

ENCLOSING THE SETTLEMENT OR FILLING THE DITCH: THE CASE OF AŞAĞI PINAR

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Abstract

Ongoing research in the Balkans is revealing the importance of Early Neolithic ditches that enclosed settlements. As the research continues, more information is being uncovered about the ditches. The initial settlement at Aşağı Pınar, layer 7, also features ditches, with two ditches and associated pits found in the last two phases of this layer. However, none of these ditches had any association with settlement units. The stratigraphy and context of the fills suggest a refilling process was involved. The stratification of the fills, along with a large quantity of pottery sherds found in the fills and other finds, strongly suggest that a complex activity involving material culture led to the refilling process. This paper discusses the refilling processes and the purposes of the ditches in the context of Aşağı Pınar. Evidently, the Neolithic ditches were part of a more intricate activity than a mere enclosure system in the beginning of the Neolithic in Balkans.

Keywords: Early Neolithic – Eastern Thrace – Aşağı Pınar – ditches – enclosures.

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Introduction

The integrity of a settlement is determined by the cohesion of the buildings and open spaces. Additionally, the location, boundaries, and duration of the settlement are also directly related to the conceptual composition of a settlement. The boundaries of prehistoric settlements are not always visible. However, these boundaries should gradually encompass the production and consumption habits of a community and settlement. They may be limited and defined by natural topographical features or distance. It is also possible to extend these boundaries within the context of communication and exchange networks or even to consider them as intertwined boundaries. However, from the very beginning of sedentary life, there are examples of concrete boundaries of prehistoric settlements, though they are not numerous. These boundaries are determined by walls and/or ditches, which generally only enclose certain areas of the settlement rather than its entirety. In Southwest

Asia, there are three known examples of this phenomenon. An enclosure wall associated with a monumental tower at Jericho (Kenyon 1981) at the beginning of the Pre-Pottery Neolithic, another wall at Tell Maghzaliyah (Bader & Aurenche 2009) which is supposed to have surrounded the settlement, and another one built on the part of the settlement facing the Euphrates at Mezraa Teleilat (Özdoğan M. 2011). Additionally, there is a ditch located in front of the walls at Jericho. The stone wall dated to the Pre-Pottery Neolithic at Aşıklı Höyük (Esin & Harmankaya 2007) limits the areas in the settlement.

To the northwest of the Anatolian Peninsula, there are complex examples of settlement enclosures. Circular settlements are formed with buildings lined up side by side to form a circular boundary, the rear façade of the buildings forming a line of enclosure from the outside, and there is also a parallel ditch (Karul 2020). The earliest example of this settlement layout is Barcın (Geritsen & Özbal 2016). In layer IV, dating back to 6400 BCE, a ditch runs behind the buildings forming a linear sequence. However, Aktopraklık provides a clear observation of the relationship between the ditch and the settlement (Karul 2017 & 2020). At this site, the buildings of the settlement from the first half of the sixth millennium BCE are arranged in a circular line and surrounded by a ditch. The existence of a boundary in the settlement is reinforced by the fact that the back façade of the building sequence runs parallel to the ditch. This emphasizes the ditch and the border phenomenon. Other nearby settlements featuring ditches are those of Ilıpınar and Pendik. A ditch in Ilıpınar passes between the buildings. There is also a row of buildings in layer VI. Although the later layer VA was excavated in a smaller area, the continued layout is suggested by the adjacent buildings in this location (Roodenberg & Alpaslan-Roodenberg 2013). Another ditch was found at Pendik, but its direction and surrounding area are not fully understood (Özdoğan M. 1983).

No ditches have been found yet in western Anatolia. Nevertheless, instances of enclosure systems have been documented. At Ege Gübre (Sağlamtimur & Ozan 2012), located near the Aegean coast, a wall bordered the settlement. The wall, characterized by a stone foundation and a wooden superstructure, borders the settlement on one side only. During the late seventh and early sixth millennia BCE, the settlements in the Lakes Region were surrounded by a series of building façades and walls, as pointed out by Mellaart (1970) and Duru (2008). In Hacılar II and Kuruçay 11, the settlements were designed as a quadrangle rather than a circular layout. Sometime later, in Hacılar I, the buildings were arranged in a circular plan, as is typical of northwestern Anatolia, and the boundaries were formed by the body of the buildings.

