



# THE PRODUCTION AND DISTRIBUTION OF POTTERY IN MYCENAEAN THEBES, BOEOTIA

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*In the course of the project 'Pottery Production and Distribution of Bronze Age Settlements of Mycenaean Greece and the Aegean' in 1996, Mycenaean pottery from Boeotia in the Archaeological Museum of Thebes was sampled with a view to investigation by neutron activation analysis (NAA). The NAA results were published and analysed in 2002. Ongoing work with new samples and re-evaluation of pre-existing ones, in both cases deriving from several sites of the Mycenaean world, resulted in the reappraisal of the NAA results concerning the Theban material. The present work aims at the archaeological assessment of the sampled material (152 samples from 148 examples) organised into three sections according to their exact findspot: (a) the chamber tomb cemeteries at Agia Anna area (Kolonaki and Mikro Kolonaki hills) and at Ismenion Hill; (b) the House of Kadmos; and (c) habitation areas at the lower south-east and north-west part of Kadmeia Hill. This classification corresponds roughly to the chronology of the examples dated to Middle Helladic and Late Helladic II to Late Helladic IIIC Late. The bulk of the pottery sampled is Mycenaean. A few examples of Handmade Burnished Pottery are included as well as four fragments of rooftiles, an uninscribed fragment of a Linear B tablet and a clay lump intended for a tablet. Twenty-one chemical groups/subgroups/pairs have been identified. The groups assigned to Boeotia comprise numerous examples excavated mainly at the habitation areas and dated to the subphase Late Helladic IIIB<sub>2</sub> Late. Imports from the Peloponnese, Euboea and Crete, as well as one from Corfu, have been recognised, as have pieces of unknown provenance and loners. In conclusion, five chemical groups of pottery (TheA, TanA, TheB, ThBC, TheF) are associated with varying degrees of certainty with Boeotian pottery production. Imports came mainly from the north-eastern Peloponnese in Early Mycenaean times and from Euboea in the late palatial and post-palatial periods.*

## INTRODUCTION

In the course of the project 'Pottery Production and Distribution of Bronze Age Settlements of Mycenaean Greece and the Aegean' in 1996, Mycenaean pottery from Boeotia stored at the Archaeological Museum of Thebes was sampled with a view to investigation by neutron activation analysis (NAA). The sampled material comprised 152 items from Thebes. The chemical results were presented in 2002 and are of substantial importance since such data are scarce for Boeotia (Mommsen et al. 2002). However, the chemical results have not been thoroughly discussed with a view to their archaeological background as has been done for other areas included in this (Demakopoulou et al. 2017; Lis et al. 2020) or other projects (Tomlinson 2000; Day et al. 2020). The pottery found at Thebes and sampled is presented and discussed in this paper.

## THE NAA RESULTS

Among the items sampled, some sherds were found to belong to the same vase (**Theb 024, 030, Theb 037, 038, Theb 054, 059**) and in one case were associated (**Theb 065+100**). Consequently, the material comprises 39 vases either entirely preserved or at least with a complete profile from base to rim, as well as 103 vase fragments. In addition, four fragments of roof tiles, one uninscribed fragment of a Linear B tablet and one clay lump for making a Linear

B tablet were sampled. From the total of 148 examples, seven date to the Middle Helladic (MH) period, 140 to the Late Helladic (LH) and one to later times (Hellenistic/Roman). The pottery to be sampled was selected to provide as complete a cross-section as possible through pottery of the Mycenaean period from Thebes. To reach this goal, pottery of various pottery classes and of different phases of the Mycenaean period were included, as was some MH material. Wherever possible, pottery from new and well-stratified excavations was prioritised for sampling in order to include exact contextual information for the vessels. While it was possible to follow this principle of guideline for the palatial (LH IIIA and IIIB) and post-palatial periods (LH IIIC), for the early Mycenaean period pottery from earlier excavations, especially of the chamber tomb cemeteries, had to be included. In addition, the famous group of Linear B inscribed stirrup jars from the *House of Kadmos* was sampled to obtain further information on the provenance of these vessels, which were certainly imported.

The NAA results have already been published and analysed.<sup>1</sup> However, ongoing work with new samples and re-evaluation of earlier ones, in both cases deriving from several sites in the Mycenaean world, have resulted in the reappraisal of the NAA results concerning the Thebes material. In some cases, samples were reanalysed for confirmation of the results. The raw concentration data of the samples are available on the webpages of the Archaeometry Group of the Helmholtz-Institut für Strahlen- und Kernphysik, University of Bonn: mommsen.hiskp.uni-bonn.de.

Following the univariate statistical grouping of the material sampled, 14.2 per cent of it consists of chemical loners, which is lower than the usual approximate of 20 per cent of the examples (Table 1).

