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From the Neolithic to the end of Early Bronze Age: developments in the construction of entrance gates and city walls at settlements in Burdur (Turkey) and the surrounding region

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ABSTRACT

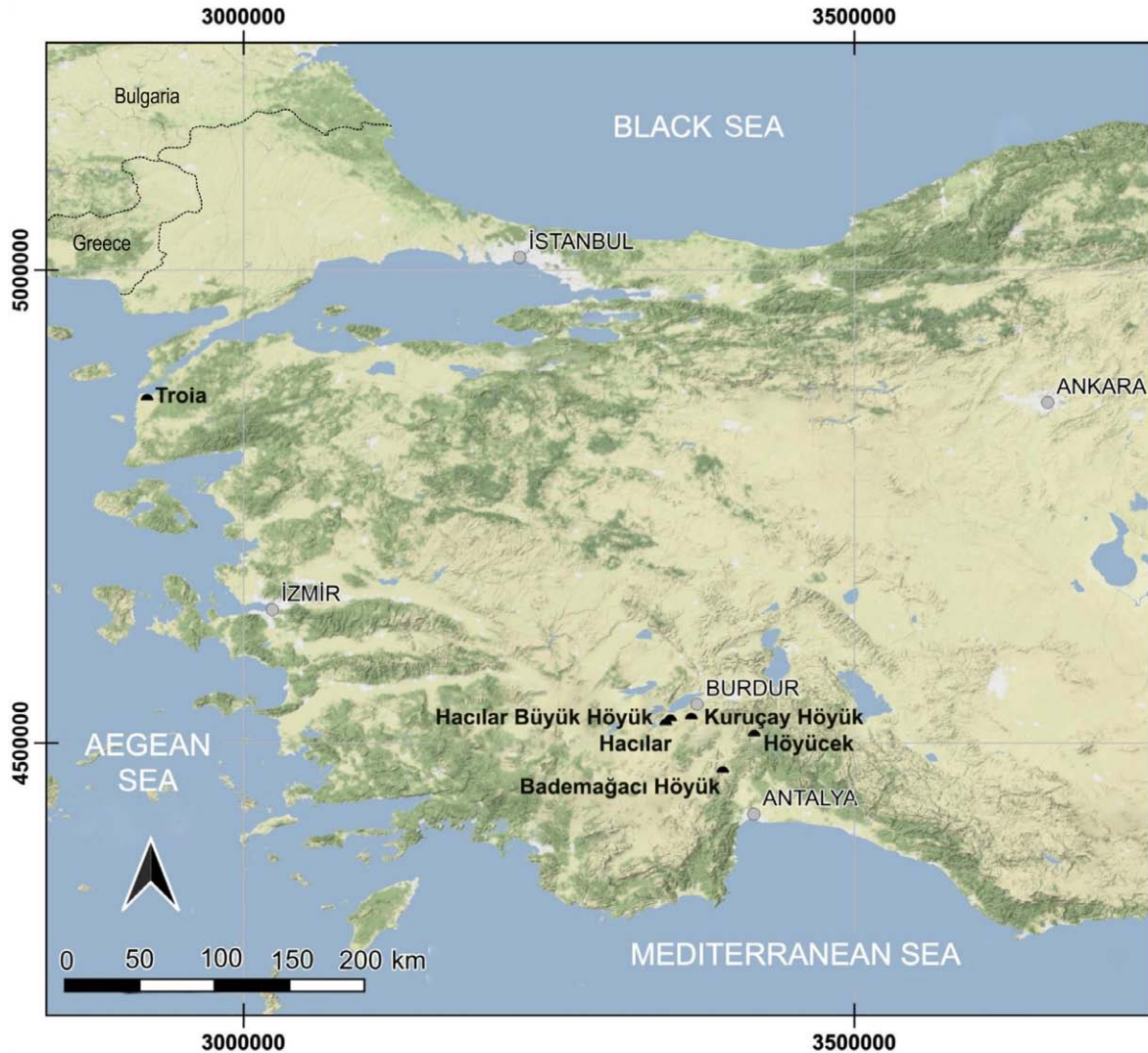
The excavations at Hacılar carried out by James Mellaart in Burdur in the second half of the 1950s were a starting point for prehistoric archaeology in the Burdur–Antalya Region (Ancient Pisidia). Almost two decades later excavations took place at Kuruçay Höyük (1978–1988), followed by excavations at the Hacılar necropolis (1985–1986), excavations at Höyücek (1989–1992) and Bademağacı Höyük (1993–2010), and excavations at Hacılar Büyük Höyük that began in 2011 and are still in progress. The first examples of fortified settlements in the region can be traced back to the Early Neolithic Period. The centres mentioned in this article represent very significant stages in both the development of defence architecture in the region and also in our understanding of the process of urbanisation in Anatolia. The earliest defence models were later replaced by more complex systems, such as the casemate and saw-tooth defence system seen in the EBA I settlement at Hacılar Büyük Höyük, and the arrangement of adjacent megarons in a row for the purpose of defence in the EBA II settlement at Bademağacı. The first example of a ‘Gate Building’ model in Anatolia is the Eastern Gate in level 6A at Kuruçay, which consists of a gateway between two casemates/ towers. The development of this type of gate can be seen in the Western Gate and the Southern Gate at Hacılar Büyük Höyük.

KEYWORDS

Neolithic Period, Early Bronze Age, Settlement, City Gate, Defence Wall, Gate Building

Introduction

The excavations at Hacılar, which got underway after James Mellaart came to Burdur in the second half of the 1950s, were a starting point for prehistoric archaeology in Burdur and the surrounding region (Ancient Pisidia). These excavations brought new concepts to the area, such as the Neolithic and Chalcolithic, terms that had not previously been used for the Anatolian Plateau, and also led to a change in the way this region was viewed. Several years after the premature termination of J. Mellaart’s work at Hacılar, a long-term research project was initiated by Refik Duru, most of which the author of this article participated in. The scope of this project includes excavations at Kuruçay Höyük (1978–1988), excavations at the Hacılar necropolis (1985–1986), excavations at Höyücek (1989–1992) and Bademağacı Höyük (1993–2010) and also the ongoing excavations at



*Fig. 1. Map with the location of the sites in Burdur and the surrounding region
Обр. 1. Карта с местоположението на обектите в Бурдур и околностите*

Hacilar Büyük Höyük, which began in 2011¹. This extensive project has led to the Burdur Region and its surroundings becoming one of the best researched areas for prehistoric archaeology in present day Turkey (fig. 1).

In spite of some gaps in the sequence, it is possible to follow the chronological development of methods of defence and entrance gate designs from the Early Neolithic onwards at the sites excavated in Burdur and the surrounding area. The settlement levels of sites where information can be obtained about the defence system and entrance gates will be evaluated below. At Höyücek, a site located 35 km south of Burdur, a temple complex (Shrine Phase) dating to the Early Neolithic Period and some open-air sanctuaries (Sanctuaries Phase) dating to the Late Neolithic Period were uncovered. However, this centre is not relevant to the context of this article as no remains of any defence system or entrance gate to the settlement were found in the two successive periods when this was used as a sacred site (Duru, Umurtak 2005, Pl. 7–19; 27–29).

¹ The Hacilar Büyük Höyük excavations are being carried out under my direction in the name of the Ministry of Culture and Tourism of Turkey and Istanbul University (Istanbul University, Scientific Research Projects No: SBA-2020-36938, SBA-2021-37973).

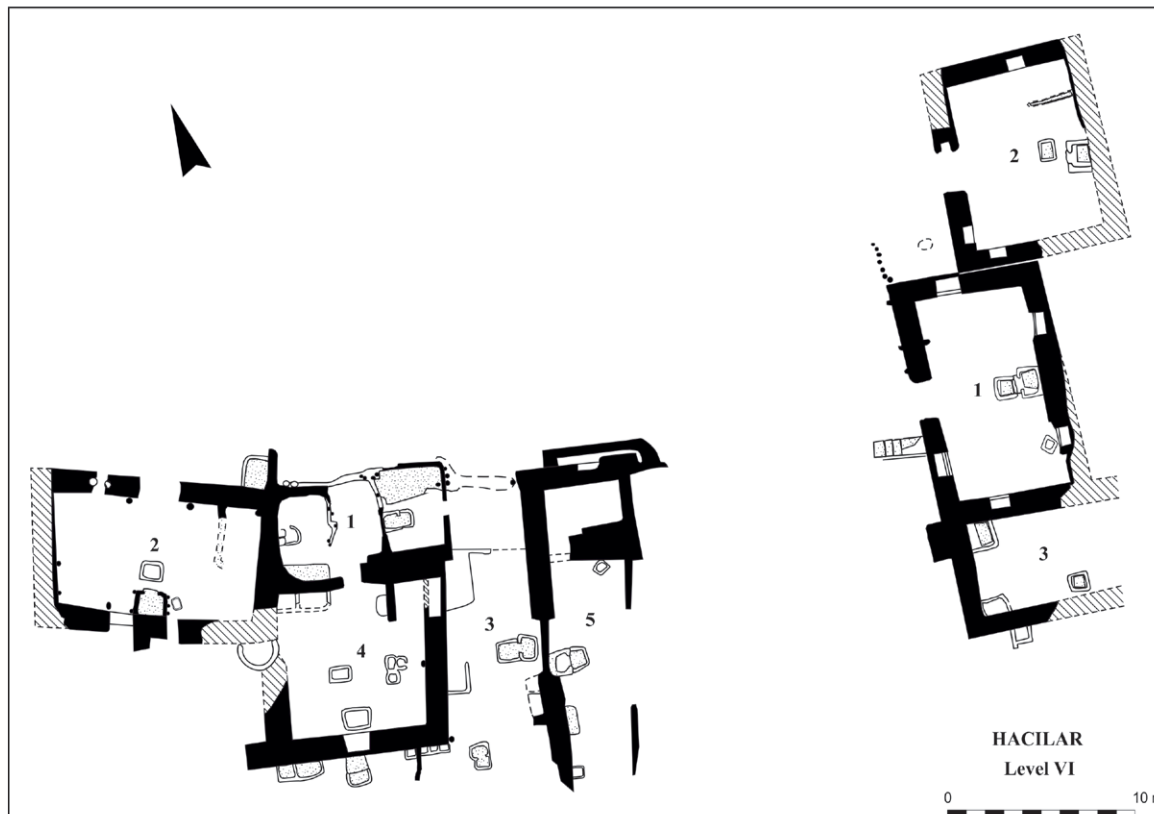


Fig. 2. Plan of the Hacilar VI settlement (after Mellaart 1970, fig. 7)
 Обр. 2. План на селището Хаджилар VI (по Mellaart 1970, fig. 7)

Hacilar

Hacilar, one of the most significant sites that initiated the process of learning about the pre-historic civilisations of the Anatolian Plateau, is located 27 km southwest of Burdur (fig. 1). The site was introduced to the archaeological world by James Mellaart, who led the excavations there in 1957–1960 (Mellaart 1970).

