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## THE TERMINAL NEOLITHIC CEMETERY IN THE FUNERARY LANDSCAPE OF MOG034, MOGRAT ISLAND, SUDAN

### SITE DESCRIPTION

An extraordinary feature has been excavated within the Bronze Age cemetery site MOG034 on Mogratt Island during two field seasons in 2014.<sup>1</sup> The site is characterised by an elongated, north-south orientated ridge and smaller elevated areas surrounding the central area in the south, containing individual graves or groups of burials.<sup>2</sup> Located on the southern

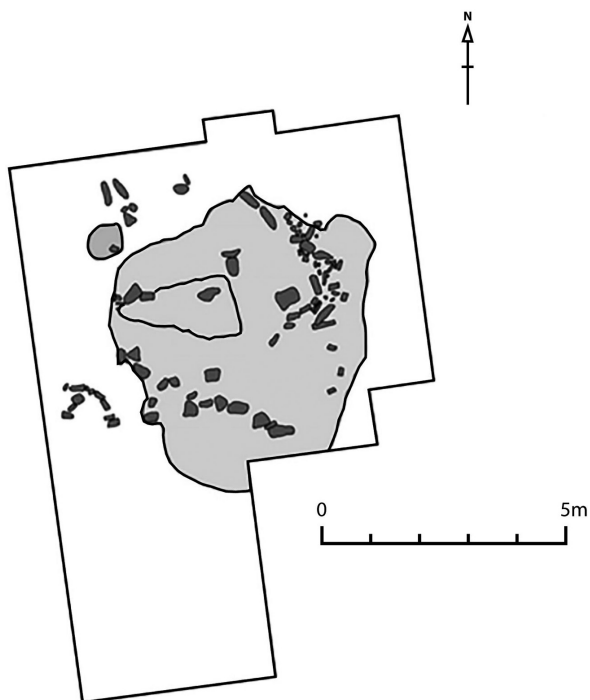


Fig. 1: Plan of the superstructure of F072 (drawing: Gareth Rees)

1 For the preliminary report on MOG034 and feature F072 see Weschenfelder and Rees 2014. The second field season took place in autumn 2014. Many thanks to Gareth Rees, Andrew Greef and Hassan Mustafa Alkheidir (NCAM) who finished excavating feature F072. Thanks also extend to our local staff for their excellent work. I would also like to thank Kerstin Weber, Tina Jakob, Claudia Näser and Gemma Tully for their comments on a first version of this paper, as well as Tina Jakob for the brief palaeopathological analysis in this article.

2 For the site plan see Weschenfelder, this volume.

part of the ridge, feature F072 was only distinguishable as a very shallow mound of about 11 x 8 m NS/EW built of quartz pebbles and a few upright stones of the local metamorphic rock.

Underneath this superstructure, a compact silty-sandy layer with small pebbles and pottery fragments covered the area of the burial pits of 7.5 x 7 m NS/EW. Several medium-sized and larger stones seem to surround this area in the east and south forming a semi-circle. These structural properties could have been part of a shallow tumulus built with an outer stone ring and a filling of quartz pebbles and silty-sandy sediment (fig. 1). This superstructure, which would originally only have covered the central part of feature F072, was presumably only constructed when the burial ground was no longer in use. Some of the

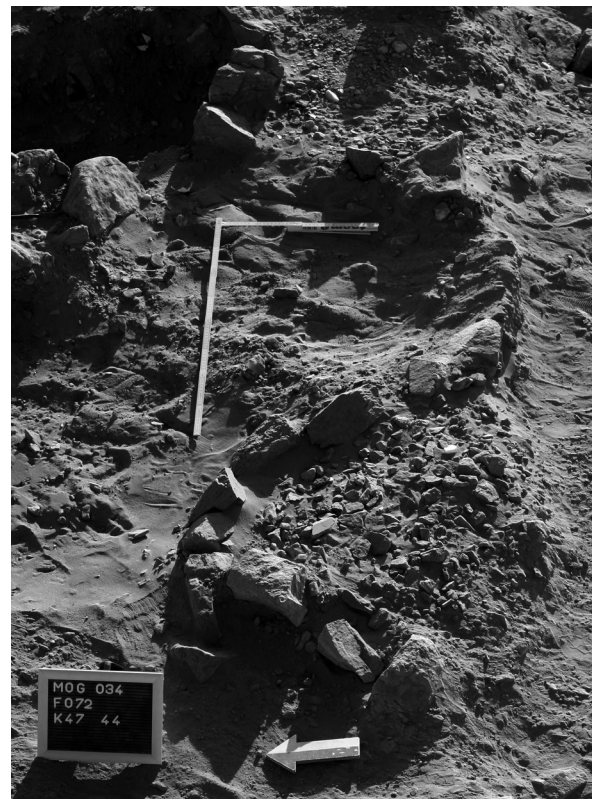


Fig. 2: Individual superstructures of SK13 and SK14 (photograph: Jens Weschenfelder)

