

Chapter 4

Excavations in the TPC Area

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Introduction

This year field works in the TPC Area were concentrated in Trench 4. It is placed between Trenches 1 and 2, directly to the north, and Trench 3, directly to the south – both excavated in the previous years. Trench 4 is located on the southwest slope of the southern prominence of Çatalhöyük East (the difference in elevation between its western and eastern edge is c.1m). It is quadrilateral in shape with northern edge being 5.5m long, the southern having 10m and the eastern measuring 9m in length.

An overall goal of the excavation of TPC Area is to link the stratigraphy of the TP sequence, excavated in the year 2001-2008, to the stratigraphy of the South Area. It further aims to recognize architecture, burial practice, pottery and obsidian manufacture and use, subsistence, landscape use, etc. in the period between the end of the South Area sequence (Building 10 in Level South T) and the beginning of the TP sequence (Building 81 in Level TP M) (see more: Marciniak *et al.* 2012).

Results of the previous excavation seasons in the TPC Area revealed a range of interesting features characteristic for the Late Neolithic dated to the period between 6350 and 6100 cal BC. They were revealed in all three excavated trenches. Altogether, remains of four Neolithic buildings in Trenches 1 and 2 and one in Trench 3 have been revealed to date. In the former contexts the two uppermost structures – B.109 and B.115 have been badly destroyed, while earlier B.110 and B.121 are pretty well-preserved. The Neolithic B.122 from Trench 3 is preserved in a relatively good shape. The dates and the character of the settlement architecture imply that the studied sequence may have been in use as late as in the TP Area, which is the very end of the 7th millennium cal. BC. The results of these works revealed also a range of characteristic features of the Anatolian Late Neolithic. This is manifested in the sheer size of the buildings, presence of pebbled floors, construction of smaller rooms inside existing larger structures as well as a probable lack of intramural burials and monumental installations.

Previous seasons brought about evidence of significant destructions of the Neolithic structures by intense activities taking place in subsequent chronological periods, particularly evident in Trenches 1 and 2. The first post-Neolithic destruction had a form of two large truncations (Sp.508 and Sp.497), which significantly destroyed B.110. They were later backfilled with a range of heterogeneous materials. These were followed by a large Hellenistic settlement represented by numerous large pits, excavated in the 2012 and 2013 seasons (Marciniak *et al.* 2012, 2013). This settlement stretched as far as Trench 3, which forms the southernmost part of the TPC Area. The best manifestation of the Hellenistic occupation in this part of the settlement was large and well preserved building (B.120). Following the abandonment of the Hellenistic settlement, the northern part of the TPC Area was further destroyed by two large truncations (Sp.507 and Sp.516). The final phase of occupation of the part of the mound was large inhumation Byzantine and early Islamic cemetery excavated in the previous seasons. It comprises the western part of the large burial ground revealed and excavated in the TP Area (Czerniak *et al.* 2001, 2002, 2003).

Excavations in the TPC Area in the past seasons were carried out in Trenches 1, 2 and 3, while Trench 4 has not yet been excavated. Trench 1 is 5 x 5m and is located directly to the south of the Mellaart Area A. Trench 2 is placed directly south of Trench 1 and its overall dimension is 5 x 6m. Trench 3 is located in southern part of TPC Area as close as possible to the South shelter's south-eastern corner and its eastern edge, where B.10 and several associated exterior spaces were excavated in past years (Kotsakis 1996, 1997). It is quadrilateral in shape with southern and eastern edges being 10m long and the northern edge measuring 6m in length.

The main objective of this year works was to recognize and excavate post-Neolithic deposits in Trench 4 and fully expose Neolithic strata. The ultimate goal of these works was to link the Neolithic structures in all four TPC trenches. The outcome of the 2014 season was excavation of numerous post-Neolithic burials and Hellenistic pits as well as exposure of the Neolithic architecture.

The works began with surface scraping in the newly opened Trench 4. A mixed layer directly below the topsoil (30431) was first recorded. Its thickness varied from 20cm in its eastern part to 10cm in its western part as features were recognized closer to the surface in that part of the trench. Features of different function were exposed underneath this layer and were excavated accordingly.

The stratigraphic sequence identified in Trench 4 in the 2014 excavation season will be presented below. When compared with a very complicated sequence from adjacent Trench 2, it appears not much simpler as it lacks both Chalcolithic and Bronze Age strata. Further details of this sequence will be further clarified in the next season, especially in southeast corner of the Trench where some of the post-Neolithic strata have not been completely lifted to date. This year works made it possible to identify the following sequence of occupational levels: the Late Neolithic settlement, the Hellenistic settlement, the Early Islamic(?) occupation area, and the Early Islamic burial ground (Figure 4.1.)



