

The First Notes on the Second Khartoum Mesolithic Cemetery at Jebel Sabaloka (Sudan)

Lenka Varadzinová^a and Ladislav Varadzin^{a,b}

The site of Fox Hill (SBK.W-20) constitutes the second locality in the Sixth Nile Cataract region where a large communal burial ground of Early Khartoum hunter-gatherers was partially uncovered. In several aspects, this cemetery resembles in its characteristics the Early Khartoum burial ground explored between 2012 and 2015 at the site of Sphinx (SBK.W-60), located some 4 km to the north-east. The co-occurrence of these burial grounds with intensively occupied coeval settlements as well as the characteristics of the burial rite enable us to interpret these complex sites not only as mere places of life and death, but also as centres of collective identity based on social memory.

KEY-WORDS: Communal burial grounds, early Holocene hunter-gatherers, Early Khartoum culture, Sixth Nile Cataract, Sudan

INTRODUCTION

The prehistoric landscape of the western part of Jebel Sabaloka and the Sixth Nile Cataract region consists of more than thirty sites of early to mid-Holocene dating that are mostly set on granite hills that dot the foothill zone of the mountain (Fig. 1a). They are of different types and at an early stage of the field research were organised into a three-level hierarchy (Suková and Varadzin 2012: 126). With core sites that occupied the top of the hierarchy, the presence of human burials was defined as one of the distinguishing features. Between 2012 and 2015, investigation focused on the settlement site of Sphinx (SBK.W-60) located at the western edge of the mountain and attributed to the Early Khartoum culture (or Khartoum Mesolithic; *c.* 9000–5000 BC), where remains of *c.* 51 individuals from *c.* 300 estimated burials were uncovered (Varadzinová

^a Czech Institute of Egyptology, Faculty of Arts, Charles University, Celetná 20, 110 00 Prague 1, Czech Republic; e-mail: slenka.varadzinova@ff.cuni.cz; ORCID 0000-0001-7060-8597

^b Institute of Archaeology of the Czech Academy of Sciences, Prague, Letenská 4, 118 01 Prague 1, Czech Republic; e-mail: varadzin@arup.cas.cz; ORCID 0000-0003-2650-6168

and Varadzin 2017; Varadzinová *et al.*, in prep.). In 2017 and 2018, we returned to another core site at Fox Hill (SBK.W-20) situated 4 km to the south-west of Sphinx to explore the cemetery detected there in 2011 (Suková and Varadzin 2012: 122–124). In this paper, we present the first characteristics of this recently explored late prehistoric burial ground as can be provided prior to completion of archaeological and anthropological analyses and, at the same time, reflect on its significance for the study of early Holocene hunter-gatherer societies in Central Sudan and beyond.

THE SITE AND EXPLORATION OF ITS BURIALS

Fox Hill is located at an equal distance of 1.2 km to the south-west of the mountain and to the west of the present-day bank of the Nile (Fig. 1a). It occupies a comparatively large granite outcrop with 16 naturally defined elevated platforms and terraces with an occupation area of 11,650 m² in total (Fig. 1b). Previous surveys of these platforms brought to light remains of intensive occupation during the Early Khartoum culture (c. 9000–5000 BC) and, unlike the situation at the site of Sphinx, also during the Early Neolithic (c. 5000–3800 BC).

