

■ TANZANIA

Archaeological Reconnaissance Between Lake Manyara and Engaruka, Tanzania, in 2003-2004

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Introduction

Researchers from the University of Helsinki have studied the archaeology of the North Tanzanian Rift Valley area over the past decade. Studies were initiated in 2002-2003 by the late Professor Emeritus Ari Siiriäinen (1939-2004), and have been continued after his passing away by the current authors in 2004–2009. In 2012 field studies in the area were continued by an international team, which concentrated mostly on Pastoral Neolithic (PN) prehistory (Prendergast *et al.* 2013; Seitsonen *et al.* 2012).

Our initial studies in early 2000s focused on evaluating observations connected to the Engaruka

Late Iron Age (LIA) Complex made by earlier researchers (e.g., Sutton 1986, 2000, and references therein). However, during fieldwork, sites connected to various other periods and cultural frameworks were located and test excavated, directing research along new paths, e.g., towards establishing Stone Age sequences and palaeo-environmental history for the study area (Seitsonen 2005, 2006; Seitsonen and Laulumaa 2007).

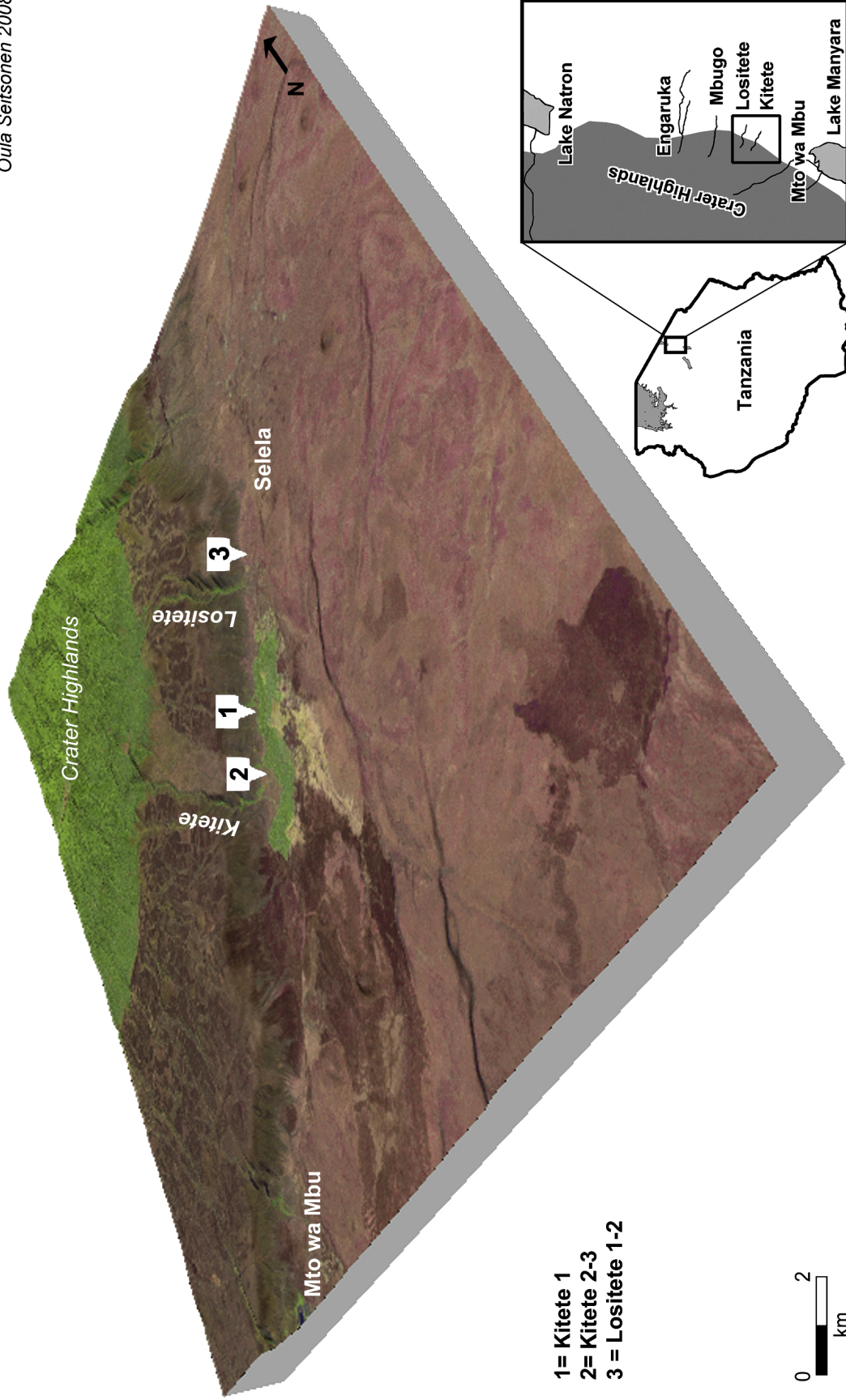
In this paper we describe an archaeological reconnaissance of the area between northern Lake Manyara and Engaruka, and test excavations carried out at Kitete 1 site (Figure 1). The study area stretches over c. 50km in the North Tanzanian Rift Valley, which has been little studied archaeologically (but see Sutton 1986). However, even our brief foray into the Mbugo, Lositete and Kitete River regions in 2003-2004 illustrates that the area has high archaeological potential, as do the adjoining areas (see e.g., Leakey 1966; Mabulla 2007; Stump 2006). The area is still very little known and deserves closer examination in the future.

