

TANZANIA

The Excavation at Kwale Island, south of Dar es Salaam, Tanzania

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Introduction

The excavation of the archaeological site on the Kwale Island took place between January and February 1995. Kwale Island is located at latitude 7°24'S and longitude 39°23'E. The excavation reported in this paper was preceded by a survey conducted by the Field School of the University of Dar es Salaam between June and July 1994 (Chami and Kessy 1995). The survey, aimed at the archaeological reconnaissance of the Kisiju area, identified several sites ranging from the Later Stone Age (LSA) to recent. Kwale Island was found to have cultural material remains ranging from the EIW period to modern times.

The identification and the excavation of the site has made a viable contribution to ongoing research on human contributions to environmental change. As part of such a project, the authors have been surveying the large part of the central coast of Tanzania looking for variety of sites which would help in the understanding of the process of human adaptation to coastal environments. Having a variety of sites and data, it may be possible to produce a holistic picture of adaptational processes from the stone age to the present. In this way, it is thought, even the external factors influencing settlements could be put into proper perspective.

Description of Kwale Island

The name Kwale seems to be common on the coast of East Africa. It appears at several places

and the authors are aware of its use for three settlements. The first one, well known to EIW period archaeologists, is south of Mombasa (Soper 1967). This site was the first of its type on the East African coast and became a variant name for the coastal EIW ceramic tradition. Another Kwale is found on the western part of the Tanga Bay, a Tanzanian port south of Mombasa. Today the settlement is suburban, with typical Swahili culture. A few hours survey at the site indicates that its peak of occupation was in the 19th century when a defensive wall and an impressive mosque was built. These are now in ruins.

The Kwale of our concern here is the island which is four km offshore from the port of Kisiju, about 100 km south of Dar es Salaam. Longest in the east-west direction, the island measures 1 x 4 km. It is entirely covered by coral stone with a very thin layer of soil cover not deep enough for substantial cultivation. The estimated population of the island is 2000, and it is questionable whether it has ever grown larger than this. As the water on the island is hard, fresh water for cooking and drinking is brought from Kisiju by boats.

Virtually no wild animals are found on this island. Ethnographic enquiries conducted at the time of our excavation revealed that pythons are occasionally encountered. In the past islanders used to capture and bring them to the center of the settlement for amusement. Regrettably, for quite some time now no single python had been seen by the local inhabitants. In the past domesticated animals included chicken, goats and cattle. But during our excavation only goats and chicken were seen.

The pressure on land on Kwale island is substantiated by the shifting of fences separating cropland from pasture land. The tree fence has been moved in order to increase cropland, and over the years land for free grazing has been reduced. Crop land is further east of the village whereas land for grazing is closer to the settlement. In Kwale agriculture is mainly the work of women whereas fishing is done by men. Women cultivate sorghum, lime and mangoes. As has been found elsewhere (Msemwa 1994), other activities of women include the collection of shellfish for food.

Natural resources found on the island are wild fruits and nuts such as baobab and a variety of plums. Although the latter resources occur in small quantities they are important for the health of the

islanders. The abundance of fish together with the island's proximity to the mainland could have been the main attractions for human colonization. Fishing is still the major activity; its products are exchanged on the Kisiju port for other subsistence requirements.

The area of the present day occupation seem not very different from that of the ancient times. The occupants of the 14th to the 15th centuries, however, seem to have been more prosperous, their island having been used as a kind of trading center. The remains of a mosque, tombs and imported products scattered all over the area indicate better living conditions than of today's abject poverty.

The choice of surveying the island in 1994 was precipitated by the fact that it is just four km from the mainland. One can see it clearly while standing at the mainland shoreline. The assumption was that if EIW people had reached the Kisiju shore, and they had means of sailing they would certainly have ventured to visit or settle on the island. Due to the sandy and coralline nature of the island it is obvious that the cultural material that could have been left behind would easily be seen. The survey identified cultural materials ranging from the EIW period to modern times. From the survey finds it was obvious that Kwale site could be the first site on the coast of East Africa to offer a complete picture of the coastal sequence from the early centuries AD to today. Hence the importance of the excavation.

The excavation

The survey established that only eight hectares of the western tip of the island has been occupied since the beginning of the first part of first millennium AD. This is the area subjected to archaeological work which lasted two and a half weeks. Before the actual excavation, a site survey was conducted to establish how material was distributed over the site. It was seen that since the 14th century AD the extreme eastern point, about three hectares, was earmarked for burial, mosque and a port (Figure 2). The further inland area is the one with the present settlement. The EIW remains were found concentrated more on the northern part of the occupied area, at a point where it is easy to observe the mainland. Few sherds of the EIW tra-

dition were found at the center of the occupied area, indicating that EIW people could have occupied an areas as large as the one occupied today.

Since other later cultural materials were found concentrated at this area of EIW tradition, our excavation effort was directed to this area. It was hoped that a complete chronology of the site could be found. Only three small size excavation trenches, one of 1 x 2 m, and two of 1 m² were excavated at this site. The purpose of this test excavation was to learn what range of material found *in situ* and hence establish chronological sequence of the site, as it is possible that it has perhaps two thousand years of continuous occupation. The first trench was placed under a baobab tree near the main street towards the town center. The tree caused the house builders to leave a large space untouched around the tree, which is used for recreation during the day. The 1 x 2 m trench was longer in the south-north direction. The surface of the area is generally flat. The second trench was put near the old beach pottery scatter on an area which has been used as a dump from the first millennium. The third was at an open area near a slope towards the old beach (Figure 2).

