



The transition from the Pre-Pottery to the early Pottery Neolithic period at the site of Uğurlu on the Island of Gökçeada, NE Aegean

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ABSTRACT

Uğurlu, on the island of Gökçeada (Türkiye), is among the most important sites in the Aegean when considering the transition from the Pre-Pottery Neolithic to the early Pottery Neolithic. To date, the emergence of pottery in the Aegean has been described based on only a few sites, and except for Uğurlu, transition layers have not been adequately studied. The relatively small Pre-Pottery Neolithic settlement at Uğurlu is about one metre thick and has been divided into seven layers. There is a continuous transition to the pottery layer, around 6600 cal BC. Although pottery production, which emerged without trial and error, indicates pre-existing knowledge, the first pottery was entirely of local production. This paper examines the similarities and differences in material culture between the Pre-Pottery and later Pottery Neolithic layers of Uğurlu.

KEYWORDS

Aegean islands, Initial Neolithic, Early Pottery Neolithic, Aegean Neolithic

Introduction

In the Aegean, the transitional period from the Pre-Pottery Neolithic to the early Pottery Neolithic has been identified at a few sites, but the processes involved are unclear (fig. 1). The excavation at Uğurlu on the NE Aegean island of Gökçeada provides an uninterrupted occupation sequence covering this transitional period. This proves the significance of the site. The site offers an opportunity to understand the similarities and differences in material culture between Pre-Pottery and later Pottery Neolithic layers, as well as contributing to discussions on the emergence of the first pottery in the Aegean. The prehistoric site of Uğurlu is a low mound located about 1 km north of the village of Uğurlu, in the western part of the island. The site covers an area of approximately 250 × 200 m on a gentle slope at the eastern foot of Mount Doğanlı (İsa). The main Uğurlu–Dereköy road cuts through the site. The Pilon stream flows through the east part of the site, and there is a spring nearby.

During the excavations that have started in 2010 and were carried out by a team led by B. Erdoğan, six main cultural phases, designated as I–VI, were identified (Erdoğan et al. 2021). Radiocarbon dates from Uğurlu demonstrate the long history of occupation at the site, from ca. 6760 to 4350 cal BC. The main aim of the project is to understand the role of the Aegean Islands in the Westward spread of a Neolithic way of life. One of the objectives of the project is to figure out the emergence of the first pottery in the Aegean. The earliest pottery found at the site appears at around 6600 cal



Fig. 1. Map showing the transition from the Pre-pottery to the Early Pottery Neolithic sites mentioned in the text

Обр. 1. Карта на споменатите в текста обекти от преходния период между предкерамичен и ранен неолит

BC during the transitional Phase V–VI. The paper examines the importance of Uğurlu for our understanding of the transition from the Pre-Pottery to Pottery Neolithic in the Aegean region.

The latest Pre-Pottery and the first Pottery Neolithic layers at Uğurlu

The earliest occupation (Phase VI) occurs in the eastern part of the settlement, close to the Pilon stream, and is characterized by the absence of pottery with domestic animals and cereal grains, which we prefer the term Pre-Pottery Neolithic (fig. 2). Phase VI was excavated over an area of ca. 35 m² and is divided into seven layers (fig. 3). The Pre-Pottery deposit is about a metre thick.

A circular structure 1.4 m in diameter was found in the latest Pre-Pottery layer. It has a central hearth with a diameter of 30 cm surrounded by a thick layer of lime plaster 10–15 cm in width. The floor of the structure was plastered with sandy mud containing calcite clasts and ash crystals, and stones were placed on the periphery of the structure possibly to support stakes (fig. 4). A radiocarbon date (charred seeds) from the upper fill of the circular structure (7820 ± 40 BP / Beta-427241) calibrates to 6774–6564 cal BC (91.1%); median age 6645 cal BC (Erdoğan 2017; Erdoğan et al. 2021; Yücel 2023).

