

# Reassessing the Date of the Beginning of the Grey Series Transport Amphorae from Lesbos

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## Abstract

*This study seeks to reassess the conventional chronology for the beginning of the Grey Series amphorae from the isle of Lesbos. Based on a rediscovery of a Lesbian amphora in a secured Iron Age IIB context at Tell Qudadi (Israel), it is suggested that the beginning of the Lesbian series should be dated to ca 700 BC (that is significantly earlier than previously assumed), similar to other archaic East Greek amphorae series (e.g., Samian, Chian and Clazomenian). The study is accompanied by thin-section and NAA analyses carried on the Lesbian amphorae from Tell Qudadi and Mezad Hashavyahu (Israel).\**

## INTRODUCTION

The term ‘Lesbian Grey Series amphorae’ relates to a well-known family of ceramic transport amphorae, originating most probably on the isle of Lesbos. The chronology, typology and distribution of these containers were discussed in length in a number of extensive studies.<sup>1</sup> According to a commonly held view, the initial production of the Lesbian Grey Series took place in the later part of the 7<sup>th</sup> century BC.<sup>2</sup> Indeed, although Cook, following his excavations of ancient Smyrna in Asia Minor, did suggest that these amphorae were already in existence in the 8<sup>th</sup> century BC if not earlier,<sup>3</sup> this theory has never been supported by additional archaeological evidence, and the early Grey Series amphorae from Smyrna remain largely unpublished. The earliest secure dated example of Lesbian Grey Series amphorae came from the exca-

vation of the Athenian Agora, in a context of the third quarter of the 7<sup>th</sup> century BC.<sup>4</sup> Other early examples have also been ascribed to no earlier than the second part of the 7<sup>th</sup> century BC. This relates to a modest number of vessels uncovered in a number of late 7<sup>th</sup>-century BC assemblages, their find-spots encompassing the whole Mediterranean. Thus a number of Grey Series Lesbian amphorae pieces have been unearthed in what seems to be late 7<sup>th</sup>-century BC contexts in Kommos (Crete);<sup>5</sup> in a number of Greek colonial contexts in southern Italy;<sup>6</sup> in Tocra on the Lybian coast;<sup>7</sup> in Clazomenai (Ionia), particularly in its Akpinar necropolis, where such amphorae were used as containers for infant inhumations;<sup>8</sup> in Histria on the Black Sea<sup>9</sup> and in Mezad Hashavyahu and Ashkelon in Israel.<sup>10</sup> In the early 6<sup>th</sup> century BC both the distribution and the quantity of Lesbian transport-amphorae exports rose significantly.<sup>11</sup>

The conventional chronology concerning the initial production of the Lesbian amphorae is in line with the so-called conventional chronologies of additional East Greek-series transport amphorae, which came from workshops in Samos, Chios, Clazomenai, Miletos and elsewhere, and according to the conventional view also began to appear in the second half of the 7<sup>th</sup> century BC (at the earliest).<sup>12</sup> However, in too many cases much weight was given to the Black Sea region whereas the evidence from other areas was sometimes overlooked.<sup>13</sup> The current archaeological consensus, although still disputed by some historians, is that an actual Greek colonization of the Black Sea area began only in the second half or even in the late 7<sup>th</sup> century BC.<sup>14</sup> This is the reason why the conventional chronologies for the initial production stage of the Archaic East Greek amphorae, based mainly on the evi-

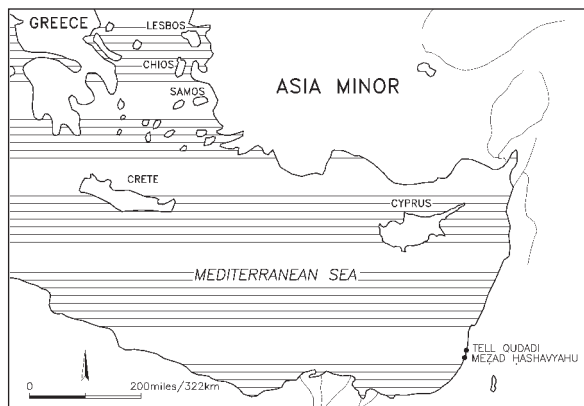


Fig. 1. Tell Qudadi and Mezad Hashavyahu in their Mediterranean setting.



