

Sorotomo: A Forgotten Malian Capital?

K.C. MacDonald*, S. Camara†, S. Canós Donnay*, N. Gestrich*, D. Keita‡

Sorotomo is one of modern Mali's largest tell sites and is connected by varied sources to the Empire of Mali (AD c.1235–1450). Unlike the majority of urban sites thus far investigated along the Middle Niger, it is associated by oral traditions with political power and military might, rather than with commercial networks. In 2006 and 2009/10 the authors conducted initial excavations at Sorotomo providing a dated occupational sequence and other evidence which have facilitated a fresh consideration of the possible historic role of the site.

Sorotomo: background to a legendary archaeological site

Sorotomo is one of the largest ancient settlements sites yet known from Mali, the principal tell extending over 72ha, not counting the area of its many satellites. Its ruins, dotted with massive baobab trees, are manifested as a series of earthen mounded plateaux, interspersed with low-lying ponding areas and scattered with pottery. Lying some 3km south of the Niger River and 23km west of Segou, Sorotomo was first noted in the literature by the French colonial administrator Robert Pageard¹ who connected its history with the legendary warlord Silamakamba Koita (**Fig. 1**). Other sources enigmatically situate Sorotomo within the epics of the Empire of Mali (AD 1235–1450). Despite this, it received no professional archaeological attention until our team first visited it, with local heritage administrator Mammadou Keita, in 2005. As a result of new initiatives promoting heritage tourism in the Segou region, a monumental archway was being built on the site in imitation of the modern entry to

Djenné, and a road sign encouraging tourists to visit the 'capital of the kingdom founded by Silamankaba Koyita' was being erected at the paved road turn-off to Konodimini – the nearest town. All this local attention called for an urgent archaeological appraisal of the locality and we therefore scheduled a return to the site in December 2006, for initial test excavations and historical enquiries, followed by more ambitious work in 2009/2010. The initial results of our combined six weeks of fieldwork are summarised below; however, it is important to begin by situating this important site in relation to local oral traditions and wider Sahelian history.

The name 'Sorotomo' means literally 'the ruins of Soro' in Bamana. 'Soro', on the other hand, is a name which can be unpacked in many different ways. As a verb it can mean 'to acquire.' As a noun it may be translated as 'a castellated stronghold' (a tempting connection), or if the elements 'so' and 'ro' are broken in two it can also be interpreted as 'amidst' (ro) 'horses' (so). This latter possibility is also tempting, given the association of the site with Silamakanba Koita, a warrior to whom are attributed vast swarms of cavalry.¹

Oral tradition and local legend may unambiguously associate the site of Sorotomo with Silamakanba Koita, but who was he and when did he live? A combination of sources suggest that he was a local governor or ruler of

* UCL Institute of Archaeology,
London WC1H 0PY, United Kingdom
kevin.macdonald@ucl.ac.uk

† ISH, Mali

‡ Université de Bamako

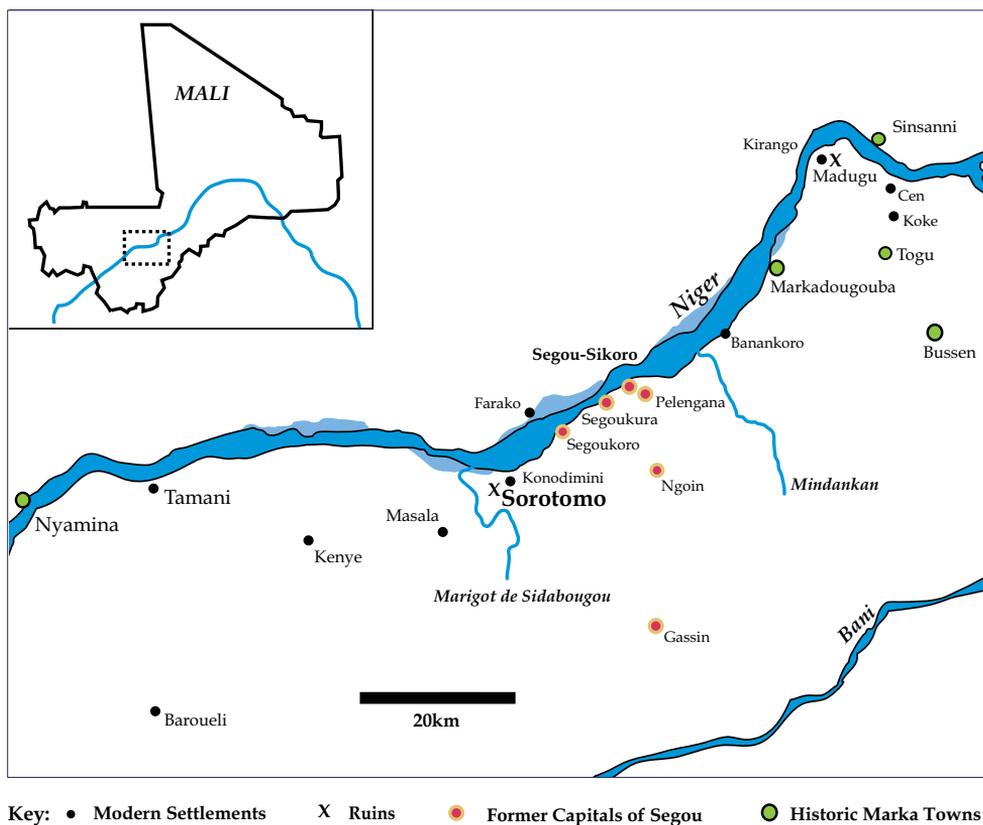


Fig. 1: Location of Sorotomo and other localities within the Segou region of Mali.

a semi-autonomous sultanate during the time of the Malian Empire. Mali's origins, according to oral tradition, go back to the early 13th century, when the heroic ruler Sunjata Keita conquered the kingdom of Sosso and began to build an empire which would stretch from the Atlantic to Gao and the Niger Bend. Most modern syntheses place the floruit of Mali between 1235 and 1450.² Unfortunately, this period is one of the least documented archaeologically for the historic core(s) of imperial Mali.

