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Old Kingdom Settlement Remains at Elkab (Upper Egypt) Preliminary Report on the 2009 Field Season

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SUMMARY – Since 2009, a new research project of the Royal Museums of Art and History has focussed on the pre-Pharaonic and Pharaonic habitation of the site of Elkab (Upper Egypt). During the first season of work a geophysical survey was conducted in the area immediately to the west of the temple and bordered in the north by the late Old Kingdom double curved wall, the so-called Double Walls of Elkab. The geophysical survey was aimed at locating the most promising areas with habitation remains and the results were subsequently verified by archaeological excavations concentrating on five test trenches. Even though preliminary, the results of the 2009 field season clearly corroborate the assumption of the presence of early Old Kingdom settlement remains at Elkab and their relatively good state of preservation. This confirms Elkab's significant position within the settlement patterning of the ancient Egyptian state during the 3rd millennium BC.

SAMENVATTING – Sinds 2009 focust een nieuw onderzoeksproject van de Koninklijke Musea voor Kunst en Geschiedenis op de pre-faraonische en faraonische bewoningsgeschiedenis van de site van Elkab (Boven-Egypte). Tijdens een eerste campagne werd een geofysische survey uitgevoerd in de zone ten westen van het tempelcomplex en ten zuiden van de late Ouderijksmuren, de zogenaamde Dubbele muur van Elkab. Doel van deze survey was het localiseren van de meest belovende zones waar bewoningsresten zouden kunnen worden aangetroffen. Deze resultaten werden daarop geverifieerd door middel van archeologische opgravingen waarbij vijf testsleuven werden uitgezet. De voorlopige resultaten van deze eerste campagne in 2009 blijken de veronderstelling van de aanwezigheid van bewoningsresten uit het Oude Rijk te staven. Bovendien zijn deze resten relatief goed bewaard. Dit bevestigt de belangrijke rol die Elkab moet gehad hebben binnen het bewoningspatroon van de Oudegyptische staat in het 3^{de} millennium v. Chr.

RÉSUMÉ – Depuis 2009, les Musées royaux d'Art et d'Histoire ont entamé un nouveau projet de recherche qui se focalise sur l'histoire de l'habitat pré-pharaonique et pharaonique du site d'Elkab (Haute Égypte). Durant une première campagne de terrain, une prospection géomagnétique a été exécutée dans une zone située à l'ouest du quartier des temples et ceinturée au nord par un double mur incurvé datant de l'Ancien Empire, dit le Double Mur d'Elkab. Le but de cette prospection géomagnétique était d'identifier les endroits les plus prometteurs contenant des vestiges d'habitat. Ces résultats ont été vérifiés ensuite par des fouilles archéologiques, se concentrant sur 5 tranchées d'essai. Même si ils sont préliminaires, les premiers résultats de la campagne de 2009 corroborent clairement l'hypothèse de la présence de vestiges d'habitat de l'Ancien Empire à Elkab et attestent d'un état de conservation relativement bon. Ceci confirme la position importante d'Elkab dans le modèle d'habitat de l'ancienne Égypte au cours du 3^e millénaire avant J.C.

INTRODUCTION

Until recently, very little was known about the habitational history of the Upper Egyptian site of Elkab, ancient Nekheb, during the Predynastic era (c. 4,500 to 3,050 BC) and the Pharaonic period (c. 3,050 to 332 BC). Since 2009, an ongoing research project of the Belgian Archaeological Mission from the Royal Museums of Art and History in Brussels has focused on the habitation area of the town, within the Late Period Great Walls of Elkab and immediately west of the temple area. The first campaign of excavation and geophysical (magnetometer) survey in this area ran from November 9 to December 10, 2009. This contribution presents the preliminary results of that field season¹.

ARCHAEOLOGICAL SURVEY WITHIN THE AREA
ENCLOSED BY THE DOUBLE WALLS

The main objective of the 2009 season was to commence a survey of the area that is partly enclosed by a late Old Kingdom double curved wall, the so-called Double Walls of Elkab², with the aim of locating archaeological evidence for pre-Pharaonic and/or Pharaonic habitation (Fig. 1). The area under investigation starts just west of the temple area and extends north to the Double Walls and west to the Great Walls³. This area of c. 3 hectares was originally the location of the “tell” (habitation hill) of the ancient town, which had almost completely been levelled during the 19th century by the “sebbakhin” digging for fertilizer⁴. A visit to this area in December 2000 and careful observation of the topography, however, indicated that the surface of the ground within the Double Walls is still several metres above the landscape to the north and east of these walls. Moreover, a limited trial excavation in this area by the English archaeologist F. W. Green in c. 1903 demonstrated that a charcoal-rich level could be traced here at a depth of 1m, a level which contained Old Kingdom ceramics and animal bone⁵. Several underlying levels, equally characterized as charcoal-rich layers, also appeared to contain Old Kingdom archaeological material. On the basis of this limited test excavation, it appears that the virgin sediment is situated at a depth

¹ The team consisted of the following members: Dirk Huyge (director), Joanne Rowland (assistant director), Wouter Claes (archaeologist), Bryan Kraemer (archaeologist), Stan Hendrickx (ceramicist), Pieta Greaves (conservator), David Baeyens (draughtsperson), Tomasz Herbich (geophysical surveyor), Wojciech Kasprzyk (geophysical surveyor) and Robert Ryndziewicz (geophysical surveyor). The Supreme Council of Antiquities was represented by Nagwa Abdel Mageed Abdel Basit Ahmed from the Antiquities’ Inspectorate at Edfu.

² HENDRICKX & HUYGE 1989, n° 17; HENDRICKX, HUYGE & NEWTON 2010, p. 160-164.

³ HENDRICKX & HUYGE 1989, n° 18.

⁴ HENDRICKX, HUYGE & NEWTON 2010, p. 162-163.

⁵ GREEN 1905, p. 262-264.

of almost 4m below the current surface. Although later habitation layers have definitely been removed in this location since antiquity, it appeared that there was still a good chance to detect early habitation traces *in situ*. The archaeological survey undertaken within this area consisted of a geophysical survey and small scale test excavations.

GEOPHYSICAL SURVEY

The objective of the geophysical survey was to search for settlement remains not visible on the surface. A fluxgate-type gradiometer by Geoscan Research, model FM256, 0.1 nT resolution, was used for this purpose. The magnetic prospection covered two areas (Fig. 1): in Area A, bordered by the Double Walls in the north, by the Great Walls in the west, and by excavation dumps and the temple area in the south and the east, the prospection encompassed c. 2 hectares; in Area B, to the west of the Great Walls, an area of c. 0.12 hectares was surveyed.

Area A

Most of the anomalies seen on the magnetic map merely reflect the uneven ground relief of this area, essentially caused by the activities of the “sebbakhin” and do not seem to indicate the presence of architectural remains. Lowered values of magnetic field intensity appearing as oval or elongated shapes up to 5m in diameter reflect depressions and are to be seen over practically the whole area. Anomalies with raised values correspond to the edges of the hollows and mounds or dumps between the depressions. The long and narrow linear anomalies recorded in the southeastern corner of grid square D3 (Fig. 2), the northern part of B4 and a very weak anomaly in the central part of B6 may reflect the presence of walls at a shallow depth. Indistinct anomalies of a form suggesting some sort of architecture were recorded in the flattest area of the prospection in A4 and A5. The magnetic map also reveals a number of oval anomalies of high amplitude typical of features characterized by concentrations of burned clay (e.g., furnaces or concentrations of pottery) or slag, for example in square G4, in the southwestern corner of G3, along the southern border of F3, in C1, D1, C2 and C6, and in the northeastern corner of C7. On the ground, in places corresponding to some of these anomalies, there are lumps of heavily baked clay or mounds of burnt soil. Anomalies detected in B1, D6 and the northwestern corner of D9 correspond most probably to metal objects. Uniform values of magnetic field intensity along the northern border of the prospected area (between B1 and A3 and A8 and B10) are caused by a more or less homogeneous layer resulting from wall collapse.

Area B

The objective of the survey in this area was to trace the expected continuation of the Old Kingdom Double Walls to the west of the Late Period Great Walls (Fig. 1). The magnetic mapping demonstrated no features (at a depth less than 1m) that could be considered to represent an image of this wall. Instead, the survey recorded a number of oval features up to 6m in diameter, forming a band up to 15m wide running alongside the Great Walls. The sizeable amplitude of anomaly values corresponding to these structures suggests that the architecture is made of heavily baked brick. There is no corresponding evidence for these features on the surface, although in a few spots, heavily burned lumps of clay can be seen on the ground. The remaining anomalies in this area correspond to rubbish containing metal or concentrations of baked brick.

TEST EXCAVATIONS

A total of five locations were selected for test excavations during the 2009 season with the aim of establishing the distribution and extent of possible habitation remains across the survey area (Area A defined above) (Fig. 1).

