

# Tell el-Retaba

## Season 2017



**Abstract:** The 2017 season of archaeological excavation at the site of Tell el-Retaba in the Nile Delta in Egypt led to several interesting discoveries. Two of these concerned burials: a Hyksos tomb from the Second Intermediate Period, robbed but with some remains of the original furnishings, and pit burials from the early Eighteenth Dynasty, one of which was richly endowed with silver jewelry. Meriting note is the discovery of moats belonging to the defenses of the Nineteenth Dynasty fortress. Exploration of a crowded Third Intermediate Period settlement was continued.

**Keywords:** Hyksos, Second Intermediate Period, Eighteenth Dynasty, Nineteenth Dynasty, Third Intermediate Period, settlement, fortress, moats, cemetery

The Tell el-Retaba archaeological site, approximately 35 km west of Ismailiya, has been investigated by a Polish–Slovak Archaeological Mission since 2007. Fieldwork was continued for two months in 2017, the investigations being concentrated in two areas: 4 and 9, situated west and east of the modern road, respectively [Fig. 1].

In **Area 4**, work was concentrated in the northwestern part, where contested ownership of the land called for salvage operations to be carried out immediately. The Second Intermediate Period (SIP) settlement and cemetery went through three phases: the earliest, G<sub>3</sub>, characterized by well-built houses; G<sub>2</sub> when a burial ground replaced the deserted buildings and G<sub>1</sub>, which was a gravel deposit that covered the structures. The area continued in use mostly as a burial ground after the Second Intermediate Period (phase F<sub>5</sub>). Most of the early Eighteenth Dynasty structures from the area: the Green house (phase F<sub>4b</sub>) and the Black house 1 (phase F<sub>3</sub>), were investigated already in previous seasons. A double moat of the Nineteenth Dynasty fortress (phase E) was also discovered in Area 4 and some construction elements were recorded above it, on the inner side of Wall 2 (phase D<sub>4</sub>) of the Twentieth Dynasty.

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In **Area 9**, exploration of a Third Intermediate Period settlement continued over the course of the season. One of the houses yielded an unusually rich set of artifacts.

The main discoveries are presented below in chronological order; *Table 1* presents the chronology and phasing of archaeological remains in Tell el-Retaba based on the results of work carried out in 2007–2017.

Table 1. Phasing of site occupation at Tell el-Retaba (following the 2017 season)

Phase	Dating	Main features
G3	Second Intermediate Period (SIP)	Settlement and infant burials
G2	Second Intermediate Period	Cemetery
G1	Second Intermediate Period	Settlement and cemetery
F5	Early Eighteenth Dynasty	Cemetery
F4a–b	Early Eighteenth Dynasty	Settlement: Green houses
F3	Early Eighteenth Dynasty	Settlement: Black houses
F2	Early Eighteenth Dynasty	Scattered remains
F1	Late Eighteenth Dynasty	No archaeological record yet
E4	Nineteenth Dynasty	Earliest defense wall: core of Petrie's "wall 1"; infant burials
E3	Nineteenth Dynasty	Fortress of Ramesses II: extension of "wall 1"; moats; barracks/workshops
E2	Nineteenth Dynasty	Fortress
E1	Nineteenth–Twentieth Dynasty	Settlement and cemetery in the ruins of the fortress
D4	Twentieth Dynasty	Ruins of Nineteenth Dynasty fortress leveled; fortress of Ramesses III: Petrie's "wall 2"
D3	Twentieth Dynasty	Fortress: Petrie's "wall 3"
D2	Twentieth Dynasty	Fortress
D1	Twentieth Dynasty–Third Intermediate Period (TIP)	Fortifications abandoned and ruined
C4	Third Intermediate Period	Settlement
C3b	Third Intermediate Period	Settlement
C3a	Third Intermediate Period	Settlement
C2b	Third Intermediate Period	Settlement
C2a	Third Intermediate Period	Settlement
C1	Third Intermediate Period	Settlement
B	Late Period	Settlement with tower houses
A	Modern	Ottoman ovens and pipes, among others

# 1 SECOND INTERMEDIATE PERIOD: PHASE G

Parts of a settlement and cemetery from the Second Intermediate Period excavated in Area 4 presented three separate occupational phases, the younger ones suffering extensive damage due to later activity at the site, either younger settlement (especially during the construction of the moat of the Nineteenth Dynasty fortress) or modern intrusions.

## 1.1 OPEN SETTLEMENT: PHASE G3, AREA 4

Phase G3 was considered as the earliest occupational phase in Area 4 until

2017 when excavations revealed a stratigraphically older elongated sand-filled pit <2475> in the northern part of Area 4. The presence of this pit suggests earlier human activity, although it has yet to yield either datable pottery or other finds corroborating this interpretation. In phase G3, the area was occupied by at least two fairly well-built houses, which are described below [Fig. 2]. Three infant burials were identified in their immediate vicinity. These children were probably buried within the settlement, somewhat outside of the regular cemetery.

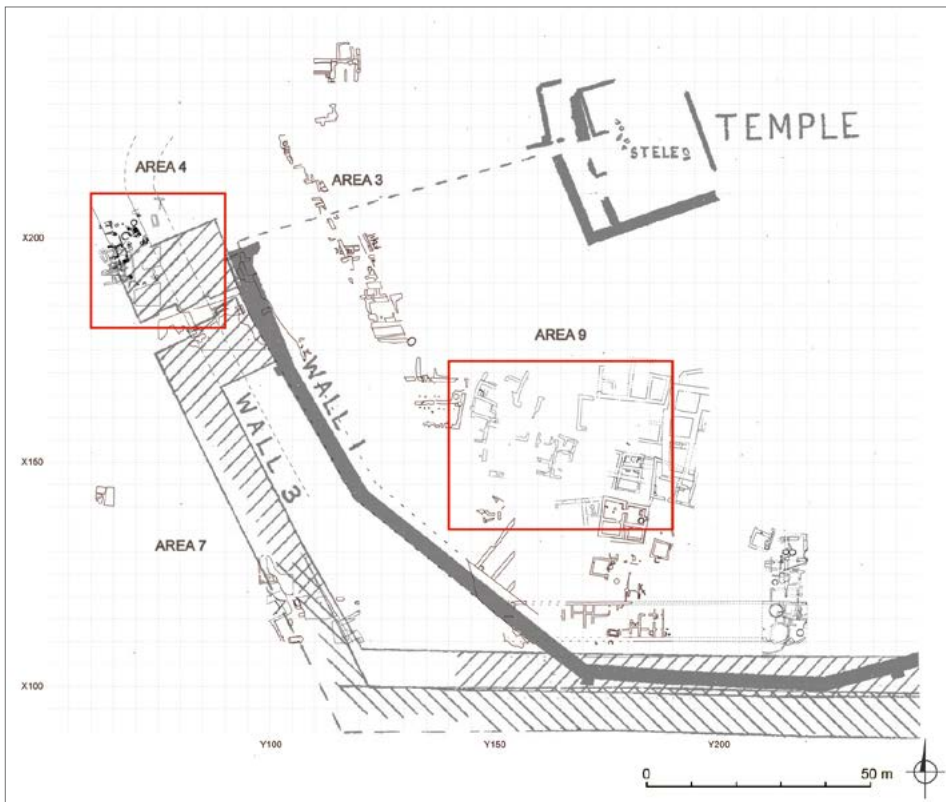


Fig. 1. Plan of the western part of the site; boxes in red mark areas investigated in 2017 (Tell el-Retaba Project/drawing Ł. Jarmużek)



and function is not clear, but a similar feature observed in building B in Tell el-Maskhuta was interpreted by the excavators as evidence of leather or metal production (Paice, Holladay Jr., and Brock 1996: 167–168).

