

# Mycenaean Pefkakia Excavation Project: report on archaeological research conducted in 2024



**Abstract:** This report presents the results of the second excavation season at the Mycenaean site of Pefkakia, conducted in 2024. We summarize our findings from two sectors of the site, B and C, initially explored in 2023. In Sector C, Trench C01, architectural remains dating to LH IIIA-B were further exposed, including an important horizon of metallurgical activity dating to around 1200 BC and a well-made, partially plastered floor dating to LH IIIA2 (Early). Layers dating to the early part of the Late Bronze Age were exposed above the bedrock. In Trench C02, an important episode of Hellenistic-period habitation was revealed. Below, we uncovered a well-built stone drain with associated floor remains dating to LH IIIA2-B. In Sector B, a further tile-built tomb, probably of Roman date, was excavated, followed by an intriguing sequence of Hellenistic activity that includes a tile-and sherd-plastered surface and a deposit of high-quality Early Hellenistic pottery.

**Keywords:** Late Bronze Age Thessaly, Pefkakia, Mycenaean culture, Demetrias, metallurgy

## INTRODUCTION

The 2024 excavation season at the Mycenaean site of Pefkakia took place from 24 June to 26 July, spanning a period of five weeks. The project, carried out under the auspices of the Polish Archaeological Institute at Ath-

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ens, is a collaboration between the Ephorate of Antiquities of Magnesia and the Institute of Archaeology and Ethnology of the Polish Academy of Sciences, co-directed by Anthi Batziou and Bartłomiej Lis. Work was conducted in two sectors, B and C, which had been explored during the initial excavation season in 2023 (Lis et al. 2024). Excavation continued in both trenches opened in 2023, labeled Bo1 and Co1, while a new trench, Co2, was opened 2 m north of Trench Co1 [Fig. 1].

The aims of this year's campaign were twofold. First, we sought to gain a better understanding of the Late Bronze Age structures revealed by the geophysical survey and initially exposed in exploratory Trench Co1. Second, we aimed to excavate a tile burial identified in the northwest corner of Trench Bo1 and to

continue excavation in this area to verify whether Hellenistic layers overlay earlier Late Bronze Age strata.

As the results reported below demonstrate, we managed to further expose Late Bronze Age architectural remains in Sector C, with several chronological horizons, while also revealing an important episode of Hellenistic-period habitation in Trench Co2. In Trench Bo1, an intriguing sequence of Hellenistic activity was uncovered, but earlier strata were not reached.

The report also includes accounts by specialists working on faunal, botanical, and malacological remains from the 2024 excavations. Their studies focus on the Late Bronze Age strata from Trenches Co1 and Co2 and Hellenistic levels in Trench Bo1.



Fig. 1. General plan of the site with trenches excavated in 2024 (Plan B. Lis)

## TRENCH C01

In 2023, we opened C01 as an exploratory trench measuring 2 m × 5 m, and in 2024 we extended it westward to form a full 5 m × 5 m square. Except for the final days of the 2024 season, excavation focused on the 3 m × 5 m extension, following the full documentation of the W baulk of the 2023 trench. After the removal of the topsoil—which contained chronologically mixed material ranging from the Bronze Age to modern times, with a few small finds (e.g. part of a Hellenistic copper-alloy fibula SF24/002)—the top part of

a wall running approximately east–west was revealed. This wall is a continuation of Wall 2, exposed over a very small stretch in 2023 [Fig. 2]. At a slightly lower level than the top of Wall 2, to the north, near the border with the area excavated in 2023, a roughly rectangular structure made of flat slabs of green schist came to light, covered and surrounded by ashy soil. After the removal of the ashy deposits, we uncovered a hard surface made of small pebbles just east of the slabs, cut by the west baulk of the area excavated in



Fig. 2. Plan of Trench C01 (Plan N. Tsironis)

2023. In the area immediately adjacent to the platform and this pebbled surface, a semicircular fireplace had been revealed in 2023. Combining the results of both seasons, it appears that we are dealing with a roughly semicircular hearth with a stone platform along part of its eastern straight edge that could have been used for cooking or other activities involving fire. Its substructure consisted of a hard-packed layer of pebbles. The fireplace, due to its location close to the current ground level, is not easy to date, but based on material from sealed levels beneath and from the fireplace itself, it should be dated still within the late LBA. Material on top of the slabs yielded several fragments of an elegant carinated kylix (P24/002) dating to the LH IIIB period.

At roughly the same level, in the southwest part of the trench, we identified an oval feature extending partly into the west baulk. As revealed by its

excavation, it was a pit filled with very hard-packed small pebbles containing small fragments of pottery, shell, and animal bone. Its function is unclear, but it is clearly post-LBA in date, as it also contained Hellenistic pottery fragments. The pit must have destroyed the westernmost part of Wall 2 and part of Wall 10 (see below; see [Fig. 2]).

As excavation continued, additional walls were revealed [see Fig. 2]. The most substantial of these is the continuation of Wall 4, first defined in 2023. It runs roughly east–west through the entire trench, with a length exceeding 5 m, as also suggested by the geophysical survey conducted in 2022. Two walls perpendicular to it were also revealed: Wall 9, running northward and disappearing into the north baulk of Co1, and Wall 10, running southward along the west edge of the trench. Initially, the corner between Walls 4 and 10 was obscured by a tumble of stones.

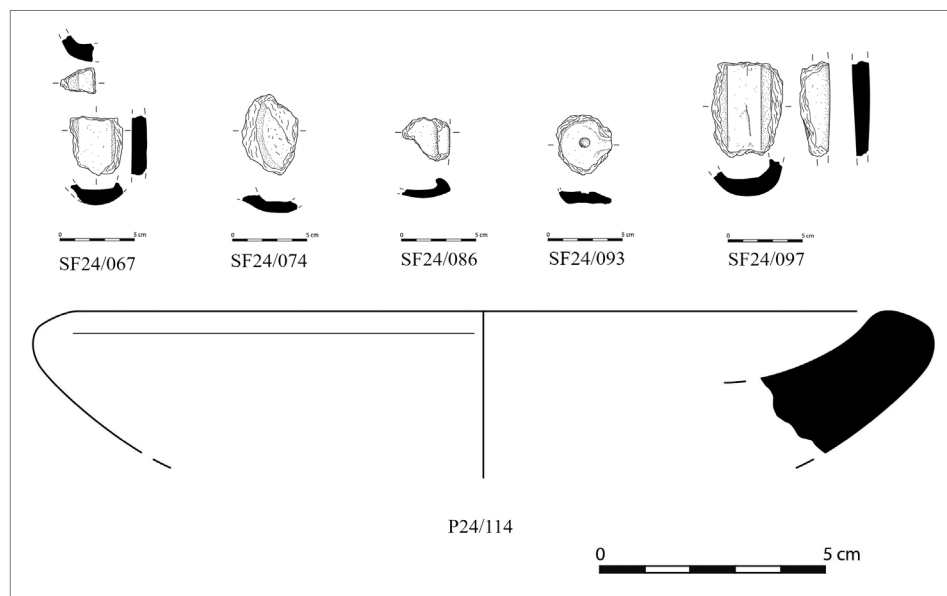


Fig. 3. Fragments of crucibles and molds (Drawing Y. Nakas)