Environmental Setting

The study area lies on the western margin of the Eastern (Gregory) Rift, north of Lake Manyara and south of Engaruka. Topography of the area is dominated by the impressive, towering western escarpment of the Rift Valley. Soils at the bottom of the Rift are predominantly eutric leptosols, whereas along the riverbanks and in the areas formerly covered by Lake Manyara during high levels are extensive riverine and lacustrine deposits (Keller *et al.* 1975).

Above the escarpment lie the Crater Highlands, which receive relatively high rainfall in contrast to the arid region below (e.g., Pickering 1993: 13). A lush area watered by perennial rivers running down from the highlands stretches from the shore of Lake Manyara to the edge of Mto wa Mbu village, but only a little further north the vegetation

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- 1 = Kitete 1
- 2 = Kitete 2-3
- 3 = Lositete 1-2

0 2
km

Figure 1: Location of the study area, and a 2.5D view of the Lositete-Kitete area with a Landsat ETM image draped over an Aster digital elevation model (Landsat ETM is courtesy of NASA, ASTER GDEM is a product of METI and NASA; data processing O. Seitsonen).

turns into dry bush savannah (Rohde and Hilhorst 2001: 1-2).

Some 20km north of Lake Manyara, on the outwash fan of the Lositete and Kitete Rivers, is a separate well-watered and fertile zone next to the Ujamaa village of Selela (see Figure 1). The immediate surroundings of Selela village are under intensive cultivation and the zone between the modern fields and escarpment is covered by dense forest, both of which effectively hinder archaeological observations. However, at the base of the escarpment are a couple of glades on the edge of the forest.

Further north, the Mbugo River runs down from the highlands through an impressive gorge, c. 10km south of Engaruka. For most of the year it is a dry riverbed, and the surroundings are mostly arid savannah, with some grassy areas adjacent to the seasonal river.

Archaeological Surveys in 2003

Judgmental pedestrian surveys were carried out at selected localities on the Mbugo, Lositete and Kitete Rivers in 2003. In the latter areas survey was restricted to the glades and the footpaths running in the forested zone at the base of escarpment. Previous researchers have described possible structures connected to the Engaruka Complex at these localities (see Sutton 1986, 2000), but our attempts to locate any clear evidence for connections with Engaruka proved unfruitful. However, other noteworthy observations were made.

In the Mbugo River Valley archaeological observations included surface lithic scatters with Later Stone Age (LSA) and Middle Stone Age (MSA) characteristics; many more of these were documented in our 2012 surveys (Prendergast *et al.* 2013). Also a number of shallow cairns were located close to contemporary Maasai enkangs. These superficially recall a structure tested by us at Engaruka in 2004, interpreted then as a burial

cairn with what appears to be a fully decomposed inhumation placed in a pit beneath it (Laulumaa and Seitsonen 2005). These cairns might represent burials connected to the Maa-occupation (see Posnansky 1968) or to the preceding periods (e.g., Leakey 1966; Siiriäinen 1984), although their precise function and dating cannot be determined without excavations.