Silamakanba Koita himself is most widely known from the minor oral epic of *Nyagalen Mугan Tarawele*,³ in which he defeats Samba Douga Niakhaté, ruler of Lambidou (an area south of modern Nioro). This allows some temporal supposition since, according to Delafosse,⁴ the Niakhaté clan ruled over an ephemeral statelet that was overturned by the Diawara c.1250–70. Silamakanba is also associated with Daman N'Guillé, ancestral

figure of the Diawara, who acted as host during Daman's exile from the rule of Sundjata Keita, legendary first emperor of Mali.⁵ This too would apparently place Silamakanba's period in the mid-13th century. Nevertheless, Pageard and Dombrowsky-Hahn have been reluctant to place his reign as early as this, given critical re-evaluations of the sequence of the Diawara rulers, beginning with Daman N'Guillé, which suggest that any association with Sunjata Keita is a mere case of historical telescoping – and that a more realistic timeframe for both Daman and Silamakanba would be between 1355 and 1437 (see Boyer⁵, annexe I); regardless, all these speculative dates align Silamakanba and Sorotomo with the time of the Empire of Mali.

The role of Sorotomo under Silamakanba Koita *vis-à-vis* Mali is ambiguous. Boyer⁵, for example, states that Silamakanba was a pro-

vincial governor, yet his province also served as a place of exile from Mali – implying a degree of autonomy. Indeed, an oral tradition recorded by Monteil⁶ cites Soro as a regional power just prior to Mali (c.1200) under the rule of *mansa* Mamourou Karouma, although the chronological resolution of this tradition is questionable. Later, a ‘Zorra’ (Soro?) is listed in the *Tarikh es-Soudan* (written c.1629–55) as a ‘sultanate’ of the Empire of Mali.⁷ Undoubtedly at Mali’s apogee, in the early 14th century, Sorotomo would have fallen within the empire’s zone of governance. Indeed, Hunwick⁸ would place the evolved centre of Mali midway between modern Bamako and Segou by the mid-14th century; this would be an area not far from Sorotomo, albeit just across the Niger. Sorotomo is therefore, as we shall see, the first major settlement to be excavated within the heartland of Mali dating to the period of its apogee.

Hyenas and horses: local traditions concerning Sorotomo

Our work at Sorotomo forms part of a much larger programme of research, known as *Projet Ségou*. Directed, since 2005, by Kevin MacDonald and Seydou Camara, the project aims at an integrated oral, historical and archaeological approach to the settlement landscape of the Segou region, systematically recording local traditions and archaeological remains in tandem. As such, information relevant to Sorotomo can be drawn from the more than 70 interviews with village elders and griots conducted over three field seasons. Although this current article is not the place to consider these in a systematic and analytic fashion, some broad observations can be made.

Oral traditions concerning the origins and abandonment of Sorotomo are complex and often contradictory. Most contemporary local historians agree that it is an ancient locality, dating back to the time of Mali, if not before. However, the reason for Sorotomo’s foundation and the ethnicity of its founders (Malinke? Soninke? Bamana?) are contested.

Likewise, though most agree that Sorotomo’s end was a violent one, the possible authors of its destruction are many: Songhay military campaigns against Mali (c.1460–1500); attacks by Kong into the region (c.1650–1700); or even destruction of the old order by nascent Segou (c.1700–25). Two things upon which the diverse traditions we collected seem to agree is an almost mythic connection of Sorotomo and Silamakanba Koita with hyenas and with horses. There follow some translated quotations that reflect this theme, selected from among many collected during our fieldwork.⁹

(1) Sorotomo and horses

“According to the traditions of our fathers, Silamakanba Koita had many horses of which one cannot count the number.” Notables of Konodimini (1, 1).

“The site of Sorotomo is that of Silamakanba Koita. He had more than 100,000 horses.” Konimba Coulibaly, village head of Gassin (11, 2).

“When he rose up to go and conquer another place, he would have trees cut down and placed across the road. His cavalry would then pass over them. So numerous were the horses that they would continue until their hooves had cut the tree trunks in two. At that moment he would say ‘Stop, that’s enough horses!’” Zoumana Coulibaly, Marabout, Dougoukouna (10, 7).

(2) Sorotomo and hyenas

“Sorotomo is the place where there are many hyenas.” Abin Sanogo, town elder, Busen (4, 4).

“There are so many hyenas around that place [Sorotomo] that on the day of a marriage, if a hyena did not pass through the town, it was said the marriage would not last long.” Konimba Coulibaly, village head of Gassin (11, 2).

“It is there where they had all the hyenas. The hyena was the totem of Konodimini [the nearest modern settlement to Sorotomo]. These hyenas would not attack people, but every year they would offer them cattle. When a woman at Konodimini goes out of the village a hyena follows her as a protector until she returns to the village...”
 Dramane Couilably, Former Deputy Mayor of Segou, Dougoukouna (39, 5).

While *prima facie* these two animal connections have nothing to do with one another, at a deeper level there may be an association. In Mande thought hyenas and warriors are often associated, thus the proverb: ‘Where armies march, hyenas follow [to consume the dead]’. Today, at least, living hyenas would seem to be no more common around Sorotomo than elsewhere in the region. The totemic association of Konodimini (and by association Sorotomo) with these scavengers suggests an aggressive military heritage. By the same token, horses are the very symbol of the military might of the Sahelian Empires. To have cavalry is to have the power to raid, to conquer and to inflict governance.^{10,11} Taken together, these elements of Sorotomo’s oral traditions would suggest that Sorotomo was a centre of military and, consequently, political power.