The excavation of trench one proceeded by 10 cm arbitrary spits (Figure 3). Level 1 had very hard compact soil near the surface. A tip of a hoe was used to break the surface. The soil was sandy clay with brownish colour. The material collected from this layer is recent, comprising goat droppings, bones, shell, coral stones, sherds, nails, daub and a coin.

Level 2 and 3 yielded materials typical of post 15th century AD. The materials were more concentrated at the 3rd level. They include sherds, shells, bones, beads and gum arabic. The cultural indicator for post 15th century is coastal pottery decorated with neatly executed band of impressions, executed either by a fine twisted rope roulette (Soper 1985:36), or by a repeated stamping of a comb-like object with four or five points. Occasionally the same pronged object would, at a point slightly below the stamped impressions, be dragged either in a waiving or zigzagging fashion to create a continuous band of five or four parallel lines (Figure 5c, also see Schmidt et al. 1992:35). This rarely undescribed pottery tradition is found in many sites north of the Rufiji to the Pangani rivers associated with Chinese and European ceramics.

Figure 1: The 1994 field school surveyed area (see Kwale Island on the right hand side of the map), after Chami and Kessey 1995.

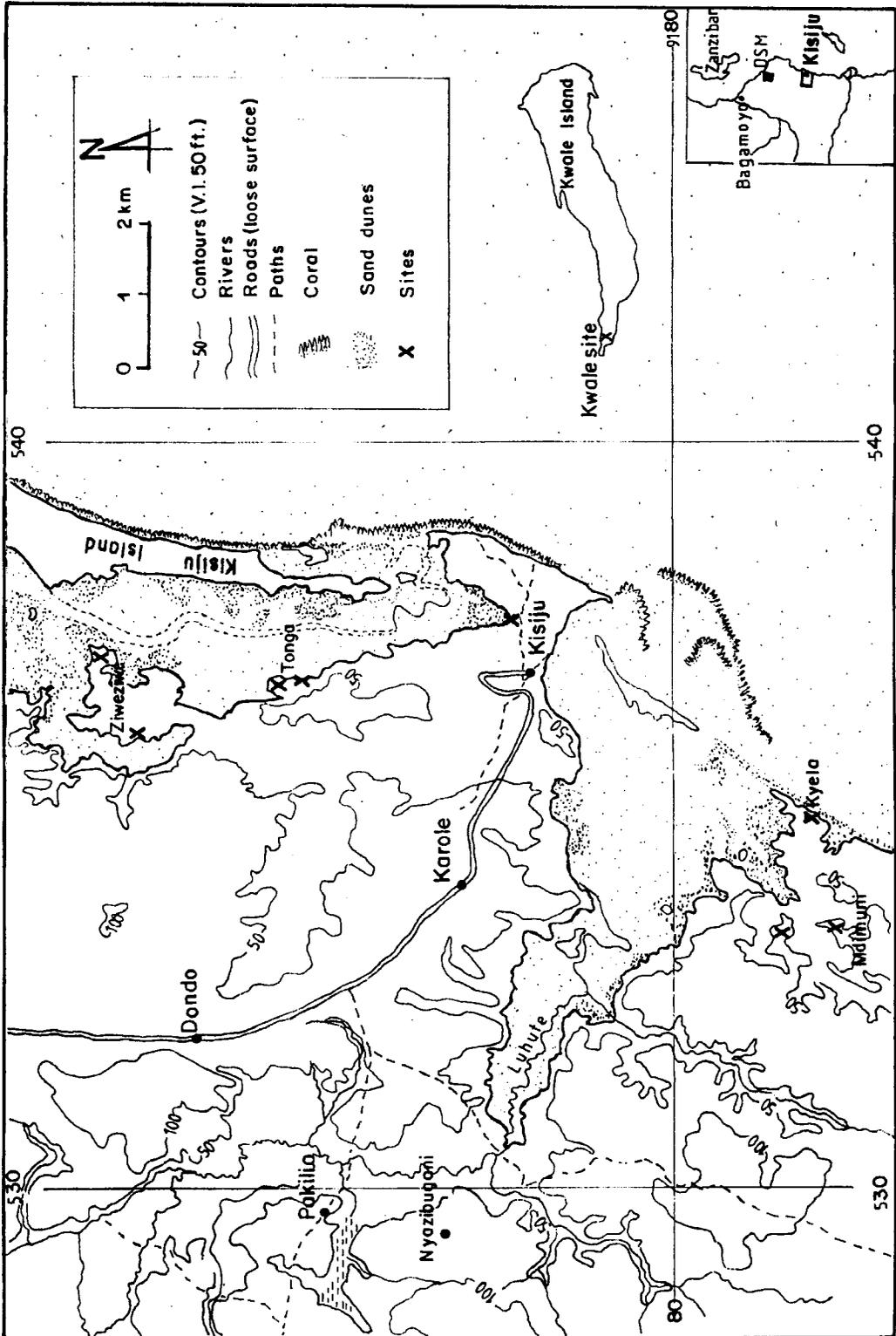
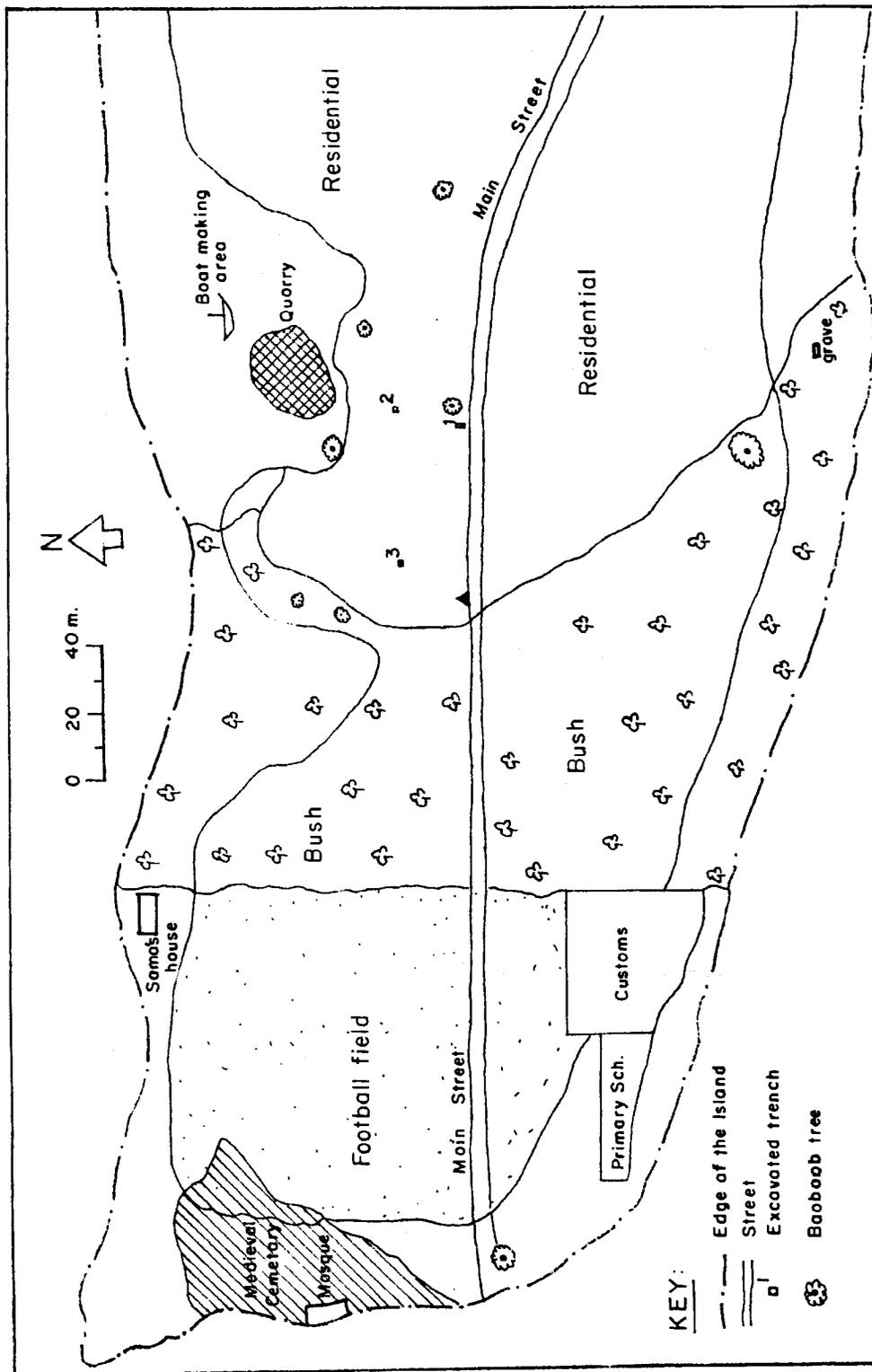


Figure 2: Kwale site map.



Level 4 and 5 seem to offer materials identified here as Swahili (13th-15th centuries AD). Apart from a variety of vessel and decoration types found in this tradition (Chittick 1974:342-345); another diagnostic form found over the larger region down to Madagascar is what Chittick (1974:322) has