The area north of the building {2034}, delineated by the walls [2463] and [2481], was probably open or roofed over only in part. The wall [2463] seems to have been built less carefully than other walls of the building {2034}, and its part running north–south is only half-a-brick thick. This indicates that it was probably only a perimeter wall dividing neighboring compounds or different areas of use around one building. The deposit (2462) here consisted of ashes mixed with sand and silt, and contained only pottery and animal bones. A fireplace in a rounded pit <2477> was also located here. A similar deposit (2464) containing a lot of burned sherds was found south of the wall [2463]. The infant tomb {2490} seems to be covered by this deposit. It would mean that the skeleton of a small child<sup>1</sup> was buried here in the immediate vicinity of the house, while this space was still used for domestic purposes.

### 1.1.2 Building {2400}

Two walls [2400] and [2401] belonging to another building were found in the northwestern corner of the excavated area. It is not entirely clear yet whether they delineated a room or were a part of a semi-open space that was used for fire-

related activities. Two small rectangular mud-brick structures [2398] and [2399], furnaces most probably, were found inside these walls, filled with ashy deposits (2397) and (2396) respectively. Without any small finds on the record, the function of these structures must remain tentative for now.

About half a meter east of wall [2401] was a simple mud-brick infant tomb {2412} containing a skeleton placed on its right side with the head to the east. Another infant mud-brick tomb {2446} was located immediately south of the wall [2400]. Its general orientation differs from that of the tomb {2412}, but the child was also interred with the head to the east.

## 1.2 CEMETERY: PHASE G2, AREA 4

The buildings of phase G3 were abandoned at some point and the area turned into a burial ground. All nine graves found here were rather substantial structures with a mud-brick burial chamber and a gabled or vaulted roof, depending on the size of the tomb. The orientation of the structures varied between north–south and east–west, but this is hardly unusual (Forstner-Müller 2008: 36–37).

Tomb {2061} was dug into the abandoned southern room of the building {2034}, other tombs like {2057}, {2009} and {2496} and possibly also {2474} (the latter's identification as a grave is not secure) were built in its immediate vicinity. Four further tombs were found in

1 Burials of infants in the vicinity of houses or other structures or in clusters are documented from other sites and this practice does not seem to be reserved only to the Second Intermediate Period. However, in most cases the infants are placed in a pottery vessel, often an amphora, for protection. See, for example, Paice, Holladay Jr., and Brock 1996: 164; Górka and Rzepka 2011; Thomas 1981: 21; Forstner-Müller 2008: 25–26.

the area east of the houses of phase G3. Their incorporation into phase G2 is not absolutely secure, because they are not directly connected with any of the buildings used as phase markers. Furthermore, all these graves suffered damage as they were robbed in antiquity and tomb {2428} was further damaged by the Ramesside moat.

### 1.2.1 Tomb {2061}

Tomb {2061} (discovered in 2016, but not explored then) is one of the smaller east-west oriented mud-brick tombs with a rectangular burial chamber covered by a gabled roof leaning on the western gable (inner dimensions: 1.06 × 0.54 × 0.54 m). The roof was in part collapsed. Inside the burial chamber was an individual lying on its left side with the head to the east and contracted feet. The head was rest-

ing against the side of a large mud brick. A pottery vase was found in the north-eastern corner and a scarab S3197 [Fig. 3] by the left arm, possibly worn on the left wrist or fallen out of the left hand.

### 1.2.2 Tomb {2428}

A substantial mud-brick structure with a rectangular burial chamber (inner dimensions 1.60+ × 0.67 × 0.75+ m), probably roofed with a vault, it was seriously damaged by the moat of the Nineteenth Dynasty fortress. Furthermore, it was probably looted even prior to this disturbance. Only disarticulated human bones were found scattered around the southern part of the burial chamber.

### 1.2.3 Tomb {2472}

The tomb was a rather large structure



Fig. 3. Grave goods from the SIP tombs: top left, faience scarab S3197 from tomb {2061}; top right and bottom, faience scarab S3302 and bronze toggle pin S3303 from tomb {2500} (Tell el-Retaba Project/photos R. Rábeková)

with a rectangular burial chamber (inner dimensions: 1.50 × 0.60 × 0.66 m), roofed with a barrel vault. It was heavily looted in antiquity, most probably during phase F4b, the robbers apparently knowing its position to judge by their pits which hit the south wall of the tomb directly (a similar observation of well-informed tomb robbing in this period was made at Tell el-Maskhuta, see Paice, Holladay Jr., and Brock 1996: 164). Mostly disarticulated human bones and a broken bone needle S3288 were scattered in the southern part of the tomb and in the robbery pit <2515>. An infant burial was found lying on its back with the head to the north in the northwestern corner of the burial chamber. It is not entirely clear whether this interment dated from the same time as the primary adult burial or post-dated the looting of the tomb.

### 1.2.4 Tomb {2496}

A small north–south oriented mud-brick tomb with a gabled roof (inner dimensions: 0.74 × 0.36 × 0.30 m) with the skeleton in the burial chamber placed on its left side, in contracted position, its head to the south. This tomb did not contain any burial goods.

### 1.2.5 Tomb {2500}

A mud-brick tomb built in a large burial pit together with tomb {2502}; the latter

was not explored this season. The rectangular burial chamber (inner dimensions: 0.95 × 0.38 × 0.50 m) was covered with a gabled roof. A circular hole in the southern part of the roof and a somewhat disturbed skeleton indicate that the burial was robbed in antiquity. The skeleton was found on its right side with the head to the south, but it may not be in position, having been dragged toward the robbers' pit in the southern part of the tomb. Despite this disturbance, a scarab S3302 and a bronze toggle pin S3303 [Fig. 3 top right and bottom] were recovered from the tomb fill along with two pottery vessels.

## 1.3 SETTLEMENT AND CEMETERY: PHASE G1, AREA 4

The remains of phase G1 are rather scant. Apart from a massive tomb {1696} known already from previous seasons, only a short fragment of undulating wall [2457], preserved as a single brick course, with an associated layer (2456) could be assigned to this phase. During this phase a relatively thick gravel deposit (2351) formed over the earlier structures indicating that this part of the settlement was not in use, although the reasons for this remain obscure. It is possible that some of the tomb robberies were carried out already during this phase.

## 2 EARLY EIGHTEENTH DYNASTY: PHASE F

Most of the early Eighteenth Dynasty structures from the excavated area: the Green house and the Black house 1, were already known from earlier work (see Rzepka et al. 2014: 55–64; Rzepka, Hudec,

Jarmužek, Dubcová, Hulková et al. 2017: 32–37). Their surroundings were now explored [Fig. 4]. Two ovens were discovered northeast of the houses. They post-date the abandonment of the Green house.



Probably the most important feature of the New Kingdom settlement predating the Green house, however, is a small cemetery with four pit tombs as the space continued to be used as a burial ground after the Second Intermediate Period. Some of the grave goods and the internment mode may be seen as a legacy of the previous age.