The bulk of the samples (50) falls within group *TheA*, which shows similarities with group *TanA* detected in many Tanagra figurines and which is represented by one example (**Theb 102**) in the Theban material. Group *TanA* is assigned to the site Mandri Danou, Tanagra, by a reference clay sample with this composition (Tsota, Zacharias and Mommsen 2010). For group *TheA* there is no reference piece in our data bank, but according to the distribution of its members this group is likely to originate from Boeotia and probably from the Thebes area.<sup>2</sup> The small Group *TheF*, comprising three examples, the Linear B tablet fragment and the lump of clay as well as a Handmade Burnished jar, is considered a Theban product. Boeotian provenance is also likely for group *TheB* although the reference piece **Theb 124**, a roof tile,<sup>3</sup> is not a secure one. Group *ThBC* is close to it with higher Cr (total 22 examples). Three pairs are also considered by us to be Boeotian, the first one (*pair 008*) comprising two Handmade Burnished Pottery (HBP) examples (**Theb 039, 040**), the second (*pair 305*) two kylix fragments, and the third (*pair 321*) a Theban roof tile fragment (**Theb 125**) and an example from Tanagra (Tana 24). Two examples are associated with group *KnoL* of central Crete, which often presents similarities to group *TheB* (Tables 1 and 2).

The clay of 14 vases/fragments is considered to originate from Euboea, described as group *EuA* (formerly named *ctheb* or *thec*; Mommsen and Maran 2000–1, 98, table 1, Thebes, **Theb 61**; Mommsen et al. 2002, 608, 609, table 1:3rd column). Seven examples fall within the groups *MYBE* and *MBKR*, both assigned to the north-eastern Peloponnese, and one example within the group *OlyB* associated with the north-western Peloponnese. The Linear B inscribed stirrup jars fall into group *TheE*, which seems to originate from Chania, Crete or its neighbourhood (Mommsen et al. 2002). Group *AegA* with three examples is associated with Aegina and one

<sup>1</sup> Mommsen et al. 2002. Previously, the names of the NAA groups referred to the place of discovery of the sampled sherds, e.g. *thea/TheA*, *theb/TheB* etc., but as this gave rise to misunderstandings, groups without any good archaeometric reference piece would currently be named U... or X... In the case of the corpus of Theban samples, we retained the previous group names, since they have already been published. Today we would call all these Theban groups X..., with the exception of group *TheF* with reference pieces (cf. the lump of clay) from Thebes. But we consider a provenance from Boeotia or even Thebes for all these Theban groups very likely.

<sup>2</sup> The Boeotian / Theban provenance of the *TheA*, *TheB* and *ThBC* groups, although probable, has to be proven by analysis of samples from clay beds and kiln wastes, which are not yet available.

<sup>3</sup> Aravantinos, Fappas and Galanakis 2020, 239: mineralogical analysis supports a local origin for the raw materials of two analysed tiles from Thebes.

Table 1. Thebes pottery analysed. Findspot / NAA groups.

Findspot	TheA	TanA	TheB	ThBC	KnoL (TheB)	TheE	TheF	EuA	single	AegA	MYBE	MBKR	OlyB	Kofu	Ul53	X 029	X 166	X 167	pairs 008 305 321	TOTAL
Chamber tomb cemeteries	1		1					3	3		4		1				2			15
<i>House of Kadmos</i>						9			1											10
Habitation areas on Kadmeia Hill	49	1	16	5	2		3	11	17	3	1	2		1	3	3		1	5	123
TOTAL	50	1	17	5	2	9	3	14	21	3	5	2	1	1	3	3	2	1	5	148
%	33.8	0.7	11.5	3.4	1.4	6	2	9.5	14.2	2	3.4	1.4	0.7	0.7	2	2	1.4	0.7	3.4	100.2

