

## KENYA

### The Case of Tana River Delta Sites

#### A Brief Historical Background

The Kenyan Coast is blessed with numerous archaeological sites and monuments. Their unique and striking architectural designs result from a long history spanning several centuries of interactions with the outside world. The construction and evolution of these sites/monuments can be compared to the development of other historic towns since the Middle Ages, based on the fact that they have been settled and resettled several times over the years.

The Tana River Delta Sites – Ungwana, Shaka, and Mwana – are settlements that grew as a result of contact between the local inhabitants and the Persian/Arabian cultures. This unique interaction evolved into a distinctive civilisation, referred to as the Swahili Civilisation, which extends along the eastern African coast from Mogadishu in the north to Mozambique in the south, includ-

ing both the Comoros and the Madagascan islands. The ruins are located at the present mouth of the Tana River, along the Kenyan Coast at Kipini, and extend in the order above from Kipini, south-east across the north end of Formosa or Ungwana Bay.

#### Ungwana

According to research, Ungwana has been identified as Hoja and was initially settled by the Portuguese. This site extends over roughly 45 acres and its structures include a perimeter town wall, eight mosques, numerous houses and several groups of large monumental tombs.

Excavations concentrated in the two *jamias* (Friday mosque) and in the mosque of the domed *mihrab*, both intrinsic sites of

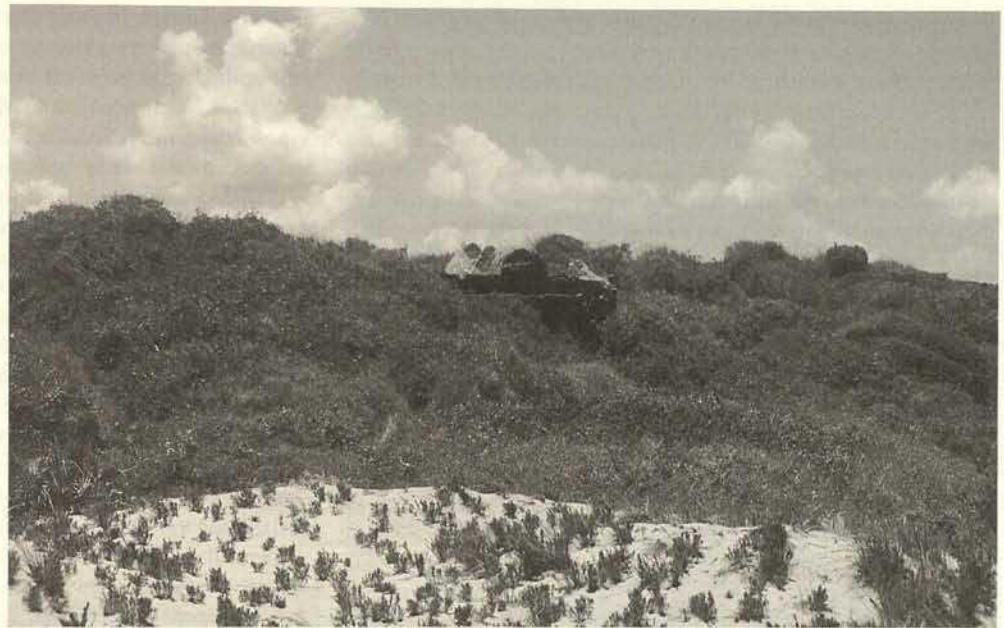


Entrance of dry-walling enclosures of Thimlich Ohinga in South Nyanza. Note the similarities with Great Zimbabwe.



Thimlich Ohinga, view during the wet season. Note the collapsed wall in the background.

Mwana, view of vegetation growth inside the ruins and of beach sands threatening the site



Ungwana. The work revealed six archaeological periods. Period II and I are postulated to have preceded the construction of the two *jamias*, and are consistent with the dates 1200 to 1250 AD. No plan could be obtained of the earliest constructions that dated to the period 1200 to 1250 AD, but there are stone and plaster walls that suggest that brickwork rose above the lowest courses, indicative of an earlier settlement. At the location of the mosque of the domed *mihrab* the earliest levels contain evidence of occupation. In the period II level (1250 to 1350), within the area of the two main *jamias*, more walls were discovered above the initial levels of construction. These turned out to be tombs that pre-dated the later mosques.