The first layer with pottery, called the transition layer is immediately above the Pre-Pottery Neolithic layer. In the thin layer where the first pottery was observed an oval building approximately 6 x 3 m and aligned NE–SW was found. Although no wall is visible, it is a shallow oval depression

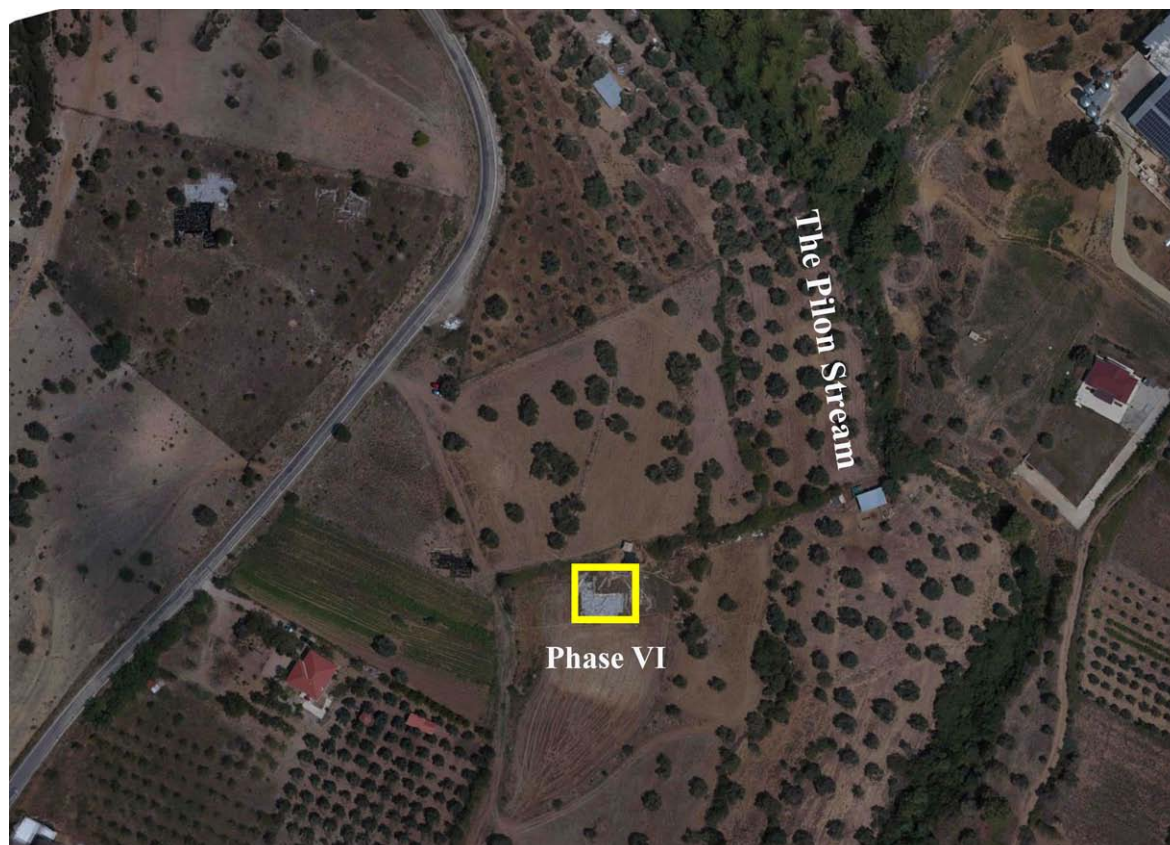


Fig. 2. Google Earth imagery of Uğurlu
Обр. 2. Google Earth изображение на Угурлу

with sharp edges. A thin, partially traceable, white-coloured floor is visible. An oval sunken mud-plastered basin (ca. 60 × 50 cm), and a hearth, ca. 35 cm in diameter, were found in the northeastern part of the building (fig. 5). A terrazzo platform made with burnt lime and pebbles occurs at the far end. It had been coloured red and was polished. This partly damaged platform, approximately 50 cm thick, extends beyond the limit of excavation. In the southwest part of the building, there is a concentration of bone tools and ground stone artefacts. A radiocarbon date (on charcoal) from the oval sunken mud-plastered basin (7740 ± 30 BP /Beta-448092) calibrates to 6641–6481 cal BC (95.4%); median age 6560 cal BC (Erdoğu 2017; Erdoğu et al. 2021).