**2.1 EARLY EIGHTEENTH DYNASTY CEMETERY: PHASE F5, AREA 4**

The cemetery of the early Eighteenth Dynasty is the earliest feature of the early New Kingdom occupation at Tell el-Retaba. Three intact tombs were excavated so far. Pit <2441> containing a disarticulated human skeleton was either another tomb or constituted a case of secondary bone depo-



Fig. 4. New Kingdom occupation in Area 4 (Tell el-Retaba Project/spatial data E. Stopková; drawing L. Hulková)

sition. There seems to be a larger than usual variation in the position of the deceased in the tomb. The supine position is considered regular for New Kingdom burials, but skel-

etons were found also in contracted position. Furthermore, the grave goods found in tomb {2458} partly follow the Second Intermediate Period tradition. This small



Fig. 5. Early Eighteenth Dynasty burials in Area 4: top, tomb {2513}; bottom, tomb {2458} (Tell el-Retaba Project/photos L. Horáková)

cemetery in its mix of traditional customs and new impulses appears to reflect the transition from the Second Intermediate Period to the New Kingdom.

### 2.1.1 Tomb {2512}

The simple oval burial pit (dimensions: 1.30 × 1.05 × 0.60 m) was just long enough to accommodate the body. Its walls, dug into the gravel layer, are unstable. Lying on its back on the bottom was an individual (2507) with the head to the south and legs probably semi-contracted or even pulled up. This interment was rather poor: only one small tubular faience bead S3306 was found with the burial.

### 2.1.2 Tomb {2513}

The tomb, which was dug directly north of pit <2512>, was also a simple burial in a rectangular pit with rounded corners (dimensions: 1.00 × 0.80 × 0.75 m) and contained two strongly contracted skeletons (2509) and (2510), lying on the right side with the head to the south [Fig. 5 top]. A large pottery vessel was placed next to the face of skeleton (2510), the first from the east. This skeleton was also covered by some organic material, but it was so badly decomposed that it was impossible to say whether it was a reed mat, leather or wood. A button-like object S3307 cut from pottery sherd was found in the tomb fill (for a similar object found by the hand of a skeleton in Tell el-Dab<sup>a</sup> tomb A/II-m/10 No. 7 [str. E/1], see Bietak 1991: 215).

### 2.1.3 Tomb {2458}

A simple pit tomb (dimensions: 1.80 × 0.80 × 1.40 m), it proved to be the richest of the lot in terms of grave goods. The

skeleton was in supine position with the head to the east [Fig. 5 bottom]. Four pottery vessels were placed with the burial: a large jar by the north wall of the pit and smaller juglets by the head and next to the right shoulder of the deceased. All the vessels had been badly damaged by the roots of plants growing through them. Other grave goods were found on the body. They may have been part of the personal adornments used in life: a silver toggle-pin S3243 by the head and, on the body, a silver metal plate S3238 (possibly a diadem or some kind of dress ornament); a silver ring S3272 and an amethyst scarab with silver mounting S3240, still preserving the remains of a thread on which it had been hung, by the arms of the deceased [Fig. 6 top]. A string of 16 globular amethyst beads and three silver beads were placed around the neck. Two scarabs S3267 and S3239 and a rectangular bead (scaraboid) S3266 were found in the fill of the grave [Fig. 6 bottom]. Similar finds are well known from Second Intermediate Period tombs from Tell el-Maskhuta and Tell el-Dab<sup>a</sup> (see Redmount 1989: 904, 908.16, 912.9; for examples made of gold, see Forstner-Müller 2008: 169–170 No. 2593 [str. F], 278–279 No. 2185 [str. E/1]).

## 2.2 EIGHTEENTH DYNASTY SETTLEMENT (GREEN HOUSES): PHASE F4A–B, AREA 4

After a time the cemetery was abandoned in favor of domestic activity. The three round silos [2414], [2426] and the much damaged [2450] seem to be somewhat older than the Green house; therefore it is possible that they belonged to another house, which has yet to be discovered. The Green house is already known from



Fig. 6. Grave goods from burial {2458}: top, silver toggle pin S3243, silver metal plate S3238, silver ring S3272 and an amethyst scarab with silver mounting S3240; bottom, scarabs, faience S3267 and serpentine(?) S3239, and rectangular scaraboid bead, faience S3266 (Tell el-Retaba Project/photos R. Rábeková)

previous excavations (Rzepka, Hudec, Jarmużek, Dubcová, Hulková et al. 2017: 32–35), however, it was possible to establish in 2017 that the thickness of the walls of this house was one brick instead of the assumed half-brick brick. The poor quality of the greenish bricks makes them hard to distinguish from the fill.

### 2.3 EIGHTEENTH DYNASTY SETTLEMENT (BLACK HOUSES): PHASE F3, AREA 4

After the Green house had been abandoned, but before the Black house 1 was built over it, an oven [2409] with an inner diameter of about 0.50 m was set up some 3.50 m east of the Green house remains (the same type of ovens was uncovered in 2011 further south, see Rzepka et al. 2014: 58, 60). The walls of the oven were made of baked clay. It seems that a layer of mud

paste was smeared on the inside of the oven and burned hard as the oven was used. Another slightly larger oven [2374] of the same construction with an inner diameter of about 0.60 m was built just east of the previous one at a later time, although it is not entirely clear that the first oven was already out of use. Anyway, it was abandoned later, since the ashy layers associated with the younger oven cover remains of the older one [Fig. 7]. The stratigraphy of these deposits indicates that Black house 1 was already standing when the second oven was in use.<sup>2</sup> It would suggest some continuity in the use of the space despite the structural development of the settlement. Copper and copper-alloy prill found in the ashy layers around the ovens may be proof of their use for metal process-



Fig. 7. New Kingdom ovens (Tell el-Retaba Project/photo L. Horáková)

- 2 Ovens located east of a house were observed also in the early New Kingdom settlement in Tell el-Dab'a, see Jánosi 1996: 91.

ing, although the animal bones inside the oven indicate food preparation. It is possible that the ovens were multifunctional structures.

Remains of another building [2499] from the early Eighteenth Dynasty were located, but not explored this year, east of the Nineteenth Dynasty moat.

### 3 MOAT OF THE NINETEENTH-DYNASTY FORTRESS: PHASE E

A double moat (2413) of the Nineteenth-Dynasty fortress was discovered in 2017 in squares Y65–X200, Y65–X205, Y65–X210, Y70–X200, Y70–X205 and Y70–X210 of Area 4 [Fig. 8; also see Fig. 4] (Hudec et al. 2018). The uncovered part of the moat ran from NNW to SSE, alongside the western outer side of Wall 1. However, sections underneath the new asphalt road currently under construction indicate that it continued probably also around the northern and southern sides of the Nineteenth Dynasty fortress. The moat consists of two depressions: a shallower one further away from Wall 1 [Fig. 9], about 6 m wide and 0.30 m deep (0.95 m deep when measured from the base of the later Wall 2), and a deeper one [Fig. 10] located closer to the fortress,

about 5 m wide and 1.30 m deep (however, 1.95 m deep when measured from the base of Wall 2). The edges of the moat are slightly irregular.

The two parts of the moat were probably contemporary, as they are filled with the same fine yellow eolian sand. The deeper moat [see Fig. 10 bottom] cut at least one massive mud-brick tomb of Second Intermediate Period date and sliced also through cultural layers of the Eighteenth Dynasty when it was dug. These cultural layers of the early New Kingdom can be seen in the profile on both sides of the deeper moat. This stratigraphic situation further supports the dating of the moat to the Nineteenth Dynasty.

