Tanzania

Archaeological Survey and Excavations in Northern Pemba Island, Tanzania, 1999-2000

Jeff Fleisher

Carter G. Woodson Institute for Afro-American and African Studies University of Virginia Charlottesville, VA 22903 fleisher@virginia.edu

Introduction

This is a preliminary report on archaeological survey and excavations carried out in the northern part of Pemba Island, Tanzania from July 1999 to Team members included Zanzibar May 2000. Antiquities officials as well as international and local students. In this project, I develop a regional perspective on the growth of Swahili polities along the eastern littoral of Africa between the 8th and 16th centuries AD, and focus on three goals: 1) to locate and define settlements surrounding two Swahili stone towns, 2) to establish a set of comparative materials from village settlements, and finally 3) to test models of village participation in the political economy of Swahili polities and their development. I emphasize the historical relationship between countryside populations and their town-based counterparts, and attempt to view ancient towns and cities within the context of their surrounding settlement landscape. This requires that we investigate the people in the nearest hinterland who would have interacted with stone town dwellers on a daily basis. I suggest that a comprehensive understanding of the micro-regions that surround stone towns will not only offer insights into the daily lives of the majority of coastal Swahili (Fleisher and LaViolette 1999a, 1999b), but open new understandings of the role that countryside populations in terms of craft production and exchange of utilitarian and prestige goods played in the local political economy of Swahili polities. 1 first describe the fieldwork accomplished to date, including a discussion of some methodological innovations, and follow with some preliminary implications of this research.

Survey

Preliminary research in 1997 and 1998 made it clear that many villages dotted the landscape from the 8th-16th centuries that never developed into stone towns, and comprised a large unexplored part of Swahili regions (LaViolette and Fleisher 1995). Thus, in order to delineate Swahili settlement systems, we carried out an archaeological research program that included a random transect survey and test excavations in the region surrounding two of the largest stone towns on Pemba: Chwaka in the northeast, and Mkia wa Ngombe in the northwest (Figures 1 and 2). A transect survey was conducted from August to December 1999. The 168 km² survey universe comprised the space between the two towns, from coast to coast, and extending from Msuka at the northern tip of the island to just north of Wete. Since we lacked any experience with Swahili countryside site populations, we did not stratify the region and surveyed without bias to landform, topography, or environment. The entire survey universe was divided into 42 areas, each four sq. km in size; a crew of five surveyors (20 m spacing) examined one transect (1000 by 100 m) in each area. The survey crew conducted both surface and subsurface examinations. This type of inspection is novel for eastern Africa, and included both ground inspection (in cultivated fields, erosion cuts, etc.), and subsurface testing. For subsurface examinations we employed a shovel-testing program, excavating small 30-cmdiameter shovel-test pits (STPs) every 100 m along transects, spaced 40 m apart. At each site located, we dug STPs at 20-40 m intervals in the cardinal directions to establish site and component boundaries, and to determine occupation length.

In sum, we located 33 new archaeological sites, ranging in size from .0004 ha to over 11 ha (Table 1). This represents a range of site types not normally recorded in Swahili settlement regions, including field houses, hamlets, and villages (but see Wilson 1982). These site classes are based on distributions of site sizes (Table 2). Sites dated from the earliest cultural periods known on Pemba (Table 3), the 8th-10th centuries AD, to the terminal date for this research project, the 16th-17th centuries. Additionally, we located and described another 30 sites which post-date the project time frame, most from the 19th and 20th centuries.



Figure 1. Pemba Island with northern stone towns

Figure 2. Northern Pemba archaeological survey, all sites located



Intensive shovel-testing provided a test of the proposition that all significant sites would be indicated by surface deposits. This is implicit in site definitions used on the coast, which assume that sites will include above ground features (either ruins of domestic or mosque architecture) or surface artifact scatters (e.g., Wilson 1982). The reliance on surface features has specific consequences for understanding settlement systems and definitions of site sizes. First, reliance on surface features alone will exclude early deeply buried sites as well as smaller, more ephemeral site types such as field houses and hamlets. And second, site sizes are systematically underestimated when based on surface finds alone; attention is focused on prominent features such as architecture or ceramic scatters and not on the more extensive boundaries of the site invisible on the surface.

The survey methods employed (including intensive shovel-testing) proved that site deposits are often buried deeply, sometimes beginning up to one meter below the current ground surface. These sites tend to be the smallest and earliest settlements. Close to 50% of the sites located had no visible surface indications at all: no mounds, architecture, or ceramic scatters. The rate of discovery was linked consistently to settlement age, that is, older sites tended to be buried more deeply, while more recent ones were more likely to have surface indications (Table 3). For example, for the earliest periods, 8th-11th centuries, 81% of the sites were buried completely and for the latest period, 15th-16th centuries, all sites had significant surface materials.

