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Front cover: Examining the pharaonic inscriptions at Khashm el-Bab on the Korosko Road, November 2013

(photo: D. A. Welsby).

Sudan & Nubia is a peer-reviewed journal
Archaeology in South Sudan past and present: Gordon’s fort at Laboré and other sites of interest

Matthew Davies

Prelude

Early 1887 saw the start of one of the stranger expeditions in the history of European exploration in Africa. The man in question was that great self-publicist and not altogether nice chap, Henry Morton Stanley. His mission was this: in 1881 the Mahdist uprising had cut off the Turco-Egyptian province of Equatoria from its supply and communication lines north to Khartoum. The governor of Equatoria, Dr Eduard Schnitzer (popularly known as Emin Pasha), and his garrison were, therefore, isolated and under supplied with no means of retreat north and blocked to the south by the relatively hostile kingdoms of Karagwe, Bunyoro and Buganda. Emin appealed to both the Egyptian and various European governments for assistance to no avail, but as a well-known naturalist his pleas raised considerable sympathies amongst European intellectuals and philanthropists and by 1886 a private fund had been established to mount a relief mission. The mission could have taken various routes, the most direct was to cross Maasai land and then tack northwards – the route was deemed dangerous since the Maasai were known to be hostile, but the Scottish explorer Joseph Thompson (1885) had recently made the journey thus demonstrating its viability. The second option was to take the better established Swahili caravan route eastward from Zanzibar to Tabora, then to Lake Tanganyika and from there northwards into the Ugandan kingdoms, but recent hostilities there had made the region more problematic for Europeans. The solution proposed by Stanley and eventually accepted was altogether less expected. In early 1887 Stanley sailed from Europe to Zanzibar, collected more than 600 Zanzibari porters and then shipped them via the Cape to the mouth of the Congo. Using river steamers and barges they then proceeded up the Congo and on by foot through the forests and into the grasslands of Equatoria. By the time they reached Equatoria their party was decimated. Only two of the original 11 Europeans remained, Stanley and a younger officer called Mounteney-Jephson. Most of the porters had fled or died and Stanley’s precious cargo of ammunition destined to resupply Emin was all but lost. Despite what might have easily become an abject failure Stanley snatched victory from the jaws of defeat - aided and resupplied by Emin in a reverse of the mission’s intentions - Stanley nevertheless persuaded Emin to return with him to Zanzibar in 1889, this time via the direct and much more sensible route, and thus was completed the rescue of Emin Pasha. Stanley immortalized the mission in his masterpiece of self-aggrandisement In Darkest Africa (1890; see also Mounteney-Jephson 1890).

Introduction

Despite its immense size and location astride the Nile, very little archaeological research has ever been conducted in South Sudan. However, there are many reasons to consider South Sudan’s history as intricately bound up in global history and thus for promoting and developing archaeological and cognate research within the country. At the same time South Sudan is in the process of re-forming a national identity, exploring its shared national history and developing intellectual and academic capacity. Archaeology can and should contribute to this process. In the second half of this paper I will re-visit previous archaeological research conducted in South Sudan and highlight some of the more significant debates to which research in South Sudan might contribute. These include stories of the emergence and spread of modern humans within and across Africa, as well as the emergence of African systems of food production and the development and spread of African metal-working technologies.

As the story briefly presented in the prelude attests South Sudan also has much to say about the nature and shape of 19th century imperialism in Africa. The region is tied to some of the most enigmatic figures of European colonial legend (and indeed infamy) and I wish to begin here because recent research in South Sudan and northern Uganda has identified and begun investigations of garrison forts governed by Emin and established by his predecessor General (then Colonel) Charles Gordon. For example, in 2006-2007 a team led by Merrick Posnansky made a preliminary assessment of Emin’s fort at Duffile near Nimule but on the Ugandan side of the border, and other studies have assessed additional early imperial forts including those at Wadelai and Patiko also in northern Uganda (Thomas 1963; Posnansky and Decorse 1986; Kinyera 2011). In 2009 surveys led by myself along the Juba to Nimule stretch of the Nile in South Sudan located a range of sites and structures including one of Emin/Gordon’s forts at a place called Laboré (Davies and Leonardi 2011). Despite its immense size and location astride the Nile, very little archaeological research has ever been conducted in South Sudan. However, there are many reasons to consider South Sudan’s history as intricately bound up in global history and thus for promoting and developing archaeological and cognate research within the country. At the same time South Sudan is in the process of re-forming a national identity, exploring its shared national history and developing intellectual and academic capacity. Archaeology can and should contribute to this process. In the second half of this paper I will re-visit previous archaeological research conducted in South Sudan and highlight some of the more significant debates to which research in South Sudan might contribute. These include stories of the emergence and spread of modern humans within and across Africa, as well as the emergence of African systems of food production and the development and spread of African metal-working technologies.

As demonstrated below however, the most exciting potential lies in the opportunity to write revisionist histories which challenge dominant paradigms of colonizer and colonized and instead explore the recursivity of relations between different peoples in the wake of disruptions caused by colonial expansion and slave/ivory trading, and the resulting hybrid communities that formed in South Sudan during this period.

