<u>'Landscape, environment and settlement in Karamoja, Eastern Uganda. c. 2000 BP to present'.</u>

Preliminary report on first season of fieldwork

Dr Matthew Davies British Institute in Eastern Africa, Nairobi

Introduction

Like much of neighboring northern Kenya and southern Sudan, the Neolithic and Iron Age archaeology of northeastern Uganda is poorly understood. However, there are a number of tantalizing hints at the rich potential to be gained from an archaeological study of the region (Lamphear 1976; Knighton; Robbins 1980, 1977; Wilson). Moreover, given the potential pathways through which livestock and cereal crops passed into Eastern Africa (Bower 1991; Gifford-Gonzalez 2000, 1998; Lane 2004; Marshal 2000) and the importance of understanding the ongoing human-environment relations which have shaped the region over the last few thousand years (including the development of specialized pastoralism and reciprocal cultivation [Davies In prep, 2008a; Lamphear 1992]), time seems ripe for a new and more detailed assessment of the later archaeology of northeastern Uganda, which will no doubt contribute much to broader archaeological debates and establish the significance of the region within regional chronological frameworks. The current project aims to achieve these goals by establishing a spatio-cultural and economic patterns and explore the dialectic relationship between humans and their environment.

The first season of research took place in July 2009 and was led by Dr Matthew Davies. He was accompanied by a small team of archaeological assistants from the British Institute in Eastern Africa, as well as Mr Dismus Ongwen from the Uganda Museum and one Ugandan student from Makarere. The team was also joined by Mr John Wilson, currently of Kitale, Kenya, who, as a former long term resident of Karamoja, had agreed to show the team a number of sites he had located over the last 40 years. This first season of field work was highly preliminary in nature and aimed only at locating potential sites for future investigation and developing the necessary contacts and logistical arrangements required for future field seasons.

Methods and Results

The team employed a highly opportunistic survey strategy during this initial foray, relying solely on information/suggestions volunteered by local informants and Mr Wilson. Due the difficult terrain, poor roads and short time available, survey was restricted to the immediate environs of Moroto Town, however a number of promising sites were located while a number of interesting general archaeological and ethnographic observations were made.

On the advice of Mr Wilson, the team conducted opportunistic walkover surveys across small portions of the eastern slopes of Mt Moroto, both north and south of Moroto Town. These quick test surveys were confined to within 100-200m of the main roads running north and south and on stretches approximately 15 km in either direction. They further allowed the team to assess the state of the roads and the access to portions of the region that would be available in the future. Throughout a generalised low density distribution of Late Stone Age lithics (mostly quartz with some chert and obsidian) was noted across the lower eastern slopes of Mt Moroto,

but higher lithic densities and non-lithic artefacts which might more clearly represent substantial sites were few.

Also on the good advice of Mr Wilson the team made to forays into large valleys on Mt Moroto. The valleys are inhabited by the agricultural Tepes people and a number of interesting observations will be outlined below.

All sites were recorded with GPS and given the identifying code 'MOR' to represents Moroto survey sites. Only very small surface collections of a handful of artefacts were collected at each site, purely as a representative sample. All artefacts collected were deposited at the Uganda museum where they will be subjected to further analysis.

Major sites located

MOR01 (Nadunget Airstrip) (long/lat: 34.58893907; 2.51131861): This site was by far the most substantial located. It is situated some 4 km from Moroto Town, adjacent to the main Moroto-Siroti highway, and partially cut by a large gravel pit. The site consists of a large scatter of ceramic sherds, chert, obsidian and quartz LSA lithics and quantities of animal bone, some of which represents domestic small stock. The scatter was approximately 300 x 200 m in dimension with variable artefact densities ranging from over twenty artefacts per meter squared to less than five per meter square. The ceramics located appear to fall into three categories. The first are highly decorated with incised designs, including deep, well executed parallel lines as well as more elaborate geometric incised patterns. The ceramic paste was of a high quality with few inclusions and fired dark grey to black. The body of the pot was thin < 5mm and consequently the sherds are all highly fragmented. The second category consists of sherds of a similar paste but with cord roulette designs. The third consists of a much thicker undecorated ceramic, with a courser paste containing numerous quartz inclusions. This last ware looks more akin to recent Karamojong pottery, while the second type may be related to late Iron Age roulette wares found elsewhere in Uganda and Kenya, and probably dating to sometime in the second millennium AD. The first ware, however, is more unique and appears to share affinities with Turkwel ceramics found in the Western Turkana basin and dated at Lopoy to the mid to late first millennium AD (Robbins 1980). These sherds also bear some affinity, particularly with respect to paste and thickness, to those found at Rangi rockshelter on Mt Kadam (Robbins et al. 1977), and probably also at Morpus Rockshelter in Pokot, Kenya (Davies 2009). Cursory analysis of the lithics found at the site only allow them to be assigned to a general Late Stone Age category for the present time, but further collections and analysis are warranted. Ultimately, this a large and potentially very interesting site, with ceramics related to a number of regional traditions.