The use of STPs also provided greater accuracy and control over the establishment of site boundaries, and ensured that more representative site sizes were reached. For instance, when we used STPs to redefine site boundaries at previouslyrecorded sites, we were able to increase substantially overall site sizes (e.g., Mkia wa Ngombe is now known to be approx. 18 ha, and Mduuni approx. 7 ha; cf. Horton and Clark 1985). At both sites it is likely that buried sectors represent non-elite areas and/or earlier components. These finds provide more reliable baseline figures with which to compare to village sites in the surrounding countryside. These survey results from Pemba suggest that coastal archaeologists might rethink the ways we look for and define sites, and also the way we envision a Swahili settlement region. A more complete image of the early Swahili can be reached only when we identify and investigate the activities of people living in all settlement types and sizes.

Test Excavations

I selected six sites for additional testing and excavations, representing a range of site types and periods from villages to stone towns. Along with the same team of surveyors, I conducted test excavations at four villages and at two known stone towns (Table 4). Excavations had three goals: to delineate the stratigraphy and chronology of representative villages and towns; to produce a database of local ceramics on which to build a more refined chronology for Pemba Island; and to provide preliminary assemblages to compare stone town and village sites. All excavation units were either 2 m² or 3 m²; we dug between one and four units at each site. All units were located in areas of high artifact concentration (likely middens) based on artifact distributions from shovel-tests. Eleven excavation units produced more than 55,000 artifacts, including local and imported ceramics, glass, iron, copper, groundstone, body adornments (beads, ear plugs), faunal remains, and evidence of production (iron slag, spindle whorls, bead grinders). Chronological work based on local ceramic typologies is ongoing, and will produce a date sequence for Pemba which will complement traditional chronologies based on imported materials. A local ceramic sequence is particularly important for dating village sites, many of which contain no imported materials.

Two of the villages (Bandarikuu and Kaliwa) were multi-component with complex stratigraphy. We excavated four units at Bandarikuu, which was occupied continuously from the 8th to 14th centuries. This is the only location on Pemba where 8th-century deposits are followed directly by later components, including at stone towns. We excavated one unit at Kaliwa, a 2-ha, 14th-to-16th-century village. This unit had relatively deep deposits (approx. 1.5 m of continuous midden debris) with an extremely high density of local ceramics (over 10,000 sherds).

We also conducted excavations at two villages (Kimimba and Gombe) that date to the earliest periods on Pemba, the 8th to 10th centuries. Two units were excavated at each of these sites.

Site No.	Time Period (centuries AD)	UTM (E)	UTM (N)	Size (hectares)
98-6	8-10	588700	9450450	0.25
98-7	8-10	589200	9450430	1.80
99-01	unknown	576666	9449309	0.70
99-02	unknown	576799	9449396	0.36
99-03	17-18	575852	9449033	0.25
99-04	17-19	578104	9449374	1.20
99-05	11-14	578177	9449102	1.44
99-06 (Bandarikuu)	8-14	577669	9451033	11.25
99-07	unknown	575798	9447934	0.0004
99-08	15-16	577828	9444488	0.80
99-09	10-11	578934	9445592	2.24
99-10	13-14	589007	9449360	0.24
99-11a	8-10	588740	9449273	2.50
99-11b	8-10, 13-14	588570	9449109	0.25
99-12 (Kimimba)	8-9	588335	9449255	1.76
99-13	13-14	592329	9444762	0.25
99-14	17-18	587765	9445885	0.25
99-15	unknown	586546	9449528	0.25
99-16 (Gombe)	9-10	584246	9447874	1.40
99-17	14-15	584167	9447726	0.25
99-18	11-12	579309	9450281	1.00
99-19	9-10	582112	9448377	0.54
99-20	11-14	582237	9448488	0.32
99-21	11-14	582450	9448408	2.25
99-22	10-11	583077	9448497	1.08
99-23	9-10; 15-16	580813	9457808	1.56
99-24	unknown	580754	9454385	0.02
99-25	15-16	584296	9452392	0.08
99-26	14-15	584211	9448109	0.25
99-27	9-10	586783	9453480	0.01
99-28 (Kaliwa)	14-15	587669	9453500	2.25
99-29	10-11	588044	9449873	0.40
99-30	10-12	588582	9449406	0.04
99-31	8-9	588200	9449433	0.06
Chwaka	9-16	588150	9451550	+30.00
Mduuni	12-14	576700	9449976	7.26
Mkia wa Ngombe	11-16	576431	9452609	18.00

 Table 1. Archaeological Sites Located during the Northern Pemba Island Archaeological Survey, August 1999

 - March 2000 (Site sizes include all components at multi-component sites)

Both sites appear to have been occupied for relatively short periods, 100 years or less. Kimimba is earlier, dating from the 8th-9th centuries, and Gombe was probably occupied during the late 9th or early 10th century. The stratigraphy in all these units was shallow and compact, comprising 30 cm or less. However, deposits were completely buried and undisturbed, with high artifact densities.

