

## ■ GAMBIA

### The Central Gambia Valley archaeological project: Further results

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### Introduction

This article serves to supplement a previous *Nyame Akuma* article on Gambian Iron Age habitation, which appeared in the June 2001 issue. In that article I reported on field methods and preliminary results associated with three seasons of fieldwork undertaken in The Gambia between 1998 and 2000. I now want to turn to the results of analyses performed on data collected during those field seasons. I will focus on three categories of data: ceramics, faunal and botanical materials, and settlement distribution. In addition, I will consider how archaeological data from The Gambia adds to our knowledge of the development of complexity and statehood within West Africa.

### Ceramic Chronology

Creating a regional ceramic chronology was one of the most important tasks undertaken after fieldwork was completed. Without such a chronology, it would have been difficult, if not impossible, to address questions of settlement patterning and socio-political change. Although ceramics were collected and recorded from surface sites, the ceramics used to create the chronology were those recovered from excavated deposits. Ceramic analysis took into account a number of stylistic and technical variables including such features as rim form, decoration, firing conditions, and non-plastic inclusions. A total of three ceramic phases were identified, spanning the first and second millennia AD. Absolute dates from excavations were used to clarify the timing of each phase.

### Phase I Ceramics

The majority of ceramics identified in excavation deposits and in surface scatters belong to Phase I. Excavation units OMJ 1, OMJ 2, and PMT 1 all featured Phase I ceramics. Unfortunately, no firm radiocarbon dates have been obtained from Phase I sites. These sites tend to be relatively shallow (less than one meter in depth) and suffer from problems of modern contamination. The amount of charcoal recovered in the three Phase I sites excavated was quite small, and the AMS dates obtained from such charcoal were modern. I hope to better date such sites in the future by dating the charcoal trapped in the iron slag associated with Phase I deposits.

Although absolute dating is a problem, it seems safe to say, based on their decoration and rim morphology, that Phase I ceramics belong to the first and early second millennia AD. These ceramics share broad similarities with those found in Senegal and the Inland Niger Delta during this period (McIntosh and McIntosh 1993; McIntosh 1995; McIntosh and Bocoum 2000). In addition, Phase I ceramics share certain features, such as rim morphology and occasional use of kaolinite clay, that are characteristic of the ceramics found in stone circle excavations in Senegal which have been dated to the first millennium AD (Thilmans *et al.* 1980). Though it is uncertain precisely when the construction of Phase I ceramics began, I am assuming that such production began sometime during the first millennium AD. Interestingly, as yet, no ceramics or stone tools have been found which would suggest occupation of the Gambia River Valley before the first millennium.

Phase I ceramics exhibit a high percentage of twine decoration. Twine 6 and tiny twine 6 (as used by McIntosh 1995 and McIntosh and McIntosh 1993) are common, as is another twine type I have dubbed "double beaded twine" which has not been identified in either Senegal or Mali to my knowledge (Figure 1). Slip is very common, particularly in the area on and just below the rim. Rims are often sharply everted or carinated, and sherds may exhibit collars several centimeters beneath the rim. Short and long-collared rims (McIntosh ed. 1995) are also common (Figures 2 and 3).

Figure 1: Example of double-beaded twine. Drawing by Jayme LaFleur.

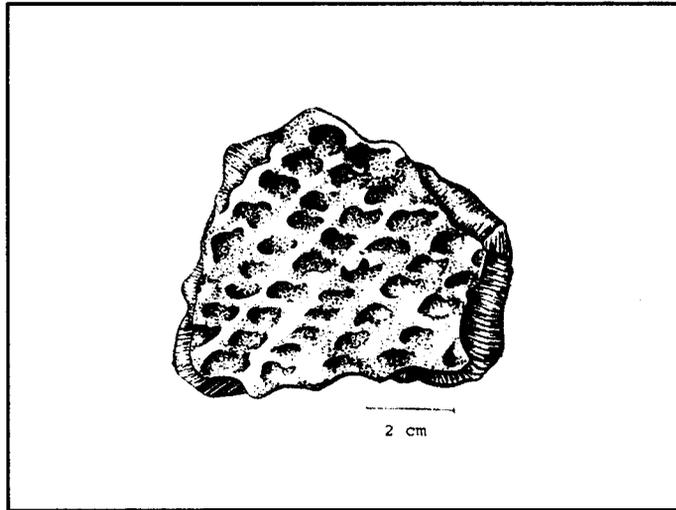


Figure 2: Common rim forms encountered in the Central Gambia Valley.