Walls 2, 3, 4, and 10 appear to form a rectangular space designated as Area 3, measuring 3.3 m × 1.6 m. No clear floor level was identified either during the excavation in 2023 or this season. However, a very thin gray layer identified at about 2.83 m a.s.l. in the south baulk left within this area, in front of Wall 2, could indicate a possible surface. Moreover, the excavated material shows a clear change between the units above and below this level. The most important aspect of the movable finds recovered from above this putative surface is the evidence for metal-lurgy involving copper alloys. In addition to small metal prills and parts of what we provisionally term metal slag (based on macroscopic observations), numerous fragments of crucibles and clay molds were found [Fig. 3]. The crucibles, preserved only fragmentarily, appear to have the form of shallow bowls with very thick walls tapering toward simple rims. They are made of clay tempered with vegetal material. In several cases, prills of metal remain attached to the walls, which often

bear signs of exposure to fire. Preliminary analysis of the metal remains by portable XRF, performed by Anno Hein, indicated the presence of copper in the slag fragments, with slight amounts of arsenic but no tin, whereas the metal remains within the crucibles contain an alloy of copper and tin, although one metal prill on a crucible showed no tin. The clay molds partially preserve the shape of the objects originally cast in them. These appear to have been items with a number of flat sides, or facets, joined at wide angles. The final product, as suggested by better-preserved fragments such as SF24/097 [see Fig. 3], would have had a polygonal section. Therefore, we are most likely dealing with the casting of legs for metal tripods, similar to one found at Mycenae (Onasoglou 1995: 25–49, Fig. 56).<sup>1</sup> Objects of different morphology were also cast, but we were not able to identify their nature (molds SF24/074 or SF24/093) [see Fig. 3]. In terms of manufacture, some of the molds were clearly made of two different clays: the inner part consists of a very

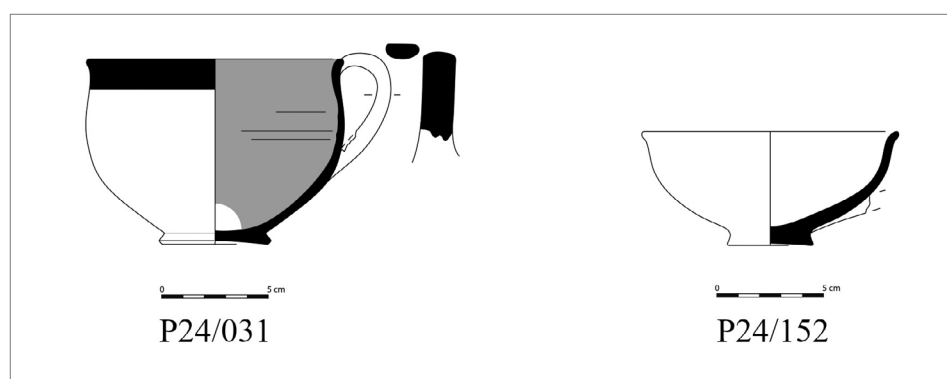


Fig. 4. Pottery from the ash pit (Drawing Y. Nakas)

1 The width of one facet of the Pefkakia molds is about 2 cm, which is slightly greater than that of the facets on the legs of the metal tripod from Mycenae.



fine clay, coated on the exterior with clay tempered with vegetal material similar to that used in the crucibles.

Within the space —Area 3— we identified a circular pit containing distinct ashy soil. The pit first became visible at the bottom of excavation unit (EU) 62 (approximately 2.82 m a.s.l., similar to the thin gray line in the baulk mentioned above) and continued for about 30 cm, cutting deep into the underlying layers. Apart from ash, it contained a fragment of a crucible and a mold (SF24/097) [see Fig. 3], a possible stone tool, and some mendable pottery, including an almost completely preserved semiglobular cup (P24/031) and a shallow unpainted cup (P24/152) [Fig. 4]. These and other ceramic finds place the pit and the associated use level above the putative floor in the LH IIIB2/C Early phase, i.e. approximately 1200 BC.

A distinct feature associated with the pit is a large slab oriented diagonally, which was visible well above the pit but continued into it. It may have been part

of the original installation, perhaps facilitating the deposition of ash into the pit.

Other areas exposed in the trench, defined as Area 5 north of Wall 4 and Area 1 south of Wall 2 [see Fig. 2], did not produce any architectural features or significant evidence regarding function. Ceramic material was similar with LH IIIB2/C Early pottery as the latest. A single mold fragment was found in Area 5 at the depth of 3.01 m a.s.l. (EU 45); it was made either of soft stone or fired clay but is very different from fragments in Area 3. Excavation did not continue in Area 1, while deeper levels were exposed in both Areas 3 and 4.

In Area 3, excavations revealed a fairly homogenous fill of dark brown soil with high clay content and frequent mudbrick fragments, both burnt and unburnt, with a thickness of about 40–50 cm. The same type of deposit was excavated in 2023 on the other side of Wall 4, in Area 4. Interestingly, despite the relatively large volume of excavated soil, this thick deposit yielded no small finds during the 2023 and 2024 sea-

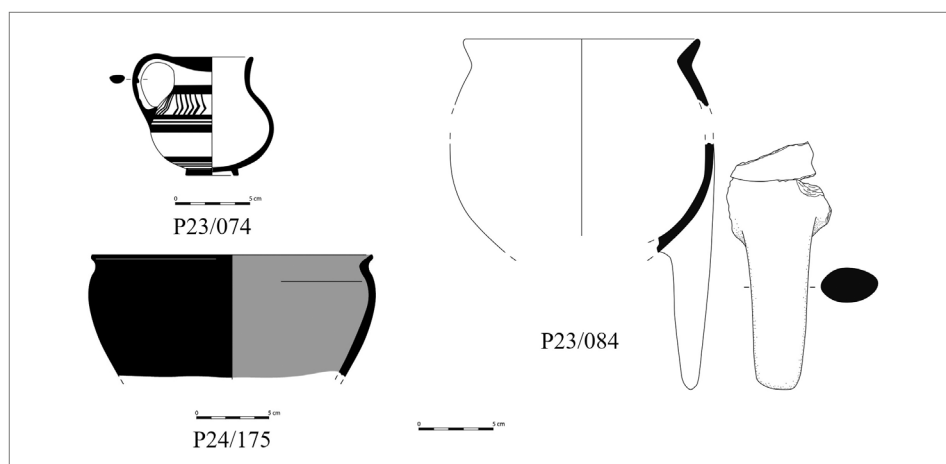


Fig. 5. Mendable LH IIIA2 pottery from Area 3 (Drawing Y. Nakas)

sons, except for a few possible stone tools. This contrasts sharply with the upper level, where, beyond metallurgical remains, there were also other finds such as steatite *conuli*/buttons and clay spindle whorls.