Fig. 2. Tell Qudadi prior to the excavations (1925, photo by S. Korbman (by special permission of the Administrator General, the State of Israel, as the executor of S. Korbman Estate and Eretz Israel Museum, Tel Aviv)).

dence from the Black Sea region, have been so widely accepted. However, new evidence from Carthage in North Africa and Toscanos in Spain prove that these chronological assumptions are not precise, since several East Greek amphorae fragments from various workshops were found in much earlier contexts. R.F. Docter, in his comprehensive study of these early amphorae, concludes persuasively that the production and distribution of the Samian amphorae began as early as the third quarter of the 8<sup>th</sup> century BC instead of the customarily late 7<sup>th</sup>-century BC date; those of Chios were already produced in the beginning of the second quarter of the 7<sup>th</sup> century BC and not in the third quarter of that century, while the beginning of the Clazomenian series may be dated to the end of the 8<sup>th</sup> century BC instead of the second half of the 7<sup>th</sup> century BC.<sup>15</sup> Although some hints for the earlier appearance of the Lesbian-series transport amphorae are known,<sup>16</sup> so far it had been impossible to claim with certainty that their initial production had begun much earlier than the latter part of the 7<sup>th</sup> century BC. In what follows, we contend that like the Samian, Chian and Clazomenian series, the beginning of the Lesbian series should also be dated significantly earlier. We base our argument on new evidence, namely a rediscovery of a Grey Series Lesbian amphora fragment at Tell Qudadi, Israel.

#### NEW EVIDENCE FROM OLD EXCAVATIONS

Tell Qudadi<sup>17</sup> is a medium-sized mound located within the city limits of Tel Aviv on the northern bank of the Yarkon estuary of the Mediterranean (for general location, see fig. 1). The mound rises about 8 m above sea level (fig. 2). Trial excavations at the site were carried out as early as October

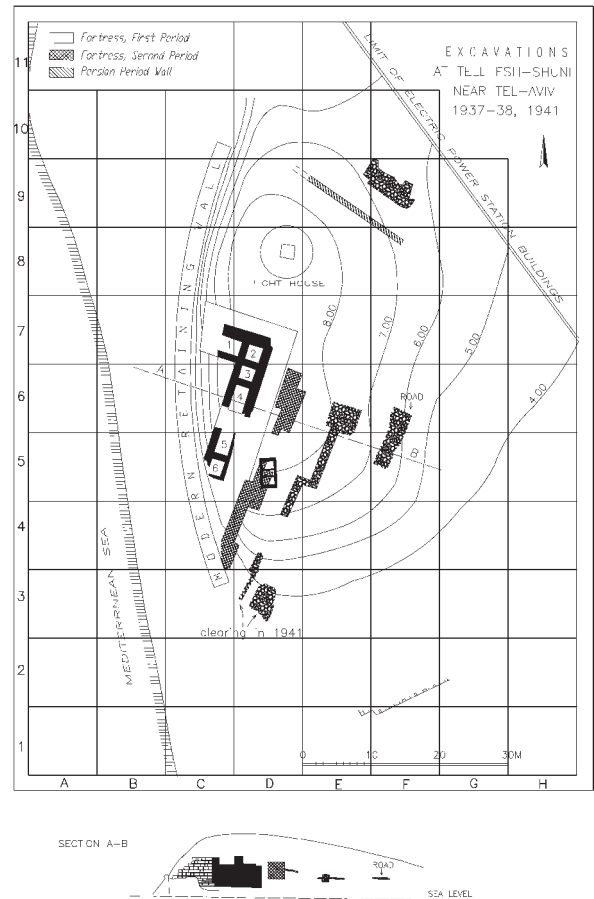


Fig. 3. Site map of Tell Qudadi of the 1937-1938 and 1941 seasons of excavations (re-drawn according to archival plan).

1936 under the direction of P.L.O. Guy on behalf of the British Mandatory Department of Antiquities. An extensive salvage excavation was conducted at the site by the Hebrew University of Jerusalem from November 1937 to March 1938, headed by E.L. Sukenik and S. Yeivin and assisted by N. Avigad. This excavation uncovered the remains of an impressive Iron Age fortress revealing two clear architectural phases (fig. 3).