Sorotomo and its landscape

Sorotomo is situated 3km south of the Niger on ground which gradually rises as one moves away from the river. When asked why both Sorotomo and Konodimini were situated at one remove from the Niger, locals stressed that only fisherfolk should live directly next to the water – reminding us that the riverfronts of Segoukoro and Segou had originally been Somono (fisherfolk) settlements – and noting that Bamana or Malinke want land all around them to cultivate. Sorotomo does not appear to have occupied a geographically strategic situation – it is not at a fording point and it commands no notable views. However, it is

located near key iron resources (the Souloukoutou mines, see below), despite the fact that the settlement has, as yet, evidenced only limited iron-working debris.

Our plan of the site (**Fig. 2**) is derived from a combination of methods, in the absence of sufficient financial resources to employ a ‘total station’. It is derived from two GPS surveys of the site, coupled with level and stadia-rod work, and checked against satellite imagery. Thus, while it is only an intermediate step before a full topographic survey can be performed, it does give an accurate representation of the sites’ various plateaux, ponding areas, and overall dimensions. The main mound’s 72ha area makes it second in dimensions only to the site of Toladié in the Mema – for comparison the main mound of the UNESCO World Heritage site of Jenné-jeno is 33ha. About half of Sorotomo is lightly stratified, with only c.1m of deposits, but the northern half of the site, and one mound rising at its southern extent, appear to have seen more intensive or longer occupation, and feature up to 4m of deposits. One remarkable aspect of the site’s topography is a greater than usual number of ponding areas (*mares*) of which there are seventeen (see **Fig. 2**). Normally, traditional Malian mudbrick towns retain a few of the spoil pits used for making architectural mud to serve as water sources for livestock and to provide irrigation for gardening areas. The rather excessive number evident on the site could indicate the maintenance of a larger number of livestock than usual – and Silamakanba’s famed cavalry immediately comes to mind.

The immediate satellites of Sorotomo are limited in number. Two have attracted a particular legendary status. In 1959 Pageard recorded them as being referred to as ‘Soro Missiri’ (the Mosques of Soro); a tradition still adhered to today. While not wishing to dispute the ascribed religious character of these mounds, the smaller of the two, known as the ‘Petite Mosquée’, measures only 0.5ha and corresponds in form and surface features more to a tumulus than a mosque, being covered with a strong lateritic carapace, and lack-

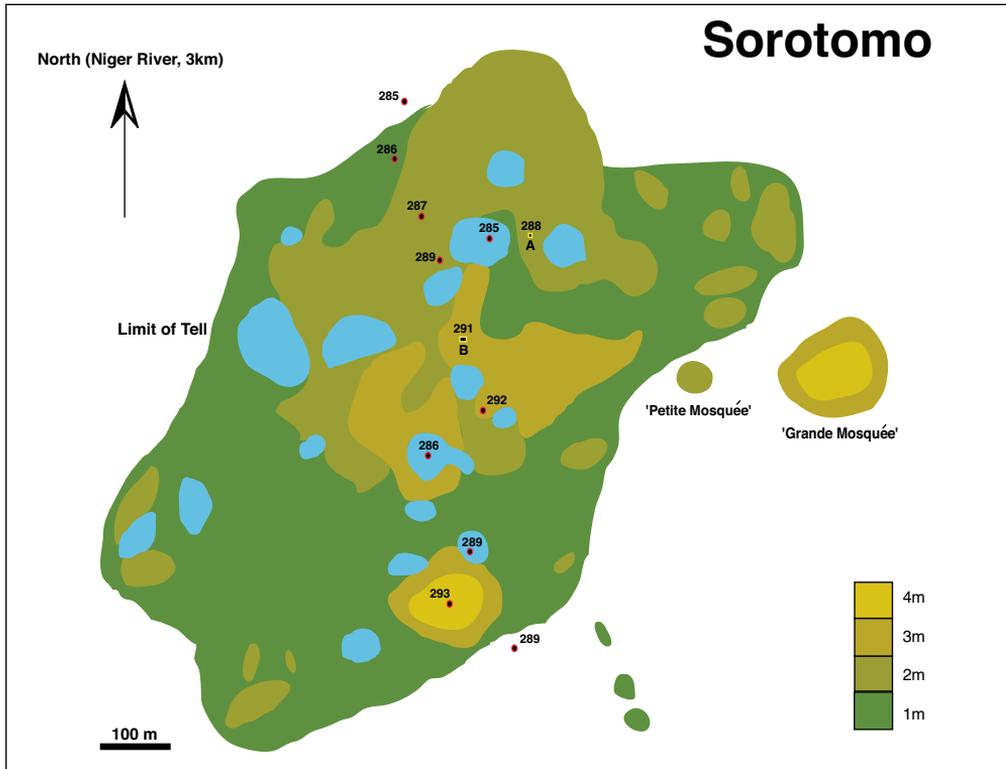


Fig. 2: Plan of Sorotomo.

ing artefacts. The 'Grande Mosquée of Silamakanba Koita', on the other hand, covers over 2ha, featuring structural remains and dense concentrations of potsherds. The other three satellites, in an alignment south of the site, are marked by strong laterite pebble content in the soil, potsherds and a gentle elevation. All the immediate satellites of Sorotomo feature pottery assemblages comparable to that of the main site which is described below.