Further south, two archaeological sites were observed directly west of Selela village near the Lositete River. On the north side of the river at Lositete 1, a few shallow stone cairns, comparable to the ones located at Mbugo, were observed near abandoned and modern enkangs (Figure 2). Immediately south of the river a solitary stone line construction and cairn were observed (Lositete 2), with an associated pestle rubber and a grinding slab. However, no other observations of archaeological find material or sub-surface layers were found at either site.

Three sites were found towards Kitete River in the glades situated in the dense forest zone (Figure 1). The northernmost of these, Kitete 1, was test excavated in 2004 (see below). Kitete 2 is located on another glade on the north side of Kitete River, near the mouth of the river gorge (Figure 3). A low c. 60m wide occupation mound was observed at the site, with undecorated ceramics as well as chert and quartz lithics collected from eroded patches. The overall character of the site suggests a pastoral origin (e.g., Causey 2010). Kitete 3 is a ceramic and lithic find location a few hundred meters south of the Kitete 2 site. A few non-diagnostic bodysherds and quartz flakes were observed eroding on a foot path. However, no other finds or sub-surface observations were discovered at this location.

Kitete 1 Excavations

Kitete 1 is in a glade immediately south of a small brook running from a spring on the talus slope of the Western Escarpment. Surface finds were collected in 2003 from two relatively large surface



Figure 2: One of the shallow cairns at Lositete 1, with the western escarpment of the Rift Valley running in the background (Photograph: Oula Seitsonen).

scatters, both of which yielded similar ceramics and faunal remains. The site was test excavated in 2004; due to time restrictions a single 2 x 1m trench was opened (Figures 4 and 5).

Excavation was carried out in c. 10cm arbitrary spits, yet following the observed stratigraphy, and all soil was screened with a 4 x 4mm wire mesh. Altogether six spits were dug to the depth of ca. 60cm below the surface until no more finds were observed. There were no specific features observed in the trench or on the surface of the site. The simple stratigraphy was as follows:

- 0-6 cm: humic grey overburden (fine silt) (spit 1)
- 6-50 cm: fine dark grey silt with charcoal speckles (spits 2-5)

- 50 cm: hard stony silt (clean bottom soil) (spit 6)

Two radiometric dates were obtained from the archaeological layers. These date at least the lower c. 30cm of the deposit to around AD 1000 (Table 1).

Find material

Find proportions from the test trench are summarized in Table 2. Most common were faunal remains and ceramics; unfortunately the majority of the faunal remains recovered by the University of Helsinki studies since 2002 are as yet not analysed (but see Siiriäinen *et al.* 2003a, b). Only three pieces of chipped stone were found: these are



Figure 3: View over the Kitete 2 site, Vesa Laulumaa, Kennedy Gitu, Gilbert Oteyo and Stephen Manoa surveying the glade in 2003 (Photograph: Martti Koponen).



Figure 4: Stephen Manoa at Kitete 1, next to the backfilled trench in 2004 (Photograph: Vesa Laulumaa).