The first fortress was erected upon a substructure of rough-hewn blocks of *kurkar* (fossilized dune sandstone), 3 m high with walls 7 m thick. The eastern wall is preserved to a length of 33 m and its southern wall to 14 m. All other walls of the substructure were completely destroyed. On top of this substructure, six rooms, built around a central courtyard, were found filled with sand. The walls of this structure were preserved to a height of 0.6 m. The excavators disagreed as to the dat-

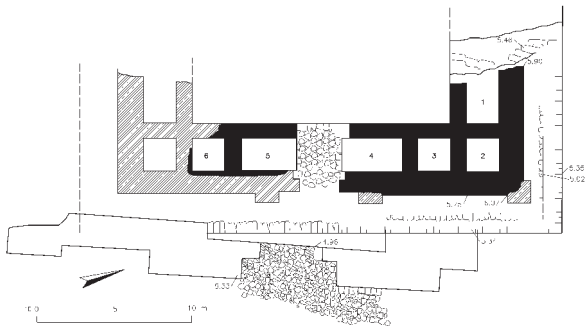


Fig. 4. Plan of the fortress of Tell Qudadi (re-drawn according to archival plan).

ing of the first phase of the fortress. In Yeivin's opinion, it was established during the 10<sup>th</sup> century BC, at the behest of King Solomon, in order to protect the approach from the sea and prevent possible hostile raids against inland settlements located along the Yarkon. He proposed that the establishment of the fortress at Tell Qudadi points to the existence of a developed maritime policy in the days of the United Monarchy.<sup>18</sup> Avigad, on the other hand, suggested that the fortress was erected sometime in the 9<sup>th</sup> century BC, and can be attributed to the Kingdom of Israel.<sup>19</sup>

From the second phase of the fortress, an inset-offset wall of rough-hewn blocks of *kurkar* was found parallel to the eastern façade of the first phase. Its length is ca 30 m, its thickness ca 2.50 m and its maximum height more than 2 m. Near its center was an entrance 4 m wide, protected by a buttress on each side and approached by a ramp paved with fieldstones (fig. 4). According to the excavators, two floors and two burnt layers they discovered were connected to the second phase of the fortress, since they cover the rooms of the first fortress. The pottery found in the burnt layers was dated to the end of the 9<sup>th</sup> and the beginning of the 8<sup>th</sup> centuries BC. The excavators therefore determined that the fortress belonged to the Israelite kingdom and they attributed the destruction of the second phase to the campaign of Tiglath-pileser III in 732 BC. Such a reconstruction of events was unreservedly accepted by other scholars.<sup>20</sup>

Although the excavations were carried out more than 70 years ago, the final results and the finds were never published, and Avigad's succinct half-page summary remained the most in-depth presentation of the Iron Age remains of the site.<sup>21</sup> Due to the importance of the fortress at Tell Qudadi, stemming from its monumental architecture and geographical location,<sup>22</sup> it was decided recently to collect all the relevant unpublished data in order

to produce a final excavation report.<sup>23</sup> It should be noted that both the documentation concerning the excavation and the finds were well-preserved. Moreover, the high excavation standards adopted by the original team, amply evident from the documentation of the excavation and the storing of the finds, made the complicated task of producing a study on an old excavation considerably simpler. Our initial analysis of site's stratigraphy and numerous finds, together with a suggested historical/chronological setting, has been presented in detail elsewhere and there is no need to revisit it here in detail.<sup>24</sup>

In brief, contrary to the excavators' opinion, the first burnt layer represents the destruction of the first phase of the fortress and the second burnt layer represents the destruction of the second phase of the fortress. Likewise, a renewed study of ceramic finds from the site has shown unreservedly that all ceramic assemblages (three in total) associated with the Iron Age phases of the fortress of Tell Qudadi belong to what is referred to in Levantine archaeology as the Iron Age IIB period. Although heterogenic in nature, that is to say the three assemblages from Tell Qudadi feature northern, southern and coastal local characteristics, their study reveals no essential differences in terms of typology. The assemblages indicate a chronological horizon identified with the assemblages of Hazor VI-V or Beth-Shean P-7, or of Lachish Level III, destroyed by Sennacherib in 701 BC and its many parallels in the Land of Israel.<sup>25</sup> For many years scholars believed that the Iron Age IIB horizon represents mainly the second half of the 8<sup>th</sup> century BC. Nowadays the majority opinion favors the idea that the transition from the preceding assemblages of the Late Iron Age IIA to those of the beginning of the Iron Age IIB had already occurred at the beginning of the 8<sup>th</sup> century BC.<sup>26</sup> Most recently, however, it has been suggested once again that the Lachish Level III ceramic horizon, to which the Iron Age ceramic assemblages of the fortress of Tell Qudadi clearly belong, cannot predate the 760s BC.<sup>27</sup> This time, however, such a notion is based upon evaluation of a number of 14C dates from Beth-Shemesh 3, a stratum that features transitional Iron IIA/Iron IIB pottery forms.<sup>28</sup> Be that as it may, it seems that in terms of regional ceramic development, the transition between characteristic assemblages of the Late Iron IIA and Iron IIB was rather gradual and was completed somewhere in the first half of the 8<sup>th</sup> century BC.