Trench 1

Trench 1 (15 x 5m, the long axis running northwest-southeast) was located to the northwest of the temple area and directly south of the Old Kingdom silo area⁶ previously investigated by the Belgian Archaeological Mission in 1955⁷ and 1968-1969⁸. In addition to the excavation of Trench 1, the silo area directly north of the trench was partly cleaned (Fig. 3) in order to establish a connection between the 1955 excavation plan and the 2009 excavations. According to the 1955 report, the mud-brick and packed-clay structures in this area represented storage facilities dating to the early Old Kingdom. The new test excavation was partly intended to locate additional features with associated artefacts that could corroborate this interpretation and dating.

In the northern half of the trench, rectangular feature C2⁹ with packed clay walls

⁶ HENDRICKX & HUYGE 1989, n° 19.

⁷ HENDRICKX & EYCKERMAN 2009.

⁸ DEMUYNCK & VERMEERSCH 1978.

⁹ Here and elsewhere, the letter C followed by a number refers to the context number given during the 2009

(c. 7.80m x 1.75m), labelled Structure “T” by the 1955 mission, was re-excavated with the intention of clarifying its function and date of construction (Fig. 4). The excavation of a series of trenches in which Structure “T” was installed, produced only very mixed deposits of ceramic material which range in date from the Old Kingdom to the Coptic period. These deposits most likely represent the backfilling of the 1955 (and/or earlier) excavations. Similarly, the interior of Structure “T” contained an upper layer of fill with worked flint, animal bones and ceramic sherds ranging in date from the Old Kingdom to Coptic times. Layer C5 beneath, however, was compact, seemingly undisturbed and contained ceramics dating exclusively to the (early) Old Kingdom, including sherds from a bread mould, stroke-polished Marl A1 bowls, a Marl A1 storage jar fragment, and some large fish vertebrae. Beneath this layer was the well-preserved cobble pavement C11. It most probably represents the original floor level of the structure that had not been reached by the previous excavators. The purpose of Structure “T” is enigmatic, although its proximity to the silos suggests that it may also have served a storage purpose. Its narrow width and undisturbed cobble pavement, however, do not support the hypothesis of an animal pen. Another possibility, based upon the presence of the cobble pavement, is that the structure may have served as a decantation basin. Similar pavements, consisting of carefully laid out large ceramic sherds, have been found in relation to circular constructions uncovered during the 1955 excavations which have been interpreted as decantation basins¹⁰. In the absence of more conclusive evidence, however, a definitive interpretation of the function of Structure “T” is not currently possible.

The southern half of Trench 1 was overlain with a thick, dense layer of mixed ceramics dating to the Old Kingdom, New Kingdom and Roman period, which is most likely a dump from earlier excavations of the temple (possibly in 1937-1938). A second less dense layer beneath contained Old Kingdom, Middle Kingdom and Roman period ceramics, including some fragments of firedogs. Within this layer, the two shallow circular depressions C9 and C10 contained animal bone, ceramics and concentrations of charcoal. These features are most probably the remains of temporary hearths. The ceramics date exclusively to the Old Kingdom, however, there were no diagnostic pieces that would allow for a more precise date. In the southeast corner of the trench, at the same level as the hearths, the small circular construction of packed clay C13 was found and the concave depression at its centre suggests that it most likely served as a vessel stand.

In the southwestern corner of Trench 1, a 2 x 2m test pit was sunk in order to investigate the underlying stratigraphy. In this pit, and below the above-mentioned layer which contained Old Kingdom features, worked flint, stone and ceramics were found distributed over a depth of more than 1m, within a thick yellowish brown deposit of aeolian sand (also encountered around the trenches in which Structure “T” was constructed). The ceramic material from this level is homogeneously Predynastic in nature, consisting mainly

field season.

¹⁰ HENDRICKX & EYCKERMAN 2009, p. 10, fig. 7.

of Nile C sherds from storage jars of Petrie's types R81-R84 (Fig. 5a-b)¹¹. These jars are characteristic for Naqada IIC–D, which corresponds well with the presence of a number of Marl A1 sherds (Fig. 5c) of Petrie's late class¹². A single Nile B1 black-topped body sherd and two Marl A1 red-polished sherds are also not in contradiction with a date of Naqada IIC–D. Other finds include a shell and some fragments of sandstone and red ochre. The remains of two possible hearths were detected at a depth of almost 2m below the current surface. Evidently, this test trench has considerable potential with regard to documenting the Predynastic occupation of the site.

Trench 2

This trench (3 x 2m, extended to 4 x 4m) was situated next to the eastern edge of the western part of the Great Walls. In this area, magnetic prospection indicated the presence of a dense concentration of fired material. Upon investigation, this concentration proved to be a thick surface layer with chronologically mixed ceramics undoubtedly resulting from “sebbakhin” disturbance. Beneath this layer, however, homogeneous early Old Kingdom material was found. Several stratigraphical phases seem to be present, but upon first inspection the pottery appears to be uniform between all of them (Fig. 6). As this pottery is identical to that found in Trench 3, the ceramic material from Trench 2 will be discussed in the next section.

The earliest stratigraphical phase in Trench 2 is characterized by the remains of a mud-brick wall C36 running northwest-southeast at the western extremity of the trench. This wall seems to be present throughout all of the Old Kingdom phases that can currently be recognised in the trench. Immediately east of this wall is floor level C33, into which pit C34 is sunk containing a few large ceramic sherds and a possible grinding stone (both floor level and pit remain to be excavated). Overlaying these features are a series of layers containing charcoal, ceramic sherds, animal bone, worked flint and broken mud bricks, that attest to many years of activity within a restricted space. What is particularly interesting within these layers is the presence of a number of small patches of dark sand with copper/copper alloy fragments and some fragments of ceramic vessels (possibly crucibles) with highly vitrified material on the inside, seemingly fused with copper/copper alloy. The most recent archaeologically intact layers surviving in Trench 2 also contain a small oval mud-brick feature in the eastern corner. This feature had turned bright orange in colour through burning at a high temperature and the construction itself consisted of compacted wall C109 around the actual firing area C108. The heat produced evidently needed to be contained within a confined space. Taken together the evidence suggests that this mud-brick feature may have been a small metal-working furnace.

¹¹ PETRIE 1921.

¹² HENDRICKX 2006, p. 78-81.

Trench 3

Trench 3 (3 x 2m, extended to 4 x 4m) was positioned 10m east of Trench 2 in order to explore the possibility of further domestic and/or small scale industrial activity within the area. Below the chronologically mixed surface deposits, as encountered in Trench 2, this test trench revealed evidence for a different type of domestic activity to that in Trench 2. Three circular mud-brick constructions were found, possibly belonging to two different phases and ranging in diameter from 1.50 to 1.90m (for comparison, the mud-brick silos discovered in 1955 measured between 1.20 and 3.55m¹³). From the stratigraphical position of these structures and their relationships to three standing walls in the trench (Fig. 7), a number of episodes of construction/building can be identified. The earliest phase must have been that of the construction of the southernmost circular structures C54 and C65, followed by the construction of the east-west running wall C52 in the southern part of the trench. The latter cuts through part of C54 and the circular structure C55 appears to have been built over part of C54. The presence of early Old Kingdom ceramics in the fill of these structures, both C57 and C58, however, suggests a roughly similar period of use.

The fill of structure C55 (C58) contained a large number of sherds from Nile C bread moulds, bread trays and beer jars. The jars, cups and bowls are mainly Marl A1, with a limited number of Nile A-B1 examples. In addition, worked flint pieces and animal bones were found. The material from this deposit evidently represents domestic waste, mainly comprising vessels for food production such as bread moulds, beer jars and cooking vessels, but hardly any true storage vessels. The jar fragments are mainly from smaller vessels, representing either short term storage or table ware. The material found in the fill of structure C54 (C57) was far less numerous, containing mainly Nile C bread moulds and beer jars. Structure C55 is tightly bound on its northern, eastern and southern sides by three mud-brick walls. The northern and eastern walls, C60 and C64, may postdate the construction of C55 since it might have proved difficult to construct the latter had they been standing. Of the two walls, C60 must be part of another structure extending north of the trench (Fig. 7) and it appears that wall C64 was subsequently built up against C60. The southern end of wall C64 appears to have been truncated/built over by structure C65. Further excavation of all of these structures and an extension of Trench 3 will allow for a more detailed interpretation.

The pottery from the *in situ* layers of Trenches 2 and 3 is to be considered homogeneous. The contexts identified in Trench 2 (C33, C41, C44, C45 and C47-50) contained only a limited number of diagnostic pottery fragments, but those from Trench 3 (C57, C58 and C62) held not only far more material but also more diagnostic items. Among these are early Meidum bowls of type B3c2 as defined by Op de Beeck, which disappear before the end of the 4th Dynasty¹⁴. Nearly all of them are made in Marl A1, with

¹³ HENDRICKX & EYCKERMAN 2009, p. 4.

