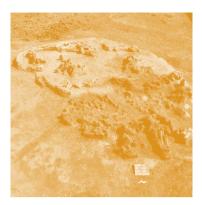
Tell el-Farkha Archaeological fieldwork 2018–2019



Abstract: The Tell el-Farkha site, which is under excavation since 1998, is formed of three tells. All three were excavated in the course of the two seasons, reopening already established trenches. Breweries discovered earlier on the Western Kom were explored, two completely, two in the early stages of exploration. Thick, poorly preserved mud-brick walls were unearthed northeast of one of the breweries. Remains of a multi-roomed structure continued to be cleared in the northern trench on the Central Kom. D-shaped red bricks in this area suggest the presence of a brewerv in the vicinity. A Nagada IIB and IIC settlement was recognized in the southern trench: storage pits, postholes, and furrows from a big house built of wood. A part of a settlement dated to the Tell el-Farkha Phases 3 and 4 (Nagada IID2-mid IIIB) was explored on the Eastern Kom. Of greatest interest is a structure composed of rectangular rooms around an open space, probably a courtyard. Three graves were discovered including one dated to the Nagada IIIB with the first pottery coffin discovered at Tell el-Farkha.

Key words: Lower Egyptian culture, Naqada culture, Protodynastic, Early Dynastic

All three tells forming the site were excavated in the course of the two seasons, reopening already established trenches. Post-processing work was also conducted on the site, including analyses of the pottery, flint and other stone tools, as well as animal and botanical remains.

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WESTERN KOM

The trench reopened in 2018 had been opened first in 2006, explored in 2007 and 2008, and extended north in 2009. Layers 39–45 were investigated in 2018 in the northern squares (63–64 and 53a–c; 54 a).

The most important feature that was excavated was a brewery (No. 342), which turned out to be similar to structure W47 discovered in the eastern part of Western Kom during the 2000 season (Chłodnicki and Ciałowicz 2001: 91–93; Ciałowicz 2012a: 155) . Brewery W47, dated to the Tell el-Farkha Phase 2 (Naqada IID1– beginning IID2), was dug into a thick layer of mud covering older Lower Egyptian architectural remains.

Brewery 342 was also dug into a thick layer of Nile mud covering earlier struc-

tures. The feature was sectioned to better recognize its structure [Fig. 1]. It resembles in shape a three-leaf clover, the three circular parts overlapping. The core is constructed of mud bricks and is surrounded by a rim of burnt mud bricks forming a wall 0.20–0.30 m thick, no more than 0.40 m high. Each of the three main parts was a fireplace where the process of beer-making took place. An oblique row of bricks slanting toward the center surrounded each of these fireplaces. Low brick walls compartmentalized the inside of the structure. The pottery finds from the brewery included a lug handle of imported Southern Levantine Erani C pottery. Based on the pottery finds, the brewery is dated to Tell el-Farkha Phase 2/3 (Naqada IID–IIIA1).



Fig. 1. Western Kom. Brewery 342 (Tell el-Farkha Project | orthophoto M. Czarnowicz)

A cluster of single unburnt mud bricks was found in a regular configuration east of the structure. Poorly preserved mudbrick walls (approximately 1.40 m thick) were unearthed northeast of the brewery [*Fig.* 2]. The walls were destroyed by a Nile flood. Better visibility of the wall outlines was observed in the lower layers [*Fig.* 3]. The walls are on the same level (about 3.10 m asl) as walls discovered in the 2004 campaign, and are presumably part of the same enclosure that surrounded the oldest brewery center in the Delta (see Ciałowicz 2012a: 157–158). The remains can be dated to Naqada IIC–IID1 and should be connected with a later phase of Lower Egyptian culture.

The pottery discovered in 2018 consisted of 17 badly preserved pots, mostly jars of small size. Some of the fragments were decorated, mainly with incised zigzags typical of Lower Egyptian culture, but two fragments of painted pottery were evidently imported from Upper Egypt. Layers 40–44 were dated by the pottery finds to a period contemporary with the final stage of Naqada IIC and Naqada IID1.