The Laboré garrison fort

Laboré was visited and described by Stanley’s companion Mounteney-Jephson in 1888 (1890), but would have been constructed by Emin’s predecessor General (then Colonel) Charles Gordon between 1874 and 1878 (see also Davies...
and Leonardi 2012). The structure is sub-rectangular some 185 x 170m in size (Figure 1). The walls are constructed of two courses of neat revetment around a rubble core, are between 1m and 1.5m thick and regularly up to 2m in height (Plate 1). The north-eastern part of the fort comprises a revetted (3m high) raised platform area which sits on a bluff overlooking the Nile (Plate 1). On this platform are found two multi-roomed drystone structures – probably the store rooms or magazines (Plate 2). The walling incorporates a number of enigmatic ‘peep-holes’ and a rectangular raised platform structure with adjoining ramp is incorporated into the south-western curtain wall. The central part of the fort is densely vegetated but appears to be free of structures – although it is likely that construction in less durable mud and wood structures may have left some traces. Material finds are interesting but limited by the reduced visibility of the vegetation – they include numerous grinding stones (Plate 3) and locally manufactured rouletted, mat impressed and graphited ceramics (Plates 4 and 7C-D) alongside small quantities of imported ceramics, glass and other items. As we might expect these finds attest to a fairly diverse constituency within the fort which was garrisoned largely by Nubian troops. A range of historical sources indicate, as we might expect, that these
troops developed close relations with local communities, so much so that there was resistance from many of the troops when ordered to leave with Stanley and Emin in 1889.

Perhaps even more interesting than the presence of local material culture within the fort is the presence of extensive evidence of habitation and activity immediately outside of the fort. Here we find large numbers of granary bases (Plate 5), what we assume to be field clearance cairns (Plate 6), low field walls and terraces, and grinding stones as well as further local roulette and mat impressed ceramics. Our project resources were fairly limited but we recorded some 400 of these features within 500m of the walls before abandoning the effort until a time when we had a larger team — certainly these features extended away from the fort in fairly high concentration for up to a kilometre. Without excavation and more detailed survey, it is impossible to confirm the exact contemporaneity of these external features with the garrison itself but we believe that they indicate the presence of a large surrounding community. Drawing on further historical sources we think it likely that this community would have been fairly heterogeneous comprising of locals, attracted to the fort for trade and agricultural production, as well as perhaps for protection, and probably also comprising freed slaves.

Naturally the site requires considerably more research, but the potential is seemingly very large. The site can draw considerable attention given its association with these enigmatic figures in colonial history. However, as already mentioned I would argue that the value of Laboré is much more than as a site which simply materializes the colonial history outlined in the prelude. The extensive communities which appear to have lived around the fort hint towards the possibility of exploring the history of local African communities and the changes they underwent with the advent of the slave/ivory trade and the gradual imposition of Turco-Egyptian imperialism.
Moreover, from 1881 the garrison would have been cut off from its supply lines thus engendering considerable reliance by the garrison on the good will of local communities and local resources, perhaps turning the nature of imperialism on its head for a time and suggesting the possibility here of using Laboré to develop much more nuanced accounts of South Sudan’s recent past (cf. Davies and Leonardi 2012).

**The 2009 archaeological surveys**

The work at Laboré in 2009 was not an isolated piece of research but rather was part of a broader survey led by the author and conducted as a preliminary impact assessment in relation to a feasibility study for a sequence of three dams spaced roughly equidistant along the Nile between Juba and Nimule (Figure 2). The project was commissioned by the Sudanese Federal Dams Implementation Unit (DIU) before South Sudanese independence and carried out by the Australian Snowy Mountains Engineering Corporation. The survey represents the first, and as far as I am aware, the only sustained piece of archaeological research in South Sudan since research conducted by the British Institute in Eastern Africa in 1977-1981 (discussed in detail below; although see Lane and Johnson 2009 for an exception). Some details of the survey and results have already been published in Nyame Akuma (Davies 2012) and the full impact assessment is kept on file at the British Institute in Eastern Africa.

The three zones surveyed centred on the corresponding proposed inundation areas located at Beden, Lakki and Shukoli (Figure 2). In each area survey was conducted by small teams of three to four individuals walking in parallel lines space around 3m apart where possible. In each zone the transects walked were constrained by time, topography (especially at Shukoli) and vegetation, and at Beden by the possible presence of landmines. The aim of the survey was partially to see what kinds of survey would be possible and to obtain a general understanding of the range of sites and finds – it was not, of course, intended to be exhaustive. Relatively dense vegetation across each transect made identification of small surface scatters generally difficult, but these were more apparent in road cuttings and along paths, while larger more structural features were more visible. Sites were defined on the fairly ad hoc basis of having any combination of three or more features or material artefacts, while single finds were recorded but are not here identified as ‘sites’. Sites ranged from small clusters and scatters of material, to large complexes of multiple features and artefacts. In what follows I give a general sense of some of the more interesting sites and artefacts recovered, before placing these into their broader context. Overall, the surveys identified over 110 sites, and made a small collection of representative surface material – no excavation or dating work has currently been attempted.

