

Title: **Tell el-Murra (Northeastern Nile Delta survey): season 2011**

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**TELL EL-MURRA  
(NORTHEASTERN NILE DELTA SURVEY) SEASON 2011**

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**Keywords:** Tell el-Murra, Egypt, Nile Delta, Predynastic, Early Dynastic, Naqada III, cemetery, grave

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The excavation at Tell el-Murra in the northeastern part of the Nile Delta in 2011 encompassed continued work in trench S3, which had been opened during the

previous season in the southwestern part of the site. The focus was also on exploring a new trench, S4, located at the eastern end of the tell [*Fig. 1*].

## TRENCH S3

The main objective of the work in the southwestern part of the tell was to prove or disprove assumptions concerning the sepulchral function of structure 2, a fragment of which had been exposed in the northwestern corner of the test trench in 2010. Assuming the interpretation was correct, it would bolster the idea that the area had been used as a cemetery (Jucha, Błaszczyk *et alii* 2013). The test trench was

extended to the north and west, ultimately covering an area 10 m by 11 m in size.

The uppermost levels of that trench, up to about 1.00 m below ground surface (Level 12, altitude 5.10 m) were very badly disturbed, by animal burrowing among others, the holes filled with loose dark red-brown earth containing many artifacts. Cohesive layers of light brown to yellow color observed in different parts of the

trench, sometimes joining and with limited artifact content, should be interpreted as remnants of disturbed architecture. Structure outlines were difficult to trace, but considering that further investigation

revealed burial chambers under these features, it was deemed probable that they represented homogeneous layers deriving from the destruction of grave superstructures.

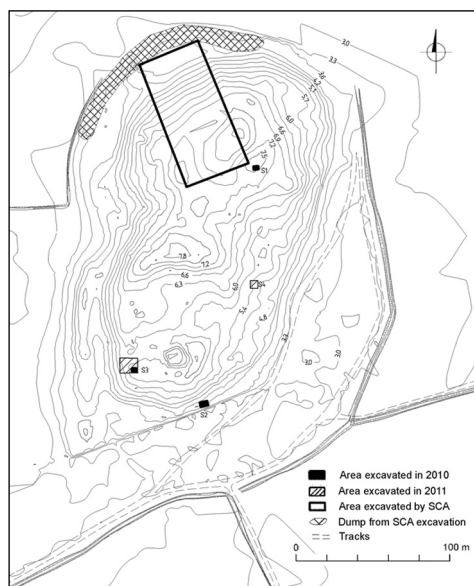


Fig. 1. Tell el-Murra site plan marking excavated areas (Drawing A. Buszek)

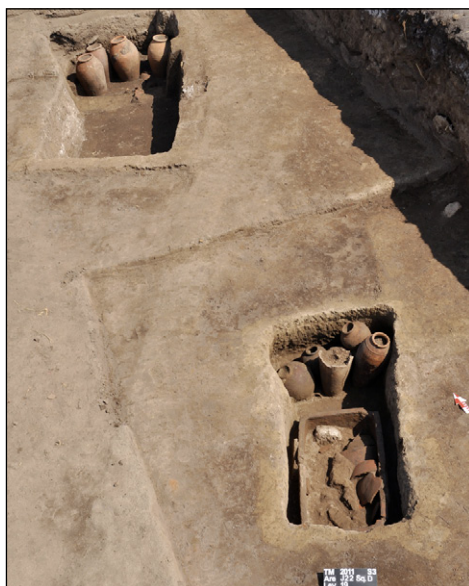


Fig. 2. Graves 1 (top right) and 2 in trench S3, view from the southwest (Photo G. Bąk-Pryc)

#### Team

*Dates of work:* 3 March–3 April 2011

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Finds included mostly fragments of pottery and stone vessels, stone and flint tools, and animal bones. Predominant among the pottery were forms dated to the Naqada III–Early Dynastic period.

Better preserved remains of mud- and sand-brick structures were revealed in the lower levels, starting from Level 13 (altitude 5.00 m). One structure proved to be a grave and another, identified also as a grave, was traced to the north of it [Fig. 2]. The two graves were dated to the Early Dynastic period. Further exploration in the trench was continued only inside the graves (in levels 14 and 15 (respectively 4.90 m and 4.80 m).