Lithic Assemblage

Except for a few examples of obsidian and rock crystal, the chipped stone industry of Pre-Pottery Neolithic Uğurlu is mainly made of local flint. There are signs of heavy use of a single source of flint from the eastern part of the island. Pressure blades are numerous, including large ones (Guilbeau et al. 2019). The majority were made by the standing pressure flaking mode on the basis of Pelegrin's experimental results (Pelegrin 2012). The use of pressure techniques indicates that the flintknappers were highly skilled. Tools are rare. Most artefacts comprise used flakes and blades that are unretouched or with lateral retouch. The lateral retouch of some blades is so steep and regular that they can be considered backed blades. Sickle inserts are frequent. Other tools, such as scrapers, denticulates, drills and burins, are less frequent. Macroscopic examination and EDXRF analysis show that obsidian artefacts came from Melos Island. A few Central Anatolian obsidians were also found¹ (fig.6).

¹ Personal communication; D. Guilbeau.

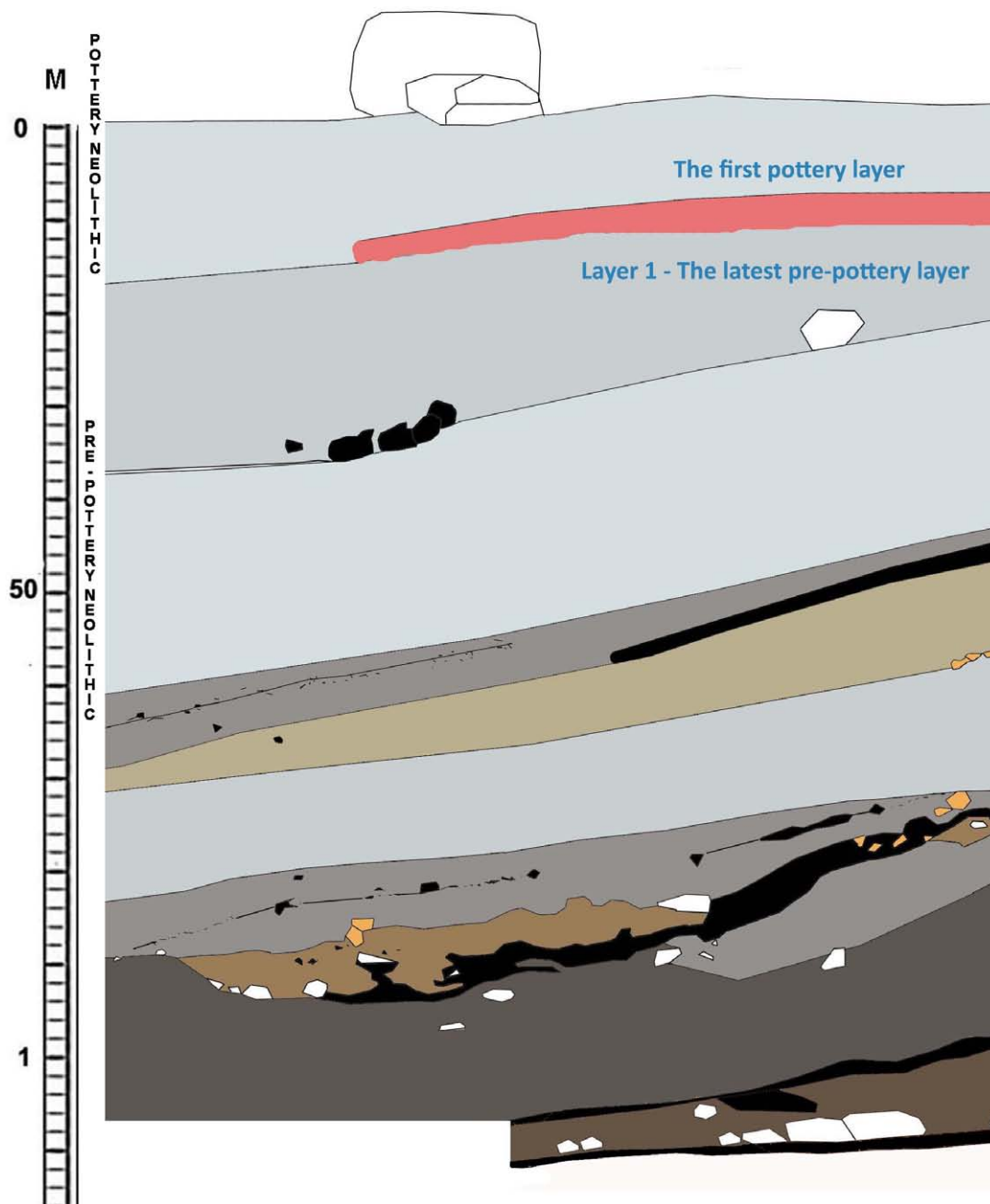


Fig. 3. Stratigraphic profile showing the sequence from the latest pre-pottery and the first pottery layers at Uğurlu (Uğurlu Excavation Archive)

Обр. 3. Стратиграфски профил на секвенцията с последните предкерамични и първите керамични пластове в Угурлу (архив на разкопките)

There is no break in raw material procurement between the Pre-Pottery and Pottery Neolithic layers, but more diversity is seen in Pottery Neolithic layers. There is strong continuity in the knapping activities performed at the site and in the local production of pressure blades. The toolkit from the Pre-Pottery Neolithic layers is similar. Again, most of the tools are blanks that were used directly (Guilbeau 2018).

Other finds

The earliest pottery as well as two polished stone axes appeared at the site around 6600 cal BC. The small proportion of the earliest pottery is characterized by a large amount of mineral inclusions.

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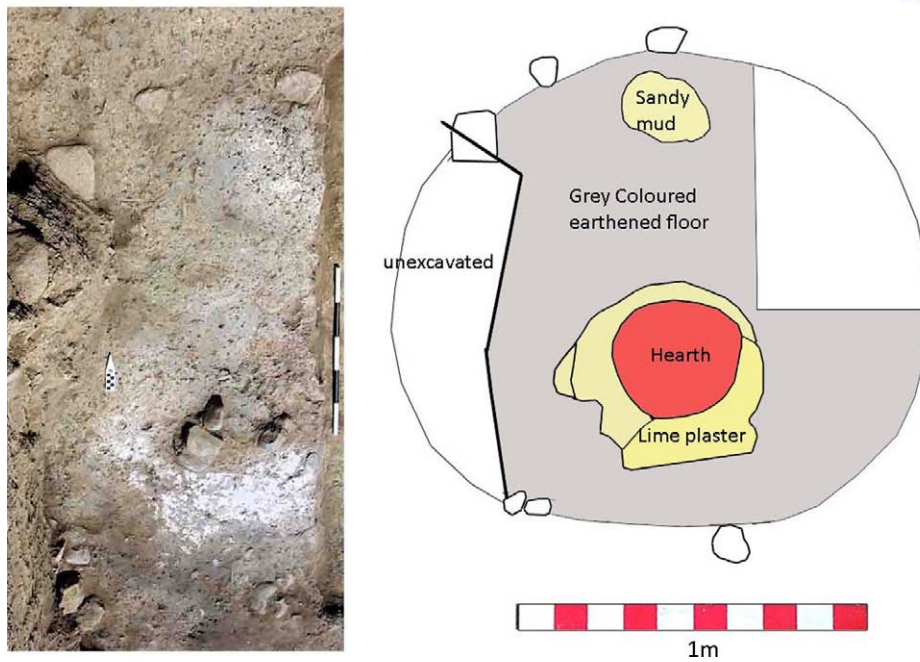