Areas farther afield, in a 2.5km radius of the site, are as yet incompletely surveyed. However, two small mound clusters, featuring pottery contemporary with Sorotomo, are situated between the site and Konodimini (to the north-east). Additionally, 1km south-east of Sorotomo lie the legendary Mines of Souloukoutou – a term meaning the 'the forest of the hyenas'. This deeply hazardous area covers 6ha of dense acacia bushland, with well over 100 open, vertical mine shafts (79 were recorded in a 50% sample of the

area), descending 8m or more into the earth (**Fig. 3**). We know of no comparable area in Mali, besides perhaps some localities in the Bandiagara. What is deeply perplexing, however, is that no smelting sites have yet been found in the region, other than one dating to the time of Segou (c.19th century) – and the site of Sorotomo features only occasional pieces of working slag. The Souloukoutou mines, at least above the surface, seem denuded of traces of material culture. Thus, the purpose of this proto-industrial mining activity remains mysterious – as does the date of the mines themselves which are associated only by local tradition with Sorotomo.

Summary of excavation results from the 2006 and 2009/2010 seasons

The initial priority of work at Sorotomo was to establish a dated occupation sequence of the site, adding a verifiable archaeological dimension to the endless traditional

speculation as to its age. With a limited time-frame and resources in 2006, it was decided to make an initial assay at dating the site's abandonment. A 4 x 4m test unit was opened near the centre of the northern extremity of the mound and termed Unit A (**Fig. 2**). Elements of rammed earth rectilinear dwellings were revealed, along with a space paved with fine, polished lateritic pebbles. Two hearths were exposed, one in the paved area, another in a corner of the rammed earth structure. The conventional C14 dates which they provided are in accord with one another, with a combined one sigma calibration-range of AD 1400–50 (**Table 1**). These dates were run on fragments of firewood, probably decades older than the actual hearths, so an abandonment date for the area of Unit A was judged likely to be in the mid- to late 15th century.

In 2009 we returned to the site, intent on completing Unit A. We also began digging another exposure (Unit B) on a higher, more central portion of the site.

The land around Unit A rises just 2m above the surrounding plain, and our continued excavations there reached sterile soil at a depth of only 1.2m, perhaps indicating that the site was originally built on a slight natural rise. Unit A contained three horizons, or layers, of coursed earth buildings, each including areas paved with fine polished laterite pebbles (**Fig. 4**). We have encountered similar paved areas in traditional villages, often in courtyards or in bathing areas. However, at Sorotomo, such pebbles also appear to have been used for paving interior spaces. Charcoal from a hearth at the base of



Fig. 3: Seydou Camara looking into a mine shaft at Souloukoutou.

the lower horizon provided a calibrated one sigma date-range of AD 1210–80.

At Unit B we gradually opened a large exposure, 10 x 6m at its greatest dimensions, which revealed an abandonment floor. The excavated area comprises a modular group of round and rectilinear coursed earth structures representing a portion of a single compound comprising eight spaces, some of which may have been open courtyard areas and three of which were paved with laterite gravel (**Figs 5 and 6**). Evidence from the living floors implies a brutal and sudden abandonment, with possessions – from pots and grinding stones, to spindle-whorls and cowries – left in place. In addition to a scattering of apparently scavenged human remains (see below), there were found an iron arrowhead and a spear point. In the roundhouse were recovered: 10 intact pots, 7 cowries, 3 spindle-whorls, a glass bead and an arrowhead; in the attached rectilinear spaces were found: 25 pots, 29 cowries, 3 spindle-whorls and 2

Unit-Context/Horizon	C14 date	Lab Number	1 Sigma Cal.	2 Sigma Cal.
A-7, Upper	470 ± 60 bp	Beta 236442	AD 1420 - 1450	AD 1400 - 1500
A-11, Upper	520 ± 60 bp	Beta 236443	AD 1400 - 1440	AD 1300 - 1460
B-6, Upper	590 ± 40 bp	Beta 274305 AMS	AD 1310 - 1410	AD 1290 - 1420
BE-38, Lower	760 ± 40 bp	Beta 274306 AMS	AD 1240 - 1280	AD 1210 - 1290
A-34, Lower	790 ± 60 bp	Beta 274304	AD 1210 - 1280	AD 1160 - 1290

Table 1: Radiocarbon dates from the 2006 and 2009/10 excavations at Sorotomo; all dates are on wood charcoal.



Fig. 4: Nick Gestrich contemplating Unit A profiles; note the thin lines of gravel pavements.

glass beads. The spear point was located in the open area to the west of the roundhouse. Taken as a whole, the assemblage implies at least a rapid abandonment and, potentially, the sacking of this portion of the settlement. A radiocarbon date, on a burned structural timber overlying the pots in the roundhouse, produced a date of c.1310–1410. This appears too old when compared to the abandonment dates from Unit A, but could be due to the timber having been curated as a roof beam or other structural support.

It was decided to undertake a 1 x 4m 'deep sounding' at the western extremity of the exposure, termed Unit BE. This unit passed through seven successive living floors, and reached a depth of 2.4m without attaining sterile soil. Given the height of the land around Unit BE, we were probably only 0.5m or less from sterile when excavation time ran out. A hearth from the basal context was dated to 1240–80. This is consistent with the foundation date of Unit A, when the remaining depth is taken into account.

In summary, our initial excavations at Sorotomo appear to bear out chronological hypotheses derived from the sequencing of oral traditions and Arabic texts. Sorotomo looks to have been founded in the early 13th century, at or just before the birth of the Mali Empire, and abandoned in the 15th century at the time of imperial Songhay's initial military surge into the region.