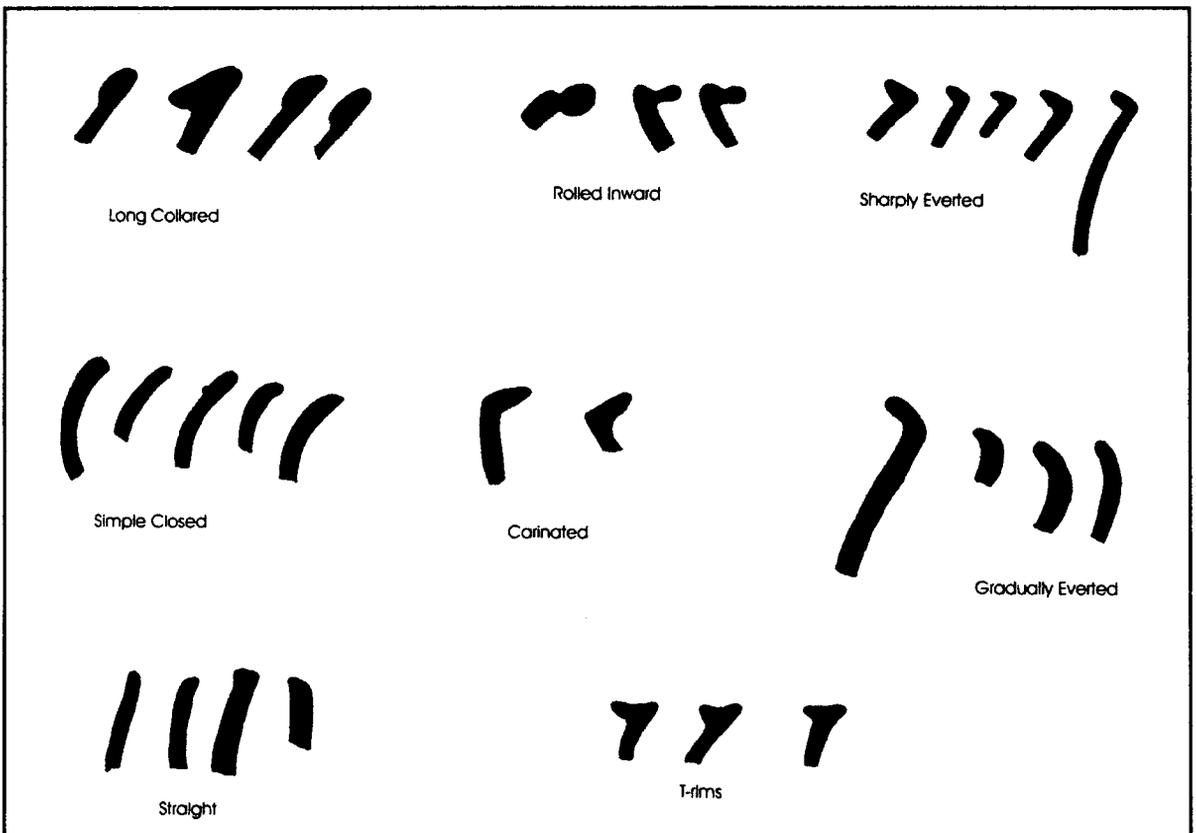
