

## ■ TANZANIA

### Archaeological Investigations at Songo Mnara, Tanzania, 2011

Stephanie Wynne-Jones  
University of York  
stephanie.wynne-jones@york.ac.uk

Jeffrey Fleisher  
Rice University  
jfleisher@rice.edu

### Introduction

Research at Songo Mnara, in the Kilwa archipelago, was introduced in a previous volume (Wynne-Jones and Fleisher 2010). This paper reports on a second field season completed in June and July 2011, under COSTECH permit no. 2011-167-ER<sup>1</sup>. As discussed in the first report, fieldwork at Songo Mnara is aimed at recovering the uses of urban space at this relatively short-lived Swahili town. The shallow deposits, dating only to the 14<sup>th</sup> to 16<sup>th</sup> centuries, mean that horizontal variation is well defined and the project is using a variety of techniques to explore the traces of past activity revealed through spatial patterning. By these means, we aim to explore elements of town planning, as built up through the priorities and practices of Songo Mnara's inhabitants and the ways these were enacted across the spaces of the site. This expands on previous studies of Songo Mnara that have focused on its monumental architecture (Chittick 1961; Garlake 1966; Mathew 1959), or attempted to locate evidence for earlier phases (Pradines and Blanchard 2005).

### Methodology

Fieldwork at Songo Mnara in 2011 built on the methodological successes of the 2009 season.

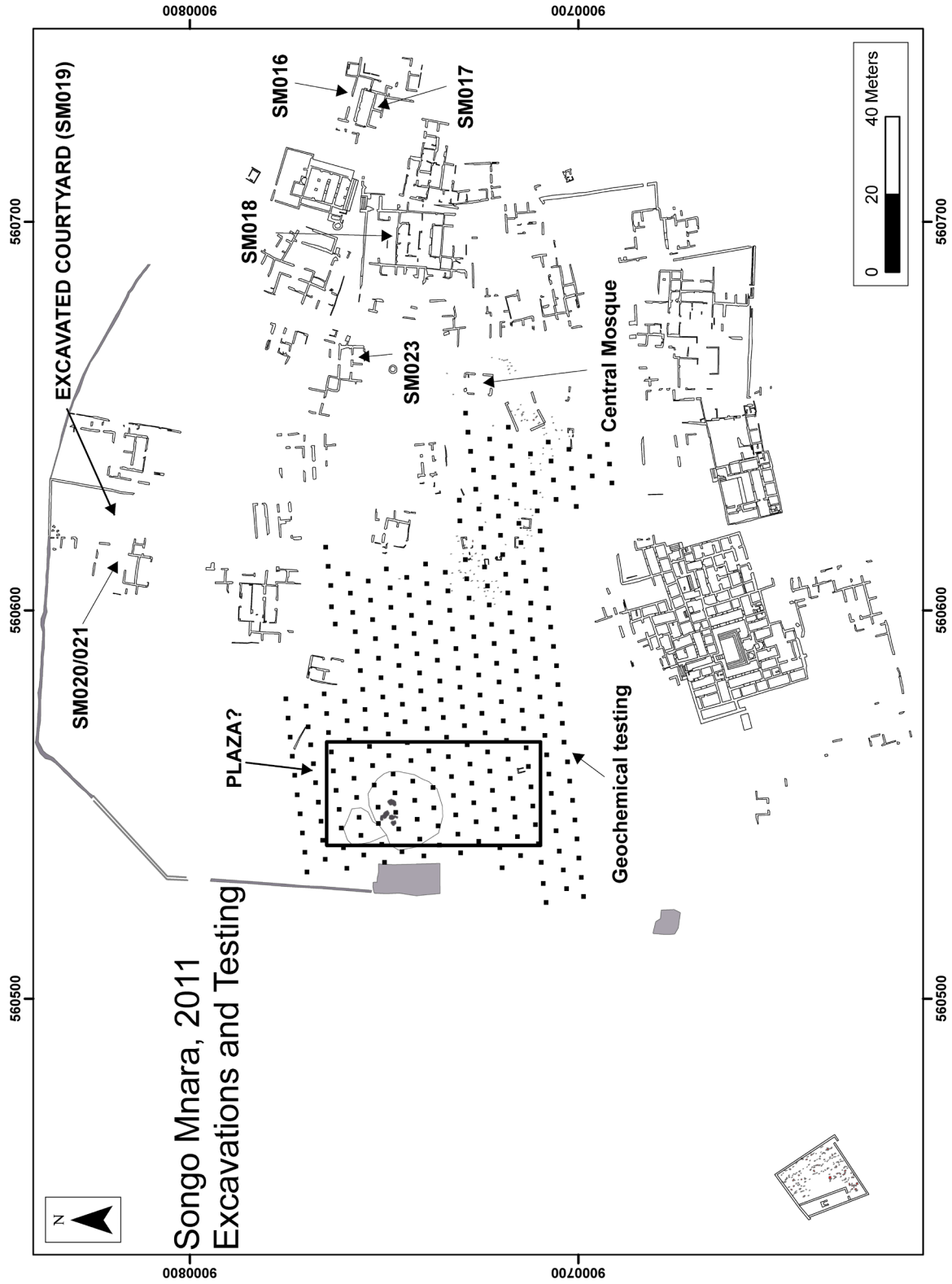
Funding is now secured for fieldwork at Songo Mnara over a five-year period, meaning that a sampling program was especially important in 2011, with subsequent visits for more intensive investigation now assured. A series of approaches were employed for the broader townscape, particularly focusing on completing successful magnetometry survey across the open areas and on expanding the geochemical testing program. Both had previously proven extremely effective at locating areas of ancient activity. The central feature of one open area of the site – a central mosque – was excavated in its entirety to explore its layout and associated artifacts. In addition, the stonehouses were further explored, with comparative data obtained from corresponding rooms in some very different structures. Finally, we initiated a pilot program of bioarchaeology at the site, excavating a series of burials and compiling a full bone report on the skeletons encountered.