The deeper moat continued to the south uninterrupted (unlike the shal-

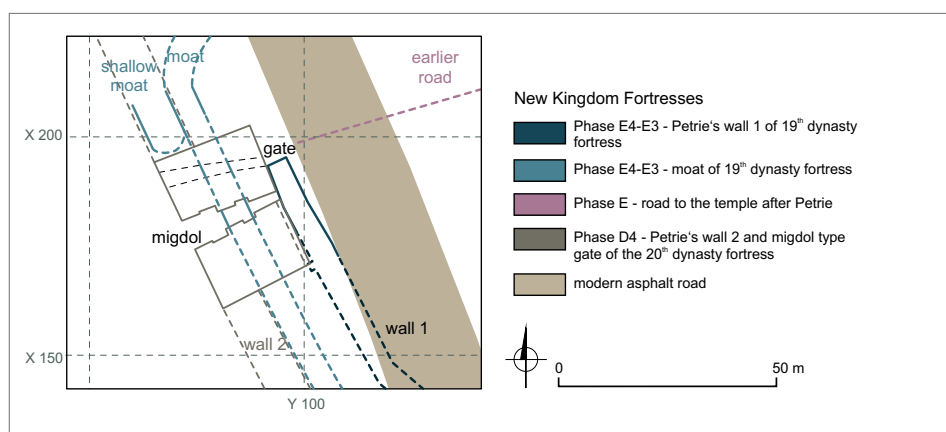


Fig. 8. Nineteenth-Dynasty moats in relation to Wall 1 and the *migdol* (Tell el-Retaba Project/spatial data E. Stopková; drawing L. Hulková)

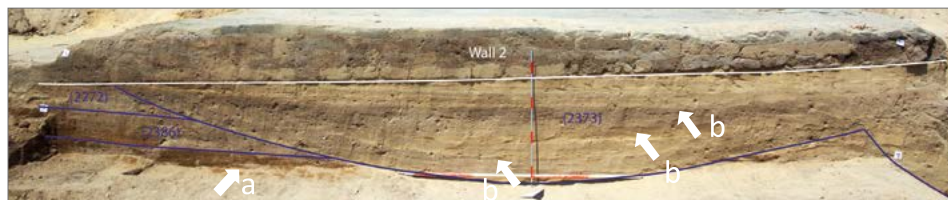


Fig. 9. Moat infilling with rusty weathered alluvial gravel of natural soil in its basement (arrow a) and sandy infilling with several grayish weakly developed surface humiferous soil horizons (arrows b) (Tell el-Retaba Project/photo and processing E. Fulajtár)



Fig. 10. Sections through the deeper moat in Area 4: top, southern section; bottom, northern section (Tell el-Retaba Project/photos L. Horáková)

lower moat), as shown previously by the Polish–Slovak team’s discoveries in the so called Naville’s trench (Rzepka et al. 2014: 50). The deeper moat was apparently intended to strengthen the defense of the Nineteenth Dynasty fortress gateway. It is also worth considering whether particularly the shallower moat could not have served as a source of silt for making the mud bricks used in the construction of the fortress walls.

The southern extent of the deeper moat will be determined in future excavations; however, the northern one is probably lost under buildings recently constructed over an area where the moat(s) probably turned eastwards.

### 3.1 FILL OF THE MOATS

The moats examined in Area 4 were more or less overbuilt by Wall 2 of the fortress of Ramesses III of the Twentieth Dynasty. The shallower part of the moat was mainly covered by Wall 2; however, the wall extended its eastern edge also over the deeper moat.

Two pedologic profiles were investigated at sections of these moats. The stratigraphy of the profiles indicates that they were filled to a large extent naturally, with wind-deposited sandy material, in some places locally redeposited by water. However, some coarse particles (fine gravel pebbles, stone fragments and artifacts like small potsherds) in both profiles indicate a settlement nearby during this



Fig. 11. Eolian sandy deposits with oblique oriented fine stratification (Tell el-Retaba Project/photo E. Fulajtár)



colian deposition with the deposited sand occasionally contaminated by material dropped by the inhabitants.

The profile in the deeper moat represents typical eolian sandy deposits with oblique oriented fine stratification [Fig. 11]. The layers are associated with the original bottom of the moat which was relatively steep in this place when the sand sedimentation began. The best view of the moat infilling is seen in the profile of the shallower moat. The rusty weathered alluvial gravel of natural soil can be seen at the base of the cultural layers [see Fig. 9 highlighted by arrow a]. The moat infillings comprise stratified eolian sand deposits with several layers of fresh yellowish sand and slightly humiferous greyish sand [see Fig. 9 highlighted by arrows b]. The sand layers here were most probably locally redeposited by water, because the oblique micro-stratification and cross-orientation of strata typical of wind deposits are not well pronounced here. The strata are very smooth and in the lowest part of the profile they copy the convex bottom of the moat. They become gradually horizontal in the upper part of the profile. This morphology also suggests the impact of local redeposition by water, either smooth flowing or stagnating. The moat represented a micro-relief surface depression that may have served as a seasonal collector of surface water runoff after rainfall. The moisture from rainfall and from lateral subsurface penetration from the surroundings accumulated in the moat and supported vegetation growth. This is indicated by the presence of slightly humiferous greyish sand layers mentioned above which

are a relic of weakly developed humiferous surface soil horizons resulting partly from the deposition of slightly humiferous sand, but partly also from organic matter accumulation created by the decay of vegetation growing on the moat infillings after the deposition of the sand. Several such humiferous horizons occurring in the moat infillings indicate that the infilling was progressing in several phases, separated by periods when the accumulation of material was interrupted. The lack of the redoximorphic features (rusty mottles) shows that the reduction conditions typical for waterlogged depressions did not develop. This suggests that water in the moat accumulated probably only for short periods and may have been circulating.

### 3.2 NINETEENTH DYNASTY FORTRESS GATEWAY: PHASE E, AREA 4

The gemination of the moat on the western side could be explained by the presence of a gateway to the Nineteenth Dynasty fortress. The presence of the gateway in Wall 1 and an earlier road was already indicated by Petrie on the eastern side of the northern *migdol* tower [see Figs 4 and 8] (Petrie and Duncan 1906: Pl. xxxv). The arrangement of the moats on the northern side of the *migdol* indicates the presence of a passage to the gateway from the western side. The passage was later covered by the *migdol*, but the termination of the shallower moat in squares Y65–X190 and Y65–X195, where the moat rises up southwards from Y65–X205 and Y65–X200, shows that it respected the passage. The shallower moat rises one meter over a distance of about 7 m.

3.3 MOAT: PHASE E, AREAS 2 AND 9

The moat around the north Wall 1 was detected also in the sections (eastern and western) of the Egyptian rescue excavations of Khaled Fareed and Mustafa Nour el-Din, which cut through the tell along the eastern side of the Salheya–Dawaweez road (Area 2). The moat is situated at

a distance of about 6–7 m from Wall 1 (Hudec et al. 2018). In similarity to the situation described in Area 4, Wall 2 in Area 2 was also constructed mainly over the moat. In Area 9, the moat was detected in the eastern section of the southeastern part of Wall 1, again covered partly by Wall 2.