Grave 1 [Fig. 3, left] in the northern part of the trench had a superstructure

too badly disturbed to be traced on the ground. The substructure, oriented NE–SW (3.30 m by 1.80 m), was distinguished at Level 14 (altitude 4.90 m). It consisted of two chambers, the burial being in the southern one. The walls, made of dry bricks, were clearly visible especially in the east and south, while in the west and north only very small fragments could be discerned. The same is true of the wall that had originally divided the substructure into two chambers. At Level 20 (altitude 4.30 m) it was recorded in its entirety, but fragments recognized at higher levels, especially on the eastern side, proved that it had been higher. A layer (S3-31) distinguished above this and the northern wall contained, among others, fragments



Fig. 3. Graves 1 (left) and 2 after exploration of the chambers (Photos G. Bąk-Pryc)

of bricks; it ran north beyond the northern chamber and could attest to robbery of the grave resulting in its destruction. To the south, a more homogeneous, loose layer (S3-32) was distinguished, dark brown in color and containing greater quantities of sherds. Yet another layer (S3-33) of dark brown color could be attributed to animal burrowing, which had disturbed the grave from the west and northwest.

The white organic material from the grave is likely to represent the remains of mats that had covered the walls and were spread over the chamber, covering the grave goods and the body of the deceased.

The skeleton, located in the southern chamber, was very poorly preserved. Only small fragments of bones were uncovered, some of them furthermore secondarily displaced. They belonged to a male (?) of indeterminate age (anthropologist A. Kozłowska, personal communication).

The assemblage comprised pottery vessels (28), stone vessels (13) as well as copper tools (3) and a fragment of a bone object (probably a spoon handle). The northern chamber yielded nine pottery vessels (among them four large jars) and sherds, while other pots of smaller size as well as other objects came from the burial chamber and were found mostly alongside its eastern side and in the southwestern corner. However, at least in the latter case, robbing of the grave may have resulted in such an arrangement. Only a few objects were located on the western side.

The pottery comprised, among others, large jars with lightly impressed half-bows on the shoulders and potmarks, ovoid jars, an almost barrel-shaped jar, small jars with broad shoulders, a narrowed bottom part of the body and a flattened

base resembling the foot, a cylindrical jar without decoration, a bowl and a pot-stand. Stone vessels made of travertine or greywacke included small narrow cylindrical jars, bowls and flat dishes. All of them were placed in the main chamber, close to the hands and legs of the deceased. Copper tools included an adze, chisel and axe, all positioned to the west of the body (for similar tools in the Nile Delta, see Czarnowicz 2012: 345–349, Fig. 2:2–4,6; Dębowska-Ludwin 2012: 59; Fig. 3).

Grave 2, the southeastern corner of which was recorded already in 2010, was located to the south of grave 1 [Figs 3, right; 4] and follows the same NE–SW orientation.

Levels located above the grave (up to Level 12, altitude 5.10 m) were very badly disturbed, among others, by



Fig. 4. Grave 2 and neighboring structures in Trench S3 (Photo G. Bąk-Pryc)

animal burrows and presumably robbing. The superstructure of the grave was poorly preserved and only its remnants, composing a cohesive layer of light brown to yellow color, were attested. Fragments were better visible in lower levels (L13 and L14), mostly in the northern and southeastern part and extending beyond the outline of a rectangular burial chamber located below. The latter (2.10 m x 1.26 m) was clearly visible on Level 14. Its southern part was taken up entirely by a pottery coffin [Fig. 3, right], while the pottery vessels were deposited in the northern part. White organic material was also recorded, constituting the remains of a mat which had been spread over the grave goods in the chamber.

The coffin [Fig. 5] consisted of a lower rectangular box and semi-cylindrical lid composed of two parts. The lid had been broken in, apparently during the robbing of the burial, which is attested also by a disturbed layer of loose dark brown earth (S3-41), distinguished already above the coffin, which continued down through the broken middle part of the lid (anthropologist A. Kozłowska, personal

communication). The body of a presumed adult male was placed inside it, in contracted position, on the left side, with the head to the northeast facing southeast.

