Van Baelen, A, Wilshaw, A, Griffith, P, Noens, G, Maíllo-Fernández, J-M, Foley, RA and Mirazón Lahr, M

Prospect Farm and the Middle and Later Stone Age Occupation of Mt. Eburru (Central Rift, Kenya) in an East African Context

Van Baelen, A, Wilshaw, A, Griffith, P, Noens, G, Maíllo-Fernández, J-M, Foley, RA and Mirazón Lahr, M

Prospect Farm and the Middle and Later Stone Age Occupation of Mt. Eburru (Central Rift, Kenya) in an East African Context

Prospect Farm and the Middle and Later Stone Age occupation of Mt Eburru (Central Rift, Kenya) in an East African context

Ann Van Baelen [1,*], Alex Wilshaw [1], Peter Griffith [1], Gunther Noens [1], José-Manuel Maíllo-Fernández [2], Robert A. Foley [1], Marta Mirazón Lahr [1]

[1] Leverhulme Centre for Human Evolutionary Studies (LCHES), Department of Archaeology, University of Cambridge, The Henry Wellcome Building, Fitzwilliam Street, Cambridge CB2 1QH.

[2] Departamento de Prehistoria y Arqueologia, UNED, c/ Paseo Senda del Rey, 7, 28040 Madrid, Spain

* corresponding author: av431@cam.ac.uk, +44 1223 764719

Running head: Prospect Farm and the Middle and Later Stone Age occupation of Mt Eburru

Archaeological time period: Middle Stone Age (MSA), Later Stone Age (LSA), Pastoral Neolithic

Country and region discussed: Central Rift, Kenya, East Africa

Keywords (4 to 6 keywords): *Middle Stone Age (MSA), Later Stone Age (LSA), Middle Pleistocene, Upper Pleistocene, East Africa, Human evolution*

Mots-clés: *Middle Stone Age (MSA), Later Stone Age (LSA), Pléistocène moyen, Pléistocène supérieur, Afrique de l'Est, Evolution humaine.*

1. Introduction

Eastern Africa is a key area from which we can improve our information and understanding of human evolution, including the emergence and subsequent dispersals of *Homo sapiens* during the late Middle and Upper Pleistocene. The material record produced by these prehistoric populations, and especially the lithic record, forms our primary source of information for this period when studying behavioural variation and/or change through time. In a first attempt to structure this lithic variability, a chrono-cultural sequence based on the classification of stone tools was put forward for Kenyan and, by extension, eastern African prehistory by Louis Leakey in the course of the first half of the 20th century (Leakey 1931, 1936). Drawing largely on analogues with similar, already established, sequences in Europe and South Africa, he identified a succession of cultures and described their relation to each other. Even though this terminology and scheme has since been revised on multiple occasions (Ambrose 1980, 1984; Clark 1954, 1982; Cole 1954; Wilshaw 2016), much of today's Middle Stone Age (MSA) and Later Stone Age (LSA) terminology cannot be understood in detail without awareness of this historical perspective.

The list of well-dated stratified sites providing a diachronic perspective on lithic variability in eastern Africa during the late Middle and/or Upper Pleistocene is limited. Such archaeological sequences are for instance known from Enkapune Ya Muto (GtJi 12; Ambrose 1998), Marmonet Drift (GtJi 15; Ambrose 2002; Slater 2016), Ntumot (GvJh 11, Ntuka River 3; Ambrose 2002) Lukenya Hill (GvJm 22; Gramly 1976; Tryon et al. 2015), Panga ya Saidi (Helm et al. 2012; Shipton et al. 2013, 2018), and Prolonged Drift (GrJi 11; Merrick 1975) in Kenya, from Goda Buticha (Leplongeon 2014; Pleurdeau et al. 2014; Tribolo et al. 2017), Mocheno Borago (Brandt et al. 2012, 2017), and Porc Epic (Assefa 2002, 2006; Assefa et al. 2008; Breuil et al. 1951; Clark et al. 1984; Leplongeon 2014; Michels and Marean 1984; Perlès 1974; Pleurdeau 2003, 2004, 2005a, 2005b; Rosso et al. 2014, 2017; Teilhard de Chardin 1930; Vallois 1951) in Ethiopia, from Laas Geel Shelter 7 (Gutherz et al. 2014) in Somaliland, from Midhishi 2 (Brandt 1986; Brandt and Brook 1984; Brandt et al. 1984; Brandt and Gresham 1989) in Somalia, and from Kisese II (Deacon 1966; Inskeep 1962; Tryon et al. 2018), Mumba (Diez-Martín et al. 2009; Eren et al. 2013; Gliganic et al. 2012; Marks and Conard 2008; Mehlman 1979, 1989; Prendergast et al. 2007), Nasera Rock (Mehlman 1977, 1989; Tryon and Faith 2016) and Magubike (HxJf-01; Werner and Willoughby 2017; Willoughby 2012; Willoughby et al. 2018) in Tanzania. However, good dating evidence is not always present for these sites, and studies of the assemblages have often focused on the MSA-LSA transition, its timing and nature; only a limited number of these sequences also document variation throughout the MSA.

Prospect Farm is one of the few eastern African sites to have yielded an archaeological sequence consisting of multiple MSA horizons underlying both LSA and Pastoral Neolithic levels. However, at present, our understanding of the site, its chronology, function(s) and importance within the regional archaeological record is hampered by multiple factors, including the lack of an up-to-date description of the site's stratigraphic sequence, the lack of insight into site formation processes, and the absence of independent, reliable dating evidence. The latter is of key importance to assess the ^{14}C and obsidian hydration dating results currently available for the site, and to provide information on the age of the two lower-most, presently undated MSA horizons. The different archaeological levels present at the site, set against a background of volcanic activity and environmental changes throughout the Middle and Upper Pleistocene, document the recurrent presence (and absence) of prehistoric groups on the slopes of Mt Eburru. Although several excavations have been conducted at the site, so far little research has focused on the local context of the site and on the spatial distribution of surface finds in the wider area as an indication of variation in land use through time.

This paper will focus on the latter aspect and in addition to providing an extensive overview of previous (largely unpublished) work done at the site, it tries to improve our understanding of MSA and LSA settlement dynamics in the Nakuru-Naivasha basin by presenting new survey results from the northern slope of Mt Eburru.

2. Regional and local context

The site of Prospect Farm is situated in Nakuru County (Kenya), part of the former Rift Valley Province. It is located within the Central Kenya Rift Valley (also known as the Central Rift), which forms part of the eastern branch of the East African Rift System (Fig. 1). The inner rift depression in this part of the Central Rift is around 35-40 km wide, and is delimited by the Mau Escarpment to the west and the Kinangop Plateau and Aberdare Ranges to the east, creating a closed inner graben basin morphology. Throughout the Quaternary period, the formation of volcanic edifices and internal segmentation of the rift created smaller sedimentary sub-basins within the inner graben, in which lakes have formed (Bergner et al. 2003; Strecker et al. 1990). The Nakuru-Naivasha basin is dominated by the presence of three major lakes – Lake Nakuru (1758 m a.s.l. [a.s.l. = above sea level]), Lake Elmenteita (1786 m a.s.l.) and Lake Naivasha (1889 m a.s.l.) – which today display important differences in hydrology and geochemistry (Bergner et al. 2009). Whereas Lake Nakuru (40 km^2) and Lake Elmenteita (26 km^2) are at present relatively small, shallow (up to 2 m deep) and highly alkaline, Lake Naivasha is a freshwater lake with a surface area of around 146 km^2 and depth of 8 m. Throughout the 20th century substantial lake level variations have been documented, with, for instance, levels at Lake Nakuru ranging between zero and 4 m (Vareschi 1982). In contrast to the present-day situation, hydrologic conditions in the past are thought to have been more uniform, with both the Nakuru-Elmenteita and Naivasha sub-basins holding substantial lakes of up to 180 m in depth and covering surfaces of a minimum of 500 km^2 in times of climatic optima during the Upper Pleistocene and Early Holocene (Bergner et al. 2009; Dühnforth et al. 2006; Trauth et al. 2003).

The basin is dominated by volcanic structures, of which Mount Eburru is among the most important. The Eburru Volcanic complex (2859 m a.s.l., 470 km^2; Ren et al. 2006) forms an E-W trending ridge, creating a topographic barrier which separates the two sub-basins (Bergner et al. 2009; McCall 1967; Thompson and Dodson 1963a, 1963b). Volcanic activity at Eburru is thought to have mainly occurred between ~ 1.2 and 0.4 Ma (Clarke et al. 1990; Ren et al. 2006), but continued into the Upper Pleistocene and possibly early Holocene (Thompson and Dodson 1963b). Current extensive fumarolic activity indicates that the Eburru Volcanic Complex is still active. Clarke and colleagues (1990) divide the volcanic activity at Eburru into two phases: an initial, older phase of volcanic activity that resulted in the formation of the western rim structure, and a second, younger phase associated with the formation of the eastern rim and the deposition of the Eburru Trachyte Formation. Subdivided into an Older, faulted (Et1) and Younger, largely unfaulted (Et2) member, this formation is characterised by feldspar-phyric trachyte lavas, welded pyroclastics, as well as pumice and scoria deposits (Clarke et al. 1990; Ren et al. 2006). Escarpments showing minor E-W and NE-SW faulting (Thompson and Dodson 1963a, 1963b) expose pyroclastic deposits consisting of a series of lapillae tuffs and weathered colluvially re-deposited tuffs, all of which have been grouped into the 'Prospect Farm Formation' (Isaac 1972, 1976). These deposits are considered to overlie the pyroclastic series of the Eburru Trachyte Formation, and represent the continuation of volcanic activity of Mt Eburru during the late Middle and Upper Pleistocene. At the base of the volcano, between 1960-2060 m a.s.l., pyroclastic deposits are interwoven with lacustrine sediments which, on the northern slope of the volcano, mark the southernmost extension of the Lake Nakuru-Elmenteita sub-basin (Thompson and Dodson 1963a, 1963b).

The slopes of Mt Eburru show altitudinal differences in vegetation communities, with higher elevations covered by Afromontane forest that is gradually replaced by more open savanna vegetation types towards the rift floor. Today, Afromontane forest is present above ~ 2400 m a.s.l., but Isaac et al. (1972) situate its lower boundary further downslope, between 2130 and 2140 m a.s.l. Trapnell and colleagues (1976) place the lower boundary of the *Podocarpus-Juniperus* forest around 2515 m a.s.l., but also suggest the presence of some scattered montane trees at lower altitudes, which have since disappeared at least in part due to the significant impact of agriculture and grazing on the landscape since Isaac and Trapnell's observations.

The archaeological site of Prospect Farm consists of three distinct localities (I-III) situated along the northern slope of Mt Eburru, between around 2000 and 2150 m a.s.l., and overlooking Lake Nakuru and Lake Elmenteita, approximately 24 and 16 km to the NW and NE, respectively.

3. Previous archaeological research at Mt Eburru

3.1 Research history

During the early 1960s, obsidian artefacts were found at Prospect Farm eroding out of one of the escarpments on the northern slope of Mt Eburru by Mr George Kleis, the manager of the Prospect Farm estate. These were brought to Louis Leakey, at the time director of the Centre for Prehistory and Palaeontology in Nairobi (Anthony 1978), who classified the material as (East African) Stillbay. Under Leakey's impetus, a fieldwork campaign aimed at a more detailed investigation of the site was set up under the joint direction of Barbara Whitehead Anthony, who had previously been investigating the Centre's East African Stillbay collections, and Glynn Isaac, then deputy director of the Centre.

Excavations began in mid-November 1963 at Locality I (GsJi 7), where a trench on top of the escarpment of approximately 4.6 m by 6.7 m was excavated to a depth of around 3 m, in order to investigate the stratigraphic provenance of the surface finds (Anthony 1978). At the end of 1963, after seven weeks of fieldwork, the excavation of Locality I was discontinued in favour of that at a location 600 m further uphill (Locality II; GsJi 8) where artefacts had been found eroding from similar deposits, but also from deposits that appeared to flank those containing the Stillbay finds at Locality I. Excavations at this new locality continued until July 1964, during which time a series of five interconnected trenches were excavated and investigated. Except for the so-called 'pit trench', where the deepest stratigraphic levels were exposed, all trenches at this second locality were open-ended and cut back from the escarpment face. The upper part of the stratigraphic sequence at Locality II mirrored that of Locality I, and in total yielded a ~ 14 m deep stratigraphy consisting of 36 stratigraphic units containing multiple archaeological horizons (Anthony 1978).

During the first half of 1964, a third location (Locality III), containing Pastoral Neolithic remains belonging to the Stone Bowl Culture, was also discovered and partly excavated.

Located downhill from Localities I and II, erosion had removed the deposits containing the MSA material, and the Pastoral Neolithic artefacts were found lying on an eroded surface covered by re-worked tuff deposits (Anthony 1978). In January 1969, a team led by Mark Cohen of Columbia University extended Anthony's trench at this locality in order to further investigate the Pastoral Neolithic occupation at Prospect Farm (Cohen 1970).

Isaac (1972, 1976; Isaac et al. 1972) reports on a density survey undertaken in the southern part of the Nakuru-Elmenteita sub-basin. More specifically, a set of altitudinal south(east)-north(west) oriented transects between the top of Mt Eburru and Lake Nakuru were surveyed, encompassing both the Prospect Farm Formation and the lacustrine deposits at the base of Mt Eburru, considered to form the lateral equivalent of the Prospect Farm Formation and assigned to Formation A (Isaac 1976; Isaac et al. 1972). Along these transects, artefact densities were calculated based on counts made in arbitrarily positioned squares of two by two metres. No attempt was made to distinguish patterns relating to different archaeological periods. Isaac's results indicate that the highest mean densities, with up to 49 artefacts per square metre, occurred around 2073-2134 m a.s.l. on the northern slope of Mt Eburru (Fig. 5d), close to where he placed the lower limit of the montane forest, as well as to the position of Anthony's excavations at Prospect Farm. Densities recorded for these elevations are up to ten times higher than those obtained for the valley floor north of Mt Eburru, where only one significant artefact concentration was found (GrJi 11; Isaac 1972).

After a 34 year-long interval, new fieldwork at Prospect Farm took place in July 2003 under the direction of Stanley Ambrose of the University of Illinois (unpublished; NMK archive record no. 3201-3202 and 4310). The site and/or its immediate surroundings were also investigated by the University of Nairobi during this period (unpublished).

In 2014, Goldstein and Munyiri (2017) conducted a survey and small-scale excavation at GsJj 50, a site located higher up the northeastern slope of Mt Eburru than earlier excavations, at an altitude around 2604 m a.s.l. and previously described by Stanley Ambrose. In an area of *ca*. 200 m^2, a number of lithic artefact scatters were found, alongside faunal remains and ceramics, which allowed an attribution to the Pastoral Neolithic. The site has been interpreted as an obsidian quarry site and the archaeological horizon has been dated by AMS between 2170 ± 20 and 2150 ± 25 uncal BP (OS-122182 and OS-122183), placing the human occupation around 2299-2016 cal BP and 2286-2007 cal BP. A third charcoal sample originating from the middle of the archaeological horizon was dated to 2110 ± 25 uncal BP (OS-122184), suggesting a somewhat younger age (2145-1934 cal BP).

In order to clarify and better understand the MSA and LSA occupation of Mt Eburru and its role in a wider regional context, a new research programme was instigated as part of the In-Africa Project (University of Cambridge). This research programme was primarily aimed at compiling a detailed description of the stratigraphic sequence at Prospect Farm, relocating the archaeological horizons described by Anthony (1978) and collecting samples for dating and environmental analyses. In addition, it also aimed at reconstructing prehistoric land use patterns through time by mapping the distribution of MSA versus LSA surface finds in the surrounding area. The wider area around Prospect Farm was first visited in July 2013 as part of a general reconnaissance survey in the Nakuru-Naivasha region aimed at relocating a number of sites known to have yielded MSA and/or LSA material. In January 2014, a first field campaign took place during which a density survey on the northern slope of Mt Eburru was undertaken, as well as a small-scale excavation of the upper-most LSA levels at Locality II. Full-scale excavations at both Localities I and II were carried out in July 2016, revealing similar stratigraphic sequences consisting of interbedded fine ash and pumice pyroclastic air-fall deposits (tephras) and reworked colluvial deposits containing up to five palaeosols. The results of these fieldwork campaigns and of the analysis of the more than 17,000 artefacts collected during the investigation of Locality I will be reported in a separate paper. Here we synthesise the historical evidence for human occupation at Prospect Farm for the first time, together with a description of the survey carried out in 2014, set against Isaac's landscape transects from 1969-1970.

3.2 Archaeological sequence at Prospect Farm

The evidence of more recent prehistory is relatively sparse at Prospect Farm (Fig. 2; Table 1). Together with pottery fragments and lithic artefacts (including crescents), fragments of stone bowls were discovered in the top soils and subsoils during the excavations at Localities I and III (Anthony 1967b; Cohen 1970). Stone Bowl artefacts, made from tuff and associated with the early spread of pastoralism (Pastoral Neolithic) are reasonably common within the Nakuru-Naivasha region and generally date from around 3000-2500 years BP. Unfortunately, the fragmentary remains found at Prospect Farm were lying on an erosional surface covered by reworked deposits, or were found in the reworked topsoil. Given the problematic context of these finds, little information about the more recent use of the site can be gleaned with confidence. The dates derived from Goldstein and Munyiri's (2017) excavation at the top of the hill indicate that quarrying for obsidian occurred during the Pastoral Neolithic.

Underlying these upper stratigraphic levels yielding occasional Neolithic elements is an abundant occurrence of LSA artefacts which is best known from Locality II. These finds were initially classified as Lower Kenya Capsian, an East African LSA Industry defined in the first half of the 20th century (Cole 1954; Leakey 1947) for which Prospect Farm subsequently became one of the type sites. During a reassessment of the nomenclature used for the prehistory of the Nakuru-Naivasha region in the 1980's, the Lower Kenya Capsian finds from Prospect Farm were reassigned to phase II/III of the Eburran industry (Ambrose 1980, 1984; Wilshaw 2016). Also known as the 'large blade Eburran', this phase is characterised by microliths with a mean length of 33-36 mm, end scrapers which are significantly larger than those occurring in the preceding Eburran phase, and prepared (microfaceted) platforms (Ambrose 1984; Wilshaw 2016).

The underlying archaeological levels at Prospect Farm show clear MSA affinities (Fig. 3-4), and were assigned to the (East African) Stillbay (Anthony 1967a, 1972, 1978), a cultural entity or industry known from sites near Hargeisa (Somaliland Stillbay), as well as from the Central Rift Valley and northern and central Tanzania (Kenya Stillbay; Clark 1954; Cole 1954; Leakey 1931). The most characteristic feature of this industry was considered to be the occurrence of bifacially retouched points, often made from flakes obtained by what was then referred to as the faceted platform technique (Clark 1954; Cole 1954; Leakey 1931). These points displayed a covering retouch thought to result from pressure flaking and which often also involved thinning of the bulb of percussion (Cole 1954; Leakey 1931). The East African Stillbay sites were seen as an analogue of the Stillbay in Southern Africa (Cole 1954), but contrary to the latter, the East African Stillbay was never adequately defined as an entity confined in time and space, and its use was therefore discontinued in archaeological literature in subsequent decades. Anthony (1978) considered the MSA artefacts from Localities I and II to represent a local expression of the East African Stillbay, which she referred to as the Prospect Industry. In addition to bifacially worked points and Levallois products, the Stillbay levels at Prospect Farm also yielded various unifacial points and other tool types, as well as artefacts produced by non-Levallois production systems.

Based on stratigraphic grounds, Anthony (1978) distinguished four different phases within the Prospect Industry (from old to young: phases I-IV; Fig. 3-4 and 7) with phases I and II being separated from each other by up to several metres of sterile deposits.

