

SUDAN & NUBIA

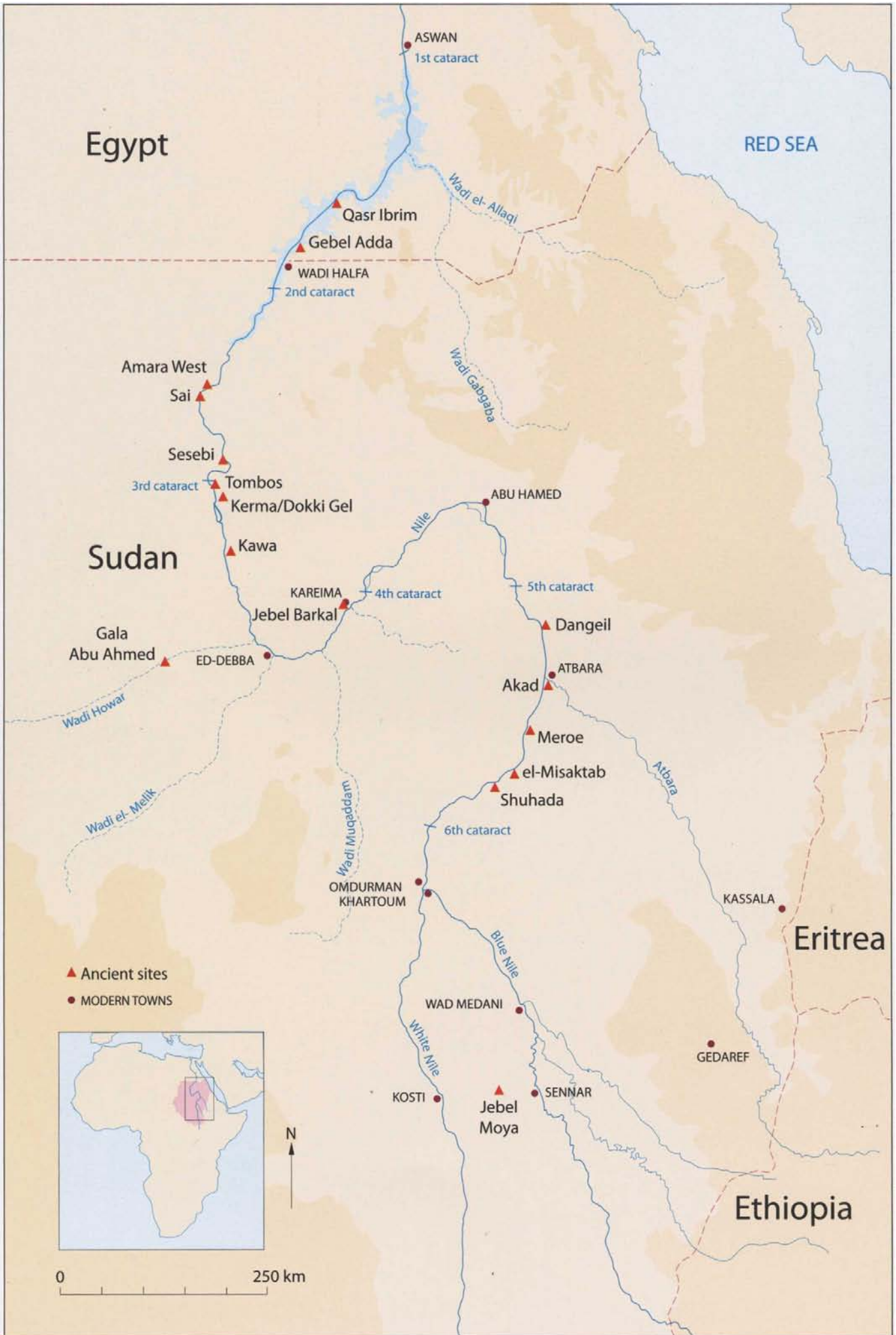
The Sudan Archaeological Research Society