Artefact scatter at MOR01 Nadunget Airstrip



Parallel incised ceramics, in situ at MOR01 Nadunget.



Fine decorated sherd MOR01, Nadunget airstrip.



Typical parallel incised sherd, MOR01, Nadunget airstrip.



LSA chert and quartz lithics, MOR01.



Obsidian lithics, MOR01.



Ground stone ring, MOR01.

MOR02 (lat/long: 34.67481762; 2.52497591): Situated round one kilometer into the valley behind Moroto town and cut by the track running up to the new Moroto Museum, this site is small scatter of ceramics and Chert LSA lithics. The scatter is small, some 50m by 40m, and extending either side of the track. Artefact densities are around 5-10 per meter square. Most of the artefacts are visible in the surface of the road itself and in the small sections and spoil heaps to either side. The land surrounding the track has been subjected to recent cultivation, thereby disturbing the most recent archaeological deposits but artefacts remain visible if obstructed by long grass. The lithics found are similar to those located at MOR01 although they are less abundant and perhaps with a lower percentage of quartz. The ceramics are also similar to the first type located at MOR01, however they are a little thicker and with a much cruder paste and consist entirely of incised groves – mainly arranged in a straight parallel situation, but occasionally curving in an arc.



Scatter in the road at MOR02.



Cruder incised sherd, MOR02.

MOR03 (lat/long: 34.65924094; 2.49834702): This location close to the road 2 km south of Moroto town was characterised by a few chert lithics and a larger percentage of potentially flaked quartz. In general, the region represents part of what appears to be a general low density scatter of LSA lithics across the eastern side of Mt Moroto.



Eroded slopes with low density LSA lithic scatters at MOR03 on the east side of Mt Moroto, some 2 km south of Moroto town.

MOR04 (lat/long: 34.65796622; 2.50477058): This location also close to the road a little under 2 km south of Moroto town was characterised by a few chert lithics and a larger percentage of potentially flaked quartz. In general, the region represents part of what appears to be a general low density scatter of LSA lithics across the eastern side of Mt Moroto.

MOR05 (lat/long: 34.66199859; 2.49632103): This location close to the road just over 2 km south of Moroto town was characterised by a few chert lithics and a larger percentage of potentially flaked quartz. In general, the region represents part of what appears to be a general low density scatter of LSA lithics across the eastern side of Mt Moroto. MOR03-MOR05 essentially represents this general scatter, but no major sites were located.

MOR11 and MOR12 (long/lat: 34.67452602; 2.58184017): Situated close to the road some 5 km north of Moroto town, these two closely spaced locations both produced a few sherds of the incised parallel line type. The general area also included low densities of LSA lithics, as well as large amounts of modern military debris resulting from armed encounters with the Karamojong.

Rockshelters and Rock art

Two major expeditions were mounted up into valleys on the eastern side of Mt Moroto in search of rockshelters with archaeological deposits and rumors of rock art. Unfortunately the rumors proved unsubstantiated in this case. In a valley south of Moroto town, two shelters, with supposed 'rock art' actually turned out to be natural water staining and, while a number of shelters were encountered with evidence of modern use (one shelters was occupied with giant storage baskets), no shelters with good archaeological deposits were encountered. In the

second expedition into the valley behind and just to the north of Moroto town, no art was located but two shelters with intact shallow deposits were identified. However, there was no evidence for either of these sites having deep archaeological deposits, and, given their relative inaccessibility, it seems unlikely that the team will revisit these sites. It was further observed that on the eastern side of Mt Moroto, protruding rock surfaces do not appear to have appropriate qualities of smoothness and hard weathering required for either rock painting or rock engraving.