¹⁴ OP DE BEECK 2004, p. 268.

rare exceptions in Nile B1. Whatever the fabric, they are always red-slipped and carefully polished. The Meidum bowls have angular transitions below the rim (Fig. 8a-e), except for one bowl with a smooth transition (Fig. 8f). The shape characteristics correspond with those from Elephantine in Oststadt Bauschicht VIII.1¹⁵. Smooth transitions are first, and only exceptionally, encountered in Oststadt Bauschicht VIII.2 (later reign of Snofru - Djedefre)¹⁶. Several Meidum bowls show traces of fire, both on the inside and outside. A very high Nile B1 example (Fig. 9) was certainly used as a cooking vessel, as indicated by soot and burning marks on its surface. Rather shallow Meidum bowls of which the rim diameter more or less equals that of the angular transition point below the rim, are less frequent (Fig. 10). They correspond with type A1a defined by Op de Beeck, occurring throughout the Old Kingdom¹⁷, and for which parallels had already been found at Elkab in the early 4th Dynasty mastabas¹⁸.

Also frequently occurring are shallow bowls with a straight rim above an angular transition (Fig. 11). All of them are made from Marl A1 and are red-slipped and polished. Nearly all show traces of firing, resulting occasionally in the flaking of the surface. No doubt these objects were used as cooking vessels in direct contact with fire. This type is not mentioned for Elephantine but similar vessels are attested for the so-called Red Pyramid of Snofru at Dahshur, although they remain exceptional at that site¹⁹. Another category of bowls characterized by convex walls and lip rims and made in Marl A1 (Fig. 12a-b) or Nile B2 (Fig. 12c) does not occur at Elephantine before Oststadt Bauschicht VIII.2²⁰. Stroke-polished bowls are only exceptionally attested (Fig. 13) and represent a small minority within the totality of Marl A1 and Nile B1 cups and bowls (in marked contrast to Trench 1). At Elephantine, stroke polishing dominates in the production of bowls in Oststadt Bauschicht VI, but a notable drop occurs in Oststadt Bauschicht VIII.1 (3rd Dynasty - early in the reign of Snofru). This technique has almost entirely disappeared in Oststadt Bauschicht VIII.2 (later in Snofru's reign - Djedefre)²¹. Two fragments of bowls with an interior rim (in Nile C)

¹⁵ RAUE 1999, p. 183-185, Abb. 39.1-2.

¹⁶ RAUE 1999, p. 185. Comparison with Elephantine is especially important as this site not only offers detailed information from stratified contexts, but also because it is located much closer to Elkab than the 3th and 4th Dynasty sites in the Memphite area.

¹⁷ OP DE BEECK 2004, p. 264.

¹⁸ QUIBELL 1898, pl. XII.54. The rims of the 3rd and 4th Dynasty examples are higher in comparison to the more recent ones. Further early examples have been found at Meidum (PETRIE, MACKAY & WAINWRIGHT 1910, pl. XXV.15; XXVI n° 44), Dahshur (STADELMANN & ALEXANIAN 1998, p. 307, Abb. 6.15), Giza (REISNER & SMITH 1955, fig. 79; HAWASS & SENUSSI 2008, p. 42 n° 6, p. 44 n° 16) and Abydos cemetery D (PEET & LOAT 1913, pl. IV.34).

¹⁹ FALTINGS 1989, p. 142, n.16, Abb. 6.a.119. Related shapes but with a different rim section occur at Dahshur (STADELMANN & ALEXANIAN 1998, p. 307, Abb. 6.7; ALEXANIAN 1999, Abb. 60, M 117-119), Giza (REISNER & SMITH 1955, fig. 61.1066/7; WODZINSKA 2007, p. 301, fig. 11.19; HAWASS & SENUSSI 2008, p. 42f, n° 5-8) and at al-Shaykh Said (WILLEMS ET AL. 2009), all early 4th Dynasty.

²⁰ RAUE 1999, p. 185. Vessels of identical shape but in Nile C occur already in the Naqada III period. Examples in Nile B2 are also known from Dahshur North for the early Old Kingdom (FALTINGS 1989, Abb. 3.d), Nazlet el-Samman (HAWASS & SENUSSI 2008, p. 155 n° A 26, p. 158 n° A 37, p. 159 n° 44, p. 162 n° A 56), Nazlet Batran (KROMER 1991, Tf. 36.1) and el-Tarif (KAMMERER-GROTHAUS 1998, p. 77-79, Abb. 40).

²¹ RAUE 1999, p. 181-185.

were found, but although neither of them allowed for a complete reconstruction of the vessel, they nevertheless belong to the types with broad rims characteristic for Elephantine in Oststadt Bauschicht VIII.1 and VIII.2²².

Among the Nile C beer jars, two types occur, one with a marked transition on the rim or “Kragenhals” (Fig. 14) and the other with a direct rim (Fig. 15), the latter type being the most common²³. Both types also occur together in the 3rd or early 4th Dynasty mastabas at Elkab²⁴. The beer jars with “Kragenhals” first occur at Elephantine in Oststadt Bauschicht VI, but they are more frequent in Oststadt Bauschicht VII (Djoser) and VIII.1 (3rd Dynasty - early in the reign of Snofru). In Oststadt Bauschicht VIII.2 (later in Snofru’s reign - Djedefre) they occur only exceptionally²⁵. The study of beer jars from all over Egypt confirms the “Kragenhals” type as being characteristic for the 3rd Dynasty and disappearing early in the 4th Dynasty²⁶.

A large amount of Nile C bread mould fragments were also found, but they were heavily used with damaged and flaked bases. No complete profile could be reconstructed, but a single example (T2/C31/5) confirms the presence of round bases, most probably with a prominent “ring” on the transition with the base²⁷. The walls of the bread moulds are almost vertical, only flaring out towards the rim (Fig. 16). Parallels are known from all over Egypt, especially for the 3rd and 4th Dynasties²⁸. Besides bread moulds, there are also large Nile C bread trays (Fig. 17).

All in all, the ceramic material from Trenches 2 and 3 is to be compared with Oststadt Bauschicht VIII.1 and VIII.2 at Elephantine. A date in the late 3rd or first half of the 4th Dynasty is to be accepted²⁹.

Trench 4

The location of Trench 4 (18 x 3m, extended to 22 x 3m), positioned at a right angle to the Double Walls, was selected in view of the results of the magnetic survey, which suggested the presence of architectural remains in an area running up to the southern edge of the Double Walls (squares A4 and A5; Figs. 1 and 2). Here too, the surface layer

²² RAUE 1999, Abb. 39.5-7, 40.3.

²³ The beer jars with direct rim are finished on the inside with horizontal or oblique finger strokes. A limited number of sherds with vertical finger strokes inside the lower part of the jar are most probably from beer jars with “Kragenhals”.

²⁴ OP DE BEECK 2009, p. 71 ff.

²⁵ RAUE 1999, p. 181-185.

²⁶ FALTINGS 1998, p. 221.

²⁷ FALTINGS 1998, p. 135, Textabb. 4.

²⁸ FALTINGS 1998, p. 135.

²⁹ The material from Trenches 2 and 3 predates that from middle-late 4th Dynasty Giza, where the Meidum bowls are not only of a more shallow type but where the examples with angular transition are also less frequent as compared to those with rounded transition; see WODZINSKA 2007, p. 291.

consisted of mixed ceramics ranging in date from Predynastic to Roman times, including Old Kingdom bread moulds, early Meidum bowls, spouted bowls and beer jars, New Kingdom hollow-based jars, beer jars and plates, Roman cooking and storage vessels and Late Roman to Coptic amphorae. Some fragments of Nubian C-ware and a single demotic ostrakon were also found. Below this mixed layer, concentrations of mud bricks appeared in the northern part of the trench, which runs along a stretch of the Double Walls where there is no wall standing today. These mud bricks are embedded within disturbed material and not *in situ*.

In the southern part of Trench 4, where only the top layer was removed, a circular feature was found beneath the mixed surface deposits. This structure consisted of a concentration of brown-grey sand and charcoal with a few mud bricks, red bricks and ceramic sherds. The central part of Trench 4 was excavated down to a depth of c. 0.60m and the layers beneath the surface deposit appear to be of entirely natural origin. The sequence of sandy and clayey strata encountered was devoid of archaeological material. Whether or not these layers are to be correlated with the yellow sandy clay layer referred to by F. W. Green in the description of his test pits to the north of the temple, remains to be clarified³⁰.

Trench 5

Trench 5 (3 x 3m) was positioned at the point of lowest elevation within the survey area. It was deemed possible that the greater depth in this area may have resulted from more intensive digging activity in recent historical times and that this trench might present an opportunity to examine remains of some of the earliest habitation at the site. Unfortunately, after the removal of the mixed surface deposits, at a depth of only c. 0.80m below surface, water filled the trench and further excavation was not possible.