4 TWENTIETH DYNASTY FORTRESS: PHASE D

4.1 WALL 2: PHASE D4, AREA 4

Some other elements recorded on the inner side of Wall 2 could be related to the

construction of the internal sand rampart/embankment (Černý and Hudec 2016: 125, Pls 17–19 [300]). A mud–stone

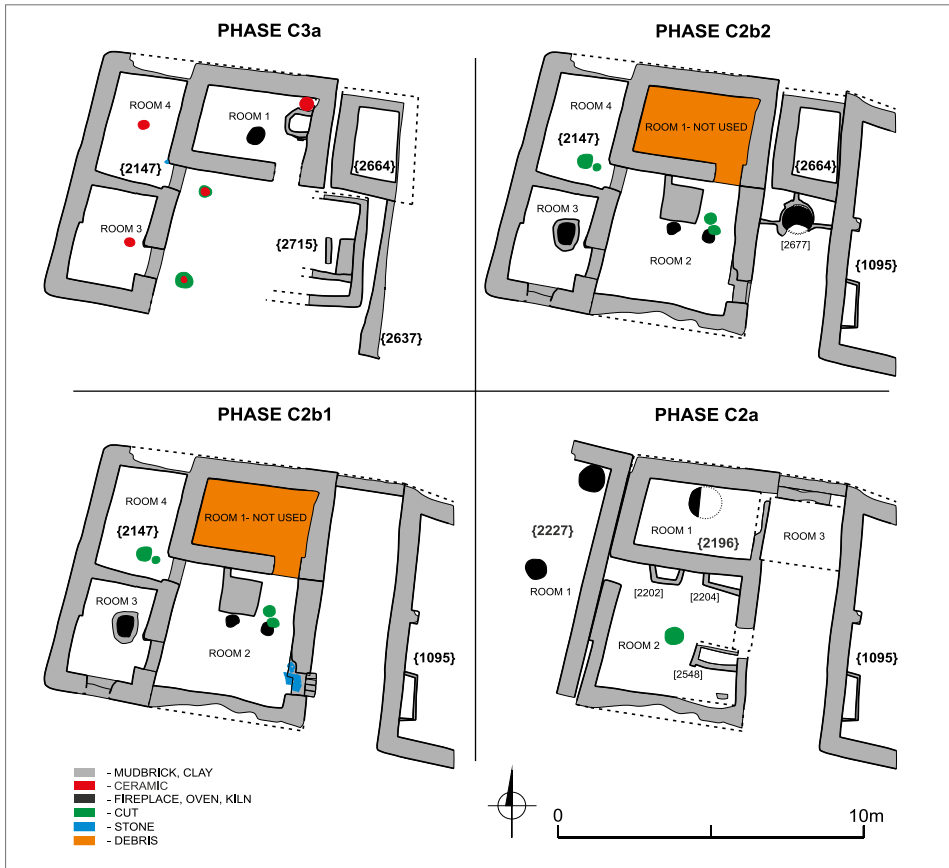


Fig. 12. Plan of the Third Intermediate Period (TIP) settlement in Area 4 in consecutive phases (Tell el-Retaba Project/drawing Ł. Jarmużek)

layer (2360), irregularly high and wide, was discovered running alongside the inside of Wall 2 [see *Fig. 10* bottom]. It

may have been connected either to the bottom rampart border or to washouts of Wall 2.

## 5 THIRD INTERMEDIATE PERIOD: PHASE C

The overall view of the settlement from phase C discovered in season 2016 in Area 9 changed considerably after season 2017 (Rzepka, Hudec, Jarmużek, Dubcová, and Hulková 2017: 120–129). The main changes concerned phases C3 and C2 in the area of building {2147} [*Figs 12 and 13*]. Fieldwork in 2017 showed frequent changes in the layout of structures in the area. Thus, it was necessary to distinguish subphases C3b, C3a, C2b, and C2a.

### 5.1 SETTLEMENT: PHASE C3A, AREA 9

#### 5.1.1 Buildings {2664} and {2637}

Buildings {2664} and {2637} were only partly excavated [see *Figs 12 and 13*]. Currently, both structures seem to originate from phase C4, but they were in use also in phase C3. The two buildings had abutting walls, but it is plausible that they were independent structures. The unearthed fragment of building {2664} was probably a room measuring 2.40 m by 1.40 m. The walls were 0.65 m thick and



Fig. 13. Buildings {2147}, {2664} and {2715}, viewed from the east (Tell el-Retaba Project/ photo S. Rzepka)

were relatively well preserved. An entrance may have been located in the east wall of the room. In phase C3a, the room was used as a rubbish dump. The thick debris layer (2683) filling the room was covered with two layers of ashes (2674, 2681). In the case of building {2637}, only its west wall was traced; it was at least 5.30 m long and 0.60 m thick.

### 5.1.2 Building {2147}: phase C3a (first phase)

West of building {2664} was a 0.15 m gap and building {2147} commenced, turning out to be much bigger than previously assumed (Rzepka, Hudec, Jarmužek, Dubcová, and Hulková 2017: 120–123) [see *Figs 12* and *13*]. The ground plan was L-shaped and comprised three rooms and a small open courtyard in front of them. The part of the courtyard that was excavated was occupied in its eastern part by structure {2715} (see below). Two storage vessels were found *in situ* in the western part. The first one, 2649, was placed in a round cut <2650> in front of room 3. The diameter of the cut was much bigger than the diameter of the vessel. The second vessel, 2751, was placed in a round cut <2752> in front of the entrance to room 4.

Room 1 was partly excavated in 2016 (Rzepka, Hudec, Jarmužek, Dubcová, and Hulková 2017: 121–123) and the results can now be reassessed in the context of an investigation of the area as a whole. The entrance, which was roughly 0.80 m wide, was placed in the eastern part of the south wall. The room measured 3.70 m by 2.30 m. A single floor level (2220) was recorded inside the chamber. In the middle was an oval cut <2615> filled with a layer of ashes (2614). A semicircular bin [2221]

was constructed in the northeastern corner; in the course of time, the bin was partly destroyed by a round cut <2214>, which was executed as an emplacement for a large storage vessel. Remains of two storage vessels were found inside the cut: 2240 preserved only as the bottom part and 2213, which replaced it, completely preserved. The assemblage of finds from the floor constituted a relatively rich set: earlier work in 2016 had collected nine loom weights of unbaked silt, a limestone spindle whorl, three grinders, three fragments of querns, a slate palette, a fragment of a stone vessel and a faience scarab (see Rzepka, Hudec, Jarmužek, Dubcová, and Hulková 2017: 120–123). Exploration of the rest of this floor in 2017 yielded more small finds, including a particularly interesting bronze artifact S3414 of elongated shape [*Fig. 14* top]. It is composed of four parts: a hollow shaft socket, prongs with rounded points and a crossbar between them, and a vertical bar below. Objects of this kind have been identified as ceremonial staff endings or a practical butt end of a spear (Petrie 1917: 33), but also as an anti-snake weapon (Cherf 1982: 86–97). Another object of obscure function was discovered nearby: a pestle-type pounder S3415 made of basalt, its function suggested by traces on its surface [*Fig. 14* center]. However, considering that basalt is rare in Retaba, the very regular shape of the piece and the round, precisely drilled depression at one end suggest that it may be an unfinished stone vessel, finished on the outside but only started on the inside, which was evidently used as a pounder instead.