It is likely that in the Early Neolithic of the Balkans, the ditch phenomenon became more significant. Ditches rather than walls are the main feature and can be found in the first settlements dated to the late seventh and early sixth millennium BCE (cf. Nikolova 2022). Circular enclosures have become increasingly widespread over time and are a distinctive element of the Neolithic in central and western Europe as well, being associated not only with settlements but also with ritual sites (Řídký et al. 2019).

In the Early Neolithic settlements in Thrace, ditches are a common structural unit (Nikolova 2018, 2021, and 2022). They are frequent components of a system of enclosures and boundaries, marking off the entire settlement or merging with another natural feature. Additionally, they typically comprise multiple ditches rather than just one. Similar ditches have been discovered in the earliest layer at Aşağı Pınar. The two ditches in layer 7 are similar to their Thracian contemporaries in terms of their structural features. However, they also possess distinctive features concerning the filling process and their relationship to the settlement. This paper will discuss these features of the ditches at Aşağı Pınar and will draw conclusions about their possible use.

Aşağı Pınar

Aşağı Pınar is situated in eastern Thrace, on the slopes of the Istranca Mountains that descend into the Ergene Basin, near the Şeytandere, one of the tributaries of the Ergene River that irrigates the basin. The settlement encompasses eight layers dating from 6000 to 4700 BCE. and has a total deposit of up to three meters at its thickest part (fig. 1). The two earliest layers, 7 and 6, are defined as Early Neolithic in Balkan terminology and as Late Neolithic – Early Chalcolithic in Anatolian terminology. Layers 5 to 2 above are equivalent to the Middle – Late Neolithic in the Balkans and the Middle Chalcolithic in Anatolia. An intermediate phase denominated as a transitional layer,



Figure 1. *Ditch II in the north area. View from the east. Image credit: Aşağı Pınar Project Archive.*