described as type 5, a bowl with "a very short, or vestigial, neck". The vessel is characterized by a line of stabs at the neck (Figure 5a). Another common design of this time period is that of wider criss-cross band appearing on the neck and shoulder of necked vessels (Figure 5b). Other cultural materials collected from these two levels include shells, glass fragments, piece of cloth (linen), bones and pieces of concretes, and goat droppings. Bones include those of fish, mammals and birds. The imported pottery looked to be of Islamic type and Chinese. Few beads typical of the period were also found. The sediments of spits 4 and 5 were darkish brown due to concentration of cultural materials. They also became more sandy.

Levels 6 and 7 yielded cultural materials of the 9th -12th centuries AD. The cultural indicator of this period is mostly plain ware with vessel types termed elsewhere as terminal TIW tradition (Chami 1994:80). Terminal TIW tradition is different from the early and later phase TIW tradition because the former ware is rarely decorated and it has a wide opening similar to Chittick's (1974:339) Kilwa period II (Figure 4f, Figure 3e is a red-slipped bowl from the same context). Other finds include shells, an iron knife and spear (Figures 6 a and b), shell beads, a bead grinder (Figure 6c), a coin (Figure 7) and a milk-white sherd with greenish alkaline glaze and a sugary paste. It was in level 7 where the first EIW pottery was recovered from a buried context. The sediment at this level is dark-reddish and more sandy. Levels 8 and 9 characterized by reddish sand were the lowest found with cultural materials. One observes calcareous materials associated with sand thus indicating that it was near the beach.