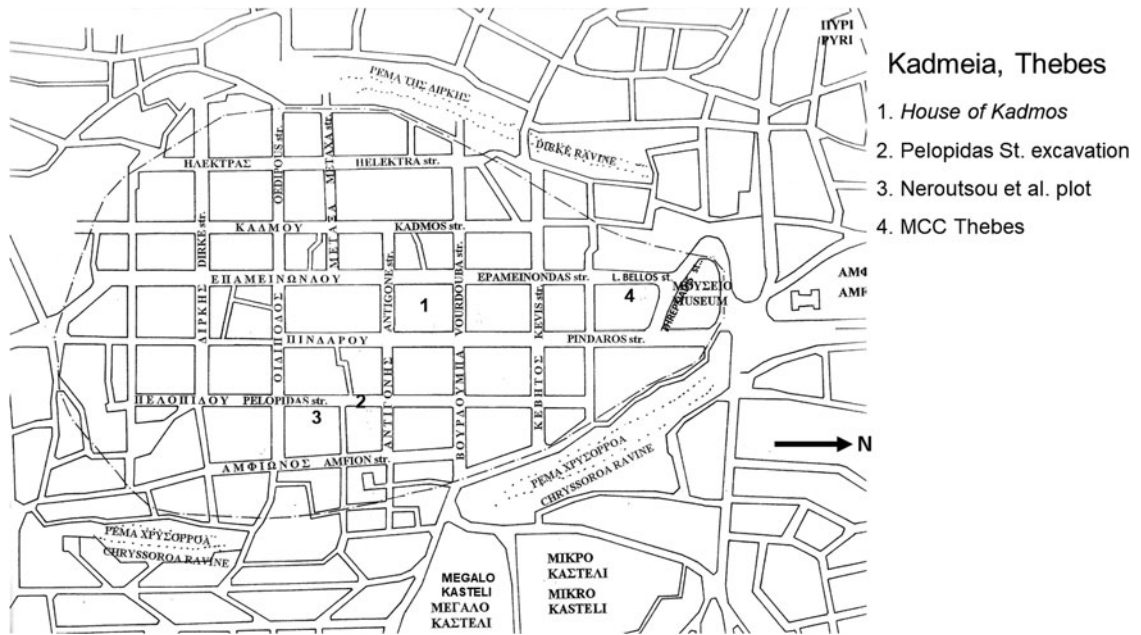


Fig. 1. Kadmeia, Thebes (E. Andrikou).

example of group *Kofu* probably with Corfu. Other examples (total 9) form small groups of unknown provenance (*UI53* [new], *Xo29* [these samples have been members of group *g*; Mommsen et al. 2002, 609, table 1:6th column], *XI66* [=group *P* in Schwedt et al. 2006], *XI67* [formerly called *phth*; Mommsen et al. 2001; Maran 2007]) (Tables 1 and 2).

Macroscopically groups *TheA*, *TheB*, *UI53* and *Xo29* – as attested in the material of the Pelopidas St. and MCCTh plot excavations – present white grits (lime inclusions), fine or not, which are rarely present in group *EuA*. Other kinds of inclusions dark in colour, brownish or reddish, can also appear together with white grits. In a few cases lime grits ranging 2–3 mm in size have caused spalling of the surface (Hruby 2006, 180–1, fig. 6:1–2). In group *TheA* (10 examples) and *TheB* (4 examples) silver mica can also be present, which occurs once in group *Xo29* and sometimes in loners. Gold mica has barely been observed, twice in group *TheB* examples. A correlation of chemical groups with specific vase shapes, decorated or plain vases, and fine, semifine or coarse wares, if it exists, needs many more samples to be defined. Yet it must always be kept in mind that open shapes and especially plain ones represent 60 per cent or more of the pottery in both habitation sites. It should also be noted that the decoration (motifs and organization) fits the Mycenaean style well, although local preferences, especially in LH IIIB2 Late and LH IIIC, may be found.

#### ARCHAEOLOGICAL ASSESSMENT

The material sampled is catalogued in three sections according to the findspot at Thebes and its character, and following the sampling numbering within each section (Table 1; see Supplementary Material). During the study of the material some pottery pieces were found to fit together or to belong to the same vase, so the catalogue comprises 148 entries, although the initially sampled items were 152 in number (see Supplementary Material). The findspots (Fig. 1) comprise:

- (a) The chamber tomb cemeteries at Agia Anna area (Kolonaki and Mikro Kolonaki hills) and at Ismenion Hill (**Theb 001–Theb 015**) excavated by Antonios Keramopoulos at the beginning of

the twentieth century (Keramopoulos 1910; 1917). The pottery and figurines have been republished by Tzavella-Evjen (2014).

- (b) The *House of Kadmos* (**Theb 041–Theb 048, Theb 051–Theb 052**), also excavated by Keramopoulos (1909; 1921). Ten inscribed storage stirrup jars found in the destruction deposit in corridor Δ, along with at least 120 more (Pugliese Carratelli 1944; Raison 1968), have been sampled.
- (c) Habitation areas at the lower south-east part of Kadmeia Hill, namely the excavation below the surface of Pelopidas St. (DEYATH) between building blocks 337 and 339 (**Theb 016–Theb 038, Theb 049–Theb 050, Theb 109–Theb 152**; Aravantinos 1994; 1995; Andrikou 2006), at the plot of Neroutsos-Kretikos and Panagiotides heirs on Pelopidas St. in building block 338 (**Theb 039–Theb 040**; Andrikou 1995), and at the Municipal Conference Centre of Thebes (MCCTh) plot at the north-west part of Kadmeia Hill, at the corner of L. Bellos and I. Threpsiades St., opposite the Archaeological Museum (**Theb 053–Theb 108**; Andrikou 1995; 2022; forthcoming).