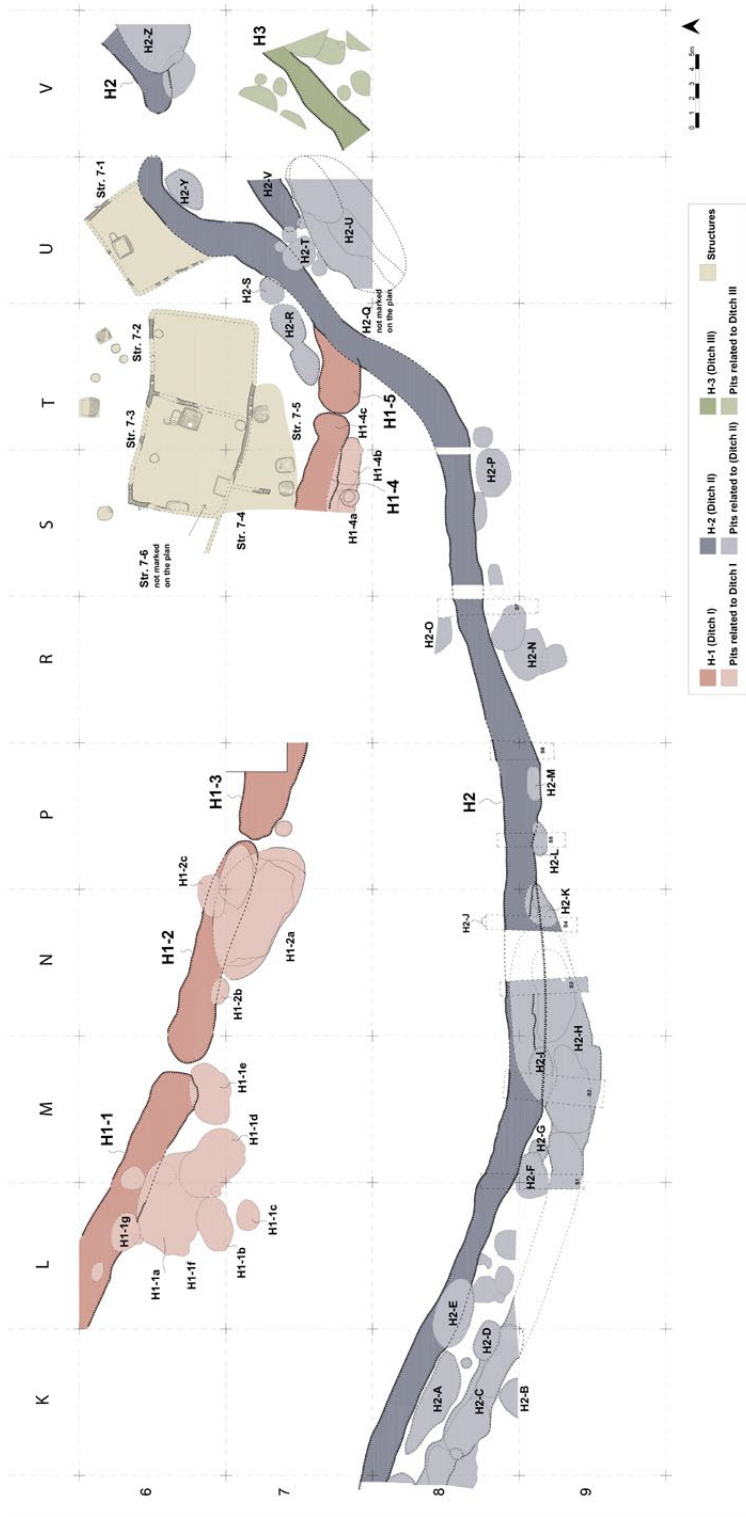


Figure 2. Layout of layer 7. Each phase is highlighted in different colors. Image credit: Aşağı Pınar Project Archive.

5–6, exists between the Early and Middle / Late Neolithic horizon (Özdoğan M. 2013; Özdoğan & Schwarzberg 2020).

The initial layers (7 and 6) represent the early stages of the first settled village life in Thrace. These layers indicate an uninterrupted process and are represented by quadrangular, adjacent, or neighboring dwellings built with wattle and daub techniques in the northern and northeastern parts of the mound (Özdoğan E. 2016; Özdoğan & Schwarzberg 2020). Layer 7 comprises three successive phases, in the lowest of which only wattle and daub dwellings have been identified that are adjacent and/or close to each other. No ditches are known. However, the two later phases can only be identified through ditches.

The formation of layer 7

The initial settlement in layer 7 was situated in the northeast parts of the mound, at the highest topography during that time and next to a small stream called Haydardere (fig. 2). The excavations uncovered dwellings and courtyards, but no units surrounding the settlement. Haydardere serves as the northern boundary of this early settlement, while the southern boundary of this phase is difficult to determine due to the destruction of the buildings by the ditches dug in later phases. The structures were excavated in an area covering 450 m² (fig. 3). Three large buildings were unearthed, two of them adjacent to