*Results of the 2009 surveys*

I need to begin with a disappointing note which is that we encountered almost no evidence for material pre-dating the late Holocene. Almost no lithic material and no obviously well stratified rock shelters or riverine middens were encountered. One of our original hopes for the survey was that we might uncover transitional Wavy-line to Kansyore material relating to the spread of complex hunter-foragers along the Nile and who are well known from contexts to the south around Lake Victoria from 6,000 years ago (i.e. Prendergast 2010). However, our result in this regard were wholly negative; in the Lakki survey zone where there were numerous rock outcrops, 14 rock shelters were GPS recorded (B01-B14) but

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1. It is my understanding that these dams will not go ahead in the form planned in 2009.
of these only eight presented any surface finds. Five shelters produced a handful of non-diagnostic body sherds with the largest collection coming from B12 and being especially robust, probably coming from a large vessel more than 500mm in diameter. B02 produced a single cord roulette sherd while B11 produced one everted rim sherd. In addition, a few pieces of fine white quartz were collected from B03, B04 and B13, but none of these were clearly worked. The only obvious stone tool came from a disturbed context on the talus just below B03 and is tentatively categorized as a Late Stone Age chert scraper. In a few other open air locations occasional quartz and chert flakes were encountered but no clear formal tool industries were identified. A couple of the rock shelters might be usefully test-pitted but we currently have no indication that they will yield much in the way of results.

In the same vein, almost all ceramics across the survey area immediately suggest later Iron Age contexts, being rouletted or mat impressed, thick and with a fairly crude mica-rich past. Only two small scatters (C06 and Y03) of pottery suggest a deeper antiquity (Plate 7A and B), but in the absence of more detailed regional ceramic sequences it may be difficult to confidently say more about these scatters at present. Much more abundant are a range of scattered features and larger sites which indicate Late Holocene villages and farming, many of which may stem from just the last couple of centuries. In general the results demonstrated extensive past agricultural activity across all transects, represented by a rather continuous low density of landscape features such as small field terraces, field-clearance cairns and granary bases, and punctuated by more dense concentrations or complexes of similar features, as well as stone-walling and surface artefacts, including the remains of iron working that taken together might be thought of as villages. The following paragraphs provide a taste of some of the larger sites encountered and further details can be found in Davies (2012) and in the Impact Assessment (Davies 2009).

2009 key sites located and planned

In the southernmost survey zone at Shukoli, as well as the Laboré fort already discussed, a second major drystone enclosure was located with a rather odd, irregular shape and ‘overlapping’ gates or entrance ways (Plate 8). The walling here is very similar to that at the Laboré fort but includes substantial quantities of lump iron slag. Also in the Shukoli zone at A032 we found a large concentration of iron slag – probably a furnace base, and A09-11 an extended village complex covering some 0.5ha or more and comprising eight neat drystone platforms as well as eight simple circular stone cairns (both features likely relating to agricultural field clearance), distinctive notched standing stones representing granary bases (c. 20), and a large number of small field terraces. Roulette decorated and mat impressed ceramics were also abundant, as were a few small pieces of iron slag. A second ‘village’ complex was found at C11 with again simple cairns (c. 10), neat rectilinear platforms (c. 5), granary bases (c. 10) and small field terraces, extending over at least 0.25ha. The Shukoli surveys also identified a number of small scatters of ceramic material including a range of cord-roulette and mat impressed sherds and a small concentration of 11 much finer sherds from site C06. These were well fired, lacking inclusions around 4-5mm in thickness including five rims (Plate 7A). The roulette sherds and mat impressed ceramics are difficult to distinguish from 20th century pottery, but as mentioned above the fine sherds may be related to older typologies (see below).

Across the Laki survey zones, all transects uncovered a range of dispersed cairns, granary bases, occasional grindstones, roulette and mat impressed ceramics, isolated standing stones, iron slag and occasional low field walls and at one site a single quartz scraper. Along one section of the west bank of the Nile was encountered a linear wall feature (F16) that ran for 2km parallel to the river. It consisted of small sections of drystone walling built around the natural bedrock. At times there were sections of neatly coursed walling (reminiscent of that at other sites) and occasionally there were neat kerb stones at the base of the ‘wall’. However, at other points the walling consisted of very rough piles of stone and natural rock outcrops. The purpose of this ‘wall’ is highly uncertain; it may have served as some form of defence from the river

Plate 7. 2009 Ceramics. A. Fine rim sherd C06; B. Hatched sherd Yo3; C-D. Mat impressed sherds from Laboré Fort.

2 As far as I am aware, South Sudan currently has no sites and monuments record and no standard site recording system. Site codes given here refer simply to the survey transect (A-Z) and number as allocated in the field.
or alternatively it may have marked the boundary between the river and areas of settlement inland. What is certain is that there is good evidence of a considerable amount of activity around this wall, particularly on its western inland side. These included short lines of standing stones marking the line of the wall as well as some roulette decorated ceramics and grinding stones carved out of the bedrock. At the northern end of this wall was a range of features reminiscent of the villages described including large scatters of ceramics and iron slag, a single large standing stone, five field clearance cairns (similar to Plate 6), low field terraces, five notched stone granary bases (similar to Plate 5), and further grinding hollows worn into outcroping bedrock. A large concentration of slag was nearly 2m in diameter and probably represents a large furnace base. Many lumps of surface slag were large with some over 5kg in mass, and a few fragments of tuyère and should certainly be subjected to further investigation.