A high water table in the northern part of trench (squares 63–64 and 53–54) was a serious obstacle in the 2019 excava-



Fig. 2. Western Kom. Brewery 342 and outline of walls under a layer of Nile mud (Tell el-Farkha Project | orthophoto M. Czarnowicz)

tion season. Only one layer was explored, but enough to confirm the continuation of the mud-brick walls discovered in the previous season. A corner of the walls separated an area, in which the upper parts of another brewery could be seen (square 64). The pottery, including five examples of lemon-shaped jars, is connected with Tell el-Farkha Phase 1, contemporary with Naqada IIB–IIC. Exploration was terminated by heavy rains and a high water table.



Fig. 3. Western Kom. Brewery 342 and walls northeast of it (Tell el-Farkha Project | orthophoto M. Czarnowicz)



Fig. 4. Western Kom. Brewery 296 in 2019 at the beginning of exploration, looking east (Tell el-Farkha Project | photo G. Bąk-Pryc)



Fig. 5. Western Kom. The oldest phase of Brewery 296, looking east (Tell el-Farkha Project | photo G. Bąk-Pryc)



Fig. 6. Western Kom. Stand for inserting a vat in Brewery 296 (Tell el-Farkha Project | photo G. Bąk-Pryc)



Fig. 7. Western Kom. Bag-shaped jar and snail shells (Tell el-Farkha Project | photo J. Skłucki)

Work shifted to squares 43–44 located in the central part of the excavated area. A brewery (No. 296), partly explored in an earlier campaign (Chłodnicki and Ciałowicz 2018: 125–127), was investigated in 2019, uncovering the two oldest phases dated to the Naqada IIIA phase [*Figs* 4–5]. A different method of mounting vats in the ovens proved of particular interest. To date, vats were known to be



Fig. 8. Western Kom. Flint arrowhead (Tell el-Farkha Project | photo J. Skłucki)

set between diagonally inserted bricks; evidence to this effect came from breweries discovered previously (Ciałowicz 2012a: 149–155), as well as from the younger stages of Brewery 296. In the phases explored now, a few bricks lay horizontally, forming a kind of stand for inserting the vat, surrounded by bricks dug into the ground [*Fig. 6*]. Brewery 296 was erected on a Lower Egyptian layer featuring traces of wooden structures [see *Fig.* 5].

A small bag-shaped jar was found north of the brewery [*Fig.* 7]. Inside it were 283 shells of snails from the Galba family. Their purpose is difficult to understand, unless they were treated as beads for making a necklace.

An older brewery (No. 361) was located northeast of this feature. Its upper part was explored [*Fig.* 9]. It is older than the previous one, being probably from



Fig. 9. Western Kom. Brewery 361, looking west (Brewery 296 in right foreground) (Tell el-Farkha Project | photo G. Bąk-Pryc)

the Naqada IID/IIIA period. A flint arrowhead with concave base was found on its southeastern fringe [*Fig. 8*]. It is only the second example of its kind found at

Tell el-Farkha. The pottery sherds from squares 43–44 are dated to Tell el-Farkha Phase 2 and beginning of Phase 3 (Naqada IID1–IID2/IIIA1). [KMC]

CENTRAL KOM

In 2018 and 2019, the Central Kom continued to be explored in trenches located on the western slope of the mound: squares C83, C84ac, C93cd and C94c in the northern trench and C32ab, C42, C52bd, C53, C62cd and C63cd in the southern one.

Remains of a Naqada IIB and IIC settlement (Lower Egyptian culture) were observed in the southern trench. The older phase comprised storage pits, postholes, and mud-filled furrows that are interpreted as traces of a wooden structure. The furrows provided data on the organization of the settlement. A long furrow cutting across the trench from the northwest to the southeast demarcated the so called "Lower Egyptian residence" explored north of it in the previous seasons [*Fig. 10*]. South of it there were traces of another big house of wood located in the southwestern corner of the trench. Smaller pits, postholes and mud pits were found inside the house. East of it, as well as in the eastern part of the residence, there were only storage and refuse pits [*Fig. 11*]. Some of these pits were sunk deep into the *gezirah* sand and below groundwater level. Similar storage pits were previously excavated in the eastern part of the residence, near the outer wall.