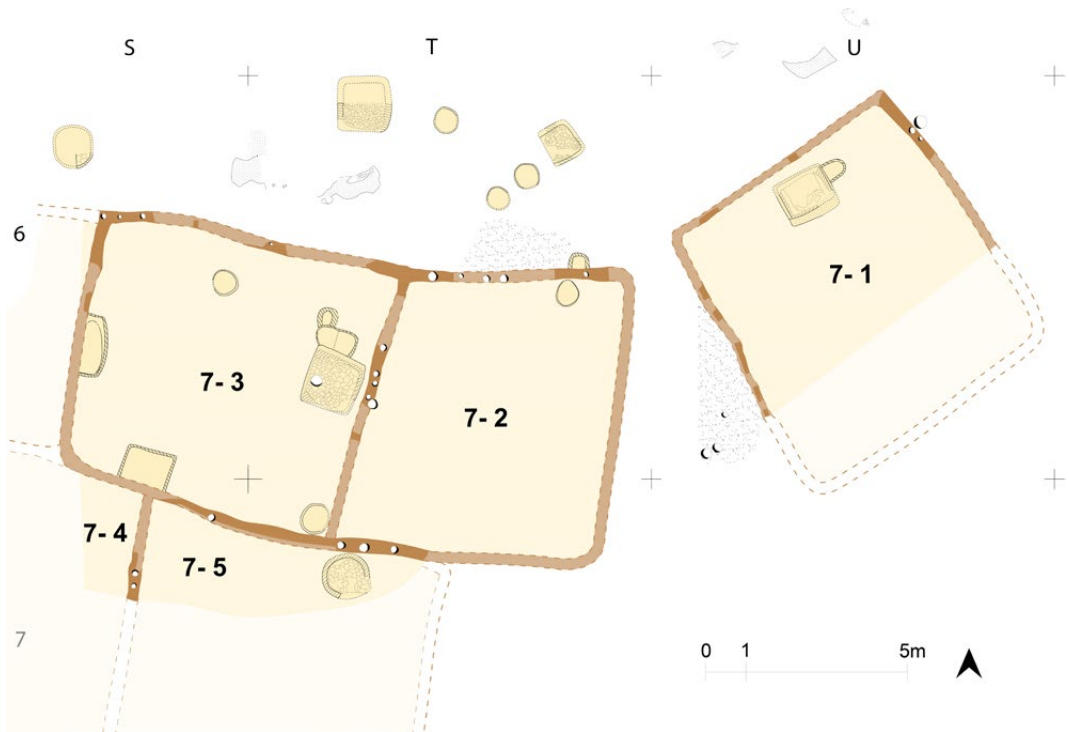


Figure 3. *Layout of earliest phase of layer 7. Image credit: Aşağı Pınar Project Archive.*

each other. Additionally, at the back of the adjacent structures, two possibly small rooms were excavated, most of which were destroyed by later ditches. The area was leveled before the buildings were constructed. Following the construction of the wattle and daub walls, the building floors were carefully made with earth fills and clay or lime plasters. Traces of red ochre surfaces remain on some of the floors. The westernmost building is the best-preserved of the existing structures (fig. 3). Within it, a hearth with a square platform near the eastern wall and platforms adjacent to the hearth were discovered. There are some platforms and storage units located next to the west and south walls of the building. It has been renovated in two main phases and all the elements, except the hearth, have been rearranged during the renovation of the floor.

The rooms' interiors are clean, probably related to the abandonment process. To the north of the buildings is an open area with hearths and storage pits. It appears that the open space was intensively used considering the presence of numerous artifacts and layers of clay and lime debris in contrast to the buildings.

After the abandonment of the buildings, ditch I was dug, cutting through the architectural elements of the earlier phase. The ditch consists of elongated pits oriented from northwest to southeast and running in a straight line in the same direction. Numerous pits, particularly to the south, were dug along with it.

Ditch II was likely excavated after the previous ditch was filled. This new ditch is more southwest oriented and has a slightly concave arc to the north. Unlike the preceding one, which consists of multiple ditch segments, this ditch was made as a single unit. At the northeast end, there is a short gap followed by a continuation that is only partially excavated. While it differs from the previous ditch in direction and geometry, it is quite similar to it in terms of the pits dug south of it and of the filling process.

During the time of layer 6, a row of buildings was constructed north of ditch II, running parallel to it with some extension above it. This indicates that ditch II was filled before layer 6. However, the ditch and building line are tangent to each other in some places, especially in the western central parts of the excavation area, and the burnt daub rubble accumulated on the upper side of the ditch in these sections indicates that the depression of ditch II was preserved in some places within the layer 6 settlement pattern.

The ditches and pits in layer 7 overlap in the northeast parts of the mound, and a large depression was revealed in this area (fig. 2). This section is reminiscent of a slope or flood cut in the prehistoric topography of the site, as it cuts a small hill slope that gradually descends towards the stream in the north. It is probable that the prehistoric settlers dug initially ditch I, intersecting the depression, and made subsequently ditch II, which runs through this slope to the northeast. The depression to the northeast was also a limiting element in layer 6 in that direction. After the time of layer 6, the northeast depression and sloping surfaces in the transitional layer 5–6 suggest that this slope was still intact, particularly in the line where ditch II passes, while in layer 5, the area was completely covered by the remains of activities such as lime processing or preparation of building materials,

and the mound gained a relatively flat topography. In layer 5, the area of the mound was extended to the south and southwest, and was at least three times larger than in the Early Neolithic. Additionally, the Early Neolithic deposits were wholly buried. For this reason, no Early Neolithic material was found in the surveys carried out before the excavations at Aşağı Pınar.