The first human burials at the site (B.1 to B.3) were discovered in 2011 in Trench 3 (4.2 m²) explored on Terrace 3 with a view to ascertaining the thickness and character of archaeological deposits (Suková and Varadzin 2012: 123–124, Plate 7; Fig. 1b–d). Other human remains were found in 2012. First, in Trench 5 (2 m²) on Terrace 14, which is of small size, elevated and exposed, but rather peripheral with respect to late prehistoric settlement (Fig. 1b), we found the badly preserved human bones of at least one individual in a flexed position (B.4), with the remains at a depth of c. 15 cm below the present-day surface surrounded and underlain by granite cobbles and boulders (Suková and Varadzin 2012: 124). Then, human teeth and fragments of a mandible were found in a secondary position in Trench 9 (8.9 m²) at the eastern edge of Terrace 1 (at the foot of the slope rising up to Terrace 3; Fig. 1b); they were collected at a depth of 5–10 cm below the present-day surface in layer SU2. The first proper exploration targeted at burial activities at Fox Hill was commenced in 2017 with excavation of two trenches on Terrace 3 (Fig. 1c, 1d): Trench 21 (11 m², max. depth 0.75 m), which was situated right next to Trench 3, and Trench 22 (21 m², max. depth 0.6–0.75 m) delimited 11 metres or so further to the south; the exploration of the latter trench was completed in 2018.¹ Trenches 3+21 and 22 were found to be located right within the limits of a burial ground used during Holocene prehistory for intensive and apparently long-term burying. To the north of Trenches 3+21, Trenches 17 (1 m²), 23 (2 m²) and 24 (1 m²) were excavated; in these, however, only prehistoric settlement remains were uncovered (Fig. 1c).

¹ Overviews of fieldwork during these two campaigns can be found in Varadzinová *et al.*, (2018; 2019).