ELKAB AND THE EGYPTIAN SETTLEMENT ARCHAEOLOGY OF THE 3RD MILLENNIUM BC

Already in 1983, B. Kemp³¹ concluded that “the archaeological evidence for the nature and distribution of early settlements in Egypt is sparse and unsatisfactory”. This is still very much the case today. Our understanding of Early Dynastic and Old Kingdom urbanism and settlement patterns, both of the capitals and major centres (Memphis,

³⁰ GREEN 1905.

³¹ KEMP 1983, p. 96.

Mendes, Buto, Bubastis and Tell el-Farkha in the Delta, and Abydos, Hierakonpolis, Elkab and Elephantine in the Nile Valley) and of the network of smaller settlements and villages (e.g. Kom el-Hisn) throughout the country, remains extremely biased³². Fortunately, thanks to ongoing and systematic research projects focusing on both settlement and landscape archaeology, the picture seems to be undergoing a slow transformation. As far as provincial settlement archaeology of the earlier part of the Old Kingdom is concerned, our knowledge is especially restricted. The early Old Kingdom strata are generally only very fragmentarily preserved and attention has been paid almost exclusively to the so-called pyramid towns³³ of the Memphite area (e.g. AERA project at Giza³⁴). Furthermore, the comparison of archaeological evidence from Old Kingdom sites of a specialised nature, such as religious centres, royal domains, frontier garrison towns and workmen's villages, with that from settlements fulfilling more diversified roles, may be problematic and easily lead to misinterpretation.

There is no doubt, however, that Elkab was an important Upper Egyptian provincial centre in early Old Kingdom times. Ample evidence is available for the existence of a central administrative authority (holders of the title "Inspector of Elkab", references to granaries in seal impressions³⁵ and the silo installations themselves) and of local elites, the latter also corroborated by funerary evidence³⁶. The most obvious confirmation of Elkab's importance in the early Old Kingdom is represented by the silo installations discovered in 1955. To date, as has already been stated³⁷, the only analogous find for these storage facilities are the silos of the so-called Royal Administrative Building excavated by the AERA team at Giza (Fig. 18)³⁸. Not only with regard to their general outline (rather regular layout, restricted access and associated buildings), but also with regard to the nature of the associated finds (scribal palette and sealing impressions), the Elkab silos seem to bear witness to a state-organised economy. Comparison between the Elkab and Giza installations clearly demonstrates their resemblance in terms of not only the arrangement of the silos but also their dimensions (Fig. 19).

There are only few other Upper Egyptian sites of comparable complexity that date to the Early Dynastic Period and the earlier phases of the Old Kingdom. Two of these, Hierakonpolis and Elephantine, are of exceptional importance and may have been more than just provincial centres. The settlement on Elephantine may possibly represent the best parallel for Elkab. It features administrative complexes (Stratum D on the so-called Western Island³⁹ and the area to the south of the Early Dynastic fortress⁴⁰), and production

³² For general overviews regarding this subject, see MOELLER 2007; UPHILL 1988; WENKE 2009, p. 289-295.

³³ For a general overview, see BUßMANN 2004.

³⁴ LEHNER, KAMEL & TAVARES 2006, 2009; LEHNER & WETTERSTROM 2007; LEHNER 2010.

³⁵ REGULSKI 2009, p. 33 ff.

³⁶ LIMME 2008, p. 18-25 (with relevant bibliography).

³⁷ HENDRICKX & EYCKERMAN 2009, p. 18 (with relevant bibliography).

³⁸ For the most recent overview, see LEHNER, KAMEL & TAVARES 2009, p. 59-65, fig. 25.

³⁹ SEIDLMAYER 1982, p. 299-306.

⁴⁰ ZIERMANN 1999, p. 71-81, Abb. 3.

as well as residential areas (the areas to the south of the Early Dynastic fortress⁴¹ and to the south of the later Khnum-temple⁴²). At Tell Edfu, only c. 17km south of Elkab, N. Moeller concluded preparatory work to start excavating the Old Kingdom strata in an area to the immediate north of the extensive Second Intermediate Period silo complex⁴³. On the basis of the ceramics present, the occupation here dates from the 4th to the 6th Dynasty.

Evidence for metallurgical production dating to the Early Dynastic period and the Old Kingdom is still extremely scarce⁴⁴ and limited to the Sinai and other frontier zones of the Egyptian state: site 702B near Bir Nasib in south Sinai⁴⁵, the area of Serabit el-Khadim⁴⁶ and the fortress of Buhen⁴⁷. If the early date for the Elkab metal-working furnace is confirmed, however, then it constitutes the earliest direct evidence thus far of Old Kingdom metal working and, furthermore, may represent evidence for state-organized activity at Elkab. The analyses of the copper/copper alloy fragments from Trench 2 will hopefully provide information not only as to the provenance of the raw material, but also on the technical aspects of production.

Acknowledgments

We would like to thank D. Raue, S. Vereecken and M. Gatto for discussing unpublished information on pottery from Elephantine, al-Shaykh Said and Nubia respectively. For kindly providing a thus far unpublished illustration of the Royal Administrative Building at Giza (Fig. 18-19), we express our gratitude to A. Tavares of the AERA project. Our thanks are also due to the Supreme Council of Antiquities of Egypt (SCA) for granting permission to conduct excavations at Elkab. Special thanks to Omer Farouk and his team for their archaeological and logistical assistance. Funding for this research was provided by the Belgian Ministry of Science Policy (Research Project MO/38/020). In addition, the Netherlands-Flemish Institute in Cairo (NVIC) and Vodafone Egypt offered administrative and logistical support.

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⁴¹ ZIERMANN 1999, p. 71-81.

⁴² ZIERMANN 1995.

⁴³ MOELLER 2010, p. 8.

⁴⁴ For a general overview, see OGDEN 2000, p. 149-160.

⁴⁵ EL GAYAR & ROTHENBERG 1998.

⁴⁶ BEIT-ARIEH 1981; 1985.

⁴⁷ EL GAYAR & JONES 1989.

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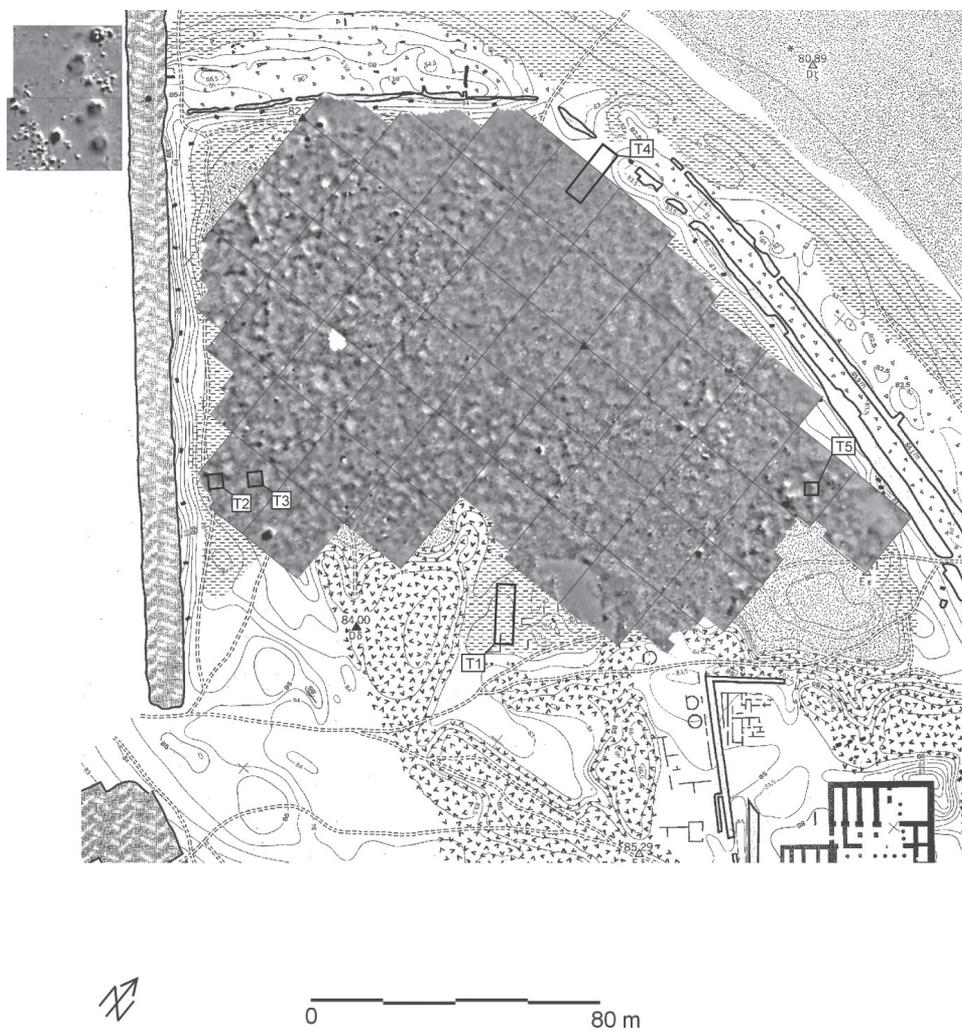


Fig. 1. – Map indicating the location of the geophysical survey Areas A and B and test trenches 1-5 (map T. Herbich).