The pottery from this thick level is usually highly fragmented, with very few joins, and consistently dates to LH IIIA2. The most diagnostic pieces correspond more closely to the earlier rather than later part of this phase. We identified some mendable material with joins to pieces found in 2023, which also dates to the LH IIIA2 (Early) phase [Fig. 5]. While the contextual association of this pottery was unclear in 2023, excavation in Area 3 revealed a floor at the level of 2.40 m a.s.l. (Feature (FE) 04), and it is likely that this pottery is associated with that floor. It also became clear that this floor is disturbed or absent in the eastern part of Area 3, excavated in 2023, and partially in 2024. This would explain the presence of mendable LH IIIA2 pottery found in 2023 at very low elevations, below the level of the floor identified in 2024.

There are two important observations regarding this floor [see Fig. 2]. Of stratigraphic significance is that it is clearly cut along Wall 4, suggesting that this wall postdates the floor, as the cut was most likely caused by a foundation trench for its construction. This is also supported by the fact that the floor is at the level of the lowest course of Wall 4. Furthermore, in its southern part, it is made of good-quality white plaster, a feature not attested in any Mycenaean building excavated thus far at Pefkakia.

Although only a small part of that floor was exposed, several objects were found on it within EUs 80 and 83. These include juglet P23/074 (for a parallel, see Thomas 2011: 187, Fig. 7:37), an Aeginetan tripod P23/084<sup>2</sup> (pieces of which had already been found in 2023 in the disturbed area to the east), monochrome goblet P24/175 [see Fig. 5], three possible stone pounders, and a fragment of a copper-alloy pin (SF24/091).

We did not excavate below the well-preserved portions of the floor, but in the eastern part of Area 3, where no floor was preserved, work continued in search for the bedrock. At the level of 2.30 m a.s.l., i.e. 10 cm below the level of the floor described above, a very hard, partially preserved surface was identified. The material found below it is exclusively of Middle Bronze Age date, providing a *terminus post quem* for that surface. In general, the lowest levels in this area contained a considerable quantity of MH-LH I pottery, strongly suggesting that some activity took place here around the beginning of the Late Bronze Age.

Below that surface, we began exposing an irregular rocky layer that turned out to be bedrock composed of schist [see Fig. 2]. One of the fissures in the bedrock contained concentrations of larger pottery fragments, the latest of which was an LH IIIA monochrome cup, as well as a fragment of palace-style jar of the LH II period decorated with a reed pattern (P24/160), a unique find so far in the wider region. These finds attest to a significant level of disturbance inflicted on late MH/early LH levels by later activity.

2 Its profile falls between the one-handed type produced on Aegina until LH IIIA1 (Gauss et al. 2017) and the short-everted rim characteristic of cooking pots produced from the more advanced stages of LH IIIA2 (Vitale 2011: 339).



Excavation in Area 5 reached similar depths as in Area 3, and the nature of the fill—with clay-rich soil and pieces of mud-brick, including large unburnt examples—was likewise similar. Nevertheless, despite reaching a depth of approximately 2.30 m a.s.l., i.e. below the base of Wall 4 and below the level of the floor in Area 3, no floor or surface was identified on this side of Wall 4.

FAUNAL REMAINS

Faunal remains were recorded following the protocol described in the 2023 report (Lis et al. 2024). [Table 1] presents the general breakdown of elements recorded per trench and includes only material dated to the main periods represented in the respective trenches — LH for Co1 and Co2, and Hellenistic for Bo1.

Table 1. Breakdown of recorded elements per trench (MinAU = Minimum Number of Anatomical Units; MaxAU = Maximum Number of Anatomical Units)

Trench	MinAU	MaxAU
B01	34	34
C01	122	124
C02	118	122
Total MinAU recorded (2024)	274	
Total MaxAU recorded (2024)		280

In terms of species composition, sheep and goats are the dominant taxa, represented in relatively equal numbers and to-

gether comprising 60.5% of the assemblage, followed by pig and cattle, while a single hare specimen was also recorded [Table 2].<sup>3</sup>

Table 2. Species representation (MinAU = Minimum Number of Anatomical Units; MaxAU = Maximum Number of Anatomical Units)

Trench	B01				C01				C02			
Species	Min AU	%	Max AU	%	Min AU	%	Max AU	%	Min AU	%	Max AU	%
Equid					1	1.2%	1	1.1%	2	0.7%	2	0.7%
Cattle	6	17.6%	6	17.6%	11	12.8%	11	12.6%	34	12.4%	34	12.1%
Pig	4	11.8%	4	11.8%	21	24.4%	21	24.1%	56	20.4%	57	20.4%
Sheep	18	52.9%	18	52.9%	22	25.6%	22	25.3%	100	36.5%	103	36.8%
Goat	6	17.6%	6	17.6%	30	34.9%	31	35.6%	71	25.9%	73	26.1%
Sheep, goat & sheep/goat	24	70.6%	24	70.6%	52	60.5%	53	60.9%	171	62.4%	176	62.9%
Dog									1	0.4%	1	0.4%
Fox/dog									1	0.4%	1	0.4%
Small carnivore									4	1.5%	4	1.4%
Hare					1	1.2%	1	1.1%	5	1.8%	5	1.8%
All species	34		34		86		87		274		280	

3 The specimens that could not be clearly identified as either sheep or goats (i.e. sheep/goat) were assigned to each category based on the proportional representation of the clearly identifiable sheep and goat specimens.

In addition, [Fig. 6] shows the representation of species in two areas in Trench C01: Area 3, which appears to be an interior space, and Area 5, interpreted as a possible exterior area. Comparison of the two datasets reveals variation in the representation of pig and sheep/goat remains between these areas. More specifically, in Area 3, sheep/goat is by far the dominant taxon, comprising more than 60% of the remains, whereas in Area 5 the corresponding proportion is significantly lower. At the same time, pig percentages are much higher in Area 5 than in Area 3. Given the different types of contexts identified, it could be argued that pig elements are more robust and thus more resilient than sheep/goat bones; however, this assumption should be considered alongside evidence for the age composition of the two species. Unfortunately, the high degree of fragmentation within the assemblage—resulting in an abundance of shaft splinters—does not allow for further evaluation. Nonetheless, comparison of bone preservation for both species between the two areas may be revealing. The recorded percentages of carnivore attrition, encrustation, and ero-

sion vary between Areas 3 and 5, with the latter exhibiting poorer preservation. This observation accords with the interpretation of the two contexts as exterior versus interior spaces. Interestingly, in Area 3, pig bones show higher rates of carnivore gnawing than sheep/goat bones (22% and 12%, respectively). Although the available sample is limited, this may reflect different deposition patterns, especially given that in Area 5 the percentages are nearly identical for both species.