Ditch I (The north ditch)

Ditch I consists of a series of elongated narrow segments. They form a more or less straight line in a northwest-southeast direction (fig. 2). Its eastern continuation is not discernible, as it is cut by ditch II. The ditch gradually ends in the west, as evident from the decline of the present-day topography. A total of five sections of the ditch were excavated, and when combined with the unexcavated intervals in between, the overall length of the investigated part of the ditch measures ca. 65 m. The narrow and elongated ditch segments are connected in a NW–SE direction with gaps between them not exceeding 0.20 or 0.30 m. In several locations, the edges of the ditch are tangential to each other, almost as if they were attached back-to-back. The ditch cuts the virgin soil and has a U or V profile. The sides of the ditch do not follow a regular pattern. The average depth of the segments is about 2 m, with some shallower areas.

There are numerous pits in certain areas south of the ditch that often truncate it (fig. 4). The fills of these pits are very similar to those of the ditch. Some of them are single, while others are in clusters and intersect each other. Few of the pits were cut by the ditch, but most of them cut it, i.e., the ditch was dug earlier and the pits were dug later, but both were used/filled together for some time.

Whether ditch I served as a settlement boundary or enclosed it is not known. No evidence was found linking it to a settlement. It cuts the buildings in the lowest phase and was cut by ditch II to the southeast. This indicates that it represents an intermediate phase between ditch II and the buildings. The additional evidence that ditch I and its associated pits were dug before ditch II is related to the process of covering them. While the fill above the ditch II was mixed with layers 6, 5–6 (transitional layer), and 5 in most places, ditch I itself was covered by the fill of layer 7. Therefore, it appears that ditch II was filled at the end of layer 7 and ditch I was filled sometime during the timespan of layer 7.

Ditch II (The south ditch)

Ditch II extends in an irregular line in an east-west direction and forms a concave arc to the north in the northern part of the mound (fig. 2). It was investigated to a total length of 112 m and appears to consist of two parts. A large area of the western part was excavated (102 m; fig. 5). A length of only 7 m was excavated of the eastern part. The two parts of the ditch are separated by 3 m. There is a remarkable convergence between the two segments at the junction; the western part curves to the south in an S-shape, while the eastern part of the ditch forms an S that curves to the north (fig. 6) at an angle oppo-



Figure 4. *The western segments of ditch I. View form the east. Image credit: Aşağı Pınar Project Archive.*

site to the other. Even though the end points were not revealed in either the east or west direction, the ditch doesn't end by gradually rising its bottom level, but the bottoms at the ends where the two segments meet are even.

Ditch II is also dug into the virgin soil, its average width being ca. 2 m, even though some parts are wider or narrower. The walls are steep and the ditch has a V or U profile. The difference in the bottom's profile is random; there are sections close to each other that turn from V to U shape and then again to V. The depth measures approximately 2.0–2.5 m.

As with the previous ditch, this one also has associated pits (figs. 7 and 8). The pits are concentrated to the west, and in the east they appear to have cut the ditch. The filling of the latter suggests that they were made after the ditch was filled to a certain level. The



Figure 5. *Ditch II. View from the northeast. Image credit: Aşağı Pınar Project Archive.*



Figure 6. *The eastern end of ditch II. View from the east. Image credit: Aşağı Pınar Project Archive.*



Figure 7. *Ditch II with its associated pits. View from the south. Image credit: Aşağı Pınar Project Archive.*



Figure 8. *The western end of ditch II. View from the north. Image credit: Aşağı Pınar Project Archive.*

density of the pits in the western part of ditch II and the fact that they run parallel to the ditch in a chain is remarkable and reminiscent of a third ditch. However, the continuing of the fills into the ditch where they intersect implies their simultaneous use.