Fig. 4. A circular structure in the latest pre-pottery layer at Uğurlu, Phase VI – Layer 1 (Uğurlu Excavation Archive)

Обр. 4. Кръгла структура от най-късния предкерамичен пласт в Угурлу, фаза VI – пласт 1 (архив на разкопките)

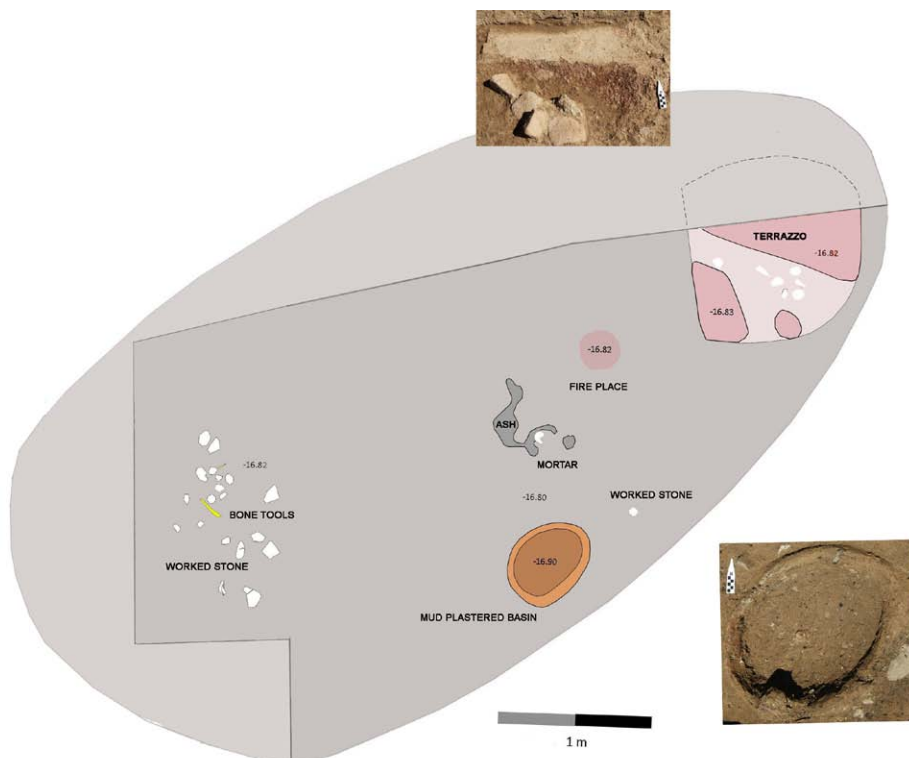


Fig. 5. An oval building with Terrazzo platform in the first pottery layer at Uğurlu, Phase V–VI (Uğurlu Excavation Archive)

Обр. 5. Овална сграда с терацо платформа от първия керамичен слой в Угурлу, фаза V–VI (архив на разкопките)



Fig. 6. Obsidian Tools from The First Pottery Layer (Uğurlu Excavation Archive)
 Обр. 6. Обсидианови артефакти от първия керамичен слой (архив на разкопките)

Red-slipped burnished ware is dominant. The surfaces of the sherds appear to have a dark red slip and light burnish. The other wares comprise reddish/buff, greyish orange, dark brown, and dull black wares. Among them, greyish-orange ware is characteristic, although this disappears in the later phases. The surface colour is mostly light grey, and a thin, pink-coloured slip was applied to the exterior surfaces, which generally have a mottled appearance. Deep bowls with an “S” profile, hole-mouth vessels and straight-sided shallow dishes are common shapes (fig. 7) (Erdoğu, Atakuman 2021).

Polished stone axes/chisels appear with pottery. Two stone axes/chisels were found on the floor of the building. One is 8.5 x 1.5 cm, and the other is 5.5 x 2 cm in size. They are made from a kind of soapstone also known as steatite (fig. 8). Three worked bones, a mortar and a shell bead were also found in this layer.