Architecture

The architecture of Sorotomo lacks mud-brick, instead employing coursed earth technology. This is indicative of a technological demarcation from the Middle Niger

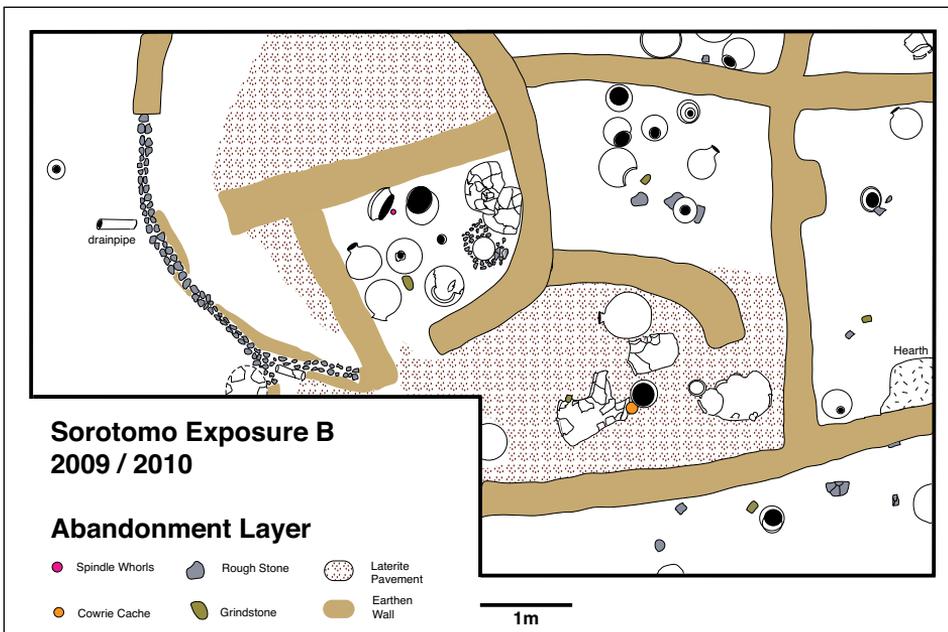


Fig. 5: Plan of Unit B abandonment layer.



Fig. 6: Part of Unit B under excavation.



Fig. 7: A jar with braided strip roulette from the abandonment layer of Unit B.

area where mudbrick is amply documented from the 13th century and before, e.g. Jenné-jeno¹² and Dia.¹³ Rightly or wrongly, this technology is often associated both with Islamization and the rise of specialist builders, or masons.¹⁴ The absence of mudbrick at Sorotomo associates it with groups which have used coursed earth into relatively recent history, including the Malinke and Bamana peoples of Segou and the Upper Niger,¹⁵ the Diawara of Sahelian western Mali,⁵ and Gurunsi (Gur) speakers of Burkina Faso.¹⁶ Similarly, these ethnographically recorded traditions also feature the same mixture of rectilinear and rounded forms as were observed at Sorotomo (**Fig. 6**). The presence of flat wood and earth roofs – rather than otherwise universal thatch – is implied by the presence of typical Sahelian drainpipes recovered from the abandonment layers of Unit B. This is an unusual combination with

coursed earth, but it is well documented in Burkina Faso.¹⁶ Interestingly, the curious double stone-lined foundation exposed beneath the roundhouse wall in Unit B conforms with foundations excavated at Niani Station 1 by Filipowiak,¹⁷ where they are associated with a 16th-century date. Taken together, the architecture of Sorotomo tends to confirm an association with the more southerly and westerly regions normally associated with the Empire of Mali.

Pottery

The pottery of Sorotomo shows remarkable stability over time in form, decorative motifs and methods of formation. Comparable pottery is recorded from the surface of regional sites known to have been occupied until the early 18th century, such as Madugu.¹⁸ Strong continuity is, however, a characteristic of many Malian ceramic traditions; for example, recognisable shifts in ceramic assemblages are only apparent in 450 to 650 year blocks at Jenné-jeno.¹² The idea of a 500-year ceramic phase (1200–1700) for Sorotomo is thus not unprecedented.

What defines the Sorotomo, or Pre-Segovian, ceramic tradition? Sorotomo pottery commonly includes everted rimmed jars and *jattes* (c.60%), simple rimmed bowls (c.20%), coupled with larger thickened rimmed vessels (15%), and – more rarely (c.5%) – ‘y-rims’ (bifurcated rims, presumably made to receive pot lids). Later Pre-Segovian assemblages, such as the 17th to 18th-century assemblage of Madugu, have proportionally greater quantities of thickened and y-rims.¹⁸ In terms of surface treatment, Sorotomo ceramics regularly have a well-burnished band of red slip below their lip, or on their collar, with the remainder of the vessel being covered by roulettes: cylindrical objects or cord manipulations rolled across the surface of pots before firing (**Fig. 7**). These roulettes are comprised of three principal types: (i) folded strip (or ‘accordion pleat’);¹² (ii) braided strip roulettes (or ‘Scoubidou’);¹⁹ and (iii) fish ver-

vertebrae roulettes, made either from the vertebrae of eel-like species, like *Gymnarchus niloticus*, or by modifying the vertebrae of other fish taxa by cutting the spines off the centrum and polishing the resultant cylinder (Fig. 8; Table 2). Twisted cord roulettes (or 'TGR'),²⁰ also present, are the simplest and most ubiquitous of cord roulettes, yet they are comparatively rare at Sorotomo. Braided strip roulettes form the only temporally diagnostic attribute of the assemblage. They appear suddenly during the middle occupational horizon in Unit A, also ceasing some 60cm above the final depth achieved by the deep sounding in Unit B. The appearance of this complex (helical) braided roulette, about the 14th century, known only from more easterly localities in Mali before this period,¹⁹ may become a useful local dating tool.