Stratigraphy (Duru 2016, 26)

Early Chalcolithic and Late Neolithic	(According to J. Mellaart 'Early Chalcolithic' V–I)
Early Neolithic II (EN II)	(According to J. Mellaart 'Late Neolithic' IX–VI)
	Hiatus
Early Neolithic I (EN I)	(According to J. Mellaart 'Aceramic Neolithic' VII–I)
	Virgin Soil

Level VI

The Level VI settlement at Hacilar dates to the Early Neolithic Period and contains a central courtyard or square along an east-west axis (fig. 2). This area measures approximately 16×35 m, and two groups of buildings are situated perpendicular to each other on either side of it. The excavated part of the settlement did not yield any information regarding whether or not there was a street or a passage way. The structures measuring $5.0\text{--}5.5 \times 6.5\text{--}10$ m are quadrangular in plan with right-an-

gled corners, stone foundations and mud brick walls. The doors of the buildings are in the middle of the long wall and opened into the central square. It is possible to talk about a rectangular plan settlement in this phase, but we do not know its exact boundaries. The fact that no defence wall was found raises doubts as to whether one actually existed. In this period Hacilar would have been a developed village settlement located on a fertile plain, so must have been defended in some way. It is possible that the houses positioned adjacent to one another in the outer row of the settlement provided some form of defence (Mellaart 1970, 10, 11).

Level II

Defence: Dating to the Early Chalcolithic Period, level II at Hacilar is a small-scale settlement 36×57 metres in dimension that is surrounded by a wall 1.50–3.00 metres in thickness. This wall was built of mud bricks with no stone foundation. Various buildings and building groups, in other words small neighbourhoods, can be seen in the area encompassed by the walls. However, it is not clear how the settlement was protected on the eastern side.

This settlement consists of two phases called IIA and IIB. Its western side contains houses and a sacred building located in the southwestern section, while the eastern side contains various workshops along with a sacred building (?) in the northeastern section. The general plan and appearance of the houses are similar to the Megaron style structures. The back walls of all the houses leaned against the enclosure wall that surrounded the settlement, and their doors opened onto the shared courtyard (figs. 3–4).

The Gates: Two gates located in the northwestern and southwestern sections of the wall surrounding the settlement served as an entrance into the settlement. The gate in the northwestern section of the settlement is flanked by large towers on either side. Perhaps shortly after the construction of the gate a decision was made to enhance protection by constructing two defence towers of a different type. The gate is in the form of a narrow doorway between the walls and is connected to the settlement by a long passage (fig. 3–4). The other gate is located in the southwestern section of the settlement, and this entrance is in the form of a wide opening that had been narrowed by a wall section extending from the western side. On entering the gate, a blind wall prevents a left turn, while turning to the right leads to a second narrow inner gateway that provides direct access into the “Southern Courtyard” (Mellaart 1970, fig. 20). James Mellaart also describes a small entrance in the northeastern section that gave access to the shrine / temple area.

Level I

The destruction by fire of the II B settlement at Hacilar marked the end of a continuous cultural process that developed over a time span of 500 years, starting with Hacilar IX. James Mellaart thinks that the new arrivals made use of all or some of the building remains when they settled at the site (ibid., 75). This new group of people constructed large, strong buildings that cannot be compared with those of the previous culture (fig. 5). It is thought that this new settlement covered the whole mound, which measures approximately 100 m in diameter. Looking at the description by J. Mellaart, it can be assumed that it consisted of a central courtyard surrounded by building groups. These quadrangular buildings contained one to four internal buttresses and their rear walls were adjacent to the outer defence wall.

Defence: The plan of the excavated areas shows that this was not a simple village settlement, but a fortress with a leader and a large population. The width of the defensive walls is about 4 metres and a section of about 70 m in length was uncovered. The sawtooth shaped projections that constitute this defence system form a circuit and probably surrounded the inner core of the settlement. As the excavations were not completed, it is not possible to know how this defence system continued (fig. 5).

The Gates: A simple entrance in the southeastern section of the excavated area leads to a trapezoidal inner gate courtyard. This door opening is 2 m in width and would easily have been filled

From the Neolithic to the end of Early Bronze Age: developments in the construction ...



Fig. 3. Plan of the Hacilar IIA settlement (adapted from Mellaart 1970, fig. 20)
Обр. 3. План на селището Хаджилар IIA (преработен от Mellaart 1970, fig. 20)

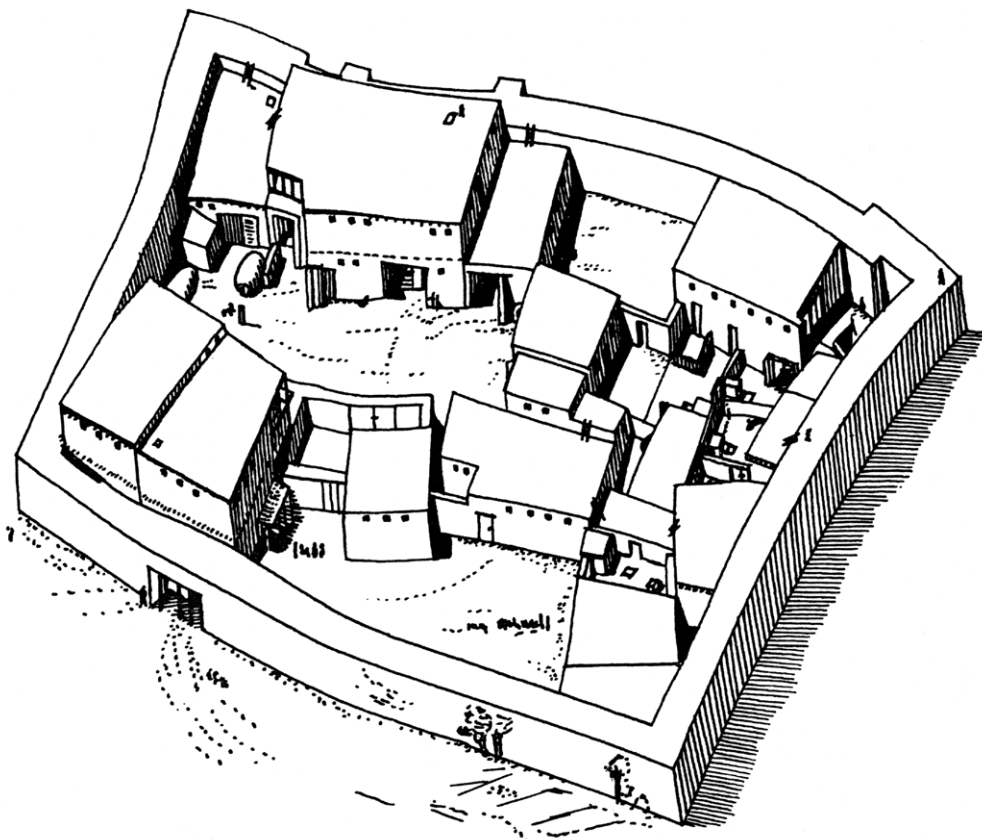


Fig. 4. Hacilar IIA. Tentative reconstruction of the village (after Mellaart 1970, fig. 22)
Обр. 4. Hacilar IIA. Предварителна реконструкция на селището (по Mellaart 1970, fig. 22)

with a wooden door leaf. J. Mellaart thought that the spaces 23 and 17 between the two groups of buildings on the eastern side may have been door openings and that it would have been possible to reach the inner courtyard through number 15 (ibid., 77, 80).

Kuruçay

Kuruçay Höyük is a settlement located 15 km southwest of Burdur (fig.1). Refik Duru, who had introduced Kuruçay Höyük to the world of archaeology, led an excavations team there and the site was excavated between the years 1978–1988 (Duru 1994, 1996).

Stratigraphy		
Early Bronze Age II (EBA II)		(EBA II/ Building Levels 1, 2)
	Hiatus	
Late Chalcolithic (L Ch)		(LCh / Building Levels 3, 3A, 4–6, 6A)
	Hiatus	
Early Chalcolithic (E Ch)		(E Ch / Building Levels 10–7)
Late Neolithic (LN)		(LN / Building Levels 11 lower, 11 upper)
Early Neolithic II (EN II)		(EN II / Building Levels 12 lower, 12 upper)
	Hiatus	
Early Neolithic I (EN I)		(EN I/ Building Level 13)
Virgin Soil		

Level 11

Defence: A 26 m long section of the defensive wall, which extends along a west-east axis and is understood to have surrounded the Level 11 settlement (figs. 6–8), was uncovered at Kuruçay. This wall varies from 1.10 to 1.20 m in width and was built with medium-sized stones. It is understood that the western end of the foundations had slid down the slope of the mound. The wall on the eastern side had been neatly cut and shaped. On the exterior side of the wall facing south there are two semi-circular towers that protrude 3.50 m forward. There are some gaps 1 m in width on the outer side of the towers, and also gaps on the inside on the same axis where the door threshold can still be seen. A wall extending from the north joins the above mentioned wall by forming a right angle. The defence system must have turned toward the north here. It is understood that there was also another semi-circular tower on this wall. It is not clear how far the wall continued to the north as it had collapsed and then probably slid down the slope. A heavy flood from the stream that flowed along the northern side of the mound may have torn off large pieces of the mound and the natural hill, and dragged a large part of the Level 11 settlement away (ibid., 12). This situation means it is impossible to understand the full extent of the level 11 settlement. The area between the city wall and the northern slope of the mound must have contained houses but only some narrow wall fragments were found in this area, and no remains relating to the locations and plans of the houses were found. On the basis of the existing remains, the settlement can be considered to have been rectangular. It is difficult to estimate the full extent and actual dimensions of the settlement.

