

■ SENEGAL

The Siin Landscape Archaeological Project: Preliminary Results

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Introduction

This article reports on archaeological and historical fieldwork carried out in western Senegal from 2001 to 2004. This research integrates different methods and lines of evidence to document long-term changes in socio-political organization and material culture in the historical kingdom of Siin during the AD 500-1900 period. By juxtaposing oral, textual, and material sources, the project promotes a critical look at conventional historical scenarios for the region, and strives for a closer understanding of the effects of political-economic conditions on local societies and their archaeological landscapes. The project's field methodology and preliminary results from the archaeological portion of the research are discussed in this paper.

Historical and Archaeological Background

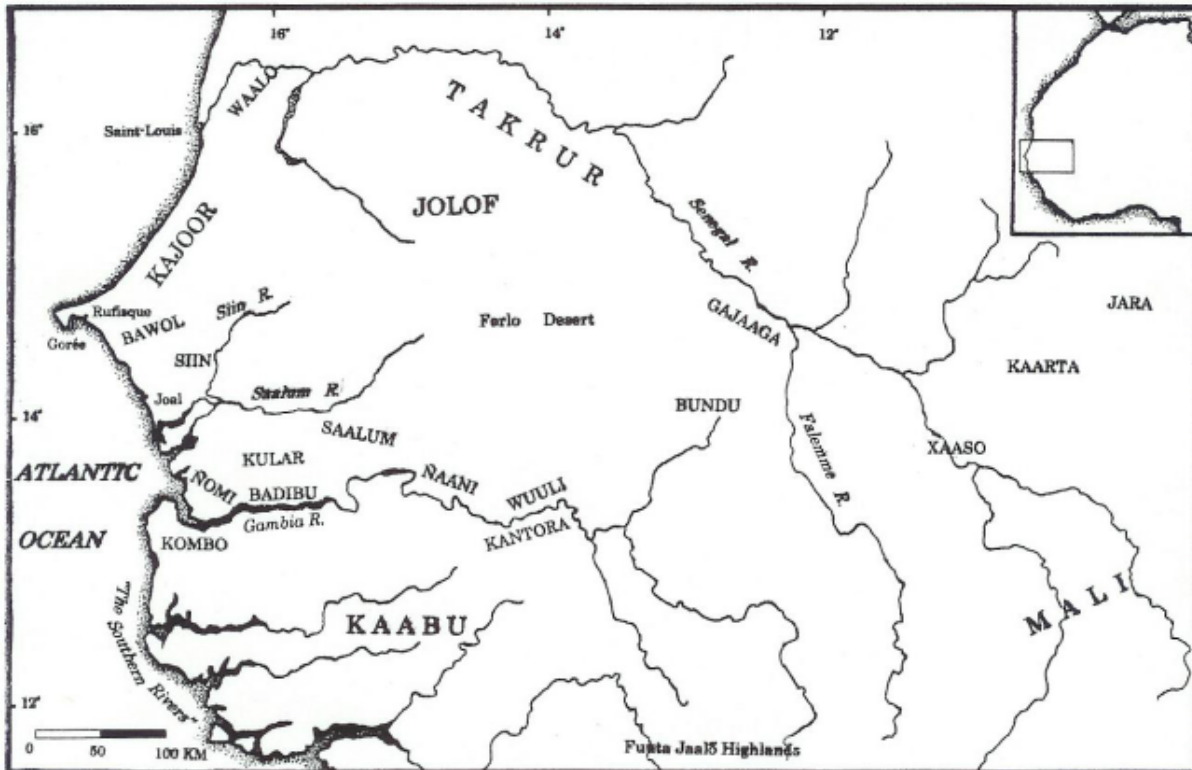
Siin is a medium-sized historic province abutting the Atlantic façade of west-central Senegal (Figure 1). Oral traditions and written documents portray the region as a vibrant cultural frontier, which oscillated between centralized and more dispersed forms of socio-political organization over the past 1500 years. Though details may vary, stories generally highlight the emergence of a kingdom some time around the mid-14th century, after a group of Mandinka exiles from the Kaabu empire moved into the area and integrated loosely organized village communities under a central political authority (Becker et al. 1991; Diouf et al. 1972; Sarr 1986-1987). After a brief period

during which the kingdom was annexed by the neighboring Jolof empire, Siin regained its independence in the late 15th century, possibly as a result of the new economic and political opportunities afforded by the growing European coastal presence (Boulègue 1987). Though quite fragmentary before the 19th century, the documentary record describes the Siin as a modest participant in the Atlantic commerce, but one increasingly influenced by changing political-economic conditions and growingly dependent on imported goods for political stability (Barry 1998; Curtin 1975). This period of instability and rapidly changing socio-economic relations was the prelude to more dramatic changes prompted by Senegambia's immersion into France's colonial empire and the capitalist world economy (Klein 1968; Mbodj 1978).