The interesting aspect of these two spits is that they are purely of EIW tradition. A fair amount of EIW tradition potsherds were found (Figures. 4 a-e). Other associated materials include shells, bones of mammals, a shell bead and daub. The two levels had less concentration of cultural materials compared to the upper levels of the later traditions.

Trench 2 was of 1 m² excavated at a further northern part about 5 m from trench 1. As it is indicated by both the recent dump and the concentration of the early materials at the edge of this area we identified the place as a dump used from the EIW period. So the idea was that a second trench should be fixed at this area so as to be able to collect a variety of material cultural remains. Unfortunately, no new data was obtained from this trench. The general layering of materials did not look different from the first trench apart from cases of materials of different time period being mixed up in some layers.

Trench 3 was also of 1 m², placed in the western edge of the site. In this area the deposition was shallower - the cultural materials being found only down to 60 cm. The soils are more sandy and reddish from the surface. A lot of quartz crystals are found associated with calcareous particles, indicating that it was right near the beach. No new data other than those in Trench 1 was recovered from this trench.

Dates

Several charcoal samples were collected from almost all levels of Trench 1 below 20 cm (Table 1). Those submitted for C-14 dating at the Uppsala Tandem Laboratory include a sample from level 7 (60-70 cm below the surface) associated with a copper coin and the 9th to the 12th century AD cultural materials. This sample is numbered in Table 1 as Ua-10285. Two other submitted samples were all from different contexts of Trench 1, level 9 (80-90cm) associated with EIW potsherds and bones. They are numbered Ua-10286 and Ua-10287. The dates in Table 1 are still uncalibrated. Sample Ua-10285 offers a date of 710 ± 60 BP (1240 ± 60 ad) for the coin, while the rest of the samples offer dates of 1710 ± 60 BP and 1555 ± 55 BP which is 240 ± 60 and 395 ± 55 ad respectively.

Interesting finds and misses - a discussion

There are interesting aspects of the Kwale excavation which would better be discussed in relation to their respective finds or misses. This is important for a better local and regional picture.

Early Iron Working pottery tradition

It is apparent that the find of EIW tradition potsherds during our initial survey led to the follow-up excavation. Pottery is found concentrated in the lowest levels of the occupation; indicating that the EIW people could have been the earliest to inhabit this island. Although this is a first EIW site to be found and excavated at the littoral and off-shore of the coast of East Africa, this is a third EIW site to be excavated on the general coast of Tanzania and Kenya. The other sites are Kwale of Mombasa (Soper 1967) and Limbo, 20 km in the hinterland of this area (Chami 1988). The former was also taken to be the name of the coastal EIW tradition variant affiliated with its far hinterland variants of Lelesu and Urewe (Soper 1971). When Chami (1988:86) analysed Limbo pottery assemblage, he indicated that what he collected in the southern district of Dar es Salaam was a variant closely related to the hinterland variants of Lelesu and Urewe than Kwale.

In a subsequent publication (Chami 1992:47) the question of Limbo cultural material affinity was not adequately discussed except for a short state-

ment which tended to affiliate the site with the Kwale variant. The shift in position may have been caused by a strong opinion existing among the Iron Age archaeologists of the East and Southern Africa that there was general EIW people's movements from the north-east Kwale cultural region to Southern Africa. This would mean that the Tanzanian coast would have necessarily been more Kwale affiliated than Lelesu/Urewe.

Although it is not the purpose of this paper to discuss the question of the movement of EIW people, the contradiction in the two works of Chami (1988, 1992) is now solved by the use of present excavation finds, and indeed by forthcoming reports from Koma and Mafia Islands and Kivinja near the Rufiji Delta. Limbo pottery must certainly be of Lelesu-Urewe connection. The pottery from Kwale island looks exactly like the Kwale variant. The analysis of pottery from the Kwale island site found that false relief chevron, a motif common in the Kwale variant and absent in the Limbo site, is found in Kwale Island site in a fair amount (Figures 4a and b). Furthermore, the type of up-turned rim bowls found in Kwale Island are more similar to those of Kwale variant than to those of

Figure 3: Eastern wall profile, Trench 1.

