

Jebel Moya: Initial re-investigation into the archaeology of south-central Sudan

Introduction

[slide] The Jebel Moya massif lies in the southern part of the Geriza Plain between the Blue and White Niles, about 250 kilometres south south-east of Khartoum. The massif has a perimeter of around 11 kilometres. It is here that Sir Henry Wellcome, the founder of the Wellcome Trust, was informed about a potential archaeological site. The site, which he began excavating in January 1911, is known as Site 100 and lies in a basin-like valley above the plain near the edge of the massif to the north-east.

[slide] The excavations encompassed four seasons until 1914. Around a fifth of the estimated 10.4 hectares was excavated. The excavations, halted by the onset of World War 1, 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. However, the anatomical, grave and tomb cards from the 2nd to 4th sessions represent a major resource which has been under-exploited.

The excavation still stands as one of the largest British excavations undertaken in North-East Africa. The majority of the materials, including the skeletal remains and the excavation records, were shipped to the UK. The skeletal remains and the records are curated here in the Duckworth Laboratory.

The nature of the site provides an unique opportunity to re-evaluate the nature of social evolution in the southern Geriza Plain, dating from the 5th to late 1st millennium BC. 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.

What is presented today is a preliminary introduction to Jebel Moya and my research to date.

Geology

[slide] Reconstruction of past conditions along the White Nile provides evidence for a wetter climate south of Khartoum in the early Holocene. Subsequently, there has been incising of some 2 meters over the past 8000 years, interrupted by high levels around 4400 BC, 1300 BC and 800 BC.

The Blue Nile was a seasonal river considered to be responsible for substantially building the flood plain deposits of the Geriza clays. The seasonality and severity of the floods had decreased by the middle to late Holocene.

There have been no comprehensive geological studies undertaken on Jebel Moya and the surrounding plain between the Niles.

Previous investigations

[slide] The excavations were not resumed after being interrupted by the First World War. Subsequent to Sir Henry Wellcome's death in 1937, the Wellcome Trust appointed Frank Addison to author the final archaeological report which was published in 1949. Mukherjee, Rao and Trevor wrote the second volume on the physical anthropological remains, published in 1955.

Addison initially dated Jebel Moya from 1000 – 400 BC, which corresponded to much of the then known Napatan period of Upper Nubia. This 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 modified his dating in a 1956 publication to 500 BC – 400 AD on the basis of Meriotic objects such as eggshell, as well as painted, stamped and wheel-made pottery also being present in some of the graves.

[Slide] Subsequent to Addison's publications, Rudolf Gerharz revisited the issue of chronology in his doctoral dissertation and subsequent 1994 published monograph. Whereas Addison's determination of chronology was based on the vertical sequence of graves, Gerharz determined it was their horizontal distribution which provided a more reliable chronology. Based on re-seriation of the graves, Desmond Clark's radiocarbon dates and nearby sites with a similar artefact repertoire, Gerharz hypothesised three phases: Phase I, about 5000 - 3000 BC, is characterised by diagnostic dotted wavy-line pottery, identified by Isabella Caneva in a prior study of a pottery sample curated at the British Museum. [slide] Phase II is dated between 3000 and 800 BC, and is regarded as the classical Jebel Moya culture encompassing the surviving site features and many of the graves. Phase III is bracketed between 800 - 100 BC [slide] and has the first appearance of imported items encompassing, amongst others, faience, glass and semi-precious stones.

Mukherjee's report demonstrated that all age groups and sexes were represented with no evident pattern of disposal or depositional bias. However, Addison's hypothesis of the population of Jebel Moya being biologically diverse was not upheld. Neither did it find any support in a recent 2007 study by Joel Irish of the dental characteristics which instead reinforce the conclusions reached by Mukherjee of population heterogeneity from Phase 2 onwards.

State of the evidence

[slide] Jebel Moya provides an unique opportunity to study the changes in demography, cultural complexity and social differentiation through understanding the inhabitants' cultural identity and their location in time and space. The massif is in the middle of a large plain and therefore is a standout feature in the landscape. Its choice as a burial location could have been because it helped define the peoples' relationship with the landscape which was the source of wealth, power and survival. In other words, there was a relationship between lands for habitation, grazing and cultivation and the graves.

There are regularities which link a society and how it disposes of its dead, interweaving a complex web of socio-economic and ideological variables. At the same time, there are no set rules concerning the degree of mortuary differentiation within any given society. 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.

There is little evidence of the first known use of Jebel Moya beyond the limited number of pottery sherds identified by Isabella Caneva as dotted wavy-line pottery dating from the 5th millennium BC. The timing is coincidental with the high level recorded from the White Nile around 4400 BC which may have forced communities away from the river areas to exploit the Plain to greater effect, though there is no solid evidence yet to back it up.