A set of small objects made of lead was found on the floor as well. They are

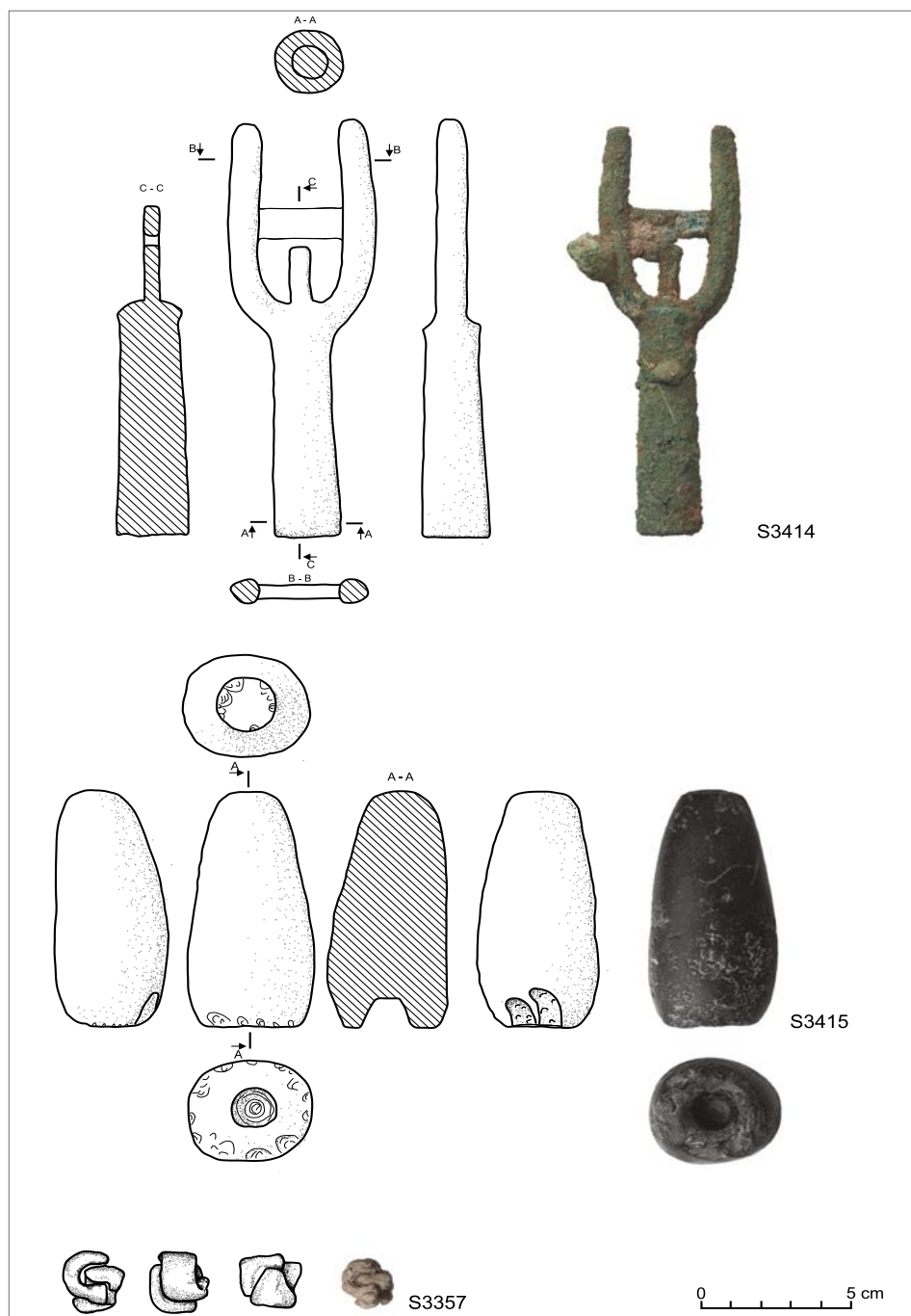


Fig. 14. Small finds from the floor of a Third Intermediate Period building (2664): top, bronze ceremonial staff ending(?) S3414; center, basalt pestle pounder S3415; bottom, fused together lead net sinkers S3357 (Tell el-Retaba Project/photos O. Bagi, drawing A. Ryš)

badly corroded but at least in the case of S3357 [Fig. 14 bottom], S3372, S3373 and S3374, their shape and function is still recognizable. They were probably net weights, made of flat pieces of lead folded around a net cord (Wilkinson 1988: Fig. 426). As other small pieces of lead of various shapes were found nearby (S3375, S3393, S3413), it seems plausible that utensils made of lead were produced in this room, more likely than that it was simply a place for storing fishing nets.

All the features inside room 1 were covered with a relatively thick layer of debris (2216). The layer was significantly thicker in the eastern part of the room, suggesting that the destruction of the east wall was more considerable than of the other walls.

Room 4, which lay to the west of room 1, measured 3.54 m by 2.25 m. The entrance was in the southeastern corner; it was 0.80 m wide. Two floor levels were noted inside the room. There was a round cut <2611> for a storage vessel 2610 made in the surface in the middle of the first floor (2612). A limestone door-socket was found *in situ* built into the north wall of the doorway flush with the second floor (2594).

South of this chamber lay room 3, which measured 3.25 m by 2.40 m and was entered from the east via a doorway that was about 1 m wide. The floor (2595) inside the room consisted of thin silty laminas. A storage vessel, 2668, was found roughly in the middle of the room, but without being cut into the floor, as was the case of the other two rooms. It was standing on the surface. The successive accumulations on the floor covered it in the end.

### 5.1.3 Building {2715}

The eastern part of the courtyard was occupied by structure {2715} [see Figs 12 and 13]. The structure was only partly excavated, but the walls have turned out to be much thinner (0.36 m) than the walls of other buildings in the area. The excavated part of the structure was 3.90 m long and at least 1.80 m wide. Inside the room there were some thin walls that formed a kind of bin. It is currently thought that structure {2715} served some kind of industrial purpose.

## 5.2 SETTLEMENT: PHASE C2B, AREA 9

Phase C2b in Area 9 is marked by a building {1095}, which covered buildings {2664} and {2637} (Rzepka, Hudec, Jarmužek, Dubcová, and Hulková 2017: 123–125). The area west of building {1095} was still occupied by building {2147}, its layout however had changed considerably.

### 5.2.1 Building {2147}: phase C2b (second phase)

It has already been said that parts of the walls of room 1 of this building had collapsed at some point, putting the room out of use [see above and Fig. 13]. To compensate for this, a new room was added; this was room 2, which was fitted into the space left by the courtyard and building {2715} to the south of room 1. The new unit measured 4.35 m by 4.15 m. Its entrance was in the southern part of the east wall and was 0.75 m wide. Two floor levels were recorded. The first floor (2583) consisted of a series of thin whitish-grey laminas. An unusual structure was found on the surface of this floor: a square platform [2739] made of mud bricks, measuring 1.20 m to the

side [Fig. 15]. It was situated about 0.25 m from the north wall of the room. The second floor (2575) accumulated around this platform. The floor surface near the platform featured several shallow, round cuts, three of which were found east of the platform. The southern one <2743> was filled with ashes, two other cuts <2736, 2737> were filled with sand. Similar platforms with shallow cuts and fireplaces can be found in central rooms in Tell el-Amarna houses (Bomann 1995: 8–14). This kind of installation is connected with the head of the household (Spence 2015: 86–89). Some of the shallow cuts could have served as an emplacement for pottery vessels.