Gateway: There is a gateway 2 m in width in the southeastern section of the settlement where the above mentioned defence walls intersect. It is understood that the main entrance to the settlement was here. The gateway is retracted as the walls develop on each side, and large stones from the stream

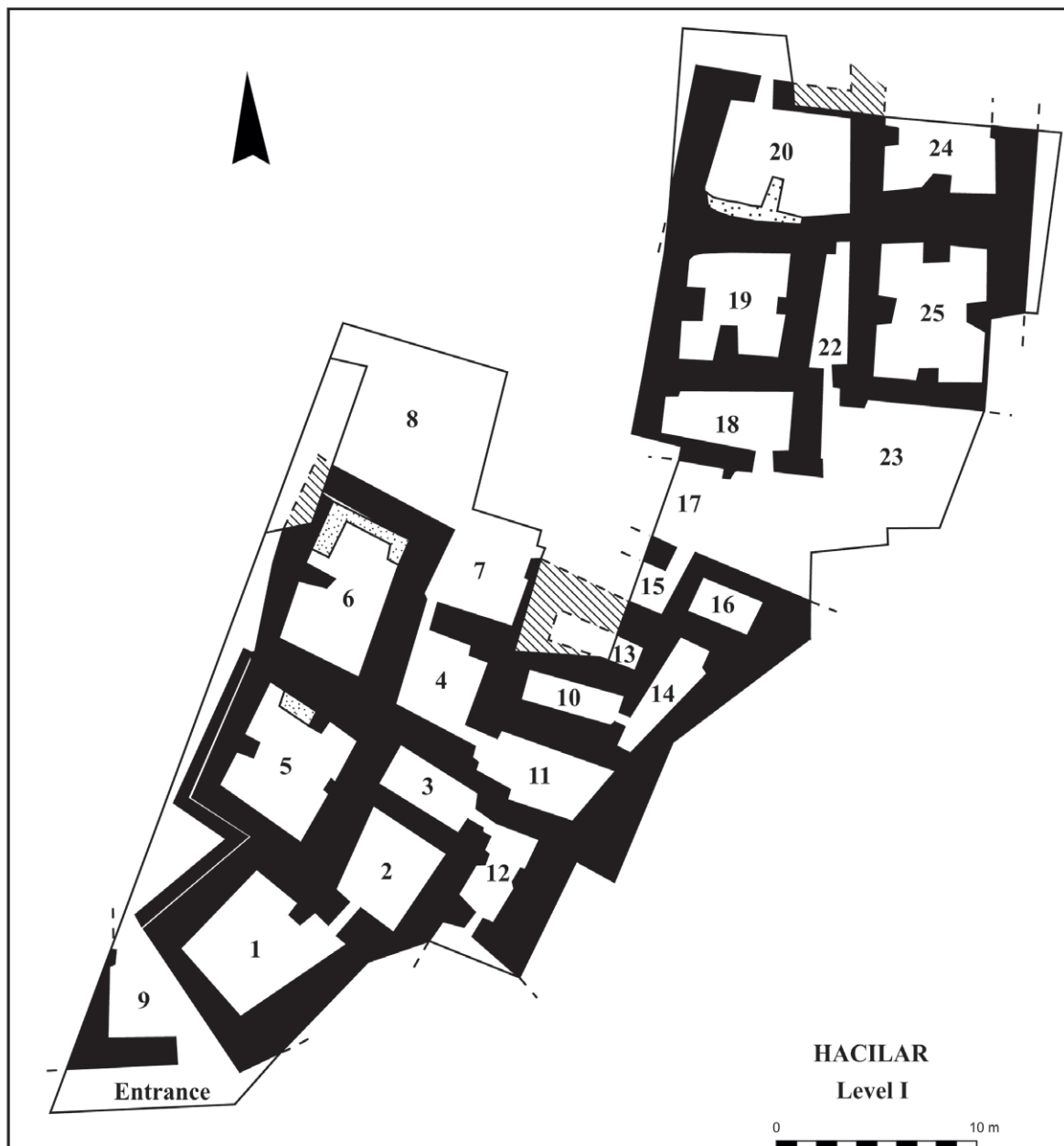


Fig. 5. Plan of the Hacilar I settlement (adapted from Mellaart 1970, fig. 28)
Обр. 5. План на селището Хаджилар I (преработен от Mellaart 1970, fig. 28)

had been placed in front of the gate (Duru 1994, 11).

Level 6A

The location of the houses, the communal squares and courtyards, and also the streets, must have been planned in advance with the aim of facilitating circulation within the settlement.

Defence: The defence of this settlement represents a very important advance, not only in the context of defence during the Late Chalcolithic Period but also in the development of defence systems in Anatolia. The fortification of the settlement was not provided by a free standing defence wall system (fig. 9). In settlement 6A, 23 structures of various sizes and with different functions were uncovered. Eight of these structures were concentrated in the central part of the settlement, while the others surrounded them. The structures on the outermost edge of the settlement had a direct defence function. It can be seen that the buildings in the outermost ring were used as ordinary residences, while the buildings in the inner section of the settlement had a special purpose; buildings no. 5 and

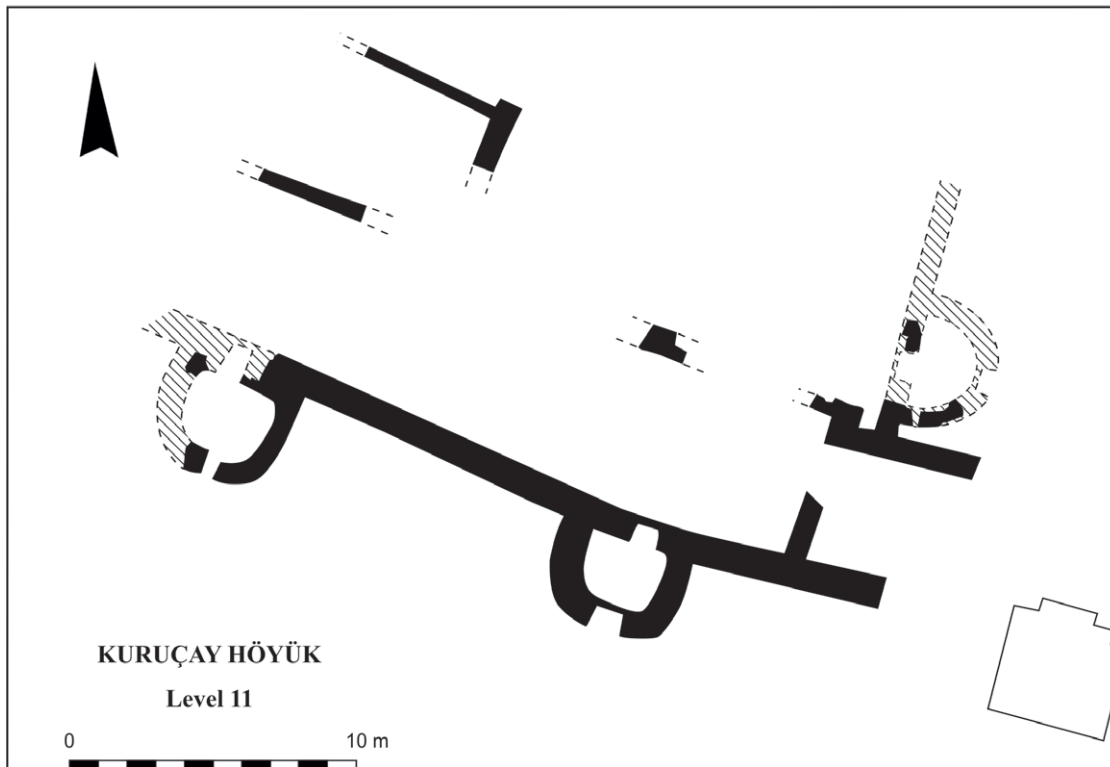


Fig. 6. Plan of the Kuruçay level 11 defence system (adapted from Duru 1994, Pl. 15)

Обр. 6. План на отбранителната система на ниво 11 в Куручай (преработен от Duru 1994, Pl. 15)

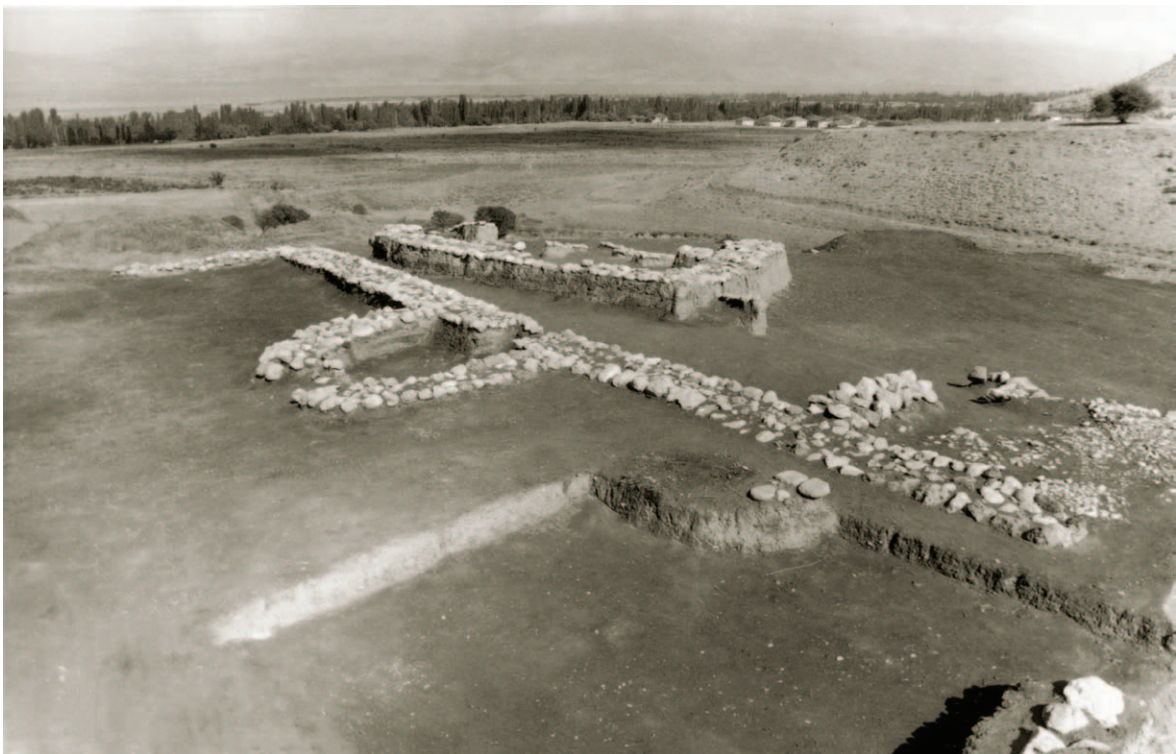


Fig. 7. A view to the Kuruçay level 11 defence system from the East (Kuruçay excavations – archive)

Обр. 7. Поглед от изток към отбранителната система на ниво 11 в Куручай (архив на разкопките)