Agricultural features and the living heritage of the Tepes

The expeditions on to Mt Moroto did however, allow for a number of observations of the Tepes people and their farming which are highly interesting. In particular, it was clear that the Tepes create small stone agricultural terraces and that these litter slopes across much of the Mountain. It was also noted that they occasionally create small drainage/irrigation channels to ensure that water is evenly dispersed across their fields and that they add organic fertilizers in the form of dung and mulch to their fields. Finally it was also noted that they create larger terrace structures in many of their villages, so as to support flat house platforms. There is some evidence therefore that the Tepes are involved in a number of 'semi-intensive' agricultural practices, that are as yet poorly documented, but which may also number them among some of eastern Africa's more innovative farmers. Indeed, there is a growing body of work concerning 'Islands of Intensive Agriculture' in eastern Africa and particularly the relationship between specialized farmers and herders (Davies 2009; Widgren and Sutton 2004) it seems that the Moroto region and the Tepes-Karamajong relationship might also be usefully drawn into this discussion.





Small field terraces, Mt Moroto.



Terraced village compounds, Mt Moroto



Large storage baskets, Mt Moroto.

Conclusions and Future Research

The first season of field work around Moroto has produced mixed results. Only a handful of sites were located and no promising rock shelters or rock art was found. However, two sites, MOR01 and MOR02 produced very interesting ceramics finds and MOR01 in particular is a large site with high artefact densities, clearly worthy of future investigation. It seems likely that the next phase of research in 2010 will focus on this site as a focal point for learning a great deal more about the past economy and culture of the region.

Select bibliography

Bower, J. 1991. The Pastoral Neolithic of East Africa. Journal of World Prehistory 5:49-82.

Davies, M.I.J. 2009. An applied archaeological and anthropological study of intensive agriculture in the northern Cherangani Hills, Kenya (Unpublished DPhil Thesis, University of Oxford).

Davies, M.I.J. 2008b. The irrigation system of the Pokot, northwest Kenya. Azania 43:50-76.

Davies, M.I.J. 2006a. The archaeology of the Cherangani Hills, Northwest Kenya. *Nyame Akuma* 66:16-24.

Gifford-Gonzalez, D. 2000. Animal disease challenges to the emergence of pastoralism in sub-Saharan Africa. *African Archaeological Review* 17:95-139.

Gifford-Gonzalez, D. 1998. Early pastoralists in East Africa: ecological and social dimensions. *Journal of Anthropological Archaeology* 17:166-200.

Lane, P. 2004. The 'moving frontier' and the transition to food production in Kenya. *Azania* 34:243-264.

Marshall, F. 2000. The origins and spread of domestic animals in East Africa. In Blench, R.M. and MacDonald, K.C. (eds): *The Origins and Development of African Livestock: archaeology, genetics, linguistics and ethnography* (London, UCL Press).

Robbins, L.H. 1980. Lopoy and Lothagam (Michigan, Michigan State University Museum).

Robbins, L.H., McFarlin, S.A., Brower, J.L. and Hoffman, A.E. 1977. Rangi: a Late Stone Age site in Karamoja District Uganda. *Azania* 12:209-233.

<u>'Landscape, environment and settlement in Karamoja, Eastern Uganda. c. 2000 BP to present'.</u>

Report on the second season of fieldwork (2010): The Nadunget site.

Dr Matthew Davies British Institute in Eastern Africa, Nairobi University of Cambridge, UK.

Introduction

As outlined in my preliminary report on the first season of fieldwork, the Karamoja region of Eastern Uganda is poorly understood archaeologically, but offers significant potential (Davies 2009). The second season of fieldwork took place over two weeks in June 2009 and was again conducted by a small team from the British Institute in Eastern Africa (BIEA) accompanied by Mr Dismus Ongwen from the Uganda Museum and Sarah Pillard a PhD student from the University of Stoneybrook (USA). Again the fieldwork was led by Dr Matthew Davies (BIEA).