[slide] In contrast to Gerharz, who relied on Frank Addison's published registrar of graves, I have revisited the expedition's records. I have recently completed the digitisation of the records, cross-correlating the information with Frank Addison's original site report (1945), and combining the information to produce a more accurate and expanded Registrar of Graves suitable for analysis. The resulting dataset will shortly be used to undertake spatial analysis of the graves and grave goods using ArcGIS. Finally, discussions for undertaking the first ever radiometric dating (AMS) of skeletal samples are under way; if possible, this dating will greatly assist in placing the relative chronology of Jebel Moya onto a more secure, absolute footing. For now, however, I do not have the luxury and currently rely on relative dating as well as the two dates obtained by Desmond Clark from charcoal not in association with any burials.

[slide] Some of the preliminary numbers arising from revisiting the records can be seen on the slide. Essentially, there is an agreed number of 2883 graves recorded, both excavated and unexcavated. There is a discrepancy of 1 in the number of excavated graves – 2792 as opposed to 2791 – due to a grave having been recorded twice by the excavator. There is a larger difference in the number of recorded human burials: 3137 for Addison and 3155 for me. Interestingly, only 2 of the 3155 human burials were dismembered.

Furthermore, there are 28 joint dog-cattle graves, not 25, which are broken down as 10 dogs and 18 cattle. There are only 5 joint animal-human burials. Their dates are unknown, although they are situated in the area designated by Gerharz as being from the 1st millennium BC.

[slide] The age breakdown is as follows: 2510 adults, 106 young adults, 258 juveniles and 41 infants. Of the recorded burials, 216 were buried prone, the majority being adults, 1697 supine, 344 on the left side and 415 on the right side.

[slide] Of these, 1540 of the supine burials were elongated, 239 of those buried on their left, 285 on their right and 174 prone. There were 26 crouched burials. The highest proportion of elongated burials are thus from those who were buried supine, followed closely by prone. The high number of supine elongated burials is unique for the Sudan.

[slide] The bodies were also buried in numerous cardinal directions: 258 to the north, 590 to the north-west, 243 to the north-east, 278 to the east, 599 to the west, 155 to the south, 244 to the south-east and 370 to the south-west. The majority of the burials were thus facing either in the

direction of somewhat north or west. What is unknown at this stage is how the cardinal directions breakdown between burials assigned to different time periods and I have yet to examine the associated grave goods. It remains possible that Jebel Moya was an aggregation site for lineage segmented purely pastoral societies, as hypothesised by Gerharz for his Phase II. However, I have been unable to find examples of African nomadic societies with long-term fixed burial grounds. Comprehensive surveys have not yet been undertaken in the immediate surrounding plain; there may be evidence of contemporary settlement remains or of mixed economies, such as the cultivation of wild sorghum. In other words, the habitation remains and non-burial lithics and pottery in the valley may have been indicative of periodic occupation by semi-sedentary communities for specific rites and burials of select individuals.

Further thoughts

[slide] Early on, from the 3rd millennium BC onwards, funeral rites periodically erased the landscape within the basin, transforming the temporarily-inhabited settlements into burial places of collective memory. This funerary process erased the individual dead in favour of the community, the collective memory, over most of the excavated valley. The communities also had active links with surrounding regions. Randi Haaland has hypothesised that select later Jebel Moya pottery, dating from the 3rd millennium BC, bears close similarity to pottery from Rabat, a site a short distance away to the west. The remaining Jebel Moya pottery have been described as “incised and rocked” ware, an unspecified category containing, amongst others, comb-picked designs and other sherds bearing connections with C-Group and Kerma pottery and later Meroitic pottery. The different styles present in the site’s middle assemblage probably reflect its broad temporal range. It has been hypothesised by Desmond Clark and others that there are stylistic similarities between the Jebel Moya assemblages and the Butana Industry in the Atbara drainage some 340 kilometres to the east north-east, with Frank Winchell’s more recent analysis showing some similarities in simple impressed decorations and band decorations between Jebel Moya and sites to the east and north-east. Taken at face value, these factors are suggestive of decorative traits shared between eastern Sudanese and central Nile Valley cultural complexes which are had their own principal components.

This process evolved further in the first millennium BC where trade links, either direct or through intermediaries, were established with the Napatan and Meriotic societies to the north. Furthermore, the burial rites changed, being confined to the east and north-east of the valley, suggesting perhaps less transitory habitation of the other parts. Either way, a greater distinction probably evolved between burial and non-burial areas, reflected in increased wealth deposition in certain graves and perhaps more of an emphasis on the individual in death.

I therefore suggest that Jebel Moya was a place where death was marked in the landscape. Engraved, death was re-experienced by the event and the location. There was the re-use of material culture in ritual activities bringing together ideological and cosmological activities, providing a sound foundation and reference point in the landscape intermittently over a sustained period of a few thousand years. [slide]