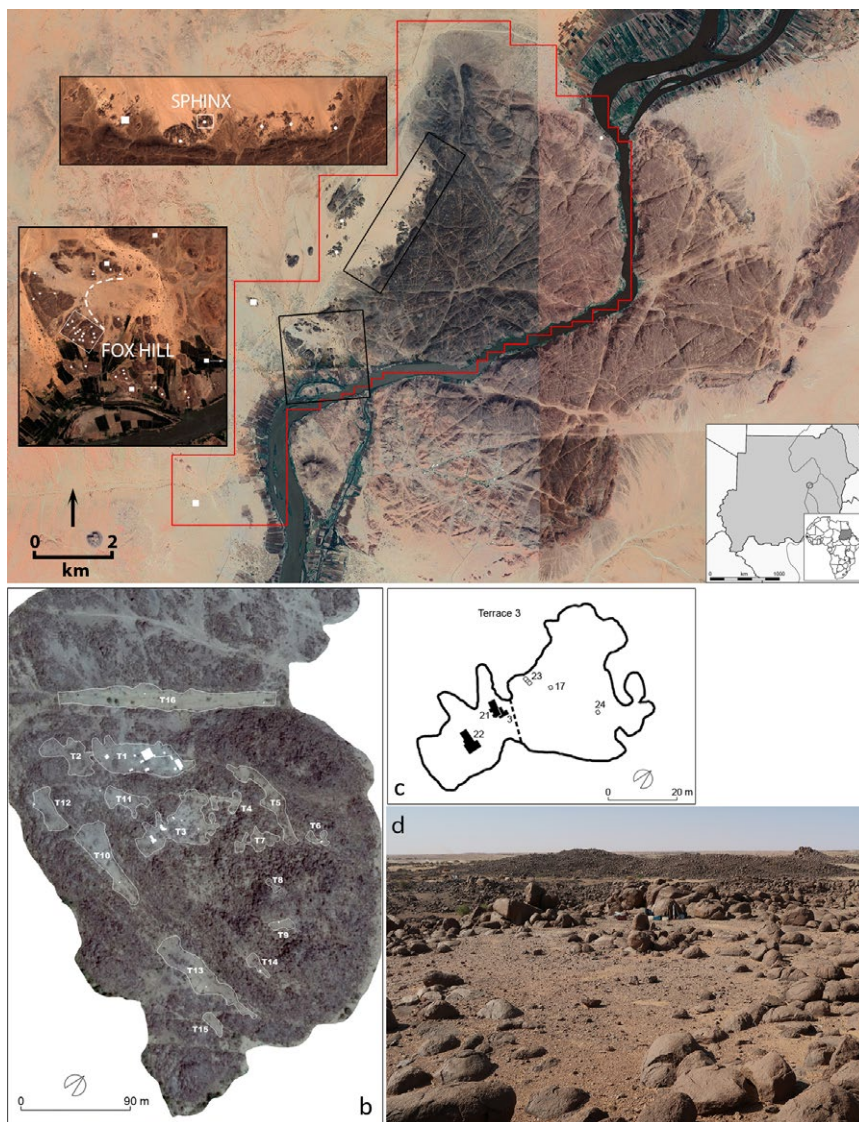


Fig. 1. a – Jebel Sabaloka with the locations of Fox Hill and Sphinx in the research area of the mission of the Charles University in Prague (red line).
 Background Google Earth 2013, 2019, updated by L. Varadzin;
 b – detail view of Fox Hill, with the locations of occupation terraces and excavated trenches.
 Background Google Earth 2016, updated by L. Varadzin based on Varadzinová *et al.*, 2018; 2019;
 c – plan of Terrace 3 at Fox Hill, with trenches containing human burials shown in solid black.
 Drawn: L. Varadzin based on Varadzinová *et al.*, 2018; 2019;
 d – Terrace 3 prior to excavation in 2017 in view from southeast. Photo: L. Varadzinová.

Trenches 21 and 22 were excavated in sectors 1 × 1 m or less and, within these, in 5-cm-thick horizontal spits unless stratigraphic units were detected. All the excavated material was dry-sieved using a 4-mm mesh and all finds were recorded according to trench, sector and mechanical/stratigraphic unit or in a greater detail, as the case may be, or according to grave context. When exploring burial relics, we differentiated *burials* (B), e.g., primary inhumations *in situ*, and *loose bones* (LB), which included all the other occurrences of human remains, such as loose redeposited bones (e.g., LB 9/2017), articulated remains (e.g., LB 15/2017), but also the disarticulated remains of an apparently complete individual (LB 12/2017; Fig. 2b). Therefore, it is probable that after completion of anthropological analysis the number of individuals unearthed so far and the information on burial practices will increase and become more diversified. In 2018, the skeletal remains in Trench 22 were excavated and documented together with a physical anthropologist Isabelle Crevecoeur (UMR 5199 PACEA, CNRS, Université de Bordeaux, Pessac Cedex, France) who devoted special attention to taphonomy and burial rite (see Varadinová *et al.*, 2019). Burials and distinct groups of loose bones were recorded in several levels in the course of gradual uncovering and were located by means of a total station within the established site grid. Beside standard drawn, photographic and textual documentation, selected cases were photographed for the purposes of photographic 3D models. Some situations were sampled for archaeobotanical, sedimentological and geological analyses.

FIND SITUATION IN TRENCHES 3+21 AND 22

The upper part of the trenches under excavation was most often made up of undifferentiated deposits about 20 to 40 cm in thickness intermixed with settlement debris. The first traces of burial pits normally began to appear in the lower parts and became more visible with the increasing depth from the surface. Nevertheless, both fills of the burial pits and the deposits into which they were sunk continued to contain considerable amounts of settlement debris down to the level of bedrock. Together with burials, we uncovered also a number of settlement features (storage pits and post holes, pits of irregular shapes etc.), which we identified at differing elevations or stratigraphic levels; some of them interfered with the existing burials. The stratigraphic situation in Trenches 21 and 22 is well illustrated by the sections on Fig. 3. There one can see settlement deposits that overlay burial pits (both distinguishable and indistinguishable from their fills) and deposits into which the burials had been cut. Whereas the latter seem to contain only artefacts datable to the Early Khartoum culture as the latest, in the upper deposits we also found some artefacts of Early Neolithic dating. Thus, it is obvious that the burial ground had been established on Terrace 3 after some time had lapsed since its very first Early Khartoum occupation and that – after some time