The basal LSA artefacts overlying the upper MSA level (phase IV) at the site were originally classified as part of the (now-abolished) Second Intermediate; similar claims were also made regarding the transitional character of the upper MSA level (phase IV) at the site. Together, the lithic artefacts from these two levels have been interpreted as supporting a gradual MSA-LSA transition in the Nakuru-Naivasha region (Michels et al. 1983). Yet, even though attribute analysis of the phase IV finds demonstrates that they diverge in a number of ways from the three underlying MSA levels (such as general differences in tool types and a decrease in tool size), their overall characteristics are considered to fall within the same range of variation (Anthony 1978; Merrick 1975). These results challenge claims of a MSA-LSA transitional industry represented by the phase IV finds at the site, and instead confirm their attribution to the MSA. In addition to the extensive studies by Anthony (1978) and Merrick (1975), samples of the MSA artefacts from Prospect Farm have more recently been analysed by Kelly (1996), Tombo-Kodalo (1991, 2002), Amollo (2001), and Onjala (2004). Apart from Anthony (1978), all of these studies used MSA artefacts from Prospect Farm as part of comparative regional and/or technological analyses, and did not focus on the temporal lithic variability at the site itself. Thus the questions regarding the place of the Prospect Farm MSA levels within the eastern African MSA and the debate regarding the transitional character of the phase IV lithic artefacts remain largely unanswered. However, the key importance of Prospect Farm within the eastern African MSA is that its long stratigraphic sequence demonstrates the potential for understanding temporal variation in a site, something seldom possible in the region.

3.3 Obsidian sourcing data from the Nakuru-Naivasha basin

Obsidian is available in abundance in the Nakuru-Naivasha basin, and the position of the site of Prospect Farm on the slopes of Mt Eburru itself places it near several obsidian outcrops (Brown et al. 2013; Goldstein and Munyiri 2017; Merrick and Brown 1984a, 1984b; Merrick et al. 1994). A considerable body of literature exists on obsidian sourcing and the geochemical characterisation of obsidian outcrops in this region (Brown et al. 2013; Coleman 2010; Coleman et al. 2008; Merrick and Brown 1984a, 1984b) and evidence indicates that the use of obsidian from these sources was not limited to the Nakuru-Naivasha basin itself during the MSA, but that it was also transported – albeit in limited quantities – over long distances, up into the Olorgesailie (~ 94 km; Brooks et al. 2018) and Baringo basins (~ 140 km; Blegen 2017; Blegen et al. 2018), the plains east of Nairobi (~ 130 km; Merrick and Brown 1984a; Merrick et al. 1994), the foothills of the Nandi Escarpment (~145 km; Merrick and Brown 1984a; Merrick et al. 1994), the north-eastern and eastern shores of Lake Victoria (~185-250 km; Blegen et al. 2017; Faith et al. 2015; Merrick and Brown 1984a; Merrick et al. 1994), and into Northern Tanzania (~ 230-305 km; Merrick et al. 1994).

Throughout the different archaeological levels at Prospect Farm, obsidian is the preferred raw material (Anthony 1978), and the proximity to these raw material sources accounts (at least in part) for the richness of the site in terms of artefact numbers. However, not only obsidian from Mt Eburru itself seems to have been used. A detailed study by Merrick and colleagues (1990, 1994) investigating and comparing the geochemical composition of obsidian outcrops and artefacts in eastern Africa includes the analyses of MSA artefacts from Locality I at Prospect Farm. Using 10 to 13 major, minor and trace elements (including SiO_2, TiO_2, Al_2O_3, Fe_2O_3, MnO, MgO, CaO, Na_2O, K_2O, Cl, F and H_2O), they determined the provenance of the raw materials represented by three samples of artefacts from phase III (spits 23-22 and 18-16) and phase IV (spits 10-9) (Fig. 1b). The characterization of the knapped raw materials is primarily based on electron probe microanalysis of three elements (Fe, Ti, and Ca, more specifically variations in Fe_2O_3, TiO_2 and CaO compositions), in addition to X-ray fluorescence and electron probe microanalysis of a limited number of additional elements (such as Zr, F, Mn, and Na). Based on these analyses, Merrick et al. (1994) identified around 30 petrological groups in the southern half of Kenya, of which 16 different obsidian groups (including a number of sub-groups) are represented at Locality I. In addition to these 16 groups, there are a number of unidentified sources in each of the three investigated artefact samples from Prospect Farm. In particular, the lowest sample (spits 23-22) contains artefacts made from unidentified obsidian sources. Throughout phases III and IV, Merrick and colleagues (1994) detected the following patterns: (1) the lowest sample (spits 23-22) shows higher frequencies of obsidian originating from the immediate surroundings of the site, alongside a larger variety of sources which only contribute to a minor proportion of the sample; (2) compared to spits 23-22, the two more recent artefact samples (spits 18-16 and 10-9) contain more obsidian from sources located somewhat further away; (3) exotic obsidian, originating from more than 50 km away, is rare in all three samples; and (4) in all three samples the artefacts made from exotic obsidian are debitage products rather than tools.

Given the proximity of the site to numerous obsidian outcrops, the presence of artefacts made from exotic obsidian at Prospect Farm is highly interesting and might point to long distance movement and/or exchange (Merrick et al. 1994). Interpreting these results in terms of settlement dynamics and spatial organisation of the lithic *chaîne opératoire*, Ambrose (2001: 37) notes that the slight increase in more distant raw material sources in the upper MSA level (spits 10-9) might reflect “a larger home range, higher residential mobility and perhaps more frequent regional exchange and interaction between bands” and that, contrary to many western European Middle Palaeolithic assemblages (Geneste 1985), exotic raw materials do not seem to have been brought to the site in the form of finished tools. Furthermore, reduction intensity does not seem to be markedly different for artefacts manufactured from nearby or more distant sources (Ambrose 2001), an observation which is in contrast with findings from Nasera Rock and Mumba in Northern Tanzania, where artefacts in obsidian originating from the Nakuru-Naivasha basin seem to have been brought to the site as finished tools and blanks (Mehlman 1989; Merrick et al. 1994).

3.4 Dating evidence at Prospect Farm

So far, Localities I-III at Prospect Farm have only been dated by means of ^{14}C and obsidian hydration dating techniques. An overview of these dates, including the uncalibrated ^{14}C dates is given in Online Resource 1. The calibrated dates referred to below have been obtained using the OxCal SHCal13 curve. ^{14}C dating results of charcoal samples originating from the colluvium overlying the Prospect Farm Formation at Locality III place the Pastoral Neolithic occupation at the site around 2956-2489 cal BP (UCLA-1234; Anthony 1978; Berger and Libby 1968) and 3329-2762 cal BP (N-651; Cohen 1970; Yamasaki et al. 1970). Additional obsidian hydration dating of 26 artefacts from this level indicates that the ^{14}C dates possibly reflect two different occupation phases (Michels et al. 1983).

The underlying large blade Eburran is placed between 9612 ± 470 and 10,845 ± 144 years ago by obsidian hydration dating, which is in line with the available ^{14}C age of 18,015-8538 cal BP (GX-224; Anthony 1967a; Krueger and Weeks 1966). Furthermore, Michels et al.

(1983) refer to an early LSA (Second Intermediate) and LSA (unidentified) level - both underlying the large blade Eburran - dated to between 21,805 ± 373 and 32,483 ± 568 years ago.

The underlying MSA levels have only been dated by means of obsidian hydration dating techniques (Michels et al. 1983). The results obtained for the phase IV artefacts from Locality I range between 45,670 ± 236 and 53,553 ± 255 years ago, and partly overlap with the youngest dates of the underlying phase III material. Contrary to Anthony's terminology, Michels et al. (1983) distinguish, based on the obsidian hydration dating results, three distinct Upper Pleistocene MSA occupation phases within phase III: (1) between 46,538 ± 1707 and 53,100 ± 4145 (from the interface between stratigraphic units 9 and 8 to the top of unit 8), (2) between 106,297 ± 3163 and 108,630 ± 2917 (stratigraphic unit 9); and (3) around 119,646 ± 1668 years ago (interface between stratigraphic units 10 and 9). As a whole, these results indicate that phase III covers a relatively long time span of > 60 kyr, extending back to MIS 5e.

Unfortunately, no results were obtained for samples from phases II and I, but the dates obtained for the overlying phases suggest that both archaeological levels pre-date ~ 120 ka. Moreover, if the interpretation put forward by Michels et al. (1983) regarding the three distinct occupation phases within phase III is correct, this would imply that the archaeological sequence at Prospect Farm includes at least seven (instead of four) MSA occupation phases.

These obsidian hydration dating results should be treated with caution as traditional (pre-SIMS) obsidian hydration dating has on many occasions been shown to produce results that differ markedly from other independent chronometric dating evidence (Anovitz et al. 1999; Liritzis and Laskaris 2011). In particular, problems relating to the measurement of the hydration depth and incorrect assumptions regarding the obsidian hydration process have resulted in inaccurate dating results, and as such, this method has been considered unreliable. As a consequence, the available obsidian hydration dates for the MSA occupation at Prospect Farm should be treated as a tentative chronology until the dates for phases III and IV can be confirmed by other methods. If the ages obtained by Michels et al. (1983) are confirmed, the lithic artefacts from phases I and II would establish the comparatively early presence of bifacially retouched points, previously considered a hallmark of the East African Stillbay.

4. Density survey 2014

4.1 Method

In order to better assess the extent of the archaeological occurrences on Mt Eburru and to improve our understanding of the spatial distribution of MSA versus LSA artefacts, a new density survey was undertaken in 2014 on the northern slope of the mount, covering the altitudes for which Isaac (1972) noted the highest artefact densities. Areas were selected based on terrain accessibility, and within each area parallel transect lines separated by 20 to 50 m wide intervals were walked. Similar to the position and extent of the selected areas, the width of the intervals between the transect lines was primarily determined by terrain accessibility. Every 20 m along the same transect line, a 1 by 1 m square was placed randomly on the ground and the following details on the surface finds present within that square metre were subsequently recorded: the total number of artefacts, the number of artefacts that could be securely assigned to either the MSA or the LSA, details on the size distribution of the finds per square (< 2 cm; 2-5 cm; > 5 cm in length), as well as details regarding other, non-lithic, find categories (if present). In addition, an assessment of the visibility was made based on the density of the land cover as observed during the survey and on the vertical photos taken of the squares. Visibility was considered 'high' when vegetation was (nearly) absent, 'medium' when the square was partly vegetated with patches of soil visible in-between, and 'low' when the vegetation was very dense and covered the entire square (Online Resource 4). GPS coordinates of the squares were recorded using a handheld Garmin Oregon 550t GPS.

No artefacts were collected during the survey. Levallois products (flakes, points and cores), discoid cores, pseudo-Levallois points, debordant flakes, retouched points and flakes with faceted platforms were recorded as MSA artefacts, whereas blade(let)s, blade(let) cores and backed microliths were considered as characteristic of the LSA. We recognise that the use of these artefacts as index fossils assumes a clear differentiation between MSA and LSA assemblages, whereas in reality eastern African assemblages dating to the period 60-30 ka often display a varying mix of both artefact groups. This subdivision is, however, considered sufficient to offer a first, general characterisation of the major late Quaternary prehistoric industries observed over the landscape in this area.

4.2 Results

Six different areas situated between ~ 1960 m and ~ 2215 m a.s.l. on the northern slope of Mt Eburru were surveyed, covering a total area of 0.486 km^2. Georeferencing of cartographic material produced by Isaac (1972) suggests that this new 3.7 km long altitudinal transect is located around 2 km east of Isaac's easternmost transect. Within these six areas, information on artefact densities was recorded in 387 squares, totalling 10,301 surface finds. Almost one third of these squares (N = 122) was found to consist of archaeologically sterile surfaces, whereas the remaining 265 squares contained between 1 and 440 artefacts (Online Resources 2-4). The visibility for most of the squares was high (N = 276; 71.3 %) or medium (N = 54; 14.0%). Only in 45 squares (11.6%) was the visibility classified as low. For twelve squares the visibility was unknown (3.1%).

Although the majority of squares with low visibility were sterile, a few of these also yielded a (limited) number of finds (Online Resources 2-4). The squares with the highest numbers of artefacts are characterised by a high visibility, but squares with a better visibility do not always contain finds: no artefacts were recorded during the survey in 48 squares (12.4%) with high visibility and 30 squares (7.8%) characterised by medium visibility. A more distinctive pattern is noted when only the MSA artefacts are taken into account. Whereas none of the squares with a low visibility contained MSA finds and only one square with a medium visibility has yielded two MSA artefacts, all the remaining MSA artefacts were found in squares with a high visibility. A similar pattern, with a few additional squares with low or medium visibility containing one or two artefacts, is observed when only the LSA artefacts are taken into account.

Based on the distribution and characteristics of the surface finds, this survey was able to identify a number of key areas showing markedly higher artefact densities and to demonstrate important differences in the spatial distribution of diagnostic MSA and LSA artefacts (Online Resource 2). As the survey did not reveal any fossil remains or pottery, the obtained densities reflect exclusively the distribution of lithic artefacts. In terms of the altitudinal position of the densest find spots, the 2014 survey generally confirms Isaac's observations. Important concentrations were present around 2093 m, between 2103-2108 m and around 2136 and 2142 m a.s.l., although high densities are also present further downslope, between 2007 and 2038 m a.s.l. (Fig. 5a-c). The maximum number of artefacts per square metre that can be securely assigned to either the MSA or LSA is 59 and 17, respectively, and whereas density plots indicate that LSA finds tend to show a wider spatial distribution, MSA artefacts mostly cluster in one particular mid-altitude area (Fig. 6). The largest cluster of MSA artefacts (2102-2108 m a.s.l.) follows the base of a protruding, 140-200 m wide escarpment. On the surface above this escarpment, a limited number of LSA finds are present, but the majority of the artefacts (including those attributed to the MSA) are found eroding from the escarpment base. A second, much smaller MSA cluster, which also shows an elevated number of LSA finds, is located further up the slope (2138-2140 m a.s.l.) and is also situated near the base of a smaller escarpment. The position of Localities I and II excavated by Anthony corresponds precisely to the altitudinal range displaying these denser concentrations of MSA finds recorded during the 2014 survey.

These findings can be compared to the average artefact density of the two lowest MSA levels excavated by Anthony (1978). For these phases, a total area of 7.2 m^2 (phase I) and 38.5 m^2 (phase II) was excavated in squares of 1 by 1 foot (phase I) and 3 by 3 feet (phase II). With a total number of artefacts amounting to 4326 (phase I) and 7712 (phase II), the average artefact density for phases I and II is 600.8/m^2 and 200.3/m^2, respectively. In particular, the average artefact density calculated from Anthony's excavation for phase II is very similar to the peak at 2103 m a.s.l. observed during our surveys (Figure 5b), where the average density amounts to 199 artefacts per square metre. Located close to Locality I, the individual artefact densities of the squares at this elevation range between 87/m^2 and 404/m^2.

Overall, however, some of the artefact densities reported in this paper are considerably higher than the mean of 49 finds per square metre previously published by Isaac (1972) for the altitudinal range between 2073 and 2134 m a.s.l. This difference can partly be explained by the fact that Isaac (1972) only reported mean and median values: the original artefact counts per square are unfortunately not included in his publication. It should furthermore also be taken into account that only artefacts larger than a certain threshold might have been included in Isaac's analysis.
The most important densities of artefacts larger than 5 cm are found around 2098-2111 m and 2136-2143 m, with some additional isolated smaller peaks further up and down the slope. Squares contain between zero and eight finds over 5 cm, and the highest mean recorded for squares with similar altitudes amounts to two artefacts. The altitudinal transect for the 2-5 cm finds shows two similar peaks, both also matching the position of two main concentrations of MSA finds. Between zero and 110 artefacts of this size have been recorded per square metre, with a mean of 44 artefacts for squares positioned at the same altitude.

The fraction below 2 cm is distributed more evenly and is found throughout all the surveyed areas, showing important densities at lower altitudes, as well as important concentrations nearby the escarpments at Localities I and/or II. Mean artefact numbers < 2 cm for squares at similar altitudes amount to 153 (lower altitudes) and 155 (near Localities I and II). These results suggest that, if only the average number of artefacts > 2 cm at each altitudinal band were calculated, the results of our 2014 survey would be in the range of the density data published by Isaac.

5. Discussion and conclusion

As the Nakuru-Naivasha basin is relatively rich in MSA and LSA sites, site distribution patterns can also be used to infer how settlement dynamics varied through time. So far, analysis of these patterns has indicated that MSA sites in the Central Rift are mostly located between 2000 and 2200 m a.s.l., with the MSA sites with the highest artefact densities – such as Localities I (2102-2108 m a.s.l.) and II (2138-2140 m a.s.l.) at Prospect Farm - clustering between 2100 and 2200 m a.s.l. (Ambrose 2001; Bower et al. 1977; Isaac 1972). Ambrose (2001) hypothesizes on the presence of a regional shift in MSA settlement dynamics coinciding with the transition from the Last Interglacial to the onset of the Last Glacial. Characterised by an increase in residential mobility and territory size, this shift is thought to reflect the abandonment of an ecotonal-based settlement pattern. Contrary to this relatively restricted altitudinal distribution of MSA sites, LSA sites in the Central Rift occur in a much broader altitudinal range (Ambrose 2001; Bower et al. 1977; Isaac 1972). Nevertheless, differences within the LSA occupation are also observed, for instance between the early Holocene wet phase and the middle Holocene dry phase (Ambrose 1986, 2001).

Even within this 2000-2200 m range, important differences are observed at Mt Eburru regarding the altitudinal distribution of MSA versus LSA artefacts. The occurrence of two important clusters of MSA artefacts near the base of two escarpments located in one particular mid-altitude area strongly suggests that large quantities of MSA artefacts are eroding from these escarpments, and that these mark the lateral extension of Localities I and II excavated by Anthony.

A survey at Mt Damota (2908 m a.s.l.) in southwest Ethiopia, reported by Vogelsang and Wendt (2018) has shown the occurrence of both MSA and LSA sites within a 2000-2400 m a.s.l. altitudinal range, with the presence of a somewhat higher concentration of sites between 2000-2150 m. Using Delauny triangulation and Thiessen polygons to reconstruct MSA and LSA land use patterns, Vogelsang and Wendt (2018) suggest an intensification of human occupation during the LSA, resulting in a larger cluster of sites. Conversely, the distribution of MSA sites on Mt Damota is characterised by multiple smaller site clusters scattered across different altitudes, leading Vogelsang and Wendt (2018) to propose a model of MSA land use in which small groups would have seasonally moved up and down the mountain ridge across different altitudes – a pattern similar to that of some historical hunter-gatherers. Similar to Mt Damota, the MSA versus LSA artefact distribution at Mt Eburru could be interpreted as pointing to an intensification of the occupation during the LSA. However, these distribution patterns and in particular the occurrence of MSA artefacts at the base of the two escarpments, might also indicate that in other parts of the northern slope of Mt Eburru, where MSA artefacts have not been identified during the present survey, these deposits are absent or unexposed.

The long stratigraphic sequence at Localities I and II at Prospect Farm, with several distinct MSA levels containing a high density of finds, indicates that the area was repeatedly occupied by MSA foraging groups during the late Middle and Upper Pleistocene. The duration of these occupations, and the pattern of land use during each, remains unknown, but in conjunction with the density and altitudinal distribution of MSA finds on the slopes of Mt Eburru, it suggests periods of intense use, possibly associated with the harvesting of obsidian sources for use and exchange. Site distribution patterns, combined with information on the range and provenance of raw materials and data on the spatial organisation of the lithic *chaînes opératoires* at Prospect Farm, can provide clues about site function, the manner in which different activities were organised within the landscape, territory size, mobility and exchange. The obsidian sourcing for MSA phases III and IV indicates that the hunter-gatherer groups or individuals that frequented Mt Eburru during the MSA were either moving around within and possibly also beyond the Nakuru-Naivasha basin, bringing limited amounts of exotic obsidian to the site, or obtaining these through exchange networks. So far, lithic analyses have suggested that these exotic raw materials were brought to the site as debitage products, but more detailed analyses are required to map variations in the import of exotic raw materials or variations in the items being transported throughout the different archaeological horizons. Claims such as those by Kelly (1996) that the artefacts from the four different MSA phases at the site mostly represent the later phases of the reduction process, suggesting that the initial phase(s) were likely to have occurred outside of the excavated area – possibly in proximity to the raw material sources – need to be reassessed, as well as include obsidian sourcing data for the lower two MSA levels.