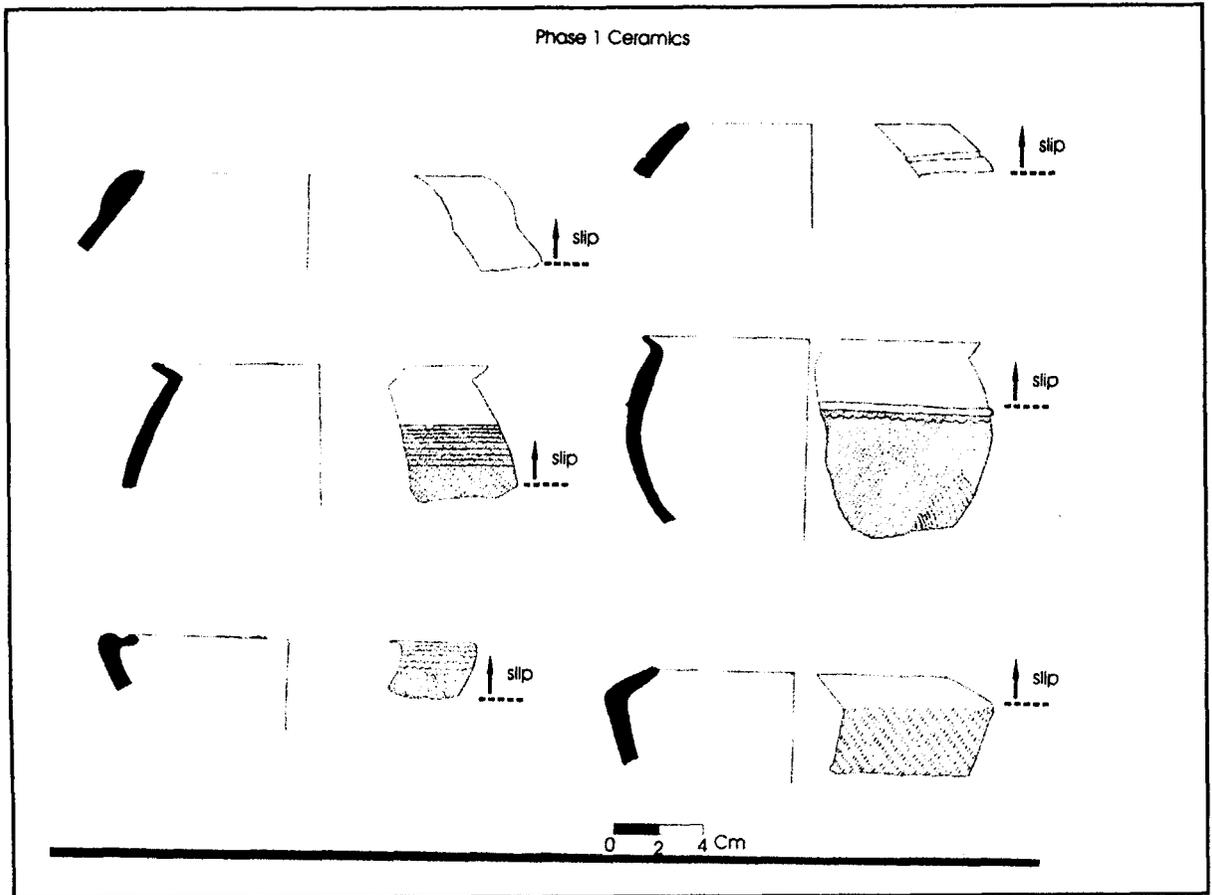