The second season of fieldwork aimed to build on the survey results of the first season (Davies 2009, unpublished report submitted to Uganda Museum) by documenting one site in detail so as to provide a comparative benchmark and typological collections for future research in the region. The site selected for detailed survey and excavation had been located during the 2009 survey and recorded as **MOR01** (close to Nadunget Airstrip; long/lat:

34.58893907; 2.51131861). The site is hereafter referred to as **'Nadunget'**¹. All research in 2010 focused on this site and this report outlines the research methods used to investigate the site and the preliminary results of the analysis. Laboratory analysis of artefacts and samples for dating are still ongoing.

Introduction to the site

The Nadunget site (**long/lat: 34.58893907; 2.51131861**) is situated some 7km west of Moroto town near the small settlement and airstrip of the same name. The site lies immediately adjacent to the main Moroto-Soroti highway and is flanked to the east by a large gravel extraction pit. The site was first visited in 2009 and high quantities of ceramics, lithics and bone were noted scattered across a large area, a small sample of which was collected. It was also noted that the gravel pit appeared to be encroaching upon the site thus making the site's documentation a priority.





¹ This site was first kindly shown to us by Mr John Wilson of Kitale Kenya and former long-term resident of Moroto. Mr Wilson had previously noted the unique ceramics and lithics located at the site and his great foresight and good willingness to assist this project has been very greatly appreciated.

By 2010 the gravel pit had cut some distance into the site destroying much of what had been observed in 2009. However, on detailed inspection it became clear that the rapid 2009 assessment had vastly understated the expanse of the site, such that large surface deposits clearly remained in situ at the western edge of the site and were worthy further examination.

A more detailed walkover of the site suggested that a large area of some 2ha remained undisturbed. Observation of sections within the gravel pit suggested a shallow archaeological horizon concentrated at the present ground surface and no deeper than 40-50cm situated above the natural (sterile) gravel. Artefacts were clearly eroding out of the current ground surface in places and the site was likely subject to a degree of wind (and perhaps water) deflation combined with low burial rates meaning that the surface scatter was a mixed assemblage of artefacts including, in places modern metals, bone, glass, porcelain, rubber/plastics and tiles. However, there were also clearly high densities of older materials including a variety of ceramics, lithics, bone, Ostrich eggshell (OES) beads and possibly metals. Of particular note were very large assemblages of a unique 'parallel incised' ceramic, perhaps related to Turkwell and other assemblages known from Western Kenya and large amounts of worked chert as well as occasional flakes of obsidian.



Site map.



The site

The vast quantities of material at the site and its extensive spatial area suggested that this was an important site with regards to the establishment of typological collections of ceramics and lithics. However, the lack of stratigraphy and temporally mixed nature of the surface collection present major methodological and interpretive problems. As a result we attempted to employ an investigative strategy that would obtain detailed information from the site, while making allowance for these difficulties.

Surface concentrations of archaeological material



Methods and initial results: Surface survey

As the site is horizontally (as opposed to vertically) extensive we employed a large-scale surface survey strategy aimed at recording and selectively collecting the vast bulk of surface artifacts across the entire site and identifying spatial patterning in artifact distribution. We divided the entire site into 469 contiguous 5x5m grid squares within which we categorized and counted every surface artefact. The site was gridded using a Lecia Total station providing c. 2-3cm accuracy and the grid points (combined with numerous intermediate points) were also incorporated in a topographic survey of the site.

The surface artefacts were divided into ten categories with the following distribution by material:

Material	Quantity
chert	361
obsidian	27
incised ceramics	1277
plain ceramics	2340
other local ceramics	50
modern tile	57
porcelain/china	34
bone	790
metal	246
glass	432
other (beads etc).	35
Total	5649

(Total artefacts recorded during surface survey, excluding grid square G34, see below)

Extensive notes were also made of any other interesting characteristics and the general state of the artefacts (i.e. if metal objects were clearly recent, if there were concentrations of fragmented/trampled bone etc). Clearly this was a multi-period surface collection with many modern pieces including glass, plastics and metals. However, the ceramics and lithics suggest material of much greater antiquity as do some of the metal artefacts and thirteen OES beads. The incised ceramics are particularly diagnostic and may be related to broader regional traditions. Detailed analysis of the ceramics is ongoing but a brief overview is offered below.