Three stone vessels were recovered from the grave. Two of them, squat and barrel-shaped jars made of travertine, were placed in the coffin, in its northeastern part, next to the head of the corpse. Yet another greywacke bowl was found outside the coffin, but close to it.

Pottery vessels, 18 altogether, comprised among others: narrow wine jars with a rope band pattern above the shoulder, ovoid jars, broad-shouldered jars, a beer jar with scraped surface, a drop-shaped jar, pot-stand, a tray with oval orifice, several bowls and a flat plate. Fragments of the latter were found along the eastern sides of the coffin, partly inside it and partly outside.

Both graves seem to be roughly contemporary with Minshat Abu Omar graves of group IV dated to the First Dynasty (Kroeper 1988: 16, Figs 156–198; Kroeper, Wildung 2000: XIII) and a group of Naqada IIIC2/D graves at Tell el-Farkha (Jucha 2009: 50–58). However, some differences were also observed (Jucha forthcoming). Generally, it should be noted that assemblages of Tell el-Murra graves show more affinity to the former site than to the latter. Most of the forms found at Tell el-Murra occurred also at Minshat Abu Omar. By contrast, at Tell el-Farkha, beer jars constituted the predominant group, while narrow wine jars with rope band above the shoulder were absent. Some other pottery types (flat plates, bowls with simple rim) as well as stone vessels showed affinity to finds from both of the above mentioned sites (Jucha 2012: 84–86; Pryc 2012: 302–304).



Fig. 5. Pottery coffin from Grave 2  
(Photo M.A. Jucha)

Remains of mats as well as fragments of other structures, among them those of rectangular shape (probably other graves), were also located in the trench. However, in most cases, these continued under the unexplored area surrounding the trench. Grave 2 intersected with the southwestern corner of structure S3-22 [Fig. 4], which was partly exposed in the eastern part. Fragments of other units extending to the north (S3-16) and northeast (S3-15) were distinguished, among others, also in the northern part of the trench, close to grave 1.

Architectural remains in the trench comprised also mud-brick walls, including one of NE–SW orientation (S3-19), exposed to the west of grave 2 on Level 13. It continued up to the southeastern corner of grave 1. Its part located near the northwestern corner of grave 2 had been breached, probably during the construction of that grave. The wall ran parallel to yet another mud-brick wall

(S3-34), located on the opposite, eastern side of grave 2. The upper courses of bricks (1A) of the latter wall were already exposed in 2010. Yet another wall (S3-39), located to the south, is likely to be a remnant of a mud-brick wall of NW–SE orientation joining walls S3-19 and S3-34 in the south. These constituted the remnants of a rectangular structure, a room(?), of a date probably older than both graves. However, the precise date as well as function of this structure can be determined only after further exploration, which was excluded for now by the presence of superimposed structures of later date (among them, grave 2 and probably also other graves in the unexplored area). In any case, the remains seem to belong to a settlement. If so, it would mirror the situation at Tell el-Farkha, where graves were also located in parts of the site previously occupied by a settlement.

[MAJ, GB-P]

## TRENCH S4

Test trench S4 measured 5 m by 5m and was located in the eastern part of the tell, close to its borders [Fig. 6]. The main objective of the work was to establish the stratigraphy and chronology of this part of the site, as well as prove or disprove assumptions regarding settlement layers of Lower Egyptian culture on site (Jucha 2010: 385–386, Fig. 4:3). Surface material collected there during the previous season contained mostly Old Kingdom and Early Dynastic pottery, hence it was assumed that the site was inhabited at least until the Old Kingdom, similarly as in the case of the northeastern (trench S1) and unlike the southwestern (trench S3) parts of the settlement (Jucha, Błaszczuk *et alii*

2013). The spot was not randomly chosen as in previous seasons coring had revealed the presence of large amounts of pottery and mud bricks. Moreover, the initial geological examination estimated the level of the oldest settlement layers at about 3.50 m below the present surface, a depth possible to reach within a test trench.