The lack of Early Neolithic deposits south of ditch II and that the pits were dug south of the ditch indicate the possible presence of a settlement to the north. There is a topographic reason, which prevents a circular layout for the ditch; a small stream flows to the west of it. Therefore, it can be inferred that ditch II functioned as a boundary running parallel to the stream. It is probable that a settlement might have existed between the stream and the ditch, on the one side bounded by a natural feature and on the other by an artificial border. However, no evidence of a settlement surrounded or enclosed by ditch II was found; there are no remains of dwellings in the excavated area. Moreover, the geophysical surveys conducted both before and during the excavation in the northern area did not yield adequate information regarding a possible settlement.

The filling process

The filling process includes successive phases (figs. 9 and 10), which can be observed both in the ditches and in the associated pits. After the ditches were dug, they must have remained open for an unknown period of time, probably not very long. When they were open, the soil falling from the walls accumulated irregularly at the bottom. The soil consisted mainly of fragments of the yellow clay deposit into which the ditches had been dug, and dark brown soil from the brown deposit above the virgin soil, which contained no archaeological material. The archaeological material in this lower layer of the fill is sparse; it contained a few large animal bone pieces and sherds.

The lime layers above the lowermost level comprise the main fill of the ditches and the related pits. Within and between these layers, particularly to the west, numerous surfaces were uncovered that consisted of small rocks, especially in ditch I. Brown soil fills, as well as some burned daub layers, are also present between the layers. Red ocher or charred surfaces (fig. 11) can be observed, albeit infrequently. At the northern edge of the ditch, the lime layers appear most intact throughout the entire ditch sequence, implying that the deposits were likely dumped from the north.

Above the lime layers in the ditches, there is a deposit which contains hearths; three of them were found in ditch I and one in ditch II. They were built when the depression of the ditch was still preserved (fig. 12). Occasionally, the surface of the ditch was plastered with clay and earth before the heart construction, while in other instances, the hearths were built directly on top of the main fill. Remains from walls were uncovered in two areas. It seems that at some point, when the ditches were not yet filled completely, certain sections were converted into closed structures and repurposed for activities related to the hearths.

Fills composed of thicker soil layers cover the hearths and the lime layers. Their thickness and general characteristics indicate a rapid filling process.



Figure 9. *Section of ditch I, with the unexcavated part behind it. View from the east. Image credit: Aşağı Pınar Project Archive.*

Ditch I was covered by a stone deposit to the west and by a thick layer of clayey soil in the east within layer 7. The stone fill spread across a gently sloping area to the west. The scraping and levelling of the area between both ditches in layer 6 resulted in a damage to the layer 7 deposits. After having been filled in completely, ditch II appears to have remained an open space for some time.

Find assemblages

The densest level of archaeological material in the ditches is the middle (main) fill, which is characterized by multiple lime layers. Both faunal and botanical material is abun-