As far as body part representation is concerned, only sheep/goat and pig remains allow for an evaluation of the available data. Almost all body parts have been identified, suggesting the presence of complete carcasses or animals brought to the site on the hoof.

Cut marks have been identified only on three sheep/goat and one pig element, the former associated with dismemberment and filleting of carcasses, and the latter with chopping.

### MALACOLOGICAL REMAINS

Shells were studied following standard archaeomalacological methodologies for the Aegean (Veropoulidou 2011a; 2011b; 2014; forthcoming). The data presented here are based on the preliminary study of the shells and a first assessment of their spatiotemporal distribution. During the 2024 season, the excavation of Trenches B01, C01, and C02 brought to light a significant quantity of shell remains (>1800 specimens).

The archaeomalacological assemblage includes marine gastropods and bivalves, as well as terrestrial snails. It is characterized by high variety (at least 30 different species) and moderate diversity, as the

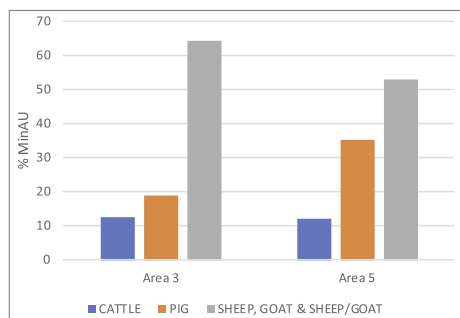


Fig. 6. Representation of the dominant species in Areas 3 and 5, Trench C01 (MinAU = Minimum Number of Anatomical Units)

Minimum Number of Individuals (MNI) is not equally distributed among taxa. On the basis of the Number of Identified Specimens (NISP), shells were organized into four groups: the first (abundant) includes four taxa (*Hexaplex trunculus*, *Cerastoderma glaucum*, *Pinna nobilis*, *Arca noae*), represented by many specimens (>150); the second (common) includes two taxa (*Spondylus gaederopus*, *Ruditapes decussatus*), represented by a fair number of remains (50–100); the third (occasional) includes six taxa (*Donacilla cornea*, *Cerithium vulgatum*, *Ostrea edulis*, *Helix* sp., *Phorcus turbinatus*, *Patella caerulea*), represented by few remains (10–50); the fourth (rare) includes the remaining 18 taxa, represented by fewer than 10 specimens. Among them are several terrestrial snails: some exhibit worn surfaces and have lost their color, suggesting they are contemporary with occupation or represent post-abandonment intrusions, while others are preserved in pristine condition, indicating modern intrusions.

Taxonomic variety and representation are similar to those observed in the assemblages from Trenches Co1 and Bo1 excavated in 2023 (Lis et al. 2024). In summary, people gathered these mollusks locally, though from different parts of the coastline and from different water zones, depending on their needs. A range of parameters—taphonomy (including surface preservation and degree of fragmentation), quantity of remains, and mollusk properties such as edibility and presence of dye glands as well as archaeological comparanda—suggests that most shells represent remains from the manufacture of purple dye (*Hexaplex trunculus*) and food consumption (*Cerastoderma glaucum*, *Arca*

*noae*, *Donacilla cornea*, *Ruditapes decussatus*, *Spondylus gaederopus*). There are also several specimens that must have been accidentally collected (*Barbatia barbata*, *Venus verrucosa*) among targeted prey or other coastal materials (seagrasses, sand, sponges). No perforated or otherwise worked shells were found in these assemblages. These results closely parallel observations from other Aegean Bronze Age sites, where mollusks and their shells served various roles in crafts and cuisine.

Shells were found in every context in Trenches Bo1, Co1, and Co2, albeit with some differences in taxonomic variety and representation. The initial assessment of their spatiotemporal distribution reveals no notable differences, suggesting a similar range of activities across time and space.

In Trench Co1, contexts rich in shells include the LH IIIA2 fills and the LH IIIB metallurgical level in Area 3, where a mixture of remains from various activities was found. Conversely, contexts poor in shells include the fireplace and units excavated above the floor at 2.40 m a.s.l. in Area 3, as well as the fills with mudbricks in Areas 4 and 5.

## PLANT REMAINS

The sample processing protocol followed the same procedure as those described in the report for the 2023 season (Lis et al. 2024).

The assemblages are relatively small and sparse. Therefore, only general comments on the abundance of charcoal fragments and the presence of charred plant remains are provided for each trench, with additional information for the most informative samples [Table 3].

Table 3. Identified plant remains and charcoal fragments in trenches excavated in 2024; x = up to 10 items (occasional); xx = 11 to 50 (moderate); xxx = 51 to approx. 250 (abundant); xxxx = over 250 (extremely abundant)

Trench/EU	C01	C02	B01
<b>CEREALS</b>			
<i>Hordeum vulgare</i>	cf.x	x	
<i>Hordeum vulgare</i> rachis			x
<i>Cerealia</i> indet.	x	x	xx
<i>Cerealia</i> /Poaceae indet.	x	x	x
<b>OTHER EDIBLE PLANTS</b>			
<i>Ficus carica</i> seed	x	x	x
<i>Ficus carica</i> pulp	x	x	x; cf.x
<i>Lens culinaris</i>	x	x	
<i>Linum usitatissimum</i>			cf.x
<i>Pisum sativum</i>	x		cf.x
<i>Prunus dulcis</i>	cf.x		
<i>Punica granatum</i> seed			xx
<i>Punica granatum</i> pulp			xxx; cf.x
<i>Olea europaea</i>		x	x
<i>Vitis vinifera</i>			x
<b>HERBACEOUS PLANTS</b>			
<i>Galium</i> sp.	x; cf.x	x	
<i>Lathyrus sativus</i>	x		
<i>Malva</i> sp.	x	x	
<i>Medicago</i> cf. <i>nigra</i>	x	x	x
<i>Rubus</i> sp.		x	
<i>Papaver</i> sp.			x
<i>Plantago lanceolata</i>		x	
<i>Prunus</i> sp.			cf.x
<i>Vicia faba</i>	cf.x		
Caryophyllaceae indet.	x		
Campalunaceae indet.		x	
Euphorbiaceae indet.			x
Fabaceae indet.	xx	x	x
Poaceae indet.	x		x
Indeterminate	xx	xx	x
<b>OTHER</b>			
charred amorphous remains (frag.)	xx	xxx	xxxx
bone (frag.)	x		
stalk	x		
straw (frag.)	x	x	x
husk (frag.)			x
<b>CHARCOAL</b>			
<4 mm	xxxx	xxxx	xxxx
>4 mm	xxx	xx	xxx