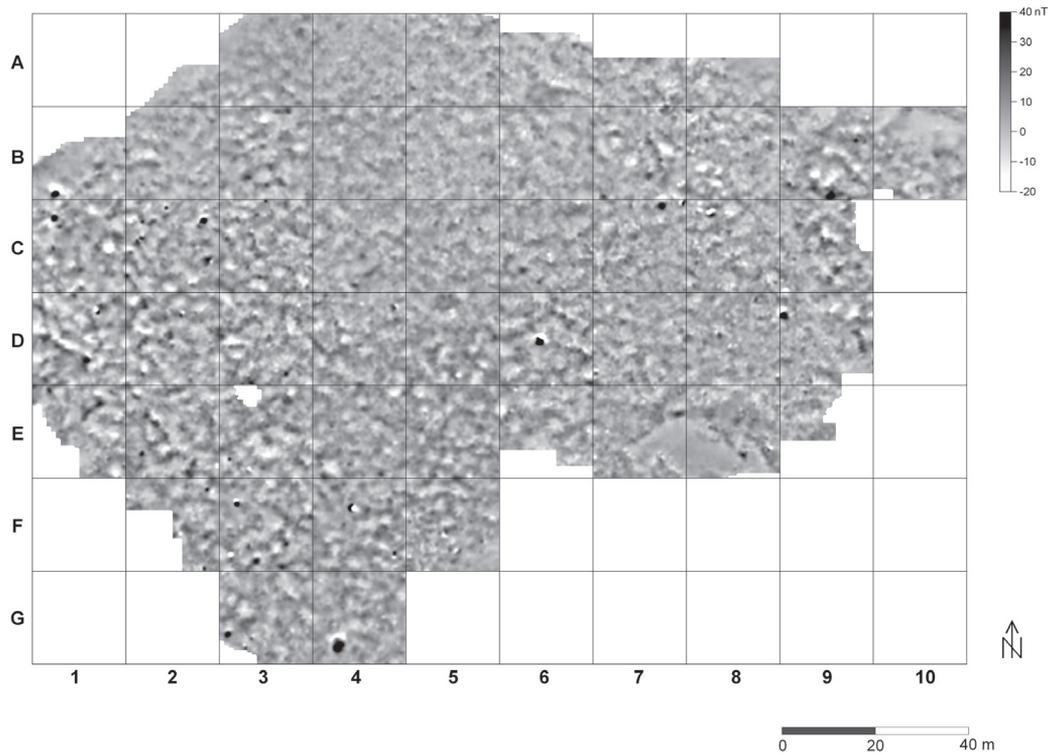


Fig. 2. – Magnetic map of Area A with indicated grid coding showing results of the geophysical survey with fluxgate gradiometer FM256 (sampling rate 0.25 x 0.50 m, interpolated to 0.25 x 0.25 m; dynamics -15/+35 nT; white/black; map T. Herbich).

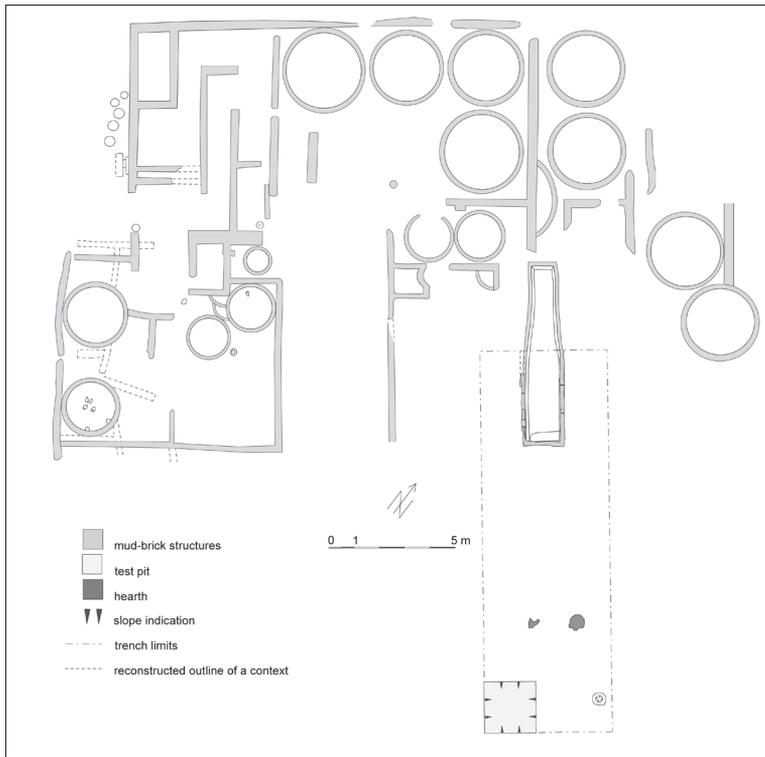


Fig. 3. – Plan of the 1955 excavations showing the position of the 2009 Trench 1.

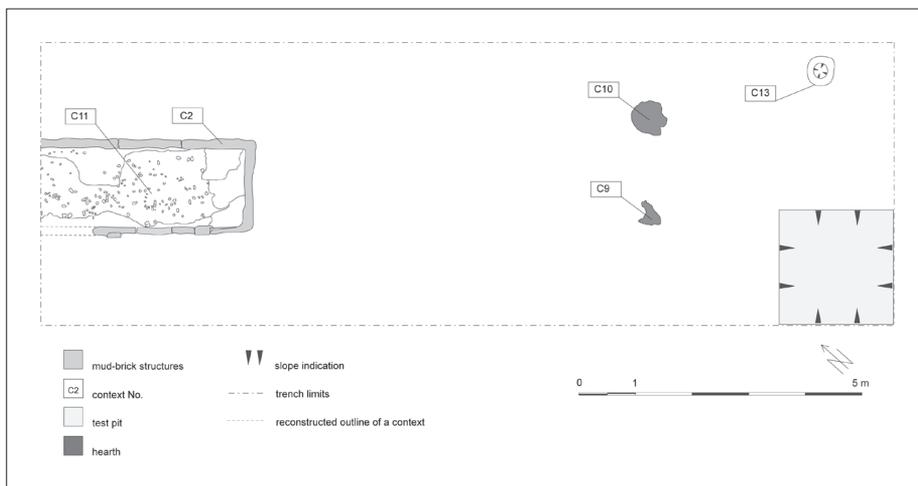


Fig. 4. – Post-excavation plan of Trench 1.

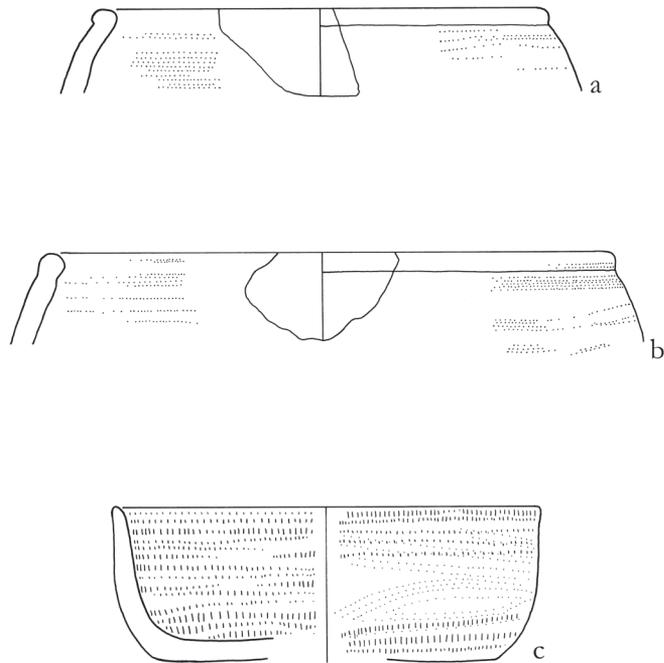


Fig. 5. – Naqada IIC-D pottery from Trench 1:
a. storage jar T1/C15/2, Nile C; *b.* storage jar T1/C15/5, Nile C;
c. bowl T1/C15/1, Marl A1, red slip, stroke-polished (scale 1:3).