Figure 4.1. An overview of Trench 4 at the end of the 2014 excavation season.

The Neolithic sequence

The excavations carried out in the 2014 season in Trench 4 allowed us to reveal a number of Neolithic features. They have been recorded directly underneath the surface in south-western, western, and northern parts of the trench as well as in sections of many later pits that truncated the Neolithic deposits. As they have not yet been excavated, their assessment will be only possible after the full excavation in the forthcoming season. Some of these Neolithic features exposed this season, especially in southern part of the trench, are located very close to

the surface and hence are significantly eroded away. Additionally, they were destroyed by intense post-Neolithic occupation, in particular large burial ground and settlement.

A solid wall running north-south was identified and recorded as F.7357 (mudbricks recorded as (21055)). This wall is likely associated with the complex B.122, revealed in Trench 3 in the previous field season (Marciniak *et al.* 2013: 87-88). In particular, it may probably be linked with Sp.517, located in the northwest corner of Trench 3, and western wall of B.122 (F.7260). An infill layer deposited against this wall (F.7357) from the east was identified and recorded as unit (21046). It seems to be very thick, as seen in the section of later pit cuts. It will be excavated in the forthcoming season.



Figure 4.2. Neolithic features visible at the bottom and in sections of the Early Islamic pit (F.7378).

or platform), have also been exposed. Both buildings have not yet been given separate numbers and they will only be fully exposed and excavated in the 2015 season.

Furthermore, fragments of possible two Neolithic buildings have been recognized at the bottom and in the section of a large post-Hellenistic pit (F.7378), which badly destroyed Neolithic deposits in the west part of the trench (Figure 4.2). Two abutting north-south walls made of solid orange mudbricks have also been revealed. The wall from its western side belongs to yet unspecified building that extends beyond the western edge of the trench, while the one from the east is a simple wall, belonging to yet unrecognized building located in central part of the trench. Traces of plaster have been identified on these walls. An infill layer, deposited against these walls, as well as a couple of features (possibly pit

Additionally, a large Neolithic midden has been identified in northern part of the trench. It was recorded both in the section of a Hellenistic pit (F.7366), located in the northwest corner of the Trench, and on the surface and in sections of later pits in its northeast corner. These fragments are believed to belong to the same midden, yet they were given separate numbers ((21038) and (21039)). Judging by their location and stratigraphic position, it seems it is the same midden as the one recorded and partially excavated in 2013 in the southwest corner of Trench 2 (divided arbitrarily into three units (30773), (30774), (30823) and badly destroyed by the post-Neolithic truncation) (see Marciniak *et al.* 2013: 79). The preliminary examination of these deposits imply that the midden was relatively quickly deposited and consisted mostly of ashy and plant material, including articulated phytoliths (Garcia-Suarez, *pers. comm.*). Four micromorphological samples have been taken for the further analyses. The extent of these midden deposits, their composition, and relation to the midden recorded in Trench 2 will be examined in the next excavation season.

The Hellenistic settlement

The Hellenistic settlement investigated in the 2014 season comprised 22 pits located in all parts of Trench 4. All but one was excavated. They were distributed randomly across the excavated area with no distinct spatial patterning (Figure 4.3). Most of them were of regular (circular/ ovoid) shape. Their dimensions varied between 0.31m and 2.69m. They differed in depth: some of them were shallow while some other relatively deep. The majority of them were pretty shallow ranging from 0.14m to 0.49m in depth. Some of them were deeper in the range between 0.55m to 0.85m in depth. They were as deep as similar features excavated in the TP Area in the 2005 season (Czerniak & Marciniak 2005: 86).

Particularly interesting were the relatively deep bell-shaped pits (F.7366, F.7383 and an unrecorded pit identified in the section of the large pit F.7378). They were located in the north-western corner of Trench 4. The dimensions of F.7366 were 1.12m x 1.07m x 1.32m, while the corresponding dimensions of F.7383 were 1.39m x 0.77m x 1.11m (Figure 4.4). They had differentiated depth in the range from 0.85m to 1.36m. The pits had undercutting sides and resembled similar features found in the TP and TPC Areas as well as those discovered in