In the latest Pre-Pottery layer, four bone artefacts (two awls, a spatula and a chisel), three stone and shell beads, a worked shell, and a worked stone were found (fig. 9). Disc-shaped stone beads are the most significant artefacts found in the Pre-Pottery Neolithic layers, mostly made from andesite, nephrite and agate. There is also evidence for bead manufacture in the form of raw material blanks and preforms. Although their number decreases, continuity is observed in the production of disc-shaped stone beads in the early Pottery Neolithic layer (Yücel 2023).

Discussion and Conclusions

As mentioned above, in the Aegean, the transitional period from the Pre-Pottery Neolithic to the early Pottery Neolithic has been identified at a few sites. There is a debate about the terminology of Pre-Pottery Neolithic in Aegean prehistory; some researchers prefer the term Aceramic or Pre-Pottery Neolithic, while others prefer the term Initial Neolithic (for discussion see Perlès 2001; Reingruber 2015, 2018; Çevik, Erdoğu 2020, 78–80). At Knossos on Crete there is a gap between



Fig. 7. The earliest Pottery sherds (6600 BC) (Uğurlu Excavation Archive)
Обр. 7. Най-ранните керамични фрагменти (6600 г.пр.Хр.) (архив на разкопките)

the lowest level of the Pre-Pottery Neolithic and the layer where the first pottery appeared around 6500 cal BC (Douka et al. 2017, 315). The same is probably true for İzmir Ulucak. Pottery emerges there around 6500 cal BC, at the end of the Pre-Pottery Neolithic layer (Çevik, Vuruşkan 2020). Although pottery appears at Girmeler, SW Anatolia ca. 6700 cal BC, the transitional layers have been destroyed. Pottery appears around 6600 cal BC at Çukuriçi on the western Anatolian coast and Revenia-Korinos and Mavropigi-Filotsairi in Macedonia (Urem-Kotsou et al. 2014; Karamitrou-Mentessidi et al. 2016; Burke, Horejs 2021). Although the situation is unclear before the “Monochrome pottery horizon”, ca. 6500 cal BC, in Thessaly, the thin layers interpreted as “Pre-Pottery” contain sherds that are considered intrusive from above, as at Argissa-Magoula (Reingruber 2015). Although a few coarse sherds and bones of domesticates are first seen in a thin Pre-Pottery Neolithic layer, the so-called “grey clay-stratum”, at Franchthi Cave the Pottery Neolithic, ca. 6500 BC, is found outside the cave for the first time at a place called “Paralia” (Perlès et al. 2013).

The site of Uğurlu has provided a rich array of information about the transitional period from the Pre-Pottery Neolithic to the early Pottery Neolithic in the Aegean. Although the earliest Pottery Neolithic layer is characterized by the first appearance of pottery, polished stone axes and the terrazzo technique, a clear stratigraphic break with the preceding Pre-Pottery Neolithic cannot be discerned. It seems evident that the site was still inhabited by the same population, as they produced, more or less, the same material culture. Uğurlu witnesses a change in architecture after 6500 BC with the emergence of mud brick architecture on stone foundations. The first appearance of the terrazzo technique in Uğurlu is also significant. Terrazzo is a lime-based plaster that also includes particles of stone. The earliest use of lime-plastered floors that involved pyrotechnology dates to around 12000 cal BC in the Levant (Kingery et al. 1988). It was used in communal buildings in Pre-Pottery Neolithic settlements in the Levant and northern Mesopotamia. At Göbekli Tepe, structures with terrazzo flooring appear at an early date, ca. the tenth millennium cal BC (Schmidt 2012).