At the Pelopidas St. excavation, to the south-east of the *House of Kadmos*, a habitation sequence of the palatial period has been attested (Andrikou 2006). Architectural remains were poorly preserved due to the continuous use of the area, especially in Byzantine and post-Byzantine times. The LH IIIA2 layer (Stratum 3) has been found in Trenches V and VI with no architectural relics except the remains of a hard floor in two areas of Trench VI (Deposits 3a, 3c). The pottery indicates that it was a habitation area, and the carbonised seeds found suggest that cereals were also kept there (Deposits 3b, 3c). The LH IIIB2 Late layer (Stratum 2) was attested in Trench VI overlying the earlier one. A concentration of Linear B tablets, fired by the disastrous conflagration that affected the building where they were stored, was found in the corner of the preserved walls 24 and 40 (Deposit 2a). In the north area of Trench VI more Linear B tablets were found scattered in a layer with clear traces of fire, including carbonised seeds and fruits (Deposit 2b). In Trenches IV, V and VI the LH IIIC layer was excavated (Stratum 1). On top of Stratum 2 or 3 in Trenches V and VI, and in Trench IV as well, patches of floors (Floors 1, 2b–5) were revealed. This habitation activity dates to LH IIIC Early (Deposits 1c, 1b) and started shortly after the LH IIIB2 Late destruction. It continued, probably shrinking, in LH IIIC Middle as a floor patch with a hearth (Floor 2a) indicates, but the site was abandoned in a short time. The LH IIIC Middle deposit (Deposit 1a) apparently is the result of later levelling works comprising building materials from the abandoned houses with a lot of pottery, fragmentary, though better preserved than in the other Mycenaean layers.

The stratigraphy, architecture, pottery and other finds of the MCCTh plot on the north-north-west slope of Kadmeia Hill are under publication (Andrikou forthcoming). The LH IIIB2 Late destruction which occurred at the Pelopidas St. site is also attested in the MCCTh plot. At the south-west area of the plot (Trenches III2–III3) the content of a storeroom for alimentary provisions, mainly liquids, comprising at least 35 vases but also some prestige items like a bronze corselet, an agate seal and ivory artifacts, collapsed from a higher level into the basement when the building housing it was destroyed by fire (Andrikou 2022). At the centre of the plot (Trenches 13–15) another building was simultaneously destroyed by the same cause. In a ground floor room (Trench 14: Room 2) ritual activities were performed, since the jug **Theb 053** was found lying on the border of a small circular earth platform against the wall, presumably used for libations. On the right side of the platform six wild boar mandibles deprived of the tusks were lying, detached from the skull and initially suspended as a pair of holes pierced at the rear ends suggests. Evidence does not allow us to speak of a proper town shrine, since essential elements known from other sites (architectural arrangement, clay idols etc.) are missing (indicatively, Whittaker 1997, passim). A considerable quantity of ivory, mainly pieces of raw material and offcuts, and pumice fallen from an upper storey of the same building (Trench 13), indicates that an ivory workshop may well have operated in the area. After the destruction,



Room 2 was reinhabited and the circular platform was rebuilt at the same place, but at a higher level, and a bathtub mended with lead clamps was installed in second use. Next to it was found the hydria **Theb 054, 059**. The reoccupation of the site dates to LH IIIC Early and probably extended into the south part of the plot, where only a layer of building materials and broken pottery was found, formed after levelling works in Hellenistic and/or Byzantine times. The site was abandoned earlier than that at Pelopidas St., apparently because it suffered another fire.

A great amount of pottery, including many plain low and high stemmed kylikes (FS 267, 274; Furumark Shape [Furumark 1941]) and cups (FS 215) and a considerable number of fragmentary terracotta female (phi-, psi- and tau- types) and animal figurines, of a throne and of a boat, was discarded in an irregular pit immediately to the north-north-east of Room 2 (Trenches 17–18). This assemblage may be connected to communal events including drinking. The objects were discarded when the area was cleaned after the LH IIIB2 Late destruction by the new (?) inhabitants, as can also be deduced by the few LH IIIC Early vases and figurines found in it. The MCCTh plot preserves limited evidence of LH IIIA2 and LH IIIB1 habitation. Apart from scanty pottery sherds mixed in other deposits, the most substantial proof is a wall and a small pottery assemblage connected with it at the south-west part of the plot (Trenches III2–III3), which were spared when the building with the alimentary storeroom was constructed in this area.

The classification according to the findspot corresponds roughly to the chronology of the examples under study. The vases from the chamber tombs are dated to the early Mycenaean period (LH II), except three of the palatial (**Theb 010, Theb 012, Theb 015**), two of the post-palatial (**Theb 009, Theb 011**) and one of the MH periods (**Theb 006**). The main bulk of the material from the habitation areas dates to the LH IIIB2 Late phase and is connected to a widespread destruction event which affected the palatial system at Thebes. Some fragments from the Pelopidas St. excavation are of LH IIIA2 date and some of LH IIIC Early and Middle. LH IIIC Early vases and sherds also came from the MCCTh plot. The MH sherds sampled come only from the Pelopidas St. excavation (Tables 2–5).