This historical picture, however, is an incomplete one, shaped by the limitations of available evidence. Existing histories are diminished by oral traditions' foggy timelines, the cultural distance and partiality of European descriptions, the fact that both records are prone to ideological license and stop at the threshold of the remote past, and thus demand critical attention. Historical accounts also beg to include an understanding of how local societies responded to political economic changes over time and how these responses were expressed in Siin's material landscape. Archaeology is well positioned to address questions of regional complexity, yet research to date has contributed surprisingly little to historical debates surrounding the Siin-Saalum. Studies have attended to burial and skeletal remains, and valuable insight has resulted from excavations at a handful of stone circles and funerary mounds (Descamps et al. 1977; Thilmans and Descamps 1982; Thilmans et al. 1980). This research, however, has not produced systematic evidence on culture-historical sequences, material culture distribution, habitation sites and settlement patterns – the building blocks for a regional perspective on long-term social change.

The Siin Landscape Archaeological Project (SLAP) was initiated in 2001 to address these lacunae, by gathering archaeological material that could paint a more inclusive picture of Siin's past. The SLAP intended to promote a long-term, regional perspective, which would examine Iron Age and post-European contact contexts within a single analytical framework, while being sensitive to variation at multiple scales (S. K. McIntosh 2001; Stahl 2001). A core com-

Figure 1: Senegambian polities around 1700 (after Curtin 1975).



mitment of the research was to develop archaeological baselines for the Siin that could provide initial insight into trade, subsistence economy, production, technology, and spatial organization, and contribute to a growing body of archaeological evidence for the Senegambia (Bocoum and S. K. McIntosh 2002; Guèye 1997; Lawson 2003; S. K. McIntosh et al. 1992; Thiaw 1999, 2003). Primary research objectives thus included a surface survey of the region, complemented by the excavation of sites spanning the past two millennia. Chronological control and the construction of a preliminary ceramic sequence became central priorities of the project. Another critical focus of the research was placed on habitation sites and settlement histories, generally seen as an important source of insight on past political organization (McIntosh and McIntosh 1993; Pradines 1996). Finally, the project also comprised a phase of original archival research to supplement archaeological information with independent evidence on coastal societies from the turbulent years of the Atlantic trade to colonial occupation.

Methodology and Fieldwork

The 2001 fieldwork involved a short reconnaissance in the vicinity of the villages of Diakhao and Joal. This work afforded preliminary information on site location, structure and density, surface assemblages, and conditions of preservation, which was used to orient subsequent laboratory and field research in 2002 and 2003.

I later returned to Senegal in 2002 to familiarize myself with artifact collections at the Institut Fondamental d’Afrique Noire (IFAN), and prepare for the data collection phase of my research, which took place in 2003. From February to July, and in November, we conducted a systematic surface survey to document and inventory regional sites. Three 20 x 10 km survey zones were defined around the villages of Fatick, Diakhao and Mbissel, which oral and documentary traditions associate with political formation and commercial activity (Figure 2). Survey quadrats were selected using both probabilistic and judgmental means, to produce a statistically reliable

archaeological picture, inclusive of less representative but highly significant materials (Nance 1983). A six percent sample was randomly drawn from each survey area and examined in its entirety by a team of four to six people walking parallel, regularly spaced paths along selected transects. A total of 19 randomly selected 2 x 1 km quadrats were surveyed in full, and complemented by judgmental survey work at locales deemed likely to lend insights into regional complexity, and along the outer edges of the survey quadrats.