The assemblages in Co1 are characterized by moderate to extremely abundant charred wood fragments <4 mm, but sparse carpological remains. Among the latter, we identified seeds similar to bur medick (*Medicago* cf. *nigra*), and seeds and fruits belonging to the carnation (Caryophyllaceae indet.), legume (Fabaceae indet.), and wild grass (Poaceae indet.) families, as well as seeds and fruit pulp of common fig (*Ficus carica*), seeds of lentil (*Lens culinaris*), pea (*Pisum sativum*), husk fragments similar to almond (cf. *Prunus dulcis*), grains similar to barley (cf. *Hor-*

*deum vulgare*), and grains of indeterminate cereal and/or wild grass (*Cerealial/Poaceae* indet.).

A sample taken from the fireplace contained extremely abundant charred wood fragments <4 mm, moderate amounts of charred wood pieces >4 mm, and occasional charred amorphous remains, together with occasional herbaceous plant finds, including a seed similar to bur medick (*Medicago* cf. *nigra*), and seeds and fruits belonging to the carnation (Caryophyllaceae indet.), legume (Fabaceae indet.), and wild grass (Poaceae indet.) families.

## TRENCH C02

We opened Trench Co2, located 2 m north of Trench Co1 [see Fig. 1], in order to investigate linear anomalies revealed through geophysical survey, whose Late Bronze Age date was suggested by discoveries in Trench Co1. However, almost immediately beneath the surface soil, we encountered a deposit of broken tiles concentrated in the middle of the trench, immediately north of two rectangular blocks aligned parallel to each other and oriented east–west (designated as Wall 13; [Fig. 7]). At the same level, a regular rectangular stone socle was revealed in the northeast corner of the trench [see Fig. 7], from which a wall begins and continues southwards but disappears into the baulk.

Removal of the tiles revealed a deposit dating to the Hellenistic period, which contained a number of small finds but very little pottery, most of which was fragmented and worn. Among the small finds, loom weights were the most frequent, predominantly of pyramidal type, with a single discoid example. There were

also a few fragmentary metal objects and a substantial block of lead with a rectangular shaft running through it, weighing several kilograms (SF24/044), found very close to Wall 13.

A single coin (SF24/048) was also recovered. However, one complete vessel—a small cooking pot (P24/008)—was found in the central eastern part of that deposit and contained a cache of 275 coins, most of them silver, which, after initial conservation, await further study.

Further excavation clarified that the two blocks initially revealed (Wall 13) are the only remnants of the wall of a building to which this deposit most likely belonged. A possible patch of floor was identified only in one spot, at an elevation of 2.97 m a.s.l.

On the south side of Wall 13, the finds differed considerably: there were far fewer tiles and no clear deposit. The most significant remnant of the Hellenistic phase was an amphora (P24/001), discovered early in the excavation, with its

base at a depth of 2.70 m a.s.l. — almost 30 cm below the possible floor north of Wall 13. Among the small finds, which included a terracotta loom weight, a sheet of lead, and an iron nail, there were already some of LBA date: part of a Mycenaean figurine, a biconical terracotta spindle whorl, and part of a clay mold. The quantity of LBA ceramic material was also significantly higher in this part. At the same level, we exposed a wall composed of a single row of unworked vertically placed fieldstones, with a slightly diagonal east–west orientation in the southeast part. It was designated as Wall 11 [see Fig. 7].

Further excavation in the northern part of the trench, below the Hellenistic deposit, revealed a drain covered with roughly rectangular stone slabs, running approximately east–west through the entire trench, sloping toward the east. Only in the westernmost part were the covering slabs missing.

As excavation continued in the southern half of the trench (EU 08), another

wall (Wall 12) [see Fig. 7] began to emerge, running east–west but with a slightly diagonal inclination, parallel to that of Wall 4 in Trench Co1. Wall 11 was built directly on top of its southern face. The northern face of Wall 12, in the eastern part of its course, appears to have been remodeled by the addition of a few blocks, giving it a slightly more diagonal orientation [see Fig. 7]. A patch of floor was identified abutting this remodeled part on the north, at an elevation of 2.85 m a.s.l. (only 12 cm lower than the floor on which the Hellenistic deposit rested). Further observation of the east baulk confirmed that this floor extended over the cover slabs of the drain, at least in its eastern part. Pottery from the level above the drain still contained some Hellenistic material, but Late Helladic pottery, extending to LH IIIB<sub>1</sub>, was dominant. This alone was insufficient to consider the drain a secure LBA feature. However, pottery recovered from its interior leaves no doubt as to its date, as it was exclusively LBA, with the latest fragments (linear semi-globular cups) dating to LH IIIB<sub>2</sub>. Therefore, the remodeled Wall 12 with the floor at 2.85 m a.s.l. and the drain beneath it should be regarded as features belonging to the LBA, separated only narrowly in vertical space from the Hellenistic phase immediately above.

With the uncovering of the drain and Wall 12, excavations focused on the western part of the trench, on both sides of Wall 12, which in this area is poorly preserved, most likely due to extensive stone robbing. In the northern part, between Wall 12 and the drain, we uncovered remains of a thick floor made of yellow clay at an elevation of 2.70 m a.s.l. It predates

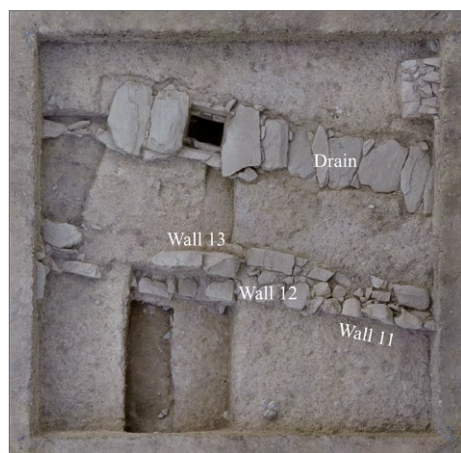


Fig. 7. Plan of Trench C02 (Photo K. Warecka and B. Lis)



the drain, as it is cut by its vertical side slabs below the horizontal cover slabs. Material collected from above the floor is exclusively Mycenaean, with the latest date of LH IIIA2. Some mendable pottery was recovered, including fragments of a transport stirrup jar (P24/127), an Aeginetan cooking pot (P24/134), and a closed shape with spirals on its shoulder (P24/158). A small amount of material from the floor make-up reinforces this dating, which also provides a *terminus post quem* for the construction of the drain.