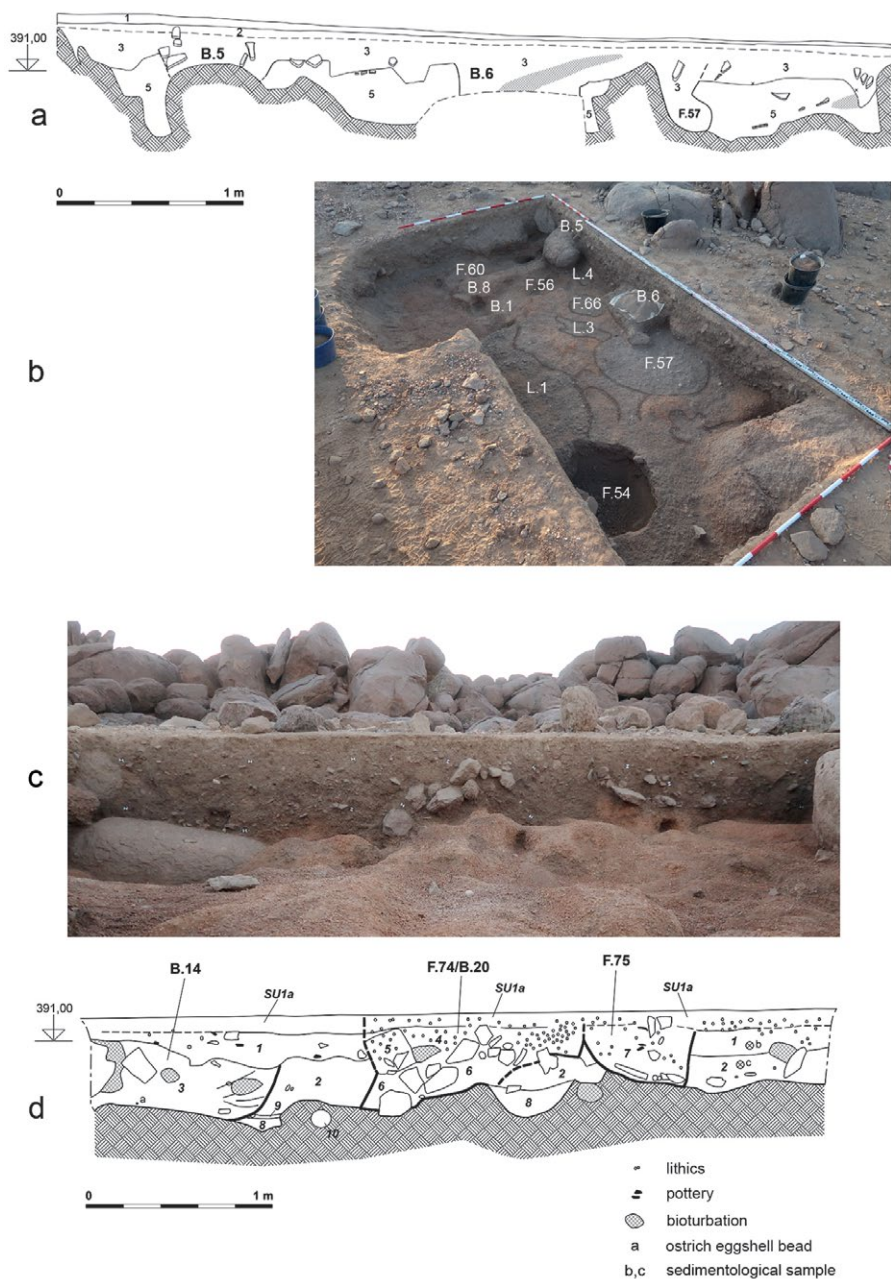


Fig. 3. Stratigraphy in Trenches 21 and 22: a – southern section of Trench 21 prior to excavation of B.5 and B.6; b – lower planum in Trench 21; c–d – eastern section of Trench 22. B = burial; F = feature; L = locus; SU = stratigraphic unit. Author: L. Varadzin.

– the area was re-occupied by Early Khartoum/Early Neolithic settlement. Mainly due to the absence of surface fixtures (such as pavements or floors), it is difficult to determine – only on the basis of the available stratigraphic data – whether the burial activities were contemporaneous with the settlement, or whether the use of the area for burying excluded simultaneous use of the same space for settlement; this issue should become clearer after chronometric cross-dating of the material from settlement and burial contexts.