At the same time that room 2 was constructed (or shortly thereafter), an oven [2677] was built just east of this room, in the space between buildings {2147}, {2664}, and {1095} [see Figs 12 and 13]. The manner of construction of this

oven was quite usual: a ceramic body lined with baked silt [Fig. 16]. The external diameter was about 1.10 m. Three low walls next to the oven abutted the nearby buildings to form bins of a kind. These bins were filled with grey ashes. The fill of the oven consisted of grey ashes on top and white ashes on the bottom.

The doorway to room 4 remained in place unchanged. An ashy layer (2593) which covered only the eastern part of the room constitutes the only floor level from this phase that could date it. Two round cuts in this layer were found next to the entrance to the room. The bigger cut <2592> was filled with sand (2591) containing a lot of fish bones and several mud-weights. The smaller cut <2630> was filled with an ashy layer (2629) containing some fish bones.

The old entrance to room 3 was blocked and a new doorway made in the



Fig. 15. Platform in room 2 of building {2147} (Tell el-Retaba Project/photo S. Rzepka)

south wall of the room. In this way the room was separated from rooms 2 and 4. Inside it there were five floor levels, all very uniform in nature. They consisted of a series of thin laminas: whitish grey and yellowish brown. Three floor levels (2577, 2573, 2564) were connected with fireplaces surrounded by low mud walls [2648, 2572, 2628].

### 5.2.2 Building {2147}: phase C2b1 (third phase)

The ground level in the space between building {2147} and {1095} rose with time. Layer (2599), made up of thin grey laminas, gradually covered the oven [2677] and building {2644}. It was thought that a passage remained clear between build-

ings {2147} and {1095} (Rzepka, Hudec, Jarmužek, Dubcová, and Hulková 2017: 125), but the present fieldwork revealed that it was not the case. Layer (2599) abutted the southern face of wall [2230], proving that the wall was standing already when the layer started to accumulate. The higher level of the ground forced the inhabitants of building {2147} to modify the entrance to room 2. First, the threshold had to be raised. In order to do so, two steps made of fragments of large stone vessels were constructed [Fig. 17], the first vessel being put on the surface of floor (2575), the second one directly on the mud-brick threshold. A two-step limestone door socket was found in place next to this new threshold.



Fig. 16. Oven [2677] in building {2147} (Tell el-Retaba Project/photo S. Rzepka)



However, since the ground level outside was already higher, a shallow semicircular cut <2765> was made in layer (2599) just outside the entrance to lower the ground in accommodation of the lower-lying threshold. Four bricks were laid at the bottom of the cut, attached to the wall but projecting from its face, to serve as the third step. They also prevented sand from accumulating near the threshold.

After some time, the level of the floor inside room 2 was raised. The new floor (2723) covered platform [2739] and the stone steps in the entrance. It was the last floor in room 2 while it was part of building {2147}. Subsequently, the building was abandoned and partly destroyed, especially in its western part, in the area of rooms 3 and 4. Inside these rooms, a relatively thick layer of debris (2586)

formed. In the case of room 2, some of the walls were reused in building {2196}, which was built on the spot in the next phase (see below).

A badly corroded and only partly preserved perforated lead sheet S3595 from floor (2723) may have been part of a strainer from the end of a tube for

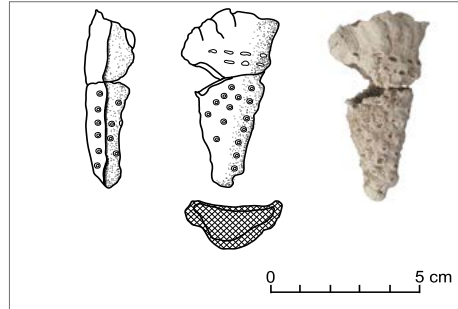


Fig. 18. Fragment of a lead strainer S3595 (Tell el-Retaba Project/photo O. Bagi, drawing A. Ryś)



Fig. 17. Threshold in the entrance to room 2 in building {2147}, made of fragments of large stone vessels (Tell el-Retaba Project/photo S. Rzepka)

drinking wine [Fig. 18]. Similar but much better preserved objects are known from Amarna (Kemp 2012: 210).

#### 5.4 SETTLEMENT: PHASE C2A, AREA 9

In this phase, building {1095} was still in use, but the area west of this building underwent a major change. Instead of building {2147}, which had fallen out of use, two new buildings {2227} and {2196} were raised there [see Fig. 12]. Building {2227} was built slightly before {2196}.

##### 5.4.1 Building {2227}

Building {2227} was discovered in season 2016, but only the tops of its walls were cleared during that time. Orientation of the walls of the building suggested that it could be contemporary with building {2147}. Thus, it was dated to phase C3 (Rzepka, Hudec, Jarmužek, Dubcová, and Hulková 2017: 120–121). Building {2227} was completely excavated during season 2017. New data showed that the building was built on the ruins of building {2147}. Thus, the building has to be assigned to phase C2a. Only the eastern part of the building was preserved, the western part being destroyed by modern cuts. The building was about 8.50 m long and at least 2 m wide, the thickness of walls being 0.60 m. Remains of any kind of activity inside the building were rather scarce. The first feature which filled the space between walls of the building was a layer of debris (2531). There was not any kind of floor level which can suggest that the building was used for a relatively short time. On the surface of layer (2531) two round cuts have been found. The first cut <2538> was placed in the northeastern corner of the building, its diameter being

0.90 m. It was filled with a layer of white (2537) and black (2539) ashes. All these data suggest that the cut was a lowermost part of an oven/kiln. However, no traces of a superstructure have been found. The second cut <2545> was placed in the middle of the preserved part of the building. It was slightly smaller than the previous one, being 0.70 m in diameter. Fill (2544) of this cut was different than in the previous case, it was a mix of sand and ashes. There were also some fish-bones found inside the unit. Smaller size and different features of the fill may suggest that this was a simple fireplace. Considering all data it seems probable that when the oven/kiln and the fireplace were used, the wall of building {2227} had already been ruined and the area was an open space. All the features mentioned above were covered with a layer of grey ashes (2530). The layer was poorly preserved but it seems that it also covered walls of the building. It proves that when this layer was formed the building had surely been out of use and probably served as a dumping place.

##### 5.4.2 Building {2196}

The greater part of building {2196} was excavated in 2016 (Rzepka, Hudec, Jarmužek, Dubcová, and Hulková 2017: 125–126) and current work did little to change the overall picture of the house layout. New data concerned the building walls. Building {2196} consisted of three rooms [see Fig. 12]. The standing north and west walls of room 1 from building {2147} were reused unchanged, but the south wall was rebuilt. The new wall was founded on the remains of the older wall, which was preserved to a height

of about 0.80 m. The east wall of the room was also reconstructed in much thinner form, just 0.30 m thick. It may have held an entrance to the room, but most of it is lost. The northeastern part of the room was destroyed by a later cut. Other remains inside the room suggest the presence of an oven: the room was filled with a 0.20–0.30-m-thick layer of ashes (mostly grey, but also black and white), in which fragments of fired mud bricks and ceramic oven body walls were found. Moreover, a fragmentarily preserved rounded cut <2211> in the middle of the room may be the lowermost section of an almost completely destroyed oven.