Among the seven examples dated to the MH period, three are imports from Aegina (*AegA*) and four are attributed to the group *EuA*, recently identified and connected to the area of Phylla on Euboea, north of Lefkandi. Consequently, no MH example is considered to be of local production, which of course may be a mere coincidence. Pottery of group *EuA* – representing 9.5 per cent of the Theban material sampled – occurs continuously from MH to the palatial and post-palatial periods in burial contexts and especially in habitation areas, a fact that allows us to assume – from an archaeological aspect – a Boeotian production. But, on the other hand, the large number of vessels with the pattern *EuA* from early times on up to modern exploitation of the Phylla clay bed and the distribution of finds with this pattern from Italy to the Levant (Kerschner and Lemos 2014 and contributions therein) points to the popularity of these Euboean products. Visiting this clay bed, the huge quantity of clay withdrawn there is astonishing. Archaeometrically a clay bed with this pattern somewhere else in Boeotia cannot be excluded, but is not very probable.

Most of the pottery analysed (80 per cent of the total) comes from habitation levels excavated in Pelopidas St. (DEYATH) and the MCCTh plot (Tables 4 and 5). The majority of it is dated to LH IIIB2 Late and falls within the Boeotian group *TheA*, with one example in the similar group *TanA* attested at Tanagra. A considerable number of examples constitutes group *TheB* of very probable Boeotian origin, completed with three examples of the group *ThBC* and two more of group *KnoL*, assigned to central Crete. However, groups *TheA* and *TheB* appear already in early Mycenaean (one example of each group in Kolonaki tombs 14 and 26 respectively) and early palatial contexts and continue to the post-palatial period. Nevertheless, it must be emphasised that more LH IIIA and LH IIIC material needs to be analysed so that the sequence and frequency of these groups throughout the Mycenaean period can be established. In the final stage of the palatial period, group *TheF*, including an uninscribed fragment of a Linear B tablet, a clay lump and a HBP jar, is recognised of Theban origin. Finally, pairs 321 and 305 belong to the late palatial period and pair 008 to the post-palatial (Tables 2, 4, 5).

From the eight examples analysed and attributed to north-eastern Peloponnesian (7) and north-western Peloponnesian (1) origin – found mainly in the chamber tombs, except three in the

Table 2. Thebes pottery analysed. NAA groups / chronology.

Chronology	TheA	TanA	TheB	ThBC	KnoL	(TheB)	TheE	TheF	EuA	single	AegA	MYBE	MBKR	OlyB	Kofu	Ul53	X 029	X 166	X 167	pairs 305	oo8 321	TOTAL
MH									4		3											7
LH II	1		1							4		3		1								10
LH IIIA1- IIIB1	1		1						4	2		1	2			1		1				13
LH IIIB						9				1												10
LH IIIB2 Late	44	1	10	5	2			2	4	12	1				1	2	3		1		3	91
LH III C Early	4		2					1	1	1											2	11
LH III C Middle			2						1									1				4
LH III C Late			1																			1
Post-Mycenaean										1												1
TOTAL	50	1	17	5	2	9	3	14	21	3	5	2	1	1	3	3	2	1		5		148

Table 3. Chamber tomb cemeteries. Shapes / NAA groups / chronology.

Shape	TheA	TheB	EuA	single	MYBE	OlyB	XI66	TOTAL
FS 20					I**	I**		2
FS 24					I**			1
FS 25				I**				1
FS 30		I**						1
FS 99							I^^	1
FS 103				I**				1
FS 114							I***	1
FS 143	I**			I**				2
FS 175			I^^					1
FS 230					I***			1
FS 255					I**			1
FS 267			I***					1
open vase			I*					1
TOTAL	1	1	3	3	4	1	2	15

\* MH \*\* LH II \*\*\* LH IIIA<sub>1</sub>–III A<sub>2</sub>/B<sub>1</sub> ^^ LH IIIC Middle

Pelopidas St. excavation – seven date to the early Mycenaean and early palatial period. Only one from the habitation area dates to LH IIIB<sub>2</sub> Late, as well as one example attributed to group *Kofu* with the suggested provenance Corfu. Groups *UI53*, *X029*, *XI66* and *XI67* with unknown provenance date mainly to LH IIIB<sub>2</sub> Late (Tables 1 and 2).