Following our initial artefact counts we selected 15% (n=72) of the grid squares with the highest concentrations of diagnostic ceramics for total collection. This collection has produced a surface assemblage for further analysis comprising of:

Material	Quantity
chert	177
obsidian	17
diagnostic ceramics	1026
plain ceramics	1002
bone	329
OES	13
metal	2
Totals	2566

(Total artefacts collected from surface survey, excluding grid square G34, see below) (N.B. Quartz lithics were too numerous to be counted and were excluded from the survey)

This analysis also allows us to plot the density of artefact types across the study region (see below). Although interpreting these patterns is difficult, especially due to the fact that the bulk of the site has been damaged by gravel extraction, we can identify distinct boundaries to

the site based on artefact densities and we can conclude that there were specific areas of activity or artefact deposition. Most notable in this regard is the area covering and around grid square G34. Extremely high artefact densities were recorded in this area and as such grid square G34 was subjected to further detailed analysis.





Grid square G34 and test excavations

The surface survey identified grid square G34 as having an extremely high density of artefacts. This area appeared to be some kind of shallow midden of mixed ceramics, lithics and cattle teeth (little other bone was identified). As such this 5x5m grid square was subjected to extensive additional treatment. The square was subdivided into 25 1x1m squares and all artefacts visible on the surface were plotted using the Total station.





Within G34, two 1x1m squares (GB1 and GC1) were selected for test excavation. These excavations uncovered relatively dense artifact concentrations to a depth of around 15 cm below the present ground surface. However, bad weather and a shortage of time forced us to abandon these excavations at a depth of just 25cm. It is assumed that little in the way of other deposits will be encountered below this depth, but this is yet to be proven. The excavation at GB1 and GC1 showed there to be a single surface artifact bearing context extending to around 20cm in depth.

Samples for dating (both charcoal and bone) were taken from GC1 and it is hoped that the results of these will be forthcoming in the near future.

In total the surface and excavated contexts of square G34 produced an additional artefact collection, comprising of:

Material	quantity
chert	483
quartz	354
polished stone	1
diagnostic ceramics	412
undiagnostic ceramics	20
metal	1
bone/tooth	2139+
Total	3410

Highly notable within G34 is the complete absence of more recent materials such as modern tile, china and plastic. Almost all ceramic sherds are also highly decorated with a parallel incised pattern. Very few sherds are undiagnostic and cursory examination of these confirms them to be of the same type as the incised sherds and not of more recent 'Karamojong' types. The lithics are yet to be analysed but generally appear to be a homogenous LSA microlithic industry. The high quantity of chert as opposed to quartz is interesting and certainly does not seem representative of the rest of the site, where quartz was so abundant it could not be counted. The single polished stone may also be representative of similar finds from sites such as Morpus in Western Kenya (see Davies 2009, unpublished doctoral thesis, University of Oxford).

In terms of the fauna, while complete analysis is ongoing, all of the bone fragments actually appear to be cattle or other large bovid teeth. The total absence of other faunal material is highly interesting and suggests that this is some kind of 'special' deposit. Together these materials do seem to confirm that this is an intact and homogenous deposit with a single ceramic and highly unique faunal signature.



Excavation at G34



Other test excavations

Two 1x1m units were located so as to test the distributions of artefacts across the site, in particular to assess whether surface distributions were relative to patterns of erosion or more truly representative of the actual distribution of artefacts. The units were also placed to test the hypothetical boundaries of the site relative to surface finds. Unit 2 was situated well within the area of higher density surface finds while Unit 1 was situated in an area with relatively few surface finds. The subsurface results confirmed the surface patterns. Unit 1 produced only 1 ceramic sherd at a depth of 10-20 cm below the surface. At 60 cm below the ground surface the unit came to a sterile gravel which, based on observation of the adjacent gravel pit, extended to a further depth of at least over 1 m and is quite clearly natural. Unit 2 produced an almost similar stratigraphy, some 50 cm of undifferentiated deposit overlying the sterile gravel. However, the distribution of artefacts was quite different with a small quantity of ceramics (n=50) and lithics (mostly quartz, n=83) were concentrated between 10-40cm. These finds seem to suggest that Unit 2 was located much more clearly within the 'site' and with a shallow spread of habitation material extending across the bulk of the area represented by high density surface finds.