Fig. 10. Central Kom. Southern trench. Remains of wooden structures from the Lower Egyptian settlement (Tell el-Farkha Project | photo M. Chłodnicki)

The archaeological finds were few: an almost complete lemon-shaped jar [*Fig.* 12 top] and many potsherds from bigger pots (bowls and jars) and smaller vessels, some of them decorated with a zigzag pattern. A fragment of a copper object, an awl, square in section, almost 6 cm long, was found in one of the storage pits (CW.483). It is the oldest copper object found so far at Tell el-Farkha [*Fig.* 12 bottom], older than the copper knife found nearby in the Lower Egyptian residence (Czarnowicz 2012a: Pl. 1.10). It was found more than 0.50 m deeper (below the present water table, level 2.32 m). Many mud pits were found in this trench. They consisted mostly of a solid bottom made of hard silt, sometimes with potsherds or even a whole pig shoulderblade. The external furrow of the residence was observed to be much deeper (0.30 m) than the furrows inside the building (which were mostly 0.10–0.15 cm deep).

The southern part of a rectangular building, interpreted as the central warehouse of the Naqada village, started to be explored in 2019. The northern part of this building had been excavated earlier in the adjacent trench (Chłodnicki

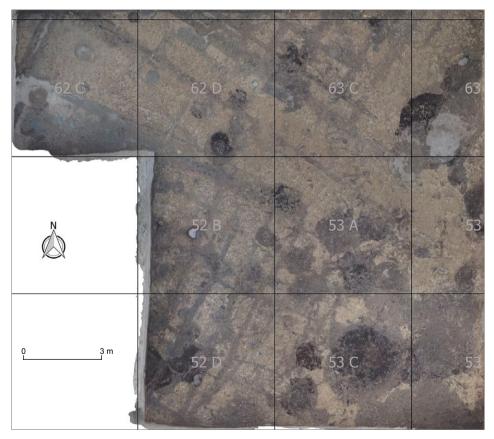
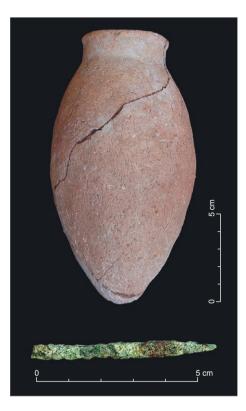


Fig. 11. Central Kom. Southern trench. Level 50 (2.70 m asl) (Tell el-Farkha Project | photo M. Czarnowicz and J. Karmowski)



and Mączyńska 2018: 81–86). In search of the southern end of the building, the trench was extended 3 m south. Eight layers (0.80 m) were explored in square C42 (level 4.20–3.40 m asl) and 18 layers (level 5.70–3.40 m asl) in the extension.

The western and southern part of the structure was destroyed in ancient times. Multiple fragments of potsherds were found on the floor level in the preserved part of the building [*Fig. 13*]. Most of them belong to storage jars of the same kind (L30, according to Petrie), but complete small, globular jars were also found.

The building had no continuation to the south (there is no trace of it in the south trench wall). The length of the

Fig. 12. Objects from a Lower Egyptian Culture pit discovered in the southern trench on the Central Kom, top, lemon-shaped vessel; bottom, copper artifact (Tell el-Farkha Project | photo J. Skłucki)



Fig. 13. Central Kom. Southern trench. Remains of a Naqadian store (southern end) with crushed pottery on the floor (Tell el-Farkha Project | photo M. Chłodnicki)

building evidently did not exceed 21 m. It also seems that room CW.94 was not divided into two parts as earlier suggested (Chłodnicki and Mączyńska 2018: 85–86). It was a long chamber, longer than CW.57. Remains of another room with a fireplace inside it was found in the southeastern corner of the trench, surrounded by a thin wall (one-brick thick) with rounded corners [*Fig.* 14]. The building stood parallel to the storage structure, 2.00 m away from it, like the other houses. This suggests that a 2-m wide passage ran east of the building.

Successive layers were explored in the previously excavated part of the northern trench (for investigations in 2012–2017, see Chłodnicki and Ciałowicz 2015: 183–184; 2016: 240–242; 2018: 137– 139). The density of D-shaped red bricks in the lowest levels reached in the latest season (some were used also in wall construction, see below) suggested the presence of a brewery most probably east of the trench; the assumption is that it was either partly or completely dismantled [Fig. 15]. A similar situation was observed in an adjacent trench excavated in 2007–2008. Part of a brewery recorded there, dated to the end of Lower Egyptian occupation on the Central Kom, that is, Naqada IID1–IID2 (Chłodnicki and Ciałowicz 2010: 169-171; 2011: 159–160), had been dismantled for reuse in a wall (C.485) of a building raised in place of the Lower Egyptian residence (Chłodnicki 2010: 108, Fig. 32).