peripheral burials (outside of the stone ring) could have been added later and would have been covered by the material eroded from the original mound. Several pits, created by disturbance activities, were easily recognisable during the excavation of the individual burials. Other burials possessed an individual superstructure built of a small stone ring and a compact filling of quartz pebbles and silt; these burials showed no signs of disturbance (fig. 2).

In total, 21 human individuals were excavated, but only five of them had remained intact. The anthropological analysis revealed a high number of non-adults among the deceased. They comprise 13 individuals, namely three infants under the age of two years, eight children up to the age of nine years and two adolescents up to 18 years. These non-adult burials seem to have been placed at the periphery of the feature (fig. 3).

Eight adults – three females, four males and an individual of indeterminate sex – were buried in the central area. The female individuals lay in the western central part close to two infants, while the male individuals occupied the centre and were surrounded by the other non-adults as well as three burials of ovicaprids, which comprised the outermost burials.

The stratigraphical sequence of the feature, which is complex and not easy to disentangle, seems to affirm that the development of the burial ground started from the centre with five adults (three women, two men). They were buried in sub-rectangular pits aligned in an EW-orientated row. The easternmost of them, a male individual, was apparently reburied as a carefully placed but completely disarticulated 'bone bundle' (fig. 4).<sup>3</sup> The other male individual had been buried with a comparatively large number of grave goods made of leather, stone and copper in the centre of the burial ground. The three ovicaprids seem to belong to this early phase of the cemetery and would represent animal sacrifices. They delimit

<sup>3</sup> The 'bone bundle' was placed in a small rectangular niche, open to the south. This pit was too small to contain an adult body, so a secondary burial is most likely. No traces of wrapping were recognised.

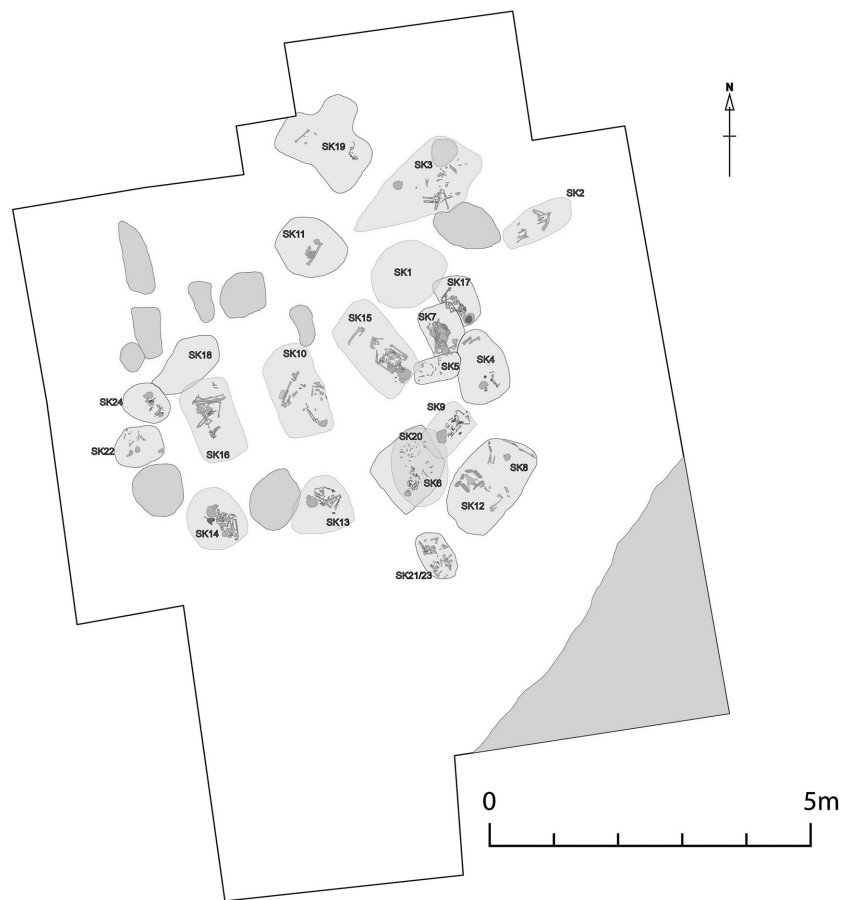


Fig. 3: Plan of the burials of F072 (drawing: Gareth Rees)