The chamber tombs at Agia Anna area are the findspot of 12 vases and three vase fragments. Three of them have been detected as loners. Four more, two piriform jars (FS 20, 24) and two cups (FS 230, 255?), are assigned to the securely attested group Mycenae/Berbat and its subgroups (groups *MYBE*, *MBKR*; Mommsen et al. 1988; 1995; Mommsen 2003, 19–21), and so they must be considered to be imports from the north-eastern Peloponnese. Another piriform jar FS 20 must originate from the north-western Peloponnese (group *OlyB*). Both a jug FS 114 (LH IIIA<sub>1</sub>–B) and an alabastron FS 99 (LH IIIC Middle) belong to the group *XI66*, which still has an uncertain origin. Groups *TheA* and *TheB* are present with only one example each, while group *EuA* includes three dating to MH, LH III and LH IIIC Middle. In the chamber tombs the evidence of imported pottery from the Peloponnese is quite clear in the early Mycenaean period and less apparently from Euboea in the palatial and post-palatial periods (Table 3).

Habitation areas on the slopes of the Kadmeia Hill provided most of the Mycenaean material sampled, namely 16 vases and 100 vase fragments, as well as fragments of four roof tiles and of one Linear B tablet and a clay lump (Table 1). The vases produced represent a wide range of shapes, with plain open shapes prevailing. The majority of the examples sampled (70) falls within the chemical groups associated with Boeotia, *TheB*, *ThBC*, *TanA* and especially *TheA*, and is mainly dated to the subphase LH IIIB<sub>2</sub> Late (Tables 2, 4, 5). So, it can be said that these two sites acquired most of the pottery needed from one major workshop at Thebes, which continued to function in the post-palatial period (LH IIIC). Alternatively, several workshops were operating, using raw material from the same clay bed processed with the same recipe (Mommsen and Maran 2000–1, 96). At the same time, other workshops were supplying these two sites with pottery using different clays or recipes.

Five pictorial sherds and one crater from Thebes have been sampled, analysed and discussed together with other examples from all over Greece and the East Mediterranean with the aim of defining the production places of Mycenaean pictorial pottery (Mommsen and Maran 2000–1). A fragment of a closed vase in Marine style (**Theb 029**) is a loner. One crater fragment depicting a stag (**Theb 060**) is dated to the LH IIIB<sub>2</sub> phase by style, since it was found in a mixed Mycenaean layer of the MCCTh plot, and falls within group *TheB*, along with three more fragments (**Theb 026**–**Theb 028**) dating to the LH IIIC Early and Middle periods. The high quality of the LH IIIC Early crater decorated with sphinx and chariot scenes (**Theb 061**) is now



Table 4. Pelopidas St. excavation (DEYATH). Shapes / NAA groups / chronology.

Vase shape / artefact	TheA	TheB	ThBC	KnoL (Theb)	TheF	EuA	single	AegA	MYBE	MBKR	Ul53	X 167	pair 321	TOTAL
<b>DECORATED</b>														
Closed vase							I**			I***				2
Closed vase	I			I										2
FS 63/64	I^													1
FS 174	I													1
FS 215		I^A^A												1
FS 282		2^A^												2
FS 282		I^												1
FS 284	16	I					I		I					19
FS 284	2^													2
FS 305	I													1
Open vase						I	I							2
Bowl	I***													1
<b>UNDECORATED</b>														
Closed vase		I												1
Cooking pot							2					I		3
FS 204						I***								1
FS 215							I^							1
FS 225										I***				1
FS 236						I								1
FS 264						I***								1
FS 267		I					I***				I***			3
FS 274						I								1
Goblet /Kylux						I***	I***							2
Kylux		I***	I				I				I			4
FS 295	I													1
Bowl											I			1
<b>VARIOUS</b>														
HBP					I^									1
Roof tile		I											I	2
Tablet, lump					2									2
Total	24	9	I	I	3	6	9		I	2	3	I	I	61
Amphora									I*					1
Closed vase									I*					1
Goblet						I*								1
Open vase						2*			I*					3
Total						3			3					6
TOTAL	24	9	I	I	3	9	9	3	I	2	3	I	I	67

\* MH \*\* LH II \*\*\* LH IIIA2-III A2/B1 LH IIIB2 Late

^ LH IIIC Early ^ ^ LH IIIC Middle ^^ LH IIIC Late

attributed to group *EuA*. All of them, in terms of shape, style and iconography, fit the Mycenaean tradition, even though they belong to a period when local divergence in pottery production is growing.

Another special category includes Handmade Burnished Pottery. Two examples (**Theb 039** and **Theb 040**) from a plot near the Pelopidas St. excavation are not yet precisely dated. They form a chemical pair different from all other chemical groups. By contrast, the HBP jar fragments from the Pelopidas St. excavation (**Theb 037, 038**) were embedded in an LH IIIC Early floor and, together with a Linear B tablet and a lump of clay intended for a tablet, are attributed to the distinct chemical group *TheF*, a fact suggesting that all three items are of local production. Finally, the chemical loner **Theb 057**, a cooking pot from a disturbed area in the MCCTh plot, dates to the post-Mycenaean period.