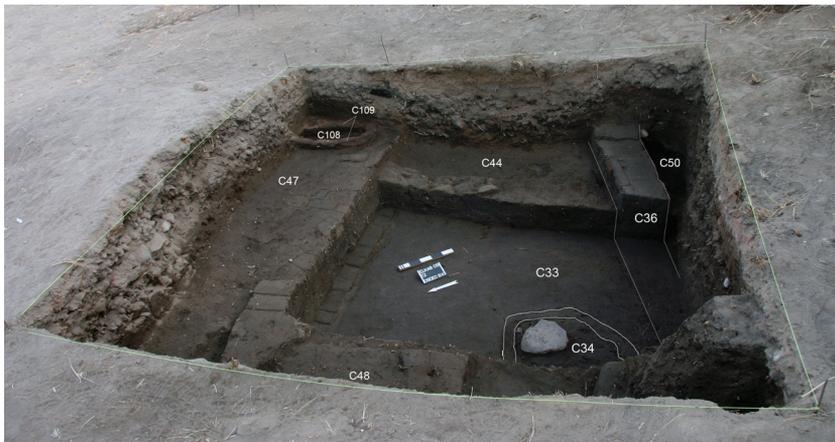


Fig. 6. – Post-excitation view of Trench 2 with indication of context numbers (Photo Belgian Archaeological Mission to Elkab).

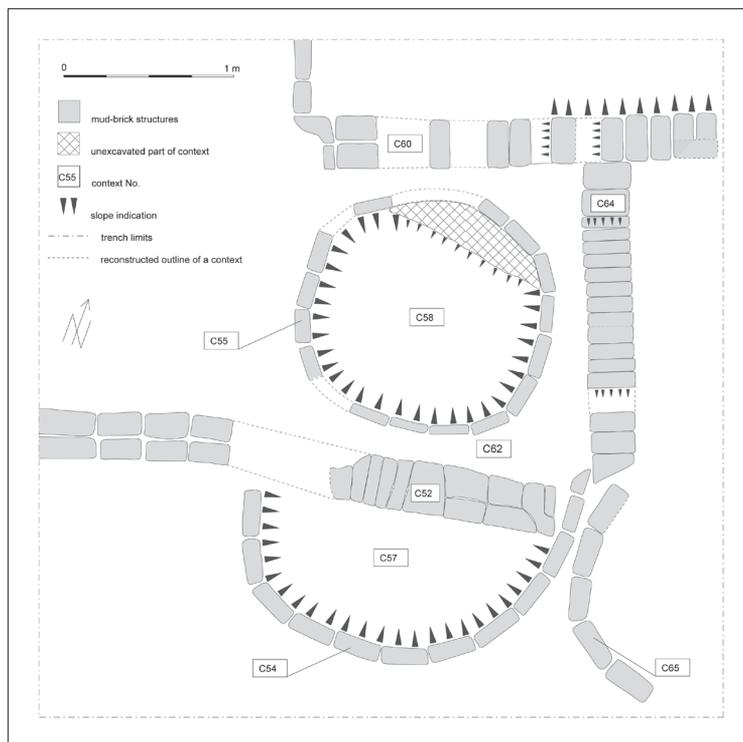


Fig. 7. – Post-excitation plan of Trench 3.

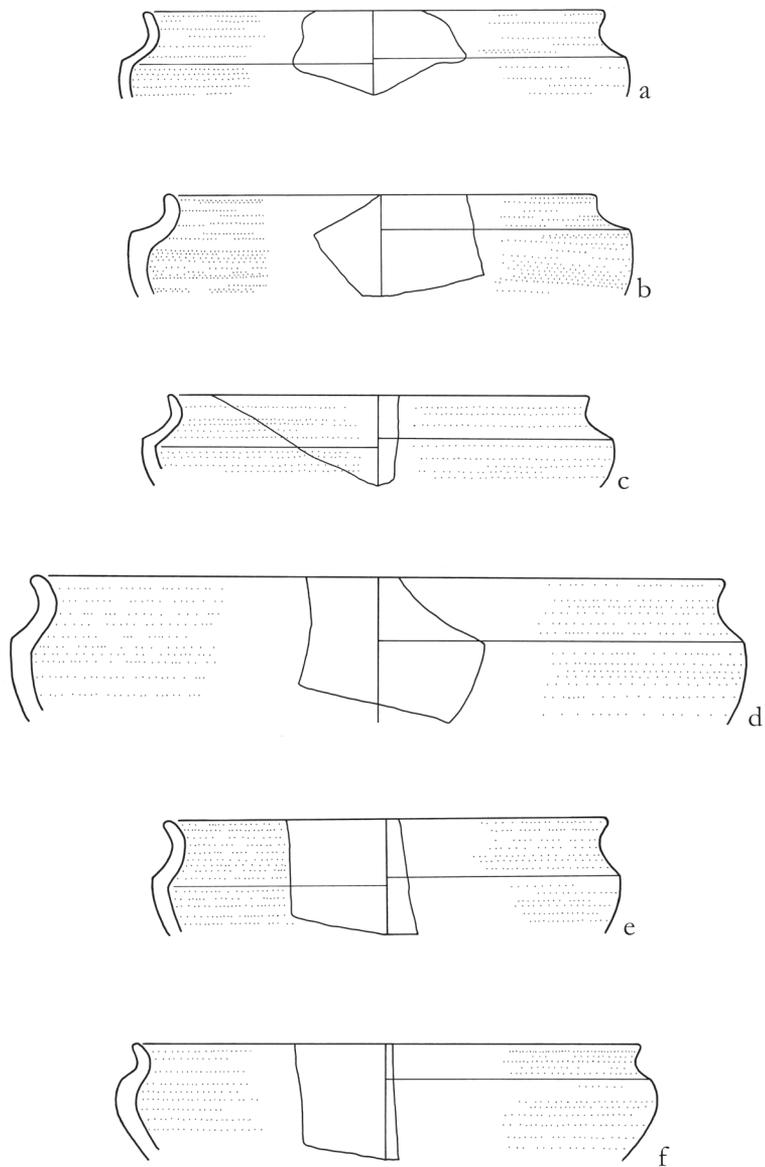


Fig. 8. – Meidum bowls from Trenches 2 and 3:
 a. T2/C33/3, Marl A1; b. T3/C53/2, Marl A1; c. T3/C53/9, Nile B1;
 d. T3/C58/13, Marl A1; e. T3/C58/14, Marl A1; f. T2/C48/1, Marl A1.
 All red slip and polished (scale 1:3).

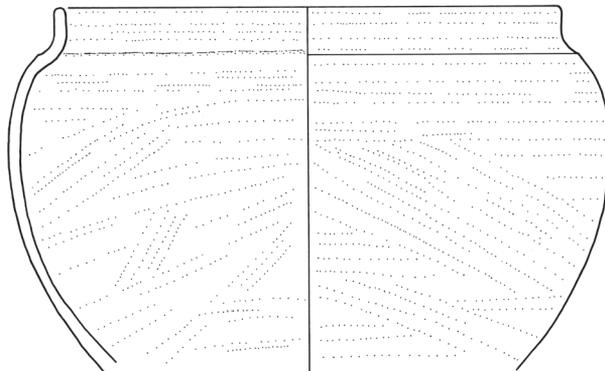


Fig. 9. – *Cooking vessel from Trench 3:*
 T3/C58/21, Nile B1, exterior red slip, polished (scale 1:3).

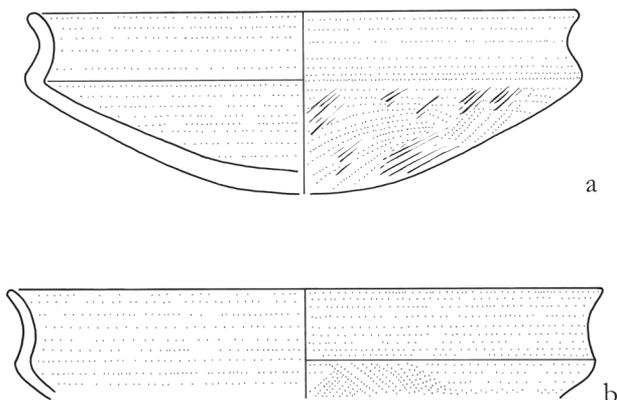


Fig. 10. – *Shallow Meidum bowls from Trench 3:*
 a. T3/C58/5, Marl A1; b. T3/C58/10, Marl A1.
 Both red slip and polished (scale 1:3).