The building in which the D-shaped bricks were used alongside mud bricks consisted of several rooms (with walls 1.5 brick thick). It covered almost the entire area of the trench. In the northern



Fig. 14. Central Kom. Southern trench. Remains of a Naqadian building (Tell el-Farkha Project | photo M. Chłodnicki)

part of the building doors were observed between adjacent rooms. The function of this structure will perhaps become evident once the lower levels of this building are excavated [*Fig. 16*]. Remains of fireplaces were noted inside the rooms. The levelling layers covering the building did not yield any architectural remains.

The upper layers 28–36 (level 5.20– 4.40 m asl) are connected with the Protodynastic settlement (Naqada IIIA1–A2).

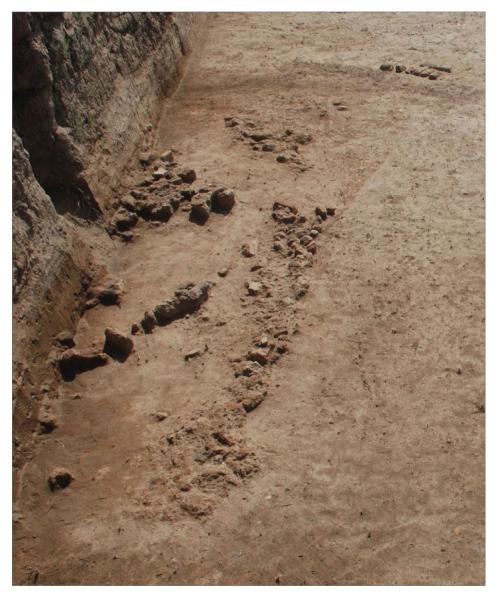


Fig. 15. Central Kom. Northern trench. Concentration of D-shaped red bricks (Tell el-Farkha Project | photo M. Chłodnicki)

Remains of a house with a courtyard, 4 m long and 6 m wide, were found in these layers in the eastern part of the trench. Long rooms were situated around this yard, with fireplaces in the interiors as well as in the area in front of the house. The house walls were 0.40 m thick (corresponding to one brick and a half). A section of a circuitous wall was found west of the house [*Fig. 18*]. Two miniature vessels with handles were connected with this occupation level [*Fig. 17*]. [MCH]

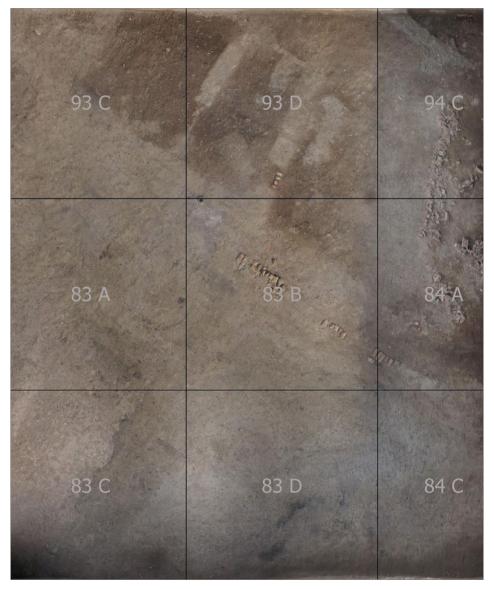


Fig. 16. Central Kom. Northern trench. Level 37 (4.40 m asl) (Tell el-Farkha Project | orthophoto M. Czarnowicz and J. Karmowski)



Fig. 17. Central Kom. Northern trench. Miniature vessels (Tell el-Farkha Project | photo J. Skłucki)



Fig. 18. Central Kom. Northern trench. Remains of a mud-brick building (Tell el-Farkha Project | photo M. Chłodnicki)



Fig. 19. Eastern Kom. Remains of mud-brick walls from Level 56/Phase 3 (Tell el-Farkha Project | photo G. Bąk-Pryc)



Fig. 20. Eastern Kom. Remains of structures from the beginning of Phase 4 (Tell el-Farkha Project | photo G. Bąk-Pryc)

EASTERN KOM

Squares 36 a–b, 45a–b, 46; 47a,c, 55a–b, 56c–d, 57c were the main objective of the investigations in the course of the two seasons. Layers 42–47 and 48–56 were excavated uncovering remains of different phases of settlement. Pottery analyses have dated layers 48–56 (excavated during the 2019 campaign) to Tell el-Farkha Phase 3 and the beginning of Phase 3 (Naqada IID2–IIIA2). Layers 42–47 (season 2018) could be dated to Tell el-Farkha Phase 4 (Naqada IIIA2–middle of Naqada IIIB).