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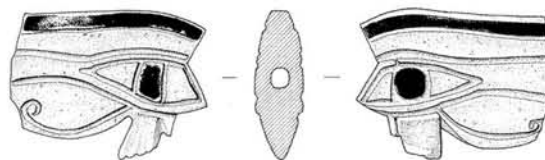
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Contents

Reports

- | | | | |
|--|----|---|-----|
| <i>Talatat</i> Architecture at Jebel Barkal:
Report of the NCAM Mission 2008-2009
<i>Timothy Kendall</i> | 2 | Gebel Adda 1963 and Meroitic stela G19
<i>Reinhard Huber and David N. Edwards</i> | 100 |
| The New Kingdom Town on Sai Island
(Northern Sudan)
<i>Florence Doyen</i> | 17 | Akad Rescue Project Season 2008
<i>Mohamed Faroug Abdelrahman</i> | 103 |
| The British Museum epigraphic survey at Tombos:
the stela of Usersatet and Hekaemsasen
<i>Vivian Davies</i> | 21 | Shuhada Rescue Archaeological Project (SRAP) and
el-Misaktab in the Shendi region
<i>Mohamed Faroug Abdelrahman, Ahmed Sokary
and Murtada Bushara</i> | 107 |
| A name with three (?) orthographies: The case of
the 'king's son, overseer of southern foreign
lands, Penre'
<i>Tamás A. Bács</i> | 30 | Districts, towns and other locations of medieval
Nubia and Egypt, mentioned in the Coptic and
Old Nubian texts from Qasr Ibrim
<i>Joost L. Hagen</i> | 114 |
| Fieldwork at Sesebi, 2009
<i>Kate Spence, Pamela Rose, Judith Bunbury, Alan Clapham,
Pieter Collet, Graham Smith and Nicholas Soderberg</i> | 38 | | |
| Cemeteries and a late Ramesside suburb
at Amara West
<i>Neal Spencer</i> | 47 | Towards an archaeology of social organisation at
Jebel Moya, 5 th – 1 st millennium BC
<i>Michael Brass</i> | 120 |
| Petroglyphs under the sand – A preliminary report
on the field season 2008/09 at the fortress Gala
Abu Ahmed
<i>Friederike Jesse and Robin Peters</i> | 62 | | |
| Houses and Pyramids at Kawa, excavations 2008-9
<i>Derek A. Welsby</i> | 72 | Miscellaneous | 126 |
| What are these doing here above the Fifth Cataract?!!
Napatan royal statues at Dangeil
<i>Julie R. Anderson and Salah eldin Mohamed Ahmed</i> | 78 | | |
| Petrography of Pottery from Meroe, Sudan
<i>Robert B. J. Mason and Krzysztof Grzymski</i> | 87 | | |
| The Meroitic Necropolises of Sai Island.
First Season at the Meroitic Cemetery 8-B-5.A
<i>Vincent Francigny</i> | 92 | | |
| First report on ceramic material from Meroitic
Cemetery 8-B-5.A
<i>Romain David</i> | 97 | | |



Front cover: The head of a Kushite king, excavated in 2008, from the Amun temple at Dangeil. It has been tentatively identified as Aspelta (593-568 BC) based upon comparisons with statues of this king discovered at Jebel Barkal and Dokki Gel-Kerma. (Photo © J. R. Anderson, Berber-Abidiya Archaeological Project).



Towards an archaeology of social organisation at Jebel Moya, 5th – 1st millennium BC

Michael Brass

The combined cemetery and settlement locality at Jebel Moya, in the south-central Sudan (Figure 1) was excavated in the early 20th century by the founder of the Wellcome Trust, Sir Henry Wellcome. The excavation was overseen by different field directors, employing variable excavation, recording and surveying techniques, over the course of the four seasons from January 1911 – April 1914. Plans for further expeditions were first placed on hold by the outbreak of World War I and subsequently ended by Sir Henry's death in 1936. Around a fifth of the estimated 10.4ha of deposits were excavated. It still stands as one of the largest British excavations ever undertaken in Africa and one of the largest cemeteries yet excavated in North-East Africa. Overall, 2792 graves were excavated and recorded (Addison 1949, 37).