Also in the Laki survey zone a site named Renjuk represented the largest village complex encountered. The site covered at least 1 ha and consisted of a series of interconnected drystone walled enclosures surrounded by dense concentrations of low field terracing, small field clearance cairns (10+), rectangular stone platforms (5+; similar to Plate 6), notched stone granary bases (20+; similar to Plate 5), a variety of large standing stones (10+), a number of grindstones (5+), and large quantities of roulette decorated ceramics (see Davies 2012 for plans and images). Interestingly a number of different walling techniques were applied here. Also evident was a semi-circular earth bank, with an internal semi-circle of standing stones, each around 1m in height and some 400-500mm in width (Plate 9). With intriguing standing stones and stone-walled enclosures perhaps representing a semi-fortified village, the Renjuk site is particularly interesting and should certainly be subjected to further investigation.

Site Y04 also in the Laki zone includes three large stone cairns built of piles of small stones and gravel. One of these is ‘L’ shaped and some 1m high and 3m x 8m in size, another contains two small standing stones projecting from its upper portion. Some 20 larger fallen standing stones, (some as much as 1.5m in length) are found scattered between the cairns. These features potentially suggest some kind of ritual or burial site, although further investigations identified an extensive network of low field terraces spanning a large area, some 400 x 300m around the central cairns – conversely suggesting a farmed area. In addition, within the terraces was a number of notched stone granary bases, as well as a handful of grindstones, and numerous small clearance cairns. Y04, therefore, possesses many elements of a domestic agricultural landscape, but the central cairns and standing stones are atypical and might suggest burial and/or other ritual activity (although there is currently no reason to assume that all of these features are contemporaneous). Near to Y04 a small scatter of ceramics labelled Y03 produced 19 decorated sherds including rouletted wares but also two fine cross hatched sherds which might be tentatively related to Later Stone Age forms (Plate 7B; see below).

At the Beden survey zone, fewer large sites were encountered, although general low density distributions of various agricultural features, roulette ceramic and iron slag were common. Here we also investigated two large islands within the Nile, although general artefact types were similar to elsewhere and no major structural features were encountered. Finally, it is worth pointing out that we also conducted a small opportunistic survey of historic sites in the broader area – outside of the survey zones – and encountered a small number of broadly historic sites including a Kings African Rifles barracks, a series of buildings said to have been a loca-
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Summary: themes emanating from the 2009 survey
As already noted there is disappointingly little material which clearly predates the late Holocene however this may reflect the challenges of the research context as much as a true absence. As well as detailed analysis of the impacts of Turco-Egyptian imperialism and slave trading as outlined above, there are also a number of other possible themes for future detailed exploration, each of which intersects with broad themes explored elsewhere in Eastern and Central Africa.

Iron Age and other ceramics
On almost all sites, surface finds are dominated by fairly robust ceramics from large bowls and jars, often with closed mouths and straight or everted rims, with a crude mica-rich paste (Plates 4 and 7A and B). Decoration is largely roulette and/or matt impressed; taken together these characteristics are strongly suggestive of the late Iron Age and probably the last millennium AD (see below). To what extent the region played a key role in the spread and distribution of such types is unclear but potentially significant (Soper 1985). More importantly, it seems likely from observations in the occasional present-day fishermen’s houses encountered, that such ceramics are hard to distinguish from those of the 20th century. A considerable amount of research (including more formal analysis of and standardization of the description of rouletting types) will therefore be required across South Sudan to develop ceramic typologies and link these to the early and later Iron Age sequences found to the north and south. However, the quantities of material encountered and the range and variation of different decoration certainly suggest that connections and chronological sequences can be developed. Too few ceramics of distinctively early or pre-Iron Age types were encountered (sites C06 and Y03) and these were highly fragmentary (Plate 7A and B) and with a sample size too small to make any definitive comparisons to material from elsewhere (see below). However, they do suggest the broader potential to explore later Stone Age ceramic types across the region.

Village/agricultural features and settlement patterns
There are a fairly consistent range of late Holocene farming features and villages, varying in size from perhaps a couple of households represented by one or two granaries and a couple of cairns, through to complexes of wailing, field boundaries, cairns, granaries and monoliths (Plates 4, 5 and 9; see also Davies 2009; 2012), with surface ceramics and grindstones which represent much larger settlements of probably 100 people or more. Whether these indicate agglomeration and/or a desire for defence due to the slave trade is not impossible but requires further investigation. Although most of these sites likely date to the last millennium and perhaps the last couple of hundred years, nevertheless, if properly chronologically sequenced they offer an interesting potential to shed further light on changing settlement patterns and densities, and perhaps the re-organizations that occurred during the development of the slave trade and the subsequent Turco-Egyptian incursions – this of course, requires considerably more research but there is significant potential. Similar extensive evidence of Iron Age settlement was noted by Phillipson (1981) in a broad swath of the countryside west of Juba.

Funerary Archaeology
There is good indication of funerary practice as indicated by monoliths (Plates 9 and 10) and some of the stone cairns, which could be explored in much greater detail and should lead to the development of a funerary archaeology with the potential to make both regional and extra-regional comparisons. It is worth noting that ethno-historic funerary monuments have been recorded in a number of contexts in South Sudan (Davies 2013; Phillipson 1981) and it has already been noted how South Sudanese funerary monuments, including finds from the 2009 survey might be usefully incorporated into wider regional analyses, especially connections to funerary monuments to the south (Davies 2013). Cultural connections between funerary practice in this region and various monuments to the north should also not be ruled out (i.e. Welsby 2007). Rather different funerary practices have also been noted at Dhang Rial mound much further north (David et al. 1981; see below).

Archaeometallurgy and metalworking
The 2009 survey has produced good indication of extensive metalworking, with at least two very clear large furnace bases located, as well as various dense scatters of iron slag.