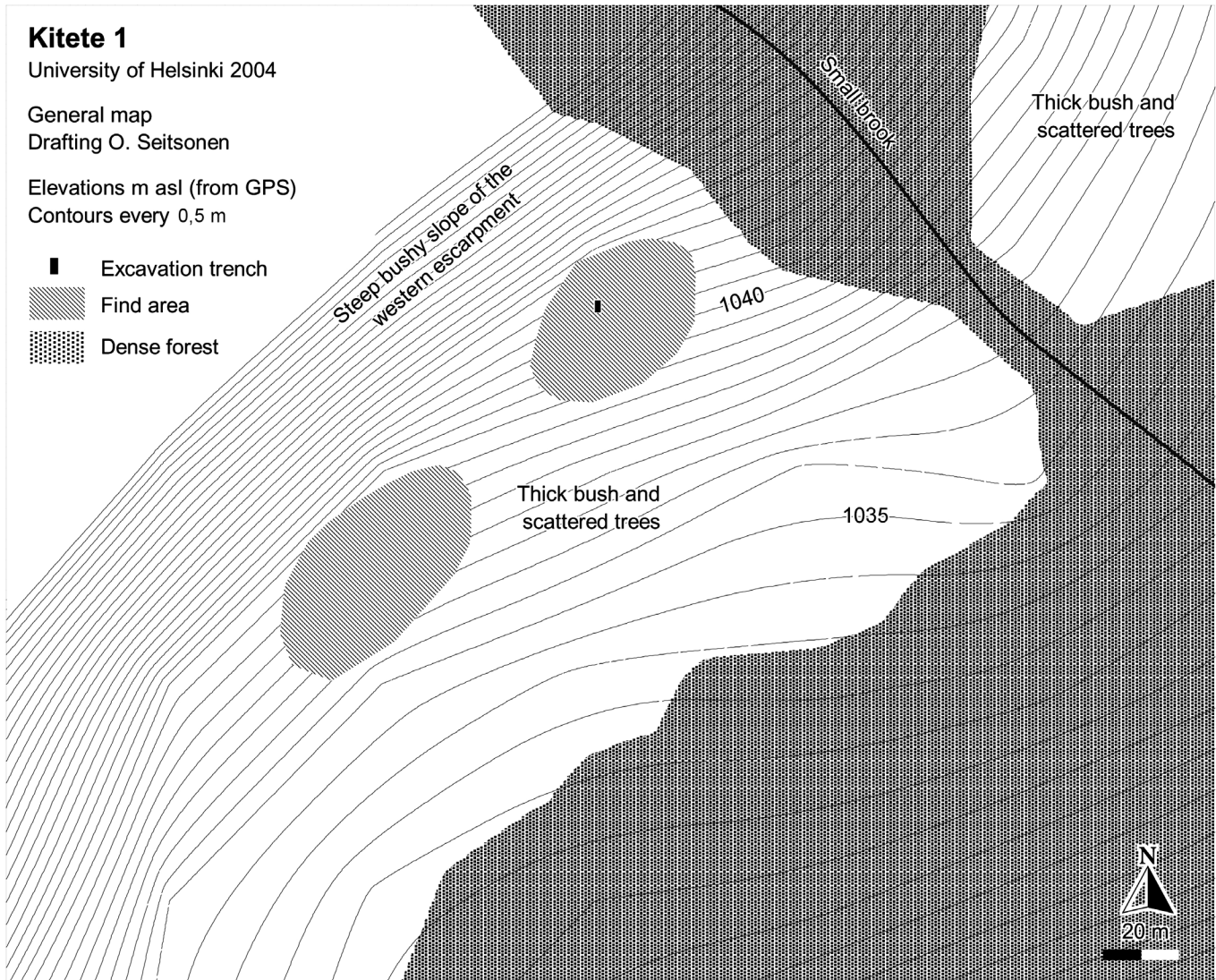


Figure 5: General map of the Kitete 1 site.

Lab. No.	Depth below the surface (spit)	d13C	Date BP	Date AD (95.4 %)
Hela-1008	ca. 22 cm (spit 3)	-24.3	1015 ± 30	1019-1151
Hela-1009	ca. 45 cm (spit 5)	-25.1	1085 ± 30	899-1104

Calibrated using the Calib Rev 5.0.1 program (Stuiver & Reimer 1993), with the calibration data for southern hemisphere (SHCal04; McCormac et al. 2004)

Table 1: Radiometric dates from Kitete 1.

Spit	Ceramics		Lithics		Faunal remains		Beads		Total	
	N	weight (g)	N	weight (g)	N	weight (g)	N	weight (g)	N	weight (g)
Surface	22	261	1	2					23	263
1	10	232			8	1			18	233
2	9	80			6	6			15	86
3	98	1109			570	520	3	1	671	1630
4	34	388			75	175	1	1	110	564
5	15	196	2	<1	25	115			42	311
6					3	25			3	25
Total	188	2266	3	<3	687	842	4	2	882	3110

Table 2: Finds from Kitete 1.

all utilized, irregular chert flakes. A solitary iron artefact, a heavily rusted small buckle, was found on the surface next to the excavation area, but this might also be of more recent date than the studied archaeological deposits. One cowrie shell (Figure 6p) as well as one ostrich eggshell bead and two broken preforms were found, all close together in spits three and four (Figure 6q-s).

Ceramics

Altogether 188 pieces of ceramics were collected in the excavations, including 23 rimsherds; 36 sherds had decoration on their outer surface; and one had internal grooves also. Ceramic technology and typology suggest that the whole assemblage belongs to a single cultural context, although the uppermost levels might also present a later phase of the site use within the same cultural context.

Some of the decorative elements on potsherds, especially the incised triangular designs, bear resemblance to the contemporaneous Tana Tradition (TT) pottery found abundantly at the coast and in the coastal hinterland of East Africa (e.g., Chami 1998, 2007; Horton 1996; Soper 1967; Thorp 1992: 25, 27)¹. Analogous observations have also been made in relation to the ceramics excavated from the Engaruka LIA site (see Sassoon 1966).