the burial ground in the south and the east, lying well outside the assumed stone ring superstructure. The other burials, mainly children and infants, seem to encircle the central area in one or two 'rings'. They had been placed in shallow oval to rectangular pits, cut directly into the bedrock. The (sub-) rectangular pits of the adults are about 1.5 x 0.85m N/S while the non-adults have more oval to (sub-) circular pits of 0.6 up to 1.2m. Body positions vary, including flexed on the left or right side, flexed



Fig. 4: 'Bone bundle' of SK07, layer 5 (photograph: Gareth Rees)



on the back and irregular positions. The level of disturbance of several burials does not allow for the identification of body positions, but the orientation of the non-adults, with regard to the position of the head and the direction of the face, seems to focus towards the central adult burials.

#### PRELIMINARY RESULTS OF THE PALAEOPATHOLOGICAL ANALYSIS<sup>4</sup>

The macroscopic analysis of the individuals from feature F072 revealed high prevalence rates for two non-specific stress indicators – cribra orbitalia (sieve-like perforations of the orbital roof) and enamel hypoplasia (lines of arrested growth on developing teeth). Both conditions can be caused by a wide range of factors, but are commonly associated with malnutrition and childhood disease, including intestinal parasites. However, their presence also indicates the survival of the individual as cribra orbitalia and enamel hypoplasia can only form once the person has recovered.<sup>5</sup> More than half of the non-adult individuals with observable eye sockets (four out of six) had cribra orbitalia, while none of the adults were affected. In addition, three of the six adults (50%) had enamel hypoplasia as well as four of the nine non-adults (44%) with preserved teeth, making this the most prevalent condition in this burial group. While it was impossible to determine the cause of death for any of the individuals, one young adult female had suffered a compression fracture of her tibia (lower leg bone) at the knee joint – an injury that could have been caused by a fall from some height.<sup>6</sup> However, although there was evidence for subsequent infection of the injury, the bone had healed prior to the death of the woman. Ultimately, the demographic structure, with a low age at death for adults and high childhood mortality, in combination with non-specific stress indicators,

