45 specimens); long hexagonal prisms (12 specimens); tapered long hexagonal prism (1 specimen); lozenge-shaped (1 specimen).
- 3) Amber; oblate (1 specimen).
- 4) If; tubular, cornerless hexagonal; tsp. colorless (71 specimens).
- 5) If and IIIf; tubular, cornerless heptagonal; op. bright Dutch blue, and bright Dutch blue over open blue (100 specimens).
- 6) IIa; circular to barrel-shaped; op. white cased in clear glass; *galet blanc* (110 specimens).
- 7) IVbb; barrel-shaped; op. barn red on tsl. green with 4 op. bright navy on op. white stripes (1 specimen).
- 8) IIIk; faceted barrel-shaped "chevron" beads; four-layered (112 specimens).
- 9) IVa; circular to barrel-shaped; op. brick red outer layer cased in clear glass; tsl. light to dark green core; *galet rouge* (224 specimens).
- 10) WIa, WIb and WId; short cylindrical, round and annular; tsp. clear or light gray; "common" glass beads (1,854 specimens).
- 11) WIb and WId; round and doughnut-shaped; tsp. amethyst-tinted glass (87 specimens).
- 12) WIId; "raspberry" beads; tsp. amethyst-tinted glass (4 specimens).
- 13) WIIa; cylindrical; tsp. ruby over op. white; distinctly-flattened ends; highly eroded (1 specimen).
- 14) WIIb; round; op. black with combed design (Pl. IB, R. 3, #3) (5 specimens).
- 15) WIIb; oval; tsl. bright navy with op. white floral wreath (Pl. IB, R. 3, #6) (1 specimen).
- 16) WIIb; round; tsp. ruby with op. yellow floral wreath (Pl. IB, R. 3, #7) (1 specimen).

The following silver, copper and brass ornaments were associated with the beads (Pl. IC, bottom). All but the silver items appear to have been cold-hammered from square European bar stock by African craftsmen (K. Karklins 1989: pers. comm.).

- 1) C-shaped bracelets; brass; circular cross-section; flat ends; decorated with a spiral groove chiselled into the metal (2 specimens).
- 2) C-shaped bracelets; brass; hemispheric cross-section; decorated with a series of chiselled grooves set perpendicular to the long axis (1 specimen).
- 3) C-shaped bracelet; copper; square cross-section; decorated on the three exterior faces with a series of punched chevrons; plain bipyramidal ends (1 specimen).

- 4) Circular copper earrings open at the top; twisted square shank; extremities ground to a point (1 pair).
- 5) Rings; brass; one is a wide band decorated with a zigzag series of chiselled lines; the other has an oval-sectioned shank with a rectangular form in the center (2 specimens).
- 6) Small cone-shaped silver ornaments; 1.7 cm wide (3 specimens).

Given the large quantity of "fancy" beads, types which were among the most expensive and highly prized in precolonial Senegal, it is our opinion that the woman or girl with whom this pot was interred was among the wealthier and, thus, more important people then living at Diakhité.

### The Smaller Pot and its Contents

The smaller pot is 16.4 cm high, 20.2 cm in diameter, and 5.7 mm thick at the rim. The mouth is 11.6 cm across. The lip is flat. A band of diagonal cord impressions encircles the rim and the base. The rounded bottom is also cord impressed. All like beads were held in place next to one another in the dried-sand matrix, indicating that, at the time of burial, all beads of one kind were strung together with no mixing of varieties.

The smaller pot contained only 408 stone and glass beads:

- 1) Crystal (quartz); oblate; faceted (50 specimens).
- 2) Carnelian; short and standard hexagonal bicones (89 specimens).
- 3) WIa, WIb and WId; short cylindrical, round and annular; tsp. clear or light gray; heavy patina (129 specimens).
- 4) WIb and WId; round and annular; tsp. amethyst-tinted glass (94 specimens).
- 5) WIIf; flattened "disc" beads; tsp. light gray; ends ground flat (19 specimens).
- 6) WIIfc; "pentagonal" beads; tsp. light gray; ends pressed flat; almost doughnut-shaped; facets incomplete (11 specimens).
- 7) WIIfd; "raspberry" beads; tsp. amethyst-tinted glass (16 specimens).

In addition, the following copper and brass ornaments were found in the smaller pot. Most of these

appear to have been cold-hammered from square European bar stock by African artisans.

