Seventh- to fifteenth-century coastal archaeology around the settlements of Kaole and Kilwa Kisiwani, Tanzania

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Ocean Currents, Monsoon Winds and Water Depths (Richmond, 1997)

Location of major places and sites visited in Kenya and Tanzania
Presentation Structure

• Research Aims and Objectives
• The Physical Environment
• Archaeological Record
• Results from Kilwa and Kaole
Aims & Objectives

1. To survey the intertidal and coastal zones
2. To establish a port settlement sequence
3. To investigate the characteristics of the human response to environmental change
Cross sections at low tide of a sheltered shore above and a fringing reef below

(Richmond, 1997)
<table>
<thead>
<tr>
<th>Century AD</th>
<th>Chittick (Kilwa)</th>
<th>Horton (Shanga)</th>
<th>Chami (Kaole/Rufiji)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td></td>
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<tr>
<td>8</td>
<td></td>
<td>Ceramic Phase A</td>
<td>Triangular Incised</td>
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<tr>
<td></td>
<td></td>
<td>Early Tana Tradition</td>
<td>Ware</td>
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<tr>
<td>9</td>
<td>Period Ia</td>
<td>Ceramic Phase B</td>
<td>PW</td>
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<tr>
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<td>Early Kitchen Ware</td>
<td>Mature Tana Tradition</td>
<td>Plain Ware</td>
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<tr>
<td>10</td>
<td>Early Kitchen Ware</td>
<td>Ceramic Phase C</td>
<td>NP/SW</td>
</tr>
<tr>
<td></td>
<td>Grey Burnished Ware</td>
<td>Late Tana Tradition</td>
<td>Neck Punctuated</td>
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<td>Period Ib</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Early Kitchen Ware</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Red Burnished Ware</td>
<td>Ceramic Phase D</td>
<td>Swahili Ware</td>
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<td>Period II</td>
<td>Ceramic Phase D</td>
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</tr>
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<td>Early Kitchen Ware</td>
<td>Final Tana Tradition</td>
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</tr>
<tr>
<td></td>
<td>Red Burnished Ware</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Period IIIa</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Kitchen Ware</td>
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<td></td>
<td>Red Burnished Ware</td>
<td>Ceramic Phase D</td>
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<tr>
<td></td>
<td>Husuni Modelled Ware</td>
<td>Final Tana Tradition</td>
<td></td>
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<tr>
<td>14</td>
<td>Period IIIb</td>
<td></td>
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<td></td>
<td>Kitchen Ware</td>
<td>Ceramic Phase D</td>
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<tr>
<td></td>
<td>Red Painted Ware</td>
<td>Final Tana Tradition</td>
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<td>15</td>
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</table>

Archaeological Setting 7\textsuperscript{th} to 15\textsuperscript{th} centuries
Causeways in Mvinje Lagoon
EDM survey of Kilwa Kisiwani East Coast

Key

Natural Features:
- Dense Bush
- Cliffline
- Beach slope cliffline
- Upper and lower limits of beach
- Cave
- Natural iron rudata area
- Causeway boundary
- Mangroves
- Seaside Puristane
- Lagoon
- LWM

Human Features:
- Runs recorded by GPS
- 14th century midden
- 20th century midden
- Fish coat (water dense for fish trap coated up for storage above HWM)
- Fish trap
- Fish basket
- Fish net hanging on line ready for use as tide retires
- Fish net
- Fishing camp
- Fishing village
- Lime making
- Graveyard
- Shipwreck
- Beacon

Archaeological Work:
- Test pit
Map of Mso Bay showing location of EDM survey at New Hotel Site, Kilwa Masoko

Key
- Beacon
- Fish traps
- Lime making evidence
- Old graveyard
- Baobab
- Mangroves
- Steps associated with colonial government rest house
- Farmland inundated during rains
- HWM
- Contour (height presumed as unclear on original map)
- EDM surveyed area of new hotel site

Seasonal stream deposit down hill slope
Post holes, daub and midden deposits
Occupation layer
Industrial layer
LSA
Mso Bay artefacts and plans

No features recorded from Test Pit 1a from this level
Map of Bagamoyo and Kaole
(Survey and Mapping Division, 1987)

Kaole Village TP1

Kaole Ruins

Bwembwenti Mounds
Bwembweni Mound
Bwembweni TP1 E Section Wall

Top soil, no artefacts

Very compact

Contexts of pits and pottery midden deposits

Furnace context

Stake Holes

Lime mortar floor above post hole

Sand flat deposit

Mortar and pottery midden deposits and house construction
EDM Survey of Bwembweni Mounds
Kaole Ruins Map (Based on Chami, 2002: 27) and common shells around Bagamoyo (Richmond, 1997)
### Kaole Ruins TP1, W section wall

The table below represents the findings from the excavation of the W section wall at Kaole Ruins TP1. The table includes the quantity of various artifacts found during the excavation, categorized under different time periods:

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Tondo</th>
<th>Kijino</th>
<th>Kombe</th>
<th>Kaya</th>
<th>Simbe</th>
<th>Cowrie</th>
<th>Fish bones</th>
<th>Local Pot</th>
<th>Imported Pot</th>
<th>Glass Beads</th>
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<tbody>
<tr>
<td>13th to 15th century landing place</td>
<td>97</td>
<td>12</td>
<td>5</td>
<td>6</td>
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<td>140</td>
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<tr>
<td>14th to 15th century</td>
<td>383</td>
<td>73</td>
<td>10</td>
<td>8</td>
<td>2</td>
<td>43</td>
<td>11</td>
<td>295</td>
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<tr>
<td>Post 15th century</td>
<td>176</td>
<td>57</td>
<td>12</td>
<td>8</td>
<td>5</td>
<td>4</td>
<td>5</td>
<td>259</td>
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<tr>
<td>14th to 15th century</td>
<td>106</td>
<td>36</td>
<td>7</td>
<td>16</td>
<td>2</td>
<td>2</td>
<td>9</td>
<td>180</td>
<td>2</td>
<td>8</td>
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<tr>
<td>Post 15th century</td>
<td>103</td>
<td>178</td>
<td>26</td>
<td>2</td>
<td>5</td>
<td>7</td>
<td>15</td>
<td>396</td>
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<td>39</td>
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<td>13th to 15th century landing place</td>
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<td>22</td>
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<td>0</td>
<td>2</td>
<td>0</td>
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</tbody>
</table>

The diagram above illustrates the stratigraphy of the site, with layers representing different time periods. The upper beach sediments are marked, and the base of the excavation is indicated. The layers include sandstone, crown conch shell, and mangrove whelk shell, among others.
Kaole swamp Trenches 1 to 8 and Well Section
Conclusion

• This first detailed coastal and intertidal zone survey discovering new settlement and industry revealing unrecorded archaeological features such as shipwrecks, causeways and landing places

• Massive construction efforts on the coastal and intertidal zones produced landmarks and navigation aids for sailors

• Industry was prevalent in the form of lime production, iron working and bead making

• Settlements responded to coastal processes of erosion, accretion, mangrove growth, monsoons and sea level change