Initial observations of the 35 intact ceramic vessels recovered from the abandonment layer of Unit B have already provided information on the techniques used in forming these pots. Formation techniques are determinate for 17 examples: 11 being *moulage sur forme convexe* (moulding the bottom third to half of the pot over a convex form, finished with coiling), and 6 being *creusage de la motte* (digging out of the base from a lump of clay, coupled with coiling and finished with a rudimentary *tournette*).²¹ Remarkably, both are used on pots of identical forms (cross cutting the formal classes of jars, jattes and carinated vessels), and decorated with identical motifs. Given the similar outward results achieved, this is suggestive of two separate potting lineages, with similar formal conceptions, in putting

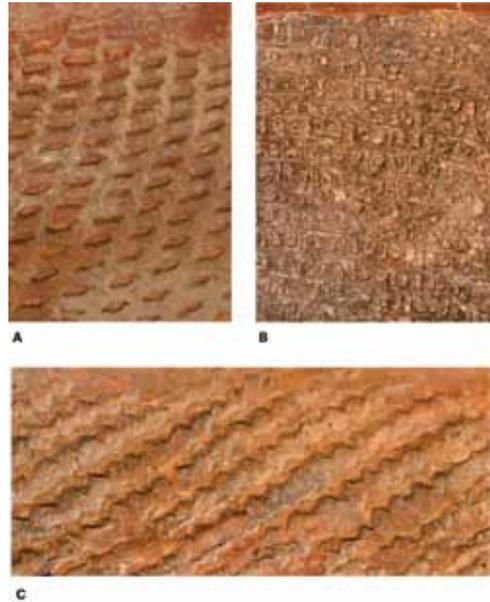


Fig. 8: The three main roulette types of Sorotomo: (a) folded strip; (b) fish vertebrae; and (c) braided strip.

into the overall finished assemblage of Sorotomo. Today, *moulage sur forme convexe* is practised amongst the Malinke, Bamana and some Dogon groups, whereas *creusage* is documented with the Bobo and some Dogon groups.^{21,22}

In terms of preliminary inter-regional comparison with archaeological assemblages, the strongest comparisons of rim form and roulette décor techniques can be drawn with ceramics recovered during survey and excavation in the Monts Manding region of Mali.²³ This is the traditional heartland of the Empire of Mali, situated to the south-west of the Segou region. In addition, carinated vessels from Sorotomo show strong resemblances in décor layout with identical forms

Occupational Horizon	Folded strip	Twisted Cord	Fish Vertebrae	Braided Strip
Upper (c.1400–1500)	43.8%	2.4%	7.4%	12.5%
Middle (c.1300–1400)	36.9%	3.9%	7.1%	12.3%
Lower (c.1200–1300)	64.7%	4.2%	18.3%	0%

Table 2: Roulette types as an overall percentage of decorative motifs in the three occupational horizons of Unit A.

from Jenné-jeno (Phase IV: AD 900–1400), situated in the Inland Niger Delta. Thus, preliminary observations of the assemblage show a mixture of traits from adjoining regions, whether areas traditionally claimed by the Malinke to the west, or by a wide variety of groups within and bordering the Inland Niger Delta.

Imports

Long-distance trade items are relatively rare at Sorotomo, with those from our excavations comprising: 7 glass/faience beads, 2 copper-alloy objects and 43 cowries. Imports are absent in the lower horizon of A and in the earlier deposits of the deep sounding of Unit B, although given the smaller sample size in these layers it would be premature to draw any conclusions from this. Import finds in abandonment and middle deposits are comparable in variety if not in number, again given the difference in sample size.

Glass beads from the site include two tubular, drawn (striped) glass beads, probably of Venetian origin, from the abandonment layer in Unit B. Given the 15th-century date of this layer, these correspond well with the initial 15th-century floruit of Venetian glass bead making.²⁴ Finds from the middle layers of Unit A include a thin tubular blue glass bead and a faience bead, both of as yet indeterminate origin, as well as a fragmentary black glass bracelet of notional Maghrebian origin. More work on sourcing Sorotomo's glass objects remains to be done.

Copper-alloy objects include a finely decorated garment pin, from the abandonment layer of Unit A, and a globular weight, from a rubbish pit cut from the abandonment layer of Unit B. This apparent scarcity of copper-alloy objects is curious, given their prominence in trans-Saharan and inter-regional trade during this period.

Cowries are frequently mentioned in Arab accounts of the trans-Saharan trade, from the 11th century onwards, and textual accounts confirm them as acting like a currency – at least by the time of the Mali

Empire.²⁵ The great majority of cowries recovered from Sorotomo (39 of 43) were found in abandonment contexts, including a cache of 12 cowries (perhaps within a pouch) hidden (?) beneath a pot. Cowries from both abandonment and middle layers include those with their backs removed (for stringing), as well as unmodified cowries. The relatively large number of cowries from the abandonment layer, although probably only the equivalent of pocket change, is nevertheless another pointer to the brusque abandonment of Sorotomo.

Faunal and human remains

Bone preservation in both units was excellent and initial sorting of the faunal remains indicates an assemblage which appears to be consistent across space and time. The primary taxa encountered include: sheep and goat (*Ovis/Capra*); cattle (*Bos sp.*); a variety of savanna antelope; chicken (*Gallus gallus*); dog (*Canis familiaris*); fish (especially the Nile Perch, *Lates niloticus*); and equids. In addition, human remains were encountered.

Although not yet quantified, small and large livestock are the most ubiquitous taxa, reflecting a subsistence economy largely reliant on pastoral products (whether from a mobile pastoral segment, or local stock-keeping). Fish are relatively rare and, when present, tend to be large, quality, deep-water fish, such as the Nile Perch, perhaps selectively acquired from nearby fisherfolk. The botanical element of the economy is not yet accounted for, with flotation samples awaiting analysis, although historically common grains (such as millet or sorghum) are likely to have been the major staples.