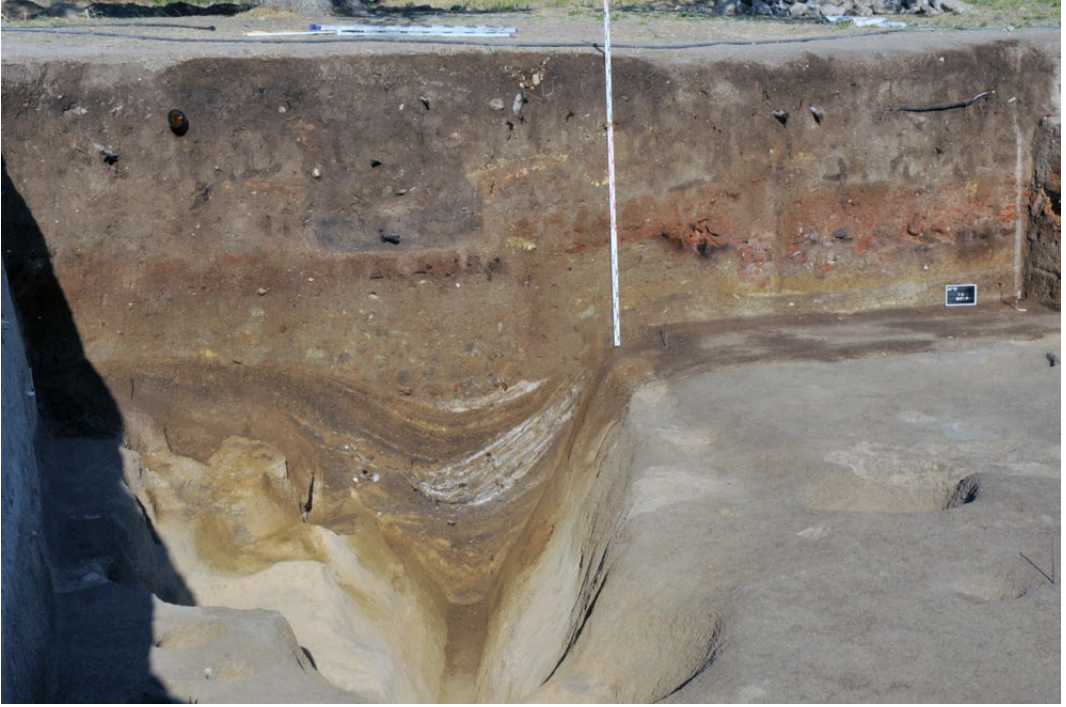


Figure 10. *Section of ditch I. View from the east. Image credit: Aşağı Pınar Project Archive.*



Figure 11. *Red ocher on the surface of the filling of ditch I. Image credit: Aşağı Pınar Project Archive.*



Figure 12. *A hearth and a storage bin in the almost filled ditch I. Above: view from above. Below: section. Image credit: Aşağı Pınar Project Archive.*

dant there, and the pottery and other finds mainly come from this layer. Some human bone fragments were also found scattered in the fill.

The pottery discovered in layer 7 comprises more than 130,000 sherds, with a substantial portion found in the ditch and related pit fills (Akyol et al. 2022). A quarter of this quantity was uncovered in layer 6, which was explored in the same location and contained well-defined domestic contexts. The sherd ratios in ditches I and II and the associated pits are nearly identical. Quality wares and open forms are more frequent. A distinct pattern is noted in the earliest phase of layer 7, where the remains of a settlement were uncovered. The proportion of materials is significantly lower, while there are numerous coarse wares. In contrast, the pottery discovered in the ditches is of superior quality and has more intricate designs than the pieces unearthed in the lowest phase's living areas.

Two-thirds of the pottery is of high-quality ware with a smaller proportion of coarse ware. The main forms include plates, bowls, cups, tulip vessels, jars, and small jars, with more than half of the vessel forms being open forms. Concerning the decoration, the red-on-white paint is reminiscent of the contemporaneous parallels in Thrace, but the remarkable intensity of the spiral motifs sets it apart. The presence of decorations in layer 7 pottery reflecting a tradition from Anatolia, particularly Central Anatolia in the first quarter of the sixth millennium BCE, is intriguing. The decoration of line and dot incisions on dark, black, or dark gray vessels is a unique feature not found in contemporary Balkan settlements.

Stone axes and grindstones are rare. Chipped stone material is also scarce. However, bone tools are plentiful and diverse. Pointed tools are common. Although there aren't many personal ornaments, they vary in terms of raw material and typology. Cult vessels and figurines are abundant. Clay rings are one of the most frequently found types of artifacts. Special findings, including quadrangular vessels adorned with human faces, non-utilitarian clay artifacts, and ornaments, were also uncovered within the ditches.

Conclusion

In the late seventh and early sixth millennia BCE, sedentary societies based on food production established numerous settlements in a vast area stretching from the Halaf region to the western Balkans. In this period, common subsistence strategies, everyday objects, symbolic elements, and living spaces demonstrate extensive communication despite variations in cultural components across a broad geographic region. The initial phase of layer 7 at Aşağı Pınar shows the main characteristics of the period with the well-arranged house contexts and open spaces. The quadrangular structures and the assemblage of finds reflect the simple village life. What distinguishes layer 7 are the ditches that post-date the structures. The ditches at Aşağı Pınar are not linked to any settlement and were filled shortly after having been dug, indicating deliberate action. Filling a ditch negates its presumed function as a boundary and defense. Furthermore, a consistent pattern was observed in the horizontal and vertical characteristics of the fill and the archaeological material found in it.