Frameworks used by Håland and Msuya (2000) for the Dakawa site, and by Chami (1994) for the coastal TT sites, were adopted in the ceramic analysis, although the Kitete 1 assemblage also exhibits atypical characteristics for TT (see below). Recently Fleisher and Wynne-Jones (2011) have implemented a new framework for analysing the Early TT material, and this could also be applied to Kitete 1 and related assemblages in the future.

Potsherds were divided into the following six categories. Although the current assemblage is small, it provides a basis for analyses of analogous sites or further finds from Kitete 1.

Category 1: Triangular incised motifs (n=7). The archetypal TT decorative element, triangular incision, was present only in a limited number of sherds (Figure 6a-c). All the sherds with incised triangular decoration were located in the lower excavation levels.

Category 2: Non-triangular incised decoration (n=5). These consist of horizontal incised lines, in two cases together with vertical lines (Figure 6d-f). Lines have been incised using some blunt instrument (cf. Håland and Msuya 2000). Non-triangular incised decoration was found on sherds collected from the topmost 20cm.

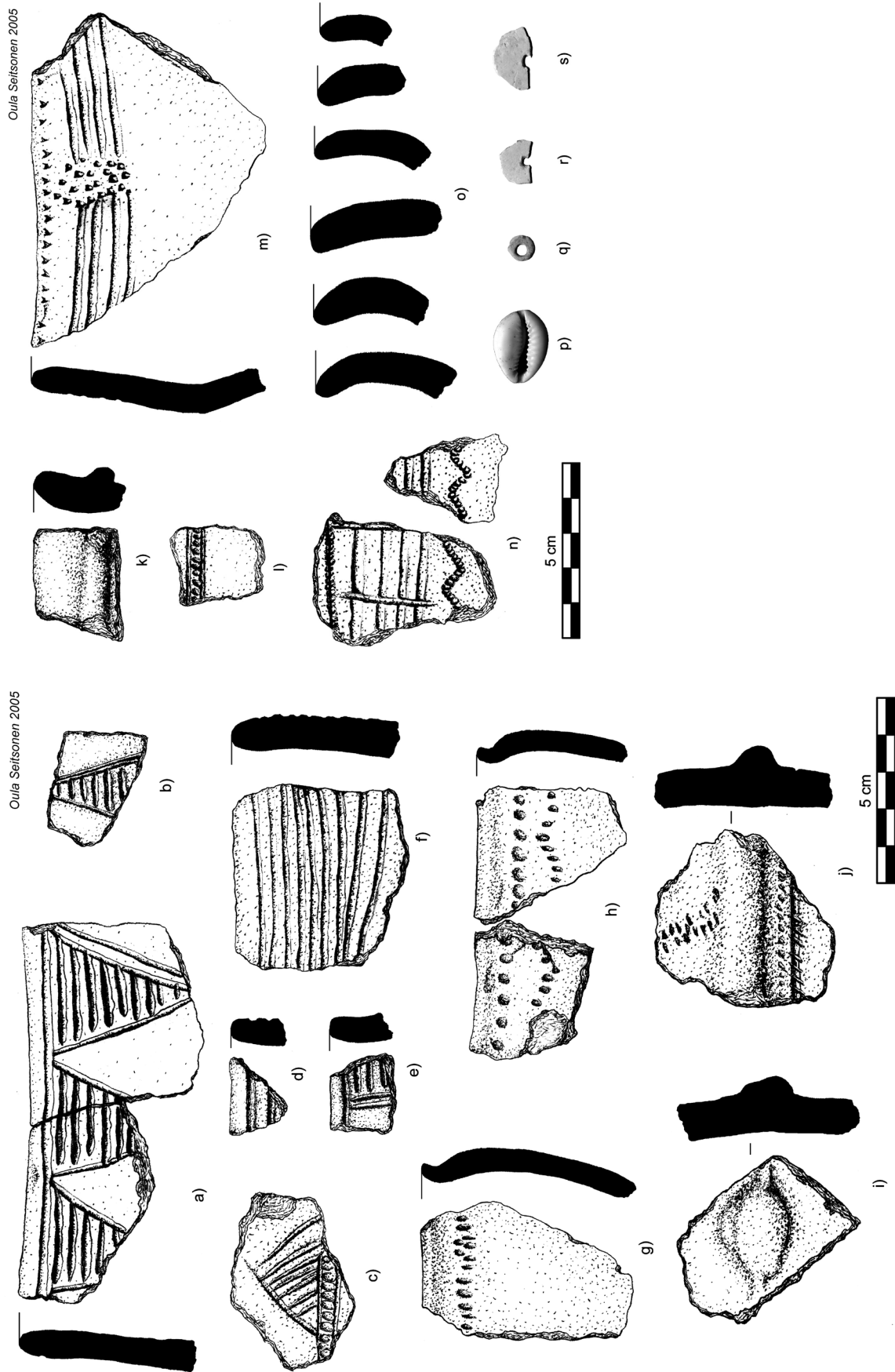


Figure 6: Finds from Kitete 1: a-n) rim and body sherds, o) profiles of undecorated rim sherds, p) cowrie shell, q-s) ostrich eggshell bead and bead fragments (Drawings: Oula Seitsonen; photographs: Vesa Laulumaa).

Category 3: Impressed and stamped decoration (n=4). Single horizontal, zigzag, and multiple vertical rows of impressed round dots are present (Figure 6g-h), as well as horizontal and zigzag rows of comb stamping (Figure 6n).