The exploration of trench S4 yielded mostly potsherds, stone and flint tools, and animal bones. Moreover, remains of architectural structures made of sun-dried mud bricks were also attested. Excavated settlement levels were assigned to six main chronological periods covering a timespan from the Lower Egyptian culture to the end of the Old Kingdom. The present report

is provisional as the material is currently under study.

The uppermost levels of the trench, up to about 0.70 m below the surface of the mound (Level 9, altitude 4.60 m) contained material dated to the second half of the Old Kingdom, that is the Fifth to Sixth Dynasties. Not a single comprehensive building structure was discovered. Visible remains of walls were often badly destroyed. Layers were quite rich in archaeological material, the pottery finds commonly including *Meidum* bowls with rounded shoulder, carination very high and rim diameter equal or greater than the diameter measured on the shoulder, bowls with two parallel lines incised in the outer part of the rim zone, bowls with incised horizontal lines on the inner part of the walls and bread moulds with straight, slightly divergent walls and flat bottoms.

Successive levels, up to Level 16 (altitude 3.90 m) contained material from the earlier phase of the Old Kingdom (Third–Fourth Dynasties), but even in that case no compact building structure was found. A clear difference was observed in the pottery assemblage. *Meidum* bowls with a maximum diameter at the angular shoulder were popular, but so were bread moulds with flat bottoms and bread moulds with slightly thickened inner part of the rim, which are typical especially of layers dated to the Third Dynasty, as well as bowls with internal ledge. The presence of large amounts of freshwater mollusk shells was also noted. The shells often had two small holes drilled close to their edge.

The next levels, down to Level 19 (altitude 3.60 m) contained material dated provisionally to the Second Dynasty/

beginning of the Old Kingdom. The pottery repertoire was composed mainly of bread moulds with angular transition dividing the body into two zones and *Meidum* bowls in shapes known from the period. The architectural structures from these levels were the best preserved. A circular structure and a few walls [see Fig. 6] made of mud bricks first appeared at Level 17 (altitude 3.80 m). The feature turned out to be an oval silos for grain (S4-15), built most probably in a house courtyard. It was about 2 m in diameter and was constructed of a single row of bricks joined at the shorter ends. A short wall connected the silos with another wall (S4-12), which probably surrounded the courtyard. In a corner between the silos and wall a grinding stone was discovered. Yet another wall (S4-17), joining with

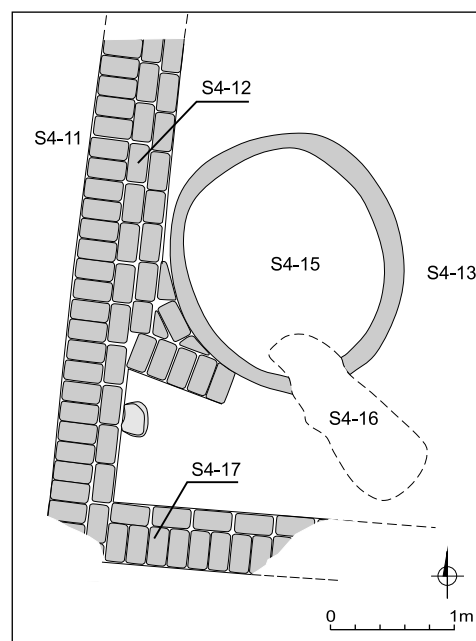


Fig. 6. Silos and associated walls in trench S4, levels 17–18 (Drawing M. Czarnowicz)



wall S4-12, was located to the south of the feature. On the south, the silos wall was damaged by a pit (S4-16) with a large quantity of animal bones, mainly a donkey some three and a half years old (archaeozoologist R. Abłamowicz, personal communication) and the skull of an ape (anthropologist A. Kozłowska, personal communication). The fill of the silos contained flint sickle inserts. Close to the bottom of the structure was a layer of badly eroded and burnt mud bricks. It seems possible that the silos was built on a low base in order to insulate it from the ground. It was demonstrated that the silos had been placed on a previously leveled surface.