At the lowest level (layer 56) outlines of walls were discerned. They were covered by the layer of destruction, corresponding probably to a site-wide conflagration that ended Tell el-Farkha Phase 3. [*Fig. 19*]. They were very badly preserved, the bricks being made of almost pure mud. This architecture is undoubtedly connected with the first southern Egyptian occupation of the Eastern Kom at Tell el-Farkha (Ciałowicz and Dębowska-Ludwin 2013). Excavations were stopped at about 2.80 m asl by a rising groundwater table.

The mud-brick structures in layers 48–52 represent a settlement from Tell el-Farkha Phase 3 and the beginning of Phase 4. Of greatest interest is a structure composed of rectangular rooms around an open space, the latter probably a courtyard with an entrance from



Fig. 21. Eastern Kom. Ovens from Level 46 (Tell el-Farkha Project | photo M. Gamrat)

the southeast [*Fig. 20*]. The entry leads to a narrow corridor with three small compartments arranged in one line. These have been provisionally interpreted as a storage area for goods kept in containers made of perishable materials (bags; baskets). Two other rooms were distinguished in the western part of the structure. The buildings stood on the layer of destruction described above.

In Tell el-Farkha Phase 4, the architecture consisted of a few rectangular rooms with walls of grey mud brick [*Fig. 22*]. Several ovens were dug into the floors of these rooms. Some of them still contained pottery vessels. The ovens intersected the older structures from the same phase with walls of a different kind of mud brick, yellow in color and with sand as temper [*Fig. 21*]. The cemetery from the Protodynastic and Early Dynastic phases yielded a few new graves. The Protodynastic graves are concentrated in the southern part of the excavated area, prompting expectations of more tombs extending south on the mound; the eastern border of this burial ground seems clear (Dębowska-Ludwin 2019: 115). A thick wall found about a meter east of the easternmost Grave 154 belongs already to the village that was apparently contemporary with the cemetery.

The graves fit the general description of the group already excavated at Tell el-Farkha (Dębowska-Ludwin 2018), presenting various typical features. Grave 153 is a small mastaba, 3.10 m by 2.70 m in size and with the superstructure preserved to a height of 0.45 m [*Fig. 23*]. The su-



Fig. 22. Eastern Kom. Building remains from Tell el-Farkha Phase 4 (Tell el-Farkha Project | photo M. Gamrat)



Fig. 23. Eastern Kom. Grave 153 (Tell el-Farkha Project | photo M. Gamrat)



Fig. 24. Eastern Kom. Grave 154 (Tell el-Farkha Project | orthophoto M. Czarnowicz)



Fig. 25. Eastern Kom. Incised decoration on a wine jar from Grave 154 (Tell el-Farkha Project | photo J. Skłucki)

per- and substructure were separated by a typical reed-mat roof, which was found collapsed inside the burial chamber. The chamber was 1.88 m by 1.35 m in plan and 1.33 m deep, with clearly sloping walls (Dębowska-Ludwin 2019: 116). The skeleton was of a male, about 40–50 years old (Szczepanek 2019: 149), laid in contracted position, on the left side, with head to the north. The body had been placed on a mat sprinkled with red ocher. A thick layer of ocher was recorded also below the body, in particular below the head.

The burial chamber was filled with brick rubble and intentionally covered with a thick layer of mud and mats on top. Consequently, the pottery vessels forming the grave equipment were mostly destroyed. It was possible to reconstruct 25 pottery vessels (mainly cylindrical jars). Also found around the body were two travertine vessels, one cylindrical and the other a small bowl (Bąk-Pryc 2019: 146) as well as one rectangular greywacke palette decorated with three incised lines on all sides. The grave is to be dated to the Naqada IIIB period.