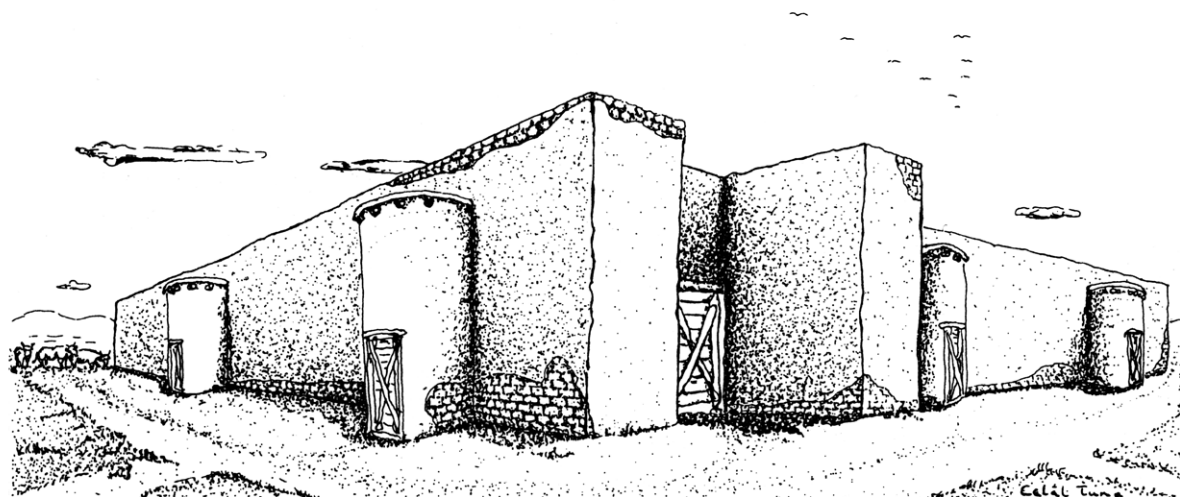


Fig. 8. Restitution of Kuruçay level 11 defence system and gateway (after Duru 1994, fig. 1)

Обр. 8. Възстановка на отбранителната система и вход на ниво 11 в Куручай (по Duru 1994, fig. 1)

6 were identified as the residence of the 'Head' or ruler of the settlement, and building no. 8 as the Temple.

None of these structures were fully attached to one another, as narrow or relatively wide gaps were left between them. The structures were placed alternately forward and backward, a tooth-shaped zigzag outline emerged. The gaps with no houses on the outer ring of the settlement were closed by a wall. The back walls of the houses in the outer ring that faced away from the settlement and the foundations of the walls in the sections without houses were built with larger stones. These walls are thicker than the other walls. In some places particular sections were strengthened by adding a second wall to the outer walls. The two areas with dimensions of 1.30×2.50 m that faced structure no. 21 in the southwestern section of the settlement are thought to have been linked to the defence system, as they are too small to have been used as dwellings. There are no components like towers or bastions in this defence system (Duru 1996, 9).

The Gates: The excavations have shown that there were three entrance gates to the settlement. In keeping with the location of the settlement, the Western Gate on the same side as the lake is a simple entrance 1.40 m in width that was probably accessed by a steep slope. There are walls 1 m in thickness on each side of the gate, and the gate was formed by joining these two walls together. Outside the wall on the northern side, further support to the defence was provided by a thick wall formed of three adjacent compartments. After passing through the gateway, which is 1.60 m in length, a large courtyard with dimensions of 7.50×7.50 m is reached. The settlement is entered through a gate on the eastern side of the courtyard (fig. 9).

The second gate is the Northern Gate, which was located near the northwestern corner. This gate provided access to the stream via a very steep slope and was probably used for going down to the water source and back. The gate, which is 2.5 m in width and 2 m in length, is in the form of a wide gap. A large trapezoid courtyard is accessed through this gate. There is a small alcove just to the left of the entrance.

The third entrance gate to the settlement is the Eastern Gate (figs. 9, 10, 15A). This gate was formed by leaving a gap 1.5 m in width and 6 m in length between house no. 13 and house no. 14 and is actually a free-standing gate building. The width of the outer gateway is 1 m. There are two rectangular pylons that had survived up to heights of 1.5 m and 0.80 m, and these functioned as door jambs on both sides. These two pylons are located on the entrance side of the gate to the settlement. Large,

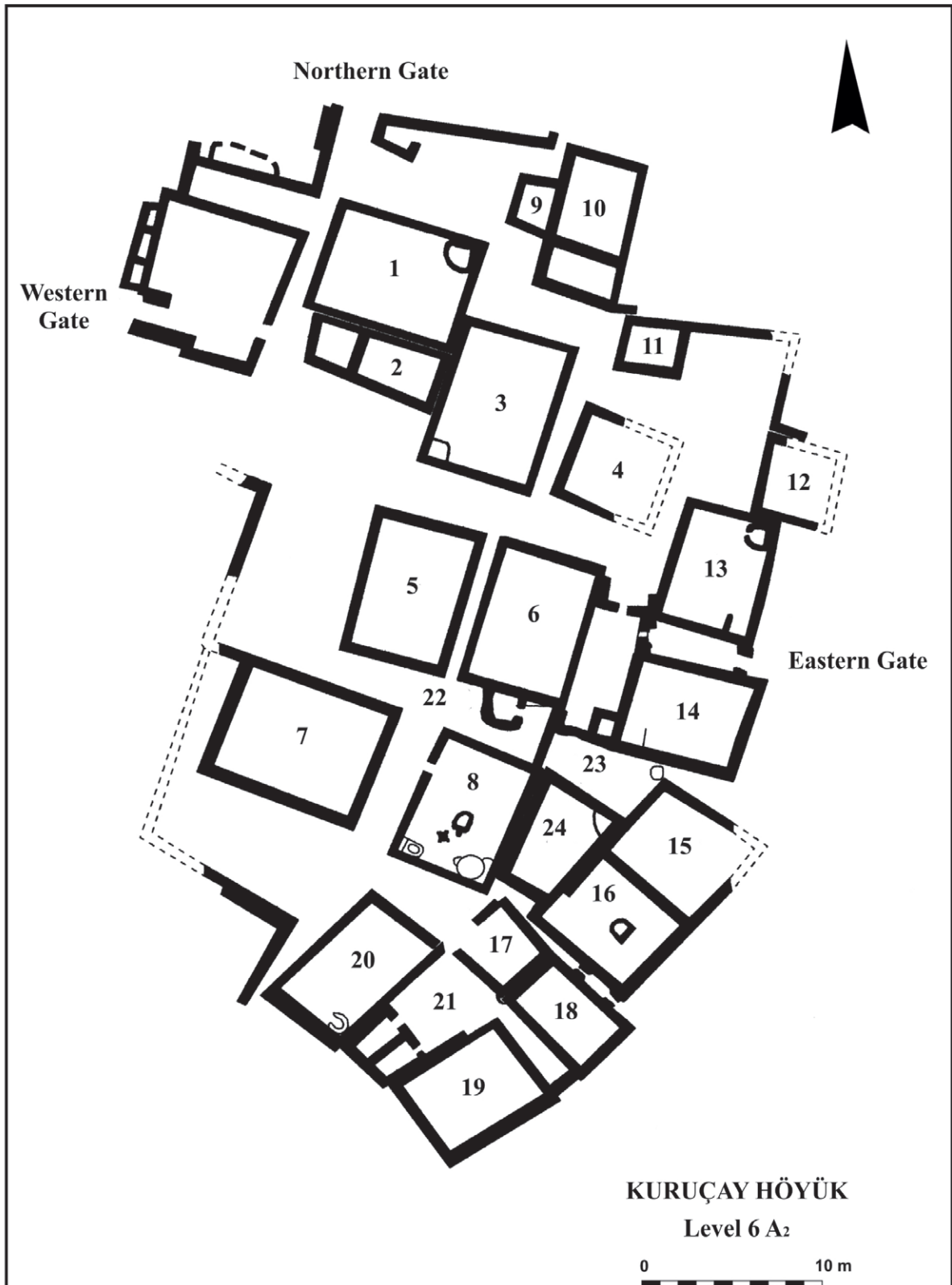


Fig. 9. Plan of the Kuruçay level 6A2 (adapted from Duru 1996, Pl. 32)
Обр. 9. План на ниво 6A2 в Куручай (преработен от Duru 1994, Pl. 15)



*Fig. 10. Kuruçay level 6A – view of the Eastern Gate from outside the settlement
(Kuruçay excavations – archive)*

Обр. 10. Куручай ниво 6А – поглед отвън към източната порта селището (архив на разкопките)

flat stones were placed on the outer and inner door thresholds. A channel was probably dug under the outer door threshold to drain away the rain water from the settlement. A door from the gateway provided access into house no. 14. The settlement was not entered immediately after passing through the Eastern Gate, as the heart of the settlement was reached through a rectangular courtyard and a door. Refik Duru thinks that the Eastern Gate was a special gate used by an elite group of people (ibid., 10). The Eastern Gate probably had wooden door wings. It is not clear whether the gateway passage of the Eastern Gate was covered or uncovered.

Hacılar Büyük Höyük

Excavations that began in 2011 under my direction at Hacılar Büyük Höyük, located 27 km southwest of Burdur and about 400 m north of Hacılar (fig. 1), are still in progress. The stratigraphy determined during these 11 years of research is given below:

Stratigraphy	
Early Bronze Age III (EBA III)	?
Early Bronze Age II (EBA II)	EBA II / Building Levels 1–3
Early Bronze Age I (EBA I)	EBA I / Building Level 1, 2s
Early Chalcolithic Period (?)	?
Virgin Soil	