The site of Prospect Farm holds an important position in the late Middle and Upper Pleistocene East African archaeological record. It is one of a limited number of open-air sites to have yielded a long stratigraphic sequence showing evidence of repeated phases of hominin occupation during the late Middle and Upper Pleistocene, whereas most evidence for such sites comes from rock shelters (Fig. 1 and 7). In addition to Prospect Farm, such open-air sites are found at Prolonged Drift and Marmonet Drift, both of which are of particular interest given their location within the Nakuru-Naivasha basin and their proximity to the site, at around 15 and 17 km NW and S of the northern slope of Mt Eburru, respectively. Marmonet Drift forms the most interesting parallel as, like Prospect Farm, it shows a stratigraphic sequence composed of volcanic tuffs, colluvial deposits and intercalated palaeosols. This almost 30 m deep sequence has yielded five different MSA levels, of which the oldest dates to an early phase of MIS 7 (Ambrose 2002; Ambrose et al. 2002; Slater 2016). Prolonged Drift, on the other hand, contains only three stratigraphically distinct MSA levels (I to III) preserved within a sequence of gravelly, sandy and silty deposits that form the infill of a more than 5 m deep channel cut into the top of the lacustrine deposits of the Nakuru-Elmenteita sub-basin (Isaac 1976; Isaac et al. 1972). Whereas the two lower MSA levels (II-III) display evidence of reworking, the impact of post-depositional processes on the upper MSA level (I) – interpreted by Merrick (1975) as a short term occupation site – seems much more limited. The presence of some LSA elements within this upper MSA level possibly suggests that it belongs to a rather late phase of the MSA, but independent dating evidence for the site is limited and problematic. A single radiocarbon age of 26,240-20,140 cal BP (UCLA 1687; 19 ± 1.27 ka uncal BP) on charcoal collected from a deposit underlying levels I and II would provide a maximum age for these levels but is considered unreliable. Stratigraphic correlations, on the other hand, indicate that the channel infill containing the three MSA levels pre-dates 30 ka (Merrick 1975).

The establishment of well-described stratigraphic sequences at these sites – especially at Prospect Farm and Marmonet Drift – anchored on information on the geochemical composition of the tephra deposits and reliable dating evidence is critical. This will allow these long stratigraphic sequences to act as reference sequences on a regional scale, *in casu* within the Nakuru-Naivasha basin, against which phases of hominin presence and absence during the MSA and LSA can be set. Establishing a chronology and tephrostratigraphy for these sites will furthermore allow us to integrate their sequences within the developing Middle and Upper Pleistocene chronostratigraphic framework of East Africa.

Given its long archaeological sequence, the site of Prospect Farm is also directly relevant to the debate on the nature and timing of the MSA/LSA transition in eastern Africa. The earliest documented LSA assemblage in the region is found at the site of Mumba, Tanzania. New excavations and analyses of the lithic artefacts from the site have reassessed the affinities of the material from the Mumba industry found in Bed V, which was originally interpreted as transitional between the MSA and LSA (Mehlman 1989) or as late MSA (Marks and Conard 2008), and is now interpreted as fully LSA (Diez-Martín et al. 2009). This LSA level overlies the Kisele MSA industry from Bed IV-A, and the transition between them is now dated to around 60 ka (Gliganic et al. 2012), and before 50 ka at Nasera (Ranhorn and Tryon 2018). At Panga ya Saidi, Kenya, there does not seem to be a sudden shift from MSA to LSA technology (Shipton et al. 2018): older elements, such as Levallois products, continue to exist throughout the sequence, where they co-occur with bipolar technology, blade technology and backed artefacts. The most important transition observed within this sequence, consisting of a reduction in artefact size and shift from microcrystalline limestone to cryptocrystalline quartz and chert, has been dated to ~ 67 ka. The evidence from other East African sites points to a slightly more recent appearance of the LSA, for instance at Enkapune Ya Muto (Kenya) where the transition from the flake-based Endingi industry (MSA) to the overlying blade-based Nasampolai industry (LSA) is dated to at least 46 ka, but possibly extends to 55 ka or beyond (Ambrose 1998). Other sites have yielded assemblages showing varying combinations of MSA and LSA elements, but their interpretation as either transitional in nature or as the result of post-depositional processes leading to the mixing of different deposits is debated. In Ethiopia, at Mocheno Borago, such an assemblage found within the deposits of the Lower T-Group has been dated to between > 50 and 49.9-47.8 ka (Brandt et al. 2017), whereas the assemblage from the lower sub-unit of Complex II at Goda Buticha, which also shows both MSA and LSA features, has been dated to between 63 ± 7 ka (OSL) / 42.5 ± 1 ka BP (^{14}C) and 29.68 ± 0.23 ka BP (Tribolo et al. 2017). The latter two sequences also display an important stratigraphical hiatus corresponding to most of MIS 2. 'Mixed' assemblages, those described as containing both MSA and LSA elements, also occur at Lukenya Hill (occurrences F, G and interval E-F), Kenya, where they have been dated to between > 46 and ~ 26 ka (Tryon et al. 2015), and at Kisese II, Tanzania, where they date to at least 39-34.3 ka (Tryon et al. 2018). At Magubike, also in Tanzania, the MSA continues up to ~ 40 ka and is followed by LSA and/or Iron Age horizons (Werner and Willoughby 2017). Late MSA material also occurs in the Lake Victoria Basin, Kenya, where bifacially worked points and Levallois cores have been found within and immediately overlying a tuff deposit dated to ~ 36 ka (Blegen et al. 2017). Therefore, although there is uncertainty regarding both the timing and spatial structure of the MSA/LSA transition in eastern Africa, with evidence that prehistoric groups manufacturing typical MSA lithic artefacts continued to exist until *ca.* 40-35 ka, the majority of the current evidence suggests that the process began between 60-50 ka.

It is to this period that obsidian hydration dating results assign the phase IV artefacts from Prospect Farm, more specifically between 53,553 ± 255 and 45,670 ± 236 years ago (Michels et al. 1983). Regardless of whether these should be classified as MSA or as a 'mixed' assemblage with both MSA and LSA features, these results place phase IV within the time window when elsewhere in eastern Africa mostly early LSA assemblages or assemblages with mixed MSA and LSA characteristics occur (but see Blegen et al. 2017). Furthermore, Michels and colleagues (1983) refer to an early LSA or Second Intermediate level alongside an (unidentified) LSA level associated with Anthony's geological levels 2 and 1, respectively, and dated to between 32,483 ± 568 and 21,805 ± 373 years ago – although it is currently unclear how the latter two levels precisely match Anthony's archaeological sequence. If the available obsidian hydration dates are confirmed to be accurate by additional, new dating evidence, then the archaeological sequence from

Prospect Farm covers a crucial period for the study of Upper Pleistocene lithic variability and adds to the growing body of data on the MSA/LSA transition.

The historic overview of the fieldwork conducted at Prospect Farm outlined in this article, combined with the overview and assessment of the preliminary results of the In Africa project, placed in a wider East African context, highlight the potential of the site for the investigation of late Middle and Upper Pleistocene hominin presence in the Nakuru-Naivasha basin and indicate avenues for future research. Mapping the spatial distribution of MSA and LSA finds along the northern slope of Mt Eburru has demonstrated the presence of important differences in their distribution, with the MSA artefacts being much more spatially and altitudinally constrained than those assigned to the LSA. These observations suggest differences in settlement dynamics through time and prompt reflection on the nature of the different occupations attested at Prospect Farm and variations therein through time.

Acknowledgements

This study was funded by a European Research Council Advanced Award to MML (In-Africa Project, ERC 295907), and carried out with permission from the National Council for Science and Technology, Republic of Kenya, No. NCST/5/002/R/419, and from the National Commission for Science, Technology and Innovation, Kenya, No. NACOSTI/P/15/2669/4758. We thank the chief of Kongasis sub-location, Mark Chipchome, for his permission to conduct fieldwork at the site, the National Museums of Kenya, the British Institute in Eastern Africa (BIEA) and Tom Cholmondeley for their logistical support, as well as the 2014 (Cecilia Ngugi [NMK], Sammy Olishimbi, Stephen Leboi and Harrison Lihemo Boge) and 2016 field teams (Henri Mwengi [NMK], Joseph Njuguna, David Tuta, Roja Kodonyo, Leonard Ruto, James Otiende Chuma, Anderson Ekale Emase, Stephen Kodonyo, Peter Mburu and Daniel Shimbi), and Andrew and Zoe Nightingale. Thanks to Aurélien Mounier for correcting the French abstract. We also thank the three anonymous reviewers for their suggestions and comments on the manuscript.

Funding

This study was funded by a European Research Council Advanced Award to MML (In-Africa Project, ERC 295907).

Conflict of interest

The authors declare that they have no conflict of interest.

Author contributions

The In-Africa Project, as part of which this research was executed, is directed by MML. Survey and excavations were conducted by: (2013) AW, JMMF, PG, RAF, MML; (2014) AW, JMMF, PG; and (2016) AVB, GN, PG, AW, RAF, MML (2016). AVB and AW compiled the historical data on the site; PG compiled and collected the geological data. Figures 1, 5 and 6 were made by AVB, Figures 3 and 4 were drawn by GN, and Figures 2 and 6 were made by AVB and PG. The paper was written by AVB, with contributions by MML, PG, AW, GN, JMMF and RAF.

References

Ambrose, S. H. (1980). Elmenteitan and other late Pastoral Neolithic adaptations in the central highlands of East Africa. In R. E. F. Leakey & B. A. Ogot (Eds.), *Proceedings of the 8th Panafrican Congress of Prehistory and Quaternary Studies, 1977* (pp. 279–282). Nairobi: The International Louis Leakey Memorial Institute for African Prehistory.

Ambrose, S.H. (1984). *Holocene Environments and Human Adaptations in the Central Rift Valley, Kenya*. PhD Thesis, University of California.

Ambrose, S. H. (1998). Chronology of the Later Stone Age and food production in East Africa. *Journal of Archaeological Science*, *25*, 377–392. https://doi.org/10.1006/jasc.1997.0277

Ambrose, S. H. (2001). Middle and Later Stone Age Settlement Pattern in the Central Rift Valley, Kenya: Comparisons and Contrasts. In N. J. Conard (Ed.), *Settlement Dynamics of the Middle Paleolithic and Middle Stone Age* (pp. 21–43). Tübingen: Kerns Verlag.

Ambrose, S. H. (2002). Small things remembered: Origins of early microlithic industries in Subsaharan Africa. *Archeological Papers of the American Anthropological Association*, *12*, 9–29. http://dx.doi.org/10.1525/ap3a.2002.12.1.1

Amollo, M. A. (2001). Understanding the Middle Stone Age adaptive strategies in East Africa: An experimental approach. Master Thesis, University of Nairobi.

Anovitz, L. M., Elam, J. M., Riciputi, L. R., & Cole, D. R. (1999) The Failure of Obsidian Hydration Dating : Sources, Implications, and New Directions. *Journal of Archaeological Science*, *26*, 735–752. https://doi.org/10.1006/jasc.1998.0342

Anthony, B. W. (1967a). Prospect Farm. *Palaeoecology of Africa*, *5*, 46–47.

Anthony, B. W. (1967b). Excavations near Elmenteita, Kenya. In E.M. Van Zinderen Bakker (Ed.), Palaeoecology of Africa & of the surrounding islands & Antarctica, Volume II (pp. 47–48). Cape Town-Amsterdam: Balkema.

Anthony, B. W. (1972). The Stillbay Question. In H. Hugot (Ed.), *Actes du VIe Congrés Panafricain de Prehistoire et de l'Étude du Quaternaire, Dakar, 1967* (pp 80–82). Cambéry: Les Imprimeries Réunies de Chambéry.

Anthony, B. W. (1978). *The Prospect Industry – A definition*. PhD Thesis, Harvard University.

Assefa, Z. (2002). *Investigations of faunal remains from Porc-Epic: A Middle Stone Age site in southeastern Ethiopia*. PhD Thesis, State University of New York.

Assefa, Z. (2006). Faunal remains from Porc-Epic: Paleoecological and zooarcheological investigation from a Middle Stone Age site in southeastern Ethiopia. *Journal of Human Evolution*, *51*, 50–75. https://doi.org/10.1016/j.jhevol.2006.01.004

Assefa, Z., Lam, Y. M., & Mienis, H. K. (2008). Symbolic use of terrestrial gastropod opercula during the Middle Stone Age at Porc Epic Cave, Ethiopia. *Current Anthropology*, *49*, 746–756. http://dx.doi.org/10.1086/589509

Berger, R., & Libby, W. F. (1968). UCLA Radiocarbon dates VII. *Radiocarbon*, *10*, 149–160.

Bergner, A. G. N., Strecker, M. R., Trauth, M. H., Deino, A., Gasse, F., Blisniuk, P., & Dühnforth, M. (2009). Tectonic and climatic control on evolution of rift lakes in the Central Kenya Rift, East Africa. *Quaternary Science Reviews*, *28*, 2804–2816. https://doi.org/10.1016/j.quascirev.2009.07.008

Bergner, A. G. N., Trauth, M. H., & Bookhagen, B. (2003). Paleoprecipitation estimates for the Lake Naivasha basin (Kenya) during the last 175 k.y. using a lake-balance model. *Global and Planetary Change*, *36*, 117–136. http://dx.doi.org/10.1016/S0921-8181(02)00178-9

Blegen, N. (2017). The earliest long-distance obsidian transport: Evidence from the ~200 ka Middle Stone Age Sibilo School Road Site, Baringo, Kenya. *Journal of Human Evolution*, *103*, 1–19. https://doi.org/10.1016/j.jhevol.2016.11.002

Blegen, N., Faith, J.T., Mant-Melville, A., Peppe, D. J., & Tryon, C. A. (2017) The Middle Stone Age After 50,000 Years Ago: New Evidence From the Late Pleistocene Sediments of the Eastern Lake Victoria Basin, Western Kenya. *PaleoAnthropology*, *2017*, 139–169. doi:10.4207/PA.2017.ART108

Blegen, N., Jicha, B. R., & McBrearty, S. (2018) A new tephrochronology for early diverse stone tool technologies and long-distance raw material transport in the Middle to Late Pleistocene Kapthurin Formation, East Africa. Journal of Human Evolution, 121, 75–103. https://doi.org/10.1016/j.jhevol.2018.03.005

Bower, J. R. F., Nelson, C. M., Waibel, A. F., & Wandibba, S. (1977). The University of Massachusetts' Later Stone Age/Pastoral Neolithic comparative study in central Kenya: An overview. *Azania: Archaeological Research in Africa*, *12*, 119–146. http://dx.doi.org/10.1080/00672707709511251

Brandt, S., Hildebrand, E., Vogelsang, R., Wolfhagen, J., & Wang, H. (2017). A new MIS 3 radiocarbon chronology for Mochena Borago Rockshelter, SW Ethiopia: Implications for the interpretation of Late Pleistocene chronostratigraphy and human behaviour. *Journal of Archaeological Science: Reports*, *11*, 352–369. https://doi.org/10.1016/j.jasrep.2016.09.013

Brandt, S. A. (1986). The Upper Pleistocene and early Holocene prehistory of the Horn of Africa. *African Archaeological Review*, *4*, 41–82. https://doi.org/10.1007/BF01117035

Brandt, S. A., & Brook, G. A. (1984). Archaeological and Paleoenvironmental Research in Northern Somalia*. Current Anthropology*, *25*, 119–121. https://doi.org/10.1086/203093

Brandt, S. A., Brook, G. A., & Gresham, T. H. (1984). Quaternary Paleoenvironments and Prehistoric Human Occupation of Northern Somalia. In T. Labahn (Ed.), *Proceedings of the Second International Congress of Somali Studies. University of Hamburg, August 1-6, 1983, Volume II - Archaeology and History* (pp 7–19). Hamburg: Helmut Buske Verlag.

Brandt, S. A., Fisher, E. C., Hildebrand E. A., Vogelsang, R., Ambrose, S. H., Lesur, J., & Wang, H. (2012) Early MIS 3 occupation of Mochena Borago Rockshelter, Southwest Ethiopian Highlands: Implications for Late Pleistocene archaeology, paleoenvironments and modern human dispersals. *Quaternary International*, *274*, 38–54. http://dx.doi.org/10.1016/j.quaint.2012.03.047

Brandt, S. A., & Gresham, T. H. (1989). L'âge de la Pierre en Somalie. L'Anthropologie, 94, 459–482.

Breuil, H., Teilhard de Chardin, P. & Wernert, P. (1951) Le Paléolithique du Harrar. *L'Anthropologie*, *55*, 219-230.

Brooks, A. S., Yellen, J. E., Potts, R., Behrensmeyer, A. K., Deino, A. L., Leslie, D. E., Ambrose, S. H., Ferguson, J. R., d'Errico, F., Zipkin, A. M., Whittaker, S., Post, J., Veatch, E. G., Foecke, K., & Clark, J. B. (2018) Long-distance stone transport and pigment use in the earliest Middle Stone Age. *Science*, *360*, 90–94. http://dx.doi.org/10.1126/science.aao2646

Brown, F. H., Nash, B. P., Fernandez, D. P., Merrick, H. V., & Thomas, R. J. (2013). Geochemical composition of source obsidians from Kenya. *Journal of Archaeological Science*, *40*, 3233–3251. http://dx.doi.org/10.1016/j.jas.2013.03.011

Clark, J. D. (1954). *The Prehistoric Cultures of the Horn of Africa. An analysis of the Stone Age Cultural and Climatic Succession in the Somalilands and Eastern Parts of Abyssinia*. Cambridge: Cambridge University Press.

Clark, J. D. (1982). *The Cambridge History of Africa. I: From the Earliest Times to c. 500 B.C*. Cambridge: Cambridge University Press.

Clark, J. D. (1988). The Middle Stone Age of East Africa and the Beginnings of Regional Identity. *Journal of World Prehistory*, *2*, 235–305. https://doi.org/10.1007/BF00975618

Clark, J. D., Williamson, K. D., Michels, J. W., & Marean, C. A. (1984). A Middle Stone Age Occupation Site at Porc Epic Cave, Dire Dawa (East-Central Ethiopia). *African Archaeological Review*, *2*, 37–72. https://doi.org/10.1007/BF01117225

Clarke, M. C. G., Woodhall, D. G., Allen, D. J., & Darling, W. G. (1990). *Geological, volcanological, and hydrogeological controls on the occurrence of geothermal activity in the area surrounding Lake Naivasha, Kenya*. Nairobi: Ministry of Energy, Kenya & British Geological Survey.

Cohen, M. (1970) A Reassessment of the Stone Bowl Cultures of the Rift Valley, Kenya. *Azania: Archaeological Research in Africa*, *5*, 27–38.

Cole, S. (1954) *The Prehistory of East Africa*. Harmondsworth: Penguin Books.

Coleman, M. E. (2010) Radioanalytical Multielemental Analysis: New Methodology and Archaeometric Applications. PhD Thesis, University of Missouri-Columbia.

Coleman, M. E., Ferguson, J. R., Glascock, M. D., Robertson, J. D., & Ambrose, S. H. (2008). A new look at the geochemistry of obsidian from East Africa. *International Association for Obsidian Studies Bulletin*, *39*, 11–14.

Deacon, J. (1966). An annotated list of radiocarbon dates for sub-Saharan Africa. *Annals of the Cape Provincial Museum*, *5*, 5–84.

Diez-Martín, F., Domínguez-Rodrigo, M., Sánchez, P., Mabulla, A. Z. P., Tarriño, A., Barba, R., Prendergast, M.E., & de Luque, L. (2009). The Middle to Later Stone Age Technological Transition in East Africa. New Data from Mumba Rockshelter Bed V (Tanzania) and their Implications for the Origin of Modern Human Behavior. *Journal of African Archaeology*, *7*, 147–173. http://dx.doi.org/10.3213/1612-1651-10136

Directorate of Overseas Surveys (1975). Ol Doinyo Opuru, Scale 1:50,000, Sheet 133/1 (Series Y731, D.O.S. 423). Nairobi: Kenya Government.