Over 180 sites were located, mapped, photographed and surface collected, exhibiting a diverse array of assemblages ranging from late Neolithic materials to recent historic and contemporary deposits. Sites also showed considerable size variation, from single finds and thinly spread surface scatters to large site complexes and areas of densely interconnected deposits covering several hectares. In addition to mapping archaeological distributions and settlement systems over time, survey work sought to explore variability in sites and artifact assemblages across the region. Several classes of sites were identified, consisting of: (1) a majority of habitation sites, characterized by widespread surface scatters of cultural materials and mound accumulations, varying in size, number, and density. The larger sites are generally associated with baobab clusters and represent ancient village vestiges, while smaller, more isolated deposits point to hamlet-sized occupations; (2) earthen tumuli of various sizes presumed to be funerary monuments; (3) shell mounds and midden accumulations; (4) extensive, shallow sheets of low-density deposits (sherds, metal fragments, trade imports) that show evidence of short-term occupations by small-sized communities; and (5) isolated scatters could correspond to a range more impermanent activities, temporary camps for example. Interestingly, no *tatas* (fortified sites) or metallurgical sites were located, while these remains are frequently documented for the Senegal River Valley or along the Gambia River (Lawson 2003; McIntosh et al. 1992; Thiaw 1999). Surface artifacts – locally produced ceramics and imported goods, principally – were collected at each locale, targeting features and areas of material concentration when possible, to investigate the timing of occupations both within and between sites.

Of the approximately 180 sites identified, 7 locales, spanning the AD 500-1900 period, were selected for shovel-testing and small-scale, localized, excavations. Excavations took place from February

to June 2003, and in December 2003. Shovel-testing and surface concentrations were used in tandem to guide the selection of areas to be excavated. Eleven units were opened, ranging from 2 x 2 m to 3 x 2 m in size and representing a total excavated area of 51 m², and dug through a combination of natural and metric stratigraphy until sterile soil was reached. Soil was sifted through a 3 mm-mesh screen, and all residual cultural and skeletal materials were collected. Soil samples for flotation were taken for each excavated level. Materials from stratified contexts can help us monitor changes in ceramic forms over time, and thus date surface deposits more closely. Excavated assemblages also afford insight into past political economies, although the limited scale and number of excavated units limits our interpretation of social practices to partial and tentative suggestions. At any rate, it is hoped that this initial baseline will orient future archaeological research in the Siin and neighboring regions.

The final component of my doctoral research revolved around the examination of available archival collections. This work aimed at gaining a clearer understanding of historical dynamics in the pre-colonial and colonial Siin, diversifying my repertoire of evidence, and creating an ethnographic baseline to compare archaeological patterns. I have conducted extensive research in the *Archives Nationales du Sénégal* in Dakar in 2002, 2003, and 2004, and at the *Archives Françaises d’Outre-Mer* in Aix-en-Provence (France) in 2004. This work has focused largely on political, commercial and military reports covering the 1850-1900 period, as well as original maps, company records, letters, travel accounts, and governors’ correspondence spanning the late 17th and 18th centuries. Prior to the 1860s, these documents tend to focus on commercial transactions, with some references to political intrigues and conflict between the coastal kingdoms, but provide rather anemic descriptions of cultural practices.

Analysis and Preliminary Results

(1) Regional Survey and Settlement Dynamics

Employing a systematic coverage approach presents a number of advantages, including the potential of recognizing all visible archaeological mani-

festations, however ephemeral. It quickly became apparent that, although a certain number of methodological and depositional considerations seem to apply to Siin's deposits as a whole, unique dynamics and significant differences underlie the distribution of sites in the various survey regions.

Our ability to read past social landscapes in the Siin is heavily affected by site formation processes and contemporary practices. One of the most problematic aspects of the survey was that surface deposits, particularly along coastal areas and tidal marshes, unfold in a nearly continual blanket of thinly spread material – alluding no doubt to a past landscape of shifting residence during the pre- and, to some extent, post-European contact periods. Segregating spatially between shallow scatters or 'sites' often presented an arduous task, just as the definition of boundaries within the nearly continuous palimpsest of shifting occupations proved to be difficult. This problem was further compounded by the composite nature of surface remains, which are generally mixed with recent domestic deposits as a result of fertilization practices and centuries of intense agricultural activity. Such temporal compression often militated against clear assessments of a site's occupation period or time of abandonment. It also frequently muddled the identification of multiple occupations within sites and their spatial extent. Surface exposure combined with cultivation practices to give an arbitrary quality to site boundaries, as these often coincided with those of cleared contemporary fields (see Robertshaw 1994 for a similar problem). Subject to the influence of plowing and tilling, site visibility and preservation also appear to fluctuate with the vagaries of aeolian erosion and transhumant herds of cattle (McIntosh and McIntosh 1993). A last factor impeding site discovery was vegetation. While the bulk of the survey took place at the height of the dry season when visibility is excellent, logistical problems forced us to complete the last phase of survey in November, shortly after the end of the rainy season. How severely the dense vegetative cover influenced site identification in the Fatick region will be statistically determined.