Figure 3: Example of Phase I ceramics.

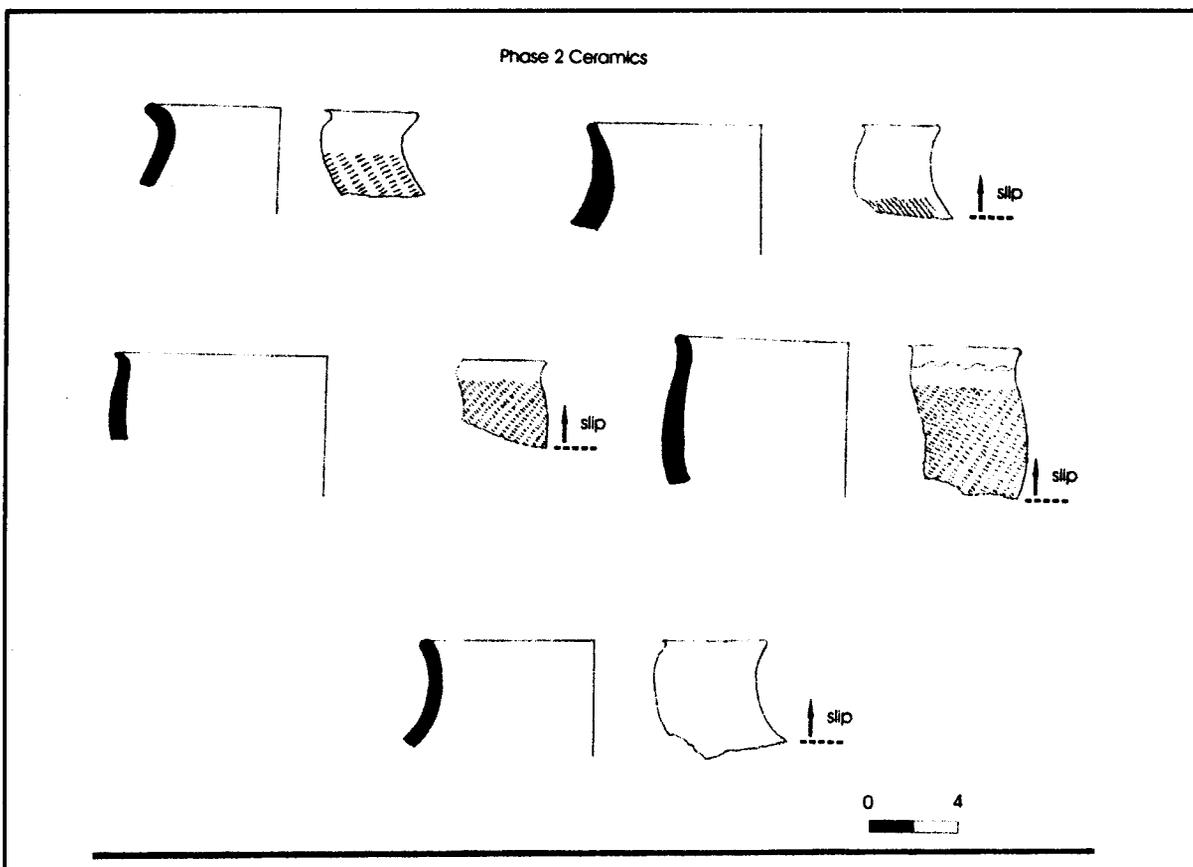


**Phase II Ceramics**

Phase II ceramics were much less common than Phase I ceramics, and were recovered at excavations at the PMM site, as well as in surface collections at two other sites. Radiocarbon samples from the PMM site date this ceramic tradition to the period between 1300 and 1700 AD. Phase II ceramics are generally less elaborate than Phase I ceramics (Figure 4). While twine decoration such as twine 7 (McIntosh 1995) is featured on some sherds, simple string impressions are much more common. Phase II ceramics are often slipped, and in some cases slip is used as paint on or near the rim. Phase II rims tend to be straight or slightly everted. The sharp eversion associated with Phase I rims is largely absent in Phase II. Phase II ceramics are still relatively well made, though they do exhibit more variable firing conditions than Phase I ceramics, which are primarily oxidized.

A large number of ceramic pipes were found associated with Phase II ceramics. The available radiocarbon information suggests that at least some of these pipes pre-date European contact in the region. The pipes are decorated with incision and punctate designs, and their texture is much finer than that of associated ceramics (Figure 6). All pipes exhibit the use of slip. While the pipes may not have been made in the Central Gambia Valley, there is no reason to believe that they were manufactured outside of sub-Saharan West Africa. This raises the question of what plant substance was being smoked in these pipes, since tobacco had not yet been introduced. The presence of these pipes in a pre-European context also suggests that we should be careful not to date sites to the post-contact period based on the presence of pipes alone. It seems likely that in at least some regions of West Africa, pipes were being used and manufactured before the introduction of tobacco by

Figure 4: Example of Phase II ceramics.



Europeans. We might instead look to other regions of Africa for initial influences.

**Phase III Ceramics**

Phase III ceramics date from roughly 1700 to 1900 AD and conform well to what has been termed the “subactuel” in Senegal (Guèye 2002). Phase III ceramics were present on several of the sites surveyed, but were not found in any of the excavated sites. Phase III ceramics are largely undecorated, though some sort of twine decoration is occasionally present (Figure 5). Unlike Phase I and II ceramics, Phase III ceramics rarely exhibit slip. In comparison with earlier ceramic traditions, little care seems to have been taken in the manufacture of Phase III ceramics. The exterior of such ceramics is often pitted, suggesting that they were placed directly on top of organic materials during firing. Non-plastic inclusions are often quite large, rendering the ceramic friable. In addition, firing and cooling conditions are sporadic

such that different parts of the same vessel may display different firing and cooling techniques. Phase III sherds in the Gambia Valley are generally either everted or straight, and often exhibit rim diameters of over 30 cm, suggesting that they were used for storage, rather than cooking or eating. The general decline in ceramic manufacture during the late 2<sup>nd</sup> millennium is likely attributable to the availability of European porcelain and tin vessels. The increase in violence associated with the slave trade may also play a part, as communities were disrupted by the presence of raiding and warfare. Ceramic manufacture today in the Central Gambia region is largely restricted to water storage vessels; tin and aluminum vessels are used for cooking and eating.

**Faunal/Botanical Materials:**

The analysis of faunal and botanical materials from excavated sites in the Gambia Valley has increased our knowledge of economic practices in the

Figure 5: Example of Phase III ceramics.

