[For PROJECT GALLERY]

Jebel Moya: new excavations at the largest pastoral burial cemetery in sub-Saharan Africa

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New excavations at the Jebel Moya cemetery in Sudan reveal extensive evidence for Meroitic-era occupation, providing valuable data on contemporaneous diet, migration, exchange and population composition in sub-Saharan Africa.

Jebel Moya is the largest known pastoral cemetery in sub-Saharan Africa. Located 240km south south-east of Khartoum, Sudan, it was excavated from 1911–1914 by Henry Wellcome, the founder of the Wellcome Trust. It is a multi-phase site with deposits dating back to c. 5000 BC. At 10ha in size and having yielded more than 3100 human burials, Jebel Moya provides scope for exploring the interactions between indigenous pastoral and external traditions on the southern boundary of the contemporaneous Meroitic state (Brass 2015, 2016). In October 2017, the *University College London–University of Khartoum-NCAM Expedition to the Southern Gezira* undertook new excavations. A key aim is to perform modern, targeted sampling and recording, and archaeobotanical, artefactual, zooarchaeological and osteoarchaeological analyses—including aDNA, isotopes and AMS dating.

Five trenches were excavated to systematically sample surviving archaeological deposits (Figure 1). Trenches 1, 2 and 4 (Figure 2) were excavated in 10cm spits and the stratigraphy recorded. Each spit was sampled for archaeobotanical remains. Trench 3 targeted the excavation of an eroding burial (see below).
<FIGURE 1,

Trench 1

Measuring 2×2m, it was placed on the western side of the valley and was excavated to a depth of 0.9m (Figure 3). Finds included Meroitic-era ceramics and animal bones, and a horizon of scattered stones (including one quern).
<FIGURE 2,

Trench 2

Measuring 2×2.5m (Figure 4), it was situated near an eroded gully that shows considerable stratigraphic depth. The gully has late Mesolithic ceramics at the base, followed by Neolithic and subsequently Meroitic-era pottery in reverse order. This was the deepest trench excavated to below the Meroitic-era stratigraphy (*c*. 1.5m), and one of the richest in charcoal (recovered through flotation) and finds of all types. Sediment samples for phytoliths were also taken. Apart from a quern, lithics, animal finds and abundant pottery, the finds included a clay (probably a goat) figurine (Figure 5) recovered from below 1m and preliminary analysis dates it either the early Meroitic-era occupation, or the end of the previous phase of occupation.
<FIGURE 3,
<FIGURE 4,

Trench 3

This trench was situated around a partially exposed burial eroding out of a slope (Figure 6). A probable female aged 25–35 years, the individual was supine, facing right, with the hands placed between the legs. No pathological changes were observed. The dentition was complete, except for ante-mortem loss of the lower central incisors. Dental attrition was minimal, although advanced labial attrition and surface polishing of the extant incisors could indicate the use of the teeth as a tool. Calculus deposits were observed mostly on the premolars and molars, and carious lesions affected the right maxillary canine and first premolar. Samples were collected for isotope, radiocarbon and aDNA analyses.

<FIGURE 5,

Trench 4

This trench was placed near the eastern edge of the site on the southern side of an erosional gully, which had exposed bones (animal) and a large quern also revealed in the trench (Figure 7). The trench's sediments contained abundant ceramics and charcoal, as well as beads and lithics. Sediment samples for phytoliths were taken from both the natural strata and a possible residue on the quern surface.

<FIGURE 6,

Trench 5

Two meters to the west of Trench 1 is a stone-ringed tumulus. A 2×2m trench encompassed a corner of this tumulus and was taken down to the first compacted surface. No below ground features or cuts were exposed to confirm this as a burial mound. Current interpretation is that the mound was built on the ground surface, after the formation of the compacted surface had begun. A ring of stones was then placed around the mound.

Flotation and wet-sieving program

Systematic flotation was performed on 40 samples using a washover bucket method through a 250 micron mesh. This yielded charcoal, seed and fruit remains. They are being analysed at UCL's archaeobotany laboratory.

Conclusion

This is the first time that occupational units at Jebel Moya have been properly excavated and documented. The scarcity of African pastoral burial complexes and the size of Jebel Moya makes this a very valuable archaeological resource. Jebel Moya offers valuable information on diet, landscape movements, exchange, and population composition.

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Compliance with Ethical Standards

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Figure captions:

Figure 1. View towards the south-west indicating locations of Trenches 1, 2 and 3.

Figure 2. Trench 1 stratigraphy. 0.5m scale; trowel points north.

Figure 3. Trench 2 stratigraphy. 0.5m scale; trowel points north.

Figure 4. Views of probable goat clay animal figurine from Trench 2.

Figure 5. Trench 3 after surface cleaning, with eroding north-west oriented burial on slope.

Figure 6. Trench 4, east-facing section at the end of excavations, including a massive quern.

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