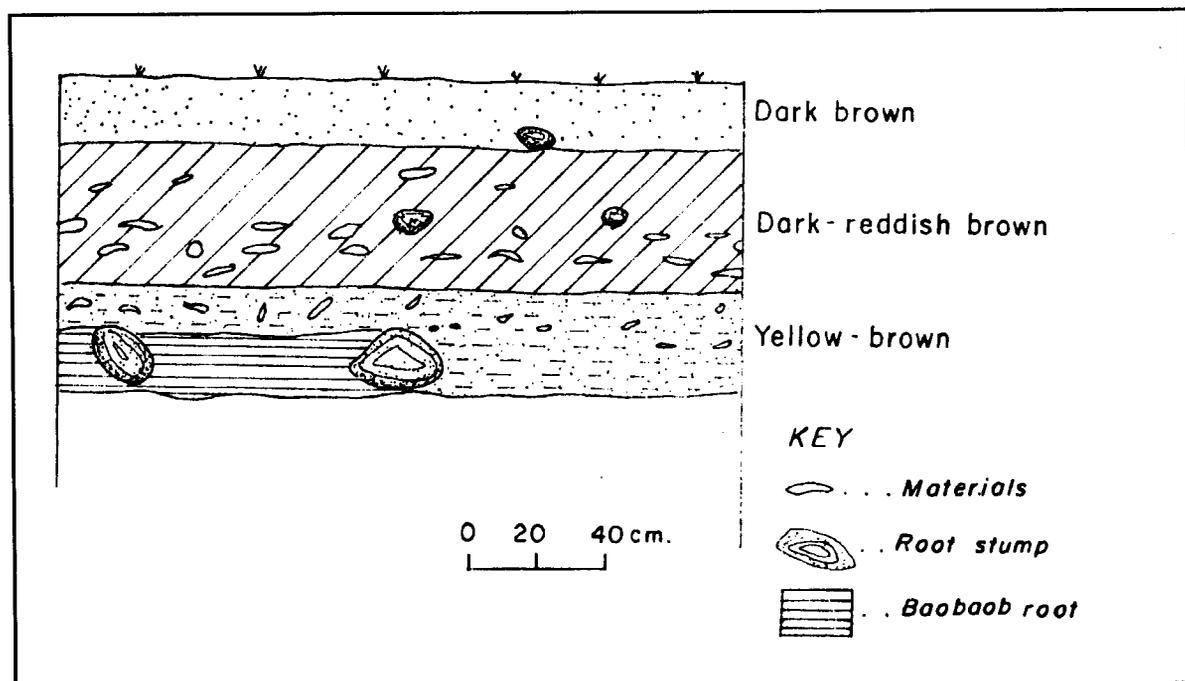
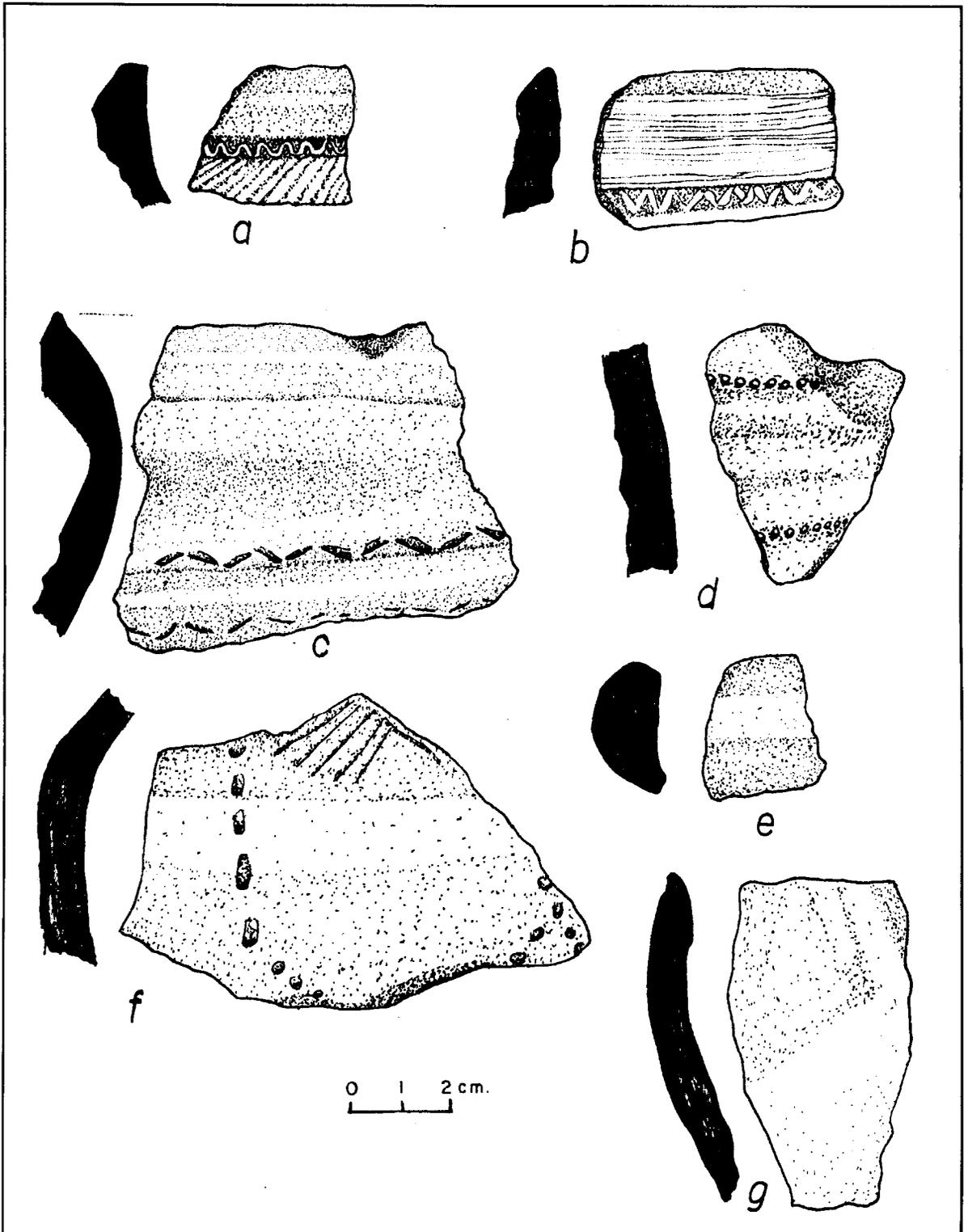


Figure 4: a-e: EIW potsherds, f-g terminal TIW potsherds.