Levels below the silos, up to Level 32 (altitude 2.30 m) were full of material dated to the period of the First Dynasty. The pottery featured, among others, shallow thick-walled bread moulds, oval trays, bowls with an inverted rim, flat plates with red-coated and polished interior and uncoated, only smoothed, outer surface. A layer registered just below the level with the silos contained First Dynasty material (probably from the second part), but it appears to have been deposited there later. It seems then that directly before the silos was built, the area was leveled to broaden the habitable space. Previous occupation levels were removed and the ground leveled under the planned structures, some amount of earth from higher on the mound was also apparently relocated. This observation may also indicate that at least in this part of the site the settlement from the second half of the First Dynasty was located elsewhere and possibly higher up on the mound.

In lower levels, also dated to the First Dynasty, material characteristic of

the first part of the Dynasty was accompanied by some forms already known from the end of the Protodynastic period. A wall (S4-24) of mud brick was discovered (Level 28, altitude 2.70 m), running north–south, but no other structural remains. It could have been a wall securing the settlement against flooding by the Nile. Heavy loads of material were deposited in successive flooding levels against the eastern side of the wall. The fact that this part of the settlement was at the time in the floodland would explain also the activity shift in the subsequent period to higher-lying areas.

An insignificant amount of diagnostic material from layers just below the mentioned wall (Levels 33–35, altitudes 2.20–1.90 m) makes their dating difficult. It seems, however, that these layers were functionally connected with a period when the Naqadans replaced the Lower Egyptian people. At the present stage of research, it is difficult to date with any

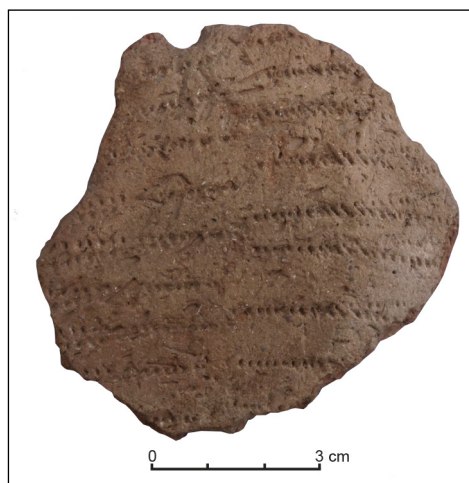


Fig. 7. *Potsherd with zigzag decoration*  
(Photo R. Słaboński)

certainty the exact date of the Naqadians' arrival. Relevant settlement remains are composed mostly of postholes and furrows, suggesting that the structures located here were made of organic materials (wood and reed). Moreover, it was stated that the settlement of the time reached beyond the later wall (S4-24). In the southeastern corner of the trench, a part of a hut (S4-41) constructed of organic materials, as discussed above, was discovered. The structure stood on sand and especially in the part located north of the house, a layer of organic remains coming either from the decomposition of the structure itself or from accumulation of layers during its functioning has located. The section through the structure proves that it was used for a longer period of time, these

waste deposits inside the building reaching approximately 0.20 m. Also, two flint knives [Fig. 7] were found in the context of the structure. Precise dating of the structure is encumbered by the fact that only a small fragment could be excavated in the trench and consequently the amount of material collected was insignificant.

The lowermost settlement layers (from Level 36; altitude 1.90 m) were dated to the period of the Lower Egyptian culture, but they unfortunately appeared just above groundwater level. Pottery samples were taken from a small test pit excavated in the center of the trench. Examples included sherds with characteristic zigzag decoration [Fig. 8]. Most importantly, however, like in Tell el-Farkha, there were no destruction layers on record.

[MAJ, MC]

## CONCLUDING REMARKS

The research confirmed our previous assumptions concerning the overall chronology of the site, as well as the presence of both a settlement and cemetery.