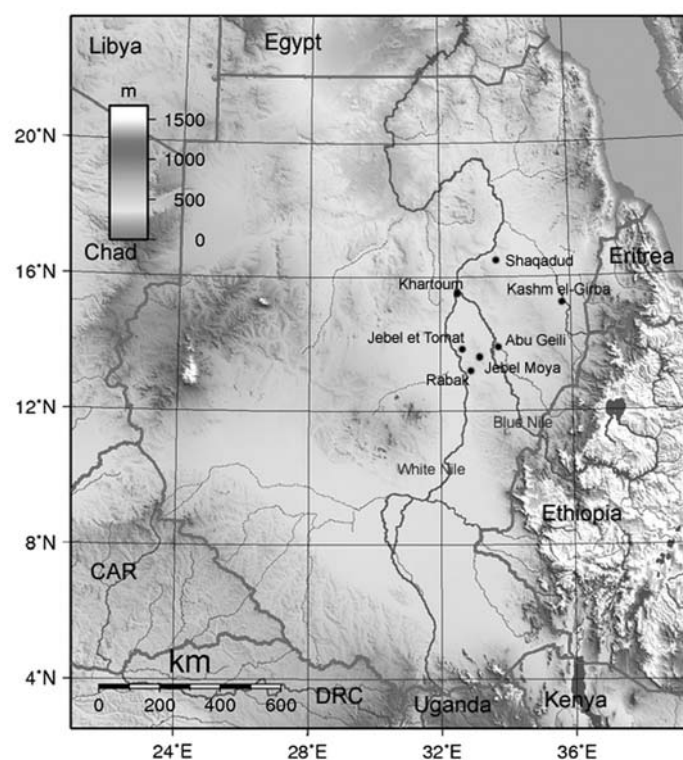


Figure 1. Jebel Moya is situated 30km west of the bank of the Blue Nile.

The repository of the excavation records and the physical anthropological remains is the Duckworth Laboratory, Cambridge, with the excavated artefacts deposited both at the Duckworth and at museums within and outside the UK, including the Petrie Museum (UK), British Museum (UK), Pitt Rivers Museum (UK), Sudan National Museum (Khartoum) and the Royal Ontario Museum (Canada).

The ongoing research described in this paper builds upon

previous research evaluating the development of social complexity in early north African pastoral societies by examining settlement patterns, mortuary distributions and grave assemblages, particularly the presence and point of origin of valued items and prestige goods (Brass 2007). The data from the excavation records are being digitised. Structural and spatial analyses of the distribution of graves and grave goods will subsequently be undertaken alongside re-examination of the composition of the recorded classes of grave goods.

Frank Addison's (1949) original site report was essentially a catalogue description of the remains and geology. Although Rudolf Gerharz (1994) has published a revised chronology through re-serialisation of the grave contents and Isabella Caneva (1991) has undertaken further work on the pottery housed at the British Museum, no study has re-examined the excavation records to test the interpretive validity of the original site report and re-analysed the social implications of the individual burial assemblages and the distribution of the graves. What is presented here is a preliminary introduction to Jebel Moya with select initial data, and an outline of what can be done with the remaining curated records and materials.

Background

The Jebel Moya massif lies in the southern part of the great Gezira plain south of the 6th Cataract between the Blue and White Niles about 250 kilometres south-southeast of Khartoum. The massif has a perimeter of about 11 kilometres (Plate 1). The excavated area, known as Site 100, lies in a basin-like valley above the plain near the edge of the massif to the north-east (Plate 2).