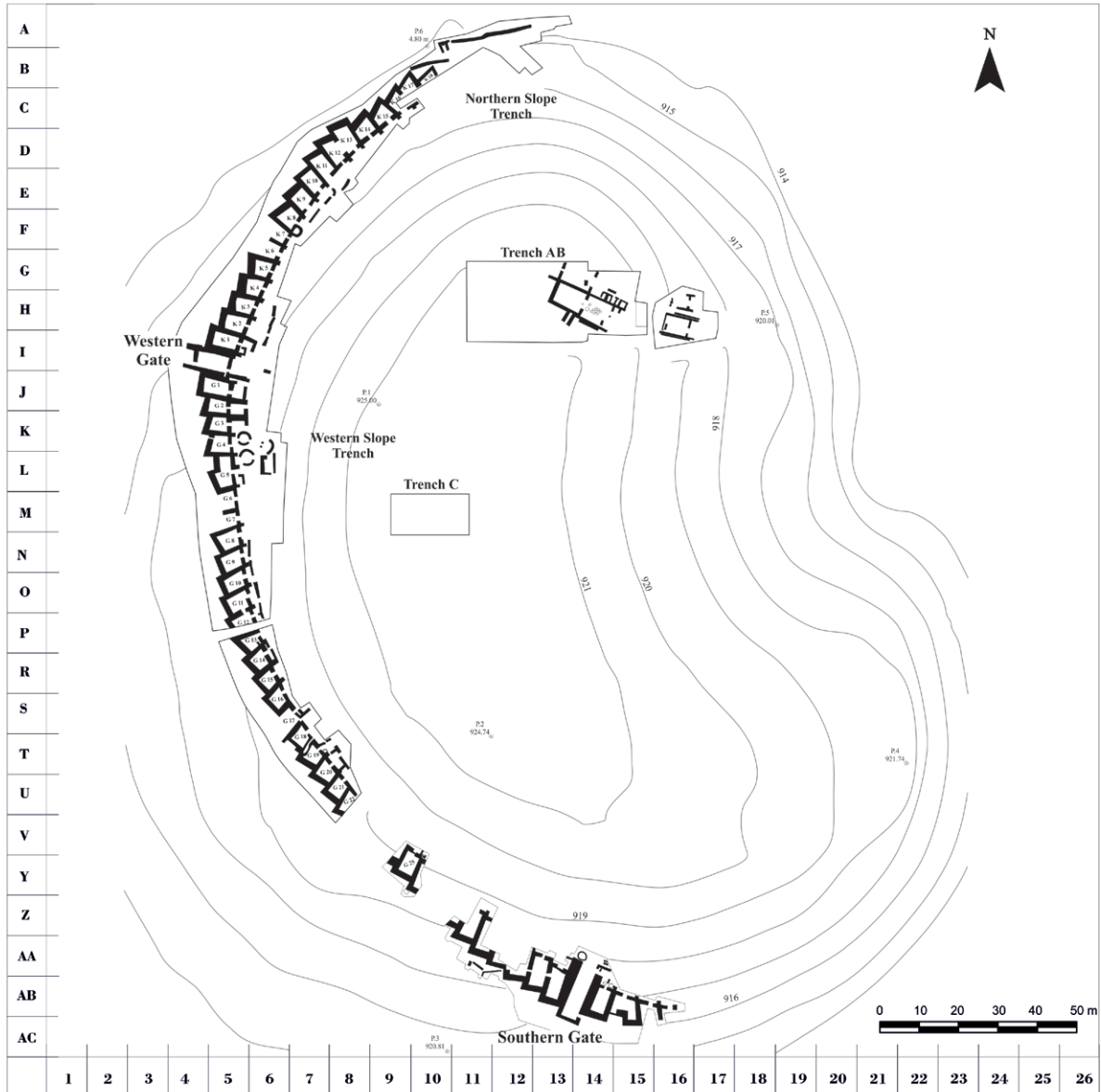


Fig. 11. Plan of the Hacilar Büyük Höyük EBA I settlement (Hacilar Büyük Höyük excavations – archive)
 Обр. 11. План на селището от РБЕ I в Хаджилар Бююк Хьююк (архив на разкопките).

Defence: During the excavations carried out in the western half of the city, a carefully planned multi-roomed defence system with “sawtooth” protrusions that developed along a north-south axis was uncovered. About 50 of the building units (casemates) that make up the defence have been uncovered so far. It is observed that the wall protrusions called ‘sawtooth’ extend out about 2.00, 2.20 or 2.50 m in keeping with the dimensions of the casemate they are linked to. We think that in the preplanning of the layout of the city, these protrusions were intended to form a circular plan or a curve (figs. 11–12).

The outer walls of the defence system, 1.50–1.60 m in thickness, are built of medium-sized stones and reach a height of 2 m in places. It is understood from the ruins of the walls and the remains attached to the top row of the existing walls that the upper sections of the walls were built with mud bricks, but these have not survived. The oval-shaped mudbricks and the pieces of pisé bearing the negative impressions of tree branches that were found in the rubble of the buildings provide some insights into the structure of the upper walls, which have not survived to the present day. The average dimensions of the sometimes slightly distorted trapezoid casemates that form the wall are 3.85



Fig. 12. Aerial view of Hacilar Büyük Höyük (Hacilar Büyük Höyük excavations – archive)
Обр. 12. Въздушна снимка на Хаджилар Буюк Хьюк (архив на разкопките).

× 6.10, 4.5 × 5.5, 3.60 × 5.00, 4.7 × 7.1 and 5.7 × 7.4 m. Their inner walls measure 1.10 m, 1.30 and 1.50 m in width, and their doors open onto the courtyards on the eastern side. The doors of some rooms are 1.10–1.20 m in width, and the *in situ* pivot stone placed inside the door in some of them indicates that the wooden door wing opened inwards, and in some of the casemates thresholds had been formed at the doors by placing stone slabs or more irregular stones. On both sides of the doors of the casemates, and on the same axis as the longer walls of the rooms, there are short wall protrusions / buttresses varying in size from 0.80–1.00 m that form ‘ante’walls. All these features give these buildings an appearance similar to a ‘Megaron’. The casemates were probably covered with a flat roof formed from wooden beams, and branches mixed with mud. In most of the 50 casemates unearthed so far the compressed floors are in poor condition, but no pedestal stone that could have been used as a base for a wooden pillar to support the roof, was found in any of these places. This suggests that, with the exception of a few buildings, the expert builders must have managed to cover the area without the need for a roof support (Umurtak 2020a, 2021; Umurtak, Duru 2013, 2014, 2016).

The Gates: The first of the two city gates that intentionally complied with the defence system is the Western Gate, and the other one is the Southern Gate. The Western Gate (figs. 11, 13A, 14A, 15B) is a pre-planned gateway building measuring 4.00 m. in width and 8.70 m in length situated between two rectangular casemates / towers (K 1 and G 1) and has ante walls extending both into and out of the city. A transverse wall was built at the front of the gate that faces away from the city, and this restricted access to the settlement as it could only be entered through a narrow gap. It is



Fig. 13. Hacilar Büyük Höyük: A. Aerial view of the Western Gate; B. Aerial view of the Southern Gate (Hacilar Büyük Höyük excavations – archive)

Обр. 13. Хаджилар Бююк Хьюк: А. Въздушна снимка на западната порта; В. Въздушна снимка на южната порта (архив на разкопките).

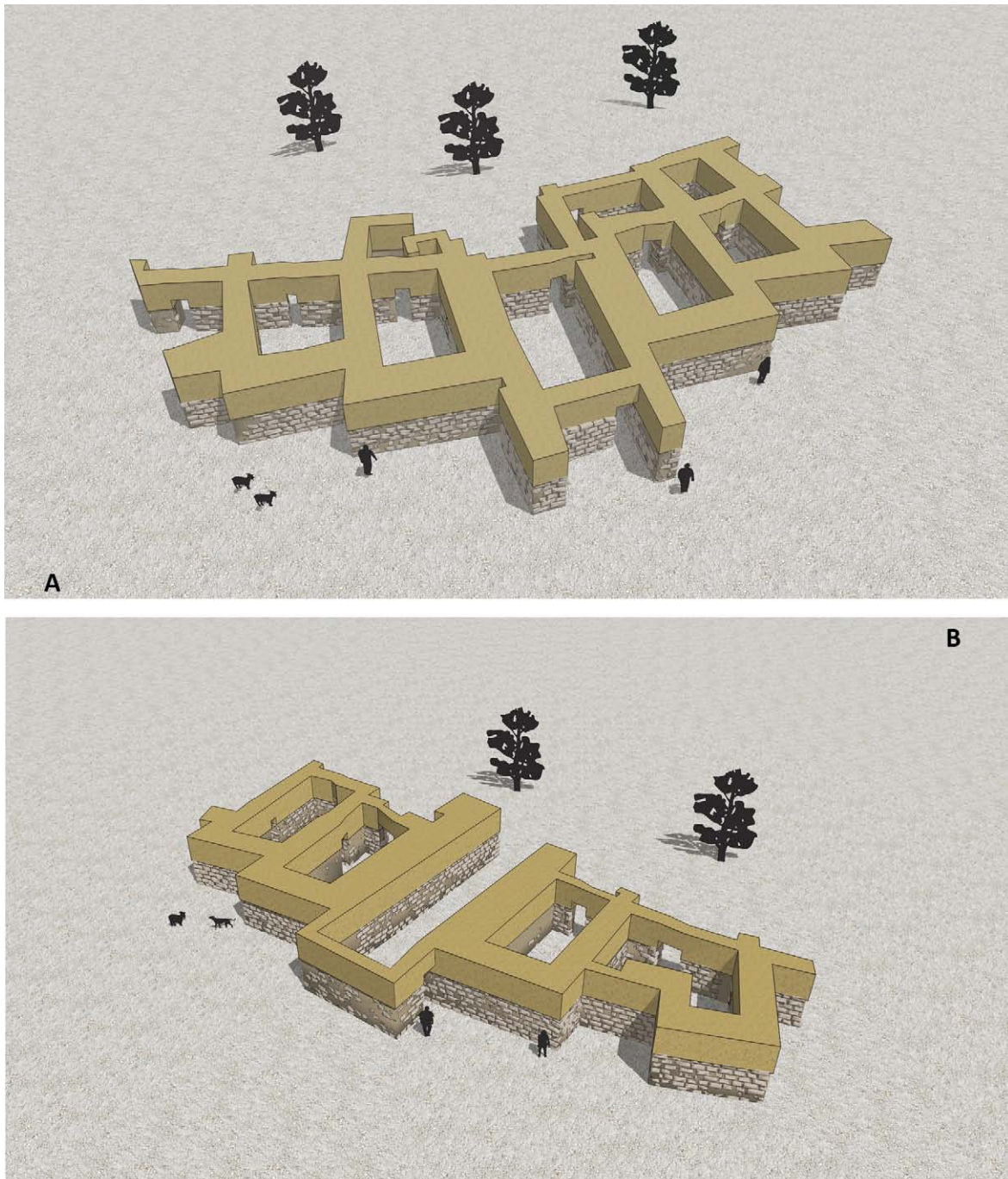


Fig. 14. Hacilar Büyük Höyük: A. Isometric drawing of the Western Gate; B. Isometric drawing of the Southern Gate (by A. Uğan)

Обр. 14. Хаджилар Буюк Хьюк: А. Изометричен чертеж на западната порта; В. Изометричен чертеж на южната порта (автор А. Уѓан)

evident that a second wall was built at a later stage at this entrance to the city, making access even more difficult. Buildings K1 and G1, which stood symmetrically on either side of the gateway, were undoubtedly more ostentatious than the other casemates.