4 For a more detailed report see Jakob, this volume.

5 Larson 2015: 33, 44.

6 Solomon et al. 2015: 891.

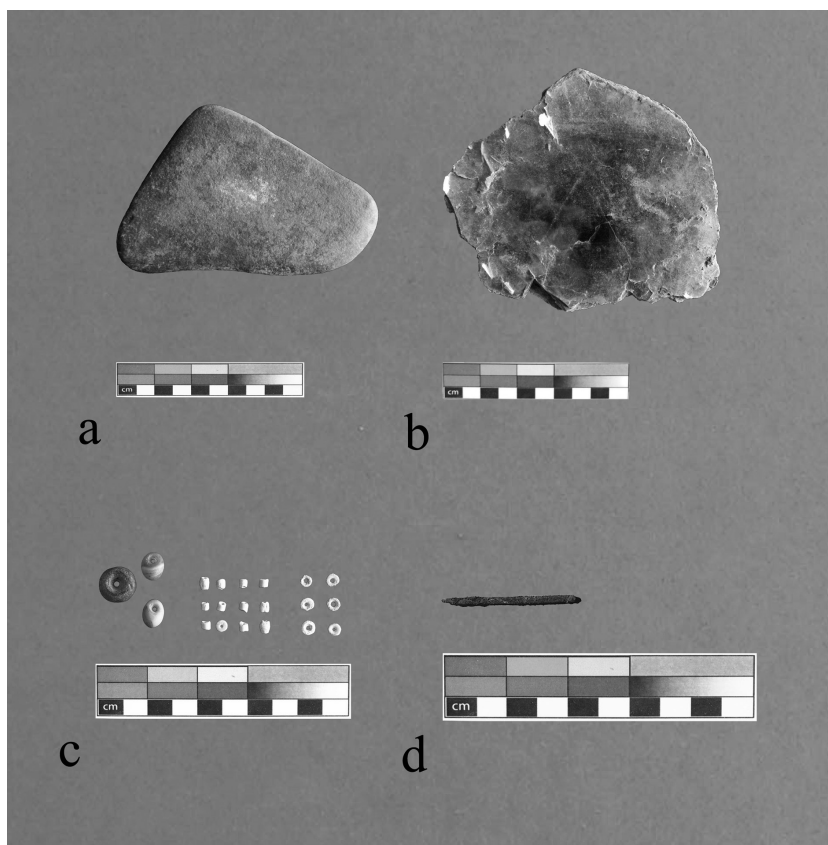


Fig. 5: a) Stone palette with remains of malachite (SK09), b) mica plate (SK10), c) beads (selection from SK09), d) fragment of copper alloy pin (SK15) (photographs: Jens Weschenfelder/Gareth Rees)

demonstrates that life on Mograt Island during the period when the small cemetery of F072 was used, was far from healthy.

#### FINDS<sup>7</sup>

The numerous finds from feature F072 include organic remains, which apparently have originally been bags, pillows and wrappings made of leather next to stone artefacts, such as a globoid quartz hammer stone and a mica plate (fig. 5b),<sup>8</sup> as well as small metal objects, such as a pin fragment (fig. 5d) and a small platelet of copper alloy. All these objects were found in the grave pits, close to the bodies. A triangular stone palette with the remains of malachite powder was placed under the head of a child (F072 SK09; fig. 5a). Beads of different shapes, i.e. flat discs, barrels, balls and pipes made from various stones, ostrich eggshell, faience, red chalcedony and mollusks, were also recovered (fig. 5c). They seem to be

7 The analysis of the finds and the pottery is ongoing.

8 The mica plate belongs to the disturbed burial of two female individuals (F072 SK10A and SK10B), who have been buried in the same pit.

particularly frequent with the burials of non-adults. An infant in the western part of the feature (SK24) was e.g. buried with 57 ostrich eggshell beads at the neck and a small copper alloy ring in the filling on top of the feet. One very special find was a large necklace or belt of a child (SK13) made of 41 Red Sea shells, *Polinices* sp., which is common in Lower Nubian A-Group burial contexts.<sup>9</sup>

#### POTTERY

While many disturbances have been recognised, many of the undisturbed burials were not equipped with pottery, except a single miniature vessel (fig. 6) found with the burial of a child (SK04). Burial customs seem to have stipulated that pottery was placed outside the grave substructures. Most of the recovered ceramics were heavily fragmented, but due to the sealing of the burials by the eroded mound, a few vessels could be reconstructed. The majority of the corpus form open bowls (fig. 7), only a few shapes are closed bowls or jars and pots respectively. Several squat bowls (fig. 8) belonging to a group of heavy impressed/incised ware as well as elongated boat-shaped bowls (fig. 9)<sup>10</sup> are unusual finds in the corpus of pottery known from this region. The common fabric appears to be a Nile clay, with organic temper alongside differing amounts of small to medium-sized quartz pebbles. Many of the vessels have been decorated with comb impressions and a few with incised lines or lines painted in red (fig. 7c). The patterns of impressions include zigzag motifs, triangular (fig. 9a), rectangular and ring-shaped single imprints (fig. 9b), either in a row or in specific patterns placed all over the body. Other sherds show pebble-burnishing on a red slip, comparable to the rippled ware of the Lower Nubian A-Group pottery. A marl clay jar from the centre of F072, possibly belonging to the adult burials, seems to be somewhat older than the previously supposed Old Kingdom date.<sup>11</sup> The squat bowls of the heavy impressed/incised ware, the comb-impressed specimens, the rippled ware, the elongated bowls ('boats') and the marl clay jar all find parallels at Cemetery

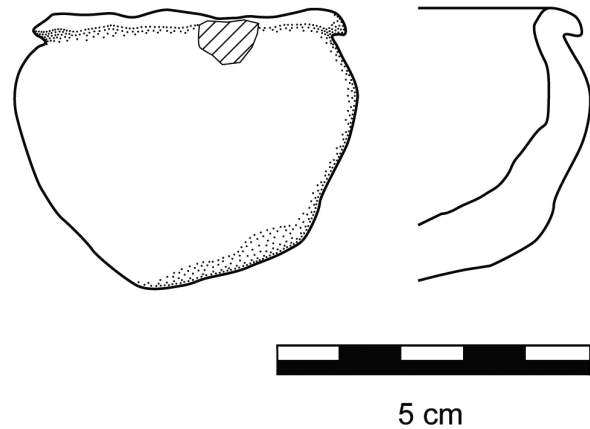


Fig. 6: Miniature vessel from SK04 (drawing: Jens Weschenfelder)