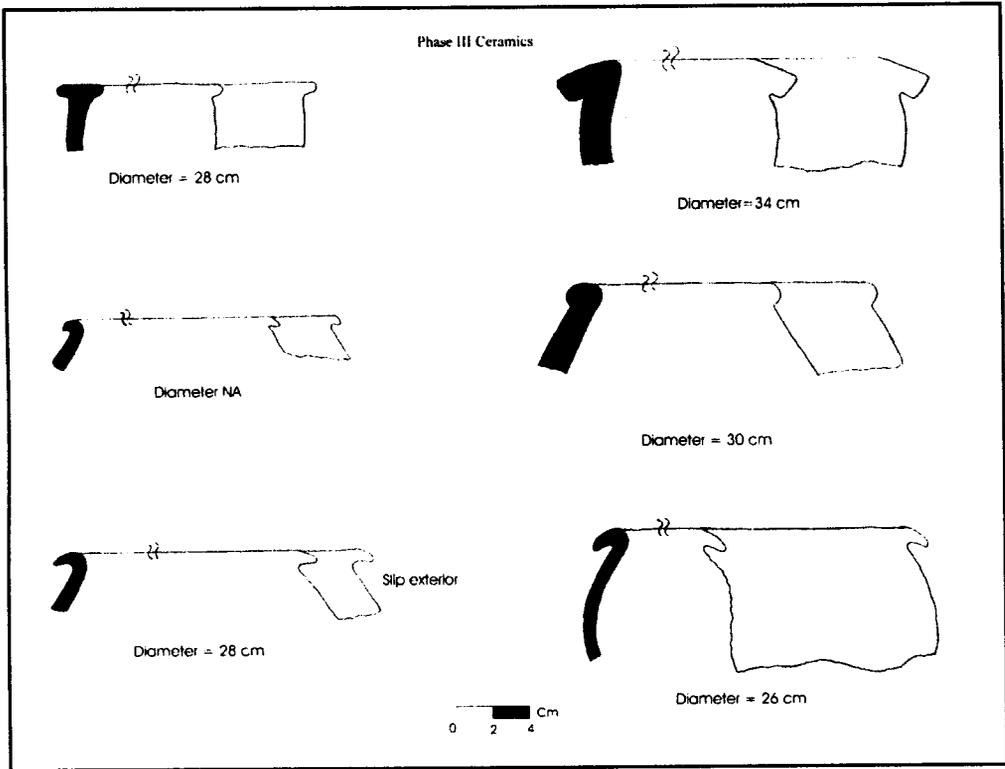
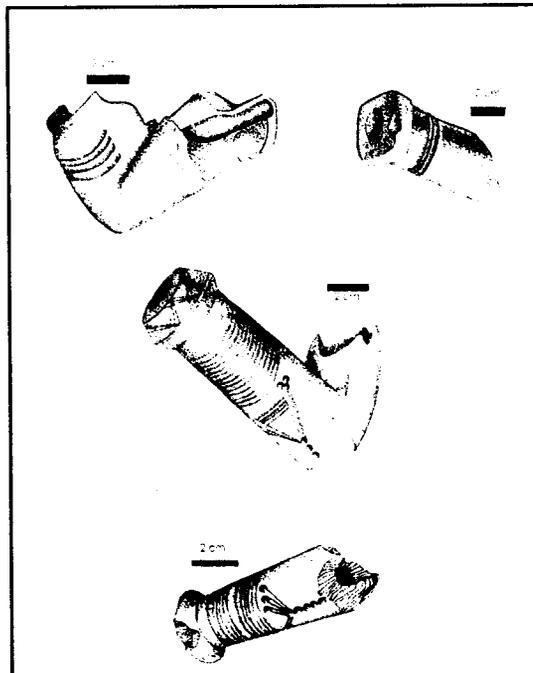


Figure 6: Pipes encountered in Phase II deposits. Drawing by Jayme LaFleur.



region. All paleoethnobotanical analysis was performed by Daphne Gallagher (University of Michigan). Sample sizes were small (five liters of soil from each excavation level) and results are only preliminary. Interestingly, the crops utilized by Gambia Valley inhabitants do not seem to have changed much over time. The only major domestic crop found in the samples is pearl millet. One rice grain was found in a sample from PMM, but could be the result of modern intrusion. The lack of other domestic resources, such as sorghum and rice, is puzzling. The Gambia Valley has long been pointed to as a potential zone of early rice domestication (Carney 2001). Floodwater rice is *certainly an important component of the modern diet*, and it seems unlikely that it was adopted only in the past few hundred years. The apparent lack of rice may be due to small sample size and/or location of the excavation units sampled. In addition, sorghum is found in the Falemme Valley of Senegal during the same time period (Gallagher 1999, Thiaw 1999). Why it would not be grown in the Gambia Valley as well is unknown. Future research at a larger sample of sites will hopefully resolve these issues.

Faunal analysis, on the other hand, suggests that a wide diversity of species were utilized for food. All faunal analysis was performed by myself and by Doug Reese, who analyzed a portion of the mammalian remains for an undergraduate honors thesis (Reese 2002). Unfortunately, the faunal remains at the Phase I sites excavated were generally in poor shape and were often not identifiable to species. Most of the faunal analysis was performed on the better preserved Phase II fauna. However, a qualitative look at the fauna represented in Phase I sites indicates that a similar diversity of species was present.

Domesticated animals identified in the Phase II deposits include cattle, sheep/goat, and chickens. A large number of as yet unidentified wild bovids are also present, as are small numbers of warthog, horse, and dog bones. Reptiles include snakes, turtles, and crocodiles. A variety of bird bones were found, ranging from hawks to large wading birds such as egrets and storks. Fish are not surprisingly well represented. Three genera of catfish have been identified, and form the majority of the fish bones. Nile perch, tilapia, and lungfish are also present in smaller numbers.