Plate 10. Monolith marking a burial in a recently resettled village.
finding mirrors previous work in South Sudan which has uncovered a range of metal-working remains (Phillipson 1981; see below). Perhaps the most interesting element in relation to metalworking is the incorporation of large chunks of slag into drystone walling at both Laboré and Laboré II, as well as in a large number of stone cairns encountered. Whether this points to more complex regional understandings of the use and significance of iron slag or whether these just represent expedient use of building materials remains unclear, however, numerous ethno-historic sources recount the importance of control over metal working within the 19th century regional economy (i.e. Birch 1937). Comparison of technologies applied here and of the social context of metal working compared to that both to the north and the south may shed considerable light on both the spread of metal working across Africa south of the Sahara (i.e. Killick 2009) and on the subsequent role of metal working within African socio-economic systems (i.e. Reid and MacLean 1995).

**Previous research**

Placing the 2009 surveys in a broader framework is difficult because such frameworks do not as yet exist and comparisons with well-known sequences to both the north and south are tentative at best. This lack of data seems particularly notable given the central role of South Sudan in the history and development of social anthropology and historicizing and elaborating these ethnographic studies would seem to be one of many major priorities for future research. As already noted, prior to the outbreak of war in 1955 very few archaeological surveys or excavations had been conducted in the Southern Sudan and almost nothing was published about the prehistory of the region. The pioneering surveys of the British Institute in Eastern Africa (BIEA) during 1977-81 went some way toward reversing this situation, but they were halted by the renewal of hostilities in 1983 (David et al. 1981; Phillipson 1981; Robertshaw and Mawson 1981; Mack and Robertshaw 1982). The results of the BIEA survey, therefore, remain the only base-line archaeological study of the region and thus require some discussion. The first season of research in 1977-78, directed by David Phillipson (1981), covered Bahr el-Ghazal and both Western and Eastern Equatoria and located a number of sites of interest both Iron Age and Later Stone Age. Most notable was the excavation of a series of undated furnaces at Maridi in Western Equatoria (approximately 240km west of Juba) which appear to be smaller and more ‘bowl like’ than those encountered in 2009. However, Phillipson (1981, 5) also noted the remains of a Jur iron furnace at Nying’ora near Wau which appears more consistent with the two located in 2009.

The 1979 expedition was led by Nicholas David and was more diverse in its make-up comprising a range of archaeologists, linguists and anthropologists (David et al. 1981). Of most relevance here, the team test excavated rock shelters at Jebel Tukyi in Western Equatoria (approximately 110km north west of Juba) and at Lokabulo south west of Kapoeta in Eastern Equatoria (approximately 200km east of Juba). They also investigated a large settlement mound at Dhang Rial in Bahr el-Ghazal. A number of other sites were located but not investigated in any detail although they add to the general impression of a rich untapped archaeological record (David et al. 1981, 50-53).

At Jebel Tukyi rock shelter (David et al. 1981, 21-31) the lowest layers date to the late first millennium BC and continue into the first millennium AD. They contain domestic cattle but also wild fauna and an expedient quartz assemblage with few microliths. They also contain distinctive comb-impressed (or ‘comb punctate’) ceramics (David et al. 1981, 28). In the upper levels roulette (fibre impressed) decorated ceramics start around the mid second millennium AD although David et al. (1981, 30) argue for some continuity with the earlier comb-impressed ceramics on the basis of common fabrics. The rock shelter also contains a sequence of fire pits and a small bowl furnace which appears quite different to those encountered in the 2009 Juba-Nimule surveys (David et al. 1981, 25). There was some suggestion that the digging of these pits has disturbed the stratigraphy causing a mixing of Iron Age and LSA material in places.

At Lokabulo rock shelter (David et al. 1981, 11-19) the lowest levels are much older and demonstrate a surprising 3000 BC or older aceramic tradition with an undiagnostic flaked quartz industry and larger flakes on diorite as well as fragmentary human remains. Around 4000 BP comb-impressed ceramics are found but these are distinct from those found at Jebel Tukyi. This ‘Lokabulo ceramic type’ seems common in surface scatters in Eastern Equatoria and may actually extend into the present (David et al. 1981, 17-19). There have been some suggestions that these comb-impressed ceramics are akin to those found a Jebel Moya but Robertshaw (1982, 92) has argued that this is not the case and that they may have closer affinities with Kansyore wares found around Lake Victoria. David et al. (1981, 10) also note a single Acheulian handaxe and a range of Middle Stone Age (including prepared cores, blades and flakes and a bifacially worked lanceolate point) and Later Stone Age scatters in the general vicinity of Lokabulo.

The 1979 expedition also excavated at Dhang Rial mound in Bahr el-Ghazal – which is one of a number of mounds historically associated with the Dinka (David et al. 1981, 31-32, 51-53). The Dhang Rial mound was sub-circular, 175m in diameter and up to 2.7m high. A small area of present-day habitation was located on the mound the remainder of which was under sorghum cultivation. Excavations showed two Iron Age horizons, the first beginning around AD 500 and associated with roulette ceramics again and with metal and shell bead jewellery and clay cattle figurines. The second phase is largely similar to the earlier one but indicates an increase in the frequency of ceramic decoration and the shift from humpless to humped cattle as evidenced in the clay figurines (David et al. 1981, 38). Many of the objects come from six formal and largely intact burials in the lower Iron Age level and above
these the more fragmentary remains of 15 other individuals (David et al. 1981, 45-48). The more fragmentary have been tentatively interpreted as resulting from a fight or even a massacre (David et al. 1981, 49). The mound itself comprised of collapsed houses and domestic rubbish, including extensive domestic and wild faunal remains including ample evidence for fishing. Most interestingly the Iron Age layers overlie an undated ceramic LSA with comb and rocker-stamp pottery of a third type and suggesting considerable continuity in settlement patterns.