Qustul L, which dates to the end of the 4th and the beginning of the 3rd millennium BC.<sup>12</sup>

#### CONCLUSION

Three 14C dates around 3000 BC,<sup>13</sup> from the grave fillings, further support a date for the feature in the Terminal Neolithic. Hence it seems to represent a transitional phase from the Neolithic to the Bronze Age. It is so far without comparisons on Mográt or the wider region and is therefore of particular interest.

The close similarities in pottery types, as well as the imported marl clay jar and the mollusk beads, suggest a link between the area of Mográt Island, the lower Nile Valley and the Red Sea area. The position of Mográt at the southern end of the desert route from Wadi Halfa, north of the Second Cataract, in conjunction with the connection to the Red Sea, is reflected in this amalgamation of different aspects of the material cultures from these regions. Analysis of the wider relevance of this observation is a task for further studies.<sup>14</sup>

9 Weschenfelder and Rees 2014: fig. 9. Thanks to Joanna Then-Obluska for data on the species and the provenance of the mollusk and eggshell beads.

10 Williams 1986: 218 (c, d, e), 232 (e-i), 384 (d-i) – form group VIII (heavy incised); 310 c, 324 a, b (boat).

11 Weschenfelder and Rees 2014: 152, fig. 10. Williams 1986: 80, 94 (c, d), 222 (h), 302 (a, b), 312 (b, c) – form group X (Egyptian hard pink), storage jars with a short neck, sometimes with a rim that flairs out slightly, usually with a round bottom, rarely with a flat bottom, dated on Cemetery L of Qustul before the First Egyptian Dynasty.

12 Glück 2010: 371. In Lower Nubia these types have been attributed to the Post-A-Group/Proto-C-Group. Williams 1986: 164, 183. Cemetery L in Qustul is dated by Williams to either Dynasty 0 or to the Early Dynastic period in Egypt, roughly equaling the end of the A-Group. Tomb L29 has been classified as one of the first in the sequence of the cemetery due to the appearance of ripple burnished pottery.