What is most interesting about the faunal assemblage is the amount of wild resources present (provide some kind of percentage for this here at

least for bovids). While domestic animals are present, they do not make up the majority of the assemblage. A much greater reliance seems to be placed upon resources obtained by hunting or fishing. This differs greatly from the situation in the region today, where wild resources other than fish are largely not utilized at all. The presence of wild resources, particularly wild bovids, is likely smaller today than in the pre-colonial period. During the colonial period over hunting of animals such as elephants led to their disappearance from The Gambia. However, many resources, such as wading birds are relatively common, but do not play a role in the modern diet. Thus, a shift in dietary preferences, perhaps related to the widespread adoption of Islam, has definitely occurred in the past few hundred years.

### Sociopolitical Change

One of the most interesting, yet frustrating, aspects of post-fieldwork analysis has been the attempt to trace sociopolitical changes in the Central Gambia Valley over the past two millennia. Complexity, and the rise of complexity, has been a hotly debated topic in archaeology generally, and in African archaeology more specifically (Earle 1991; S. McIntosh. 1999). Ethnographic and ethnohistoric data suggest that several unique features may have contributed to the rise of complexity in the Gambia Valley, as well as to the sociopolitical forms taken by Gambian polities. Such features include the presence of slavery from early times (common to many West African societies), the presence of multiple ruling lineages practicing rotating succession, and the importance of maintaining and controlling long-distance trade. These features, of which more will be said later, had a major impact on the spatial structure of Gambian societies.

Several lines of evidence were used to evaluate sociopolitical change and complexity in the Central Gambia Valley. The information gleaned from stone circle excavations in nearby Senegal was used to help develop a baseline for the first millennium AD. Historical reports by European travelers on the nature of Gambian polities provided a window into the political forms of the late second millennium, before colonialism became a major force. The analysis of extant settlement patterns, as revealed by systematic survey, offered another perspective on sociopolitical integration.

As previously noted, the majority of archaeological research in central Senegambia has focused on the excavation of stone circles and tumuli. These excavations provided information about mortuary ritual, which can be used as one line of evidence in assessing sociopolitical form (Peebles and Kus 1977). Many of the burials recovered during the excavation of stone circles were associated with grave goods (Thilmans *et al.* 1980). Some of these burials were those of young children, suggesting that social status may have been inherited, as well as achieved. The grave goods recovered also reveal another important aspect of Gambian society in the first millennium AD: access to long-distance trade networks. Items such as copper and carnelian, found associated with stone circle burials, are not native to the area, and in the case of carnelian can only have been acquired through trans-Saharan trade networks. This suggests that in the first millennium Gambian societies may have had (1) political structures based on inherited status, and (2) control over riverine and/or overland trade networks through which the luxury goods found associated with burials were acquired.

The information provided by early European travelers to the Gambia Valley indicates that by the 1500s the settlements along the river had consolidated into a number of polities, which the Europeans referred to as "kingdoms" (Crone 1937; Jobson 1932). By all accounts Gambian polities (at least in the ethnohistoric present) were relatively stable, hierarchical structures. The Gambian leaders with whom Europeans traded often arrived decked out in full regalia and accompanied by large numbers of armed guards and slaves. It is clear from the first contact between the Portuguese and the coastal polities that Gambians had control over the terms and conditions of trade (Crone 1937). This suggests that concern with trade, and traders, was not something new to Gambian leaders, a point I will return to later.

Thus, both mortuary and historical evidence support the existence of relatively well developed Gambian polities from the first millennium onwards. By the time of European contact on the Gambian coast, some of these societies had become both extremely wealthy and extremely hierarchical. What were the political economies that underpinned such systems? Based on an analysis of settlement patterns, I propose that control over trade may have played an important role in the formation of complex societies in the Gambia Valley.

Information about settlement and settlement systems derived from surface survey and excavation can be used as an important line of evidence in mapping political cohesion. As noted in my 2001 article, settlements in the Gambia Valley are different from those in neighboring river valleys because they are not tell sites. Rather, settlements are located outside of the floodplain and communities move relatively frequently due to economic and social factors. The ephemeral nature of some of these village sites has made the estimation of site size difficult. Reoccupation of sites compounds this problem. However, information about site distribution by phase in the two main survey areas is available.

Both visual and statistical analyses of the settlement patterns of past Gambian polities suggest that such polities were relatively evenly spaced (Figures 7 to 9). Point pattern analyses indicate that while not maximally dispersed, villages within each phase do not exhibit the kind of clustering one might expect from central place theory (Boots and Getis 1988; Christaller 1966; Steponaitis 1978, 1981). Rather, the settlement distribution is reminiscent of the dendritic model used to describe settlement patterns in Philippine chiefdoms (Junker 2000). As Junker and others have argued, such dendritic settlement distributions are useful in polities in which the control of trade, and trade routes, plays a major role in the political economy. In such systems, settlements are located at important nodes along waterways or overland trade routes in order to maximize control over, and tribute collected from, merchants using these routes.