The 1980 season was led by John Mack and the archaeological component focused exclusively on Eastern Equatoria. Again the team located numerous sites from varying periods and test excavated an ash mound site at Jebel Kathangor (approximately 300km north east of Juba), a rock shelter at Itohom (approximately 170km south east of Juba) in the Imatong Mountains and second rock shelter in the Lulubo Hills (just 80km south east of Juba).

The Itohom and Lulubo excavations largely replicated the picture from the 1979 rock shelter excavations. At Itohom a fairly recent Iron Age horizon contained wood and knotted cord roulette which likely stemmed from use of the shelter for pottery making by the Lango people of the area. The lower ceramic LSA deposits included an unstandardised quartz industry with a solely wild faunal record and horizontally banded comb impressed/incised ceramics similar to Lokabulo (Robertshaw and Mawson 1981, 80). The LSA level is of uncertain date but is possibly fairly recent given two post AD 1500 radiocarbon dates (Robertshaw and Mawson 1981, 57-65). The Lulubo results were similar to Itohom with a rough quartz lithic assemblage and a comb-impressed/incised ceramic LSA overlain by Iron Age rouletted pottery (with perhaps two distinct phases) (Robertshaw and Mawson 1981, 66-69). The LSA deposits are dated to around AD 1000, while the upper Iron Age levels likely date to the last few centuries and include an interesting ‘pottery pavement’ (Robertshaw and Mawson 1981, 70).

Although undated, the results of the Jebel Kathangor ash mound excavations were particularly informative since they uncovered a distinct ceramic type with fine incised parallel lines which appears to be a possible variant of the Turkwel tradition known to the south from north west Kenya and eastern Uganda and with a mid-1st to early 2nd millennium AD date (Robertshaw and Mawson 1981, 73-74). The mound itself covers some 2,000m² and includes a stone cairn (5m in diameter and 1.75m high) topped by a 300mm high monolith. As well as the distinct ceramics, excavations uncovered a chert dominated lithic assemblage and evidence of both wild and domestic fauna. Similar pottery finds were also noted in surface collections from Nopou mound near Mogoth some 60km south of Jebel Kathangor, while a rather distinct unparalleled ceramic form was found in surface and test excavated collections at Jebel Kachinga in the same area (Robertshaw and Mawson 1981, 75-77).

Finally the 1980 season noted a single rock-art site near Keyala with naturalistic white paintings of cattle, as well as a range of circular standing stones south east of Juba which appear to be similar to the standing stone granary bases extensively recorded in the 2009 survey. The 1980 survey also noted numerous stone cairns in the east and north of Kapoeta, but unfortunately none of these were excavated, nevertheless these findings again add to the weight of potential to explore both Iron Age settlement patterns and funerary practices.

The final 1981 expedition was led by Peter Robertshaw and focussed exclusively on Lakes Province in areas to the south and east of Rumbek (Robertshaw and Siiriäinen 1985). The expedition sampled a range of cattle-camp ‘mounds’ both associated directly with Dinka settlement but also often ascribed by Dinka guides to the ‘Jur’. Six sites were test excavated at Jokpe, Ngeni (A+B), Bekjiu, Na’am and Kat.

At Jokpe four occupation phases were identified (Robertshaw and Siiriäinen 1985, 92-104). A semi-historic layer with rouletted material indistinguishable from Dinka ceramics was found above two layers characterised by mat impressed pottery with decoration covering the entire exterior pot surface. The upper of these horizons included burnt clay floors and post holes, but the absence of these from the lower level may simply be a reflection of sampling bias. The lowest occupation layer contained distinct fine tempered bowls as well as fired clay ‘balls’ and likely humblest cattle figurines. All levels contained both wild and domestic fauna including fish, while rare flaked quartz is found throughout the sequence. The sequences at Ngeni A and B were fairly similar with primary occupation horizons also dominated by mat impressed ceramics similar to layers two and three at Jokpe (Robertshaw and Siiriäinen 1985, 104-112). Again the sequences contained both wild and domestic fauna including fish, as well as fired clay balls and one figurine. A new variant of ceramic vessel form (plain constricted bowl) was noted at Ngeni A, while a small number of sherds from both sites displayed a different range of characteristic including one rocker-stamped sherd and five from Ngeni B with incised parallel lines reminiscent of Turkwel/Jebel Kathangor.