There are equid remains from multiple contexts at the site, but they are only diagnostic of taxon in the middle horizon of Unit A, in which there was a cluster of remains, probably the hind limb from one individual. On the morphological basis of a distal tibia, this appears to be horse rather than donkey – and measurement of a metatarsal (GL 232mm) indicates an individual of 118–22cm with-

ers height, depending on the index used.²⁶ This falls at the lower end of the size range of modern Sahelian ponies (c.120–45cm).²⁷ At the risk of being presumptive, this measurement is corroborated by early Arabic accounts that uniformly describe the horses of the early polities of the West African Sahel as being small, pony breeds.¹¹

As mentioned above, a scattering of human remains (three first phalanges and one second phalanx of the hand, and a skull fragment, which may all derive from a single individual) was found across three room spaces in the abandonment layer of Unit B; two specimens feature gnaw marks of rodents and dog-sized carnivores. Contextually, they come from fill overlying intact pot groups and living floors. Taken together, this may be a further indication of the violent abandonment of the site and thus these remains may represent one or more individuals whose bodies were left in the open, to be scattered by scavenger activity.

Keying into the historical conundrum: Sorotomo as a capital

Sorotomo is the first major settlement within Mali's core territory to be dated conclusively to the period of the historical empire. Niani, Mali's speculative first capital, has only furnished C14 dates from before or after the key 13th to 15th-century period.¹⁷ This indicates that, at best, it was a late imperial seat of power. The issue of ancient Mali's capital has thus been a matter of much debate – and is as yet unresolved. There is currently general agreement among historians that Mali's first centre(s) of power would have been located in the so-called 'Pays Manding', c.200km south-east of Sorotomo. There is, however, substantial historical evidence suggesting a rapid shift of power towards the north-east during the empire's apogee.^{8,28} A shift towards the Segou region would have made sense commercially, as it would have enabled direct riverine communication with large trading centres such as Jenné and Timbuktu, avoiding the rapids in the stretch of the Niger south-west of Nyam-

ina and Koulikoro. Furthermore, the area immediately west of Ségou, especially near Nyamina, was initially the favoured location for ancient Mali's capital on the basis of medieval Arabic texts and oral traditions.^{29,4}

Nevertheless, as has been tellingly pointed out by Conrad,²⁸ the entire notion of 'capital' is a misleading Arabic and European formulation, having little resonance with local understandings of power and its organisation. Instead, oral traditions describe the notion of 'king's towns', centres of power linked to royal courts, which could change over time (different rulers established their own towns) and could be multiplied over space (a ruler could have several towns simultaneously). This observation fits well with the results of the Ségou Project, which uncovered a local understanding of the Ségou state's (18th-century) historical landscape in which an 'eternal landscape' of trading towns and sites of ritual importance co-existed with a more ephemeral and changing landscape of political power, expressed in the form of king's towns and other forms of state settlements, including points of regional governance, garrisons and managed centres of (slave) agricultural production.³⁰ Indeed, from the point-of-view of historical traditions and legitimation, it is interesting that Sorotomo stands within the heartland of the future power of Segou, an area defined by the Marigot de Sidabougou and the Mindankan (**Fig. 1**).

So, where does Sorotomo fit historically? As our excavations have revealed, Sorotomo was a very large and complex settlement. Its dates coincide with the Mali Empire's expansion and apogee – and its pottery corresponds with known assemblages from as far west as the Monts Manding. Likewise, its architecture has affiliations with territories to the south and west of the Middle Niger, including traditional zones of Malinke presence. The site's expanse, coupled with the relative thinness of most of its deposits (apart from the scattered 'plateau' areas), indicates a rapid – and brief – expansion;

this is in keeping with the notion of state-established settlements. Its many ponding areas suggest numerous livestock; perhaps horses, as documented amongst the faunal remains. There is no superficial evidence for a town wall, although its perimeter has not yet been archaeologically tested and, in any case, early Arabic accounts refer to smaller interior redoubts within 'royal settlements' rather than to perimeter walls.³¹ Exotic trade items, while excavated in limited quantities, are virtually invisible on the surface and are by no means comparable with those found on more important commercial settlements (e.g. Gao and Jenné-jeno). In accordance with oral traditions, the site appears to have met a violent end at a time of inter-polity warfare – probably at the hands of a Songhay military campaign in the mid- to late 15th century. All of this, coupled with oral traditions, suggests a type of settlement heretofore virtually unexcavated in Mali – a political power centre rather than an urban commercial entrepot.

Whether Sorotomo was or was not a 'capital' is to a large extent a misleading question, given that (as explained above) this term may be irrelevant to understanding the political landscape of ancient Mali. Instead, it is far more productive to ask: what was its (changing) functional role within the Empire? Oral traditions claim it as the centre of a semi-autonomous sultanate of the Empire and the military base of at least one great warlord: Silamakanba Koita. Yet, if the political centre of Mali did shift to the region of Segou c.1300, why should there be a semi-autonomous sultanate so close by? Much will depend on upcoming survey work by the authors in areas to the west of Sorotomo and on both sides of the Niger. Although we are not yet able to describe with confidence the changing role of Sorotomo within ancient Mali, our initial excavations and historical research around Sorotomo have given us a tantalising idea of its political, rather than mercantile, character.

Acknowledgements

We would like to thank the British Institute in East Africa, the Bremer Stiftung für Kultur- und Sozialanthropologie and the UCL Institute of Archaeology for their financial support of our research. Additionally, we would like to express our gratitude to all those who participated in the excavations, particularly site foreman 'Baba' Coulibaly, and to the mayor, elders and people of Konodimini whose visits made our labours worthwhile.