Based on the distribution of Gambian villages in Phase I and Phase III (Phase II sample is too small to judge), one can argue that settlements were placed so as to maximize control over trade. Furthermore, a more dispersed model of settlements would be expected in a political system in which power is shared between several lineages as mentioned above. Wright (1997) notes that each elite lineage was likely to have its own capital, such that the "center" of power shifted with each new ruler. It is interesting to note that although settlement patterns seem to shift during Phase II, a good deal of continuity in settlement patterning is present from Phase I to Phase III. This suggests that sociopolitical structure may not have changed significantly over this period. Hierarchies may have become more entrenched in the second millennium, but it is likely that some degree of hierarchy already existed in Phase I.

Figure 7: Distribution of Phase I villages. Dots indicate villages. Open polygons indicate survey regions.

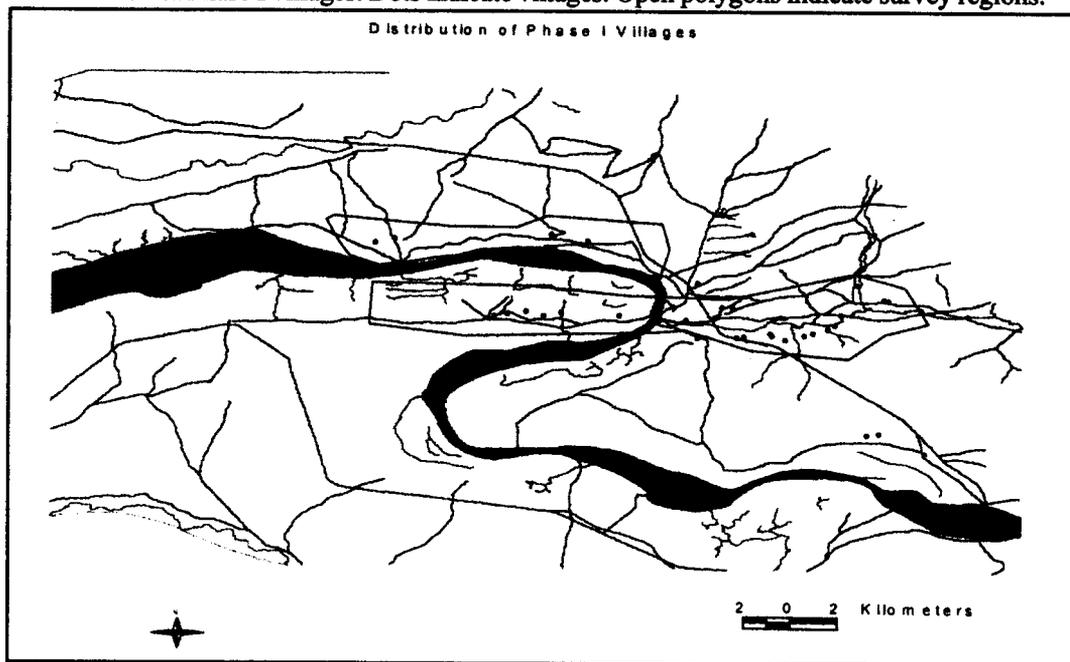


Figure 8: Distribution of Phase II villages.