13 Weschenfelder and Rees 2014: 153.

14 See also Weschenfelder, this volume.

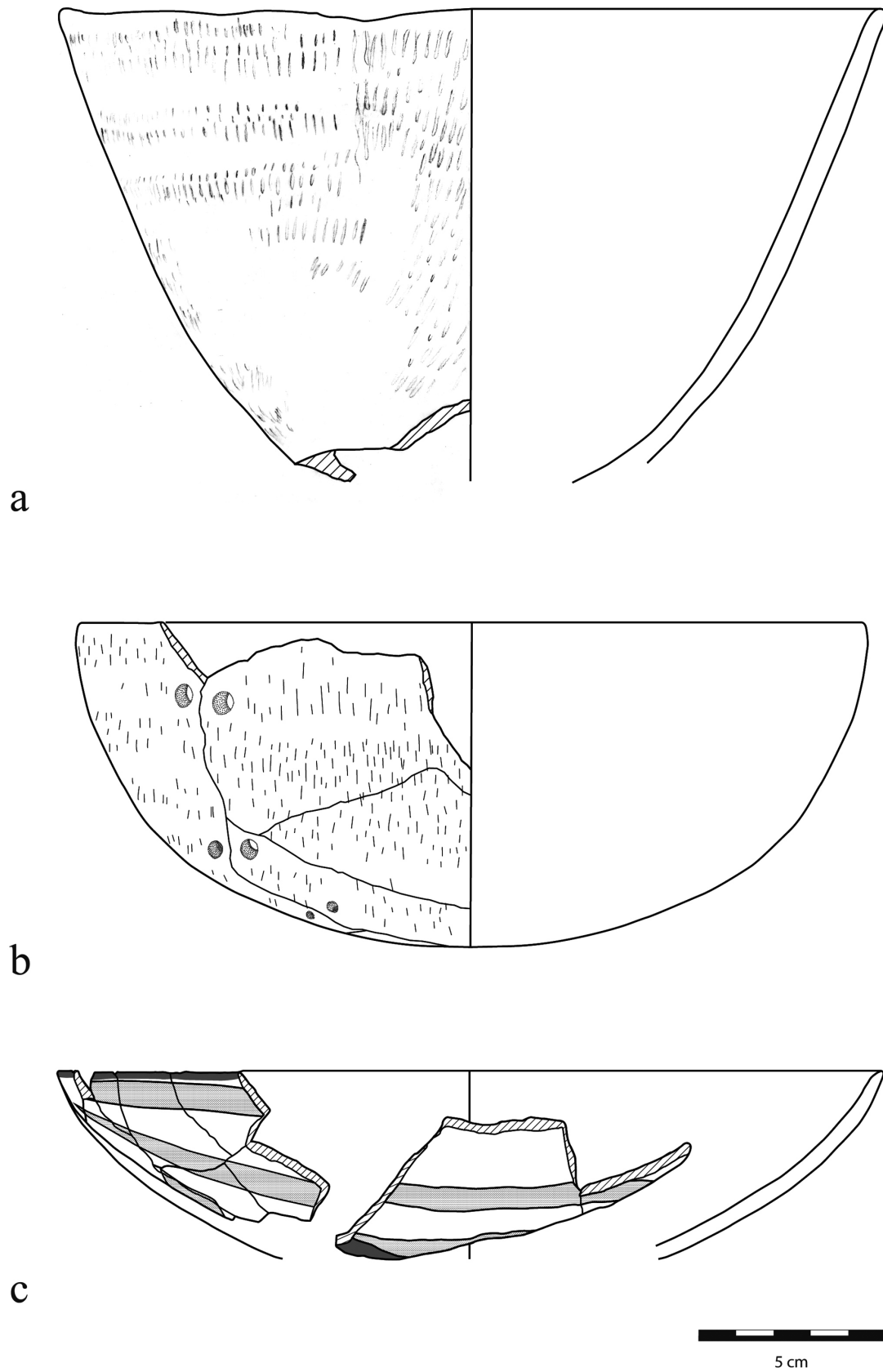


Fig. 7: a, b) Bowls with shallow comb impressions, c) flat bowl with painted red lines (and secondary burning marks) (drawings: Jens Weschenfelder, Kateryna Kortschagina, Kay Kossatz)