Category 4: Stabbed and dragged impressions (n=6). Stabbings have been made with both cuneiform and straight, narrow instruments, and are sometimes combined with a single incised line, called train track incision by Fleisher and Wynne-Jones (2011) (Figure 6j, n).

Category 5: Combinations of decoration techniques (n=14). Combinations of various decoration techniques are more common in the assemblage than the appearance of any single decorative element by itself. These are mostly incised lines combined with rows and zigzag lines of comb stamps, dot impressions and stabbings (Figure 6l-n). In four sherds triangular incised designs are combined with other elements (Figure 6c).

Category 6: Undecorated (n=152). Undecorated sherds are most common in the assemblage (Figure 6o). Also undecorated raised ridges and lugs are present (Figure 6i-k).

Ceramic paste is generally fine and homogenous. Sherds with triangular designs seem generally better fired than the rest. The temper of over half of the sherds is fine sand (63%) while the rest have a light mica temper. However, mica seems not to be a deliberately added decorative element – as for example in the PN Elmenteitan pottery (e.g., Robertshaw 1990) – but instead mica-rich sand appears to have been used to temper the ceramic paste, as is also seen in the Engaruka LIA ceramics (see Oteyo and Doherty 2006). Then again, this might have been intentional and culturally meaningful. The colour of roughly half of the sherds is reddish brown, while the rest are grey, blackish brown, and black in colour.