These important caveats notwithstanding, a number of patterns also emerged from the survey. While coastal stretches and the area bordering the Siin fossil valley seem to have supported dense protohistoric (and Neolithic) populations, the hinterland enveloping the Fatick and Diakhao *communes*

has produced comparatively fewer remains dating to these periods. A notable exception to this trend was found in the survey area around Sorokh (S63), where numerous protohistoric habitation sites covered a low-rising plateau overlooking the desiccated bed of the erstwhile Siin River. Before a finer periodization is available, it appears that proximity to water and aquatic resources were important factors for human settlement at various stages of the Iron Age past. Following the period of European contact, however, we observe a proportional decline in occupation along the Petite Côte, although settlement remains are very much present in the vicinity of Joal, which was Siin's principal trading post during the Atlantic era. Interior areas, by contrast, seem to have experienced an explosion of village foundation during the 'historic' period (Diouf et al. 1972). This movement could mirror the demographic shifts that accompanied the migration of the kingdom's political center towards the interior after the 15th century, when Diakhao became the capital, and reconfigurations linked to the growing Atlantic trade.

We also note differences in the organization of space between coastal and interior areas. On the littoral, occupations (mostly protohistoric) often appear as shallow surface scatters. These sites tend to be smaller, with fewer surface materials, than contemporary sites in the interior or later settlements. However, systematic survey of the environs of Simal (S93) revealed a dense blanket of Iron Age and Neolithic deposits, with few later intrusions, covering the entire village and adjacent fields. In interior areas, sites generally show more abundant surface remains distributed around deflated trash or habitation mounds. Sites are larger and more visible (associated with stands of baobabs); they take the shape of systems of dispersed clusters that are reminiscent of a network of hamlets or quarters, and of larger 'village-like' settlements. Historic occupations generally gravitate in the vicinity of present-day settlements, possibly reflecting the long-term practice of moving to a new piece of lineage-controlled land when the soils under cultivation became exhausted. Another interesting demographic element is the palpable increase in post-1870s deposits in the Fatick region, which seems to support archival evidence of rural migrations as the town became an important colonial commercial crossroads in the last quarter of the 19th century. While finer-grained variation in settlement patterns both within and between the survey regions

is expected, we will have to await the completion of the ceramic sequence and final radiocarbon analyses to begin to perceive geographic or temporal differences in the assemblages, and map period-sensitive changes in village occupations. The GIS database currently under construction should also permit to address and statistically evaluate transformations in settlement patterns.

While it is not possible to comment accurately on regional variation in artifact assemblages at this point, preliminary observations show that European trade goods (bottle glass, ceramics, tobacco pipes) do not become a significant material presence until the second half of the 18th century at the earliest, and more generally during the 19th century – which raises questions regarding the extent and timing of European impact on local cultural practices (Thiaw 2003). Particularly intriguing is the high degree of homogeneity which characterizes imported artifacts. European ceramics are few in numbers, and generally limited to utilitarian earthenwares or stonewares, and white-bodied earthenware plate fragments. Glass comprises mostly wine and gin bottles, joined in the 1870s by ‘alcool de menthe’ flacons and mineral water bottles. The abundance of alcoholic beverage bottles recovered during the survey seems to support the portrait of rampant alcoholism which 18th and 19th century documents paint for the region. Tobacco pipes combine local forms and red-slipped, molded elbow bend pipes mass-produced by the French in the late 19th century. Beads assemblages are dominated by Venetian drawn beads and 19th century molded beads, but also include a local few clay specimens. Also striking is the paucity of gunflints across regional assemblages. This limited diversity in trade imports is perhaps suggestive of Siin’s ancillary position in European commercial circuits and regional trading networks, though the concrete traces of certain pivotal items of exchange (cloth, gunpowder, paper) unfortunately remain beyond archaeological reach. Differential regional distribution of spindle whorls, fishnet weights, and ‘prestige items’ may indicate specialized production (particularly in ‘satellite’ villages surrounding former capitals or in coastal settlements), differential access to imported commodities, or different consumption patterns. Slag was retrieved from a number of sites, suggesting possible iron production, but no furnace vestiges were observed. Let us also note that many sites on the Petite Côte present lithic assemblages that can be tied to

late Neolithic occupations. Stone tools also likely coexisted alongside metal implements during the Iron Age.