Although cursory, these two units seem to confirm that the surface distributions reflect subsurface distributions fairly well, with artifact bearing deposits across the site not likely to extend much beyond a depth of 40 cm. They also allow us to approximately define the boundaries of the site based on surface distributions.



Unit 2 at the end of excavation



Topographic map of the site showing units 1-2, and GB1-GC1 (within G34).

Nadunget Akiriket site

A very interesting feature of the Nadunget site is the fact that it is partially overlain by a modern Karamojong '*Akiriket*', this being a ceremonial and ritual site where a range of meetings take place. We were fortunate enough while working at the site to be party to a major gathering of Karamojong elders and to watch, map and photograph them undertaking the ritual slaughter and consumption of an ox at the site.





Map of the Akiriket site

Interpretation and ongoing analysis

We cannot yet interpret the significance of the overlap between what is a particularly large archaeological site and a modern Akiriket of significant ceremonial importance. However, we can draw some basic interim conclusions about the archaeological component of the site.

At two hectares Nadunget is one of the largest open air Pastoral Iron Age (PIA) sites c. 2000 BP to AD 1800 known in eastern Africa with one of the most extensive and well recorded material artefact records. It seems very likely that the site was formerly much larger than two hectares but has been significantly damaged by gravel extraction.

The site is particularly notable for extensive quantities of incised (horizontally banded ceramics; see below) which may related to broader regional traditions, notably the poorly defined Turkwell tradition and finds from sites such as Rangi in Karamoja (Robbins) and Morpus in West Pokot (Davies 2009, doctoral thesis). Detailed ceramic analysis is ongoing and it seems likely that the Nadunget collection could form the basis of a new typological scheme.

Lithics from the site are yet to be properly analyzed but also seemingly follow the broad pattern of rough quartz, chert and occasional obsisdian micro-liths recorded at Rangi, Morpus and some other Turkwel sites including Lopoi.

The attached ceramic reports provide preliminary analysis of the unique ceramic collection as well as information on the recording procedures and typology under development.

The attached faunal report provides basic analysis of the unique cattle teeth recovered from grid G34.

A sample of a cattle tooth from G34 will be submitted for radiocarbon dating.

Nadunget Ceramic Analysis: Notes on the database, analysis and procedure

Collection of surface artefacts

Artefacts from the Nadunget site have been collected from both excavated and surface contexts. The largest collection comes from a full surface artefact survey whereby the site was gridded into 5x5m grid squared labelled A1, A2,...An; B1, B2,...Bn...etc. All artefacts in each square where then recorded and a sample of grid squares were collected for further analysis.

In addition to this surface survey collection. One grid square which held very high concentrations of surface artefacts, G34, was subdivided into 1x1m squares and all surface artefacts plotted using a total station. The surface artefacts were then collected on the basis of these 1x1m squares labeled G34/A1, G34/B3 etc.

Excavated artefacts

Four 1x1m units were test excavated and the artefacts collected. Units 1 and 2 were situated in the southeast of the site and were conducted to assess the subsurface deposits/stratigraphy in relation to densities of surface artefacts - they both produced only low quantities of artefactual material.

Within the high density survey grid square G34 two of the 1x1m subdivisions GB1 and GC1 were test excavated and produced much higher quantities of material. In addition adjacent squares GB2 and GC2 were cleaned of the first few CM of surface material which was also collected.

Special and opportunistic finds

In addition to the systematic survey collections a number of finds were recorded as 'special finds' - as unique or particularly representative artefacts. Some of these finds were collected from within the surface survey area and others from chance observations beyond the bounds of the main survey region (the location of these was recorded with GPS). Only a small number of these special finds are ceramic.

In 2009 a small number of other sites were located around Moroto town and small surface collections made. They also include a number of diagnostic ceramic sherds, some representative of the Nadunget site and others more diverse.