The Southern Gate (figs. 11, 13B, 14B, 15C) is similar in plan to the Western Gate. The passage formed between two rectangular casemates/towers is approximately 15.20 m in length and 4 m in width. There is a wall partially blocking the entrance on the side of the gateway that faces away

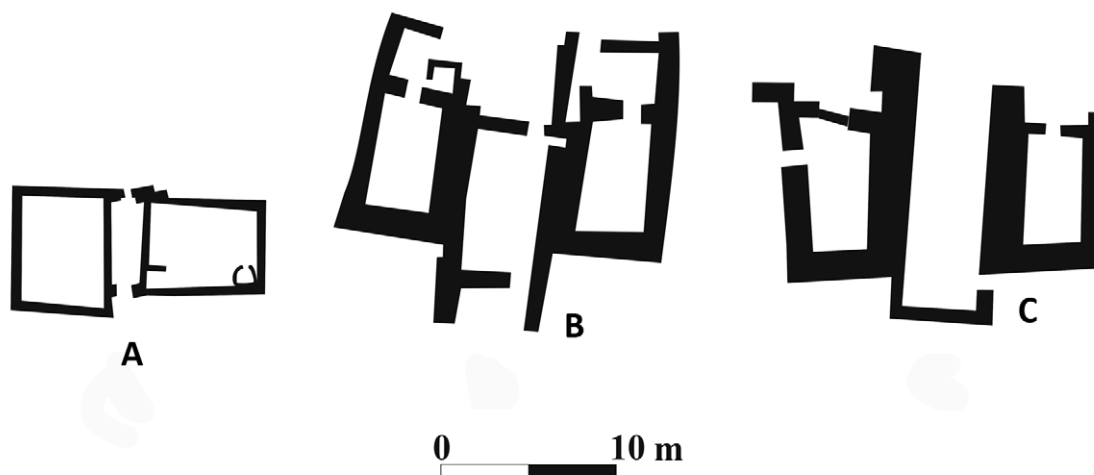


Fig.15. A. Plan of the Eastern Gate at Kuruçay (Kuruçay excavations – archive); B. Plan of the Western Gate at Hacilar Büyük Höyük; C. Plan of the Southern Gate at Hacilar Büyük Höyük (B & C – Hacilar Büyük Höyük excavations – archive)

Обр. 15. А. План на източната порта в Куручай (разкопки на Куручай – архив); В. План на западната порта в Хаджилар Буюк Хьюк; С. План на южната порта в Хаджилар Буюк Хьюк (В & С – архив на разкопките)

from the city. It is apparent that this closure wall, which was much thinner than the side walls of the gate that are more than 1.5 metres in width, was added later, sometime after the construction of the gate. The rooms/towers on both sides of the gateway are similar in plan to the other casemates of the defence system, but their dimensions are noticeably larger. For example, with dimensions of 7.90×3.90 m, the size of the area adjacent to the gate passage on the northern side is striking. There are two areas to the south of the Southern Gate. The first of these must have functioned as the southern tower of the gate, and is smaller (6.30×1.30 m) than the northern tower. Gates of a similar plan enabled entrance into and exit out of the city on the western and southern sides of the settlement. The tops of both doorways must have been covered. If the tops of the casemates were roofed over without the use of any wooden supports, it can be assumed that a similar technique was used to cover the gates.

We think there must be another gate in the yet unexcavated eastern part of the city at Hacilar Büyük Höyük. There is no gate in the northern section, but there is a retaining wall (Umurtak 2020a) built to give protection against potential flooding from the stream below. Some sections of the defence system had no external walls, and these gaps in the wall were in the form of simple doorways. Unlike monumental gates, these gates would have been necessary for daily domestic activities, such as bringing water from the stream and for entering and exiting of people going to fields and gardens, and also domesticated animals. Gate buildings, which can be called monumental, undoubtedly had a different function. An interesting factor is that the Western Gate and the Southern Gate were not suitable for the entrance and exit of wooden carts pulled by animals. Does that mean this type of transport was not used, or was there another entrance suitable for such carts in the yet unexcavated parts of the settlement?

Bademağacı Höyük

This höyük is located 50 km north of Antalya, close to the northern slopes of the Taurus Mountains, a range that separates the Anatolian plateau from the Mediterranean coast (fig. 1). Bademağacı was excavated in 1993–2010 by a team under the direction of Prof. Dr. Refik Duru with my participation as co-director (Duru, Umurtak 2019).

Cultural Period	Stratigraphy	Building Level
Early Christian Church/Chapel		
	Hiatus	
Middle Bronze Age (MBA)		MBA 1
Early Bronze Age III (EBA III)		EBA III/1
Early Bronze Age II (EBA II)		EBA II/1–3
Early Bronze Age I (EBA I)		?
	Hiatus	
Late Chalcolithic (LCh)		?
	Hiatus	
Early Chalcolithic (ECh)		?
Late Neolithic (LN)		LN 1, 2
Early Neolithic II (EN II)		EN II/1–3, 3A, 4, 4A, 4B
Early Neolithic I (EN I)		EN I/5–9
	Virgin Soil	

Defence: Early Neolithic II Period: The function of the grid-shaped foundations and the rectangular building remains (figs. 16, 18) in this section, which are believed to belong to this settlement period, are not fully understood. As they are located on the eastern border of the Neolithic Period settlements, these foundations are thought to be linked to the defence system but no evidence was found to suggest the presence of a gate here (ibid., Pl. 10, 16/1).

Early Bronze Age II: The layout of the Bademağacı EBA II settlement suggests that it was built in accordance with a pre-planned design (figs. 17–18). The most significant defence-related architectural feature is the row of megarons placed along an extensive 580 m long section of its outer line. The doors of the houses on the outermost edge were on the shorter side facing the centre of the settlement, and the back wall on the other end that faced away from the settlement was deliberately left as a blind wall. In this way, the adjacent back walls of the houses that were attached to each other, made uncontrolled entry into the settlement impossible. In addition to this, beyond the row of megarons on the outer edge of the settlement there is a defence wall 90 cm in thickness that continues intermittently in spite of having disappeared or been destroyed in places. The situation on the unexcavated southeastern side is likely to have been similar. As described above, when some of the houses here were demolished as a result of a great destruction on the southern edge of the settlement, the settlement border was pulled slightly inwards and a thick wall (defence wall) measuring 1.00–1.10 m. in thickness was constructed (fig. 17). There is a different architectural implementation at the northern end of the settlement. The row of megarons on the eastern and western slopes stops abruptly near the northern end. The defence issue at the northern end was resolved with the construction of a freestanding wall instead of a row of megarons.

Beyond the back walls of the row of houses in the outer ring of the Bademağacı EBA II settlements, there is a stone-paved section (*Glacis*) that descends to the lower part of the hill as far as the level of the plain at that time. This paved section on the hillside varies between 4 m and 7 m in width and is formed of several layers, indicating that it was renewed from time to time. The gradient of this sloping paved area was not steep enough to make entering the town more difficult or to deter those who wanted to enter. This paving was most likely placed there not to defend the settlement, which is located in a small plain surrounded by hills, but to protect it from floods (Duru 2008; 2016, 83–85).

The Gates:

The Eastern Gate: Situated on the eastern slope of the city, the eastern gate measures approximately 10.0 m in length and 4.5 m in width and is similar in plan to the megaron. However, an important difference when compared with the others is the absence of any back walls in the building. The building was most likely a gateway / gate building (Propylon) that provided entrance to the EBA II settlement from this direction. Ante walls extended out on both sides at the front of this building, forming a cell-like area with dimensions of 1.70 × 3 m. The door of this small room faces the Eastern Gate. As this tiny room is too small to have been inhabited it was probably a special cell room linked to the gatehouse, perhaps built to control this entrance (a sentry room!) (fig. 17).

The Western Gate: The plan of this building measuring 11.80 m in length and 4.5 m in width exactly matches the Eastern Gate on the eastern slope, so it is thought to have also been a gate building (fig. 17).

The Southern Gate: When its plan and features are compared with those of the other buildings, it can be seen that the southern gate has stronger walls (fig. 19). This building, which was built to allow access into the settlement from the outside, is 8.90 m in length and 3.50–4.50 m in width (interior). An important feature of the building is a bed that could be placed inside a ‘window frame (!)’, which opened up in the wall immediately adjacent to the southern doorway. The width of both the inner entrance of the gate building and the outer gate is approximately 1.90 m. These dimensions are exactly right for a wooden door to have been used here. A stone base in the middle of the room should be considered as evidence for the existence of a wooden pillar. In view of this, we can definitely assume that the gate was covered. The thick stone wall (defence wall) that protected the southern section of the settlement was located outside the outer wall of the building. All these features point to the fact that the building in question must have been an entrance gate to the city (figs. 17–19).

Gateways: In the northern section of the mound and near the northwestern corner, an area of the stone paving approximately 3.50–4.00 m in width was left unpaved (figs. 17–18). In this section, there is also a gap in the above mentioned defence wall. These narrow gaps without stones were probably simple gateways serving as passages for wooden carts to enter and exit, and for herds to enter and leave for their protection at night and when necessary, rather than a ‘City Gate’ for pedestrians.

Evaluation and Conclusion

The first examples of settlement fortification in the region can be traced back to the Early Neolithic Period. At present, we consider the grid-planned foundations and a rectangular building (casemate?) (Duru, Umurtak 2019, Pl. 10) that belongs to the EN II settlement at Bademağacı to be the earliest example of a defence system (fig. 16).

James Mellaart wondered whether there was a defence wall at the Hacilar VI settlement and if the arrangement of the houses adjacent to each other could have formed part of a defence system, and this situation was compared with the situation at Çatal Höyük (Mellaart 1970, 10). However, although Mellaart produced two slightly different theoretical development plans for Hacilar VI (ibid., fig. 9), in reality there is no evidence of any defence wall surrounding the existing houses and no remains of an entrance gate to the settlement were found (fig. 2).