Much further to the west, Bekjiu mound was the largest of the sites excavated, being over 180m in diameter and up to 2m high (and likely extending over an area larger than this) (Robertshaw and Siiriäinen 1985, 112-126). Here Trench 1 revealed a complex stratigraphy for which three calibrated radiocarbon dates indicate an accumulation beginning around AD 600 and with clear pole and dagga constructions evident from around AD 1000 or just before. Three dates from Trench 2 provide a similarly dated but less complex stratigraphy. Mat impressed ceramics again dominate the sequence but incised and rocker stamped sherds are found in the lower level of Trench 2 while a number of mat impressed sherds with oblique/vertical scoring may represent a new element in the mat impressed tradition. As at Ngeni, no overlaying semi-historic layer with rouletted ‘Dinka-type’ ceramics was found. Fired clay objects including pottery disks, clay balls and loosely identified ‘figurines’ were again
recovered. Most notable is the presence of small quantities of iron slag through the sequence and six iron objects including part of a small blade and part of a bracelet. A number of grindstones, worked bone, shell beads and occasional flaked quartz was also recovered, alongside domestic and wild fauna including fish.

The site of Kat, 5m North of Bekjiu, is noted in Agar oral history as the burial site of a prominent Agar leader (Robertshaw and Siiriäinen 1985, 126-133). Here, upper layers in the test excavation unit seem to represent admixing of fairly recent deposits associated with Dinka occupation. These layers include rouletted ceramics but also a few mat impressed sherds as well as occasional iron slag, one large iron needle and domestic pearl millet. However, this horizon overlies a deposit bearing an interesting array of ‘zigzag’ pattern rocker-stamped and incised sherds, alongside burnished fine red-slipped sherds. This lower layer also produced a crude quartz lithic assemblage, grindstones and four loosely termed clay animal ‘figures’. Again domestic and wild fauna are found throughout the sequence but with fish in much lower proportions. The lower levels at Kat appear similar to those at the lower levels of Bekjiu and suggest a date before the mid first millennium AD. At the final site of Na’am about 4km east of Bekjiu a 2m deep sequence provided three radiocarbon dates which all calibrate to modern with a corresponding millennium AD. The Dhang Rial sequence and figurines from the 1981 Lakes Province sites also interestingly record the introduction of both mat impressed and roulette-decorated ceramics, including fish.

**Summary of previous research and comparative suggestions**

In general, the tentative results of the 1977-81 BIEA surveys suggest that at least the southern half of South Sudan was inhabited by predominantly stone tool using hunter-gatherers from before 3000 BC until as recently as the second millennium AD (and perhaps more recently at Itohom). However, this period is far from homogenous with a pre-ceramic phase noted at Lokabulo and two succeeding distinct LSA ceramic types, including the lower layers at Lokabulo, Lulubo, Itohom and probably Kat and Bekjiu which contrast with those at Jebel Tukyi. There are, however, also variations in the Lokabulo types and the dating is unclear, with the earliest suggestion of these at Lokabulo from the second millennium BC, Kat and Bekjiu before AD 500, but much more recent second millennium AD dates from Lulubo and Itohom. The Jebel Tukyi LSA layers date to the late first millennium BC but also here include domestic cattle alongside wild fauna, while the LSA at Kat and Bekjiu also likely contain domesticates of generally unknown date before AD 500. A third ‘LSA’ ceramic type is found at the lowest undated levels of Dhang Rial mound and suggests interesting continuity of settlement even in open areas from the LSA to the Iron Age. Robertshaw (1982, 92) has linked the Lokabulo ceramics to the Kansyore of Lake Victoria and, while similarities may exist, considerable further re-analysis is required including a standardisation of the terminology and analysis of decorations types (which varies across the published material), as well as on fabrics and vessel forms. As already noted, given the small sample size it is impossible to say if the fine incised sherds and rims recovered in 2009 from sites C06 and Y03 can be related to any of the LSA traditions noted above – however, it seems likely that they represent some form of LSA occupation.

At Jebel Kathangor a distinct cultural pattern is observed which includes metal working but also lithic use and both wild and domestic fauna. This material is undated but likely spans the Later Stone Age to Iron Age transition and, if directly related to Turkwel pottery from further south, would probably date to the mid first to mid second millennium AD (Lynch and Robbins 1979). Also notable is the presence of similar material at both Ngeni and Nyany, which if correct would again greatly extend the range of this tradition north and westward. In particular the Turkwel phenomenon possibly relates to the development and spread of Nilotic languages, perhaps early Maa groups from South Sudan and into north-western Kenya and eastern Uganda over the last millennium. Recent survey and excavation near Moroto in eastern Uganda has identified an extensive site known as Nadunget with similar pottery forms and a chert-dominated lithic assemblage, which certainly includes domestic cattle but may also incorporate wild fauna and limited metal working (Davies 2010).

During the mid-second millennium AD we begin to see the introduction of both mat impressed and roulette-decorated ceramics and clear evidence of metal working as dated at Dhang Rial and Jebel Tukyi. To the north around Rumbek the 1981 expedition has shown mat impressed ceramics to underlie later rouletted wares which may be associated with the historic Dinka, especially at Jokpel. However, further south and east rouletted ceramics appear to lie above incised LSA and Turkwel-type potteries. In the Juba-Nimule 2009 surveys both rouletted and mat impressed ceramics appear alongside other in surface contexts, including at Laboré Fort, and seemingly also in the few present-day households observed. Ultimately this spread of metals, domesticates and late Iron Age ceramics is likely to have been spatially and temporally uneven, and based on a range of ethno-historic data it seems probable that there was an extensive continuation of part hunting-foraging and lithic using lifeways well into the second millennium AD. The Dhang Rial sequence and figurines from the 1981 Lakes Province sites also interestingly record the introduction of humped cattle and potentially also of distinct burial patterns (and at Dhang Rial perhaps even evidence of violence), although further dating is required here.