Grave 154 was rectangular, rather small (1.70 m by 0.93 m, 0.54 m deep) and simple. It did not have a brick superstructure but contained the first example of a pottery coffin to be found at Tell el-Farkha [*Fig. 24*]. It was heavily fragmented. The bottom was pierced with nine small holes. The skeleton was in very bad condition. It was a young person (20–25 years old), probably a woman (Szczepanek 2019: 149). The equipment comprised two stone bowls, one of basalt and the other of travertine, a small rectangular greywacke palette, 127 beads of carnelian and greywacke, and four pottery vessels. The most inter-



Fig. 26. Eastern Kom. Rounded northwestern corner of monumental mastaba (No. 10) (Tell el-Farkha Project | photo M. Gamrat)

esting of these is a wine-jar with an incised representation of two birds, probably herons, and a boat [*Fig. 25*]. On the left, there was another sign (a whip?). This grave was also dated to the Naqada IIIB period.

Grave 152 contained a very poorly preserved skeleton burial of a youth (16–18 years old), the head pointing north. There was no grave equipment. The dating thus is based on a stratigraphic analysis, presumably Tell el-Farkha Phase 6 (late part of the First Dynasty and beginning of the Second).

Investigations in the northwestern corner of the oldest Egyptian mastaba, aimed at studying the building techniques involved in its construction, brought highly interesting results. Sections through the edifice wall showed that it was composed of three different walls built of different types of bricks. The middle wall ran a rounded corner. The main chamber of the mastaba evidently had rounded corners at the start. The wall of this phase was lined with another wall that stood on a layer of rubble [Fig. 26]. The middle wall was built of a dark mud brick in the upper layers and a yellow sandy brick in the lower parts [Fig. 27]. The building stood on a layer of destruction covered by Nile mud, a stratigraphic sequence known from other parts of the site, e.g., the so-called Naqada residence on the Western Kom, which was burnt and then flooded by the waters of the Nile (Ciałowicz 2012b: 168; 2018: 12–13). The destruction layer was levelled under the mastaba. A few ovens were discovered in the deepest strata under the mastaba corner [Fig. 28]. They were connected with the first occupation of the Eastern Kom in Tell el-Farkha Phase 3 (Nagada IID2/IIIA1).



Fig. 27. Eastern Kom. Section through the west wall of the mastaba (Tell el-Farkha Project | photo M. Gamrat)

A big lump of bitumen discovered in the corner of Room 183, dated to Tell el-Farkha Phase 4 (Naqada IIIA1-middle of Naqada IIIB) has substantiated yet again the importance of trade exchange for the inhabitants of the settlement at a time when trade with the Levant was picking up. The Northern Canaanite vessels that appear next to Southern Levantine ones (Czarnowicz 2012b: 247–251) are a reflection of contacts reaching far beyond the region of Southern Canaan where the major Naqada trade centres were located during the Early Bronze IB. [KMC]



Fig. 28. Eastern Kom. Layer of destruction and earlier ovens under northwestern corner of mastaba (Tell el-Farkha Project | photo M. Gamrat)