The level 11 settlement at Kuruçay was made into a strong, well-constructed fortress exhibiting a very advanced understanding of defence techniques (figs. 6–8). It is clear that the semicircular towers situated next to the wide wall that were uncovered during the excavations belong to a defence system. It is not possible to follow the development in the use of fortification at settlements during the process of transition to settled life in Anatolia. In this context, we also do not know how the transition to the free standing fortification system in the late phase of the Neolithic Period at Kuruçay

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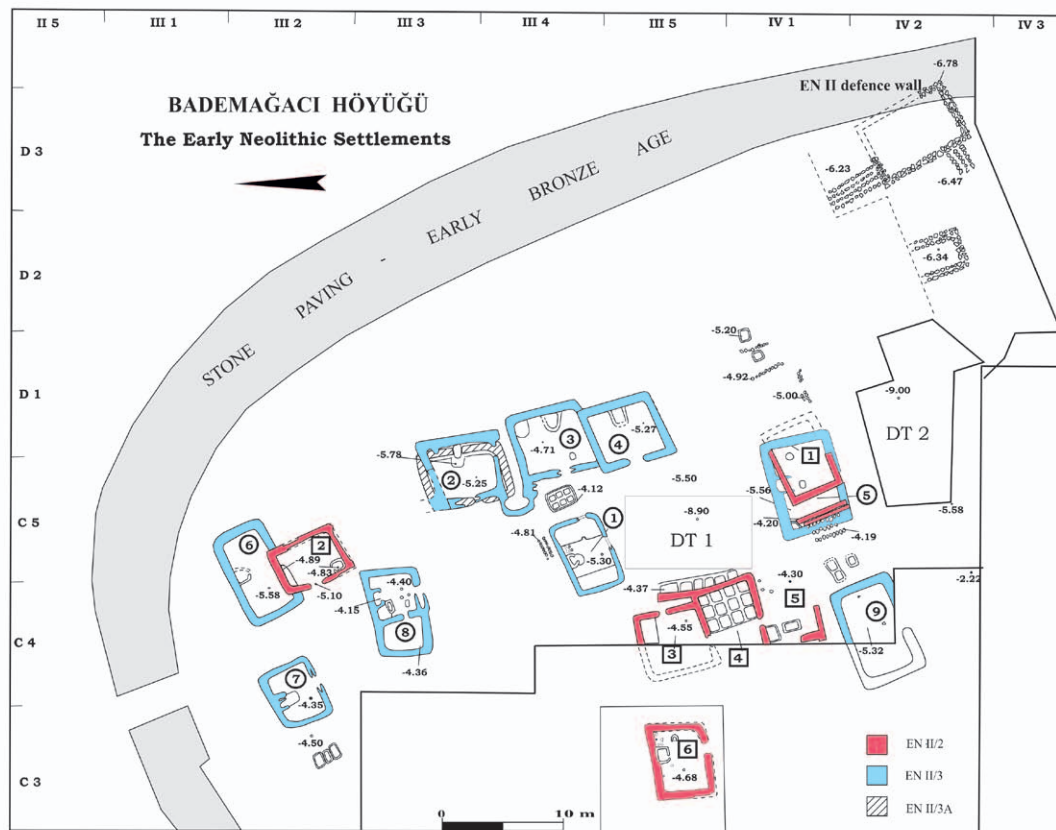


Fig.16. Plan of the Early Neolithic period structures at Bademağacı (Bademağacı Höyük excavations – archive)

Обр. 16. План на структури от ранния неолит в Бадемааджъ (архив на разкопките)

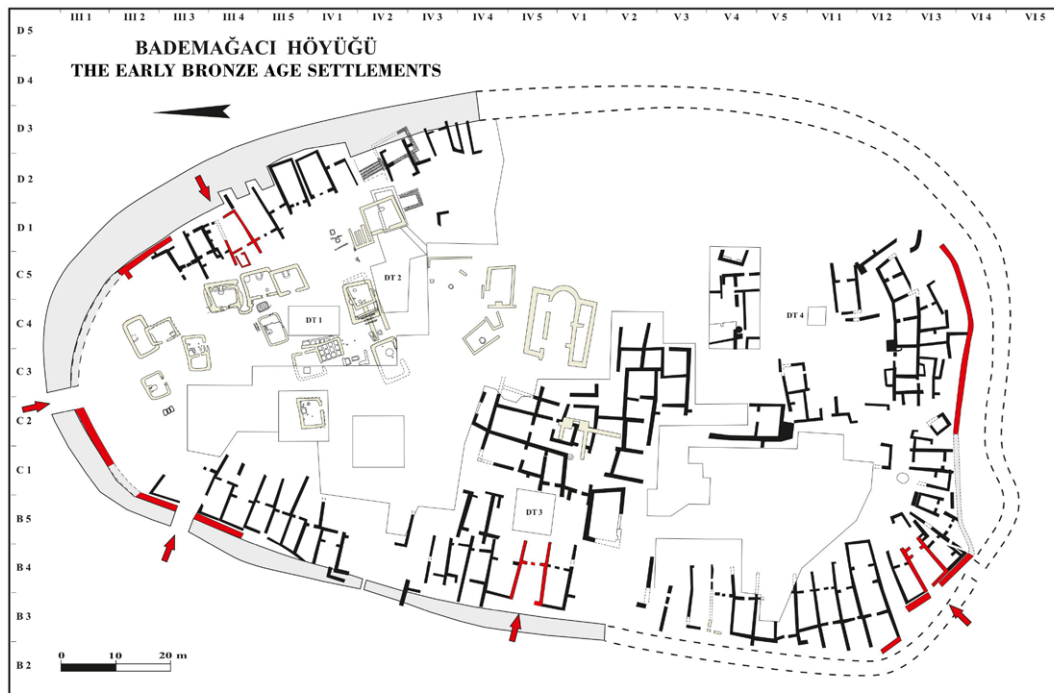


Fig. 17. Plan of the Early Bronze Age settlement at Bademağacı (Bademağacı Höyük excavations – archive)

Обр. 17. План на селището от ранната бронзова епоха в Бадемааджъ (архив на разкопките)



Fig. 18. Aerial view of Bademağacı Höyük (Bademağacı excavations – archive)
 Обр. 18. Въздушна снимка на селището Бадемааджъ (архив на разкопките)

occurred, or anything about the precursor to the level 11 defence system at this site. No similarity between the defence methods used at Hacilar and Kuruçay can be seen in any phase of the Neolithic Period, even though these sites are only 10 km apart.

This could be due to the scarcity and inadequacy of architectural finds in the Early Neolithic level 12 at Kuruçay (Duru 1994, 9, 10) and levels IX–VI at Hacilar (Mellaart 1970, 9, 10). However, it is understood from the common characteristics in the architecture of the houses, pottery traditions, and the mother goddess cult that the people groups who settled in the villages of this region during the Neolithic Period were probably related to each other (Duru 1994; Duru, Umurtak 2005; Duru, Umurtak 2019; Mellaart 1970). The fact that Hacilar and Kuruçay are located so close to each other can be interpreted as precautionary behaviour against external threats. However, it has not been possible to see actual evidence of this mutual understanding of the need for defence.

We would have expected the well-developed defence system at Kuruçay to have been used again in levels 10–9, 8 and 7, which date to the Early Chalcolithic Period, but this did not happen (Duru 1994, 12, 13). At Hacilar levels V, IV and III were excavated in extremely limited areas, so consequently there is no information about defence in these levels (Mellaart 1970, 23–25). However, Hacilar II (fig. 3, 4) has a solid defence / enclosure wall, which gives us a better idea about the defence system (Mellaart 1970, 25–28). Considering the size of the settlement, it can be assumed that no need was felt for any more gates, especially as a large number of gates would have created a potential defence weakness. The northern gate that was flanked by two “towers” (?) and also allowed entrance and exit into the settlement would have been sufficient. We do not think it would have been possible for all the people to have lived in the area surrounded by this wall during this period. This issue has also been discussed by various researchers over time (Anvari 2021, 45, 46). The Hacilar II settlement, which consists of a small number of houses and temple(s?) along with some workshops,

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was probably the home of a privileged elite. The people who worked in the workshops, the artisans and the farmers are more likely to have lived outside of this small settlement, in the surrounding area (Umurtak 2011).

At Hacilar I, however, radical changes are seen in the long-standing local tradition that had continued since level IX (fig. 5). The shape of the settlement plan, shown as circular in Mellaart's drawing, must have been formed using sawtooth indentations (Mellaart 1970, 75), but it is difficult to explain the appearance of this practice in the Hacilar Büyük Höyük defence system approximately 3000 years later. Gate opening no. 23 would have been securely closed from the outside. The wide gap seen in the plan would probably have been contrary to the spirit behind the establishing of a fortress! In this plan, it is not possible to know whether the courts were covered or left open. However, the matter of whether the Hacilar I settlement was actually a "fortress" is debatable (Anvari 2021, 49, 50). Another issue is how the thick wall that formed the outer ring, and also the roof sections of the structures leaning against this wall, were covered. The zigzags in the outer ring would have made this a greater challenge (fig. 5).

The Late Chalcolithic settlement process at Kuruçay began with level 6A2. It is observed that the houses in the outer ring formed a defence line in the context of the settlement plan (Duru 1996, 8, 9). This type of defence system is seen at Aktopraklık Höyük in Western Anatolia, where boundary buildings dating to the Early Chalcolithic Period were positioned forward and backward parallel to the ditch of an area bordered by a ditch (Karul 2017, Fig. 112a, b). Another example with a similar design is seen in level VI at Ilıpınar (Cookson 2009, fig. 19). There is no free standing wall in the system that emerged in level 6A2 at Kuruçay, but this expertly planned settlement had three functional gates (fig. 9). The gates on the western and northern sides are freestanding in plan, and would have been functional in relation to the layout of the inner-gate courtyards and would have conformed to the topography. Refik Duru asserts that the courtyards linked to the gates should be considered as the beginning of a street system (Duru 1996, 10, 11). The Eastern Gate is literally a 'Gate Building', which is a very advanced design for the time period of both the gate and settlement (fig. 10). This gate must have been made for the entrance to a special area right in the centre of the settlement where buildings such as the 'House of the Ruler / Leader', the Temple and the Temple Storeroom, are located (ibid., 9).

The EBA I city at Hacilar Büyük Höyük represents a very important stage in both the development of defence architecture in the region and also in our understanding of the process of urbanisation in Anatolia. In this context, the fact that the city was surrounded by such a strong and complex defence system that would have been difficult to construct above all indicates there must have been great wealth inside it that needed to be protected, and also that external threats were a reality. A section of the defence system 350 m in length has so far been excavated, and it can be seen that the buildings/casemates within this system were placed in an extremely regular order, and the saw-shaped projections systematically change direction. As the upper sections of the casemate walls in the defence system had not survived, it is not possible to know how the tops of the casemates were covered. In the pre-planning of the defence system the architectural design must have included a walkway for the sentry / guard (on the roof) a row of parapets, lookout slits and merlons to keep watch over the outside of the city. This situation was previously examined from a broad perspective by Rudolf Naumann (Naumann 1971, 254, 255).

The location and design of the two gates that provide access into the city were undoubtedly pre-planned according to the needs of the settlement. The casemates located at the entrance gates on each side of a long, wide gate passage must belong to the gate, and we have decided to call these gates the 'Gate Building'.

It is very difficult to explain what developments took place in an area approximately 10 km



*Fig. 19. Bademağacı – a view to the Southern gate from the west (Bademağacı excavations – archive)
Обр. 19. Бадемааджъ – поглед от запад към южната порта (архив на разкопките)*

in width that extends over a period of approximately 500 years from settlement 6A2 at Kuruçay to Hacılar Büyük Höyük. In fact, it is not possible to give an accurate answer to this question in any part of Western Anatolia. The sophisticated ‘Gate Building’ plan of the Eastern Gate at Kuruçay, which is located between houses 13 and 14 and has dimensions of 1.5 m in width and 6 m in length (fig. 15 A–C), must have been a prototype for the gates at Hacılar Büyük Höyük. The similarities between the Kuruçay Late Chalcolithic culture and the Hacılar Büyük Höyük EBA I settlement are not limited to the gate plans, as there are some obvious similarities in the pottery from the two sites as well (Umurtak, Duru 2014, p. 11).