To the south of Wall 12, no floor levels were revealed; this situation is similar to that in the northern part of Co1 (Area 5), which should be considered as part of the same context. Ceramic material from the excavation units dug below EU o8 is consistently Mycenaean, dating no later than LH IIIA2, but up to EU 16 still contained some Hellenistic intrusions. This may result from the stone robbing evident in the condition of Wall 12 and the absence of any continuation of the Hellenistic Wall 11.

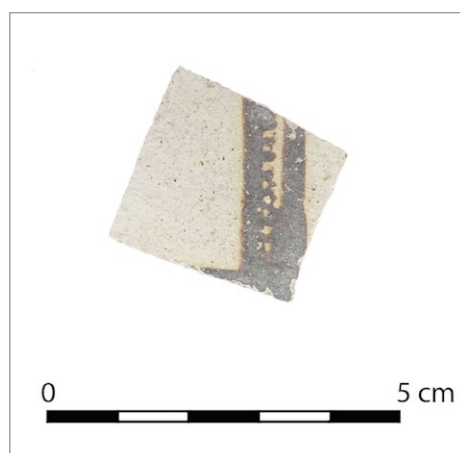


Fig. 8. Cypriot White Slip II milk bowl (Photo B. Lis)

In addition, a small circular pit was revealed next to the southern baulk and excavated separately as EU 15. Material from the pit was LH IIIA2 and thus chronologically similar to the surrounding level. EU 16, covering the entire western part except for the pit, yielded the most remarkable ceramic find of the season: a body sherd of a Cypriot White Slip II milk bowl (P24/174) [Fig. 8]. Only two other such finds are known from the Greek mainland, both from Tiryns (Cline 2009: 180, Pl. 8.28). This unique find adds to the growing body of evidence for the far-reaching external relations of the site of Pefkakia (Lis and Batziou 2025).

The final stages of excavation in Trench Co2 led to the discovery of a complete adult skeleton, buried directly south of Wall 12 at a depth of about 2.20 m a.s.l. The burial contained no grave goods, and the individual was placed in an extended position with the legs bent at the knees, such that the knees were the first to appear during excavation. Intriguingly, no burial pit was identified, as though the individual had been interred together with the surrounding fill. The soil around the skeleton contained material no later than LH IIIA2, suggesting that the deposition was not a later intrusion. The skeleton was fairly complete; missing elements include half of the right clavicle, most of the right wrist and hand, and the entire right patella. A preliminary anthropological analysis indicates that the remains belong to a young adult, probably male. The only observable pathologies include carious lesions in the maxillary molars on the right side and what appears to be a well-healed antemortem fracture of the left ulna.

## FAUNAL REMAINS

As presented in [Table 2], in terms of species representation, the assemblage from Trench Co2 follows that from Trench Co1: sheep/goat comprise the dominant taxa, followed by pig and cattle, whereas a few elements of small carnivores and hare were also identified.

The distribution of identified body parts for the dominant species indicates the presence of complete carcasses. The lower numbers of small elements, such as phalanges, for sheep/goats and pigs—as opposed to the balanced ratios among the respective cattle specimens—appear to result from incomplete recovery. Nevertheless, the marked difference in the representation of ankle bones between the two taxa, with sheep/goat astragali and calcanei showing higher percentages than those of pigs, may indicate differential preparation of sheep/goat and pig carcasses, given the comparable sizes of these elements.

No cut marks have been recorded, and the age data are too fragmentary for valid evaluation. The percentage of carnivore attrition is relatively low (9.5%) and is therefore unlikely to have affected the identification of bone modification.

Signs of erosion and encrustation have been recorded on 11.4% of the assemblage from Trench Co2.

## MALACOLOGICAL REMAINS

In Trench Co2, the contexts richest in shells are those where a mix of Bronze Age and Hellenistic pottery was found. Moderate amounts of shells were recovered both north and south of Wall 12, in LH IIIA2 contexts (including around the skeleton) and in LH IIIB1 contexts (above the lowermost floor).

## PLANT REMAINS

Similarly to Trench Co1, assemblages recovered in Trench Co2 are characterized by moderate to extremely abundant charred wood fragments <4 mm, yet sparse carpological remains [see Fig. 6]. The latter include a fragment of olive (*Olea europaea*) stone, a seed similar to bur medick (*Medicago* cf. *nigra*), a seed of ribwort plantain (*Plantago lanceolata*), seeds and fruits belonging to the legume family (Fabaceae indet.), a grain of barley (*Hordeum vulgare*), three lentil (*Lens culinaris*) seeds, one mallow (*Malva* sp.) seed, seeds of common fig (*Ficus carica*), and a seed of the bellflower family (Campanulaceae indet.).

# TRENCH B01

We resumed work in Trench B01 in order to excavate a tile grave revealed in 2023 in the northwestern corner of the trench, partially in the baulk. We hoped that by doing so, more space would be available for investigating lower-lying layers in search of remains dating to the Late Bronze Age.

Thus, we opened an extension measuring 1 m × 1.5 m in the northwestern corner of the trench. After removal of the surface layer, we revealed the outlines of two oval pits. One was clearly related to the tile grave under investigation and was partially cut by the original northern baulk of the trench. The pit was charac-

terized by hard-packed soil with numerous small stones, a feature common to the pit of the other tile grave investigated in 2023 (FE05). The other pit, further to the north, only part of which was visible in the extension, had a different fill of looser and darker soil than the surrounding sediment. We left it uninvestigated, as the priority was to excavate the tile grave and reach deeper levels within the borders of the initial trench.

The pit of the tile grave was about 1.2 m long and 0.5–0.6 m wide, but exact dimensions cannot be reconstructed, as its southern part had been excavated in 2023 without defining the pit. Just above the top of the grave, we came across several larger flat stones, especially by the eastern and western edges of the grave. Their function remains unclear.

After exploration of the pit, the entire grave became visible [Fig. 9]. It was a tent-like structure, built of terracotta tiles (Gr. *καλυβίτης*) measuring 86 cm × 42 cm and 3 cm thick. The two tiles with slightly curved sections were leaned against each other to form the roof of the grave. They were decorated on the interior side with a finger-impressed fish ornament.

Excavation of its interior, after the removal of the southern tile, was conducted by the team of anthropologists from Texas State University, led by Nicholas Herrmann. The interior was filled with very fine and soft soil containing numerous small snails. At the bottom, a well-preserved inhumation of a child was uncovered without any grave goods, as is the case with other burials in this area [see Fig. 9]. As with the other burials,



Fig. 9. Tile grave in Trench B01 (Photo D. Agnousiotis)



we might be dealing with a Roman burial, most likely Christian. This interpretation is reinforced by the schematic depiction of a fish on the side tiles.