Dühnforth, M., Bergner, A. G. N., & Trauth, M. H. (2006). Early Holocene water budget of the Nakuru–Elmenteita basin, Central Kenya Rift. *Journal of Paleolimnology*, *36*, 281–294. https://doi.org/10.1007/s10933-006-9003-z

Eren, M. I., Diez-Martin, F., & Dominguez-Rodrigo, M. (2013). An empirical test of the relative frequency of bipolar reduction in beds VI, V, and III at Mumba Rockshelter, Tanzania: Implications for the East African Middle to Late Stone Age transition. *Journal of Archaeological Science*, *40*, 248–256. http://dx.doi.org/10.1016/j.jas.2012.08.012

Faith, J. T., Tryon, C. A., Peppe, D. J., Beverly, E. J., Blegen, N., Blumenthal, S., Chritz, K. L., Driese, S. G., & Patterson, D. (2015) Paleoenvironmental context of the Middle Stone Age record from Karungu, Lake Victoria Basin, Kenya, and its implications for human and faunal dispersals in East Africa. Journal of Human Evolution, 83, 28-45. https://doi.org/10.1016/j.jhevol.2015.03.004

Geneste, J.-M. (1985), *Analyse Lithique d'Industries Moustériennes du Périgord: Une Approche Technologique du Comportement des Groupes Humains au Paléolithique Moyen.* PhD Thesis, Université de Bordeaux

Gliganic, L. A., Jacobs, Z., Roberts, R. G., Dominguez-Rodrigo, M., & Mabulla, A. Z. P. (2012). New ages for Middle and Later Stone Age deposits at Mumba rockshelter, Tanzania: Optically stimulated luminescence dating of quartz and feldspar grains. *Journal of Human Evolution*, *62*, 533–547. http://dx.doi.org/10.1016/j.jhevol.2012.02.004

Goldstein ST, Munyiri JM (2017). The Elmenteitan Obsidian Quarry (GsJj50): New Perspectives on Obsidian Access and Exchange During the Pastoral Neolithic in Southern Kenya. *African Archaeological Review*, *34*, 43–73. https://doi.org/10.1007/s10437-016-9240-0

Gramly, R. M. (1976). Upper Pleistocene archaeological occurrences at site GvJm/22, Lukenya Hill, Kenya. *Man*, *11*, 319–344. http://doi.org/10.2307/2800274

Gutherz, X., Diaz, A., Ménard, C., Bon, F., Douze, K., Léa, V., Lesur, J., & Sordoillet, D. (2014). The Hargeisan revisited: Lithic industries from shelter 7 of Laas Geel, Somaliland and the transition between the Middle and Late Stone Age in the Horn of Africa. *Quaternary International*, *343*, 69–84. http://dx.doi.org/10.1016/j.quaint.2014.04.038

Helm, R., Crowther, A., Shipton, C., Tengeza, A., Fuller, D., & Boivin, N. (2012) Exploring agriculture, interaction and trade on the eastern African littoral: preliminary results from Kenya. *Azania: Archaeological Research in Africa*, *47*, 39–63. http://dx.doi.org/10.1080/0067270X.2011.647947

Inskeep, R. R. (1962). The age of the Kondoa rock paintings in the light of recent excavations at Kisese II rock shelter. In G. Mortelmans & J. Nenquin (Eds.), *Actes du VI Congrès Panafricain de Préhistoire et de l'Étude du Quaternaire* (pp 249–256). Tervuren: Musée Royale de l'Afrique Centrale.

Isaac, G. L. (1972). Comparative studies of site locations in East Africa. In P. J. Ucko, R. Tringham, & G. W. Dimbleby (Eds.), *Man, Settlement and Urbanism: Proceedings of a meeting of the Research Seminar in Archaeology and Related Subjects held at the Institute of Archaeology, London University* (pp 165–176). London: Duckworth.

Isaac, G. L. (1976). A preliminary report on stratigraphic studies in the Nakuru basin, Kenya. In B. Abébé, N. Chavaillon, & J. E. G. Sutton (Eds.), *Proceedings of the Seventh Panafrican Congress of Prehistory and Quaternary Studies, 1971, Addis Ababa* (pp 409–411). Addis Ababa: Ministry of Culture.

Isaac, G. L., Merrick, H. V., & Nelson, C.M. (1972). Stratigraphic and Archaeological studies in the Lake Nakuru Basin, Kenya. In E. M. Van Zinderen Bakker (Ed.), *Palaeoecology of Africa & of the surrounding islands & Antarctica, Volume VI (pp 225–232)*. Cape Town: Balkema.

Kelly, A. J. (1996) *Intra-regional and inter-regional variability in the East Turkana (Kenya) and Kenyan Middle Stone Age*. PhD Thesis, Rutgers University.

Krueger, H. W., & Weeks, F. C. (1966). Geochron Laboratories, Inc. Radiocarbon Measurements II. *Radiocarbon*, 8, 142–160.

Leakey, L. S. B. (1931). *The Stone Age cultures of Kenya colony*. Cambridge: Cambridge University Press.

Leakey, L. S. B. (1936) *Stone Age Africa: An outline of Prehistory in Africa*. London: Oxford University Press.

Leakey, L. S. B. (1947). Capsian or Aurignacian? Which term should be used in Africa? In L. S. B. Leakey (Ed.), *Proceedings of the 1st Panafrican Congress on Prehistory, Nairobi, 1947* (pp 205–206). Oxford: Blackwell.

Leplongeon, A. (2014). Microliths in the Middle and Later Stone Age of eastern Africa: New data from Porc-Epic and Goda Buticha cave sites, Ethiopia. *Quaternary International*, *343*, 100–116. http://dx.doi.org/10.1016/j.quaint.2013.12.002

Liritzis, I., & Laskaris, N. (2011) Fifty years of obsidian hydration dating in archaeology. *Journal of Non-Crystalline Solids*, *357 (10)*, 2011–2023. https://doi.org/10.1016/j.jnoncrysol.2011.02.048

Marks, A. E., & Conard, N. (2008) Marks Technology vs. Typology: the case for and against a transition from the MSA to the LSA at Mumba Cave, Tanzania. In T. Aubry, F. Almeida, A. C. Araújo, & M. Tiffagom (Eds.) Space and Time: Which Diachronies, Which Synchronies, Which Scales? / Typology vs. Technology. Proceedings of the XV World Congress UISPP, Lisbon, 4-9 September 2006 (Bar International Series, S1831)(pp 123–132). Oxford: Archaeopress.

McCall, G. J. H. (1967). *Geology of the Nakuru-Thomson's Falls Lake Hannington area* (Geological Survey of Kenya Report, 78). Nairobi: Geological Survey of Kenya.

Mehlman, M. J. (1977). Excavations at Nasera Rock, Tanzania. *Azania: Archaeological Research in Africa*, *12*, 111–118.

Mehlman, M. J. (1979) Mumba Höhle revisited: The relevance of a forgotten excavation to some current issues in East African prehistory. *World Archaeology*, *11*, 80-94.Mehlman, M. J. (1989). *Late Quaternary archaeological sequences in northern Tanzania*. PhD Thesis, University of Illinois, Urbana.

Merrick, H. V. (1975). *Change in Later Pleistocene Lithic Industries in Eastern Africa*. PhD Thesis, University of California.

Merrick, H. V., & Brown, F. H. (1984a). Obsidian sources and patterns of source utilization in Kenya and northern Tanzania: some initial findings. *African Archaeological Review*, *2*, 129–152. https://doi.org/10.1007/BF01117229

Merrick, H. V., & Brown, F. H. (1984b). Rapid chemical characterization of obsidian artifacts by electron microprobe analysis. *Archaeometry*, *26*, 230–236. http://doi.org/10.1111/j.1475-4754.1984.tb00337.x

Merrick, H. V., Brown, F. H., & Connelly, M. (1990) Sources of the obsidian at Ngamuriak and other south-western Kenyan Sites. In P. Robertshaw (Ed.), *Early Pastoralists of South-Western Kenya* (pp. 173–182). Nairobi: British Institute in Eastern Africa.

Merrick, H. V., Brown, F. H., & Nash, W. P. (1994). Use and movement of obsidian in the Early and Middle Stone Ages of Kenya and Northern Tanzania. In T. S. Childs (Eds.) *Society, culture and technology in Africa* (MASCA Research Papers in Science and Archaeology, supplement to volume 11)(pp. 29–44). Pennsylvania: University of Pennsylvania & Museum of Archaeology and Anthropology.

Michels, J. W., & Marean, C. A. (1984). A Middle Stone Age occupation site at Porc Epic cave, Dire Dawa (east-central Ethiopia), Part II. *African Archaeological Review*, *2*, 37–71. https://doi.org/10.1007/BF01117225

Michels, J. W., Tsong, I., & Nelson, C. M. (1983). Obsidian dating and East African archaeology. *Science*, *219*, 361–366. http://doi.org/10.1126/science.219.4583.361

Onjala, I. O. (2004). The Emergence of Modern Human Behavior: The East African Evidence. *Nyame Akuma*, *62*, 42–49.

Perlès, C. (1974). Réexamen typologique de l'industrie du Porc-Épic (Éthiopie): Les pointes et pièces pointues. *L'Anthropologie*, *78*, 529–552.

Pleurdeau, D. (2003). Le Middle Stone Age de la grotte du Porc Épic (Dire Dawa, Éthiopie): gestion des matières premières et comportements techniques. *L'Anthropologie*, *107*, 15–48.

Pleurdeau, D. (2004). *Gestion des matières premières et comportements techniques dans leMiddle Stone Age africain. Les assemblages lithiques de la grotte du Porc-Épic, Dire Dawa, Éthiopie* (British Archaeological Reports International Series 1317). Oxford: Archaeopress.

Pleurdeau, D. (2005a). Human technical behavior in the African Middle Stone Age: The lithic assemblages of Porc-Epic Cave (Dire Dawa, Ethiopia). *African Archaeological Review*, *22*, 177–197. https://doi.org/10.1007/s10437-006-9000-7

Pleurdeau, D. (2005b). The lithic assemblage of the 1975-1976 excavation of the Porc-Epic Cave (Dire-Dawa, Ethiopia) - Implications for the East African Middle Stone Age. *Journal of African Archaeology*, *3*, 117–126. http://doi.org/10.3213/1612-1651-10040

Pleurdeau, D., Hovers, E., Assefa, Z., Asrat, A., Pearson, O., Bahain, J.-J., & Man Lam, Y. (2014). Cultural change or continuity in the late MSA/Early LSA of southeastern Ethiopia? The site of Goda Buticha, Dire Dawa area. *Quaternary International*, *343*,117–135. https://doi.org/10.1016/j.quaint.2014.02.001

Prendergast, M. E., Luque, L., Domínguez-Rodrigo, M., Díez-Martín. F., Mabulla, A., & Barba, R. (2007) New excavations at Mumba Rockshelter, Tanzania. *Journal of African Archaeology*, *5(2)*, 217-243.

Ranhorn, K., & Tryon., C.A. (2018) New Radiocarbon Dates from Nasera Rockshelter (Tanzania): Implications for Studying Spatial Patterns in Late Pleistocene Technology*, Journal of African Archaeology*, 16 (2), 211-222. https://doi.org/10.1163/21915784-20180011

Ren, M., Omenda, P. A., Anthony, E. Y., White, J. C., Macdonald, R., & Bailey, D. K. (2006). Application of the QUILF thermobarometer to the peralkaline trachytes and pantellerites of the Eburru volcanic complex, East African Rift, Kenya. *Lithos*, *91*, 109–124. https://doi.org/10.1016/j.lithos.2006.03.011

Rosso, D. E., d'Errico, F., & Queffelec, A. (2017). Patterns of change and continuity in ochre use during the late Middle Stone Age of the Horn of Africa: The Porc-Epic Cave record. *PLoS ONE*, *12 (5)*, e0177298. https://doi.org/10.1371/journal.pone.0177298

Rosso, D. E., d'Errico, F., & Zilhão, J. (2014). Stratigraphic and spatial distribution of ochre and ochre processing tools at Porc-Epic Cave, Dire Dawa, Ethiopia. *Quaternary International*, *343*, 85–99. http://dx.doi.org/10.1016/j.quaint.2013.10.019

Shipton, C., Helm, R., Boivin, N., Crowther, A., Austin, P., & Fuller D. Q. (2013) Intersections, Networks and the Genesis of Social Complexity on the Nyali Coast of East Africa. *African Archaeological Review*, 30, 427–453. https://doi.org/10.1007/s10437-013-9140-5

Shipton, C., Roberts, P., Archer, W., Armitage, S. J., Bita, C., Blinkhorn, J., Courtney-Mustaphi, C., Crowther, A., Curtis, R., d' Errico, F., Douka, K., Faulkner, P., Groucutt, H. S., Helm, R., Herries, A. I. R., Jembe, S., Kourampas, N., Lee-Thorp, J., Marchant, R., Mercader, J., Pitarch Marti, A., Prendergast, M. E., Rowson, B., Tengeza, A., Tibesasa, R., White, T. S., Petraglia, M. D., & Boivin, N. (2018) 78,000-year-old record of Middle and Later Stone Age innovation in an East African tropical forest. *Nature Communications*, *9*, Article number: 1832. https://doi.org/10.1038/s41467-018-04057-3

Slater, P. A. (2016). *Change in Lithic Technological Organisation Strategies during the Middle and Later Stone Ages in East Africa*. PhD Thesis, University of Illinois.

Strecker, M., Blisniuk, P., & Eisbacher, G. (1990) Rotation of extension direction in the central Kenya Rift. *Geology*, *18*, 29–302. https://doi.org/10.1130/0091-7613(1990)018<0299:ROEDIT>2.3.CO;2

Teilhard de Chardin, P. (1930). Le Paléolithique en Somalie française et en Abyssinie. *L'Anthropologie*, *40*, 331–334.

Thompson, O. A., & Dodson, R. G. (1963a*). Geological Map of the Naivasha Area. Degree Sheet No. 43, South-West Quarter, Scale 1:125,000*. Nairobi: Ministry of Commerce and Industry & Geological survey of Kenya.

Thompson, O. A., & Dodson, R. G. (1963b). *Geology of the Naivasha Area. Explanation of Degree Sheet 43, South-West Quarter* (Report No. 55). Nairobi: Ministry of Commerce and Industry & Geological survey of Kenya.

Tombo-Kodalo, J. (1991). *A Comparative Study of the Middle Stone Age Cores from Kenya Highlands and the Lake Victoria Basin Sites*. Bachelor Thesis, University of Nairobi.

Tombo-Kolado, J. (2002). A comparative study of Middle Stone Age cores from the Lake Victoria Basin and the Central Highland of Kenya. *Nyame Akuma*, 58, 19–25.

Trapnell, C. G., Birch, W. R., Brunt, M. A., & Lawton, R. M. (1976). *Kenya 1:250,000 Vegetation Sheet 2. Results of a vegetation - land use survey of south-western Kenya*. Nairobi: British Government's Ministry of Overseas Development (Directorate of Overseas Surveys) under the Special Commonwealth African Assistance Plan.

Trauth, M. H., Deino, A. L., Bergner, A. G., & Strecker, M. R. (2003). East African climate change and orbital forcing during the last 175 kyr BP. *Earth and Planetary Science Letters*, *206*, 297–313. https://doi.org/10.1016/S0012-821X(02)01105-6

Tribolo, C., Asrat, A., Bahain, J.-J., Chapon, C., Douville, E., Fragnol, C., Hernandez, M., Hovers, E., Leplongeon, A., Martin, L., Pleurdeau, D., Pearson, O., Puaud, S., & Assefa, A. (2017). Across the Gap: Geochronological and Sedimentological Analyses from the Late Pleistocene-Holocene Sequence of Goda Buticha, Southeastern Ethiopia. *PLoS ONE*, *12 (1)*, e0169418. http://doi.org/10.1371/journal.pone.0169418

Tryon, C. A., Crevecoeur, I., Faith, J. T., Ekshtain, R., Nivens, J., Patterson, D., Mbua, E. N., & Spoor, F. (2015). Late Pleistocene age and archaeological context for the hominin calvaria from GvJm-22 (Lukenya Hill, Kenya). *Proceedings of the National Academy of Sciences*, *112*, 268–2687. http://doi.org/10.1073/pnas.1417909112

Tryon, C. A., & Faith, J. T. (2016) A demographic perspective on the Middle to Later Stone Age transition from Nasera rockshelter, Tanzania. *Phil. Trans. R. Soc. B*, *371*, 20150238. http://dx.doi.org/10.1098/rstb.2015.0238

Tryon, C. A., Lewis, J. E., Ranhorn, K. L., Kwekason, A., Alex, B., Laird, M. F, Marean, C. W., Niespolo, E., Nivens, J., & Mabulla, A. Z. P. (2018) Middle and Later Stone Age chronology of Kisese II rockshelter (UNESCO World Heritage Kondoa Rock-Art Sites), Tanzania. PLoS ONE, 13(2), e0192029. https://doi.org/10.1371/journal.pone.0192029

Vallois, H. (1951). La Mandibule Humaine Fossile de la Grotte du Porc-Épic près de Diré-Daoua Abyssinie. *L'Anthropologie*, 55, 231–238. https://doi.org/10.1016/j.quaint.2012.02.021

Vareschi E. (1982) The Ecology of Lake Nakuru (Kenya). *Oecologia*, 55, 81-101. https://doi.org/10.1007/BF00386722

Vogelsang R. & Wendt K.P. (2018) Reconstructing prehistoric settlement models and land use patterns on Mt. Damota/SW Ethiopia. *Quaternary International*, 485, 140-149. http://dx.doi.org/10.1016/j.quaint.2017.06.061

Werner, J.J., & Willoughby, P. R. (2017) Middle Stone Age Technology and Cultural Evolution at Magubike Rockshelter, Southern Tanzania. *African Archaeological Review*, 34, 249–273. https://doi.org/10.1007/s10437-017-9254-2

Willoughby, P. R. (2012). The Middle and Later Stone Age in the Iringa Region of southern Tanzania. *Quaternary International*, 270, 103–108. http://dx.doi.org/10.1016/j.quaint.2012.02.021

Willoughby, P. R., Compton, T., Bello, S. M., Bushozi, P. M., Skinner, A. R., & Stringer, C. B. (2018) Middle Stone Age human teeth from Magubike rockshelter, Iringa Region, Tanzania. *PLoS ONE*, *13 (7)*, e0200530. https://doi.org/10.1371/journal

Wilshaw, A. (2016). The Current Status of the Kenya Capsian. *African Archaeological Review*, *33*, 13–27. http://dx.doi.org/10.1007/s10437-016-9211-5

Yamasaki, F., Hamada, T., & Hamada, C. (1970). Riken natural radiocarbon measurements VI. *Radiocarbon*, *12*, 559–576.

Figure legend

Fig. 1

(a) Elevation map of eastern Africa showing the sites mentioned in the text: [1] Midishi 2, [2] Laas Geel, [3] Porc Epic, [4] Goda Buticha, [5] Mochena Borago, [6] Lukenya Hill, [7] Panga ya Saidi, [8] Nasera Rock, [9] Mumba, [10] Kisese II, and [11] Magubike; (b) Elevation map of the Central Rift Valley showing the location of Prospect Farm and other sites mentioned in the text: [12] Prolonged Drift, [13] Marmonet Drift, and [14] Enkapune Ya Muto. Sample locations of obsidian sources and source groups represented at Prospect Farm are depicted in green (after Merrick et al. 1994). Elevation data: GMTED2010 7.5 arc-second global data (Fig. 1a) and SRTM 1 arc-second global data (Fig. 1b), both available from the U.S. Geological Survey, http://eros.usgs.gov/find-data (image available in full colour online)

Fig. 2

Stratigraphic sequence and archaeological levels at Prospect Farm. The stratigraphic sequence is redrawn from the original section recorded at Locality II by Anthony (1978: figure 7) and the numbering of the stratigraphic units kept identical to Anthony (1978). Black rectangles indicate archaeological levels as described by Anthony (1978). Uncalibrated radiocarbon dates (with lab code) and obsidian hydration dates (indicated by an asterisk) have been added.

Fig. 3

Lithic artefacts from the MSA levels at Prospect Farm: (a-d) phase IV, (e-h) phase III, and (i) phase II (after Clark 1988: figures 9-10, p. 269-270, and Anthony 1978).

Fig. 4

Lithic artefacts from the MSA levels at Prospect Farm: (a-c) phase II, and (d-j) phase I (after Clark 1988: figures 9-10, p. 269-270, and Anthony 1978).