However, the ceramic horizon of Iron Age IIB does not end with the Neo-Assyrian destruction

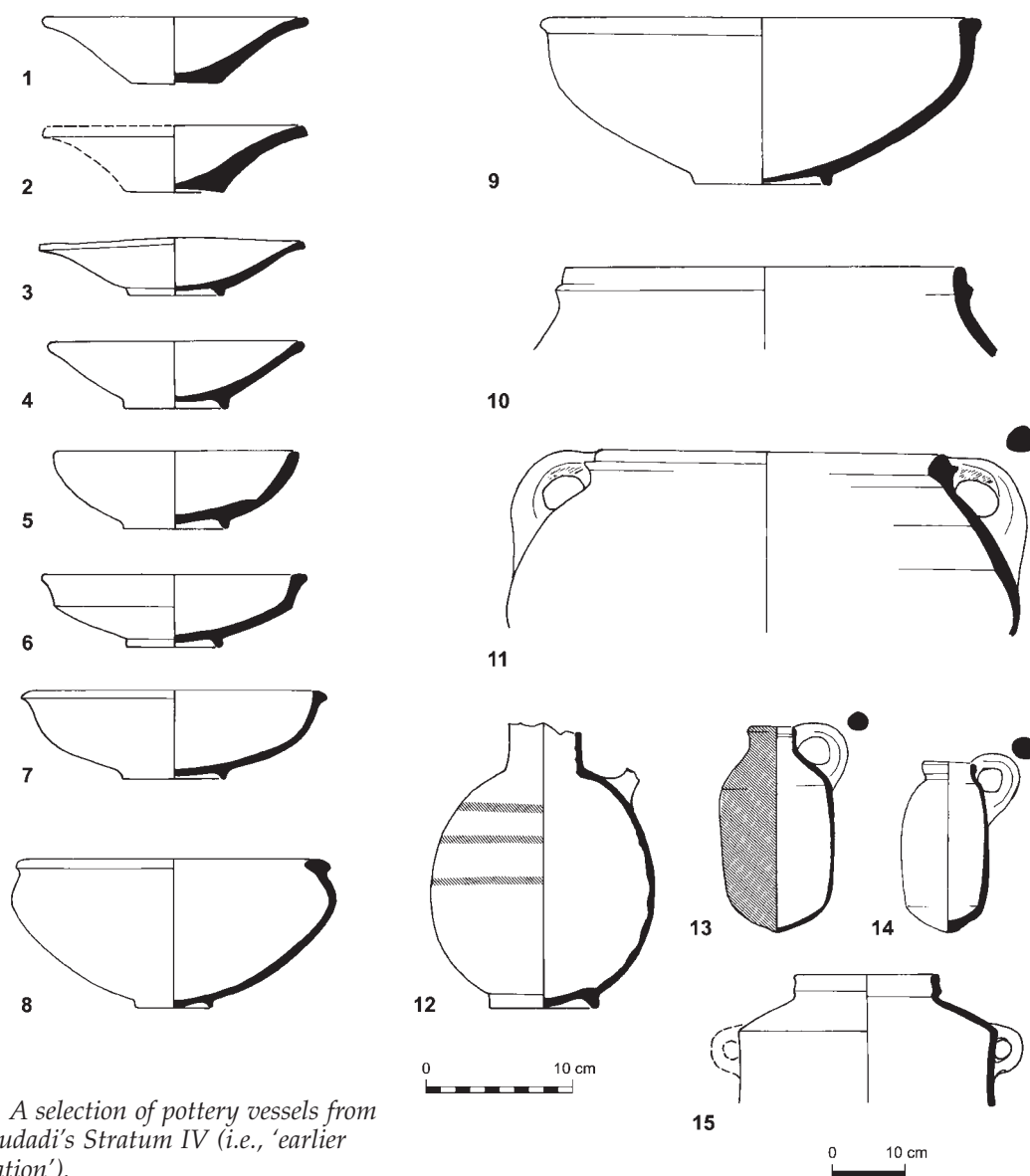


Fig. 5. A selection of pottery vessels from Tell Qudadi's Stratum IV (i.e., 'earlier occupation').