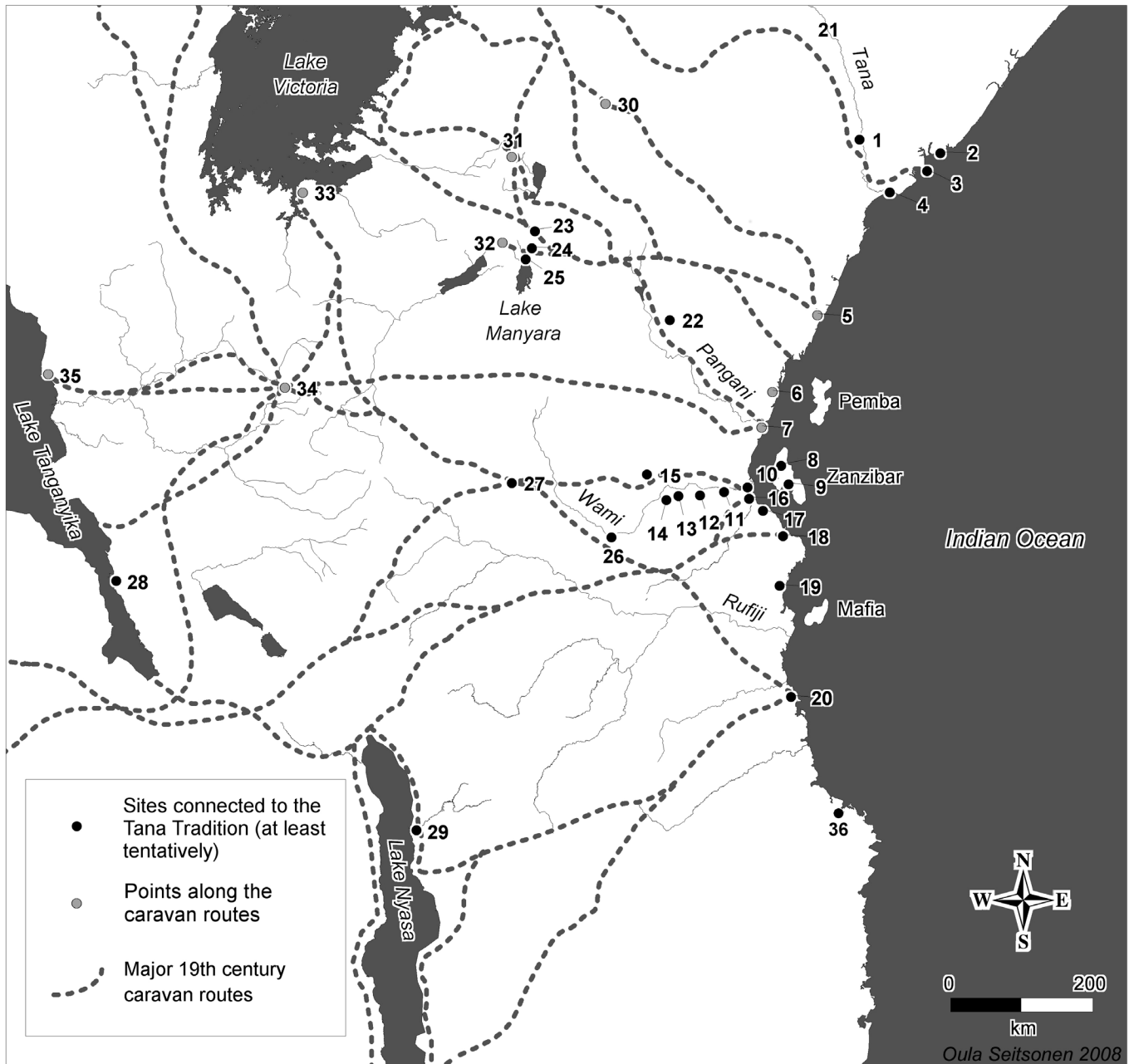
The rim profiles are tapering or rounded,

and slightly everted in the necked vessels. The most common vessel forms are necked, undecorated pots (Figure 6g-h, o). Besides these, convergent mouthed vessels (Figure 6a, m), open bowls, and one globular vessel are present in the assemblage. On the basis of rimsherds 16 ceramic vessels could be identified in the assemblage. Given the small size of the excavated trench, this might suggest an abundant total number of vessels at the site. Kitete 1 merits further studies to get a better idea of the diversity of its ceramic assemblage and the site's character.

Kitete 1 in Its Wider Context

The ceramic finds from Kitete 1 could suggest possible connections with the TT, common on the coast and coastal hinterland (e.g., Chami 1994; Håland and Msuya 2000; Fleisher and Wynne-Jones 2011). Perhaps this is connected to, for example, trade networks along which influences on ceramic decoration might have been passed from the coast to further inland. Also the cowrie shells encountered at Kitete 1 and at later date at the Engaruka LIA site (Siiriäinen *et al.* 2003b) evidence coast-inland contacts. However, very little is known of the Iron Age ceramics in the general area, or for that matter of the earlier phases of ceramic technology, or of the nature of the presumed coast-inland connections; these all should be examined more closely in future.

Classic TT sites are found along the coast and on the major islands of East Africa, ranging from southern Somalia down to southern Mozambique, and in the coastal hinterland (e.g., Chami 1998, 2007; LaViolette and Fleisher 1995). The appearance of TT seems to date to the 6th to 7th centuries AD (Fleisher and Wynne-Jones 2011), and based on some studies the tradition might continue until the 11th/13th centuries AD (Chami 2001; Mapunda 1995). In the coastal hinterland, c. 50-150km from the coast, TT pottery has been located from several sites e.g., in the area between Dar-es-Salaam and Morogoro (Chami 1994) and at