Limbo (Figure 4e; Chami and Kessy 1995:Figure 1d; Chami 1994:70-71; Soper 1967:7-10).

How would this be explained given the fact that Limbo is just over 20 km in the hinterland of Kwale Island? Having solidly established Limbo as a site of the first two centuries AD (Chami 1988) and that the Kwale Island site is of the 3rd and 4th centuries AD, it is obvious that the Limbo site predates the Kwale variant. Indeed, the Kenya Kwale site is dated to the third century AD (Soper 1967). This means that the original EIW settlers on the coast were of older Urewe tradition, who after centuries of experience adopted new cultural elements to be identified as Kwale and later on as TIW tradition (Chami 1994). It is understandable therefore that if there was any cultural diffusion from the East African coast to the southern region in the 3rd to the 6th centuries AD it would be as popularly theorized (Soper 1971; Phillipson 1985). Equally related is the question of iron smelting for which no evidence was found in all three trenches at Kwale. One piece of corroded iron was found associated with EIW sherds. It is likely that the islanders obtained their iron from the hinterland sites in exchange with marine resources as they do today.

The TIW tradition

Despite our conviction that the site was occupied continuously from the EIW period to modern times, the three trenches did not yield TIW tradition materials. Only one triangular incised sherd (Figure 4f) and a bead grinder (Figure 6c) were found associated in a mostly plain ware of between the 10th and the 12th centuries AD. It can be concluded, therefore, that if any, a very small population of TIW tradition occupied the island between

the 5th and the 9th centuries AD. After the end of the EIW occupation on the island, the next major occupation began after the 10th century when the island is connected to the rest of the coastal communities through trade, as seen in the find of many imports and Kilwa coin of the 13th century AD.

The Coin

The coin (Figure 7) was found in Trench 1 level 7 associated with 10th-12th centuries materials. Helen Brown of the Ashmolean Museum identified the coin as belonging to a Kilwa Sultan, al Hasan ibn Suleiman, the only Sultan known to have used the motto found on this coin: Yathiq bil-Wahid al-Minuan (trusts is the one the (Lord of) Favours). According to Brown (personal communication), the problem is that three sultans bearing this name are listed in the Arab History of Kilwa, the chief source for the dynasty, and only one of them is securely dated, the early 14th century one visited by Ibn Battuta (Brown 1991:4). As we know Ibn Battuta visited Kilwa in the 1330s. Our uncalibrated C-14 date for the coin is 1240 ± 60 ad (Table 1). Even when calibrated (Chami 1994:91) this date would firmly put the coin in what Chittick (1974) refers to the first dynastic period in Kilwa. Chittick (1967:12) dated a coin with a similar rhyme to AD 1160 ± 110. As Brown has mentioned in her comment (personal communication) there could have been a ruler in the first dynasty with a sultanic name "al H. ibn S".

An alkaline glazed potsherd

Another interesting find is an alkaline glazed potsherd which is of either small bowl or cup found in Trench 1 level 6 associated with the

Table 1: Radiocarbon dates from the Kwale Island excavation

Lab number	Trench	Level	C14 Age BP	Uncal age AD/BC
Ua-10285 1	7	(60-70 cm)	710 ± 60	1240 ± 60 ad
Ua-10286 1	9	(80-90 cm)	1710 ± 60	240 ± 60 ad
Ua-10287 1	9	(80-90 cm)	1555 ± 55	395 ± 55 ad

Figure 5: Swahili tradition pottery.