Ungwana Period III, dating from 1350 to 1450 AD, spans the life of the first construction of the mosque of the domed *mihrab*, a notable benchmark of Ungwana. Period IV, dating from 1450 to 1500 AD, witnessed the rebuilding of the Old *Jamia* (Old Mosque), another notable structure on site, and the construction of the New *Jamia* (New Mosque). Period V at Ungwana incorporated the first half of the 16th century, and was marked by reconstruction following the Portuguese raid of 1505 AD. Both the New *Jamia* and the Mosque of the domed *mihrab* were probably rebuilt following collapse during this period. The final period, known as Period VI, was marked by the construction of another mosque and lasted until 1600 AD. Ungwana ceased to exist as a community in the last quarter of the 17th century, due to the advancement of the Galla (an Eastern Cushitic-speaking people from south-western Somalia).

The town can be divided into sections based on the spatial organisation of the standing ruins. The standing stone houses at Ungwana are concentrated in the central and eastern parts of the settlement. Most of the houses are known from standing piles of rubble – except for the palace, the mid-west section where there are houses of long rooms and a group of houses on the eastern section.

The divisions of the town are as follows: the palace (central), the central section, the south section, the commercial section, the mid-west section, the western, the northern west section, the south-western section, the wells, the town wall, the mosques 1 to 7 and the burial tombs.

## Mwana

Mwana, on the other hand, is comprised of ruins of tombs. The walls and the superstructure of the tombs were well plastered, representing some of the finest architectural monuments of the coast of Kenya – characterised by panelled walls decorated with various combinations of geometric elements, a benchmark of Mwana. The best examples include Omwe, Ishakani and Ungwana – all sites in the same region. Similar to other features of design and construction in Coastal architecture, the site's panel of niches can be most likely traced back to the 16<sup>th</sup> century.

## Shaka

Shaka is located along the edge of the present beach, about 4.5 kilometres from Ungwana. The ruins consist of mosques, numerous houses represented by mounds of rubble, tombs and wells – all surrounded by a wall. This site is smaller relative to sprawling Ungwana and Shaka, standing at between 10 and 12 acres. The only mosque may have been a double mosque, as at Ungwana. The most notable architectural structures of Shaka are tombs. On the rising ground north of the site, within the town wall, are five tombs referred to as tombs A, B, C, D and E.

## The General Architectural Description

Mosques, tombs and houses are the most frequent and authentic constructions on site.

### *The General Mosque Structures*

The Mosques were constructed out of lime, manufactured from the burning of coral from the reefs at sea. This formed the building blocks, while the mortar was made out of ground lime mixed with sandy soil and water. When assembled to form a wall, this building-block and mortar construction formed a structurally stable wall – akin to conventional brick and mortar technology.

Great care was taken in the construction of mosques. The north-facing wall was given extra support by the buttressing effect of the walls of the mihrab (the arched apsidal recess in the north-facing wall to point towards Mecca). Low walls and the usual joining of the corners, combined to make the structures generally stable constructions. It was, and still is, a formal requirement of a mosque as a house of worship to conform to the generally stipulated architectural design. In eastern Africa each mosque must have a *mihrab*. A mihrab or pulpit of masonry or wood occurs to the right of the Mihrab, either against the wall or recessed into it. Most mosques have sanitation infrastructure consisting of a well, water conduit and cistern on the eastern or southern side of the mosque, although they may in fact occur at any point of entry. The simplest design plans were those with a single chamber, with elaborations, the addition of side rooms and verandas, and perhaps a southern chamber. In half a dozen mosques, the southern area is further divided and is restricted for use by women, forming a distinctive six-room plan.