In contrast to the other tile grave (Lis et al. 2024: 14–15, Fig. 8), this one had neither a bottom tile nor side tiles perpendicular to the two roof tiles, nor was mortar used to reinforce the structure. The skeleton was placed directly on the ground.

The individual buried in the tile grave is an infant approximately two years old (with a range of 1.2–2.9 years old) based on dental development. The skeleton is well preserved and complete. The infant is estimated to have been 84 cm in height, which is within the normal range, albeit on the lower end, for modern two-year-olds according to World Health Organization growth standards (WHO 2010). The infant exhibits various cribrous lesions on the



Fig. 10. Trench B01 with tile-and-sherd plaster (Photo B. Lis)

femora and orbits, consistent with non-specific health stress possibly related to iron-deficiency, nutritional deficiencies, or parasitic infections (including malaria). These lesions include bilateral *cribra orbitalia* and *cribra femoralis* on the right anterior femoral neck. While not indicative of any specific cause of death, these lesions suggest extended systemic health issues for this individual, which likely contributed to their death. A full analysis of the individual will be completed in summer 2025.

After removal of the grave, we uncovered a layer of densely packed tiles and sherds [Fig. 10], forming an apparent surface at an elevation of 1.40 m a.s.l. It was first attested in 2023 (EU 21), immediately to the east of the explored area. We continued working in the area stretching between the west baulk and the baulk separating the unexplored part with stone-rubble paving on the east side of the trench, and between the north baulk and the 2023 sounding below grave FEO4. We exposed a surface made of tiles and sherds over the entire investigated area. It was clearly cut by the pit for the tomb, while another part of it was missing further to the south, perhaps indicating that the pit was originally planned to be larger [see Fig. 10]. A blackened area was identified in the center of the southern part of the surface, and another similar area was observed within portion of the surface exposed in 2023.

The thickness of the paving varied, being greatest in the easternmost part, where larger and more frequent tile fragments appeared in its make-up. An interesting feature, observed only in the northwest corner (and baulk), was a layer of yellow clay directly above it.

The paving was removed, yielding large amounts of tiles and pottery, some preserved in large fragments. Its composition is noteworthy: Hellenistic pottery prevailed, but the material from the western part of the paving was distinguished by a significantly higher content of Mycenaean and earlier pottery, reaching about 30%. The proportion was distinctly lower in the eastern part, which in turn produced better-preserved and larger pieces of Hellenistic pottery, including a mortarium (P24/o61), a large pan (P24/o87), many amphora fragments, and some finewares. There was also a Classical painted lid (P24/o81), and an earlier (Geometric?) amphora with a horizontal shoulder handle (P24/120).

This paving has not been identified in the area excavated immediately to the south in 2023, where grave FEO4 was located. This is undoubtedly partly due to the disturbance caused by the digging of the pit for this grave, which reached a depth of approximately 1.20 m a.s.l., i.e. about 20 cm below the level of the paving. Yet even at the edges of the pit, no such paving was identified, suggesting that it did not continue further south. The only feature in this part is a dense stone packing starting at a depth of 1.10 m a.s.l. (see Lis et al. 2024: Fig. 4).

The blackened area in the middle of the paving at first appeared not to be covered with a layer of sherds and tiles, but upon excavation it turned out that tiles were present in that part as well, although the underlying soil was looser there. Further investigation revealed a clay-lined pit (measuring 0.60 m north–west × 0.40 m east–west, with a depth of about 0.20 m) with a clay surface around it, clearly

predating the paving that attempted to cover it [Fig. 11]. The pit contained small amounts of Hellenistic pottery and several iron slags; its connection with metal processing is thus likely.

As the end of the season was approaching, we decided to open a small sounding in the northeastern part of the investigated area, measuring 1.40 m (north–south) × 0.80 m (west–east). It led to the discovery of a very dense deposit of pottery of unusually high quality and excellent preservation, including a number of joins allowing for more complete profiles. The composition of this pottery assemblage is distinct, as it contains predominantly finewares, much of them apparently of Attic provenance, bearing

West Slope decoration, along with some cooking pottery [Fig. 12]. The finewares include black-glazed and highly polished black-glazed kantharoi with strap handles, ring feet, and ivy-leaf and garland ornaments; fish plates; plates with projecting or rolled rims; plates with West Slope decoration; small bowls with projecting or outturned rims; hemispherical and semi-glazed bowls; and Echinus bowls (Rotroff 1997: 151, Pls 67–68, 153, Pl. 70, 159, Pl. 73, 164–165). The assemblage dates to the beginning of the 3rd century BC, contemporary with the earliest phase of Hellenistic Demetrias. We stopped the sounding at a level of 0.90 m a.s.l., when the outline of a possible hearth was revealed.



Fig. 11. Final view of Trench B01 (Photo B. Lis)

#### FAUNAL REMAINS

The identified species in Trench B01 include cattle, sheep, goat, and pig [see Table 2].<sup>4</sup> In terms of species distribution, ovicaprids comprise 70.5% of the recorded material, followed by cattle (17.6%) and pig (11.8%). Although the recorded assemblage is very small for valid statistical comparisons, the percentages are overall similar to those from the 2023 study season, though a slight increase in cattle is observed.

As far as body part representation is concerned, a more meaningful evaluation is possible for sheep, goat, and sheep/goat, given the very low numbers of cattle and pig specimens. All body parts are represented, though mandibles and lower hind-limb bones are more abundant. Given the very low percentage

4 The percentages of sheep/goat specimens have been proportionally assigned to sheep and goats based on the representation of clearly identified individuals.



of carnivore gnawing (<5%), the higher numbers of these elements may reflect actual depositional patterns, such as the presence of primary butchery waste (and hence dressing of carcasses), rather than survival due to greater resilience. This observation is also consistent with the material studied in 2023.

No butchery marks have been detected on the assemblage from Bo1, despite the absence of erosion and encrustation on bone surfaces. Finally, age composition cannot be assessed, given the extremely fragmentary data and small sample size.

### MALACOLOGICAL REMAINS

Despite the small number of shells from Trench Bo1, there are some differences in their abundance and representation

between the layers above and below the pavement. The former (EUs 46–49) produced only a few shells, though notable is a concentration of intact *Sp. gaederopus* valves, possibly representing food refuse. By contrast, the sounding below the pavement was richer in shells. In addition to common food refuse (*Sp. gaederopus*, *C. glaucum*), there were also intact purple shells (mostly *B. brandaris*), which are usually considered remains from food consumption (as opposed to fragmented shells related to the process of extracting the purple gland).