1 – Wenje, 2 – Shanga, 3 – Manda, 4 – Ungwana, 5 – Mombasa, 6 – Tanga, 7 – Amboni, 8 – Mkotoni, 9 – Unguja Ukuu, 10 – Mkadini, 11 – Kiwangwa, 12 – Masuguru, 13 – Lugoba, 14 – Dakawa, 15 – Nguru Hills, 16 – Kaole, 17 – Mpiji, 18 – Dar-es-Salaam, 19 – Misasa, 20 – Kilwa, 21 – Sites further up the Tana River, 22 – Usambara Mountains, 23 – Engaruka, 24 – Kitete 1, 25 – Misfortune Hill, 26 – Kilosa area, 27 – Dodoma area, 28 – Kirando, 29 – Ruhuhu River Basin, 30 – Nairobi, 31 – Sonjo Land, 32 – Ngorongoro Crater, 33 – Mwanza, 34 – Tabora, 35 – Ujiji, 36 – Mikindani

Figure 7: Sites (at least tentatively) connected to the Tana Tradition by various researchers (based on Chami 1994, 2001; Håland and Msuya 2000; Mapunda 1995, 2001; Laulumaa and Seitsonen 2004; Pawłowicz 2009; Sassoon 1966), documented historical native caravan routes and vital points along these routes (based on Erhardt and Rebmann 1856; Koponen 1988; Wakefield 1870; Wynne-Jones and Croucher 2007) (map: O. Seitsonen).

Usambara Mountains (Schmidt 1994; Soper 1967). Further inland TT has been reported from Dakawa near Morogoro (Håland and Msuya 2000; Wynne-Jones and Fleisher 2011), at the Nguru Hills (Thorp 1992), and ostensibly also in the Kilosa (Chami 1994; Schmidt 1994) and Dodoma (Masao 1979: 47) areas.

Some researchers have suggested that TT influences might have an even wider spatial distribution. Bertram Mapunda has described superficially TT-influenced ceramics as far inland as at the Ruhuhu River Basin on the eastern shore of Lake Malawi (IiJc-4, IiJc-15; Mapunda 2001), and on the eastern shore of Lake Tanganyika (HvIk-58; Mapunda 1995). The radiocarbon dates from Kitete 1 and from the other excavated inland sites tentatively linked to TT -influences (Håland and Msuya 2000; Mapunda 1995, 2001) are contemporaneous with the late phase of coastal TT. However, the character of these TT-like inland occurrences needs to be studied more closely in the future, and their possible connections with the coastal TT need to be evaluated through detailed studies.

Despite the mentioned TT-like characteristics, the Kitete 1 ceramic assemblage also exhibits decorative elements uncommon for the coastal and hinterland TT sites, including the comb stamped zigzag lines (Figure 6n). These elements might derive from the Pastoral Neolithic traditions (see Abungu 1996; Abungu and Muturo 1993; Horton 1996; Wright 2005), which seem to have existed also in the Engaruka–Lake Manyara area (see Prendergast *et al.* 2013; Seitsonen *et al.* 2012).

Chami (1994: 99) has suggested that the coastal traders might have already established trading posts at important inland locations by TT times: in fact the known inland manifestations of TT-like ceramics are found roughly along the historically documented native caravan routes (Figure 7). This might suggest that some kind of socio-economic coast-inland networks were

already established and at work in the earlier times along these routes, which run on the optimal paths to inland areas. Long distance trade has also been hypothesised to play a role in the establishment of Engaruka's vast irrigation agricultural system and its socio-cultural and economic framework (e.g., Robertshaw 1986; Siiriäinen *et al.* 2003a).

Conclusion

The reconnaissance surveys conducted in the area between Lake Manyara and Engaruka and the test excavations at the Kitete 1 site have revealed the research potential of this archaeologically little known area. The ceramic assemblage from Kitete 1 exhibits possible resemblance with the contemporaneous coastal Tana Tradition, but also ostensibly with the Pastoral Neolithic ceramic traditions. The inland occurrences of TT-like characteristics on ceramics, as well as the cowrie shells, might suggest some form of socio-economic ties between the coast and inland already at this time. The sites apparently connected to TT are most often encountered close to the native caravan routes from the coastal Swahili cities to the inland areas as documented by the historical accounts. The character of these ostensible inland TT-like occurrences should be studied more closely in the future, as should be the general ceramic chronology of the North Tanzanian Rift Valley area.

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Footnote

¹ Also known as Group C (Soper 1967), Early Kitchen Ware (Chittick 1974), Wenje Ware (Phillipson 1979), Triangular Incised Ware (TIW) (Chami 1994) and Triangular Incised (TI) ceramics (Schmidt 1994); however, here the traditionally used name 'Tana Tradition' is applied.