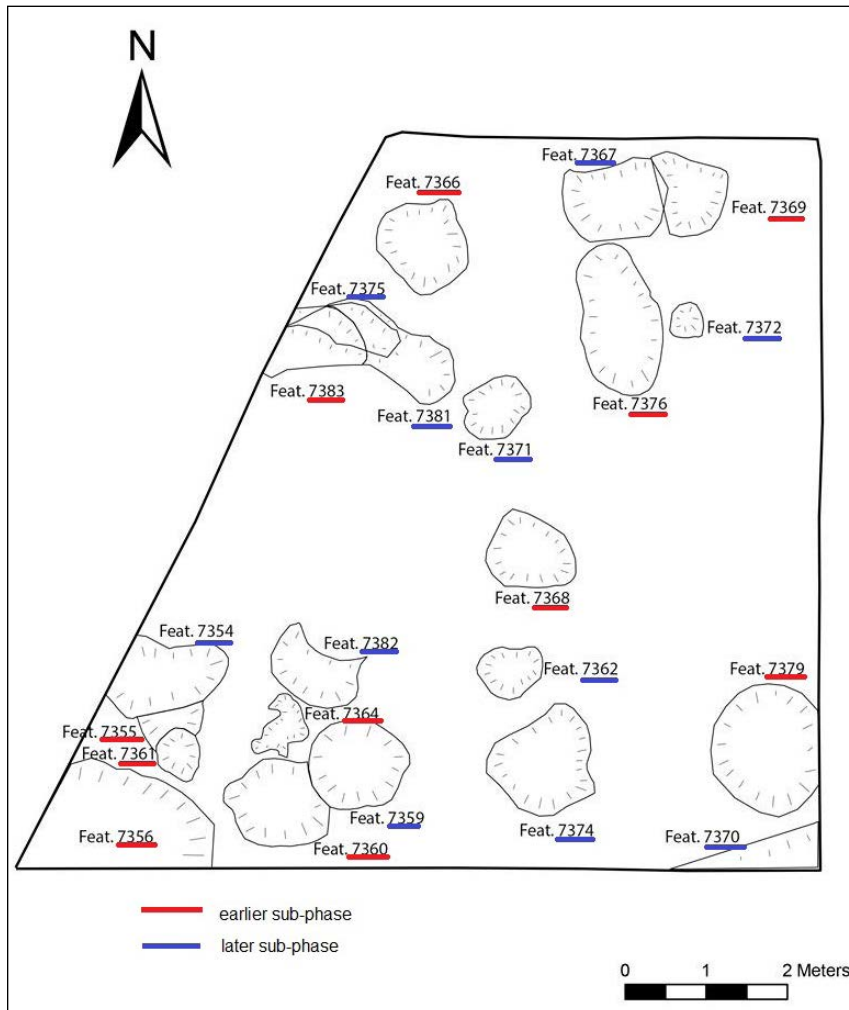


Figure 4.3. Distribution of Hellenistic pits from Trench 4.



Figure 4.4. A bell-shaped Hellenistic pit (F.7366) during exploration.

close proximity to B.10, assigned to Level South T in the Hodder scheme, in the Summit Area excavated in 1996 and 1997 (see Kotsakis 1996, 1997). A considerable number of stones (more than 30) and big fragments of storage vessels were found in pit F.7366.

The stratigraphic position of these pits is not easy to determine. In four cases they truncated each other as well as they cut through Neolithic features. They themselves were truncated by later Islamic burials and some of them by a large Islamic pit (F.7378) (see below). Based upon stratigraphic position of the pits as well as by their shape and location, they have been attributed to two chronological phases (a) early Hellenistic, and (b) late Hellenistic, following the stratigraphic sequence identified in the neighboring Trench 2 in the TPC Area, excavated in the 2012 and 2013 seasons. The early phase is represented by 11 pits (F.7356, F.7364, F.7360, F.7355, F.7361, F.7379, F.7376, F.7368, F.7383, F.7366) while the later phase is also represented by 11 pits (F.7374, F.7382, F.7359, F.7354, F.7362, F.7370, F.7371, F.7372, F.7381, F.7375, F.7367). In some cases, the attribution of pits to one of these phases was rather tentative as it was hard to determine any straightforward stratigraphic relations between them.

Archaeological materials found in these pits comprised mostly pottery and animal bones. These features probably functioned as storage pits. This may indicate that this studied complex comprised a storage zone of the Hellenistic settlement revealed in the past years, along with 13 pits and 6 postholes recorded in Trenches 1 & 2.

The Early Islamic (?) occupation

This phase is represented by a single, very large and deep pit (F.7378). The pit cut truncated Neolithic deposits as well as Hellenistic pits, including pit F.7375 and two bell-shaped pits visible in its section, and itself was truncated by the early Islamic burial (F.7350). It was also located significantly closer to the surface than other pits identified in the trench. This stratigraphic position, in addition to abundant green glazed Islamic pottery found in its fill, seem to imply it originates from the Early Islamic period. Accordingly, the pit was allocated to a new space (Sp.533).