Fig. 8. Polished stone axes/chisels from The First Pottery Layer (6600 BC) (Uğurlu Excavation Archive)
Обр. 8. Полирани каменни брадви/длета от първия керамичен слой (6600 г.пр.Хр.) (архив на разкопките)



Fig. 9. Small finds of Uğurlu Phase VI – Layer 1 (Uğurlu Excavation Archive)
Обр. 9. Малки находки от Угурлу, фаза VI – пласт 1 (архив на разкопките)

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There is also continuity in knapping activities and the production of pressure blades between the Pre-Pottery and early Pottery Neolithic layers. While the pressure blades have been seen in the Ulucak and Çukuriçi settlements in western Anatolia since the beginning of the 7th millennium BC, it does not appear at Knossos in Crete. The presence of obsidian in Uğurlu as well as early Çukuriçi and Ulucak indicate that an obsidian network was already established at least at the beginning of the occupation of these settlements. On the other hand, Melian obsidian was already being exploited by the foragers of the Aegean prior to the establishment of agricultural villages (Guilbeau et al. 2019).

Many questions about the late adoption of pottery technology in the Aegean remain open to discussion. Pottery began to be adopted by the Uttery community as is found at other settlements in western Anatolia such as at Ulucak, and Çukuriçi (Horejs et al. 2015; Çevik, Vuruşkan 2020), at least 400 years later than other regions of Anatolia. This development may have been related to a period when communities with different social, symbolic, and economic practices began to exchange goods, people, and food, thereby creating and negotiating social divisions (Erdoğu et al. 2021). The first pottery at Uğurlu seems to have emerged without a period of trial and error, which indicates a pre-existing knowledge of pottery production. Although the technology seems imported from outside, the pottery at Uğurlu was made of local clays.

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Преходът от предкерамичен към ранен неолит в Угурлу, остров Гьокчеада, Североизточно Егейско море

Неджат Юджел

(резюме)

Праисторическият обект Угурлу е ниска могила, разположена на около километър северно от село Угурлу, в западната част на остров Гьокчеада в североизточната част на Егейско море. Това е едно от малкото селища в Беломорието, което бележи прехода от докерамичния към ранния неолит. Първото предкерамично неолитно селище е малко, обхващащо площ от 400–500 m². Дебелината на секвенцията е около 1 m и съдържа 7 пласта.

Кръгла структура с диаметър около 1,5 m и с огнище е открита в последния докерамичен

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пласт. Датата ^{14}C на тази кръгла структура е 6774–6564 cal BC. Характеризира се с изключително плътна концентрация на кости от домашни животни и дивеч, и огромно количество кремъчни пластини, отделени чрез натиск и отпадъчни продукти. Първият пласт с керамика следва непосредствено над предкерамичния неолит и съдържа останки от овална сграда с размери приблизително 6×3 m с овална, вкопана и обмазана с глина структура, както и малко кръгло огнище. В единия край е разположена терацо платформа, изработена от горена вар и дребен чакъл. Платформата е била оцветена в червено и полирана. Най-ранното използване на подове с варова мазилка, което включва пиротехнология, датира от около 12 000 cal BC в Леванта. Това са подове на обществени сгради в селища от докерамичния неолит в Леванта и Северна Месопотамия.

В Гъобекли тепе, в югоизточна Анатолия, структури с терацо под се появяват през X хил. пр.Хр. Калибрираната ^{14}C датата на сградата с терацо платформа в Угурлу е 6641–6481 cal BC.

Малка част от най-ранната керамика от Угурлу се характеризира с минерални примеси. Доминират полираните червено-ангобирани и сиво-оранжевите съдове. Често срещани форми са дълбоките купи с S-овиден профил и плитки съдове с прави стени. Много въпроси относно късното възприемане на керамичната технология в района на Егейско море остават отворени. Най-ранната керамика в Угурлу изглежда се е появила без период на опити и грешки, което показва съществуващи познания за керамично производство. Въпреки че, най-вероятно, технологията е внесена отвън, съдовете в Угурлу са направени от местни глини. Заедно с керамика за първи път на обекта се появяват и каменни полирани брадви/длета. Въпреки че ранният неолитен пласт се характеризира с първата поява на керамика, полирани каменни брадви и техниката терацо, ясно прекъсване с предходния предкерамичен неолит не се идентифицира. Най-вероятно обектът е бил обитаван продължително от население, което възпроизвежда, в по-голяма или по-малка степен, същата материална култура.