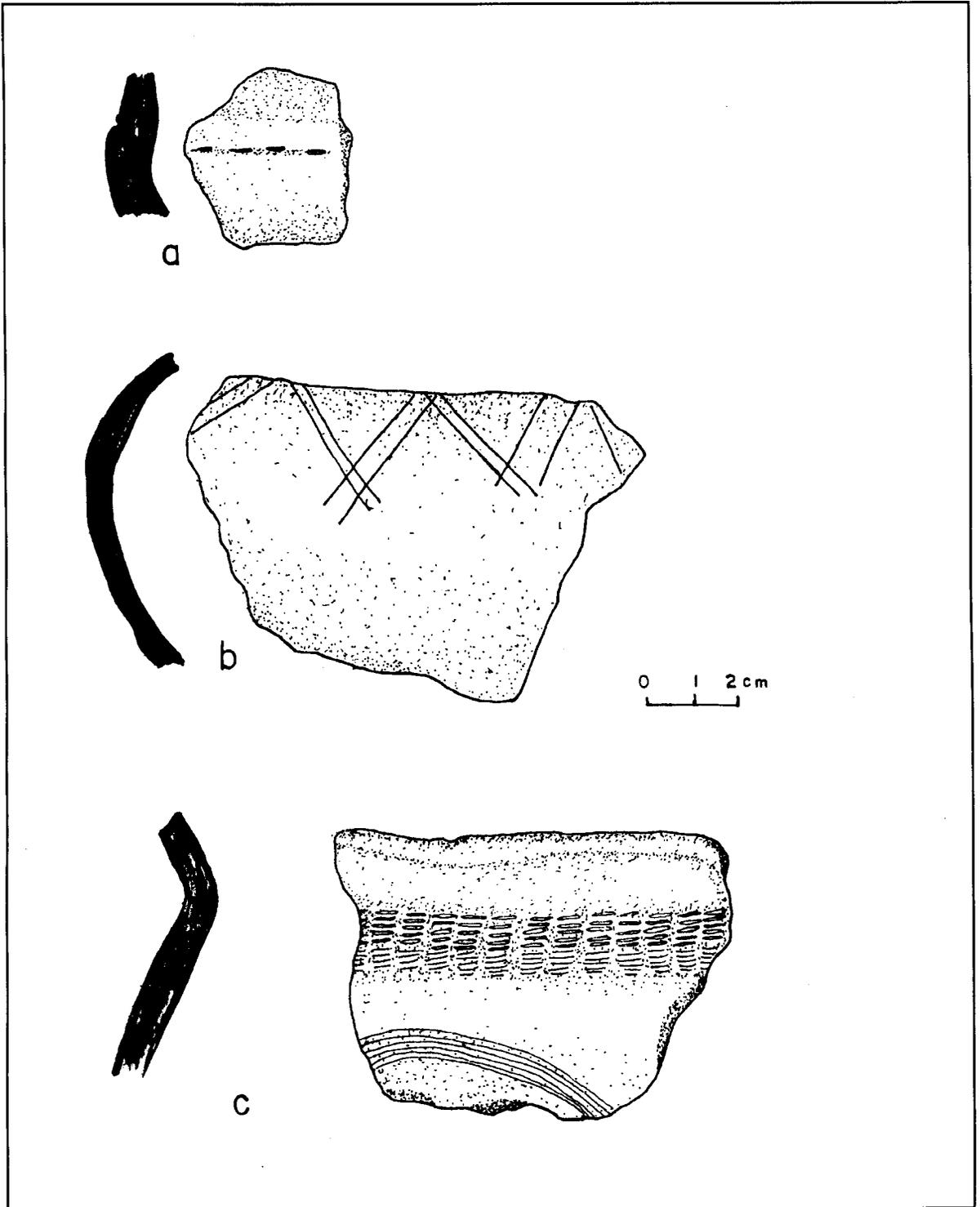


Figure 6: Objects from the Kwale excavation: a-b: iron tools; c: bead grinder.

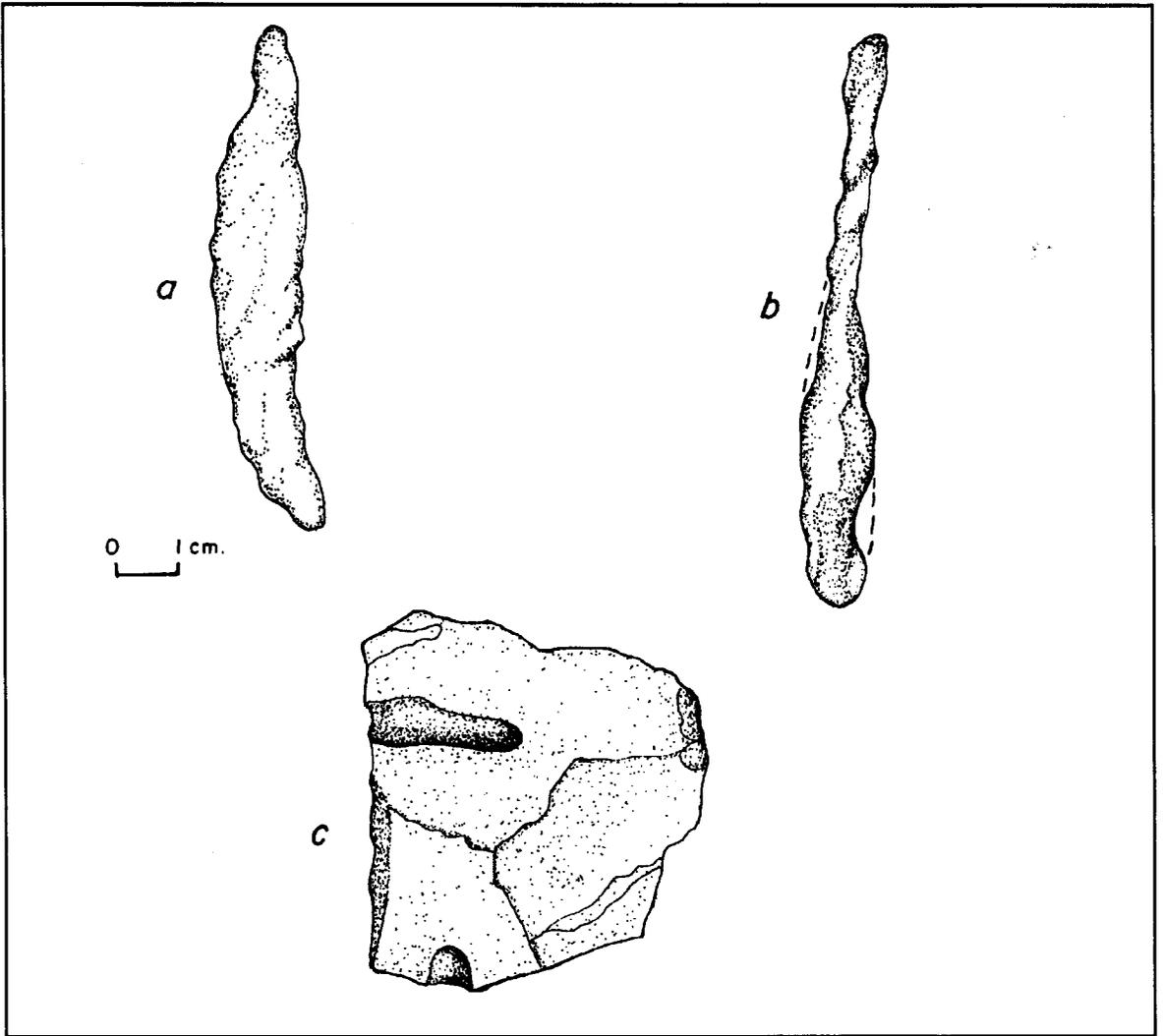
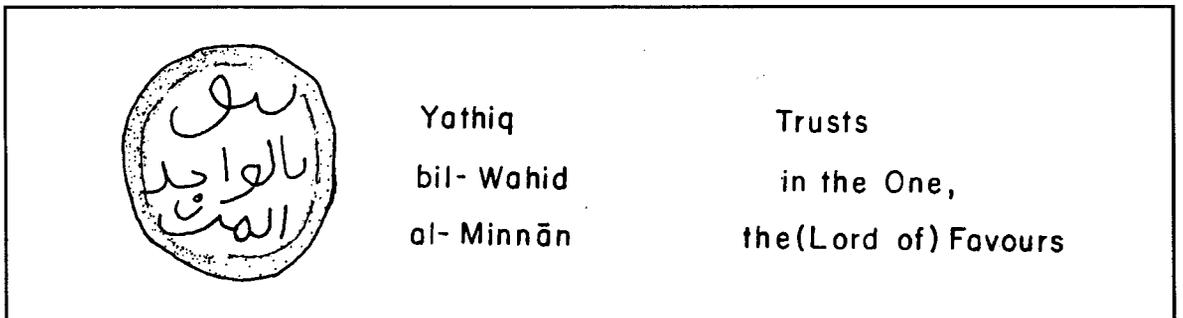