In total, on Terrace 3 we recorded 26 primary inhumations *in situ* and 21 groups of loose bones since 2011. The state of preservation of the skeletal remains differed markedly. In Trenches 3+21, six burials (B.1–B.3, B.5, B.6 and B.8; Fig. 4a–4d) and two groups of loose bones (LB 1/2017 and LB 4/2017) were found. These finds concentrated in the eastern and southern parts of the trench (Fig. 3b), while the northern and western parts of Trench 21, on the contrary, showed no evidence of human burials at all. Many more remains come from Trench 22, where we recorded 20 burials (B.7, B.9–B.27) and 19 groups of loose bones (LB2, LB3, LB5–LB9, LB11–LB16 in 2017 and LB1–LB6 in 2018; Fig. 2). They occurred unequivocally in the highest densities in the western part of the trench, where superimpositions between burials and groups of loose bones, including frequent cases of interference, were also noted to be most frequent.

BURIAL RITE

Outlines of **burial pits** were clear only when they had been excavated into the eluvium. They were of oval or irregular shape that corresponded to the outer perimeter of the corpses (e.g., Figs. 2a, 4h) and they usually widened towards the terrain surface (Fig. 3a, 3d). The **grave constructions** could be assessed only in cases where rocks had been used (we lack direct evidence for use of organic materials; nevertheless, their presence is indicated by the taphonomical study of skeletons). Grave constructions using rocks (usually small- to medium-sized pieces of local granite, but also pieces of lithic artefacts, in particular cores, and upper and lower grinders) were noted with 16 out of 26 burials (62%) and also with several groups of loose bones. In the present state of knowledge, the following types of grave constructions can be tentatively defined.

- (1) **Stone lining**, both continuous and discontinuous, running along the perimeter of burial pits, were noted in three burials (12%) – B.10, B.26 and B.27. In two cases (B.26 and B.27), the stones were positioned directly over the peripheral parts of skeletons, which attests to their arrangement after the bodies had been deposited (Fig. 4h).
- (2) **One more or less compact layer of stones** covering the whole or a part of a burial was ascertained in four cases (15%), with the stones either touching the bones (B.9, B.13), or placed above the burial in a partly refilled burial pit (B.1, B.22; Fig. 4d – right).



Fig. 4. Varied types of burials and grave constructions uncovered in Trenches 21 and 22:
 a – stone pile over B.5, the arrow points to the fragment of a vessel shown in Fig. 4c;
 b – B.5 in a tightly contracted position achieved most likely through some kind of bandage;
 c – fragment of a globular vessel with a rim and Dotted Wavy Line decoration;
 d – a circular arrangement of granite cobbles, lithic artefacts and fragments of lower grinders above the upper part of B.8 (left) and larger stones covering B.1 (top right);
 e – B.6 with two shells of Nile bivalve (marked with arrows);
 f – burial of a child B.19; g – examples of stone beads found with B.19;
 h – burials B.22 (top), B.27 (centre) and B.26 (bottom) during exploration. Author: L. Varadzin.

(3) A flat **stone positioned directly on the head** was found in B.11; however, as the lower part of the body was disturbed by later burial activities, we cannot rule out that this stone was part of a more extensive cover; for this reason, it is not clear whether we can speak of a separate type of grave construction in this case. (4) A specific and very pronounced type of grave construction is represented by **stone piles**, e.g., elongated heaps consisting of several layers of stones reclining on one another and forming free-standing constructions. They were ascertained in the case of seven burials (27%) in which they rested directly on the skeletons – B.5 (F.67), B.12, B.20 (F.74), B.21 (F.76), B.23 (F.72), B.24 (F.71) and B.25 (F.73; Figs. 2a, 2b, 4a). Feature F.75 protruding from the eastern section of Trench 22 constitutes another example of such a pile (Figs. 2a, 3c, 3d); for the time being no articulated human remains have been found in association with this feature – nevertheless, these may be located beyond the limits of the trench. (5) A **ring** made of granite cobbles, fragments of lower grinders and lithic artefacts was ascertained above the head and upper part of body of B.8 (Fig. 4d); however, we lack certainty as to whether to include this as a separate type, as it could also constitute the remains of a stone pile partly disturbed upon deposition of B.1 that entirely removed the lower part of B.8 (Fig. 4d).