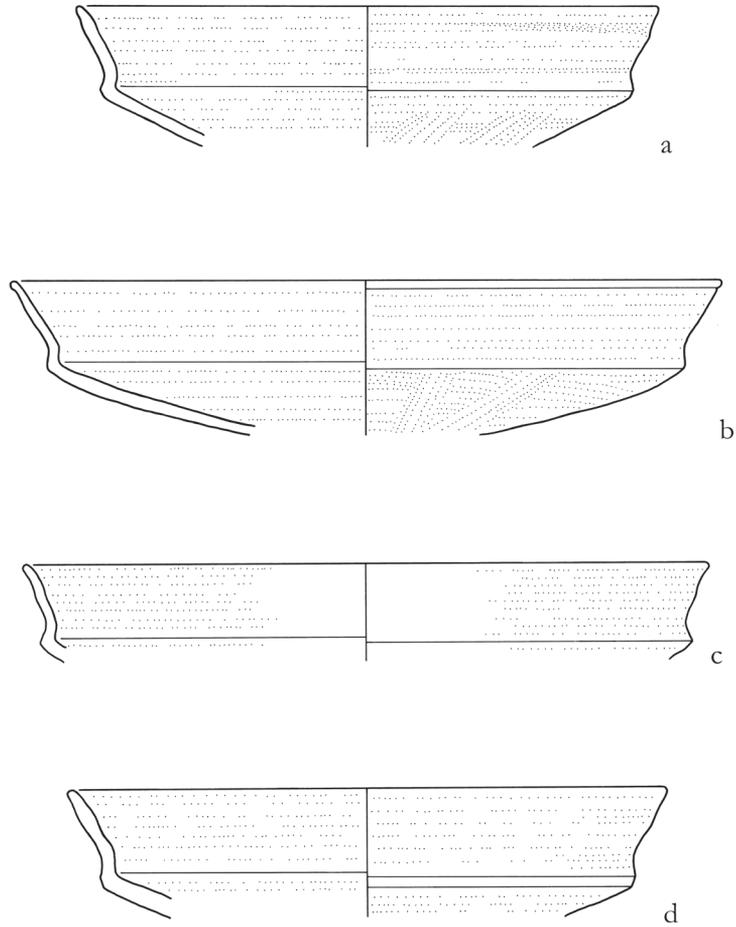


Fig. 11. – Bowls with straight rim from Trench 3:
 a. T3/C58/3, Marl A1; b. T3/C58/9, Marl A1;
 c. T3/C58/16, Marl A1; d. T3/C58/23, Marl A1.
 All red slip and polished (scale 1:3).

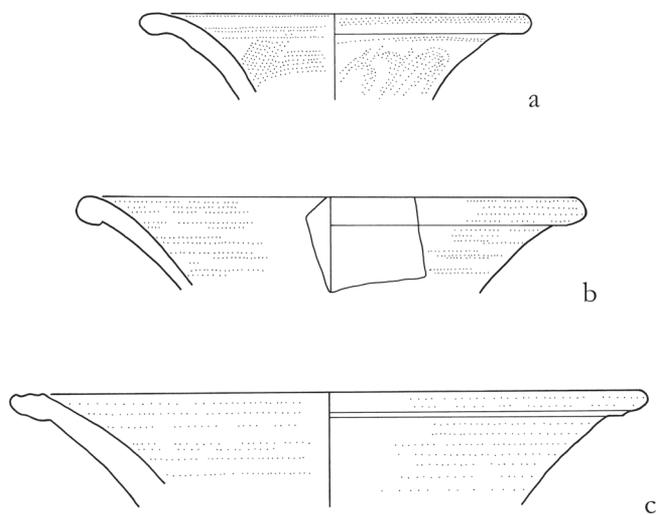


Fig. 12. – Bowls with convex wall and lip rim from Trenches 2 and 3:
 a. T3/C51/2, Marl A1, red slip, smoothed; b. T3/C51/5, Marl A1, red slip, polished;
 c. T2/C48/10, Nile B2, no slip, smoothed (scale 1:3).

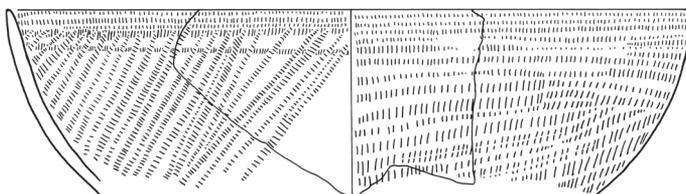


Fig. 13. – Stroke-polished bowl from Trench 3: T3/C53/6, Marl A1, red slip (scale 1:3).

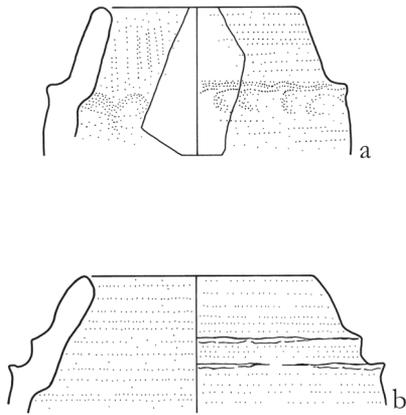
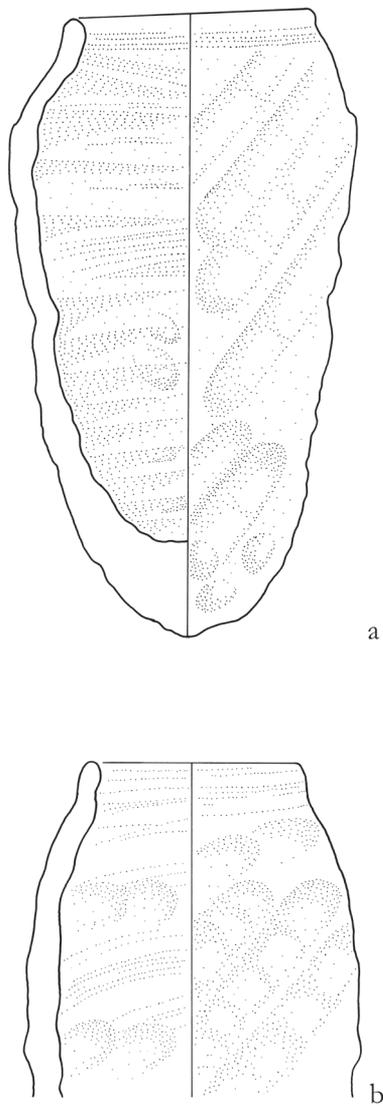


Fig. 14. – Beer jars with “Kragenbals” from Trench 3:
a. T3/C53/14, Nile C; b. T3/C57/1, Nile C (scale 1:3).



*Fig. 15. – Beer jars with direct rim from Trenches 2 and 3:
a. T3/C62/1, Nile C; b. T2/C2/4, Nile C (scale 1:3).*

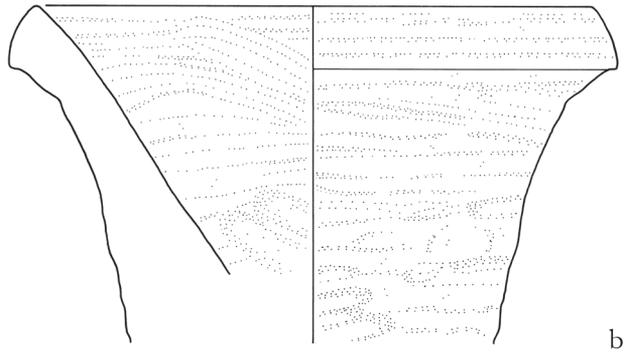
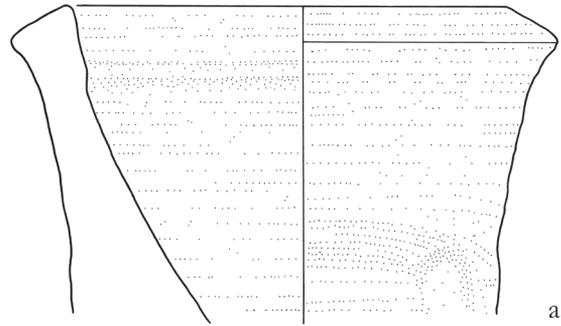
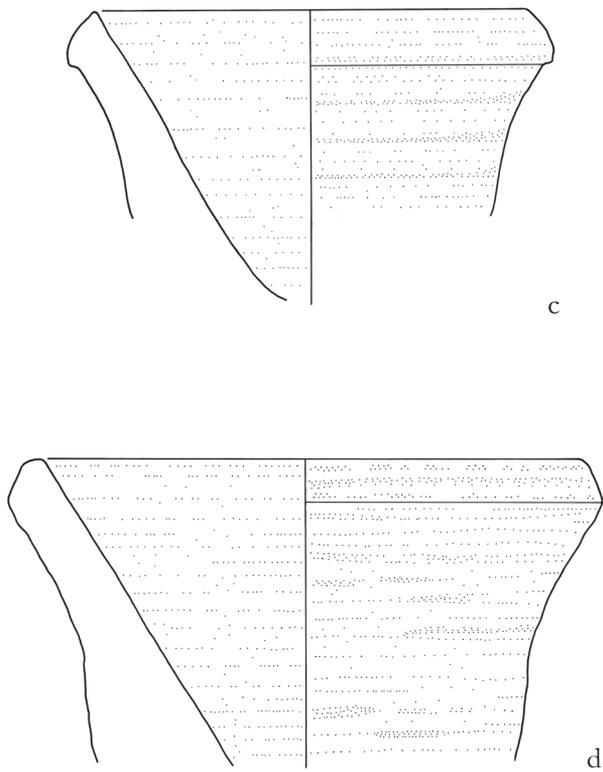


Fig. 16a-b. – Bread moulds from Trench 3:
a. T3/C62/2, Nile C; b. T3/C58/27, Nile C (scale 1:3).