Wellcome first visited Sudan in 1900 after the overthrow of Khalifa Abdullahi by Lord Kitchener (Addison 1949, 1). His immediate interest in the country is attested by the founding of the Wellcome Tropical Research Laboratories (Khartoum). Later in 1910, Lord Kitchener approached Wellcome to elicit unspecified assistance to the inhabitants of the Sudan. Wellcome agreed to provide aid but did not denote the form it would take (Addison 1949). His health was poor and he travelled to Egypt on the advice of his doctors to recuperate before taking the opportunity to continue south to Sudan. For unknown reasons, he decided to combine his passion for archaeology with philanthropy and proposed to the Sudanese administration that his aid comprise of a large-scale archaeological exploration the staff of which would be primarily drawn from the local inhabitants, thus providing employment. After acceptance he consulted with Mek Omar of Abu Geili on appropriate unexplored sites south of Khartoum (Addison 1949, 2) as expeditions such as John Garstang's at Meroe were active in the north. One of the places recommended by Mek Omar was Jebel Moya. Wellcome sailed up the Blue Nile to Sennar, from where he travelled overland to Jebel Moya. He arrived on 26th January 1911 and initiated excavations on the 29th January with 15 local inhabitants equipped with improvised wooden tools. There were around 4000 people employed by Wellcome on



Plate 1. *The Jebel Moya massif from the north (photo D. A. Welsby).*

site by the close of the fourth and final season in April 1914 (Addison 1949).

Wellcome maintained close supervision of the overall operations and inspected the notebooks of the field excavators at the close of each day (Addison 1949, 7). Oric Bates was appointed as the first field director at the start of the second season on the advice of George Reisner. Douglas Derry was the chief medical officer. James Dixon and G. A. Wainwright took over the responsibilities for the third season, assisted by M. B. Ray who replaced Derry (Addison 1949, 4-5). Wainwright was only present for a few weeks while Dixon continued until a couple of weeks prior to the end of the fourth season as did Ray. Excavations ended with the outbreak of the First World War, although Wellcome wanted to resume right up to his death in 1936.

Wellcome originally wanted Reisner and Arthur Keith to examine the archaeological and anatomical remains respectively and compile the site report (Addison 1949, V). However, both were unavailable. Reisner recommended Frank Addison, who had not participated on the excavation and had not viewed the site before accepting the request from the Trustees of the Wellcome Trust (Addison 1949, V). It was agreed between Addison and the Trustees that no further excavations were required and his brief was to work on the existing materials. Addison then hired L. P. Kirwan who was also an experienced excavator in the Sudan. Kirwan's contribution to the published results included the accurate formulation and attribution of grave types. Sadly, Kirwan did not return to assist Addison with the analysis after the Second World War and was replaced by I. W. Cornwall. His secretary was Miss Halford; her duties were wide-ranging and she oversaw the compilation of the invaluable registrar of graves (Addison 1949, VI), which forms an important resource for my re-examination of the excavation records.

Addison's task was made harder by the deaths of most of the primary archaeologists prior to 1936. Wainwright was alive but he could provide only limited assistance. The records of Bates and Dixon were technical and provided no contextual setting into which to place the excavations (Addison 1949, VI). Addison visited Jebel Moya in 1938 but otherwise relied on the descriptions provided by the Camp Commandant, Major Uribe, of life and activities over the seasons of excavation.

Responsibility for the human osteological analysis was handed to G. M. Morant and A. Samson, who were unable to continue after the Second World War (Addison 1949, VI). J. C. Trevor of the

Duckworth Laboratory was commissioned to complete the examinations and he brought in Ramkrishna Mukherjee and C. Radhakrishna Rao to undertake the majority of analyses (Mukherjee *et al.* 1955).

State of the evidence

There are no recordings or photographs of Jebel Moya as first seen by Wellcome and his initial crew in late January 1911. However, photographs taken soon afterwards show the valley floor littered with stones and boulders. The excavations, halted by the onset of World War I, were undertaken to a detailed standard for the time, although different methods of excavation and recording were adopted by the different field directors in charge over the duration of the expedition. No detailed archaeological contextual records exist from season 1; the only records from season 1 are a manuscript diary from John Holmes, which gives little archaeological contextual information, and Wellcome's



Plate 2. *General view over the excavation area looking towards the 'House of Boulders' constructed by Wellcome on the site (photo D. A. Welsby).*



1912 brief paper presented to the British Association.