Fig. 5

(a) Map of the northern slope of Mt Eburru showing the position of Anthony's Localities I and II and the results of the 2014 density survey. Orange polygons and yellow graduated symbols indicate the surveyed areas and the total number of finds per square, respectively. Contour lines are inferred from SRTM 1 arc-second global data (available from the U.S. Geological Survey, http://eros.usgs.gov/find-data). Labour lines and tracks (in dark grey) and river courses (in blue) are taken from Directorate of Overseas Surveys (1975); (b) Altitudinal transect (in m a.s.l.) depicting mean artefact densities per square metre as recorded in 2014. Grey columns correspond to surveyed altitudes, white columns correspond to altitudes that were not surveyed; (c) Square metre showing obsidian artefacts (Photo: by JMMF); (d) Altitudinal transect with artefact density data per square metre as recorded by Isaac (after Isaac 1972: Fig. 1c, p. 166) (image available in full colour online).

Fig. 6

(a-b) Map of the northern slope of Mt Eburru showing the position of Anthony's Localities I and II and the results of the 2014 density survey. Orange polygons and yellow graduated symbols indicate the surveyed areas and the total number of MSA or LSA finds per square metre, respectively. Contour lines are inferred from SRTM 1 arc-second global data (available from the U.S. Geological Survey, http://eros.usgs.gov/find-data). Labour lines and tracks (in dark grey) and river courses (in blue) are taken from Directorate of Overseas Surveys (1975); (c-d) Altitudinal transects (in m a.s.l.) depicting mean densities of MSA and LSA artefacts per square metre as recorded in 2014. Grey columns correspond to surveyed altitudes, white columns correspond to altitudes that were not surveyed (image available in full colour online).

Fig. 7

Stratigraphic columns and associated archaeological levels of sites mentioned in the text. Prospect Farm stratigraphic column: (1) Prospect Industry - phase I, (2) Prospect Industry - phase II, (3) Prospect Industry - phase III, (4) Prospect Industry - phase IV, (5) Kenya Capsian, and (6) Stone Bowl Culture. Corresponding bibliographic references are given in the text (image available in full colour online).

Loc.	**Trench**	**Spits**	**Stratigraphic units (Anthony 1978)**	**Artefacts (n)**	**Attribution**
I	Trench	2-1	3-1??	622	LSA? Perhaps (also) Stone Bowl Culture??
		8-3		1,621	
		15-9	8-4	13,692	Prospect Industry - Phase IV
		23-16	9-8	11,791	Prospect Industry - Phase III
II	Hilltop Trench	-	3	??	Kenya Capsian
	Sacrifice Trench	-	9-8??	??	Prospect Industry - Phase III
	Long Trench	-	11	25	??
		-	15	7,712	Prospect Industry - Phase II
	Connection	-	19	≤ 10	??
	Pit Trench	-	32	4,326	Prospect Industry - Phase I
III	Trench	-	Colluvium	??	Stone Bowl Culture

Table 1

Overview of the different archaeological levels, and corresponding stratigraphic units and spits, identified by Anthony (1978) in Localities I, II and III at Prospect Farm.

Online Resource 1

Overview of the available ^{14}C and obsidian hydration dating results.

Online Resource 2

Results of the 2014 density survey. Elevation is inferred from SRTM 1 arc-second global data (available from the U.S. Geological Survey, http://eros.usgs.gov/find-data).

Online Resource 3

Overview of the number of artefacts (total, MSA and LSA) recorded per square during the 2014 density survey in function of square visibility.

Online Resource 4

(a-b) Map of the northern slope of Mt Eburru depicting the visibility details (high, medium, low or unknown) of the squares during the 2014 density survey. Contour lines are inferred from SRTM 1 arc-second global data (available from the U.S. Geological Survey, http://eros.usgs.gov/find-data). Labour lines and tracks (in dark grey) and river courses (in blue) are taken from Directorate of Overseas Surveys (1975); (c) Square metre characterised by high visibility; (d) Square metre characterised by medium visibility; (e) Square metre characterised by low visibility; Photos c-e by JMMF (image available in full colour online).