Nine out of the 10 inscribed stirrup jars from the *House of Kadmos* analysed were found to belong to the separate group *TheE*, which can be connected to identified groups from Chania, West Crete (MommSEN et al. 2002). Vases/sherds consistent with the group *TheE* were not attested in the material sampled from the other findspots, either the chamber tomb cemeteries on the Ismenion and Kolonaki hills or the habitation sites on Kadmeia Hill. The tenth inscribed storage stirrup jar analysed from the *House of Kadmos* is a chemical loner (Table 1).

#### SUMMARY: CONCLUSION

The pottery from Thebes sampled within the project ‘Pottery Production and Distribution of Bronze Age Settlements of Mycenaean Greece and the Aegean’ in 1996 has been found to consist of 21 chemical groups and pairs.

The pottery assigned to group *TheA* (33.8 per cent of the material sampled) is considered Boeotian and probably of Theban production. Group *TheA* is first detected in the early Mycenaean period and mainly occurs, as well as the related Boeotian group *TanA* (representing 0.7 per cent), in LH IIIB2 Late contexts which were widely sampled, and also post-palatial ones (LH IIIC Early) (Tables 1 and 2).

Group *TheB* and subgroup *ThBC* (total 14.8 per cent) may also be of local Boeotian production, with a distribution over time similar to the previous groups, plus some examples of LH IIIC Middle and Late date. Group *TheB/ThBC* has been attested at the site of Eleon near Thebes with more post-palatial examples than group *TheA* (Lis et al. 2023, 4–5, table 1).

Group *TheF*, consisting here of three special items, a HBP jar, an uninscribed fragment of a Linear B tablet and a clay lump for making a Linear B tablet, is connected to Thebes in the subphases LH IIIB2 Late and LH IIIC Early. Two other examples of HBP form a distinct pair (*pair 008*) of unidentified provenance.

The third group, according to the number of examples included (9.5 per cent), is *EuA*, archaeometrically assigned to be of Euboean origin. The examples spread over quite a long time-span (MH, palatial and post-palatial periods) and include decorated and plain everyday-use vases. The pottery of this group seems to have been imported, although it cannot be ruled out that clay from the Phylla bed near Lefkandi was imported. MH pottery is found to fall within this *EuA* group (four examples) or to have been imported from Aegina (*group AegA* – three examples).

The inscribed stirrup jars from the *House of Kadmos* belong to group *TheE* (old name, not Thebes), indicating that they are imports from Chania and the surrounding area. From the rest of the material, the pairs *008*, *305* and *321* seem to be Boeotian. Small groups of unidentified provenance (*UI53*, *X029*, *X166*, *X167*) are recognised, while 14.2 per cent of the total are characterised as loners.

Two examples associated with the group *KnoL* of central Crete, which often presents similarities to group *TheB* with only a difference in Rb (Gilboa et al. 2017), and one more with the group *Kofu* originating probably from Corfu are considered imports. Nearly 5 per cent of the material was imported from the north-eastern Peloponnese (two distinct groups: Table 1) and 0.7 per cent from the north-western Peloponnese. These Peloponnesian imports, mostly complete vases,

Table 5. MCC Thebes plot. Shapes / NAA groups / chronology.

Vase shape / artefact	TheA	TanA	TheB	ThBC	KnoL (TheB)	EuA	single	Kofu	Xo29	Pair 305	TOTAL
<b>DECORATED</b>											
Closed vase	I					I			I		3
FS 59			I								I
FS 64			I								I
FS 105	I										I
FS 128			I <sup>^</sup>								I
FS 162	I										I
FS 199									I		I
FS 282			I			I <sup>^</sup>					2
FS 284	4	I		I	I		I	I			9
<b>UNDECORATED</b>											
Closed vase	I						I				2
FS 222				2							2
FS 222/267	2						I				3
FS 267	5		I	I			2		I	I	11
FS 274	2										2
FS 274	I <sup>^</sup>										I
Kylix	I						I			I	3
FS 280			I								I
FS 281	I										I
FS 284	2										2
FS 295	2										2
FS 295 basin	I										I
<b>VARIOUS</b>											
Roof tile			I				I				2
Cooking pot							I <sup>#</sup>				I
<b>TOTAL</b>	<b>25</b>	<b>I</b>	<b>7</b>	<b>4</b>	<b>I</b>	<b>2</b>	<b>8</b>	<b>I</b>	<b>3</b>	<b>2</b>	<b>54</b>

LH IIIB2 Late ^ LH IIIC Early # post Mycenaean

come almost exclusively from the chamber tombs and date to the early Mycenaean and early palatial periods. Only one fragment comes from the habitation areas and is of LH IIIB2 Late date. This implies that north-eastern Peloponnesian pottery was widely imported in early Mycenaean times and decreased dramatically in quantity in the LH IIIB2 period. However, this conclusion may not be totally valid, because the pottery sampled comes from different contexts, for example, early Mycenaean/early palatial burials versus late palatial habitation areas. Since habitation contexts dating to LH II–LH IIIA1 are very sparsely preserved in Thebes, more sampling of LH III vases from chamber tombs may shed light on this matter.