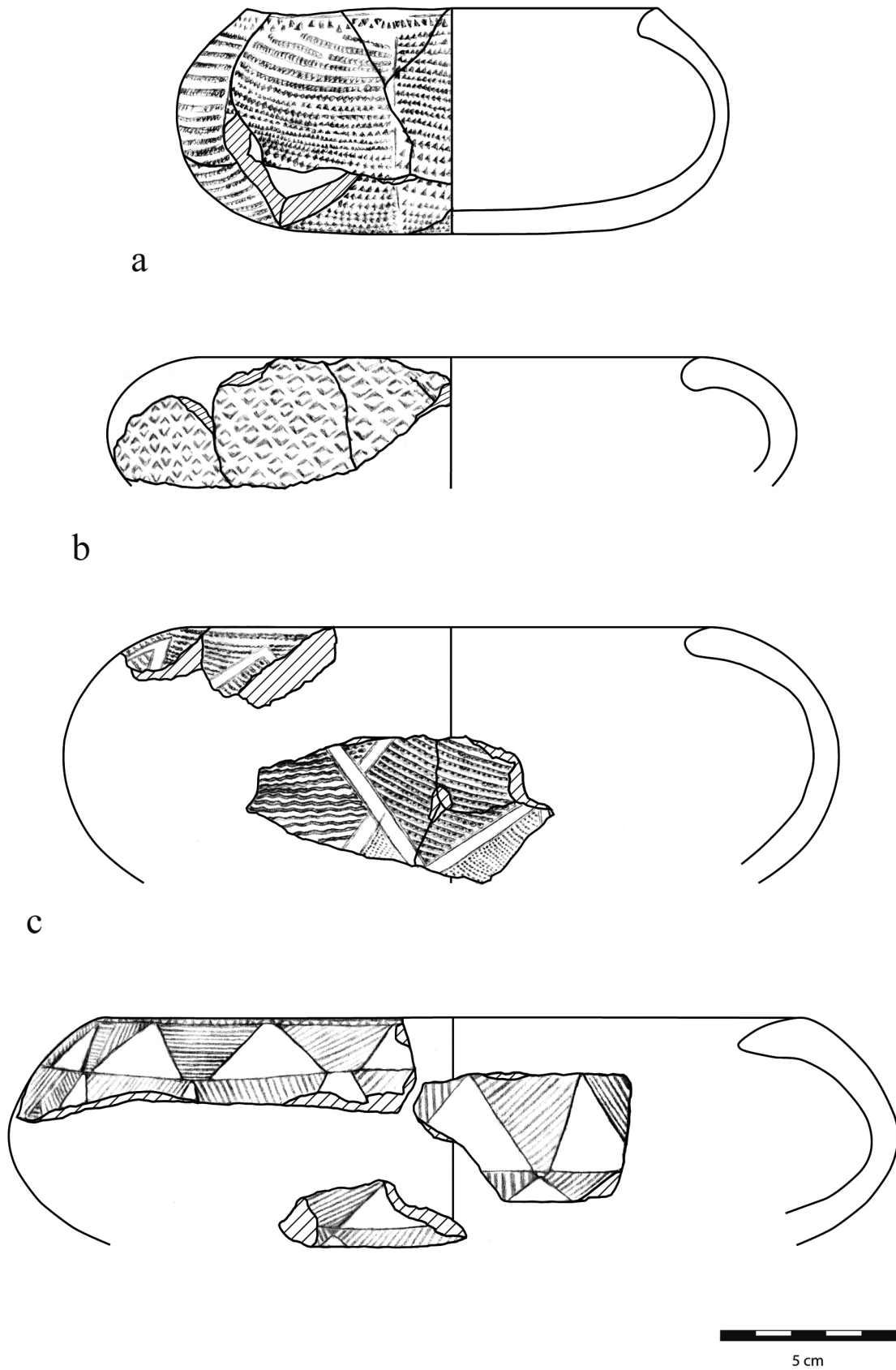
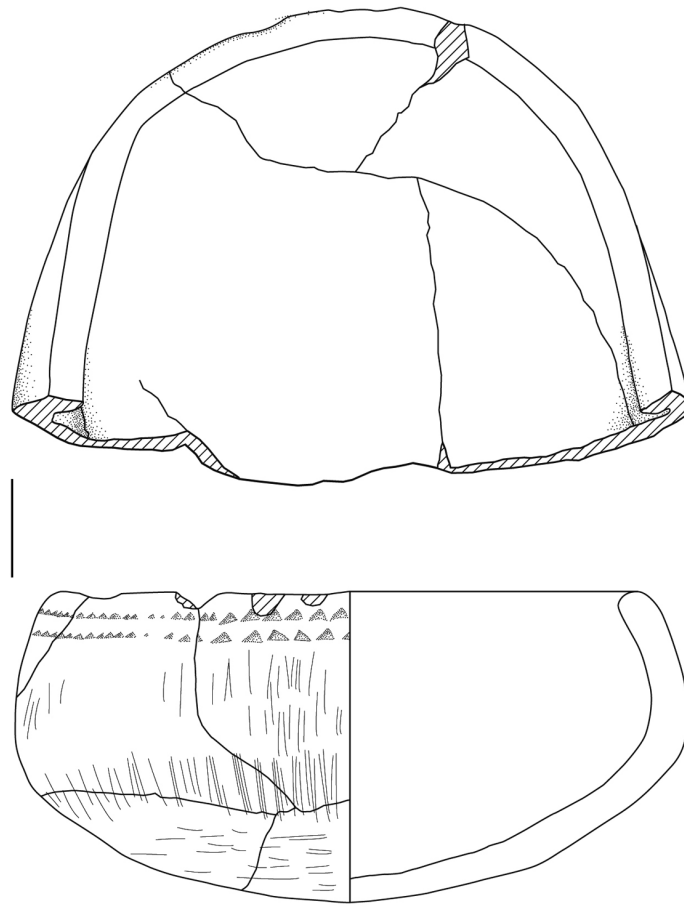
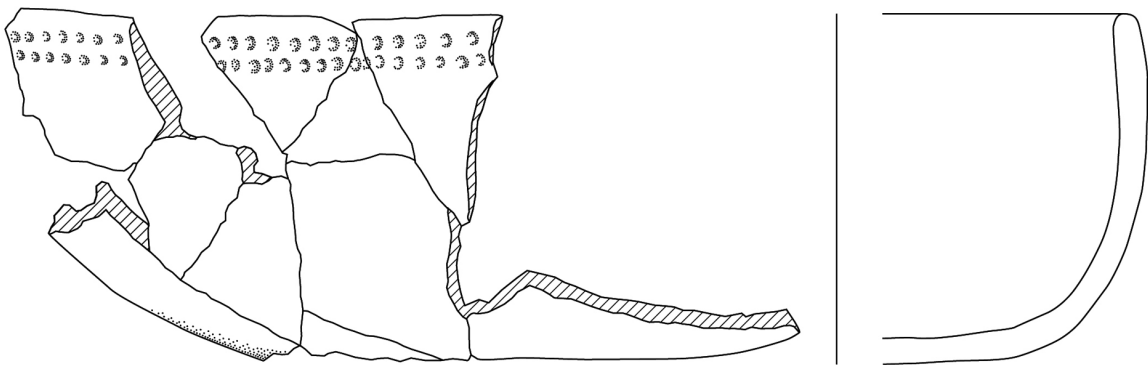