The existence of multiple ditches with associated pits, their prolonged use for almost 200 years, the absence of any clear connection to a settlement area, and the intentional filling have raised issues concerning the original purpose and function of the ditches. They are located in the northwest part of the mound. It is possible that a settlement exists in the unexplored eastern section of the mound. However, considering the positioning and orientation of the ditches, even assuming the presence of a contemporary settlement, the ditches do not appear to surround it. This is what sets the Aşağı Pınar ditches apart from neighboring settlements that share similar characteristics.

The ditches were dug with extensive labor and refilled after a short period of time. The accumulation of fill indicates a consistent pattern of filling both horizontally and vertically. As filling progressed, irregular pits were dug along the southern edge of both ditches and were filled in along with the ditches. In certain areas, these pits were made as if to form a third series of ditches.

The main fill of the ditch, consisting of multiple thin layers, is located in the middle. These fills were thrown into the ditch, mostly from the northern edge of the ditch, to form smooth and thin layers. The layers of lime, soil, daub, and charcoal vary in thickness. Despite the relatively large area excavated around the ditch, no lime-containing remains were found that could have fallen in the ditch. This suggests that these materials were intentionally transported to this area and disposed of in the ditch.

Most of the artifacts have been found in the main fill. Moreover, plant and animal remains are rarest in the bottom layer accumulated in the time when the ditches were briefly open, and the artifact density is highest in the main fill. Additionally, human bones were also found there, but their random distribution doesn't show an identifiable pattern.

In particular, the material in the ditch has specific characteristics in both density and type, as opposed to the random material that should be found in a settlement midden. The most unusual type of material found in the ditch is pottery. Almost the same areas of layers 7 and 6 at Aşağı Pınar were excavated. Layer 6 comprised primarily of dwellings, whereas ditches were excavated in layer 7. The quantity of sherds discovered in layer 7 exceeds that of layer 6 by more than four times. The type and shape of the vessels is also noteworthy. Although the number of everyday types of vessels, such as storage and cooking vessels, is minimal, the number of service vessels, plates, and open-shaped vessels is predominant. This indicates that the material found in the ditch was not waste from the settlement. The large size of the sherds suggests that they were broken at their original location.

Despite the abundance of pottery, bone finds, and clay rings, there are very few stone tools, especially axes and grindstones, compared to the other settlement layers.

The radiocarbon dates on material from the ditches are insufficient for precise dating of the ditch stratigraphy, potentially due to the re-digging of the fill and occasional overturning in the Neolithic. Nevertheless, the earliest and latest dates fall within a time-frame of almost 200 years, suggesting a relatively short use. Additionally, the successive digging of ditch I and II suggests a shorter use for each ditch.

In conclusion, layer 7 at Aşağı Pınar yielded extensive architectural and material evidence of a typical Balkan site. It is the earliest dated site in the interior of Eastern Thrace, and shares many similarities with contemporaneous sites in Bulgaria. However, the dark pottery featuring dotted decoration – absent in the Balkans but prominent in Anatolia's interior – suggests different communication networks. Undoubtedly, the presence, construction, and purpose of ditches distinguish the earliest occupation of Aşağı Pınar from others, as evidenced by the material in the ditches. It is clear that the ditches of Aşağı Pınar were excavated for the specific purpose of filling, with special efforts being made for achieving this, and that fill and material forming a specific context were deposited in them. It is evident that this process was repeatedly carried out over time, implying the ditches were linked to ritual practices, although their purpose remains unclear. As excavation continued at Aşağı Pınar, subsequent layers revealed feasting pits, followed by offering pits. The latter were a customary activity in the Balkans between the late sixth millennium and fifth millennium BCE; it thus becomes possible to argue that the ditches were precursors to this tradition.

Acknowledgments

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