Figure 1 colour

Click here to access/download;Figure;Fig_1_colour.tif

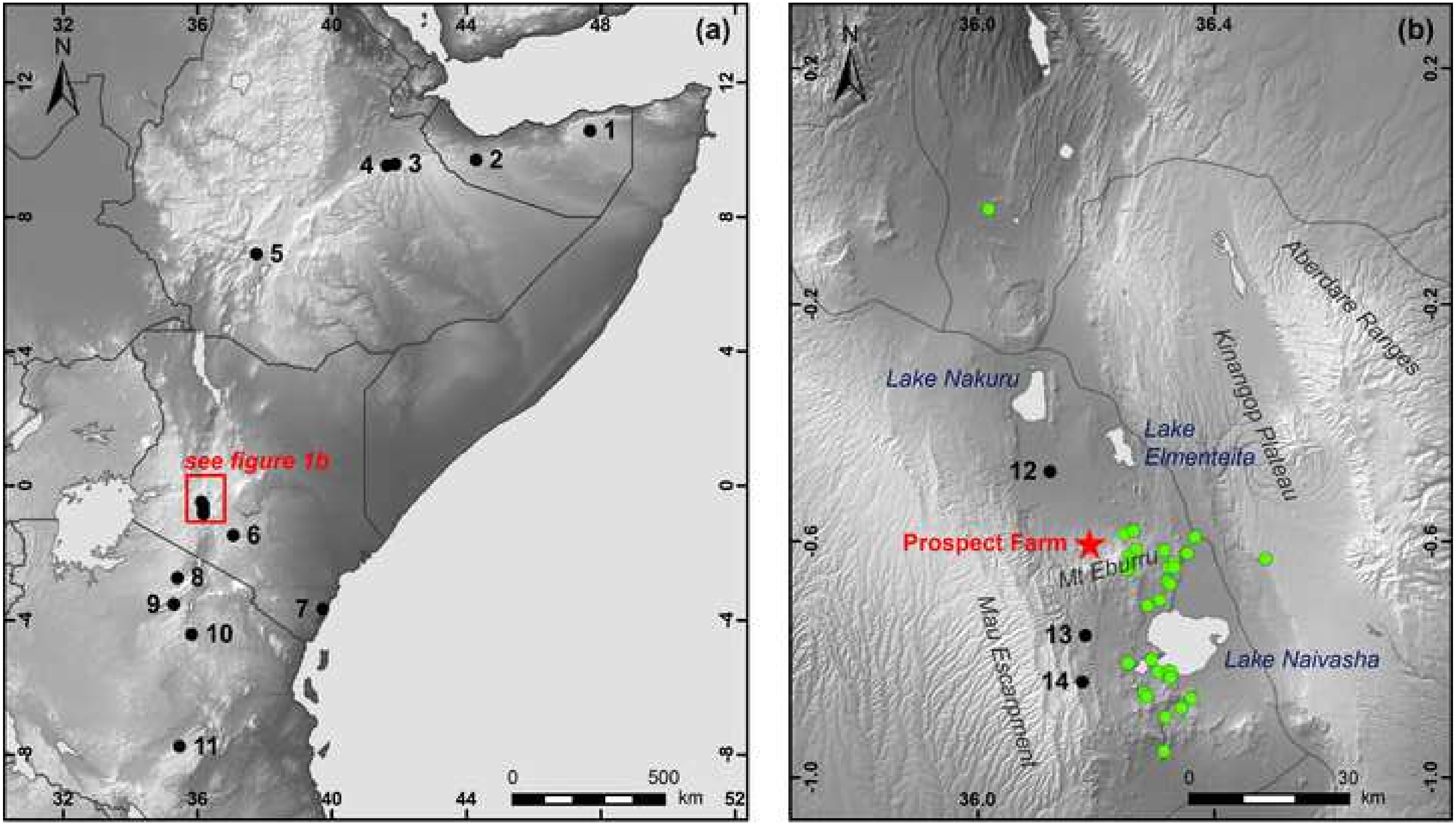


Figure 1 grayscale

Click here to access/download;Figure;Fig_1_grayscale.tif

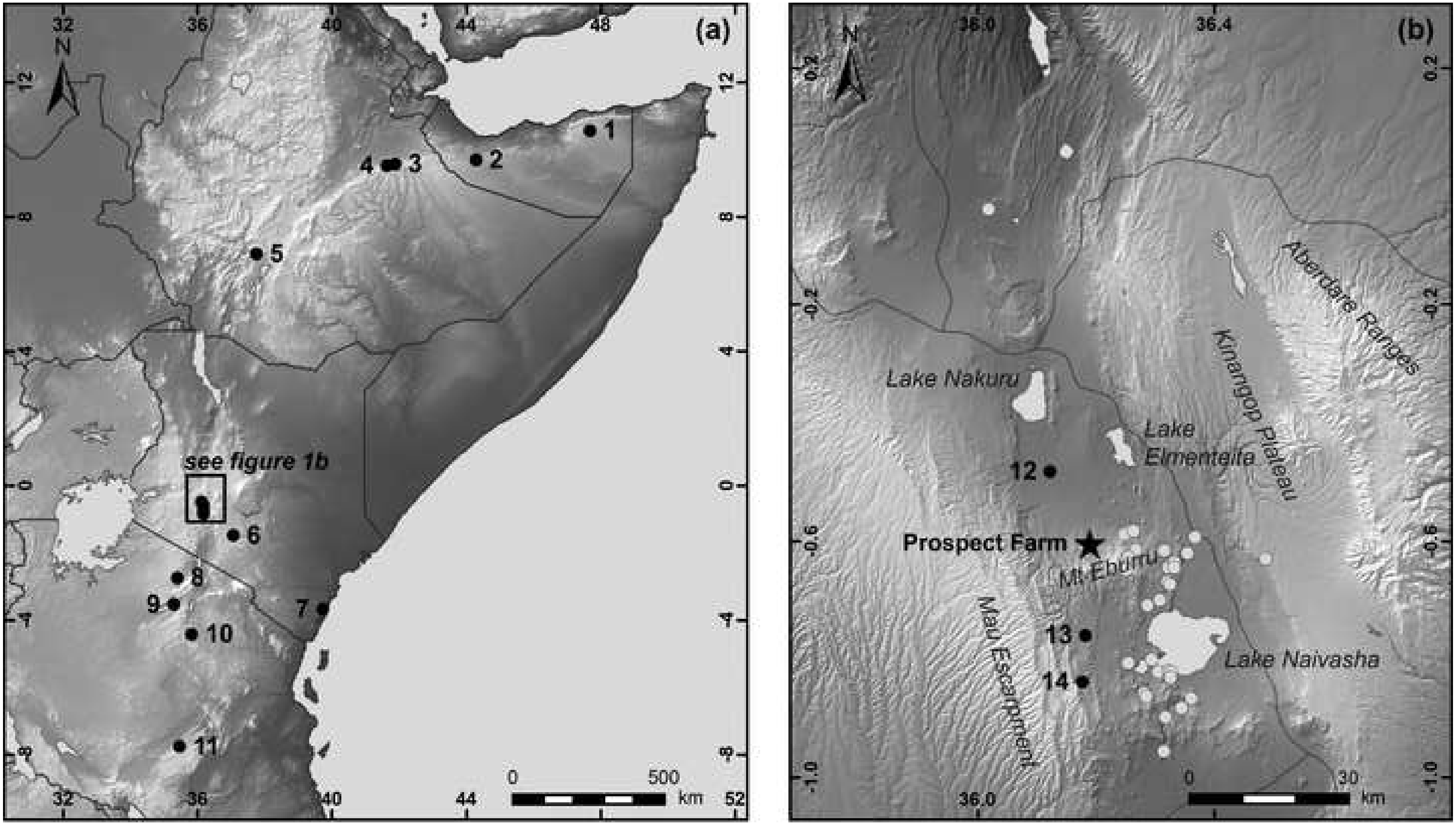


Figure 2

Click here to access/download;Figure;Fig_2.tif

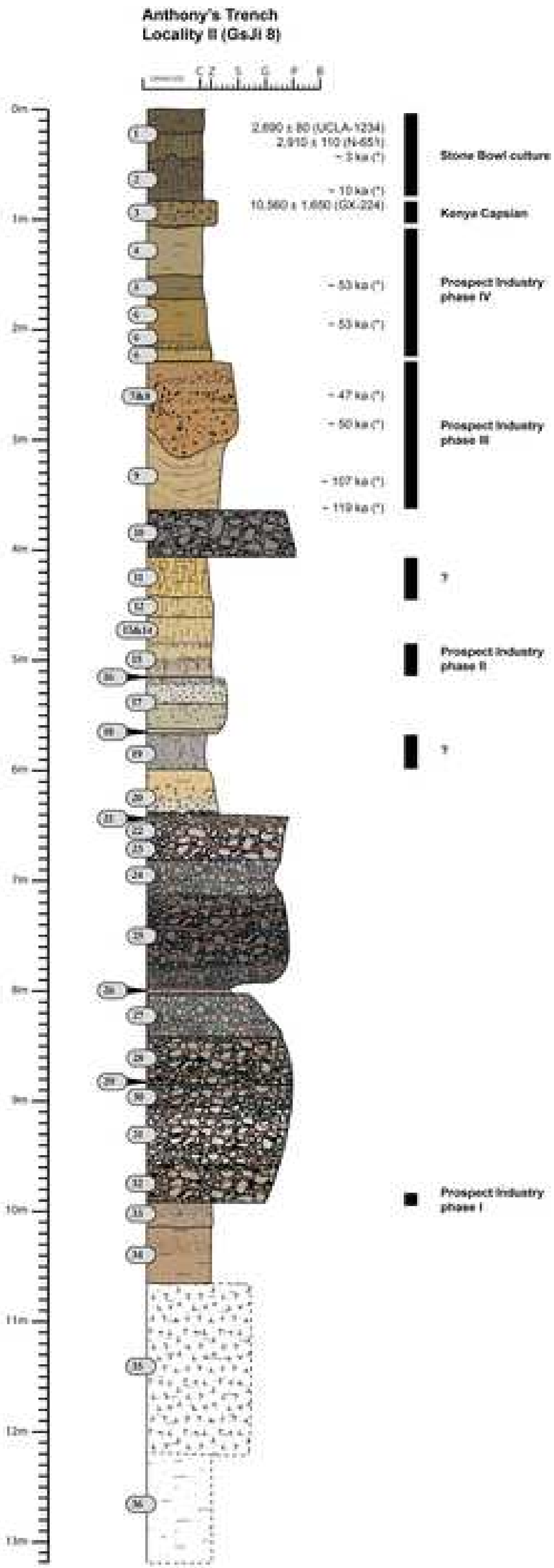


Figure 3

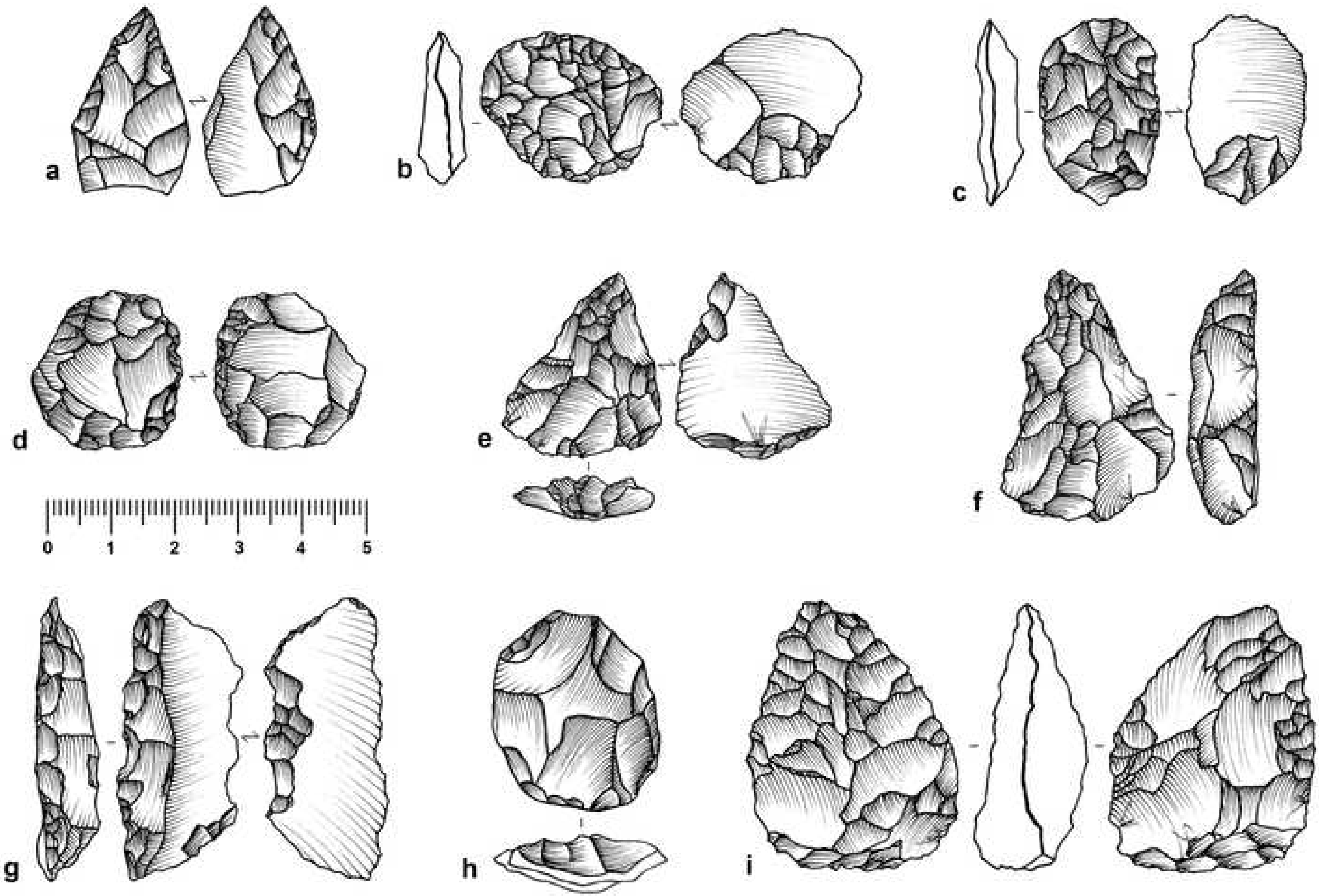


Figure 4

Click here to access/download;Figure;Fig_4.tif

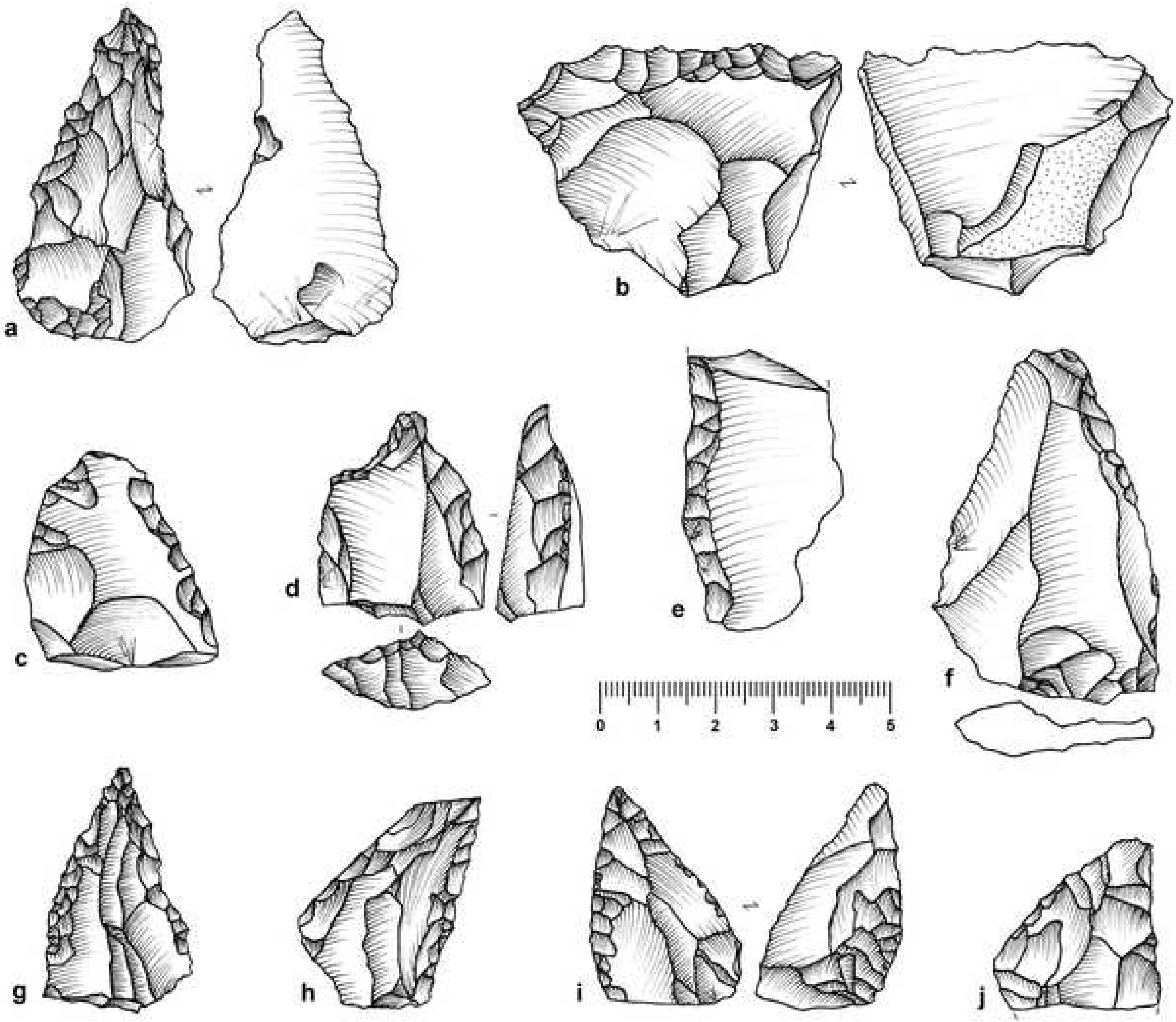


Figure 5

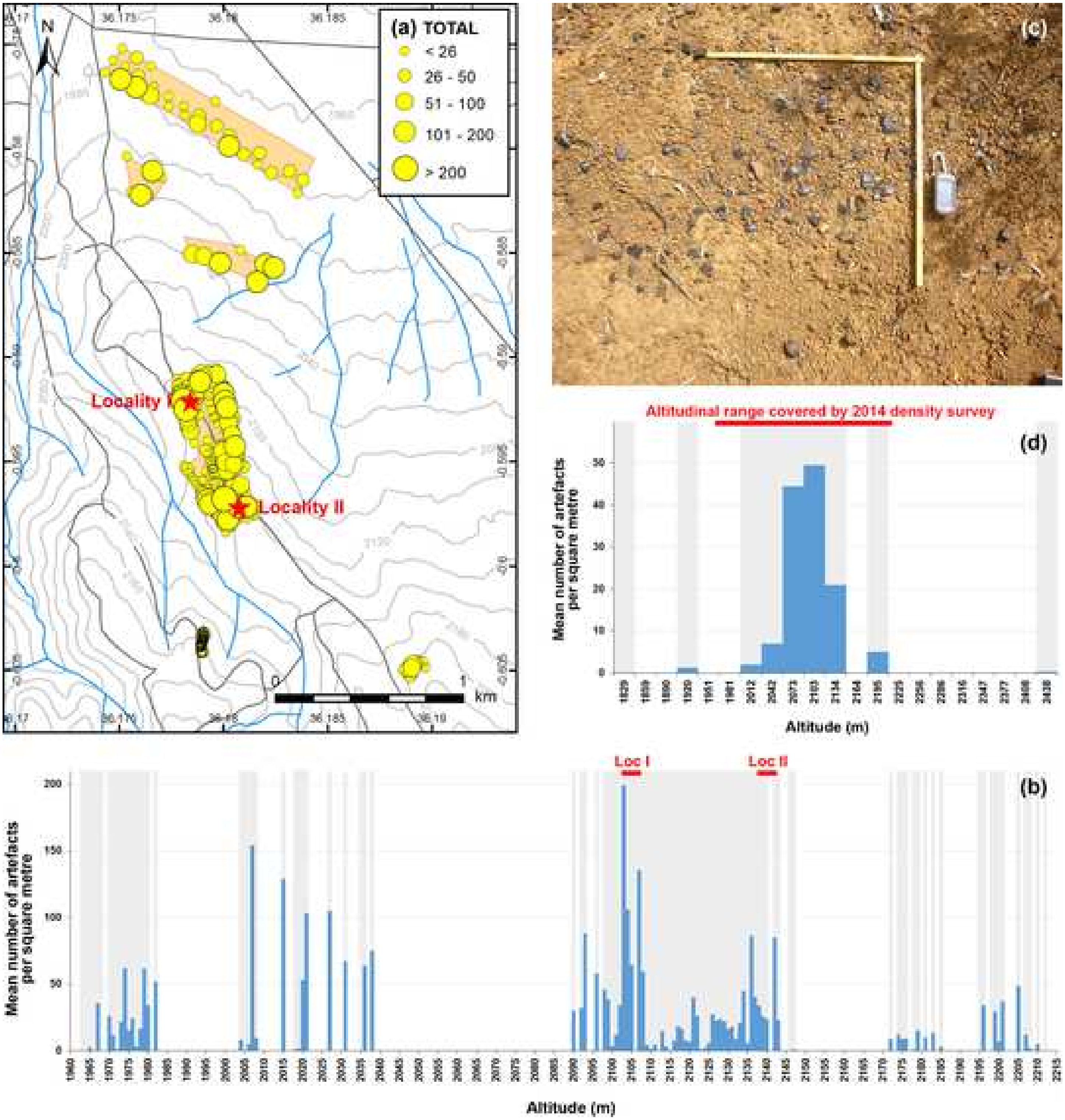

(a) TOTAL
< 26
26 - 50
51 - 100
101 - 200
> 200
N
Locality I
Locality II
0
1
km
(c)
Altitudinal range covered by 2014 density survey
(d)
Mean number of artefacts per square metre
Altitude (m)
Loc I
Loc II
(b)
Mean number of artefacts per square metre
Altitude (m)

Figure 6 Click here to access/download;Figure;Fig_6.tif

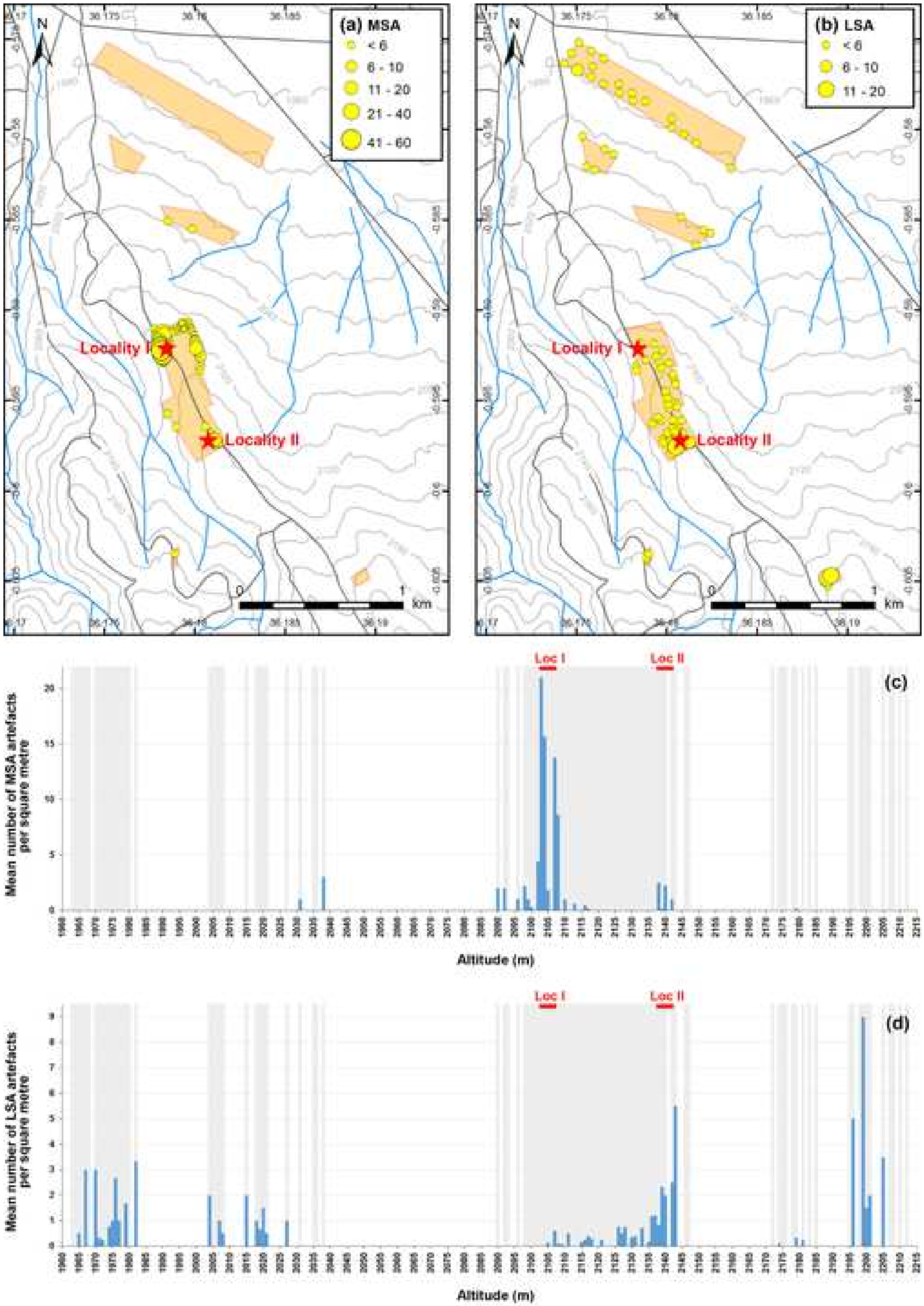
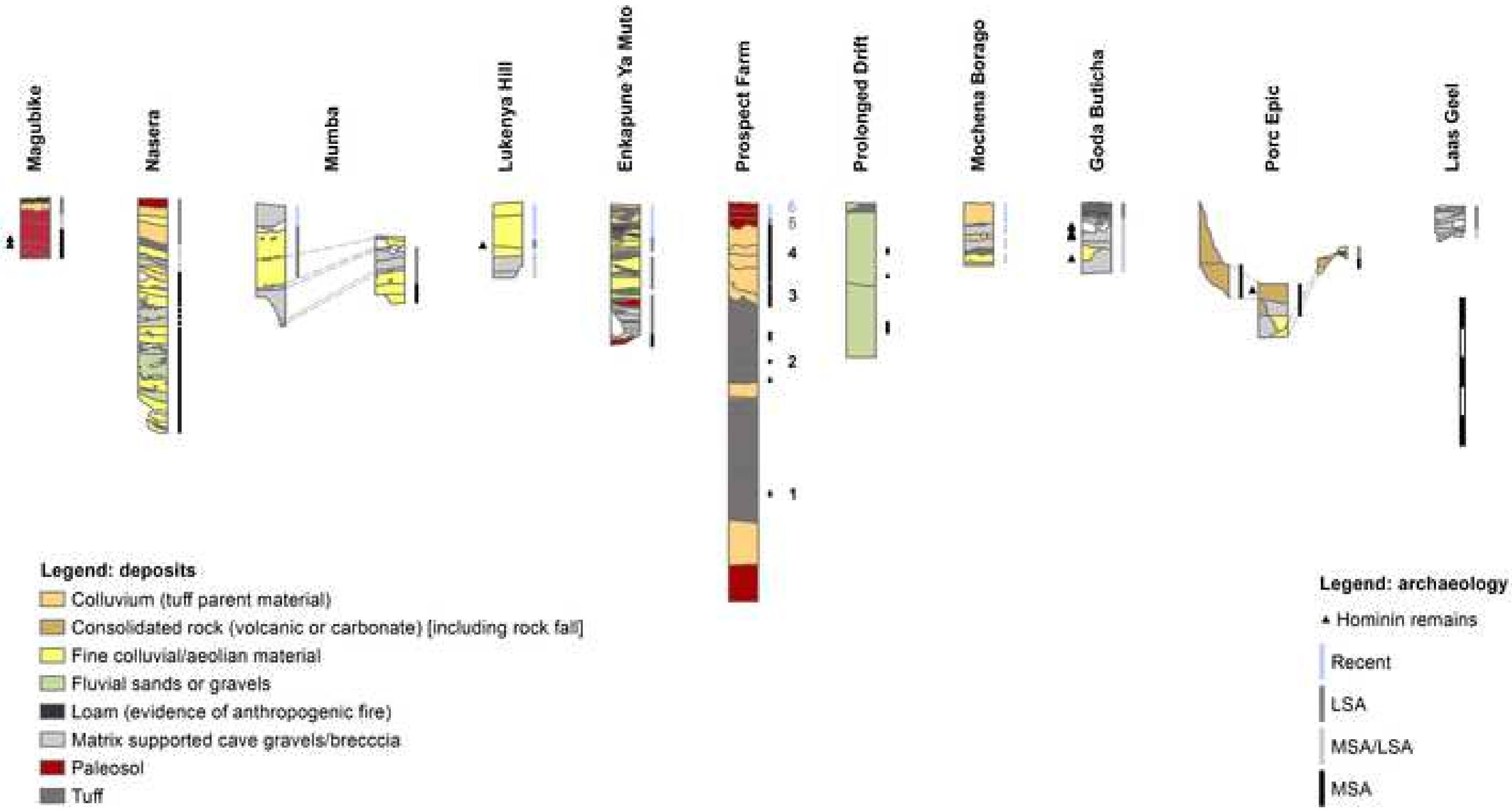


Figure 7

Click here to access/download;Figure;Fig_7.tif



Prospect Farm and the Middle and Later Stone Age occupation of Mt E

by Ann Van Baelen (1,*), Alex Wilshaw (1), Peter Griffith (1), Gunther Nc

(1) Leverhulme Centre for Human Evolutionary Studies (LCHES), Department of
(2) Departamento de Prehistoria y Arqueologia, UNED, c/ Paseo Senda del Rey,
** corresponding author: av431@cam.ac.uk, +44 1223 764719*

LOC.	Trench	Spits	Stratigraphic units Anthony (1978)	Artefacts (n)
I	Trench	2-1	3-1??	622
		8-3		1,621
		15-9	8-4	13,692
		23-16	9-8	11,791
	Hilltop Trench	-	3	??
	Sacrifice Trench	-	9-8??	??
II	Long Trench	-	11	25
		-	15	7,712
	Connection	-	19	≤ 10
	Pit Trench	-	32	4,326
III	Trench	-	Colluvium	??

burru (Central Rift, Kenya) in an East African context, *African Archaeological Review*

pens (1), José Manuel Maillo Fernandez (2), Robert A. Foley (1), Marta Mirazón Lahr (1)

Archaeology, University of Cambridge, The Henry Wellcome Building, Fitzwilliam Street, Cambridge CB2 1QH
, 7, 28040 Madrid, Spain

ATTRIBUTION

LSA? Perhaps (also) Stone Bowl Culture??

Prospect Industry - Phase IV
Prospect Industry - Phase III
Kenya Capsian
Prospect Industry - Phase III
??
Prospect Industry - Phase II
??
Prospect Industry - Phase I
Stone Bowl Culture

Online Resource 1 Click here to access/download;Table;ESM_1.xlsx

Prospect Farm and the Middle and Later Stone Age occupation of Mt Eburru (Ce

by Ann Van Baelen (1,*), Alex Wilshaw (1), Peter Griffith (1), Gunther Noens (1), J

(1) Leverhulme Centre for Human Evolutionary Studies (LCHES), Department of Archaeolo
(2) Departamento de Prehistoria y Arqueologia, UNED, c/ Paseo Senda del Rey, 7, 28040
** corresponding author: av431@cam.ac.uk, +44 1223 764719*

Locality	Excavation campaign	Chrono-cultural attribution
III	Anthony 1963-1964	Pastoral Neolithic
III	Anthony 1963-1964	Pastoral Neolithic
III	Anthony 1963-1964	Pastoral Neolithic
III	Anthony 1963-1964	Pastoral Neolithic
III	Anthony 1963-1964	Pastoral Neolithic
III	Cohen 1969	Pastoral Neolithic
III	Anthony 1963-1964	Pastoral Neolithic
III	Anthony 1963-1964	Pastoral Neolithic
III	Anthony 1963-1964	Pastoral Neolithic
III	Anthony 1963-1964	Pastoral Neolithic
III	Anthony 1963-1964	Pastoral Neolithic
III	Anthony 1963-1964	Pastoral Neolithic
III	Anthony 1963-1964	Pastoral Neolithic
III	Anthony 1963-1964	Pastoral Neolithic
III	Anthony 1963-1964	Pastoral Neolithic
III	Anthony 1963-1964	Pastoral Neolithic
III	Anthony 1963-1964	Pastoral Neolithic
III	Anthony 1963-1964	Pastoral Neolithic
III	Anthony 1963-1964	Pastoral Neolithic
II	Anthony 1963-1964	LSA - Kenya Capsian / Eburran
II	Anthony 1963-1964	LSA - Kenya Capsian / Eburran
II	Anthony 1963-1964	LSA - Kenya Capsian / Eburran
II	Anthony 1963-1964	LSA - Kenya Capsian / Eburran
II	Anthony 1963-1964	LSA - Kenya Capsian / Eburran
II	Anthony 1963-1964	LSA - Kenya Capsian / Eburran
II	Anthony 1963-1964	LSA - Kenya Capsian / Eburran
II	Anthony 1963-1964	LSA - Kenya Capsian / Eburran
II	Anthony 1963-1964	LSA - Kenya Capsian / Eburran
II	Anthony 1963-1964	LSA - Kenya Capsian / Eburran
II	Anthony 1963-1964	LSA - Kenya Capsian / Eburran
?	Anthony 1963-1964	LSA
?	Anthony 1963-1964	LSA
?	Anthony 1963-1964	early LSA (or Second intermediate)
?	Anthony 1963-1964	early LSA (or Second intermediate)
?	Anthony 1963-1964	early LSA (or Second intermediate)

?	Anthony 1963-1964	early LSA (or Second intermediate)
?	Anthony 1963-1964	early LSA (or Second intermediate)
I	Anthony 1963-1964	MSA - Phase IV
I	Anthony 1963-1964	MSA - Phase IV
I	Anthony 1963-1964	MSA - Phase IV
I	Anthony 1963-1964	MSA - Phase IV
I	Anthony 1963-1964	MSA - Phase IV
I	Anthony 1963-1964	MSA - Phase IV
I	Anthony 1963-1964	MSA - Phase IV
I	Anthony 1963-1964	MSA - Phase III
I	Anthony 1963-1964	MSA - Phase III
I	Anthony 1963-1964	MSA - Phase III
I	Anthony 1963-1964	MSA - Phase III
I	Anthony 1963-1964	MSA - Phase III
I	Anthony 1963-1964	MSA - Phase III
I	Anthony 1963-1964	MSA - Phase III
I	Anthony 1963-1964	MSA - Phase III
I	Anthony 1963-1964	MSA - Phase III
I	Anthony 1963-1964	MSA - Phase III
I	Anthony 1963-1964	MSA - Phase III
I	Anthony 1963-1964	MSA - Phase III
I	Anthony 1963-1964	MSA - Phase III
I	Anthony 1963-1964	MSA - Phase III
II	Anthony 1963-1964	MSA - Phase II
II	Anthony 1963-1964	MSA - Phase II
II	Anthony 1963-1964	MSA - Phase II
II	Anthony 1963-1964	MSA - Phase II

entral Rift, Kenya) in an East African context, *African Archaeological Review*

losé Manuel Maillo Fernandez (2), Robert A. Foley (1), Marta Mirazón Lahr (1)

ogy, University of Cambridge, The Henry Wellcome Building, Fitzwilliam Street, Cambridge CB2 1QH
Madrid, Spain