The **position** of the bodies can be tentatively determined in 24 cases. Only one burial (4%) was in an extended position on its back – this is the case of B.20 which was found beneath stone pile F.74 that protruded from the eastern section of Trench 22 and of which no more than the almost complete lower limbs located within the trench could be recorded (Figs. 2a, 3c, 3d). In all the other cases (96%), the corpses were flexed, with six burials (26%) tightly contracted, e.g., in a position indicating possible use of wrapping or binding (B.2, B.5, B.7, B.13, B.23 and B.25; Figs. 2b, 4b).

The **type of deposition** can be ascertained with 21 individuals: four rested on their side (19%), four with their chest to the ground (19%) and 13 on their back (62%); nevertheless, it is probable that in some cases the latter two positions could have resulted from the secondary collapse of the trunks from a position lying on the side. Burial B.14 was positioned face down (Fig. 2a). Of the 21 ascertainable cases, 12 flexed burials had their legs turned to the left (57%) and nine to the right (43%). The position of the hands varied and ranged from a location in the pelvic area to a position in front of the face; in the case of B.27 (Fig. 4g), the right hand was placed beneath the head. In the **orientation of body** (determined with 27 individuals, including LB 12/2017), the quadrant between south and west clearly predominated (17 cases; 63%), with the segment between east and northeast representing the second most frequent orientation (six cases; 22%); the remaining five eighths of possible orientations were apparently marginal (four burials; 15%).

Apart from the above-mentioned burials, the site yielded also remains of essentially complete, but disarticulated individuals in what can be termed “**bundle burials**”. So far, one such bundle of bones was identified in the western part of Trench 22 (LB 12/2017;

Fig. 2b). It was closely related to a primary inhumation (B.7), with which it also shared identical orientation; as there were no traces of interference between them, they may have been deposited into the same burial pit.

GRAVE-GOODS

Grave-goods, ascertained only with primary inhumations, were found with eight out of 26 individuals (31%). B.5 and B.6 were provided with two shells of Nile bivalves each – beneath the chin and on the neck in the case of B.5 (Fig. 4b) and in front of the face and beneath the skull with B.6 (Fig. 4e), and B.14 had one shell beneath the skull. A nearly complete lower grinder was placed with its active (concave) surface directly on the body of B.26 (Fig. 4h). Burial B.27 had one shell of Nile bivalve on the skull and several beads from ostrich eggshell around the head and in the neck area, while the right coxal bone rested on a lithic core, evidently placed into the grave intentionally. With B.16, about half of a large granite lower grinder was placed directly on the remains, again with its concave side downwards (Fig. 2b). Of especial interest is B.24 – in addition to the fact that this burial was one of those covered by stone piles, the individual was provided with a large piece of red ochre sandstone, several pieces of lithic artefacts, one upper grinder and a deposit of several bones of a large wild mammal placed over the burial inside the pit (Fig. 2a). Of importance from chronological point of view is the burial of a child B.19 (stratigraphically above B.27) found with 14 stone beads of red and dark-green colour (of red quartz and amazonite?; Fig. 4f, 4g); of these, one bead was found in the neck area close to the skull and another one by one of the femurs; the other pieces were obtained after sieving of the bottom of the burial pit. In their character, these beads fall likely within the Neolithic (e.g., Arkell 1953: Plate 41, 1–4). In the case of other burials, other artefacts, in particular lithic artefacts, were found in contact with the corpses; however, these were only rarely in positions that would indicate their intentional placement. As the burial ground was situated on the site of an earlier settlement, these artefacts may constitute mere accidental intrusions.