layers toward the end of the 8<sup>th</sup> century BC, but, most probably, continues at least throughout the first half of the 7<sup>th</sup> century BC.<sup>29</sup> Like the gradual transition from the assemblages of the Late Iron Age IIA to those of the Iron Age IIB, it may be safely assumed that the transition from the Iron Age IIB assemblages to those uncovered in the Neo-Babylonian destruction layers from the end of the 7<sup>th</sup>/beginning of the 6<sup>th</sup> centuries BC (sometimes termed Iron Age IIC) was also gradual and was completed only in the second part of the 7<sup>th</sup> century BC. This next chronological horizon, which is often referred to as 'Lachish Level II and its parallels', is securely defined in terms of ceramic

assemblages, due to its preservation in the Neo-Babylonian destruction layers.<sup>30</sup>

Overall, the ceramic assemblages discovered on the floors and in the fills of the Iron Age fortress of Tell Qudadi, belong to the 'classic' Iron Age IIB period. That is to say both the transitional features of Iron IIA/Iron IIB pottery forms and the forms that characterize the ceramic assemblages from the end of the 7<sup>th</sup>/beginning of the 6<sup>th</sup> centuries BC (Iron Age IIC) are basically missing from Tell Qudadi's ceramic repertoire (figs 5-7). Such an observation might help to limit the fortress' occupation in broad terms to the second half of the 8<sup>th</sup>-first half of the 7<sup>th</sup> centuries BC, corresponding to