How did the predecessor-succession relationship develop between the Hacılar Büyük Höyük EBA I and Bademağacı EBA II settlements, and were there any chronological gaps between them? The excavated areas of the Hacılar Büyük Höyük EBA II settlement have not yet yielded sufficient information to answer these questions. The continuation of some typical pottery forms from the red ware group at Hacılar Büyük Höyük EBA I, especially the double handled jug form, in the red ware group of the EBA II settlement at Bademağacı (Duru 2017, figs. 3–4; Umurtak, Çongur 2021) is extremely important. However, it would not be easy to say there is also a continuing parallel in the architecture. The extensions of the side walls of the casemates at Hacılar Büyük Höyük towards the interior of the settlement resemble megaron ante walls. The people of the Hacılar Büyük Höyük EBA I settlement knew how to construct megarons (Umurtak 2020; 2021), but they did not choose to build casemates in the form of megarons. Although houses that form the outer ring are part of the defence system at both settlements, the defence system at Hacılar Büyük Höyük is extremely strong and much more durable than the one at Bademağacı.

As mentioned above, this situation can be interpreted as showing the presence of very significant external threats at the beginning of the 3rd millennium BC in the plain where Hacılar Büyük

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Höyük was located. It is difficult to imagine that the blind back walls of the megarons and the defence wall on the outer ring at Bademağacı would have provided significant protection against a possible enemy. There may have been a relatively quiet, peaceful period of in the region north of the Taurus Mountains during the EBA II period. From around 3100 BC onwards, both Hacılar Büyük Höyük and Bademağacı would have been centres of powerful local principalities / kingdoms that controlled the village-type settlements in the surrounding area that made a living through agriculture, livestock breeding and simple trade.

Defence methods in the Burdur Region and its surroundings such as the defence wall with towers in level 11 at Kuruçay, the system where houses were positioned forward and backward at Hacılar I, and the placing of buildings adjacent to each other in the “town” of level 6A2 at Kuruçay, were replaced by a casemate and saw-tooth shaped defence system in the EBA I settlement at Hacılar Büyük Höyük, and the arrangement of adjacent megarons in a row for the purpose of defence in the EBA II settlement at Bademağacı. At Karataş-Semayük to the south of the region the walls surrounding a large building, simple entrance gates and row of buildings on the edge of the settlement, which is dated to the beginning of EBA, show a very different situation (Mellink 1966, Ill. 1, 2).

At Demircihöyük, the houses were placed in a radial design in keeping with the circular shape of the small-scale settlement and formed a defence line. In this system, sawtooth protrusions enabled the walls to turn in an appropriate manner (Korfmann 1983, fig. 343). In the context of the Demircihöyük settlement, Manfred Korfmann examined the “Anatolisches Siedlungsschema” model, which had been seen at many fortified settlements in other parts of Anatolia but up to that time had not been recognised as a general structural layout. The table of settlements (ibid., 222, abb. 353) classified by Korfmann, beginning with the Neolithic Period and including the Early Bronze Age, has changed a lot in the intervening 40 years and, as a result of the current increase in available information, has become a topic for open discussion. At Küllioba in Inner Western Anatolia, the architectural implementations of the period called the Transition to the Early Bronze Age by its excavator have been described in detail. Looking at the schematic plan, it can be seen that the settlement is surrounded by a defence wall in the shape of distinctive zigzags made of mudbricks and rectangular or trapezoidal houses that lean against this wall. A long passage is labelled as an entrance, although there is a question mark after it (Fidan 2012, fig. 7). At the same settlement during the EBA II period, there is a defence system formed by the arrangement of building groups in specific rows. Its eastern and southeastern entrances are in the form of a *propylon*, and there is a much simpler entrance on the northwestern side (ibid., figs. 11, 12, 21). At the Keçiçayırı settlement, which is almost oval in shape, the defence system consists of a series of buildings leaning against the outer wall. There is a badly damaged entrance to settlement on the western side that is in the form of a passageway (Fidan 2016, figs. 5, 6, 10, 11). There is no similarity between the design of the strong, thick massive walls and polygon plan settlements at Troy, the development of which can be traced back to the beginning of the 3rd millennium BC, and the defence system at Hacılar Büyük Höyük that consists of casemates or that of Bademağacı that consists of megarons. The entrances to Hacılar Büyük Höyük, designed as a Gate Building with a gateway between two casemates/towers, and the Troy I gate model, which consists of large protrusions / towers on either side of a gate, bear no resemblance and point to different traditions. The appearance of the *propylon* model during the Bademağacı EBA II and Troy II settlement processes should not be considered an indication of any direct relationship between the two sites (Blegen et al 1950, fig. 417; Korfmann, Mannsperger 1998, figs. 41, 42, 45; Mellaart 1959, figs. 2–9; Naumann 1971, 311–314).

In level XVI at Mersin Yumuktepe in the Çukurova Plain, there is a defence system with a row of casemates and very small sawtooth-shaped indentations and protrusions, and also a very well-developed gate plan for that period (Garstang 1953, figs. 79, 80a). In the EBA II settlement at Tarsus

Gözlükule in the same region, there is a saw-tooth shaped defence wall (with very large ‘teeth’) that is 2.80 m in thickness, and has a simple ‘L’ shaped entrance but no casemates (Goldman 1956, Pl. 6). There was clearly no interaction between these sites and the settlements in and around Burdur. The first example of a ‘Gate Building’ model in Anatolia is the Eastern Gate in Level 6A at Kuruçay, which consists of a gateway between two casemates / towers. The development process of this type of gate can be seen in the Western Gate and the Southern Gate at Hacılar Büyük Höyük. We have no information about the development of the casemate defence system at Hacılar Büyük Höyük and whether or not there was a successor to its gates. What kind of changes occurred in the region in just a few centuries that led to the strong defence system at Hacılar Büyük Höyük giving way to rows of megarons at Bademağacı that leaned on a partially surviving surrounding wall about 1 m in thickness, and the monumental sized Gate Buildings – according to the criteria of that period - being replaced with weak *propylons*? The reappearance of the ‘Gate Building’ model on the Anatolian plateau in the middle of the 2nd millennium BC (Bittel 1970, fig.12, Pl. 12; Naumann 1971, 277–279, figs. 363, 369, 370) is certainly very significant and thought provoking.

Acknowledgments

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От неолита до края на ранната бронзова епоха: развитието в строежа на порти и градски стени в селища в Бурдур (Турция) и околния район

Гюлсун Умуртак

(резюме)

Разкопките в Nasırlar (бизо до гр. Бурдур), извършени от Джеймс Мелаарт през втората половина на 50-те години на миналия век, са отправна точка за праисторическата археология в региона Бурдур–Анталия (древна Писидия) (обр. 1). Почти две десетилетия по-късно се провеждат разкопки в Куручай Хьююк (1978–1988), последвани от проучвания на редица обекти като: некропола на Хаджилар (1985–1986); селищата Хьюючек (1989–1992), Бадемааджъ Хьююк (1993–2010). През 2011 г. започват продължаващите и до днес разкопки в Хаджилар Бююк Хьююк. Осъществяването на тези научни проекти превърна Бурдур и околностите му в един от най-добре проучените региони на праисторическата археология в днешна Турция.

Първите примери на селищно укрепление в района могат да бъдат проследени от ранния неолит (обр. 2 и 16). Обектите, споменати в тази статия, представляват много значими етапи както в развитието на отбранителната архитектура в региона, така и, респективно, в нашето разбиране за процеса на урбанизация в Анатолия. Методите за отбрана в района Бурдур и околностите му, като отбранителната стена с кули от ниво 11 в Куручай (обр. 6–8), системата на разположение на жилища с редуващи се предни и задни стени в Хаджилар I (обр. 5), както и поставянето на съседни сгради една до друга в „града“ от ниво 6A в Куручай (обр. 9–10), са заменени съответно от казематната отбранителна система с назъбени издатъци („зъбци на трион“) в селището от РБЕ I в Хаджилар Бююк Хьююк (обр. 11–12) и от подреждането на съседни мегарони в редица с цел отбрана – в селището от РБЕ II в Бадемааджъ (обр. 17–18).

Разкопаните площи на селището от РБЕ II в Хаджилар Бююк Хьююк все още не дават достатъчно информация за важните въпроси относно приемствеността между РБЕ I в Хаджилар Бююк Хьююк и РБЕ II в Бадемааджъ и по-точно как са се развивали тези селища и дали има хронологически хиатус между тях. Някои типични керамични форми от групата червени съдове от РБЕ I в Хаджилар Бююк Хьююк (особено каните с двойна дръжка) намират продължение в групата червени съдове на селището от РБЕ II в Бадемааджъ, което е факт с изключително значение. Въпреки това не може да се твърди за такъв континуитет и в архитектурата. Необходимостта от сериозна отбранителна система в Хаджилар Бююк Хьююк показва наличието на много значителни външни заплахи в началото на III хил. пр. Хр. в равнината, където се намира този обект. От друга страна, фортификационната система в Bademağacı не изглежда много солидна, тъй като задънените задни стени на мегароните и защитната стена на външната куртина не осигуряват надеждна отбрана срещу евентуален враг. Възможно е периодът РБЕ II да е бил относително тих и спокоен в региона на север от планините Тавър. От около 3100 г. пр. Хр. насетне Хаджилар Бююк Хьююк и Бадемааджъ стават центрове на мощни местни княжества/ кралства, контролиращи селския тип обиталища в околността, които практикуват земеделие, скотовъдство и дребна търговия.

Първият пример на модел „порта–сграда“ в Анатолия е източната порта от ниво 6A в Kığıcaу, която се състои от вход/ портал между два каземата/ кули (обр. 10, 15A). Процесът на развитие на този тип порти може да се проследи и илюстрира от западната и южната порти на Хаджилар Бююк Хьююк (обр. 11–12, 13.A,B, 14.A,B, 15.B,C). Няма налична информация за развитието на сложната казематната отбранителна система в Хаджилар Бююк Хьююк и дали тя

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намира продължение/ приемственост във времето. Само за няколко века силната отбранителна система в Хаджилар Бююк Хьюк отстъпва място на редици от мегарони в Бадемааджъ, които се опират на частично оцеляла заобикаляща стена с дебелина около 1 m, а монументалните, според критериите от този период, порти–сгради са заменени със слаби пропилони. Остава открит въпросът за причината за тези промени в отбранителните съоръжения на селищата в района на Анатолийското плато през II хил.Хр.