Figure 7: Kilwa copper coin.



10th-12th centuries pottery. This is what Chittick (1974:302) has identified as rare ware, light blue glazed "without any other decoration over the buff paste; the glaze is very subject to decay". It has been seen as a variant of the Sassanian-Islamic ware.

Shell beads

Shell beads were not manufactured on the coast of East Africa before the 7th century AD and not later than the 11th centuries AD. In the present excavation, one shell bead was found in the lowest (90 cm) occupational level (9) associated with EIW potsherds, and were also found in levels 6 and 7 dated by charcoal and coin to the 12th-13th centuries AD. Chittick (1974:473) indicates that shell beads continue to be made until period IV (15th century) but in a very rare form. It is likely that the bead in the EIW context is an intrusion from the upper layer.

Faunal remains

The existence of many bones of fish, birds and mammals is a proof that the islanders subsidized marine food with others from within and from the mainland. It is apparent that the size of the island could not host large numbers of mammals. The animals must have been brought from the mainland, possibly in exchange with marine resources, or by a team of islanders themselves crossing for a hunting mission. From the goat bones and droppings in the post 12th century contexts, domestication is attested. Even today, a few individuals keep goats in small numbers.

Sailing

This is the first site with EIW tradition to be excavated on the near shore and islands of East Africa. The ancient inhabitants needed the ability to cross deep sea channels with strong currents. As will be outlined more in a forthcoming publication about similar sites in the deep sea islands in the region, the first century EIW inhabitants quickly transformed their techniques to be able to sail across deep waters for marine exploitation and probably trade. All indications suggest that, just as it continued in the Kilwa period, the EIW

islanders linked themselves to the mainland by improving sailing techniques. This was necessary for their survival as all their resources depended on sailing either for fishing or for exchange. This is, however, contrary to the existing view that the ancient East Africans had not adopted their own means of sailing in the deep sea. According to Sheriff (1981:555) the population "appears to have been essentially coast-bound", not having deep sea dhows.

Acknowledgements

We would like to sincerely thank all individuals and bodies that made it possible to accomplish this work. The excavation took place at an environment which was very hostile to human existence due to the February heat and lack of freshwater on the island. Half of the crew fell sick of diarrhea within the first week. The excavation crew was composed of Mr. A. Kweka of the National Museum, Mr. F. Ndunguru of the University of Dar es Salaam, Mr. M. Uvuruge of the University of Dar es Salaam, and Mr. E. Sama of the Forestry Department in Kwale Island. The leadership of Kwale Island and sailors assisted us with facilities such as water. The University of Dar es Salaam and Antiquities department gave permits and equipment. Funds were from SAREC via Uppsala's Human Responses to Environmental Change project directed by Professor Paul Sinclair.

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