Despite these problems, the anatomical, grave and tomb cards from the second to fourth sessions represent a major resource which has been under-exploited. There is also an excellent photographic record from the third and fourth seasons. Addison (1949, 16) records that the first season's excavators only penetrated the first two strata. Despite later claims by Dixon that only 23 skeletons were unearthed and conserved during the 'lost' first season, the number of skeletons excavated in subsequent seasons is an indicator that many more were not recognised and destroyed through inappropriate excavation methods, such as the use of pick axes in feature-rich depositional layers, which are evidenced in the photography from this season (Addison 1949, 16).

There is scant evidence of structures (Addison 1949, 97-104). There are few earthen floors (irregular shapes at different levels) and a couple of floors comprised of stone and pottery. None of the floors have post-holes or show signs of occupation. There are also a series of ovens in the middle and upper layers which are not associated with any floors. The settlement layers are thin, perhaps from a slow rate of accumulation. There is also a lack of substantial remains from decayed structures and therefore it is likely that light organic materials were used, although this could also be attributed to the methods of excavation employed by Wellcome and his team.

To compound difficulties, many of the materials from the site were poorly stored once reaching England and were frequently moved over the succeeding four decades. Many of the artefacts and skeletal remains were lost or damaged in the process. The final physical anthropology report was particularly affected by the degradation which had occurred to the anatomical remains over the intervening decades (Mukherjee *et al.* 1955, X). To observe the gradual reduction in data it should be noted that there were field cards for only 2903 of the 3137 skeletons originally recorded. Only 98 crania, 139 mandibles and a few hundred post-cranial elements had survived by the time osteological analyses were undertaken (Mukherjee *et al.* 1955, 3). Moreover, the measurements and conclusions stated on the anatomical cards from the last two seasons were frequently shown by the work of Mukherjee *et al.* (1955, 9-31) to be inaccurate with regards to sexing and aging.

Previous re-investigations

Addison (1949, 249-260) initially placed Jebel Moya in a single sequence from 1000 to 400 BC, largely via correspondence with the then recognised chronology of the Napatan period of Upper Nubia. This conclusion was based primarily on the presence of Napatan amulets, beads, faience and metal objects within select graves and on his reconstruction of the rate of deposition. He later modified his dating to 500 BC – 400 AD on the basis of Meroitic objects such as egg-shell, as well as painted, stamped and wheel-made pottery occurring in some of the graves; the Napatan objects were

relegated to the status of archaic objects (Addison 1956, 13). It is problematic that two contrasting chronologies could be devised by the same scholar based upon the same body of data. Taken together with the mixed stratigraphy of the site, this is one of the primary reasons why there has been no comprehensive re-examination of the excavated materials.

Mukherjee *et al.*'s (1955) report employed advanced statistical analyses to understand the population make-up and affiliations, among which was the now common Mahalanolais D^2 distance technique applied to craniometric data for the first time. This approach was directed away from typology and towards the concept of population affinity; it would not become common practice amongst physical anthropologists until the early 1970s. They demonstrated that all age groups and sexes were represented with no evident pattern of disposal or depositional bias. To this can be added Addison's findings of diversity in mortuary practice: tomb types differed in appearance and body positions and grave orientations were variable. Also, almost half of the individuals were buried without grave goods. Additional material evidence of cultural diversity was found in the range of lipstuds, ornaments, potsherds and other objects' design and manufacture. However, Addison's prior hypothesis of the population of Jebel Moya being biologically diverse was not upheld by Mukherjee *et al.* (1955), nor did it find any support in a recent study (Irish and Konigsberg 2007) of the dental characteristics which instead reinforced population heterogeneity.

More recently, Rudolf Gerharz (1994) revisited the issue of chronology in his doctoral dissertation and subsequent published monograph. Addison's determination of chronology was based on the vertical sequence of graves which Gerharz disputed by drawing parallels with the differential erosional and depositional sequence at Abu Geili. His re-serialisation of 465 grave inventories, out of a total of 2792 graves, determined that it was the horizontal and not the vertical distribution of graves which provides a more reliable chronology (Gerharz 1994, 341). He did not re-examine the archival, ceramic, osteological or artifactual data and based his conclusions on the published data in Addison's (1949) registrar of graves alone. Yet, it is nearly impossible to attribute a grave to different phases based on inventory and burial rites alone, particularly as the graves generally lack pottery and stone tools. Therefore, he hypothesised three phases based on re-serialisation of the graves and radiocarbon dates from the basal layers and nearby sites with a similar artefact repertoire (Gerharz 1994, 45-60).