(2) Excavated Sites

Archaeological sites in Siin rarely show substantial material accumulation indicative of multiple occupations, but are rather the expression of single episodes of occupation. In recent history, rural populations’ use of the landscape has been underlain by a logic of mobility, with variable periods of residence (50-150 years) at particular places interrupted by episodes of abandonment to relocate short distances away from the previous village. These dynamics may have applied for more distant periods as well. Unfortunately, this residential pattern does not encourage the accumulation of long-term depositional sequences encompassing centuries of cultural variation that intersect from one site to the next and permit an appreciation of material change over time. In the absence of deep stratigraphic sequences, the sites chosen for excavation represent discrete periods of occupation that can be strung together to sketch a record of cultural change over the past 1500 years. These sites included: Ndongolor (S6C), a secondary capital occupied in the 18th and 19th century, with an earlier occupation; Joral (S11), Sagn Folo (S61), and Sorokh (S63) are identified as some of the earliest Serer villages, with deposits ranging from protohistoric to 19th century; Cupaan (S89) is a historic residence associated with aristocratic elites; Simal (S93O) is described as an ancient settlement preceding the formation of the Siin kingdom, with both Neolithic and early protohistoric occupations; and Mbissel (S106) is an early second millennium AD site, remembered as the kingdom’s first capital. Trash accumulation areas were favored places for excavation, as we thought they would permit the retrieval of well-contextualized ceramic assemblages and facilitate the building of artifact sequences.

Again, preliminary analysis suggests a certain degree of homogeneity across the sites, despite chronological differences. Building technology, for instance, as evidenced by excavated structural features, appears to have remained relatively stable over time, involving mostly the use of mud-brick walls (banco). Because it tends to melt into surrounding soils, however, mud architecture is not easily tractable archaeologically, and excavations did not permit

a conclusive delineation of house forms, sizes, and orientations among the sites. While artifact assemblages vary over time, contemporaneous sites show relatively undifferentiated material culture. Protohistoric sites show limited diversity, with assemblages overwhelmingly dominated by ceramics, with some metal fragments, small numbers of beads, spindle whorls, and fishing weights. No salient evidence of involvement in long-distance trade has been found at the excavated Iron Age habitation sites. Trade imports also appear fairly homogenous for more recent periods, although increased quantities of certain objects can be found in political centers or land concessions controlled by ruling classes. Higher concentrations of toiletry and cosmetic glass were found in the surface and excavated assemblages of Cupaan (S89) and Pec Waagaan (S6C), for instance, and these sites also revealed greater variety of beads and European ceramics.

It is only fair to keep in mind, however, that these observations only reflect the initial stages of analysis. More broadly, they may also be the product of sampling limitations. As mentioned above, excavations were limited in scale, with small judgmental units that often covered a minute portion of much vaster sites. In this light, subsurface testing should be seen as exploratory rather than conclusive. It is hoped, however, that excavated assemblages will complement surface material to produce *initial* clues on regional political economy, that will encourage a more systematic study of local production, consumption, and exchange.

(3) Chronological Framework

With the results of ceramic analysis still pending, it is difficult to avoid a certain degree of impressionism in discussing issues of chronology for the Siin. As mentioned earlier, this problem is further compounded by the relatively shallow occupations characteristic of regional sites, which raises special challenges for the establishment of a ceramic chronology. Because material sequences did not always overlap between the excavated sites, surface ceramics were sometimes used to fill in the gaps, which is not without its ambiguities (Thiaw 1999). In addition to leaving 'gaps' between the different sites, formation histories make it difficult to control whether differences in assemblages are chronologically significant or the expression of regional traditions. Available ra-

diocarbon dates have been relatively inconclusive, due to contamination problems, and additional C14 analysis is currently being pursued to help correct or refine the specific time range of preliminary ceramic phases. With these disclaimers in mind, a number of features nevertheless appear to emerge from comparing local ceramics with assemblages from other regions and dateable European materials (Guèye 1997; Lawson 2003; Bocoum and S. K. McIntosh 2002; S. K. McIntosh 1995; S. K. McIntosh et al. 1992; Thiaw 1999).