Fig. 8: a-d) heavy incised/ impressed squat bowls (drawings: Jens Weschenfelder, Kateryna Kortschagina, Kay Kossatz)



a



b



5 cm

Fig. 9: a, b) boat-shaped bowls (drawings: Jens Weschenfelder, Kateryna Kortschagina, Kay Kossatz)



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- Rotmeermuschel *Polinices* sp., sind eindeutig nicht-lokaler Herkunft. Mit Ausnahme eines Miniaturgefäßes war keine Keramik direkt mit den Bestattungen assoziiert. Dafür fanden sich zahlreiche Fragmente von ursprünglich außerhalb der Grabgruben platzierten Gefäßen. Bisherige Untersuchungsergebnisse zeigen einen unerwartet variationsreichen Gefäßkorpus auf. Zahlreiche Gefäßformen und Verzierungstypen sowie ein als Import zu identifizierendes Mergelgefäß belegen einen direkten oder mittelbaren Austausch mit Ägypten. Die Belegung des Friedhofs am Ende des 4. bis zum Beginn des 3. Jahrtausends v. Chr. ist sowohl durch das Keramikensemble als auch durch 14C-Datierungen belegt. Dieser in der Region bisher singuläre Fundplatz spiegelt also einen Übergangshorizont vom Neolithikum zur frühen Bronzezeit wider und ist, nicht zuletzt auf Grund seiner hervorragenden Erhaltung sowie der außergewöhnlichen Funde, von großer Bedeutung für das Verständnis der Entwicklung funerararchäologischer Kontexte an dieser Epochenschwelle im Mittleren Niltal.

## ZUSAMMENFASSUNG

Während der Frühjahrskampagne 2014 wurde die für den Friedhof MOG034 außergewöhnliche Struktur F072, eine flache mit Quarzkieseln bedeckte Erhöhung, in einer Testgrabung untersucht und im Herbst desselben Jahres vollständig dokumentiert. Unterhalb des Oberbaus markiert eine unregelmäßig kreisförmige Steinsetzung die vermuteten Grenzen des Tumulus. Ihre Füllung besteht aus schluffig-sandigem Material, kleinen Quarzkieseln und einer großen Anzahl von Keramik-scherben. Insgesamt wurden auf einer Fläche von ca. 7.5 x 7 m 21 Individuen in annähernd runden bis rechteckigen, direkt in das oberflächennah anstehende Gestein gehauenen Grabgruben bestattet. Hinzukommen kommen drei Gruben, die Schafe/Ziegen enthielten. Vereinzelt sind individuelle kleine Steinsetzungen als Oberbau belegbar. Die dreizehn nicht-adulten Grablegen gruppieren sich andeutungsweise um ein geschlechtsunbestimmtes Individuum sowie die Bestattungen von vier Männern und drei Frauen. Die paläopathologische Analyse der Skelette belegte zahlreiche Pathologien wie Schmelzhypoplasien, Frakturen und Abszesse. Grabbeigaben waren vornehmlich mit den nicht-adulten Bestattungen assoziiert. Es handelt sich dabei vor allem um Schmuck, d.h. Perlen aus Straußeneischalen, Muscheln, Fayence und unterschiedlichen Gesteinen, sowie um wenige Metallobjekte. Vereinzelt Objekte, wie die