Artefact catalogues and recording

An initial catalogue was made of all artefacts and the diagnostic ceramics separated out. Photographs were taken firstly of the whole contents of each grid square/context/bag and then more detailed photographs were taken of diagnostic artefacts. Records were made of the number of artefacts of each type I.e. Ceramic, lithics, bone, metal etc

Following this, detailed ceramic analysis were conducted on the surface and excavated ceramics from grid square G34, on the excavated ceramics from units 1 and 2 and the opportunistic surface collection from 2009 opp. survey site 'Lia Valley'. Sherds. It is envisaged that the ceramic analysis will be expanded to include all collected diagnostic sherds in the near future.

In general the vast majority of Nadunget sherds fall into a single type with very homogenous fragmentation, thickness, paste, inclusions, color and horizontal banding decoration. The sherds are generally very well made, thin, highly decorated and stylized, probably comprising small open mouthed bowls or shallow bowls. These characteristics seem similar to the Turkwel assemblage from Lopoy west Turkana although more detailed comparison in needed. A second type of ceramic is even more finely made, even thinner with finer paste and even more elaborate decoration. These sherds seem more characteristic of the Rangi assemblage from Mt Kadam, Karamoja and Morpus, Pokot, Kenya.

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Ceramic analysis database: procedures and abbreviations

Sherd identification: Each sherd was analyzed individually and attached to the site name and given a unique code based on context and sherd number within context I.e. G34/GB1/C2/2 = Nadunget grid square G34, grid square GB1, context 2, sherd no. 2. Each sherd was also obliquely photographed and rim sherds were additionally photographed in profile.

Dimensions: each sherd was measured with a length (the longest axis), width (shorter axis perpendicular to length) and thickness (measured at thickest part). All dimensions were taken with, where obvious, decoration running horizontal or vertical such that lengths/widths were not taken diagonally but rather represent the maximum length or width of the sherd as it would have sat in the complete pot.

Rims: Rim sherds were unfortunately highly fragmentary however an attempt was made to compare them to the rim profiles from Lopoy, Kenya. Most rim sherds suggest very fine open mouthed bowls (OMB) or perhaps small jars or on occasion shallow bowls (SB), however this is very subjective given the small size of sherds. It is important to note that many rim sherds had broken from the body of the pot at the first line of Horizontal banding (HB). As such we can see that decoration began in most instances between 5mm and 10mm below the rim - however this means that the rims themselves cannot be confidently linked to the body and thus form of the vessel. Refitting may assist with improving this situation. Where a slight shoulder is indicated on the rim then it now appears this 'shoulder' is actually created by the first line of horizontal banding -the rim-to-body profile is actually straight without any 'shoulder'.

Given the small size of rims it was also difficult to give diameters. Rarely was more that 2percent of the rim present and commonly sherds were less than 1 percent. Where 'U' is indicated then the diameter, profile and vessel form is unclassified although we may have indicated some idea/guesses.

Rim profiles were mostly rounded at the rim with only a few squared off. Very few rim sherds were decorated along the rim itself. When this did occur (one sherd) the decoration was simple hatching or finger nail impression.

A small selection of rim profiles were sketched and all rims were photographed in profile.

Decoration:

Horizontal banding seemingly typical of the Turkwel tradition was most ubiquitous and hence the terminology/criteria applied at Lopoy was also used here. However a number of sherds displayed characteristics potentially not represented at Lopoy and so a number of other terms were invented (see below). In addition, a number of sherds may be more representative of the poorly known Rangi tradition and so the basic Rangi decorative motifs were also used to classify sherds. Each sherd was therefore given a twofold decorative classification 'Lopoy' and 'Rangi' where one or other classification was clearly not applicable the sherd was recorded as NA for that type.

Decoration was primarily comprised of narrow horizontal banding in the Lopoy classification referred to as **HB** and in the Rangi terminology as a variant of '**U shaped incised parallel lines**' (**Rangi 7a**). This being incised parallel lines drawn across the body of the pot either across the entire surface or in fairly substantial bands. Where this decoration was observed it covered the entire outer surface of the sherd and no sherds were observed with only partial horizontal banding. The exception to this rule were rim sherd where the rim itself was given only a smoothed surface finish with the banding beginning just below the rim.

Narrow horizontal banding **HB(N)** was defined as having less than 5mm gap between the peaks of successive bands (i.e. The band 'troughs' had a maximum width of less than 5mm). Where the bands were 5mm or more in width the banding was recorded as wide **HB(W)**. Very few sherds had wide banding and where they did the bands tended to be only 5-6mm wide.