### The General Tomb Structures

The tombs of the east African coast have long been recognised as among the most interesting architectural features of the area. They occur as walled enclosures or roofed structures, the former dominating the scene. Both structures usually exhibit two discrete vertical sections, a lower wall enclosing a rectangular space, and a roof or other elements of superstructure built on top of the wall. The most impressive are the pillar tombs, the enclosures of which encompass up to 75 square metres, with pillars rising up to 8 metres above the ground and attaining a diameter of 1.25 metres. In section the pillar can be round, rectangular, square, octagonal or polygonal, with some tapering towards the top. The largest pillars always occur on the eastern wall of the tomb, the direction towards which Muslims must be placed when buried.

### Houses

Houses were divided into three distinct categories: i) traditional stone, ii) more elaborate and iii) most outstanding in design. In descending order, architectural designs transformed to resemble the more unique mosques and tomb structures.

### Description of Threats

The three sites are described as ruins, and exist mostly as fallen walls with sections still standing – mainly due to the reinforce-

ments that were intrinsic designs of the original architecture. Notable examples include the mihrab section of the north-facing walls of mosques, most of which are still standing to date, but are continuously predisposed to threats. Another notable structural type is the tomb pillar, which is intrinsically stable and remains standing at most of the tomb sites in the three ruins.

The most notable threats to the sites include weathering that has assumed and still assumes different forms. Chemical weathering has led to the disintegration of the building blocks of the various architectural structures on site. A characteristic coastal humid and mostly saline environment creates a condition conducive to the decomposition of the coral limestone building blocks. Water from the atmosphere has been known to collect on the blocks, gradually dissolving the grains of limestone; this results in crevices that expand into large cracks, eventually weakening the walls, which finally collapse.

Mechanical weathering has taken the form of plant activity in and around the sites. Creepers and vines loosen the mortar on the walls as they grow. As these plants mature, their roots have been known to penetrate crevices on the walls. These cracks expand as the girth of the roots increases with their annual growth – further weakening the walls. Tree roots, on the other hand, have been known to push against the walls beneath the foundation, further enhancing crack expansion. The final result has been a general weakening of the wall structures, leading to their collapse.

Monsoon rains, a characteristic of the coastal seasonal weather-pattern, have been observed to lash at the mortar and plastered surfaces of the monuments over the years, causing water to enter the tops and sides of the walls and resulting in loosening of the wall stones by expansion or erosion of the mortar.

Another notable threat to the sites is erosion by the river Tana. By virtue of the fact that these ruins are located along the river banks, several metres from the main river, undercutting of the walls by rivulets has caused water to soak underground, leading to wall dislocation. Additional erosion is caused by the effect of wind-blown sand. The soils along the mouth of the Tana and especially the Tana River Delta are silty sands resulting from deposition. As these soils dry up from the frequent changes in the river's water level, aeolian forces resulting from strong wind movements cause transportation of sand to and from the site. The results have been the removal of soil from the foundations of buildings, leading to slumping.

Deposition by the fluvial action of the Tana, together with oceanic erosion and deposition action – including that of the wind – has also led to the burial of sections of the ruined sites, further leading to sedimentation.



Mwana, remains of a residential house

Each site remains an entirely open ground: with no perimeter fence it is difficult to control entry and movement. The result is the uncontrolled movement in and out of these ruins by both people and animals. The latter has taken the form of elephant and monkey activity in and around the sites. Elephants have been known to scratch themselves on the walls, causing sections of the wall to collapse. The ruins are located close to a game reserve leading to frequent wildlife visitation on site. Humans, on the other hand, have taken their toll in various ways. Because of the high fertility and humid content of the soils of the coastal archaeological sites, these areas are desirable for cultivation. The combination with rich alluvial silt that is continuously deposited along the river Tana flood plains, including its adjacent delta, has meant that agriculture has become a major livelihood for local residents. The result has been encroachment of adjacent lands with a view to increasing agricultural production. Settlements have sprawled in the proximity of the ruins and have essentially interfered with their intrinsic nature and value.