Discussion

A number of tentative conclusions can be drawn from this research. First, coastal archaeologists must look closely at the methods they use to locate and define archaeological sites. A host of formation processes must be understood before we can adequately assess the representativeness of our site populations. We must attend to these issues if we seek to apply settlement data to questions of origins or local political and economic development.

Second, archaeological survey has demonstrated that numerous sites are located in the countrysides surrounding previously-known stone town settlements. The area surveyed represents 2.5% of the survey universe, which suggests that the site population for the northern quarter of Pemba alone may include well over 1000 archaeological sites. Perhaps the most surprising finding from the survey is the relatively larger numbers of early sites on Pemba, when compared to site numbers from the 12th-15th centuries (more than a third of all sites located date from the 8th-11th centuries). In addition to information about early life on Pemba, these sites also offer a very different image of how regional settlement developed. During the 8th-11th centuries, the largest villages and towns were surrounded by many contemporary communities, and these communities extended into the interior of the island. However, during the 12th to 14th centuries. this settlement pattern changed dramatically, as many people seem to have moved into the larger stone towns, abandoning nearby villages. Such a pattern may point to increased political centralization and economic control by stone town elites. This stands in marked contrast to 8th- and 10th-century settlements that were dispersed throughout the region. Finally, the survey data support the idea that there was a large-scale abandonment of these settlement systems during the 15th-16th centuries. This changing settlement pattern runs counter to those of Wilson (1982) and Kusimba (1999a), who suggest that the types and number of settlements increased through time, as settlement systems became dominated by more politically and economically complex stone towns. Although this may be the case for towns on the northern Swahili coast (north of Mombasa), there may have been dramatically different patterns of settlement and regional development on the southern coast, including Pemba.

Third, excavations at villages have exposed the complexity of countryside life, both within villages themselves and in their relations with stone towns and other villages. At Kimimba the richness of artifact classes suggests that village activities cannot be viewed simply as mundane or poor; some activities often thought restricted to stone towns, such as craft production, were commonly practiced and possibly at a level commensurate with stone towns of the same period. In contrast, however, excavations at Gombe, a site in the interior of the island, provided evidence of a more modest village. I found no imported materials nor any significant evidence of craft production. Compared to

Site type	Size range (in ha)	Sites located
Field house	0001 -	10 6
Hamlet	.11 -	1.00 12
Village	1.01 - 5	5.00 12
Small town	5.01 - 8	8.00 2
Stone town	8.01 - 20	0.00 1

Table 2. Site types and size ranges

Time period (centuries AD)	Sites with no surface indications	Total	Sites with surface indications	Total	Total sites
Period I: 8-10	98-06, 98-07, 99-06, 99-12, 99-16, 99-19, <i>99-23</i> , 99-27, 99-31	9	99-11a, <i>99-11b</i>	2	11
Period II: 10-11	<i>99-06</i> , 99-22, 99-29, 99-30	4	99-09	1	5
Period III: 12-14	<i>99-06</i> , 99-20, 99-21, 99-05	4	99-10, <i>99-11b</i> , 99-13, 99-18, 99-28	5	9
Period IV: 15-16		0	99-08, 99-17, <i>99-23</i> , 99-25, 99-26	5	5
Period V: 17-18		0	99-03, 99-04, 99-14	3	3
Unknown date	99-15	1	99-01, 99-02, 99-07, 99-24	4	5.
Total		18		20	38

Table 3. Sites located on or below ground surface (Sites in italics have multiple components and are listed more than once).

Table 4. Sites excavated

Site	Size type	Date (centuries)
Kimimba	Village	8th - 9th
Gombe	Village	9th - 10th
Bandarikuu	Village	8th - 14th
Kaliwa	Village	14th - 15th
Mduuni	Small town	12th - 14th
Mkia wa Ngombe	Stone town	11th - 16th

Kimimba, Gombe also contained a sparser assemblage of materials, with relatively fewer sherds decorated with the normally ubiquitous incised ceramic motifs of the period. These distinctions suggest that village participation in island exchange systems was variable, even in the earliest periods of settlement.