### PLANT REMAINS

All but two samples were relatively sparse, containing occasional to extremely abundant charred wood fragments <4

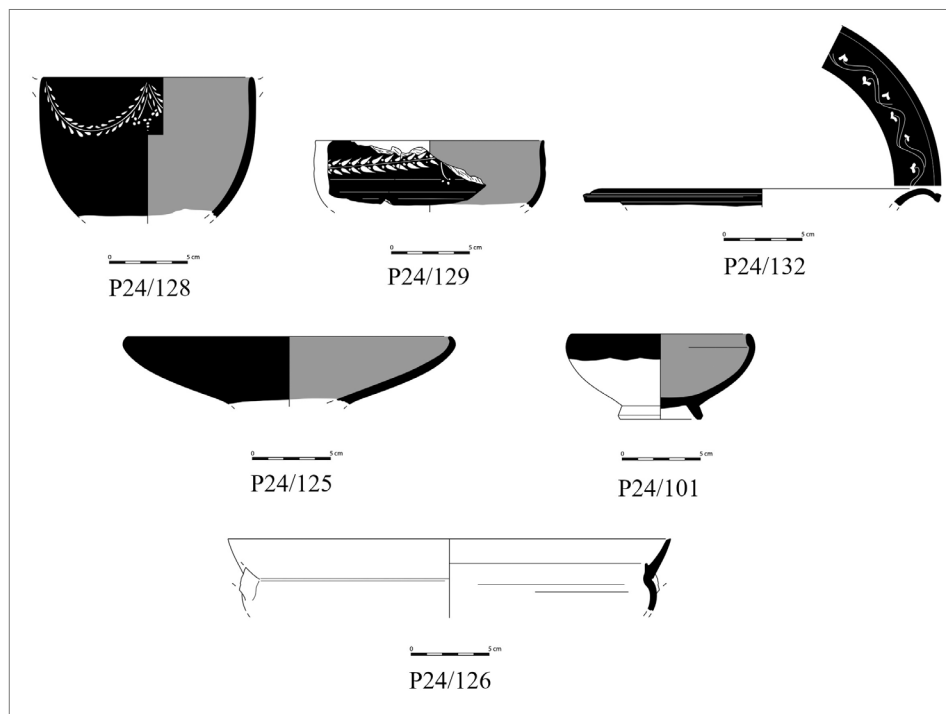


Fig. 12. Pottery from the sounding in Trench B01 (Drawing Y. Nakas)

mm, occasional to moderate charred wood pieces >4 mm, occasional grains of undetermined cereals/wild grasses (*Cereal*ia/Poaceae indet.), occasional finds of common fig (*Ficus carica*), pomegranate (*Punica granatum*), common grapevine (*Vitis vinifera*), peas (*Pisum sativum*), occasional herbaceous plants, and occasional to moderate charred amorphous remains [see *Table 3*].

Sample SS24/036, collected from the fill of the grave pit (EU B01/38), comprises charred amorphous remains in which merged fragments of seeds, grains, and small straw fragments are noted. Occasional undetermined husk fragments, single fragments of charred pomegranate (*Punica granatum*) fruit pulp, a single barley (*Hordeum vulgare*) rachis, and abundant charred wood fragments <4 mm are also present. This assemblage could probably be interpreted as a grave deposit, an offering,

or leftovers from feasting during burial ceremony. Similarly, samples associated with other burials in this trench may also have had a ritual significance.

Sample SS24/072 was taken from the clay oven (EU B01/45). The richest assemblage so far comprises occasional fragments of indeterminate cereals (*Cereal*ia indet.), a seed similar to flax (*Linum usitatissimum*), two pea (*Pisum sativum*) seeds, pips and seeds of common grape vine (*Vitis vinifera*), fragments of pomegranate (*Punica granatum*) fruit pulp, and pieces of olive (*Olea europaea*) stone. Additionally, over 20 fragments of unidentified fruit pulp and other amorphous charred remains are present, along with extremely abundant charred wood fragments <4 mm and abundant charred wood fragments >4 mm. The assemblage most likely represents food leftovers dropped incidentally or purposefully (e.g. as fuel) into the fire.

## CONCLUDING REMARKS

Starting with the earliest excavated remains, the fieldwork conducted in 2024 has provided a better understanding of the late MH/early LBA history of habitation in Sector C, with material excavated directly above the bedrock. Despite the presence of a patch of floor incorporating pre-LBA material, clear habitation levels or architecture are still lacking. Nevertheless, activity in this area of the site predating the LH IIIA2 period appears to be certain and constitutes one of the major achievements of the project so far. Yet, the presence of fairly large fragments of LBA pottery, as late as LH IIIA, in one of the

bedrock cavities, attests to significant disturbance reaching deepest levels.

The exposure of a partially plastered floor dating to LH IIIA2 Early may indicate the presence of an important building, which will be further investigated in future seasons. Thus far, no architecture can be associated with it, as the most substantial Wall 4 clearly post-dates its use. The function of this wall, which—based on geophysical prospection—continues further to the west, remains enigmatic. First, there is no floor or use level associated with it prior to about 1200 BC on its south side. Second, north of it, between Wall 4 and the similarly

oriented Wall 12, no floors or surfaces were recorded. The fill in that space is poor in finds, and the only notable — and again enigmatic — feature is a complete skeleton of an adult male.

Another important feature dating to the later LBA, revealed in 2024, is a well-built drain with parallels in Megaron A at Dimini (Adrymi-Sismani 2014: 170–171). In this area, we identified two clear floor levels dating to LH IIIA2 (probably its Late sub-phase) and LH IIIB, the latter associated with the drain, thus providing a different settlement history than in the area south of Wall 12 or Wall 4.

The following phase, around 1200 BC, appears to be associated with intense craft activities, first documented in Sector A (Batziou et al. 2022: 177). Evidence recovered in trench Co1, Area 3, suggests the casting of bronze tripods — objects of high value found during the LBA only in burials. Such tripods were probably not intended exclusively for local consumption; thus, the activities carried out at Pefkakia may have had supra-regional significance.

Both Trenches Co2 and Bo1 provided new evidence for Hellenistic activity. In

Trench Co2, we uncovered poorly preserved remains of a Hellenistic building, including an interesting destruction deposit. Geophysical investigations indicate that more Hellenistic architecture lies to the north and northwest of the excavated area, arranged within an insula.

In Trench Bo1, further evidence supplemented the findings from 2023 of a children's cemetery directly south of the city wall of Demetrias, possibly dating to the Roman period and containing Christian burials. Revealed beneath —and partly disturbed by— the tombs, were earlier episodes of activity associated with the Hellenistic period. These include a well-constructed paving of yet unknown function, a clay oven with rich plant remains and metallurgical slag, and a pottery-rich deposit of high-quality drinking vessels found together with cooking pottery. Therefore, even though no architecture has been preserved, the excavation provided plentiful data on the range of activities carried out in an area located between the first inhabited insula to the south and the city wall directly to the north.

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