Phase I, from the 5th millennium BC, is characterised by pottery related to the 'dotted wavy-line' tradition as identified by a small pottery sample curated at the British Museum (Caneva 1991). Two small pottery collections were from sealed deposits at the base of layers from the middle of the basin about 50 metres apart. Some sherds are found amongst later horizons due to disturbance. This original settlement horizon is regarded as having been largely disturbed by subsequent agro-pastoral burial activities (Gerharz 1994, 45-6).

Addison (1949, 204) termed this pottery “Impressed ware” which has a coarse consistency, unburnished surface with buff, ochre or pink colours. Gerharz (1994, 45) also attributes two graves to this early period as they differ from the other graves by being cut into sterile ground at the bottom of the basal layer, Layer D, the skeletons being tightly contracted (knees closely pressed to thorax, possibly tied to it) and no grave goods, although the latter was the norm through the succeeding period as well.

Phase II follows after a hiatus and is dated between 3000 and 800 BC. It is regarded as the ‘classic’ Jebel Moya culture, encompassing the bulk of surviving site features and the majority of the graves (Gerharz 1994, 48). The pottery differs markedly from Phase 1. While it is therefore surprising that Addison did not detect this break in the pottery sequence, it should be noted that he did not pay adequate attention to the pottery typology as he was convinced by the small finds of a short chronological sequence. He incorrectly described the pottery from this phase as being undifferentiated from Phase III.

Only one specific pottery type from the middle phase has been positively cross-correlated with wares from other sites: Rabat Ware, named after a site 70km distant (Gerharz 1994, 48, 329). The rims are everted and thickened, and bear a hatched fish motif. None of the more ‘typical’ Jebel Moya pottery has been found at Rabat. Addison (1949, 202-206) describes the remaining pottery collectively as rocker-stamped and incised with mainly red or black colours and a burnished surface. There are sherds bearing connections with C-Group and Kerma pottery and later Meroitic pottery (Gerharz 1994, 334). The different styles present in the site’s middle assemblage probably reflect its broad temporal range.

There are also a wide range of stone tools recorded from the site: chipped tools (including microliths but no blades), ground stone tools (axes, maceheads, grinders, for example). However, only armllets and stone beads occur amongst those graves with assemblages assigned to this phase (Gerharz 1994).

Extended burials predominant this middle phase with a few flexed burials. Extended burials are unusually common compared with elsewhere in the Sudan (Gerharz 1994, 330). As in the succeeding phase, the dead are predominantly positioned supine with few prone. They were buried in pits with few distinguishing features. However, there is a non-conformity of the graves with respect to orientation and attitude which has been claimed to mark out Jebel Moya from many of the sites further north along the valley (Gerharz pers. comm.). Moreover, Caneva (1991) mentions there are other sites displaying similar multiple orientations of burials; a regionally rare feature after the 3rd millennium which Gerharz (1994) claims continues until the 1st millennium at Jebel Moya. To what degree this reflects the chronology of the other sites and what impact it may have upon re-interpreting the chronology of Jebel Moya is unknown. Desmond Clark, Kenneth Williamson, Andy Smith and others undertook a limited survey of Jebel Moya and the surrounding area after

their expedition to Adrar Bous (Central Sahara) in 1970 (Clark and Gifford-Gonzalez 2008); they obtained charcoal samples from two pits in the Western area which yielded two radiocarbon dates of 4200 ± 80 uncalibrated bp (2768 ± 109 BC)¹ (Clark and Stemler 1975, 589).