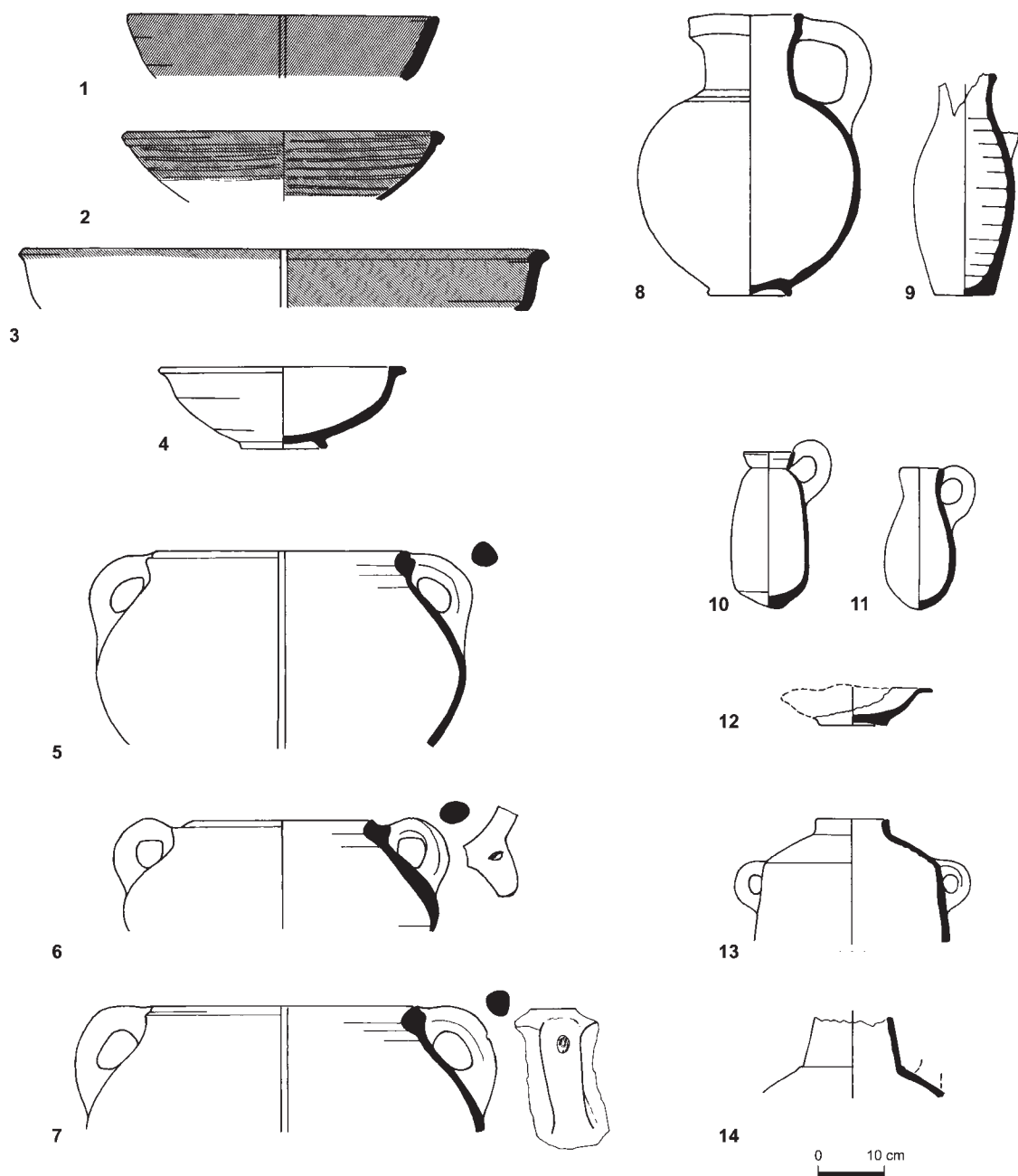


Fig. 6. A selection of pottery vessels from Tell Qudadi's Stratum IIIB (i.e., 'middle occupation' (the Lesbian amphora appears in no 14)).

the period of Neo-Assyrian domination in Palestine. It is in this context that the Lesbian amphora appears, or more accurately, a rather large fragment of a neck and body of a Lesbian Grey Series transport amphora (figs 6:14; 8), discovered within a clear context of what we call Stratum IIIB; that is, the middle occupation layer. This layer repre-

sents a rich local assemblage from the occupation level above the first destruction layer of the fortress. Based on the excellent recording in the excavation logbooks, we can even trace the date of this discovery, which was specifically mentioned on February 16, 1938. Thus according to the excavators, parts of the large neck of a grey vase were