Pottery characteristic of the Lower Egyptian Culture, found in the lowermost levels of trench S4, proved that the settlement which existed there since the Predynastic period had been inhabited

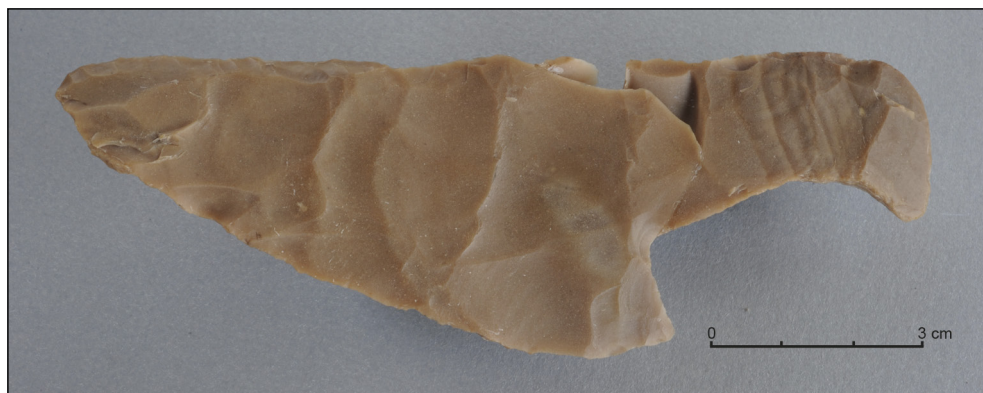


Fig. 8. *Flint knife with handle, from trench S4*  
(Photo R. Słaboński)

first by people belonging to the said culture.

Naqadian culture representatives inhabited the site at a later date, but it is difficult at present to say whether this was from the second half of the Naqada II period, as at Tell el-Farkha and Buto, or during Naqada III. Pottery from Naqadan layers in trench S4 comprised forms, which in most cases showed an affinity to Naqada III types. The two flint knives should also probably be associated with that period. On the contrary, a few potsherds could belong to forms that might have appeared already during Naqada II. Diagnostic potsherds from the layer directly above the one associated with Lower Egyptian Culture are so very scarce, however, that far-reaching conclusions concerning the period of cultural transition are difficult. Based on preliminary pottery analysis, the Naqada II phase appears not to be represented, at least not in test trench S4.

If that is indeed the case, it still remains unclear whether we are dealing here with a settlement break (between Lower Egyptian Culture and Naqada III) that concerned the whole site or only its part. The latter would mean that there was a shift of habitation area, which could have been located elsewhere on site during Naqada II. Changes of settlement reach and location of inhabited parts, for different reasons (Jucha forthcoming), seem to have occurred several times in the history of the locality. The area currently excavated is still too limited to supply enough data for analysis in order to answer this question. However, considering the presence, confirmed by coring, of several layers with cultural material going down some 3 m below the currently

explored Naqada III levels in trench S3, the presence of Naqada II layers cannot be ruled out.

The site was also inhabited during the Naqada III–Protodynastic as well as the Early Dynastic periods, what was confirmed in both trenches. However, it seems that at least during Early Dynastic times the habitation area was reduced. The presence of graves in trench S3 proved that the southwestern part of the tell was used then as a cemetery.

The settlement existed until the end of the Old Kingdom, as confirmed by finds from trench S4. This, together with data obtained in 2010 from trench S1 and surface finds from the 2008 and 2010 seasons, has proved that the habitation area was concentrated at the time in the eastern and most probably also northern part of the tell.

Therefore, the situation at Tell el-Murra is similar to that at Tell el-Farkha (Chłodnicki, Ciałowicz, Mączyńska (eds) 2012), which is barely 10 km away to the west, where the habitation area of the Naqada III period seems also to have been reduced at the beginning of the First Dynasty, (Chłodnicki 2006: 914–915; Ciałowicz 2006: 917). Both sites continued to be inhabited, although undoubtedly reduced in size, during the Old Kingdom, but Tell el-Farkha was abandoned at the beginning of that period, in the Third/beginning of the Fourth(?) Dynasty. The settlement at Tell el-Murra appears to have lasted longer. Research at Tell el-Murra has shown that the reduction in size of settlements at some point during the Early Dynastic period concerns several sites located in this part of the Nile Delta. The process of gradual depopulation, which started during

the Early Dynastic period, must have continued through the Old Kingdom, leading ultimately to the abandonment of several of the settlements. This was confirmed also in the case of some other sites where surface material was collected during the survey (Jucha forthcoming). [MAJ]

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## REFERENCES

Chłodnicki, M.