- 1) C-shaped bracelet; brass; round cross-section; plain except for several grooves around the extremities; made by folding and hammering a long strip of sheet brass into a round-sectioned rod and then bending it to shape (K. Karklins 1989: pers. comm.) (1 specimen).
- 2) C-shaped bracelets; copper; round cross-section; several grooves encircle the extremities (2 specimens).
- 3) C-shaped bracelet; brass; square cross-section; decorated with perpendicular (to the shank) lines chiselled into the three exterior surfaces; bipyramidal extremities; rectangular protuberance in the middle (1 specimen).
- 4) C-shaped bracelets; brass; round cross-section; decorated with spiral grooves; stippled rectangular protuberance in the middle; bipyramidal extremities (2 specimens).
- 5) C-shaped bracelets; brass; hemispheric cross-section; undecorated; rectangular protuberance in the middle; bipyramidal ends (2 specimens).
- 6) Circular earrings; copper alloy; twisted square shank (1 pair).
- 7) Rings; copper alloy; undecorated; varied sizes and thicknesses (3 specimens).

### Dating the Intact Pots

Karlis Karklins (1989: pers. comm.) provides the following comments concerning the temporal placement of the beads in the two intact pots:

The larger pot contains quite a temporal mix of beads. Beads definitely diagnostic of the 18th century are rare (type WIIfd). Some of the WIIfb and WId types may also relate to this period but most have a much more recent appearance (that is, no patina or surface erosion). The crystal and carnelian beads may also date to the 18th century although it is quite possible that they are much older.

The relatively common *galet blanc* (called "crackled whites" in southern Africa) and *galet rouge* specimens characteristically occur together throughout southern and eastern Africa at 18th to early 19th-century sites (David

Killick 1989: pers. comm.). The WIIb wreath-decorated varieties also fall into this time period.

The most recent specimens include the If/IIIIf varieties, the IIIk four-layered chevrons and WIIa beads which are the most common during the 1805-1870 period. These beads suggest that the larger pot was interred during the late 18th or early 19th century, and that the early varieties are heirloom pieces.

The three diagnostic bead types in the smaller pot (WIIb, WIIC and WIId) are found on archaeological sites that were occupied from around 1650 to 1833, and have modal dates that cluster around 1725-30. The absence of the later varieties found in the larger pot suggests that the smaller vessel is somewhat earlier.

#### **DATING THE DIAKHITÉ BURIAL GROUND**

The following comments regarding the chronological position of Diakhité were also provided by Karklins (1989: pers. comm.):

The glass beads recovered from the Diakhité sand pit span the period from about 1500 to 1900. The two faceted seven-layered chevron beads (IIIk) are the earliest specimens and can be attributed to the 16th or 17th century. The crystal beads, similar to those called "Florida Cut Crystal" in North America, may also date to this period, but have also been found in 18th-century contexts (Marvin T. Smith 1989: pers. comm.).

The distinctively-shaped wound beads such as types WIIb, WIIC, WIId and WIIf are generally attributable to the 18th century. Some of the WIb, WIC and WId varieties probably also date to this period.

The drawn-faceted (If/IIIIf), four-layered chevron, and red-on-white and decorated wound beads are primarily of styles that span the period from around the end of the 18th century to the early 20th century. However, based on the luster, degree of patination, the quality of the workmanship and other factors, it is apparent that the earlier part of this date

range is represented. The absence of "mandrel-pressed" and Prosser-moulded beads which post-date ca. 1825 (Ross 1989) and 1840 (Sprague 1983), respectively, tends to confirm this.

While it is possible that the Diakhité site was utilized for several centuries, the temporal mixture of beads in the larger pot suggests that the earliest specimens are heirloom pieces, handed down from generation to generation or obtained from native traders. It is, therefore, probable that the Diakhité burial ground was first utilized during the 18th century and had been abandoned by the middle of the 19th century.

#### **CONCLUSION**

The beads found at the Diakhité burial site reveal that it was used by the local Serer population from the 18th century to around the middle of the 19th century. Although the dates are based primarily on data derived from archaeological sites in the eastern United States and the Caribbean (there are presently very little published comparative data from West Africa), there appears to have been very little, if any, time lag between the arrival of specific bead types in coastal West Africa, and these areas (Karklins 1989: pers. comm.). Thus, the accuracy of the dates assigned to the Diakhité beads seems assured.

As elsewhere in West Africa (DeCorse 1989; Lamb and York 1972), the heirlooming of beads seems to have been a common practice at Diakhité and hampers the estimation of accurate site-occupation dates. Such heirlooming of personal material continues to be an important cultural aspect among Senegalese women. Still counted among their most-prized possessions are beads of all kinds and metal bracelets, rings and earrings.

Although this study has been conducted as scientifically as possible, we are the first to admit that much more information would be forthcoming were an official archaeological excavation conducted employing proper field techniques and trained personnel. A systematic stratigraphic investigation of the site would, we are sure, further advance the study of beads in a little-known part of the world and uncover new

insight into the life and times of the people who inhabited Diakhité in the past.

## ACKNOWLEDGEMENTS

Many thanks to the Bead Society of Los Angeles whose grant allowed us to return to Senegal in 1989 and complete our research. Thanks also to Karlis Karklins for his patience, and for being a friend and mentor.

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