Gerharz’s chronological reconstruction suggests that Jebel Moya was inhabited continuously throughout the middle phase and that the bodies were deposited in graves outside of shifting habitation areas. He also claims that there is no available evidence for social stratification during this period and that the variety of grave inventories, skeletal positions, burial attitudes and grave sizes are indicative of multiple sources from the surrounding region (Gerharz 1994, 330). In other words, Jebel Moya is suggested to be an aggregation site for little more than 2000 years for lineage segmented pastoral groups.

Phase III is bracketed between 800-100 BC and has the first appearance of imported items encompassing, amongst others, faience, glass and semi-precious stones (Gerharz 1994, 333). Gerharz’s re-seriation found that only two graves outside of the Eastern Area have imported items. Although Phase II graves are found in the Eastern Area, he proposed that the Eastern Area became a special burial ground during this final phase with settlements occupying the western half of the basin. Although the burial ground became semi-permanent, the number of burials increases and they retain non-conformity in orientation. It is speculative whether there was a greater populace using the basin in different ways to their predecessors perhaps with a new mode of land use such as a transition from fully nomadic to semi-settled with some agriculture.

New pottery styles appear in the final phase which are present at Napatan and Meroitic sites: channelled, red-painted, moulded and footed dish wares (Gerharz 1994, 334). These vessels contain features (rimmed notched and comb-stamped) and decorations (e.g. rocker-stamped and incised) which Gerharz (2008, pers. comm.) suggested indicated that they were manufactured by local potters but which are fairly widespread across the Sudan (Mohammed-Ali and Khabir 2003; Winchell 1992).

There are also pottery figurines made from unburnt clay which represent both animals (mainly cows) and humans. Copper and iron objects were present from the beginning of the final phase. Metal ornaments are found almost exclusively in graves with metal weapons and some tools in settlement areas. Gerharz (1994, 331) proposed that the imported items and metal were used to signify social distance. The conclusion that Jebel Moya was abandoned in the 1st century BC is based on the lack of classic and late Meroitic items.

What is particularly interesting from all phases is that there is a paucity of pottery in graves. Moreover, Gerharz (1994) and J. Desmond Clark (1975) have asserted cultural similarities between Jebel Moya and nearby sites (e.g. the Butana

¹ The calibration was obtained using CalPal (2009).



Industry from Khashm el-Girba and the pottery from Jebel et-Tomat) and emphasised their collective distinctiveness from surrounding regions. Gerharz (1994, 330) believes this differentiation can be seen from Phase II onwards.

What can be done with the data?

Views of society and social evolution have undergone several changes in the decades since Addison's 1949 publication. Essentially, investigations of continuity and change are no longer in opposition. Inequalities have now become widely recognised in all societies, from hunter-gatherers to states, although the forms taken differ as do the socio-economic, ideological and material manifestations. These practices are negotiated, contested and resisted within the context of inter-personal and everyday activities (Chapman 2003, 187-99). The presence of one inequality (e.g. wealth) does not necessarily imply the existence of others (e.g. political). The community at Jebel Moya has previously been hypothesised to have permitted a wide range of variation. Indeed, the spatial dimensions and organisation of mortuary systems can be a sensitive indicator of social variability, including providing information on social variables other than status.

One of the challenges I face is to trace changes in the form of social inequalities and the extent to which the inequalities manifested themselves spatially and temporally at Jebel Moya, while at the same time remaining cognisant of transformations in social structures. The value inherent in the subsequent publications by Caneva (1991), Gerharz (1994), and Irish and Konigsberg (2007) is that important information can still be gleaned from the available materials for descriptive, comparative and analytical purposes. As mentioned earlier, Caneva re-examined a sample of the pottery in the British Museum's collection; Gerharz analysed the composition and distribution of pottery in graves to arrive at a revised chronology. Irish and Konigsberg tested the hypothesis of population heterogeneity using dental samples for the first time. However, the archaeological materials, including the grave and tomb cards, have never been re-examined for social data. Furthermore, none of the studies to date have considered the social aspects of the individual burial assemblages and the distribution of the graves in terms of how the spatial and temporal distributions reflect and inform social organisation at the site.