In conclusion, five chemical groups of pottery (*TheA*, *TanA*, *TheB*, *ThBC*, *TheF*) are associated with varying degrees of certainty with Boeotian pottery production during the Mycenaean period. In the late palatial period group *TheA* seems to prevail in Thebes. In the post-palatial period it seems to have declined gradually, while the workshop identified as group *TheB/ThBC* still operated. Imports in the late palatial and post-palatial periods came mostly from Euboea, while in early Mycenaean times the north-eastern Peloponnese was the source.

#### SUPPLEMENTARY MATERIAL

Online-only Supplementary Material, consisting of the catalogue of the pottery sampled, is published alongside this article.

To view supplementary material for this article, please visit <https://doi.org/10.1017/S0068245424000030>.

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## Η παραγωγή και διάδοση της κεραμικής στη μυκηναϊκή Θήβα της Βοιωτίας

Στο πλαίσιο του προγράμματος «Παραγωγή και διάδοση της κεραμικής στους οικισμούς της Εποχής του Χαλκού στη μυκηναϊκή Ελλάδα και το Αιγαίο» ελήφθησαν το 1996 δείγματα από μυκηναϊκή κεραμική της Βοιωτίας στο Αρχαιολογικό Μουσείο της Θήβας, προκειμένου να αναλυθούν με τη μέθοδο της ενεργοποίησης νετρονίων (AEN). Τα αποτελέσματα των αναλύσεων δημοσιεύθηκαν το 2002. Η συνεχιζόμενη εργασία επί νέων δειγμάτων και η επανεκτίμηση των προϋπαρχόντων, και

στις δύο περιπτώσεις προερχόμενων από διάφορες θέσεις του μυκηναϊκού κόσμου, οδήγησε στον επανακαθορισμό των αποτελεσμάτων της AEN στο θηβαϊκό υλικό. Η παρούσα εργασία αποσκοπεί να προσεγγίσει από αρχαιολογική άποψη το αναλυθέν υλικό (152 δείγματα από 148 αντικείμενα), το οποίο οργανώνεται σε τρεις ενότητες ανάλογα με την ακριβή θέση ευρέσεώς του: **A.** Τα νεκροταφεία των θαλαμωτών τάφων στους λόφους της Αγίας Άννας (Κολωνάκι και Μικρό Κολωνάκι) και του Ισμηνίου. **B.** Η *Οικία του Κάδμου*. **Γ.** Περιοχές κατοικήσεως στις ΝΑ και ΒΔ πλαγιές του Καδμείου λόφου. Αυτή η ταξινόμηση ανταποκρίνεται σε γενικές γραμμές στη χρονολόγηση του υλικού, το οποίο τοποθετείται στη Μεσοελλαδική και από την Υστεροελλαδική II έως την Υστεροελλαδική IIIΓ Όψιμη περίοδο. Η αναλυθείσα κεραμική είναι μυκηναϊκή. Λίγα δείγματα ανήκουν στη χειροποίητη έντριπτη κατηγορία, ενώ περιλαμβάνονται τέσσερα θραύσματα από κεραμίδες, ένα ανεπίγραφο θραύσμα από πινακίδα Γραμμικής γραφής Β' και ένας βώλος πηλού για την κατασκευή πινακίδας. Αναγνωρίστηκαν είκοσι μία χημικές ομάδες/υποομάδες/ζεύγη. Οι ομάδες που αποδίδονται στην Βοιωτία περιλαμβάνουν πολυάριθμα αντικείμενα που προήλθαν κυρίως από τις οικιστικές περιοχές και χρονολογούνται στην Υστεροελλαδική IIIΒ2 Όψιμη φάση. Εντοπίστηκαν εισαγωγές από την Πελοπόννησο, Εύβοια, Κρήτη και μία από την Κέρκυρα, καθώς και θραύσματα άγνωστης προέλευσης ή ιδιότυπα. Συμπερασματικά, πέντε χημικές ομάδες κεραμικής (TheA, TanA, TheB, ThBC, TheF) συνδέονται με την παραγωγή αγγείων στην Βοιωτία με ποικίλο βαθμό βεβαιότητας. Εισαγωγές πραγματοποιούνταν από την ΒΑ Πελοπόννησο κατά την πρώιμη Μυκηναϊκή περίοδο και από την Εύβοια κατά την ύστερη ανακτορική και μετανακτορική περίοδο.