### Geophysical Survey

A team from the University of Bournemouth, led by Dr Kate Welham, completed magnetometry and EM survey across the entire area within the town wall at Songo Mnara, in accessible areas. This completes the work begun in 2009; as then, definite areas of activity were visible on the magnetic survey. No further spikes associated with iron-working were located. Instead, magnetometry has illustrated a pattern of anomalous areas that seem to be linked to wattle and daub architecture and associated areas of domestic refuse. This populates the spaces of the site and gives a context for much of the sampling work undertaken here (see below). A Digital Elevation Model was also completed, to combine with the other spatial data in a site GIS, being constructed by Mark Dover.

In addition, the geophysical survey team conducted some trials at the neighbouring site of Kilwa Kisiwani. This aspect was funded separately by a small grant from the Society of Antiquaries of London, and the aim was to explore the wider

Figure 1: Map of Songo Mnara, showing excavation units (numbered) and locations of geochemical test pits.



urban landscape into which the famous Kilwa monuments fit. In addition to magnetometry, the team used Ground-Penetrating Radar (GPR) survey at Kilwa, to help take account of the much deeper stratigraphy. The results are still being processed, but it seems that Kilwa is more complex methodologically, with fewer clear signatures across the open spaces. This may be due to wholesale clearance of ground during the 1960s excavations. Still, results in certain delimited areas have been clearer, particularly in the enigmatic enclosure of Husuni Ndogo, and the full results look to be very interesting.

### **Open Spaces**

Research in open areas included a testing program over a large section of the central/western open area and excavations in a courtyard between two houses in the north (SM019). The testing program was an extension of work begun in 2009, during which soil samples were taken along three transects in the central open space to examine soil chemistry and phytoliths (Sulas 2010). The testing program this year was more intensive, and covered an area of roughly 130m x 70m, with shovel tests excavated every five meters on a staggered grid. In total, 266 shovel tests were excavated; soil samples were taken from the primary cultural deposit and all fill was sieved and artifacts collected. Soil samples have been submitted to the ALS Laboratory in Seville, and will be subject to ICP-AES analysis to determine chemical concentrations. Phytoliths will also be extracted from these samples. Dr Federica Sulas supervised the testing program and will oversee the geochemical and phytolith processing.

The test zone corresponds with an area in which geophysical surveys in 2009 indicated a possible open plaza, bordered by numerous circular anomalies. It also extended into the central open space, covering the central cemetery with tombs and gravestones, as well as spaces adjacent to and between houses (Figure 1). While we await the chemical and phytolith data to examine possible activities across this space, an initial plotting of artifact distributions from the test pits reveals that earth

houses once bordered the plaza space on the north and south; concentrations of daub correlated directly with geophysical anomalies located in 2009. Artifact distributions have also allowed for a more precise mapping of an iron smithing area, as well as variable and likely patterned distributions of materials across the space. A similar testing program will cover the northern open area in 2013.

Excavations were also carried out in a courtyard between two houses on the northern wall of the settlement. A 2m x 14m trench was excavated across the courtyard, running from wall to wall. The excavations produced dozens of artifacts relating to household activities. The distribution of artifacts across the trench suggests that activities were clustered at the margins, with the central space kept relatively clean. A large feature with burned coral rag is likely the debris from coral lime plaster production; this feature was sealed with 15<sup>th</sup>/16<sup>th</sup> century deposits and thus likely relates to the construction of the settlement itself.