*Fig. 16c-d. – Bread moulds from Trench 3:
c. T3/C58/28, Nile C; d. T3/C58/30, Nile C (scale 1:3).*

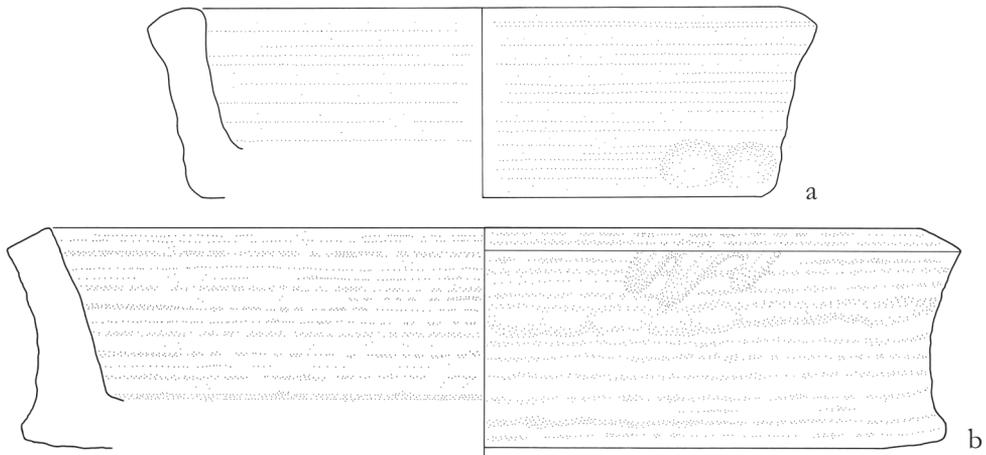


Fig. 17. – Bread trays from Trench 3:
 a. T3/C53/18, Nile C; b. T3/C58/29, Nile C (scale 1:4).

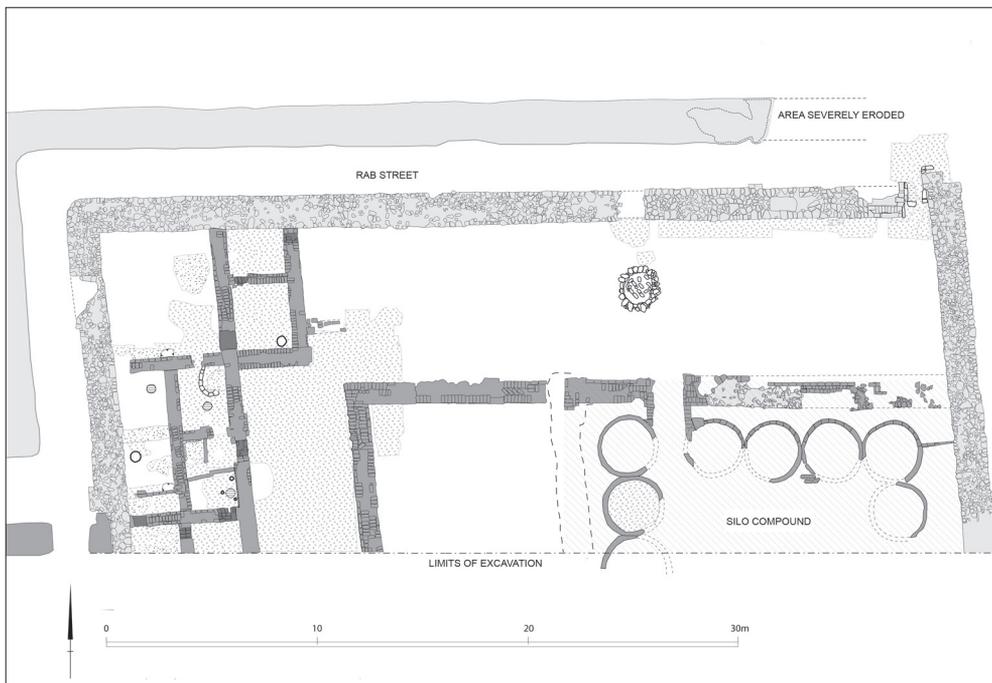


Fig. 18. – The so-called Royal Administrative Building at Giza during occupation phase 7F
 (after Sadarangani forthcoming; © AERA).

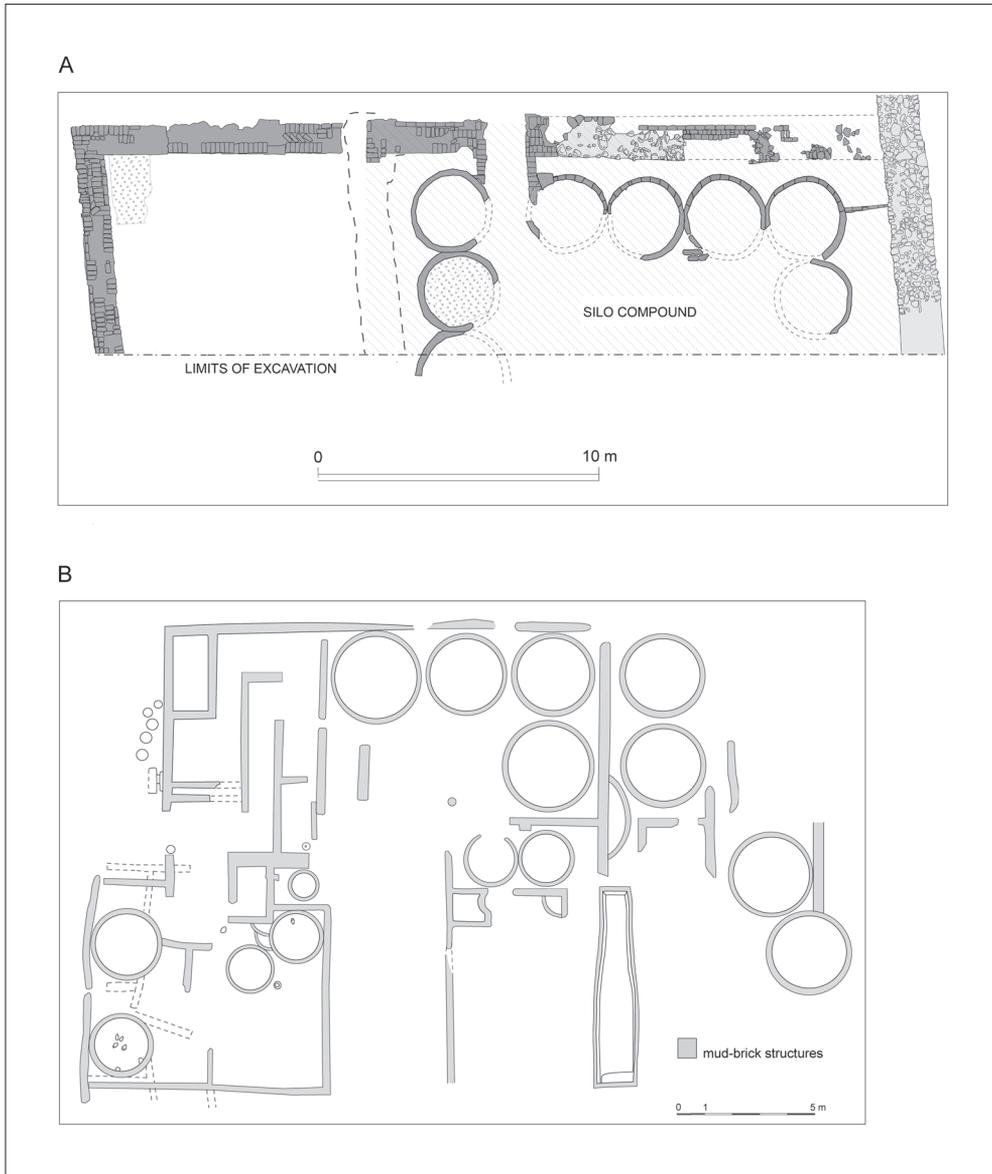


Fig. 19. – Comparison of silo arrangements in (A) the so-called Royal Administrative Building at Giza (after Sadarangani forthcoming; © AERA) and (B) in the vicinity of Structure “T” at Elkab.