References

- 1 Pageard, R. (1959), 'Note sur les Kagoro et la chefferie de Soro', *Journal de la Société des Africanistes* 29, 239–72.
- 2 Levtzion, N. (1981: 3rd ed.), 'The early states of the western Sudan', in *History of West Africa: Volume One*, Harlow: Longman, 129–66.
- 3 Dombrowsky-Hahn, K. (2001), *Nyagalen Mугan Tarawele: une épopée Bambara racontée par Bakoroba Koné*, Köln: Rüdiger Köppe Verlag.
- 4 Delafosse, M. (1912) [1972], *Haut-Sénégal Niger* (3 vols), Paris: G-P Maisonneuve et Larose.
- 5 Boyer, G. (1953), *Un peuple de l'Ouest soudanais: Les Diawara*, Mémoires de l'IFAN 29, Dakar: IFAN.
- 6 Monteil, C. (1928) [1968], *Les empires du Mali: étude d'histoire et de sociologie Soudanaises*. Paris: G-P Maisonneuve et Larose.
- 7 Houdas, O. (trans.) (1913–14) [1964], *Tarikh Es-Soudan*, Paris: Adriene-Maisonneuve.
- 8 Hunwick, J.O. (1973), 'The mid-fourteenth century capital of Mali', *Journal of African History* 14, 195–206, DOI: <http://dx.doi.org/10.1017/S0021853700012512>.
- 9 SEGOU 2005 (n.d.), *Project Archives*, transcripts of taped interviews in Bambara, translated into French, held at the UCL Institute of Archaeology and the Institut des Sciences Humaines, Bamako [numbers following the archive citation are the transcript number and page number of that transcript].

- 10 Goody, J. (1971), *Technology, Tradition and the State in Africa*, Cambridge: Cambridge University Press.
- 11 Law, R. (1980), *The Horse in West African History*, Oxford: Oxford University Press.
- 12 McIntosh, S.K. (ed.) (1995), *Excavations at Jenné-Jeno, Hambarketolo, and Kaniana (Inland Niger Delta Mali), the 1981 Season*, Berkeley: University of California Press.
- 13 Bedaux, R., Polet, J., Sanogo, K. and Schmidt, A. (eds) (2005), *Recherches Archéologiques à Dia dans le Delta Intérieur du Niger (Mali): bilan des saisons de fouilles 1998–2003*, Leiden: CNWS Publications.
- 14 Prussin, L. (1986), *Hatumere: Islamic design in West Africa*, Berkeley: University of California Press.
- 15 UNCHS Habitat (1983), *Analyse et Evaluation de l'Habitat Traditionnel au Mali. Projet MLI-80-001*, Bamako: Programme des Nations Unies pour le Développement.
- 16 Bourdier, J-P. and Minh-ha, T.T. (1985), *African Spaces: designs for living in Upper Volta*, New York: Africana.
- 17 Filipowiak, W. (1979), *Études archéologiques sur la capitale médiévale du Mali*, Szczecin: Muzeum Narodowe.
- 18 MacDonald, K.C. and Camara, S. (2011), 'Segou: warfare and the origins of a state of slavery', in P.J. Lane and K.C. MacDonald (eds), *Slavery in Africa: archaeology and memory*, Oxford: Oxford University Press (for the British Academy), 25–46.
- 19 Mayor, A. (2010), 'Braided strip roulette', in A. Haour, K. Manning, N. Arazi, O. Goselain, N.S. Guèye, D. Keita, A. Livingstone Smith, K. MacDonald, A. Mayor, S. McIntosh and R. Vernet (eds), *African Pottery Roulettes Past and Present*, Oxford: Oxbow, 181–91.
- 20 Soper, R. (1985), 'Roulette Decoration on African Pottery: technical considerations, dating and distribution', *The African Archaeological Review* 3, 29–51, DOI: <http://dx.doi.org/10.1007/BF01117454>.
- 21 Gallay, A., Huyseom, E., Mayor, A. and de Ceuninck, G. (1996), *Hier et aujourd'hui: des poteries et des femmes. Ceramiques traditionnelles du Mali*, Geneva: l'Université de Genève.
- 22 Frank, B. (1998), *Mande Potters & Leatherworkers: art and heritage in West Africa*, Washington (DC): Smithsonian.
- 23 MacDonald, K.C. (1997), 'Koroukorokale revisited: the Pays Mande and the West African microlithic technocomplex', *African Archaeological Review* 14, 161–200, DOI: <http://dx.doi.org/10.1007/BF02968406>.
- 24 Dubin, L.S. (2009), *The History of Beads: from 100,000 B.C. to the Present*, Revised and Expanded Edition, New York: Abrams.
- 25 Hogendorn, J. and Johnson, M. (1986), *The Shell Money of the Slave Trade*, Cambridge: Cambridge University Press.
- 26 Johnstone, C. (2004), 'A Biometric Study of Equids in the Roman World', unpublished PhD dissertation, University of York.
- 27 MacDonald, K.C. and Hutton MacDonald, R. (2000), 'The origins and development of domesticated animals in arid West Africa', in R. Blench and K. MacDonald (eds), *The Origins and Development of African Livestock: archaeology, genetics, linguistics and ethnography*, London: UCL Press, 127–62.
- 28 Conrad, D.C. (1994), 'A town called Dakalajan: the Sunjata tradition and the question of Ancient Mali's Capital', *Journal of African History* 35, 355–77, DOI: <http://dx.doi.org/10.1017/S002185370002675X>.
- 29 Binger, G. (1892), *Du Niger au Golfe de Guinée par le pays de Kong et le Mossi*, Paris: Librairie Hachette.
- 30 MacDonald, K.C. and Camara, S. (in press), 'Segou, slavery, and Sifinso', in J.C. Monroe and A. Ogundiran (eds), *Landscapes of Power in Atlantic West Africa*, Cambridge: Cambridge University Press.
- 31 Levtzion, N. and Hopkins, J.F.P. (eds) (2000: 2nd ed.), *Corpus of Early Arabic Sources for West African History*, Princeton: Markus Wiener Publishers.