The problems of re-assembling the data from the differing expedition records are not insurmountable. The records in the Duckworth Laboratory range from the anatomical, grave and tomb cards to archaeological and physical anthropological remains, and copies of relevant documents and correspondences by prior researchers. Therefore, in conjunction with drawing upon already published works and unpublished correspondence, I am currently digitising the Duckworth Laboratory archives. To date, I have around 1650 scans which encompass all the available grave cards as well as select anatomical and tomb cards. Ultimately, all the records, which I currently estimate to exceed 10,000 cards, will be digitised and ArcGIS employed to plot spatial and

temporal distributions of grave and grave goods.

To date, I have digitised 340 burials and groups of burials, all but 50 of which were from the final season of excavation and from the Eastern area of the basin. The 50 exceptions were from the second season.

Where stated on the excavation cards, this sample breaks down as follows in order of stratigraphical placement:

Stratum A (top): 4
Stratum B: 240
Stratum C: 43
Stratum D: 40

One hundred and thirty of these burials are supine and 31 prone. There are a total of 14 infants, 37 juveniles, 22 young adults and 233 adults. Of the total number of graves, 104 have accompanying grave goods of which 6 are from the second season of excavation.

One Stratum D burial (1487) had an accompanying n-trolite bead necklace and an ivory bracelet on the right wrist. Other Stratum D burials had OE beads, cow bone remains and pottery. There are similar occurrences in Stratum B, supporting Gerharz's (1994) stance that stratigraphical dating is problematic due to erosion and later burials in the now-exposed lower ground.

My task is made harder in needing to sort out the number of inconsistencies between what is written in Addison's 1949 publication and what is actually written on the excavation cards, between how the cards are organised and what excavation season the cards refer to, and between the statistics reported by Addison and the data I am currently compiling. In addition to the difficulties already outlined by Addison (1949), here is one example from my own experience to date: there is a box marked "grave cards" which I have determined are not part of the tomb or object registers by the third season's field director, Dixon, but rather those of the anatomist Ray.

As outlined above, there are impressed ceramics with similar decorative motifs to the Khartoum Neolithic, suggesting some form of cultural connection. Simple impressed decorations are common between the late Butana Group, Jebel Moya and early Shaqadud Cave, although rim band decorations are absent in the Butana Group while it continued at Jebel Moya, in the Gash Group and in the early Shaqadud Cave (Winchell 1992, 531). Taken at face value and combined with Caneva's (1991) analysis, these factors are suggestive of decorative traits shared between eastern Sudanese and central Nile Valley cultural complexes which had their own principal components. At the same time, neither Winchell nor Gerharz physically re-examined the pottery samples and Caneva's sample size was limited. The Jebel Moya pottery curated in the British Museum, the Duckworth Laboratory and the Petrie Museum needs to be re-examined to determine the tools used to make the motifs and to re-identify the sherds, vessels and fabric in order to more accurately place the ceramic sequences and practices in a wider regional context.

Summary

Ultimately the resulting structural and spatial analysis of the nature of burial distributions, both human and animal, and grave goods will be placed into temporal context through comparative analysis against Gerharz's chronology, the potential application of new C¹⁴ dates and re-examination of the ceramic and artefact relationships between Jebel Moya and surrounding regions. It is uncertain at this stage whether new, limited test excavations will be required as there is an enormous volume of available material and excavation reports which require re-analyses. These analyses will assist in developing a framework through which to test existing hypotheses of cultural variability as well as to ultimately re-evaluate the nature of social complexity at Jebel Moya and in the wider southern Gezira plain.

The Jebel Moya massif was the site of a well-situated camp which may have served to bind together different communities migrating from the surrounding regions with each group representing independent lineages. This cultural backdrop, fed by regional sources, may explain the diversity reflected in the burials. These are all possible scenarios which will be explored as my cataloguing of the excavation records and analysing continues. I remain confident that I will be able to present preliminary results in the next couple of years which will place this framework and the most fruitful avenues of investigation before the wider Africanist community for debate.

Acknowledgements

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