DATING

Chronometric dating of the burials is not available yet. At this moment, we can rely only on stratigraphic observations, grave-goods and some (so far not completely processed) finds in the fills of burial pits. Frequent superimpositions or interferences between burials and groups of loose bones bear witness to long-term use of the burial ground. The stratigraphic position of the burial ground between settlement deposits in the upper and lower parts of the trenches confines the period of its use to the period of the Early Khartoum

culture and, at the latest, the Early Neolithic. The use of shells of Nile bivalves as grave-goods finds analogy at the Mesolithic burial ground at el-Barga (Honegger 2004: 28–29). More importantly, in the fill of the burial pit of B.5 (c. 25 cm above the skeleton), we found a larger fragment of a vessel decorated with Dotted Wavy Line motif (Fig. 4a, 4c) whose state of preservation (sharp fractures etc.) suggests a rather short interval between the production of the vessel and the burial. In sum, these facts point to the formation of this cemetery during the Early Khartoum period. The singular burial B.19 with stone beads, however, indicates that some burial activities might have taken place in this area also during the Neolithic. Nevertheless, there is no evidence for the presence at Fox Hill of richly equipped Early Neolithic burials such as those known from Kadero, el-Ghaba or Kadruka (e.g., Reinold 2001; Chłodnicki *et al.*, 2011; Salvatori *et al.*, 2016).

DISCUSSION

The above-mentioned findings are of preliminary character and therefore we limit ourselves at this moment only to a few considerations. Although more than one burial area from late prehistory may be situated at Fox Hill (see the burial(s) on Terrace 14), burial activities appear to have concentrated in particular on Terrace 3 that also yielded evidence of the most intensive Early Khartoum occupation within this site. The absence of burials in Trenches 17, 23 and 24 in the central and northern parts of Terrace 3 suggests that the burial ground may have occupied roughly the southern third of the terrace and that it was spatially rather coherent; also with a view to the geomorphology of Terrace 3, we estimate that the area occupied by the burial ground may have been approximately 550 m² (Fig. 1c). The marked density of burials with numerous superimpositions attests to its quite intensive and, at the same time, long-term use. Redeposition of bones from disturbed burials, in some cases along the perimeter of subsequent burials (e.g., B.17), suggests a pious regard towards the disturbed earlier remains; in any case these situations indicate a shared awareness that what had once been buried should stay in the ground. We believe that the common denominator of the comparatively varied types of grave constructions employing rocks (lining, covering, stone piles) was the endeavour to signal presence of burials beneath the level of the terrain (we do not rule out the existence of some kind of above-ground markers, but so far no such features have been ascertained) and thus to avoid destruction of earlier burials by later ones, which in other words means that the survivors anticipated future continuation of burial activities. In sum, these aspects allow us to designate this burial ground as a communal one.

In the burial rite, marked variability can be observed in deposition of the bodies, construction of the graves, and in the presence and character of the grave-goods; at present, a hint of regularity can be traced only in body orientations. Further research

should clarify whether this lack of patterning is a sign of inconsistent mortuary customs, or rather a sum of diachronic changes of the burial habits that through gradual superimpositions at one place created what appears today as a somewhat chaotic situation, while in synchronic layers it had much more uniform character. However, in this rather complex situation, given also by the small size of the trenches, one can still observe some indications of inner structure of the burial ground. This is suggested by the existence of less frequented or quite empty tracts that imply division of the burial ground into enclaves of burials, and by the conspicuous accumulation of seven of the eight attested stone piles in the eastern part of Trenches 21 and 22 (Figs. 2a and 4a). The latter has an antipode in the opposite (western) part of Trench 22 which features an accumulation of human remains (also including at least one disarticulated bundle burial) with numerous cases of disturbance, where we recorded, and apparently not incidentally, a much lower frequency of marking of human remains by stones. Assuming that the placing of stones was connected with the protection of corpses, the stone piles then constitute its maximalist form. It was apparently an effective one, as none of the burials secured in this way was disturbed. This, however, necessarily raises the question of why this type of protection was afforded only to some individuals: did they enjoy a special status? Is it a signal of social differentiation within the given community? Only further field and laboratory research will allow this complex question to be addressed properly. Nevertheless, a positive answer is already now suggested by the unique burial B.24 beneath the stone pile F.71 (Fig. 2a).