The pit was located in central-western part of the trench. It was of a circular shape and had the dimensions 2.69m x 2.64m x 1.57m. It was probably a garbage pit, as indicated by numerous fragments of vessels, including two nearly complete oil lamps. Additionally, animal bones, including a skull of large animal, and stones were also found. It is worth stressing that the entire pit had been covered by a very thick reed mat, as indicated by the presence of well preserved phytoliths.

The Early Islamic (?) burial ground

The 2014 season brought about further evidence of the latest occupation of the East mound. Similarly to previous years (Czerniak *et al.* 2001; Marciniak *et al.* 2012, 2013), numerous burials, which may have originated from a large burial ground, were uncovered (Figure 4.5).

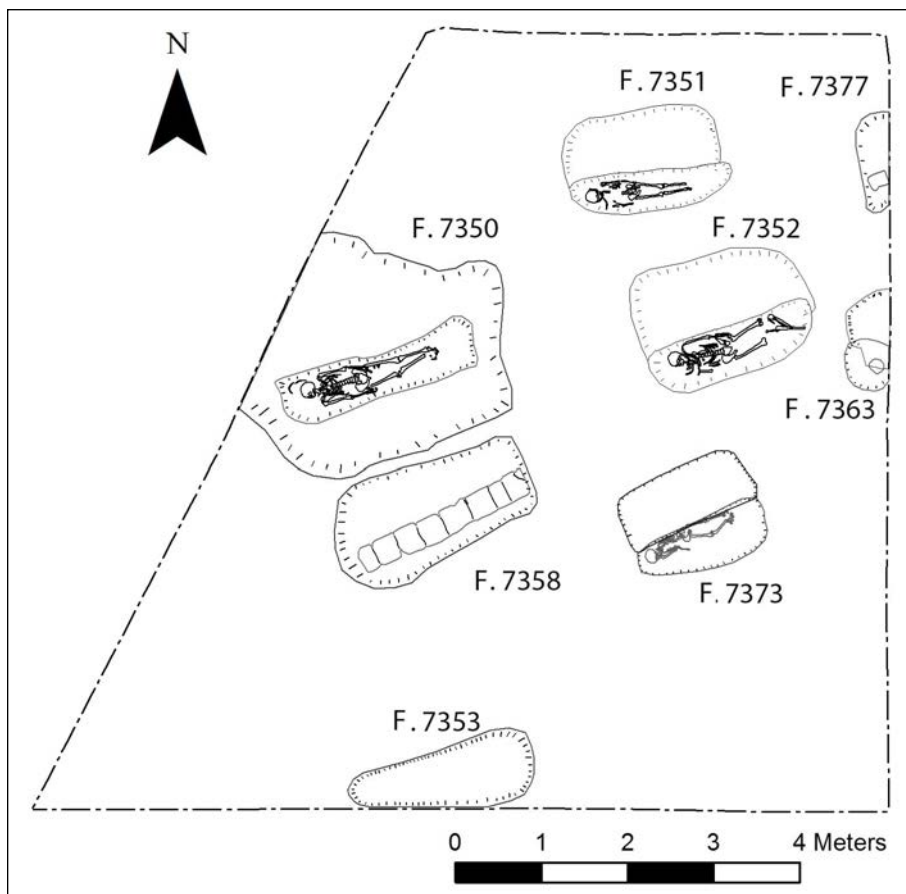


Figure 4.5. Distribution of Early Islamic burials from Trench 4.

Altogether, this year's field season brought about excavation of eight burials (F.7350, F.7351, F.7352, F.7358, F.7363, F.7373, F.7377), dated possibly to the Early Islamic period. Only four of them were fully excavated. Three others are partially located outside the excavated area and hence were only partially studied. The remaining one was only identified and is to be excavated in the 2015 season. All burials were oriented on an east-west axis with the head towards the west, facing south. They were placed in a three parallel rows in Trench 4. They have not truncated each other and hence their stratigraphic relations remain unclear. They were allocated to Sp.528.

All burials belong to the niche type grave (Kwiatkowska 2009). It is composed of two interrelated burial chambers – upper, usually rectangular in shape, and lower niche chamber, where the skeleton has been placed.

Diagonally placed mudbricks were placed directly above the lower chamber and functioned as grave markers.

Similar burials were excavated in the TP Area between 2001 and 2003, where a considerable part of the large cemetery was revealed (Czerniak *et al.* 2001, 2002, 2003). The Early Islamic cemetery was placed on the top of the East Mound and was used for a long time: from the middle of the 12th to the middle of the 17th century AD, i.e. in the late Selçuk period (Kwiatkowska 2009). Altogether, excavations in the TP Area revealed 63 burials.