Stratigraphic Unit (*sensu* Anthony 1978)	Specimen or Lab code	Date (BP)	Uncertainty
?	13354	2,578	80
?	13352	2,562	129
?	UCLA-1234	2,690	80
?	13345	2,815	204
?	13334	2,840	161
?	N-651	2,910	110
?	13338	2,930	64
?	13340	2,951	107
?	13339	2,994	86
?	13341	3,059	154
?	13342	3,080	177
?	13343	3,015	175
?	13336	3,102	177
?	13335	3,124	245
?	13346	3,146	133
?	13359	3,168	133
?	13344	3,168	293
?	13358	3,257	250
?	13337	3,279	205
1	13363	9,905	357
1	13360	10,845	144
2	13376	9,612	470
2	13365	9,905	535
2	13366	9,905	535
2	13377	9,979	622
2	13364	10,090	673
2	13368	10,277	445
2	13367	10,460	173
2-3	13380	10,522	224
3	GX-224	10,560	1,650
1	13287	14,145	874
1	13286	14,452	1,350
2	13288	21,805	373
2	13290	22,155	329
2	13289	24,635	696

2	13292	30,808	762
2	13291	32,483	568
5	13293	52,936	836
5-6	13294	49,586	210
6	13296	52,106	252
6	13295	53,553	255
6-7	13297	49,621	281
7	13298	45,670	236
7	13299	47,816	2,256
8	13333	46,538	1,707
8	13306	47,816	1,295
8	13305	48,160	1,649
8	13301	48,887	769
8	13300	50,777	3,322
8	13302	51,843	4,096
8	13304	53,100	4,145
8-9	13307	51,308	4,260
9	?	14,900	-
9	?	18,300	-
9	13310	106,297	3,163
9	13308	107,201	3,430
9	13309	108,630	2,917
9-10	13311	119,646	1,668
15	?	14,700	-
15	?	24,500	-
15	?	81,800	-
15	?	88,400	-

Date (cal BP) OxCal_SHCal13 68.2 % Probability	Date (cal BP) OxCal_SHCal13 95.4 % Probability	Method	Sample type
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
2,875-2,621	2,956-2,489	^{14}C	Charcoal
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
3,156-2,863	3,329-2,762	^{14}C	Charcoal
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
14,847-9,964	18,015-8,538	^{14}C	Charcoal
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]

-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [2]
-	-	OH	Obsidian artefact [2]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [2]
-	-	OH	Obsidian artefact [2]
-	-	OH	Obsidian artefact [1]
-	-	OH	Obsidian artefact [1]

Interpretation Michels et al. (1983)
Pastoral Neolithic, second occupation phase
Pastoral Neolithic, second occupation phase
Pastoral Neolithic, second occupation phase
Pastoral Neolithic, first occupation phase
Pastoral Neolithic, first occupation phase
Pastoral Neolithic, first occupation phase
Pastoral Neolithic, first occupation phase
Pastoral Neolithic, first occupation phase
Pastoral Neolithic, first occupation phase
Pastoral Neolithic, first occupation phase
Pastoral Neolithic, first occupation phase
Pastoral Neolithic, first occupation phase
Pastoral Neolithic, first occupation phase
Pastoral Neolithic, first occupation phase
Pastoral Neolithic, first occupation phase
Pastoral Neolithic, first occupation phase
Pastoral Neolithic, first occupation phase
Pastoral Neolithic, first occupation phase
Pastoral Neolithic, first occupation phase

MSA - Phase III, third occupation phase
MSA - Phase III, third occupation phase
MSA - Phase III, third occupation phase
MSA - Phase III, third occupation phase
MSA - Phase III, third occupation phase
MSA - Phase III, third occupation phase
MSA - Phase III, third occupation phase
MSA - Phase III, third occupation phase
Minimum age
Minimum age
MSA - Phase III, second occupation phase
MSA - Phase III, second occupation phase
MSA - Phase III, second occupation phase
MSA - Phase III, first occupation phase
Minimum age
Minimum age
Minimum age
Minimum age

Reference
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Berger and Libby 1968
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Cohen 1970; Yamasaki et al. 1970
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Krueger and Weeks 1966; Anthony 1967b
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3

Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983
Michels et al. 1983
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983: table 3
Michels et al. 1983
Michels et al. 1983
Michels et al. 1983
Michels et al. 1983

Legend

[1]: unspalled remant hydration rim

[2]: remnant hydration rim below spalled surface

OH: Obsidian hydration

Prospect Farm and the Middle and Later Stone Age occupation of Mt Eburru (Central Rift, Kenya) in an East African conte

by Ann Van Baelen (1,*), Alex Wilshaw (1), Peter Griffith (1), Gunther Noens (1), José Manuel Maillo Fernandez (2), Robert

(1) Leverhulme Centre for Human Evolutionary Studies (LCHES), Department of Archaeology, University of Cambridge, The Henry Wellco

(2) Departamento de Prehistoria y Arqueologia, UNED, c/ Paseo Senda del Rey, 7, 28040 Madrid, Spain

** corresponding author: av431@cam.ac.uk, +44 1223 764719*

OBJECTID	Latitude	Longitude	Elevation (as inferred from SRTM 30 m)	Total	*Chrono-cultural attribution*		
					MSA	LSA	Unidentified
1	-0.604835	36.188668	2195	0	0	0	0
2	-0.604747	36.188859	2199	12	0	1	11
3	-0.604619	36.189014	2200	0	0	0	0
4	-0.604502	36.189214	2200	8	0	2	6
5	-0.604374	36.189350	2198	0	0	0	0
6	-0.604598	36.189608	2205	8	0	0	8
7	-0.604708	36.189379	2208	2	0	0	2
8	-0.604798	36.189194	2205	3	0	0	3
9	-0.604888	36.189055	2205	84	0	2	82
10	-0.604997	36.188732	2196	34	0	5	29
11	-0.605272	36.188970	2201	37	0	2	35
12	-0.605154	36.189125	2207	12	0	0	12
13	-0.605083	36.189311	2212	0	0	0	0
14	-0.604980	36.189525	2212	0	0	0	0
15	-0.604882	36.189707	2210	5	0	0	5
16	-0.604364	36.189499	2198	0	0	0	0
17	-0.604537	36.189285	2200	4	0	0	4
18	-0.604709	36.189106	2205	99	0	12	87
19	-0.604837	36.188905	2199	47	0	17	30
20	-0.605115	36.188797	2200	16	0	4	12
21	-0.597347	36.181815	2132	0	0	0	0
22	-0.597176	36.181685	2135	2	0	0	2
23	-0.597022	36.181540	2135	24	0	0	24
24	-0.596836	36.181401	2135	0	0	0	0
25	-0.596673	36.181272	2135	0	0	0	0
26	-0.596482	36.181131	2138	2	0	0	2
27	-0.596282	36.181003	2137	3	0	0	3
28	-0.596105	36.180868	2137	56	0	1	55
29	-0.595905	36.180753	2133	0	0	0	0
30	-0.595718	36.180626	2132	0	0	0	0
31	-0.595496	36.180514	2130	22	0	0	22
32	-0.595327	36.180400	2133	38	0	0	38
33	-0.595123	36.180289	2131	17	0	1	16
34	-0.594941	36.180163	2129	0	0	0	0
35	-0.594739	36.180047	2131	8	0	0	8
36	-0.594347	36.179864	2126	14	0	0	14
37	-0.594542	36.179938	2128	43	0	3	40
38	-0.594180	36.179766	2123	1	0	0	1
39	-0.594371	36.179394	2122	0	0	0	0
40	-0.594547	36.179521	2122	2	0	0	2
41	-0.594719	36.179635	2128	0	0	0	0
42	-0.594912	36.179744	2128	0	0	0	0
43	-0.595111	36.179837	2129	0	0	0	0
44	-0.595313	36.179945	2132	0	0	0	0

xt, *African Archaeological Review*

A. Foley (1), Marta Mirazón Lahr (1)

ome Building, Fitzwilliam Street, Cambridge CB2 1QH

Artefact size			***Visibility***
< 2 cm	**2-5 cm**	**> 5 cm**	
0	0	0	high
11	1	0	high
0	0	0	low
8	0	0	high
0	0	0	low
7	1	0	high
2	0	0	medium
3	0	0	high
82	2	0	high
28	6	0	high
22	15	0	medium
12	0	0	high
0	0	0	low
0	0	0	low
5	0	0	medium
0	0	0	medium
4	0	0	high
67	28	4	high
39	8	0	high
14	2	0	high
0	0	0	unknown
2	0	0	unknown
23	1	0	unknown
0	0	0	low
0	0	0	low
2	0	0	low
3	0	0	medium
56	0	0	unknown
0	0	0	medium
0	0	0	low
21	1	0	high
36	2	0	high
17	0	0	high
0	0	0	low
8	0	0	high
14	0	0	medium
41	2	0	high
1	0	0	low
0	0	0	low
2	0	0	medium
0	0	0	unknown
0	0	0	medium
0	0	0	unknown
0	0	0	unknown

45	-0.595507	36.180032	2132	0	0	0	0
46	-0.595702	36.180134	2133	11	0	0	11
47	-0.595902	36.180240	2133	3	0	0	3
48	-0.596075	36.180374	2133	30	0	2	28
49	-0.596244	36.180473	2136	67	0	3	64
50	-0.596444	36.180615	2138	38	1	3	34
51	-0.596650	36.180773	2139	0	0	0	0
52	-0.596818	36.180915	2139	22	1	2	19
53	-0.596989	36.181044	2138	12	3	0	9
54	-0.597181	36.181124	2138	112	11	2	99
55	-0.597320	36.181270	2140	75	8	6	61
56	-0.597398	36.181388	2140	16	1	2	13
57	-0.597577	36.181528	2138	18	0	0	18
58	-0.597746	36.181164	2147	1	0	0	1
59	-0.597568	36.181029	2146	0	0	0	0
60	-0.597389	36.180936	2142	38	0	6	32
61	-0.597215	36.180797	2142	125	4	3	118
62	-0.597055	36.180687	2139	33	0	2	31
63	-0.596892	36.180571	2139	0	0	0	0
64	-0.596732	36.180485	2139	6	0	1	5
65	-0.596540	36.180357	2136	44	0	1	43
66	-0.596416	36.180282	2136	27	0	0	27
67	-0.596255	36.180153	2134	13	0	0	13
68	-0.596107	36.180026	2133	4	0	0	4
69	-0.595965	36.179904	2132	0	0	0	0
70	-0.595821	36.179752	2130	0	0	0	0
71	-0.595665	36.179666	2129	4	0	0	4
72	-0.595487	36.179579	2129	41	0	0	41
73	-0.595308	36.179523	2124	5	0	0	5
74	-0.595127	36.179478	2125	7	0	0	7
75	-0.594971	36.179382	2125	0	0	0	0
76	-0.594634	36.179281	2119	5	0	0	5
77	-0.594469	36.179198	2119	27	0	0	27
78	-0.595290	36.179085	2120	0	0	0	0
79	-0.595476	36.179203	2120	1	0	0	1
80	-0.595679	36.179380	2125	14	0	0	14
81	-0.595938	36.179553	2127	8	0	1	7
82	-0.596102	36.179708	2131	45	0	1	44
83	-0.596263	36.179799	2131	0	0	0	0
84	-0.596445	36.179915	2134	28	0	0	28
85	-0.596645	36.179981	2136	0	0	0	0
86	-0.596790	36.180067	2136	216	0	2	214
87	-0.596947	36.180178	2140	3	0	0	3
88	-0.597110	36.180265	2140	1	0	0	1
89	-0.597249	36.180369	2139	95	0	9	86
90	-0.597411	36.180458	2142	177	0	1	176
91	-0.597580	36.180535	2143	45	0	11	34
92	-0.597760	36.180680	2143	1	0	0	1
93	-0.597962	36.180783	2146	0	0	0	0
94	-0.598127	36.180423	2142	1	0	0	1
95	-0.597957	36.180330	2137	14	0	1	13
96	-0.597824	36.180233	2137	127	0	4	123
97	-0.597658	36.180137	2138	21	0	0	21

0	0	0	medium
11	0	0	unknown
3	0	0	high
29	1	0	low
64	1	2	high
35	3	0	high
0	0	0	high
17	3	2	high
6	6	0	high
59	46	7	high
48	23	4	high
11	4	1	high
16	2	0	high
0	1	0	high
0	0	0	low
26	12	0	high
121	3	1	high
28	3	2	high
0	0	0	low
4	2	0	high
44	0	0	high
27	0	0	high
13	0	0	medium
4	0	0	high
0	0	0	medium
0	0	0	low
4	0	0	medium
41	0	0	medium
5	0	0	high
7	0	0	high
0	0	0	unknown
5	0	0	high
27	0	0	high
0	0	0	low
1	0	0	low
14	0	0	high
8	0	0	high
43	2	0	high
0	0	0	medium
26	2	0	high
0	0	0	high
214	2	0	high
3	0	0	high
1	0	0	low
85	10	0	high
176	1	0	high
34	10	1	high
0	1	0	low
0	0	0	medium
1	0	0	high
13	1	0	high
122	5	0	high
21	0	0	high

98	-0.597473	36.179988	2134	134	0	0	134
99	-0.597325	36.179880	2136	164	0	1	163
100	-0.597158	36.179798	2135	9	0	1	8
101	-0.597008	36.179713	2135	0	0	0	0
102	-0.596846	36.179620	2134	5	0	0	5
103	-0.596652	36.179468	2129	0	0	0	0
104	-0.596464	36.179356	2128	0	0	0	0
105	-0.596291	36.179245	2121	1	0	1	0
106	-0.596098	36.179111	2121	0	0	0	0
107	-0.595912	36.179004	2113	1	0	0	1
108	-0.595732	36.178895	2113	0	0	0	0
109	-0.595566	36.178804	2113	0	0	0	0
110	-0.595390	36.178682	2109	0	0	0	0
111	-0.595229	36.178567	2109	0	0	0	0
112	-0.595006	36.178463	2109	0	0	0	0
113	-0.595203	36.178119	2098	4	0	0	4
114	-0.595374	36.178275	2102	31	0	0	31
115	-0.595563	36.178396	2101	12	0	0	12
116	-0.595748	36.178512	2108	21	1	0	20
117	-0.595933	36.178634	2108	1	0	0	1
118	-0.596139	36.178756	2114	1	0	0	1
119	-0.596312	36.178877	2114	7	0	0	7
120	-0.596471	36.179000	2116	29	2	0	27
121	-0.596646	36.179135	2122	64	0	0	64
122	-0.596854	36.179262	2122	169	0	0	169
123	-0.597049	36.179367	2129	132	0	0	132
124	-0.597235	36.179465	2128	25	0	0	25
125	-0.597477	36.179615	2131	0	0	0	0
126	-0.597710	36.179730	2131	0	0	0	0
127	-0.597882	36.179849	2132	3	0	0	3
128	-0.598053	36.179957	2131	2	0	0	2
129	-0.598217	36.180063	2131	0	0	0	0
130	-0.598382	36.180134	2137	1	0	0	1
131	-0.595334	36.180606	2130	27	0	1	26
132	-0.595244	36.180990	2127	38	0	0	38
133	-0.595068	36.180886	2124	3	0	0	3
134	-0.594883	36.180809	2121	1	0	0	1
135	-0.594664	36.180718	2120	32	0	0	32
136	-0.594442	36.180652	2124	0	0	0	0
137	-0.594281	36.180586	2121	158	0	0	158
138	-0.594098	36.180524	2118	78	0	1	77
139	-0.593908	36.180477	2118	34	0	1	33
140	-0.593729	36.180441	2117	67	0	1	66
141	-0.593538	36.180375	2117	78	0	1	77
142	-0.593322	36.180312	2117	39	2	0	37
143	-0.593113	36.180247	2113	72	3	0	69
144	-0.592918	36.180172	2109	9	0	1	8
145	-0.592767	36.180091	2114	1	0	0	1
146	-0.592589	36.180003	2112	0	0	0	0
147	-0.592435	36.179917	2110	0	0	0	0
148	-0.592241	36.179805	2111	9	0	1	8
149	-0.592060	36.179702	2108	0	0	0	0
150	-0.591866	36.179642	2106	0	0	0	0

134	0	0	high
162	2	0	high
8	1	0	medium
0	0	0	medium
5	0	0	high
0	0	0	medium
0	0	0	medium
0	1	0	medium
0	0	0	medium
1	0	0	medium
0	0	0	medium
0	0	0	medium
0	0	0	low
0	0	0	high
0	0	0	medium
4	0	0	medium
31	0	0	high
12	0	0	high
20	1	0	high
1	0	0	low
1	0	0	medium
7	0	0	medium
27	1	1	medium
64	0	0	high
166	3	0	high
132	0	0	high
24	1	0	high
0	0	0	medium
0	0	0	medium
3	0	0	high
2	0	0	high
0	0	0	low
1	0	0	medium
26	1	0	high
38	0	0	high
3	0	0	high
1	0	0	high
32	0	0	high
0	0	0	low
158	0	0	high
76	2	0	high
31	3	0	high
66	1	0	high
75	3	0	high
34	5	0	high
68	4	0	high
6	3	0	high
1	0	0	medium
0	0	0	unknown
0	0	0	low
0	8	1	low
0	0	0	low
0	0	0	medium

151	-0.591668	36.179582	2106	0	0	0	0
152	-0.591475	36.179537	2106	0	0	0	0
153	-0.591283	36.179474	2102	0	0	0	0
154	-0.591049	36.179426	2098	71	2	0	69
155	-0.590866	36.179370	2098	86	6	0	80
156	-0.590692	36.179322	2090	30	2	0	28
157	-0.590636	36.179675	2092	32	2	0	30
158	-0.590826	36.179733	2098	59	1	0	58
159	-0.591017	36.179811	2098	10	2	0	8
160	-0.591203	36.179921	2099	23	2	0	21
161	-0.591380	36.179987	2102	30	2	0	28
162	-0.591582	36.180018	2102	61	3	0	58
163	-0.591755	36.180032	2105	117	6	0	111
164	-0.591939	36.180062	2107	52	9	0	43
165	-0.592107	36.180095	2107	112	16	0	96
166	-0.592267	36.180141	2105	120	5	0	115
167	-0.592427	36.180205	2105	104	4	0	100
168	-0.592560	36.180328	2108	36	9	0	27
169	-0.592705	36.180432	2105	0	0	0	0
170	-0.592895	36.180539	2109	30	0	0	30
171	-0.593078	36.180594	2113	1	0	0	1
172	-0.590761	36.178966	2093	88	0	0	88
173	-0.590951	36.179049	2096	58	1	0	57
174	-0.591097	36.179116	2102	36	2	0	34
175	-0.591290	36.179188	2102	0	0	0	0
176	-0.591492	36.179242	2105	0	0	0	0
177	-0.591671	36.179274	2108	0	0	0	0
178	-0.591852	36.179327	2107	1	0	1	0
179	-0.592048	36.179391	2109	0	0	0	0
180	-0.592256	36.179447	2112	0	0	0	0
181	-0.592446	36.179514	2112	0	0	0	0
182	-0.592624	36.179566	2115	0	0	0	0
183	-0.592827	36.179621	2117	1	0	1	0
184	-0.593009	36.179679	2117	0	0	0	0
185	-0.593205	36.179733	2117	1	0	1	0
186	-0.593424	36.179791	2118	0	0	0	0
187	-0.593610	36.179829	2120	0	0	0	0
188	-0.593803	36.179912	2122	0	0	0	0
189	-0.593988	36.179992	2124	0	0	0	0
190	-0.594162	36.180066	2126	0	0	0	0
191	-0.594337	36.180165	2124	0	0	0	0
192	-0.594534	36.180254	2128	0	0	0	0
193	-0.594721	36.180313	2129	0	0	0	0
194	-0.594924	36.180413	2124	1	0	0	1
195	-0.595109	36.180514	2126	58	0	3	55
196	-0.595442	36.180174	2133	60	0	3	57
197	-0.595232	36.180135	2131	32	0	1	31
198	-0.595029	36.180110	2132	58	0	0	58
199	-0.594844	36.180059	2131	79	0	1	78
200	-0.594665	36.180005	2128	48	0	2	46
201	-0.594491	36.179969	2128	75	0	1	74
202	-0.594321	36.179926	2126	37	0	0	37
203	-0.594122	36.179884	2124	3	0	0	3