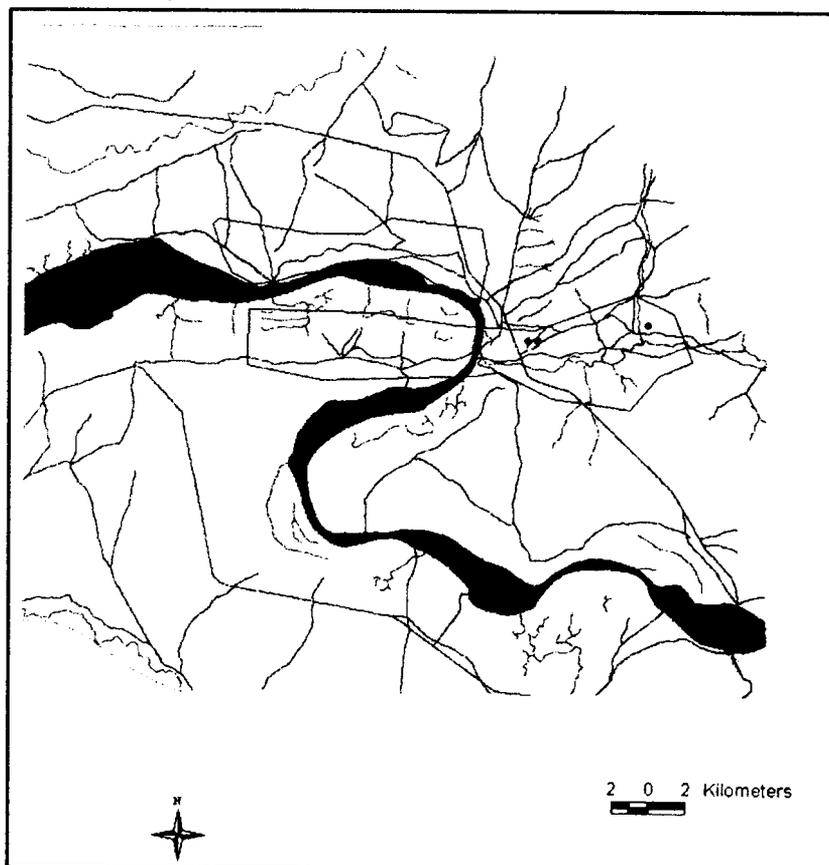


Figure 9: Distribution of Phase III villages

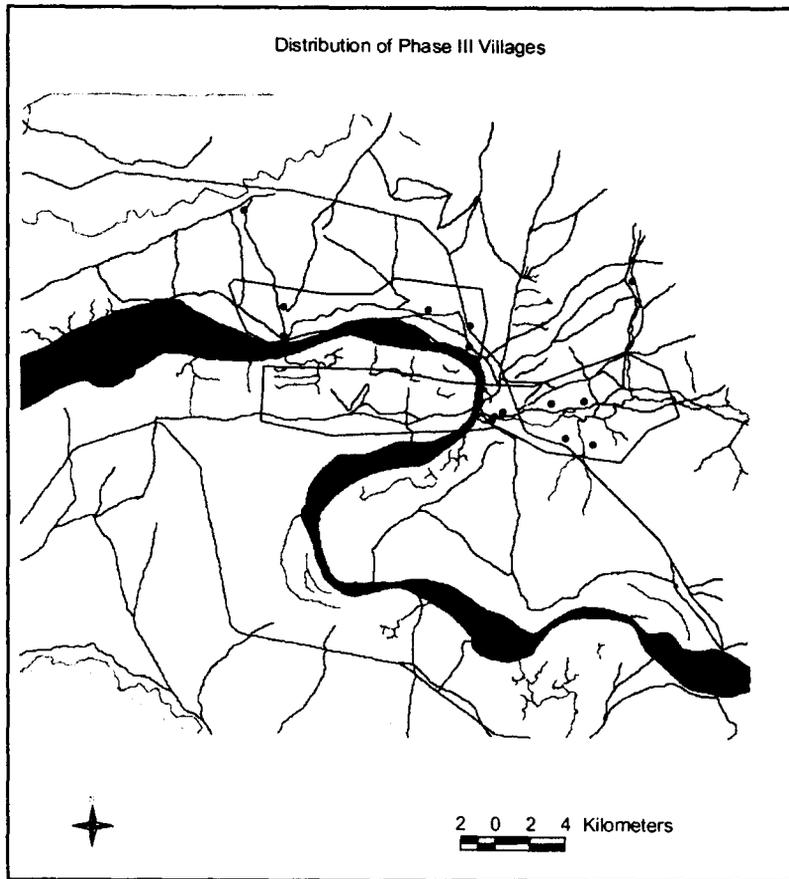


Table 1: Summary of chronological phases and relevant radiocarbon dates. Note: Dates suggesting contamination of charcoal have been left out. Calibration based on Stuiver *et al.* 1998.

| Phase                     | Sample Number                    | Site Name               | Calibrated Date (all at 2 sigma) |
|---------------------------|----------------------------------|-------------------------|----------------------------------|
| Phase I (c. 500 –1300 AD) | Beta-155792                      | PTI (Iron Working Site) | Cal AD 880-1020                  |
| Phase II (1300-1700 AD)   | Beta-165780                      | PMM Unit 1              | Cal AD 1260-1380                 |
| Phase II                  | Beta-155791                      | PMM Unit 1              | Cal AD 1460-1650                 |
| Phase III (1700-1900s AD) | NA, surface finds of glass, etc. | Surface sites           |                                  |

**Future Directions**

The analysis of survey and excavation materials from the 1998-2000 field seasons in The Gambia has provided vital information concerning regional chronology, subsistence, and settlement patterning. Future work in the region will focus on increasing the scale of both survey and excavation. It is hoped that additional radiocarbon dating, performed charcoal trapped within slag, will help to refine the Phase I chronology. An increase in survey area will allow us to test whether the settlement patterns discussed above are present over larger regions. New excavations will be aimed at identifying possible trade goods, and thereby testing the hypothesis that control over trade was a driving force in the political economies of the Central Gambia Valley. Increased attention will be paid to intra-site patterning, and to the possible identification of elite and non-elite villages. Our knowledge of Gambian archaeology has increased exponentially, but major research questions remain unanswered. Only through many more seasons of fieldwork can we hope to truly understand sociopolitical structure and change.

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