Two main types of graves were distinguished: (a) pit graves with niche (type I), and (b) pit graves with no niche (type II, with several subtypes) (Kwiatkowska 2009, 132). The latter was particularly common in the TP Area.

A majority of the fully excavated skeletons was relatively well preserved and only slightly disturbed by animal burrowing. Three graves belonged to juveniles/sub-adults, while one to an adult/older individual (for more details see 2014 Human Remains Report). The bodies were placed in a supine position with head towards the west, facing south. No grave goods were found. One particularly interesting feature is grave F.7352, where a smooth layer of clay covering the skeleton was recorded Sk(30464).



Figure 4.6. Grave marker of an Early Islamic burial (F.7351).

Two well-preserved graves were F.7352 and F.7351. Burial F.7352 was characterized by only one course of mudbricks serving as a grave marker. The body was buried in a full extended supine position. Skeleton (30463) belonged to juvenile and was relatively well preserved. However, it was disturbed by rodent burrowing and therefore left hand and some ribs were displaced. The lower limbs were also disturbed at the knee such that the tibiae and fibulae were displaced.

The second burial (F.7351) was very similar. This primary burial was located north of the previous one. This grave had two courses of mudbricks: first course consisted of 10 bricks, while the second one of five (Figure 4.6). The skeleton of sub-adult Sk(30479) was partially disturbed in thoracic region. Cervical vertebrae in articulation were fully supine, suggesting that the rotation of the head was taphonomic and not the burial position. Both arms were adducted, either as a result of narrow confines of the grave or as a result of shrouding. Head and ribs were also displaced by animals.

This burial ground provides a valuable insight into burial practices on the East Mound in post-Neolithic periods. The ongoing field works, along with recent attempts to re-define existing typologies (e.g. Moore & Jackson 2013; Hordecki, in press), make it possible to get a more comprehensive understanding of burial practices, in particular at the beginning of the Islamic period.

Final remarks

This year excavations brought about a systematic implementation of a set of new recording methods. The on-site tablet recording has been adopted by all teams, including the TPC Trench. The works were carried out by Elisa Biancifiori. According to the new planning workflow, archaeological deposits were drawn in a specific GIS software (ArcGis) based upon orthophotos. Orthophotos were made out of digital photos of documented context, which were later rectified and georeferenced by control points placed on-site around the investigated layers and features and recorded with Total Station (for more details see Chapter 16, this volume).

Another new routine implemented systematically this year was the production of 3D models. These works were carried out by Marta Perlińska. Each model was aimed at documenting significant changes in the stratigraphy of the Trench, e.g. exposure of new pits, graves, etc. The process of creating 3D models consisted of the following stages. Firstly, a set of photos of the feature or the entire Trench was taken. Photos from each

set had to overlap in order to be recognized by themselves and used at the later processing stages. Considering changes of the light exposure due to sheltering of the Trench, each set of photos required post-processing in the photo editing software. This comprised, in particular, equalizing the color levels in order to obtain a texture that would best correspond to the factual colors. The resulting set of photos was then imported into Agisoft Photoscan Pro software. This software, using the sequences of overlapping photos, recognizes the depth and, therefore, the geometry of the recorded scene. The outcome of this analysis was a point cloud, which was later transformed into mesh (a triangular irregular network). The last phase of the implemented workflow required creating a texture (.jpeg file with a 4096x4096px resolution). Having the model created, it was then possible to georectify it using the points recorded by Total Station. Georectified models were then imported into ArcScene (part of the ESRI ArcGIS environment), where they were placed automatically according to the spatial grid set up for Çatalhöyük. Thus, it is possible to obtain any desired measurements of all recorded features (of a distance and area), as well as to take the x, y, z coordinates for any point.

These new methods made it possible to speed up excavation works and improved their overall efficiency. Accordingly, goals of this year works in the TPC Area may have been fully achieved. Their outcome was the excavation of a number of post-Neolithic burials, Hellenistic pits and exposure of the Neolithic architecture throughout Trench 4. The Neolithic strata and deposits will be systematically investigated in the coming excavation season and their relation to the adjacent Neolithic structures from Trenches 1, 2 and 3 will be recognized and studied. Hence, this will make the ultimate goal of the project accomplished by connecting the stratigraphy in the TP Area with the main stratigraphic sequence in the South Area and recognizing of architecture, burial practices, pottery and obsidian manufacture and use, subsistence, landscape use, etc. in the period between the end of the South sequence and the beginning of the TP sequence. This represents a unique opportunity to understand a period of Çatalhöyük occupation that has not been documented or studied very intensively in the past.

Acknowledgements

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