0	0	0	high
0	0	0	high
0	0	0	high
68	3	0	high
78	7	1	high
27	3	0	high
30	2	0	high
57	2	0	high
8	0	2	high
21	1	1	high
27	2	1	high
58	2	1	high
108	8	1	high
43	8	1	high
91	13	8	high
114	6	0	high
95	8	1	high
27	5	4	high
0	0	0	high
29	1	0	high
0	1	0	high
88	0	0	high
57	1	0	high
34	0	2	high
0	0	0	low
0	0	0	medium
0	0	0	high
0	1	0	high
0	0	0	high
0	0	0	high
0	0	0	high
0	0	0	high
0	1	0	high
0	0	0	high
0	1	0	high
0	0	0	high
0	0	0	high
0	0	0	medium
0	0	0	low
0	0	0	high
0	0	0	high
0	0	0	high
0	0	0	high
1	0	0	medium
56	2	0	high
54	6	0	high
31	1	0	high
58	0	0	high
77	2	0	high
47	1	0	high
74	1	0	high
37	0	0	high
3	0	0	low

204	-0.593933	36.179834	2122	0	0	0	0
205	-0.593744	36.179783	2120	0	0	0	0
206	-0.593553	36.179731	2118	0	0	0	0
207	-0.593299	36.179663	2117	0	0	0	0
208	-0.593111	36.179605	2117	0	0	0	0
209	-0.592923	36.179552	2118	1	0	0	1
210	-0.592749	36.179513	2118	0	0	0	0
211	-0.592547	36.179450	2115	1	0	1	0
212	-0.592347	36.179379	2112	0	0	0	0
213	-0.592140	36.179319	2109	1	0	0	1
214	-0.591946	36.179224	2111	0	0	0	0
215	-0.591752	36.179167	2108	0	0	0	0
216	-0.591540	36.179101	2105	0	0	0	0
217	-0.591358	36.178998	2106	0	0	0	0
218	-0.591186	36.178896	2103	107	3	0	104
219	-0.591056	36.178789	2099	54	0	0	54
220	-0.590822	36.178617	2100	3	0	0	3
221	-0.590951	36.178213	2100	1	0	0	1
222	-0.591144	36.178284	2102	95	19	0	76
223	-0.591318	36.178337	2102	32	11	0	21
224	-0.591488	36.178406	2104	57	6	0	51
225	-0.591686	36.178510	2108	90	10	0	80
226	-0.591846	36.178558	2108	134	2	1	131
227	-0.592036	36.178590	2110	3	2	0	1
228	-0.592207	36.178684	2112	0	0	0	0
229	-0.592388	36.178752	2114	6	0	0	6
230	-0.592583	36.178812	2115	0	0	0	0
231	-0.592758	36.178881	2116	1	0	1	0
232	-0.592963	36.178931	2116	0	0	0	0
233	-0.593147	36.178993	2115	0	0	0	0
234	-0.593368	36.179070	2116	0	0	0	0
235	-0.593599	36.179113	2117	0	0	0	0
236	-0.593812	36.179196	2117	0	0	0	0
237	-0.594002	36.179257	2118	1	0	0	1
238	-0.594199	36.179300	2122	0	0	0	0
239	-0.594380	36.179317	2122	0	0	0	0
240	-0.594574	36.179339	2122	0	0	0	0
241	-0.594792	36.179367	2124	0	0	0	0
242	-0.594965	36.179416	2124	5	0	0	5
243	-0.595150	36.179461	2125	2	0	0	2
244	-0.595335	36.179511	2124	7	0	0	7
245	-0.595559	36.179572	2129	0	0	0	0
246	-0.594952	36.178964	2115	0	0	0	0
247	-0.594767	36.178867	2115	0	0	0	0
248	-0.594585	36.178795	2114	0	0	0	0
249	-0.594318	36.178683	2109	0	0	0	0
250	-0.594109	36.178632	2109	1	0	0	1
251	-0.593884	36.178567	2109	0	0	0	0
252	-0.593720	36.178506	2109	2	0	0	2
253	-0.593523	36.178433	2105	84	0	0	84
254	-0.593336	36.178385	2105	92	0	1	91
255	-0.593114	36.178343	2107	73	0	2	71
256	-0.595627	36.179148	2119	0	0	0	0

0	0	0	medium
0	0	0	medium
0	0	0	high
0	0	0	high
0	0	0	high
1	0	0	high
0	0	0	high
0	1	0	high
0	0	0	high
0	1	0	high
0	0	0	high
0	0	0	high
0	0	0	high
0	0	0	medium
104	3	0	high
54	0	0	high
3	0	0	high
1	0	0	high
63	32	0	high
16	12	4	high
39	17	1	high
71	17	2	high
131	3	0	high
1	1	1	high
0	0	0	low
6	0	0	high
0	0	0	low
1	0	0	high
0	0	0	high
0	0	0	medium
0	0	0	medium
0	0	0	low
0	0	0	low
1	0	0	high
0	0	0	medium
0	0	0	low
0	0	0	medium
0	0	0	medium
5	0	0	high
2	0	0	high
0	7	0	high
0	0	0	low
0	0	0	high
0	0	0	high
0	0	0	low
0	0	0	low
1	0	0	high
0	0	0	high
2	0	0	high
83	1	0	high
88	3	1	high
64	9	0	high
0	0	0	high

257	-0.595627	36.179148	2119	0	0	0	0
258	-0.592923	36.178296	2108	65	4	0	61
259	-0.592771	36.178278	2108	84	10	0	74
260	-0.592467	36.178239	2108	224	59	0	165
261	-0.592254	36.178183	2107	440	44	0	396
262	-0.592076	36.178117	2103	404	52	0	352
263	-0.591872	36.178084	2104	177	30	0	147
264	-0.591658	36.178026	2104	84	11	0	73
265	-0.591457	36.177964	2103	87	8	0	79
266	-0.591244	36.177870	2102	22	3	0	19
267	-0.591021	36.177808	2100	6	1	0	5
268	-0.576318	36.174355	1977	3	0	1	2
269	-0.575755	36.174754	1976	3	0	2	1
270	-0.575175	36.175167	1970	25	0	5	20
271	-0.576687	36.175097	1982	109	0	6	103
272	-0.577066	36.175849	1974	196	0	2	194
273	-0.577444	36.176532	1976	68	0	5	63
274	-0.577951	36.177418	1975	4	0	1	3
275	-0.578385	36.178180	1976	2	0	1	1
276	-0.578805	36.178784	1973	95	0	0	95
277	-0.579393	36.179620	1973	0	0	0	0
278	-0.579891	36.180292	1979	145	0	3	142
279	-0.580268	36.180984	1982	26	0	1	25
280	-0.580765	36.181663	1979	10	0	2	8
281	-0.581161	36.182311	1980	34	0	0	34
282	-0.582126	36.183590	1982	20	0	3	17
283	-0.581504	36.183834	1978	33	0	0	33
284	-0.581089	36.183172	1979	30	0	0	30
285	-0.580578	36.182360	1974	0	0	0	0
286	-0.580224	36.181743	1974	49	0	0	49
287	-0.579860	36.181182	1978	0	0	0	0
288	-0.579378	36.180324	1975	27	0	1	26
289	-0.578915	36.179690	1973	34	0	0	34
290	-0.578425	36.178868	1970	27	0	1	26
291	-0.577966	36.178127	1972	1	0	1	0
292	-0.577481	36.177402	1974	3	0	1	2
293	-0.577010	36.176695	1972	5	0	0	5
294	-0.576510	36.175947	1971	35	0	1	34
295	-0.576052	36.175333	1973	0	0	0	0
296	-0.576051	36.175332	1973	1	0	0	1
297	-0.575630	36.175854	1967	36	0	3	33
298	-0.576045	36.176540	1965	3	0	1	2
299	-0.576434	36.177310	1968	0	0	0	0
300	-0.576836	36.178122	1966	0	0	0	0
301	-0.577213	36.178859	1963	0	0	0	0
302	-0.577721	36.179649	1965	2	0	0	2
303	-0.578271	36.180504	1964	0	0	0	0
304	-0.578912	36.181176	1972	0	0	0	0
305	-0.579473	36.182171	1973	0	0	0	0
306	-0.579816	36.183036	1971	0	0	0	0
307	-0.580102	36.183762	1971	0	0	0	0
308	-0.580475	36.184366	1972	0	0	0	0
309	-0.584606	36.180443	2020	0	0	0	0

0	0	0	unknown
48	17	0	high
68	16	0	high
114	108	2	high
354	86	0	high
294	110	0	high
121	55	1	high
61	22	1	high
68	19	0	high
17	5	0	high
4	2	0	high
2	1	0	high
0	3	0	high
19	4	2	high
99	10	0	high
194	2	0	high
64	4	0	high
2	2	0	high
1	1	0	high
94	1	0	high
0	0	0	high
141	4	0	high
25	1	0	high
8	2	0	medium
32	2	0	high
17	3	0	high
32	1	0	high
29	1	0	high
0	0	0	medium
48	1	0	high
0	0	0	high
26	1	0	high
34	0	0	high
26	1	0	high
0	1	0	high
2	1	0	high
5	0	0	high
35	0	0	high
0	0	0	unknown
0	1	0	high
33	3	0	high
2	1	0	high
0	0	0	high
0	0	0	high
0	0	0	high
2	0	0	high
0	0	0	high
0	0	0	high
0	0	0	high
0	0	0	low
0	0	0	medium
0	0	0	low
0	0	0	high

310	-0.584858	36.180844	2019	5	0	2	3
311	-0.585201	36.181411	2019	0	0	0	0
312	-0.585563	36.182052	2021	162	0	1	161
313	-0.585729	36.182454	2015	129	0	2	127
314	-0.586409	36.181641	2027	105	0	1	104
315	-0.585980	36.180637	2031	0	0	0	0
316	-0.585508	36.179881	2031	134	2	0	132
317	-0.585147	36.179092	2036	64	0	0	64
318	-0.584219	36.178121	2035	0	0	0	0
319	-0.585056	36.178528	2038	75	3	0	72
320	-0.582441	36.176635	2019	0	0	0	0
321	-0.582243	36.176331	2021	45	0	0	45
322	-0.582236	36.176057	2020	106	0	3	103
323	-0.582043	36.175598	2018	1	0	1	0
324	-0.581511	36.177257	2008	0	0	0	0
325	-0.581373	36.177082	2008	19	0	1	18
326	-0.581291	36.176797	2006	10	0	0	10
327	-0.581092	36.176636	2007	154	0	1	153
328	-0.581005	36.176401	2006	0	0	0	0
329	-0.580353	36.175406	2004	8	0	2	6
330	-0.580290	36.175288	2005	0	0	0	0
331	-0.604206	36.178982	2185	0	0	0	0
332	-0.604174	36.178991	2185	7	0	0	7
333	-0.604103	36.179047	2178	4	0	0	4
334	-0.604057	36.179064	2178	0	0	0	0
335	-0.604044	36.179040	2178	0	0	0	0
336	-0.604111	36.179012	2183	37	0	0	37
337	-0.604165	36.178999	2185	6	0	0	6
338	-0.604183	36.178982	2185	0	0	0	0
339	-0.604199	36.178951	2185	0	0	0	0
340	-0.604170	36.178980	2185	4	0	0	4
341	-0.604110	36.179012	2183	22	0	0	22
342	-0.604030	36.179033	2178	0	0	0	0
343	-0.604119	36.178980	2183	8	0	0	8
344	-0.604171	36.178966	2185	2	0	0	2
345	-0.604119	36.178969	2183	9	0	0	9
346	-0.603935	36.178930	2183	8	0	0	8
347	-0.603876	36.178961	2183	6	0	0	6
348	-0.603799	36.178994	2181	5	0	0	5
349	-0.603792	36.178970	2181	1	0	1	0
350	-0.603858	36.178937	2183	3	0	0	3
351	-0.603904	36.178921	2183	18	0	0	18
352	-0.603896	36.178915	2183	9	0	0	9
353	-0.603830	36.178947	2181	7	0	1	6
354	-0.603764	36.178978	2181	4	0	0	4
355	-0.603740	36.178956	2181	12	0	0	12
356	-0.603820	36.178898	2181	23	0	0	23
357	-0.603749	36.178929	2181	11	0	0	11
358	-0.603701	36.178998	2181	10	0	0	10
359	-0.603661	36.179041	2175	17	0	0	17
360	-0.603609	36.179089	2175	3	0	0	3
361	-0.603578	36.179050	2175	6	0	0	6
362	-0.603633	36.179012	2181	4	0	0	4

1	4	0	high
0	0	0	medium
159	3	0	high
127	2	0	high
104	1	0	high
0	0	0	high
131	2	1	high
62	2	0	high
0	0	0	high
71	4	0	high
0	0	0	high
42	3	0	high
103	3	0	high
0	1	0	high
0	0	0	high
18	1	0	high
8	2	0	high
153	1	0	high
0	0	0	high
6	2	0	high
0	0	0	high
0	0	0	low
6	1	0	high
3	1	0	high
0	0	0	low
0	0	0	low
36	1	0	high
3	3	0	high
0	0	0	low
0	0	0	low
2	2	0	high
22	0	0	medium
0	0	0	low
8	0	0	medium
2	0	0	high
8	1	0	high
8	0	0	high
5	1	0	high
5	0	0	medium
0	1	0	high
3	0	0	high
18	0	0	high
8	1	0	high
6	1	0	high
4	0	0	high
11	1	0	high
23	0	0	high
10	0	1	high
10	0	0	high
17	0	0	high
3	0	0	high
6	0	0	high
4	0	0	high

363	-0.603697	36.178954	2181	12	0	1	11
364	-0.603731	36.178919	2181	10	0	0	10
365	-0.603607	36.179001	2181	20	0	0	20
366	-0.603558	36.179028	2174	11	0	0	11
367	-0.603504	36.179071	2174	9	0	1	8
368	-0.603419	36.179111	2174	5	0	0	5
369	-0.603375	36.179139	2174	6	0	0	6
370	-0.603350	36.179116	2174	8	0	0	8
371	-0.603415	36.179033	2174	5	0	0	5
372	-0.603474	36.178974	2179	5	0	0	5
373	-0.603510	36.178948	2179	7	0	2	5
374	-0.603485	36.178936	2179	4	1	0	3
375	-0.603434	36.178995	2179	21	0	0	21
376	-0.603363	36.179074	2174	22	0	0	22
377	-0.603303	36.179112	2174	48	0	0	48
378	-0.603290	36.179093	2172	1	0	0	1
379	-0.603344	36.179044	2174	1	0	0	1
380	-0.603385	36.178977	2179	47	0	0	47
381	-0.603364	36.178974	2179	8	0	0	8
382	-0.603306	36.179040	2174	8	0	0	8
383	-0.603218	36.179075	2172	7	0	0	7
384	-0.603145	36.179092	2172	11	0	0	11
385	-0.603122	36.179069	2172	16	0	0	16
386	-0.603187	36.179008	2176	10	0	0	10
387	-0.603226	36.178987	2176	8	0	0	8

11	1	0	high
10	0	0	high
20	0	0	high
11	0	0	high
7	2	0	high
5	0	0	high
6	0	0	medium
8	0	0	high
4	1	0	high
5	0	0	high
5	1	1	high
3	0	1	high
21	0	0	high
22	0	0	high
48	0	0	high
1	0	0	high
1	0	0	high
46	1	0	high
8	0	0	high
7	1	0	high
7	0	0	high
11	0	0	high
16	0	0	high
10	0	0	high
8	0	0	high

Prospect Farm and the Middle and Later Stone Age occupation of Mt Eburru (Central Rift, Kenya) in a

by Ann Van Baelen (1,*), Alex Wilshaw (1), Peter Griffith (1), Gunther Noens (1), José Manuel Maillo Fe

(1) Leverhulme Centre for Human Evolutionary Studies (LCHES), Department of Archaeology, University of Cambr
(2) Departamento de Prehistoria y Arqueologia, UNED, c/ Paseo Senda del Rey, 7, 28040 Madrid, Spain
** corresponding author: av431@cam.ac.uk, +44 1223 764719*

Total artefacts (N)	*Squares (N): Visibility*				
	Low	Medium	High	Unknown	Total
0	36	30	48	8	122
1	5	6	20		31
2	1	2	6	1	10
3	1	1	13		15
4		2	8		10
5		2	9		11
6		1	6		7
7		1	6		7
8		1	10		11
9	1	1	4		6
10		1	5		6
11			3	1	4
12			6		6
13		1			1
14		1	2		3
16			3		3
17			2		2
18			2		2
19			1		1
20			2		2
21			3		3
22		1	4		5
23			2		2
24				1	1
25			2		2
26			1		1
27			5		5
28			1		1
29		1			1
30	1		4		5
31			1		1
32			4		4
33			2		2
34			4		4
35			1		1
36			3		3
37		1	2		3
38			4		4
39			1		1
41		1			1
43			1		1

44	1		1
45	3		3
47	2		2
48	2		2
49	1		1
52	1		1
54	1		1
56		1	1
57	1		1
58	3		3
59	1		1
60	1		1
61	1		1
64	2		2
65	1		1
67	2		2
68	1		1
71	1		1
72	1		1
73	1		1
75	3		3
78	2		2
79	1		1
84	4		4
86	1		1
87	1		1
88	1		1
90	1		1
92	1		1
95	3		3
99	1		1
104	1		1
105	1		1
106	1		1
107	1		1
109	1		1
112	2		2
117	1		1
120	1		1
125	1		1
127	1		1
129	1		1
132	1		1
134	3		3
145	1		1
154	1		1
158	1		1
162	1		1
164	1		1
169	1		1

177			2		2
196			1		1
216			1		1
224			1		1
404			1		1
440			1		1
Total	**45**	**54**	**276**	**12**	**387**

ın East African context, *African Archaeological Review*

rnandez (2), Robert A. Foley (1), Marta Mirazón Lahr (1)

ridge, The Henry Wellcome Building, Fitzwilliam Street, Cambridge CB2 1QH

Prospect Farm and the Middle and Later Stone Age occupation of Mt Eburru (Central Rift, Kenya) in an East Afri

by Ann Van Baelen (1,*), Alex Wilshaw (1), Peter Griffith (1), Gunther Noens (1), José Manuel Maillo Fernandez (2)

(1) Leverhulme Centre for Human Evolutionary Studies (LCHES), Department of Archaeology, University of Cambridge, The Hen
(2) Departamento de Prehistoria y Arqueologia, UNED, c/ Paseo Senda del Rey, 7, 28040 Madrid, Spain
** corresponding author: av431@cam.ac.uk, +44 1223 764719*

MSA artefacts (N)	***Squares (N): Visibility***				
	Low	**Medium**	**High**	**Unknown**	**Total**
0	45	53	229	12	339
1			8		8
2		1	11		12
3			6		6
4			3		3
5			1		1
6			3		3
8			2		2
9			2		2
10			2		2
11			3		3
16			1		1
19			1		1
30			1		1
44			1		1
52			1		1
59			1		1
Total	**45**	**54**	**276**	**12**	**387**

can context, *African Archaeological Review*

), Robert A. Foley (1), Marta Mirazón Lahr (1)

ry Wellcome Building, Fitzwilliam Street, Cambridge CB2 1QH

Prospect Farm and the Middle and Later Stone Age occupation of Mt Eburru (Central Rift, Kenya) in ar

by Ann Van Baelen (1,*), Alex Wilshaw (1), Peter Griffith (1), Gunther Noens (1), José Manuel Maillo Fer

(1) Leverhulme Centre for Human Evolutionary Studies (LCHES), Department of Archaeology, University of Cambrid
(2) Departamento de Prehistoria y Arqueologia, UNED, c/ Paseo Senda del Rey, 7, 28040 Madrid, Spain
** corresponding author: av431@cam.ac.uk, +44 1223 764719*

LSA artefacts (N)	***Squares (N): Visibility***				
	Low	**Medium**	**High**	**Unknown**	**Total**
0	43	50	195	11	299
1	1	2	44	1	48
2	1	2	15		18
3			10		10
4			2		2
5			3		3
6			3		3
9			1		1
11			1		1
12			1		1
17			1		1
Total	**45**	**54**	**276**	**12**	**387**

n East African context, *African Archaeological Review*

rnandez (2), Robert A. Foley (1), Marta Mirazón Lahr (1)

ge, The Henry Wellcome Building, Fitzwilliam Street, Cambridge CB2 1QH

Online Resource 4

Click here to access/download;Figure;ESM_4.tif