### **House Excavations**

A variety of different rooms were sampled across the site (Figure 1), building on work in 2009 that had identified differing patterns between two houses on the northern and southern sides of the site. Although this was a sampling program, the focus on spatial practice meant that rooms were excavated in their entirety: test pitting would be inappropriate here. This aspect of sampling is therefore slower than the test pits elsewhere on site, and is likely to continue into future seasons. In total, six units (SM016, SM017, SM018, SM020, SM021, SM023) were excavated in the houses/domestic spaces:

- Two entrance rooms were excavated in Houses 31 (SM016) and 34 (SM018)<sup>2</sup>
- Two back rooms were excavated in Houses 31 (SM017) and 40 (SM023)
- One unit (SM021) explored a back room associated with a courtyard. The courtyard was also exca-

vated (SM020)

One of the entrance rooms, off the courtyard of the largest and grandest house to the north of the site (SM018) was disappointing as it became obvious that it had been excavated previously, a fact that had been obscured by the falling in of its ceiling after clearance. This likely occurred during the work of the 1950s/60s and the renovations of Mr Charles Little. In fact, a thicker plaster floor overlaid the original, cracked floor, and was probably laid by the conservators. The other front room, however, was extremely densely packed with materials, and the remains of multiple domestic activities. As in 2009, a buried ceramic pot was found to one side of the entrance, which contained a rich sediment that was sampled and floated. The entire room was also full of ashy deposits and ceramic concentrations, suggesting a wealth of activity in this entrance hall.

The back rooms, in contrast, were both largely clear above floor level. The numbers of ceramics were low in both units, and suggest that the plaster floors were kept very clean. Both had a drainage sump in the centre of the room down which would have helped in washing them down. Beneath the floors, though, both rooms yielded buried deposits which had been plastered into the foundations. A hoard of 360 Kilwa-type coins was found beneath the floor of SM017, accompanied by a carnelian necklace. SM023 contained instead a small pit into which eight large aragonite (clam shell) beads or spindle whorls had been placed. These comparable but different deposits suggest deliberate acts of structured deposition that might be linked to the meanings and value of the houses, and their founding as domestic spaces.

The courtyard and associated back room of House 47 were much more reminiscent of the open area excavations, and directly correspond to those undertaken this season in SM019 (Figure 1). As outside, the courtyard contained a dispersed midden associated with domestic activity and cooking, with some clear areas of burning but no clear concentrations or midden pits. In fact, the deposits

were less rich than those immediately outside the wall of this courtyard, suggesting that debris was simply thrown over into the external space.

Excavations of the houses are therefore slowly building a picture of both diversity (in the uses of different rooms) and shared practices (such as the structured deposits) across the site. We are also beginning to be able to speak to the different uses of the range of space across the site, and the ways that domestic activities were defined by, and overspilled the bounds of, the domestic structures themselves. Future seasons will continue this process, and explore as many as possible of the range of houses at Songo Mnara.

### Mosque Excavations

Excavations of the central mosque (SM030) were undertaken by Professor Mark Horton, University of Bristol. The structure was excavated fully, revealing a neat floor plan of a small mosque on a stepped plinth. Fallen remains were found of a vaulted ceiling with hardwood rafters. In addition, a unique cistern arrangement was uncovered next to the southern door, with dual cisterns on either side of the stairs, one still containing a complete inset celadon bowl.

*Botanical remains.* All deposits were floated for botanical remains by Dr Sarah Walshaw and Mr Dominic Pistor of Simon Fraser University. The resulting light and heavy fractions are being analysed by Dr Walshaw.

*Faunal remains.* All bones were collected, and sieving ensured good recovery of fish as well as mammal bones. The mammal bones are being analysed by Thomas Biginagwa of the University of Dar es Salaam. The fish remains will be studied by Erendira Quintana Morales of the University of Bristol.

*Finds analysis.* Ceramic analysis was conducted in the field by Freda Nkirote of the National Museums of Kenya. The work continues at

Rice University, under Jeffrey Fleisher's direction. Beads are being analysed by Marilee Wood, University of Uppsala. The coins are being identified by John Perkins of the British Museum/University of Bristol.