'Historic period' ceramics from the Siin present some sub-regional variability, and preliminary analysis has identified three chronologically distinct assemblages: (1) a recent group associated with 20th machine-made bottle glass, plastic beads, and modern trash; (2) an assemblage associated with 18th and 19th century European imports; and (3) an earlier, stylistically-related group showing no association with European imports, which could actually stretch back to, and maybe predate, the 16th century, and thus regarded as transitional from 'protohistoric' collections. A number of surface and excavated assemblages throughout the region seem to show affinities with the Middle Senegal Valley Phase III (AD 600-950) and Phase IV (AD 1000-1500) material, although specific time bracketing is likely to vary. Some materials along the Petite Côte could also be compatible with the earlier Phase II (AD 400-600), while a number of bottom-level assemblages also contain pottery with Neolithic fabrics.

Conclusion and Future Directions

Due to their preliminary nature, the above observations have remained confined to the broadest of patterns and comparisons. Nevertheless, even at fairly coarse scales, when viewed in mutual light, archaeological and historical information begin to outline suggestive historical trajectories and dynamics, as well as possible analytical pathways towards fuller understandings of the regional past. A major goal of my research focuses on exploring how human communities constructed their social landscapes, and using the archaeological manifestations of these landscapes (habitation sites, tumuli, settlement dynamics, material assemblages and their distributions) to chart Siin's historical experiences in the context of Senegambia's changing political economy. Again, the above evidence presents several axes of social vari-

ation that appear to have oriented Siin's historical landscapes over the past 2000 years. Thus, the size, structure, density, and distribution of habitation sites, settlement patterns, and artifact assemblages show signs of fluctuation between survey regions and over time. Particularly promising is the prospect of uncovering finer differences in spatial occupation from one period to the next, between coastal and inland areas, or within survey regions, that could provide an alternative or supplementary look to current scenarios of complexity in Siin (S. K. McIntosh 1999). Can we follow archaeologically the trail of social transformations chronicled by oral traditions, from the era of tumulus building societies, to the heterarchic 'village republics' of the lamanal period, and the development of centralized rulership (Dème 1998; S. K. McIntosh 2001)? Other questions may spring to our attention: for instance, historical scholarship has stressed the stability of political rule in Siin, and the cultural conservatism of its populations. Though not discussed here, initial settlement data lead me to suspect more regional autonomy within the Siin than allowed by historians, and possible changes in the organization of regional village networks during the historic period.

As always, the litmus test will be whether or not changes in social landscapes are traceable archaeologically. In effect, artifact chronologies may not necessarily cut historical processes at their joints. Nor do they always provide sufficient resolution to capture the kind of subtle social trends that unfold at smaller spatial and temporal scales. The extent to which these problems affect the study of long-term political economic changes in Siin can only be glimpsed at this time, but should become clearer as both spatial and artifact analyses continue. Once completed, the results of settlement pattern analysis and Siin's ceramic chronology, and their implications for regional complexity, will be reported to *Nyame Akuma* in an updated companion-piece to the present research note.

Acknowledgments

The SLAP was made possible by generous financial support from the Wenner-Gren Foundation, the National Science Foundation, Syracuse University Graduate School, Syracuse University Department of Anthropology and Maxwell School of Citizenship and Public Affairs, the Patrick Moynihan In-

stitute of Global Affairs, and the Bremen Stiftung für Sozialanthropologie. At various stages of the project, Christopher DeCorse, Susan McIntosh, Martin Klein, Hamady Bocoum, Massamba Lame, and Ndèye Sokhna Guèye have provided support, kind advice and help with artifact identification. Ibrahima Thiaw provided invaluable guidance and friendly insights on Senegalese archaeology. The Laboratoire d'Archéologie and Musée Ethnographique de l'IFAN extended material, logistical, and human assistance, in the form of equipment, as well as laboratory, storage and office space. The History Department at the University Cheikh Anta Diop (UCAD) in Dakar, and the University of Kankan (Rep. of Guinea) kindly agreed to entrust their students in my care for archaeological training. I thank all the participants to the project whose hard work and good spirits kept the fieldwork alive: Mor Faye, Mboussiriou Diallo, Idrissa Sall, Aliou Badji and Ousseynou Badiane (UCAD), Boukhane Camara, Kélétiogui Doukouré, and Amadou Oury Bah (U. Kankan). Finally, my most binding debt of gratitude goes to the friends, families, and municipalities in Ndiongolor, Diakhao, Fatick and Diofior that supported our stay in 2002-2003.

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