Fox Hill constitutes one of the most significant sites in the western part of Jebel Sabaloka. With the size of its occupation area around 11,650 m² it surpasses several-fold all the other locations, including the site of Sphinx located only 4 km to the northeast, whose size equates to mere 8% of that of Fox Hill. After Sphinx, field research brought to light the existence of another large Early Khartoum hunter-gatherer burial ground in this area. In a number of respects this burial ground shows many similarities with that at Sphinx which is securely dated within the Early Khartoum culture (Varadzinová *et al.*, in prep.). These similarities include the lack of, at first sight, standardized rules for deposition of the deceased, intercutting of graves with frequent redeposition of bones, some of which bear signs of piety, the presence of clusters of burials separated by empty spaces, as well as several ways of using natural stones and stone artefacts to cover and mark human remains. However, there are clear differences as well, such as the presence of the stone piles at Fox Hill, for which there are no indications at Sphinx (or in published reports from elsewhere in Sudan), and the unequivocal use of grave-goods. Only further research will show to what extent this is the result of the only partial chronological overlap of the two cemeteries. Nevertheless, of greater importance is the fact that, after Sphinx, Fox Hill constitutes the second site where we find apparently very significant co-occurrence of two elements – a long-term and intensive occupation by Early Khartoum hunter-gatherers and, at the same time, an Early Khartoum communal

burial ground. The settlements were provided with cemeteries in which an emphasis was put on the relation to ancestors, on intergenerational continuity and – no doubt – on social memory. These must have played a significant role in the formation of collective identity and in the social stabilisation of the respective human groups.

ACKNOWLEDGEMENTS

The authors thank the National Corporation for Antiquities and Museums of Sudan for their long-term support granted to the Sabaloka (West Bank) Research Project. The paper forms part of *Communities and resources in late prehistory of Jebel Sabaloka, central Sudan: from analysis to synthesis*, a research project supported by the Czech Science Foundation (project no. GA ČR 17-03207S). We dedicate this article to Michał Kobusiewicz in commemoration of his help to us in the very beginnings of our field project at Jebel Sabaloka.

REFERENCES

- Arkell, A. J. 1953. *Shabainab. An Account of the Excavation of a Neolithic Occupation site carried out for the Sudan Antiquities Service in 1949–50*. London.
- Chłodnicki, M., Kobusiewicz, M. and Kroeper, K. (eds). 2011. *Kadero. The Lech Krzyżaniak Excavations in the Sudan*. Poznań. *Studies in African Archaeology* 10.
- Honegger, M. 2004. Settlement and cemeteries of the Mesolithic and Early Neolithic at el-Barga. *Sudan & Nubia* 8: 27–32.
- Reinold, J. 2001. Kadruka and the Neolithic in the Northern Dongola Reach. *Sudan & Nubia* 5: 2–10.
- Salvatori, S., Usai, D. and Lecoq, Y. (eds). 2016. *Ghaba. An Early Neolithic Cemetery in Central Sudan*. Frankfurt am Main.
- Suková, L. and Varadzin, L. 2012. Preliminary report on the exploration of Jebel Sabaloka (West Bank), 2009–2012. *Sudan & Nubia* 16: 118–131.
- Varadzinová, L. and Varadzin, L. 2017. Exploration of the site of Sphinx (SBK.W-60): findings of the 2014 and 2015 field seasons. *Sudan & Nubia* 21: 23–33, 48–49.
- Varadzinová, L., Varadzin, L., Kapustka, K. and Pacina, J. 2018. Výzkum lokality Liščí kopec (SBK.W-20) v pohorí Sabaloka: poznatky z výzkumné sezóny 2017. *Pražské egyptologické studie* 20: 35–45.
- Varadzinová, L., Varadzin, L., Crevecoeur, I., Kapustka, K., McCool, J.-P. and Štůvová, Z. 2019. Výzkum pravěkého osídlení v pohorí Sabaloka v centrálním Súdánú: poznatky z výzkumné sezóny 2018. *Pražské egyptologické studie* 22: 43–53.
- Varadzinová, L., Varadzin, L., Ambrose, S. H., Crevecoeur, I., Havelková, P., Juříčková, L., Kapustka, K., Pacina, J., Pokorný, P., Řídský, J. and Wang, H. in prep. The early Holocene funerary behaviour in central Sudan.