2006 Tell el-Farkha — stratigraphy of the Eastern Kom (northern part) [in:] K. Kroeper, M. Chłodnicki, M. Kobusiewicz (eds), *Archaeology of Early Northeastern Africa. In Memory of Lech Krzyżaniak [=Studies in African Archaeology 9]*, Poznań: Poznań Archaeological Museum, 909–916

Chłodnicki, M., Ciałowicz, K.M., Mączyńska A. (eds)

2012 *Tell el-Farkha I. Excavations 1998–2011*, Poznań: Poznań Archaeological Museum; Kraków: Institute of Archaeology, Jagiellonian University

Ciałowicz, K.M.

2006 From residence to early temple: the case of Tell el-Farkha [in:] K. Kroeper, M. Chłodnicki, M. Kobusiewicz (eds), *Archaeology of Early Northeastern Africa. In Memory of Lech Krzyżaniak [=Studies in African Archaeology 9]*, Poznań: Poznań Archaeological Museum, 917–934

Czarnowicz, M.

2012 Copper tools [in:] M. Chłodnicki, K.M. Ciałowicz, A. Mączyńska (eds), *Tell el-Farkha I. Excavations 1998–2011*, Poznań: Poznań Archaeological Museum; Kraków: Institute of Archaeology, Jagiellonian University, 345–355

Dębowska-Ludwin, J.

2012 The cemetery [in:] M. Chłodnicki, K.M. Ciałowicz, A. Mączyńska (eds), *Tell el-Farkha I. Excavations 1998–2011*, Poznań: Poznań Archaeological Museum; Kraków: Institute of Archaeology, Jagiellonian University, 53–75

Jucha, M.A.

2009 Beer jars of Naqada III period. A view from Tell el-Farkha [in:] T. Rzeuska, A. Wodzińska (eds), *Studies on Old Kingdom Pottery*, Warsaw: Neriton; ZAŚ PAN, 49–60

- 2010 Tell el-Murra. The Predynastic–Old Kingdom site in the North-Eastern Nile Delta, *Folia Orientalia* 47, 379–390
- 2012 Pottery from the cemetery [in:] M. Chłodnicki, K.M. Ciałowicz, A. Mączyńska (eds), *Tell el-Farkha I. Excavations 1998–2011*, Poznań: Poznań Archaeological Museum; Kraków: Institute of Archaeology, Jagiellonian University, 77–86
- Forthcoming North-eastern part of the Nile Delta during Naqada III period [in:] *Egypt at its Origins 4. Proceedings of the Fourth International Conference “Origin of the State. Predynastic and Early Dynastic Egypt”*, New York, July 26–30, 2011, Leuven: Peeters
- Jucha, M.A., Błaszczuk, K., Buszek, A., Pryc, G.
- 2013 Tell el-Murra (Northeastern Nile Delta Survey). Season 2010, *PAM* 22 (*Research 2010*), 105–120
- Kroeper, K.
- 1988 The excavations of the Munich East-Delta expedition in Minshat Abu Omar [in:] E.C.M. van den Brink (ed.), *The Archaeology of the Nile Delta. Problems and Priorities*, Amsterdam: Netherlands Foundation for Archaeological Research in Egypt, 11–46
- Kroeper, K., Wildung, D.
- 2000 *Minshat Abu Omar. Ein vor- und frühgeschichtlicher Friedhof im Nildelta II. Gräber 115–204*, Mainz am Rhein: Philipp von Zabern
- Pryc, G.
- 2012 Stone vessels [in:] M. Chłodnicki, K.M. Ciałowicz, A. Mączyńska (eds), *Tell el-Farkha I. Excavations 1998–2011*, Poznań: Poznań Archaeological Museum; Kraków: Institute of Archaeology, Jagiellonian University, 297–314