Vandalism has been realised on site as another major threat. The local inhabitants have been known to collect stones from fallen walls for purposes of constructing their own dwellings.

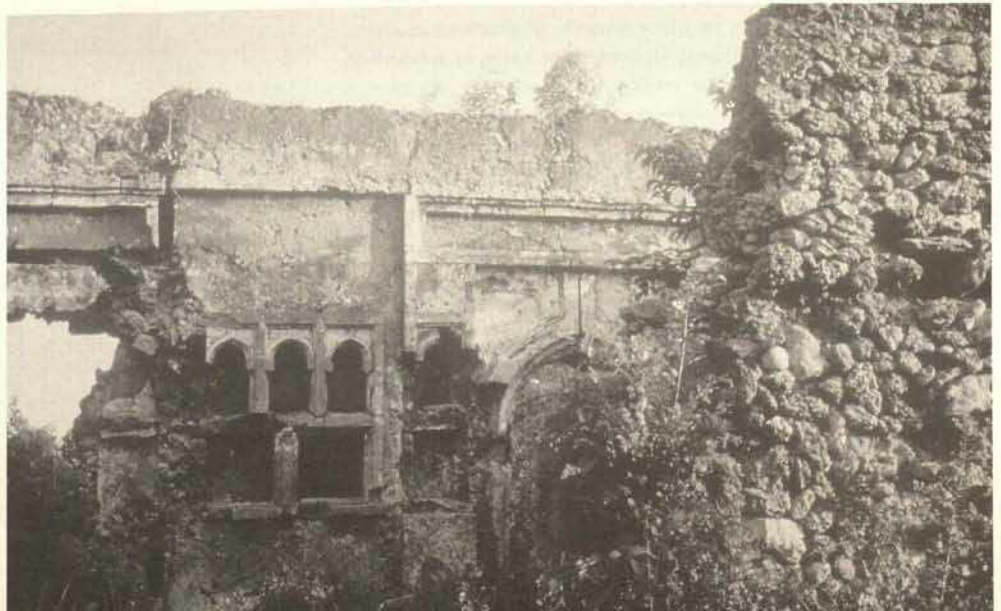
The government of the Republic of Kenya gazetted the three sites as national monuments and employed staff to constantly monitor the ruins. The local community has been informed about the significance of the sites and the need to preserve them. However, with only a skeleton staff on site and the absence of a perimeter fence, coupled with policing and legislation that is both bureaucratic and unclear, and with challenges with on-site maintenance and education of the local inhabitants, the Ungwana, Shaka and Mwana monumental sites continue to deteriorate under both natural and anthropological factors.

### Actions Necessary to Preserve the Site

It is important to realise that the most ideal method of preserving these ruins is through adopting *in-situ* preservation/conservation. There is very little that can be done through a reconstruction of the fallen walls, as by so doing the intrinsic structural and architectural properties may be interfered with. Preservation is the most ideal method of ensuring that the unique and authentic monuments last for a long time.

An adequate and appropriate number of staff needs to be stationed at the site and a perimeter fence should be erected. In addition, there is a need for the construction of an interpretive centre

Ungwana, house wall with niches as evidence of prosperity



Mwana, remains of a scroll mosque

from which information about the site can be obtained and disseminated to the local inhabitants.

The intervention of the international community and the inclusion of the site among the list of monuments at risk will reveal the plight of these ruins to the world at large, further enhancing a realisation of the need for preservation work on site. The government of Kenya is encouraged to enforce laws and carry out the implementation of these policies that are preservation driven.

Ungwana, Shaka, and Mwana are unique artistic achievements and are masterpieces of creative genius – well above similar sites along the eastern African coastal belt and Africa at large. Routine control of vegetation growth, construction of a perimeter fence and the control of wind movement through the establishment of windbreaks will greatly check further deterioration of these unique coastal ruins. Lastly an interpretive centre will provide adequate information to both local and other visitors about the site and the historical/cultural need for preservation of the ruins.

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