*Burial excavations.* A sample of Songo Mnara's many burials was excavated this season, as a pilot program to gauge feasibility for a larger study looking at demography and disease within the town. We were very grateful to receive permission from the local community for these excavations. Fourteen skeletons were excavated, across four excavation units (SM024, SM025, SM026, and SM027). These sampled some simple graves (SM024), a stone-built tomb in the central area (SM025), the central graveyard (SM026) and an area of tombs outside the walls (SM027). Analysis was completed by Dr Kate Robson Brown and Francesca Migliaccio of the University of Bristol. All bones were subsequently re-buried in the same positions, and a blessing was completed at the end of the season.

Initial results were excellent, with wonderful bone preservation in the sandy soils. Full results will follow, but it was notable that the excavations were also instructive on burial practice. It was clear from the offset tombs and stones that graves were often marked or memorialised some time after the initial burial. In addition, offerings are visible at the former ground level, including ceramics and imported wares, and one grave with nearly six thousand rounded quartz pebbles.

### **Island Survey**

A survey of the island landscape was conducted in parallel with the excavations at Songo Mnara, as part of the doctoral fieldwork of Jack Stoetzel of the University of Virginia. This survey is reported separately in this bulletin.

### **Conclusions and Potential for Future Work**

While the 2009 field season at Songo Mnara confirmed the integrity of archaeological deposits, the 2011 field season was designed to test a wide range of urban areas, tests that will help situate more extensive excavations in 2013 and 2015. Excavations within houses continue to demonstrate the potential of household archaeology at the site. The presence of buried deposits on and beneath house floors suggests that household archaeology at Songo Mnara will not only allow us to explore domestic life at this site, but will challenge and add complexity to our understanding of medieval Swahili life.

Research in the open spaces at Songo Mnara has allowed us to begin delineating productive and ritual activity areas, defined public plazas and courtyards, and features now erased from view, such as earthen houses. By slowly reconstructing these features of the open spaces, the form and meaning of Songo Mnara's urban plan comes into better focus. For example, we now believe that public access to the site was along the western shoreline (now choked with mangrove trees), where visitors would enter between two small mosques, and immediate have a vista into the central cemetery area and the central mosque on its stepped plinth.

Such insights can only come from multi-layered datasets produced by specialists over the course of a number of seasons. Future research will continue these investigations, and will include larger exposures excavations in the open areas, as well as the complete excavation of a sample of houses across the site. All these data will allow for a more comprehensive understanding of life in this ancient Swahili town, and the way that materials practices and the use of space were central to its inhabitants and its history.



## Acknowledgements

Research at Songo Mnara was funded primarily by the National Science Foundation (US, BCS-1123091) and the Arts and Humanities Research Council (UK, AH/J502716/1). Additional funds were made available through the Archaeological Field School of the Department of Anthropology, Rice University. The Society of Antiquaries of London gave a grant for the geophysical survey.

Fieldwork was conducted in collaboration with the Antiquities Department of Tanzania, and we are very grateful to the Director, Donatius Kamamba, for his assistance. We would also like to acknowledge the help of our Antiquities representative, Revocatus Bugumba, and to Mohammed Chidoli in the Kilwa office who was likewise invaluable. Our camp director, Ahmed Kassim, ensured that all ran according to plan and we are very grateful for all his help.

Excavations were conducted by students from Rice, York and other universities including Nathan Anderson, Grace Apfeld, Juliette Chaussen, Daisy Chen, Tom Delany, Kylie Klein, Hannah Leighton, Erick Miller, Khadija Mohammed, Courtney Ng, Sheena Shah Simpson, Rachel Warren, and Amanda Wicker.

We are particularly grateful to the people of Songo Mnara who made us extremely welcome during the 2011 season. Their willingness to trust us to excavate the tombs of Songo Mnara was not taken lightly, and we appreciate the unease our plans may have caused. We hope that we were able to lay many of their fears to rest.

## Bibliography

Chittick, H.N.

1961 *Annual Report of the Department of Antiquities*. Dar es Salaam: Government Printer.

Garlake, P.S.

1966 *The early Islamic Architecture of the East African Coast*. London: Oxford University Press.

Mathew, G.

1959 Songo Mnara. *Tanganyika Notes and Records* 53: 154-60.

Pradines, S. and P. Blanchard

2005 Kilwa al-Mulûk. Premier bilan des travaux de conservation-restauration et des fouilles archéologiques dans la baie de Kilwa, Tanzanie. *Annales Islamologiques* 39: 25-80.

Wynne-Jones, S. & J.B. Fleisher

2010 Archaeological investigations at Songo Mnara, Tanzania, 2009. *Nyame Akuma* 73: 2-8.

## Footnotes

<sup>1</sup>Full field reports for the 2009 and 2011 seasons are available for download at [www.songomnara.rice.edu](http://www.songomnara.rice.edu).

<sup>2</sup>House numbers are those assigned by Garlake (1966).