Finally, it is also important to highlight work which has elaborated other wider and more recent traditions. Paul Lane
and Douglas Johnson (2009) have reported on surveys of slave trading garbias or fortified camps around Rumbek and these might be interestingly related to the changes enacted by the slave trade potentially evidenced in data from the 2009 surveys presented here. Else Kleppe (1982) has also published preliminary material potentially related to the Funj state from around Malakal in Upper Nile Province, including sites with supposedly characteristic bands of rocker-impressed decoration. These may be very worthy of future investigation and may elaborate on connections to the north. Indeed, as the present summary demonstrates, the northern borders of South Sudan remain largely unexplored. Kleppe (1983) also reported on an infant burial near er-Renk on the white Nile which may bear some commonalities with the burials as Dhang Rial and Bekjiu. Also in a vast unexplored region, Hillman and Hillman (1984) briefly reported on finds from the Bangangai Game Reserve in Zande territory which included a number of sites with ‘grinding grooves’ assumed to be related to ground-stone axe production, as well as a range of smelting evidence, including two recent low shaft furnaces with intact superstructures.

Overall, our present understanding of the archaeology of South Sudan is patchy and highly superficial at best. The chronological sequence outlined above is highly partial and lacks detail and spatial nuance. South Sudan’s varied environmental zones are unevenly covered and likely we should expect quite varied spatial and temporal trends across the country. The picture is also chronologically shaky, being based on far too few dates, from far too few sites, spaced far too far apart. Over the coming years this sequence will require considerable reconsideration and re-evaluation no doubt demonstrating a mosaic of interactions, influences and movements of people practicing diverse life-ways from hunting and foraging to settled farming with networks of trade, exchange and power, including emphasis on the production and control over metal working. However, what this brief overview does demonstrate is that the potential for archaeological research in South Sudan is vast. A few small expeditions with very limited personnel and resources have uncovered a great deal of information which should be productively followed up. The 2009 surveys were in essence no different from the earlier BIEA led expeditions – being brief, under-resourced affairs. Yet these too add considerably to our understanding of the later phases of South Sudan’s history uncovering a wide range of sites primarily associated with twisted cord roulette ceramics, extensive agricultural production and larger scale iron work, as well as historic events.

**Priorities and challenges for the future**

Naturally, conducting archaeological research in South Sudan is currently challenging. Besides the general issues of poor roads, dense bush, high costs and unexploded ordinance, challenges exist at the level of establishing appropriate legislation, and human capacity especially in the face of rapid infrastructural development and increasing population size as refugees return to the countryside – each of these threatens key historic and archaeological resources the significance of which may only be recognized too late. Among other organizations, the British Institute in Eastern Africa remains committed to developing and supporting research in South Sudan across disciplines and in collaborative and capacity-building relations with South Sudanese colleagues. We hope to see this agenda move forward in coming years.

Thinking more broadly South Sudan has the potential to contribute extensively to many ‘big topics’ in global prehistory and archaeology – not least because for so long it has remained a notable ‘blank spot’ on the map of Africa’s deeper past. These include but are not limited to questions of human evolution and the spread of modern humans out of Africa, the spread of complex hunter-gatherers during the mid-Holocene, the development and spread of food production including cattle and African cereal crops (both between the Sudan belt savannah crops of sorghum and pearl millet and the Ethiopian highland crops perhaps including finger millet and okra), the development and spread of metalworking in Africa, the subsequent intensification of agricultural and pastoral life ways, and finally the general nature of colonial and imperial encounters. There is then, or should be, a great drive towards a more concerted approach to South Sudan’s past since it would likely interest many colleagues working across most periods on the continent.

But that said there is a broader issue here. Archaeology in Africa has over recent decades dealt with some considerable soul searching through which it has been recognized that there is much more to the past than western dominated ideas of prehistory; and that the ‘narratives’ and ‘stories’ which have been told need to be tempered with stronger appreciations of African-led research agenda and African-derived narratives which speak more to local concerns, local control over the past, and the development of local capacity; especially to ensure that the past does not simply reproduce simplistic western narratives of social evolution and western views of what is complex, civilised, and significant. To some extent, South Sudan’s relative lack of previous research and existing capacity, provides a fresh canvas on which to construct a much more sophisticated view of the African past driven by African priorities and perspectives and owned not just by outside researchers and research projects, but by local scholars and indeed by local communities. This may, of course, seem idealistic, but there is, to my mind the need for a radically different approach – as communities re-populate the South Sudanese landscape researchers, policy makers and legislators must realize the benefits of engaging the local community in the appreciation, preservation and protection of historic and archaeological resources through making them relevant to present-day lives and through the equal appreciation of cultural resources of all periods and types, from ‘intangible’ 20th century radio songs and dances through to colonial fortresses and mid-Holocene rock shelters. While South Sudan’s vast, yet underexplored cultural resources are under threat
by development and resettlement, the scale of the issue is so vast that it can only be done by working with rather than to the exclusion of local peoples, and through the development of strong in country capacity.

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The West Bank Survey from Faras to Gemai 1. Sites of Early Nubian, Middle Nubian and Pharaonic Age
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View upstream along the Wadi Murrat from the late 19th century Anglo-Egyptian fort. The pharaonic inscriptions are amongst the trees at the wadi edge in the far centre (photo D. A. Welsby).