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References

- Bąk-Pryc, G. (2019). Stone vessels from the Eastern Kom. Seasons 2014–2018. In M. Chłodnicki, K.M. Ciałowicz with contributions by G. Bąk-Pryc, J. Dębowska-Ludwin, U. Doros, M. Kazimierczak, A. Mączyńska, J. Skłucki, M. Sobas, A. Szczepanek, Polish excavations at Tell el-Farkha (Ghazala) in the Nile Delta. Preliminary report 2014–2018. Archeologia, 68, 144–148
- Chłodnicki, M. (2010). Excavations at the Central Kom. In M. Chłodnicki, K.M. Ciałowicz with contributions by R. Abłamowicz, J. Dębowska-Ludwin, M.A. Jucha, A. Mączyńska, G. Pryc, M. Rozwadowski, and M. Sobas, Polish excavations at Tell el-Farkha (Ghazala) in the Nile Delta. Preliminary report 2006–2007. *Archaeologia*, 59, 105–110
- Chłodnicki, M. and Ciałowicz, K.M. (2001). Tell el Farkha (Ghazala): Interim report, 2000. *PAM*, 12, 85–97
- Chłodnicki, M. and Ciałowicz, K.M. (2010). Tell el-Farkha. Preliminary report, 2007. PAM, 19, 161–178
- Chłodnicki, M. and Ciałowicz, K.M. (2011). Tell el-Farkha (Ghazala), 2008. *PAM*, 20, 153–170
- Chłodnicki, M. and Ciałowicz, K.M. (2015). Tell el-Farkha. Excavations 2012–2013, *PAM*, 24/1, 173–197
- Chłodnicki, M. and Ciałowicz, K.M. (2016). Tell el-Farkha. Archaeological fieldwork 2014–2015, *PAM* 25/1, 227–253
- Chłodnicki, M. and Ciałowicz, K.M. (2018). Tell el-Farkha: Archaeological fieldwork 2016–2017. *PAM*, 27/1, 123–148
- Chłodnicki, M. and Mączyńska, A. (2018). Central storage devices from the Central Kom at Tell el-Farkha. In K.M. Ciałowicz, M. Czarnowicz, and M. Chłodnicki (eds), *Eastern Nile Delta in the 4th millennium BC* (pp. 81–90). Kraków–Poznań: Institute of Archaeology, Jagiellonian University; Profil-Archeo Publishing House
- Ciałowicz, K.M. (2012a). Lower Egyptian settlement on the Western Kom. In M. Chłodnicki, K.M. Ciałowicz, and A. Mączyńska (eds), *Tell el-Farkha I. Excavations 1998–2011* (pp. 149–162). Poznań–Kraków: Poznań Archaeological Museum; Institute of Archaeology, Jagiellonian University
- Ciałowicz, K.M. (2012b). Protodynastic and Early Dynastic settlement on the Western Kom. In M. Chłodnicki, K.M. Ciałowicz, and A. Mączyńska (eds), *Tell el-Farkha* I. *Excavations 1998–2011* (pp. 163–180). Poznań–Kraków: Poznań Archaeological Museum; Institute of Archaeology, Jagiellonian University
- Ciałowicz, K.M. (2018). Socio-political transformations in the Eastern Delta in the second half of 4th millennium BC. The view from Tell el-Farkha. In K.M. Ciałowicz, M. Czarnowicz, and M. Chłodnicki (eds), *Eastern Nile Delta in the 4th millennium BC* (pp. 9–20). Kraków–Poznań: Institute of Archaeology, Jagiellonian University; Profil-Archeo Publishing House

- Ciałowicz, K.M. and Dębowska-Ludwin, J. (2013). Tell el-Farkha and its implications for understanding the earliest architecture of Lower Egypt. *Studies in Ancient Art and Civilization*, 17, 25–40
- Czarnowicz, M. (2012a). Copper tools. In M. Chłodnicki, K.M. Ciałowicz, and A. Mączyńska (eds), *Tell el-Farkha I. Excavations 1998–2011* (pp. 345–355). Poznań–Kraków: Poznań Archaeological Museum; Institute of Archaeology, Jagiellonian University
- Czarnowicz, M. (2012b). Southern Levantine imports and imitations. In M. Chłodnicki, K.M. Ciałowicz, and A. Mączyńska (eds), *Tell el-Farkha I. Excavations 1998–2011* (pp. 245–265). Poznań–Kraków: Poznań Archaeological Museum; Institute of Archaeology, Jagiellonian University
- Dębowska-Ludwin, J. (2018). Socio-economic changes in early Egyptian society as reflected by graves of the Tell el-Farkha cemetery. In K.M. Ciałowicz, M. Czarnowicz, and M. Chłodnicki (eds), *Eastern Nile Delta in the 4th millennium BC* (pp. 21–29). Kraków–Poznań: Institute of Archaeology, Jagiellonian University; Profil-Archeo Publishing House
- Dębowska-Ludwin, J. (2019). The cemetery. In M. Chłodnicki, K.M. Ciałowicz with contributions by G. Bąk-Pryc, J. Dębowska-Ludwin, U. Doros, M. Kazimierczak, A. Mączyńska, J. Skłucki, M. Sobas, A. Szczepanek, Polish excavations at Tell el-Farkha (Ghazala) in the Nile Delta. Preliminary report 2014–2018. *Archeologia*, 68, 115–122
- Szczepanek, A. (2019). The anthropological analysis. Seasons 2016–2018. In M. Chłodnicki, K.M. Ciałowicz with contributions by G. Bąk-Pryc, J. Dębowska-Ludwin, U. Doros, M. Kazimierczak, A. Mączyńska, J. Skłucki, M. Sobas, A. Szczepanek, Polish excavations at Tell el-Farkha (Ghazala) in the Nile Delta. Preliminary report 2014–2018. Archeologia, 68, 148–150