Examples of HB

A common variation on **HB(N)** involved the addition of vertical hatching within the bands, created by some thin blunt stylus. This produces the overall initial impression of cross-hatching or even rouletting, but the primary decorative technique is actually HB(N) of the common type followed by hatching. This type was referred to as **HB(N)H** in Lopoy classification and **7B** in the Rangi.

The vast majority of HB sherds had bands with a 'U' or 'V' shaped profile. A few sherds displayed a particularly narrow form of banding which might be better termed 'incised lines'. These lines were more widely spaced and referred to as Horizontal banding very narrow **HB(VN)** and Rangi **9** incised lines. These few HB(VN) sherds were invariably on a much finer fabric more diagnostic of Rangi sherds.

Another variation on HB(N) was for the parallel lines to actually run in an arc of various degrees. It seems likely that this arcing represents areas where the banding was running towards the bottom of the pot, thus forming concentric circles rather than bands. On a few sherds the arched banding was observed to sit tightly around a single small incised circle, likely representing the bas of the pot. Arcing was recorded as **HB(N)A** and **7C**. Where concentric circles were present they were noted in the notes section and the Rangi classification for circles was noted.

A few sherds had puncture holes purposefully (drilled?) through them which were noted (Rangi 14). While one sherd on the same material as the predominant 'Turkwel' HB(N) type, had a form reminiscent of Rangi 'hollow bases'. Only a few 'Rangi' sherds were recorded in this sample and their decorative motifs recorded on the Rangi criteria (see additional sheet). They showed various banding, incised lines and cross hatching.



Examples of HB

Finish:

Most sherds of the Turkwel HB type had a smoothed interior finish and banding on the exterior. Rims were smoothed all over. Coarseness varied very slightly with paste and degree/size of quartz inclusions but variation was very minimal. The potters had invariably taken care to leave a smooth unblemished surface. On only one sherd were careless draw marks visible below a rim.

Rangi sherds used on a much finer paste with an extremely fine smooth finish and no coarseness or graininess of quartz inclusions.

Colour:

The majority of Turkwel type HB sherds were Orangey brown **OB** in colour. A small number had a lighter grey brown **GB** or grey black **GBL** shade, but overall color was v. Consistent. Rangi sherds were much darker being **GBL** to black **BL**.

Inclusions:

The majority of sherds had small (less than 0.5mm) quartz inclusions and a few 0.5-1mm quartz inclusions. Occasionally a larger 1-2mm quartz inclusion was noted but these were rare.

Rangi sherds had many fewer inclusions. Strangely the occasional large 1-2mm quartz grain was noted but an abundance of smaller grains was not apparent. This seems to contribute to the overall smoother feel to the touch - it results in a finer less 'sandy' surface.

Notes on other Moroto sites

Lia Valley (see 2009 season report) had a mixed assemblage including HB wares as at Nadunget but also much thicker rim sherds with bands of cross hatching - perhaps Urewe or variant. There were also a number of various 'rocker' stamped sherds of currently unknown type.

Another survey site OMOR 11/12 produced a small number of sherds of HB as at Nadunget.

Discussion: Turkwell, Rangi and Morpus

Although the 'Turkwell' HB sherds seem remarkably homogenous serious comparison with Lopoy is needed. Are the Nadunget sherds thinner and more fragmented? If the assemblages from Nadunget and Lopoy are comparable what does this mean in terms of comparative economy and identity etc. If not then is one a variant of the other and what is the temporal connection?

There are a number of characteristics which suggest to me some correlation between the HB Turkwel and the Rangi styles. Horizontally banded incisions, fine thin construction, smooth surfaces, thin rounded rims, circular motifs, the hollow base(?), all suggest some common design motifs but perhaps pots used in very different ways with different meanings, importance and circulation?

Certainly there are some more 'Turkwell' like HB sherds at Morpus, are there also at Rangi? Why are the proportions reversed I.e. at Nadunget there are mostly Turkwell HB and few Rangi, at the other sites the opposite. Perhaps then these ceramic traditions represent two different but interacting communities or two facies of the same community.