The west and south walls of room 2 originated from building {2147}. It is noteworthy that the doorway in the west wall, which once led to room 4 of building {2147}, was not blocked. It was already closed by the east wall of building {2227}, which was erected slightly earlier than building {2196}. The consequence of this was that a niche was formed in the southwestern corner of the room. In the case of the eastern limits of the room, a completely new wall was built on the remains of the old wall. The new wall [2695] was slightly thinner (0.60 m) than the older one. The entrance to room 2 used in building {2147}, placed in its east wall, was blocked by wall [2146], which was 0.30 m thick. The connection between walls [2146] and [2695] is rather puzzling, considering the different thickness of the two walls; the junction however was destroyed by later structures. At present, there is no clearly preserved entrance to room 2. It may have been placed in the south wall

of the room, but again, this wall was almost completely destroyed by a later cut. Room 2 measured 4.35 m by 4.15 m. Two floor levels were found inside the room. On the first floor (2549) there were five round and oval cuts, most of them in the middle of the room. Four of them were filled with black ashes, hence their probable use as fireplaces. The room changed function after some time with two or three roughly rectangular bins being built on its floor. Bin [2204] was located in the northeastern corner of the room, while bin [2548] was built next to the east wall [2146]. A single brick found *in situ* in the southeastern corner of the room may be witness to yet another bin, but this is highly uncertain. The second floor (2182) abutted the walls of the bins, proving that the bins were still in use. Another bin [2202] was added later by the north wall of the room. These three bins seem to have been used at the same time. A round shallow cut <2697> was made in the middle of the room, in the surface of floor (2182). It was filled with sand, hence it was most probably not a fireplace. The cut might have served as an emplacement for a storage jar.

Room 3 was created by adding wall [2224] between wall [2196] and the west wall of building {1095}. Wall [2224] probably abutted the older wall [2230] (see above). The two walls combined measured 0.80 m in width. The south wall of the room was not preserved. The room was 2.40 m wide and at least 2.24 m long. A fragmentarily preserved whitish-grey layer formed the floor (2195); it yielded a small amount of pottery and animal bones, but no small finds.

## SUMMARY

Excavations in Area 9 provided new data for understanding the Third Intermediate Period settlement. Building {2147}, which is now almost completely explored, yielded a set of small finds that is noticeably richer than the finds from earlier excavated parts of the settlement. A bronze “ceremonial staff”, a basalt pestle/vessel, a lead strainer, a large faience scarab, all these artifacts suggest that the dwellers of the house were quite wealthy. The square platform found in room 2 of this house is also so far the only example of such an installation in Tell el-Retaba. And yet the size of the house and the quality of its construction is very similar to other houses from this period known

from Tell el-Retaba. The richer than usual set of artifacts from this house may be explained in another way: three of the objects listed above (“staff”, pestle, scarab) were found on the floor of room 1. There are reasons to believe that this room was not abandoned in a planned way, but was destroyed in a catastrophic event, which covered its floor with a thick layer of rubble.

Work concentrated west of this house cleared several wall tops, confirming dense building in the whole area. The exploration of these buildings is at an early stage and will be continued in upcoming seasons, hence their description will appear in future reports.

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 93–122.  
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**References**

- Bietak, M. (1991). *Tell el-Dab'a V. Ein Friedhofsbezirk der mittleren Bronzezeitkultur mit Totentempel und Siedlungsschichten*. Vienna: Verlag der Österreichischen Akademie der Wissenschaften
- Bomann, A. (1995). The excavation of house P46.33. In B.J. Kemp (ed.), *Amarna Reports VI [=EES Occasional Publication 10]* (pp. 1–43). London: Egypt Exploration Society
- Černý, M. and Hudec, J. (2016). Fortifications at Tell el-Retaba. *Asian and African Studies*, 25(2), 117–144
- Cherf, W.J. (1982). The function of the Egyptian forked staff and the forked bronze butt: a proposal. *ZÄS*, 109, 86–97
- Forstner-Müller, I. (2008). *Tell el-Dab'a XVI. Die Gräber des Areals A/II von Tell el-Dab'a*. Vienna: Verlag der Österreichischen Akademie der Wissenschaften

- Górka, K. and Rzepka, S. (2011). Infant burials or infant sacrifices? New discoveries from Tell el-Retaba. *MDAIK*, 67, 93–100
- Hudec, J., Černý, M., Fulajtár, E., Fareed, K., and Nour El-Din, M. (2018). Discoveries on fortifications at Tell el-Retaba. *Asian and African Studies*, 27(1), 21–49
- Jánosi, P. (1996). Hausanlagen der späten Hyksoszeit und der 18. Dynastie in Tell el-Dab'a und 'Ezbet Helmi. In M. Bietak (ed.), *Haus und palast im alten Ägypten: Internationales Symposium 8. bis 11. April 1992 in Kairo* (pp. 85–92). Vienna: Österreichischen Akademie der Wissenschaften
- Kemp, B.J. (2012). *The city of Akhenaten and Nefertiti: Amarna and its people*. London: Thames & Hudson
- Paice, P., Holladay Jr., J.S., and Brock, E.C. (1996). The Middle Bronze Age/Second Intermediate Period houses at Tell el-Maskhuta. In M. Bietak (ed.), *Haus und palast im alten Ägypten: Internationales symposium 8. bis 11. April 1992 in Kairo* (pp. 159–173). Vienna: Österreichischen Akademie der Wissenschaften
- Petrie, W.M.F. (1917). *Tools and weapons* [=British School of Archaeology Publications 30]. London: British School of Archaeology in Egypt
- Petrie, W.M.F. and Duncan, J.G. (1906). *Hyksos and Israelite cities* [=British School of Archaeology Publications 12]. London: School of Archaeology
- Redmount, C.A. (1989). *On an Egyptian/Asiatic frontier: An archaeological history of the Wadi Tumilat* (unpubl. Ph.D. diss.). University of Chicago
- Rzepka, S., Hudec, J., Jarmužek, L., Dubcová, V., and Hulková, L. (2017). Tell el-Retaba, season 2016. *PAM*, 26/1, 109–135
- Rzepka, S., Hudec, J., Jarmužek, L., Dubcová, V., Hulková, L., Wodzińska, A., Šefčáková, A., and Stopková, E. (2017). From Hyksos tombs to Late Period tower houses. Tell el-Retaba – seasons 2015–2016. *Ägypten und Levante*, 27, 19–86
- Rzepka, S., Hudec, J., Wodzińska, A., Jarmužek, L., Hulková, L., Dubcová, V., Piorun, M., and Šefčáková, A. (2014). Tell el-Retaba from the Second Intermediate Period till the Late Period. Results of the Polish–Slovak Archaeological Mission, seasons 2011–2012. *Ägypten und Levante*, 24, 39–120
- Spence, K. (2015). Ancient Egyptian houses and households: architecture, artifacts, conceptualization, and interpretation. In M. Müller (ed.), *Household studies in complex societies: (Micro) archaeological and textual approaches* [=The University of Chicago Oriental Institute Seminars 10] (pp. 83–99). Chicago: The University of Chicago
- Thomas, A.P. (1981). *Gurob: A New Kingdom town I–II*. Warminster: Aris & Phillips
- Wilkinson, J.G. (1988). *The Ancient Egyptians: Their life and customs I–II*. New York: Crescent Books