Bandarikuu provides another example of the richness and diversity of village life. Despite its proximity to other larger towns (less than two km from Mkia wa Ngombe and one km from Mduuni), Bandarikuu's deposits contained imported ceramics, glass, slag, body adornments, and evidence of earth-and-thatch houses. Although Bandarikuu differed considerably from the larger towns (it contained no monumental architecture, was smaller in size), the similarity of the assemblages suggests that wealth, and possibly power, was not monopolized completely by elites in the largest towns. A similar pattern can be read from the material at Kaliwa. This village dates from the 13th-15th centuries, a time when most large towns on the island were at their peak of political and economic power. Finds include debris indicating cloth and metal production, dense faunal remains suggesting a dedication to fishing, and a moderate assemblage of imported materials. These finds suggest some degree of economic independence from the larger towns, such as Chwaka which lies two kilometers to the south. However, Kaliwa's faunal and pottery assemblages indicate that access to prestigious materials was quite different from Chwaka's; preliminary inspection of the faunal assemblage shows that Kaliwa's inhabitants had less access to larger mammals, such as cattle, and relied heavily on fish and shellfish. Also, the local pottery assemblage contained none of the decorations so prevalent at contemporary stone town sites, and this material may also have been restricted to elite populations.

Although imported goods are frequently located at villages, the quantity of imports from both stone town sites, Mkia wa Ngombe and Chwaka. far exceeds that of the villages and small towns, in all periods. Often, the density of artifacts in town deposits was close to twice that in villages. These latter differences indicate both the longer length of occupation at town sites, but also may indicate the number of prestige goods available to town versus village dwellers. These data provide the basis for evaluating the proposition that elite control over regional political economy was manifest in symbolically potent and prestigious goods (Wright 1993; Kusimba 1999b). Data from villages and settlements surrounding the stone towns allow us to chart the distribution of such goods through time, and across space and class. The assemblage from Kaliwa provides the best evidence of these distinctions, with significantly different collections of faunal remains and local ceramics than contemporary deposits at Chwaka, a stone town center. Despite the relative distinctions, however, some village settlements contain a rich assemblage of artifacts. At Bandarikuu and Kimimba the rich diversity of imported materials, local styles, and production debris suggests that these villages may not have been simply subsistence-oriented. From the earliest periods, they may have been involved in mercantile activities as well as craft production beyond the household level. With only preliminary results, we can see that village economies and their relationships with those of the stone town were complex and variable, and that designing methodologies to capture evidence about the rural population has tremendous archaeological potential.

Acknowledgements

The work reported here would not have been possible without the complete support and assistance provided by H. H. Omar, Director, Zanzibar National Archives, Museums, and Antiquities and Abdurahman Juma, Head of Antiquities, Zanzibar. l also acknowledge the generous support of the following individuals: Abdallah Khamis, Salim Seif, Kombo Khamis, Rashid Ali, Hajj Moh'd Hajj, Assa Hamad, Awena Ali, Suleiman Nassor, Molly Margaretten, Marcel Ali, Jovita Vakolavene, Ceri Ashley, Dan Wallis, Bertram Mapunda and Paul Lane. Finally, the fieldwork was also assisted on a day-to-day basis by the communities where we set up field camps, including Bandarikuu, Gando, Kifundi, Kijichame, Konde, Mihogoni, Mkia wa Ngombe, Mondoni, Tumbe Mjini, and Wingwi-Lastly, a special thanks to Adria Mapofu. LaViolette, whose conversations, encouragement, guidance, and friendship made all of this come together.

This project was funded by a number of organizations and l gratefully acknowledge their support: the Fulbright Foreign Scholarship Board,

42

National Science Foundation (INT-9906345), Wenner-Gren Foundation, Explorers Club of Washington DC, and the University of Virginia. I also acknowledge the logistical support of the University of Dar es Salaam and the British Institute in Eastern Africa.

References

- Fleisher, J. and A. LaViolette
- 1999a Elusive Wattle-and-Daub: Finding the Hidden Majority in the Archaeology of the Swahili. Azania 34: 87-108.
- 1999b The Recovery of Swahili Settlements in the Absence of Stone Architecture: Two Preliminary Surveys from Pemba Island, Tanzania. Nyame Akuma 52: 64-73.

Horton, M. C. and C. Clark

1985 The Zanzibar Archaeological Survey 1984-5. Zanzibar: Ministry of Information, Culture, and Sports.

Kusimba, C. M.

- 1999a The Rise and Fall of Swahili States. Walnut Creek: AltaMira Press.
- 1999b Material Symbols Among the Precolonial Swahili of the East African Coast. In J. E. Robb, editor, *Material Symbols: Culture* and Economy in Prehistory. Carbondale: Southern Illinois University, pp. 318-341.

LaViolette, A. and J. Fleisher

1995 Reconnaissance of Sites bearing Triangular Incised (Tana Tradition) Ware on Pemba Island, Tanzania. Nyame Akuma 44: 59-65.

Wilson, T. H.

1982 Spatial Analysis and Settlement Patterns on the East African Coast. *Paideuma* 28: 201-219.

Wright, H. T.

1993 Trade and Politics on the Eastern Littoral of Africa, AD 800-1300. In T. Shaw et al., editors, *The Archaeology of Africa: Food, Metals and Towns*. London: Routledge, pp. 658-672.