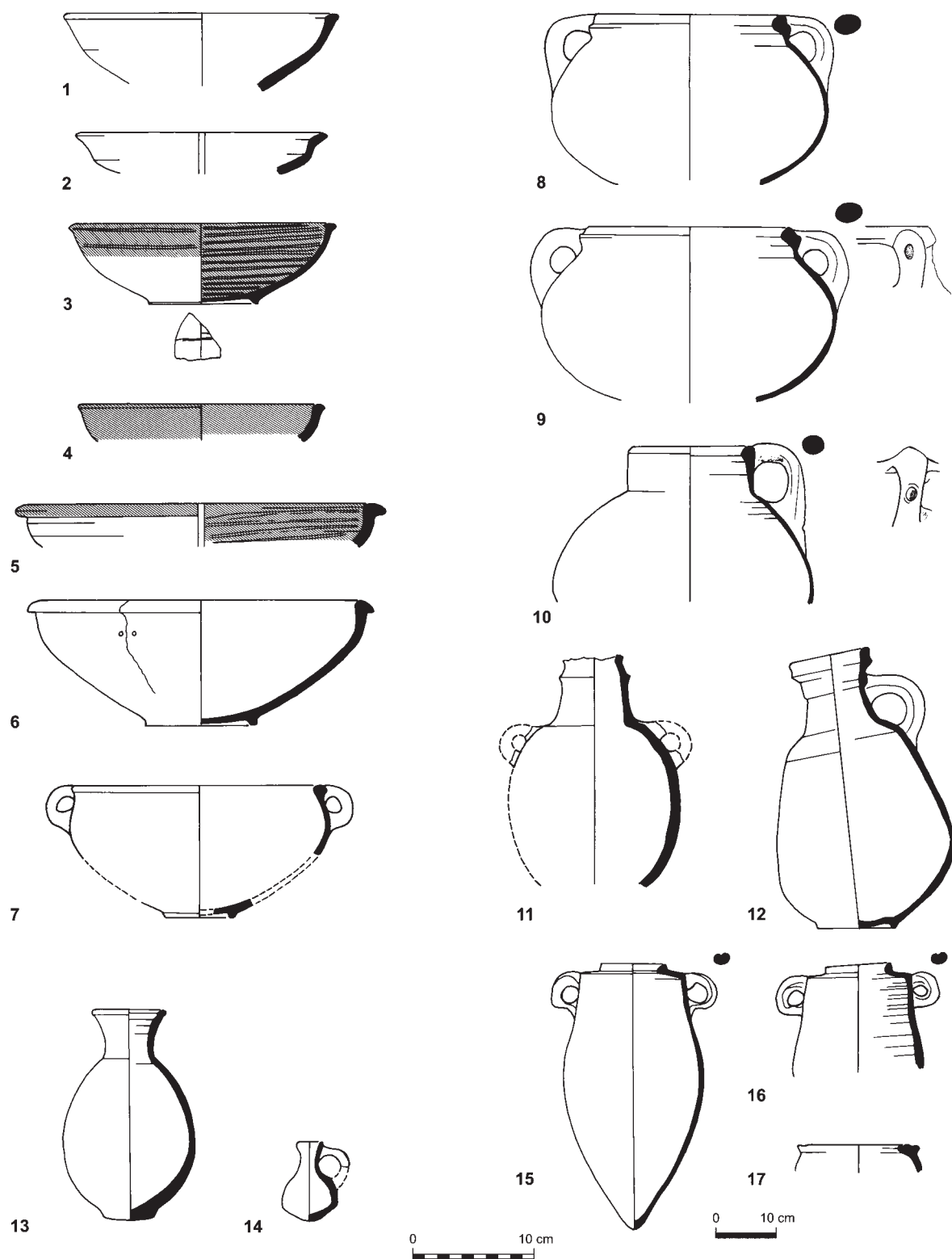


Fig. 7. A selection of pottery vessels from Tell Qudadi's Stratum III (i.e., 'later occupation').

Fig. 8. The Lesbian amphora from Tell Qudadi.

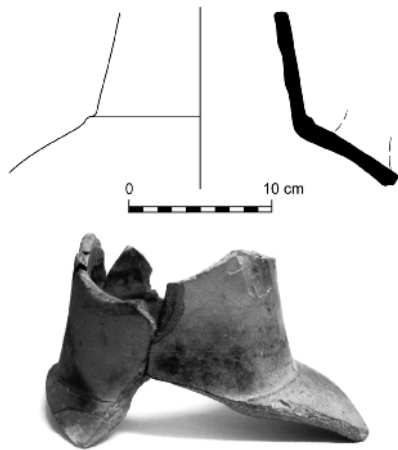
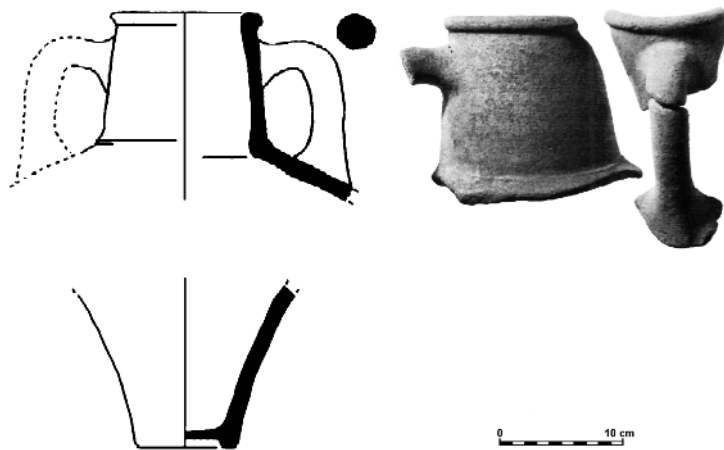


Fig. 9. The Lesbian amphora from Mezad Hashavyahu.



found together with numerous pottery sherds in a clear context, above the first destruction layer and beneath the second destruction layer of the Iron Age fortress. The excavators did not offer any suggestion concerning the place of origin for this piece, other than acknowledging its unusual grey fabric. Taking into consideration the date of the discovery, this is not surprising. Moreover, although the beginning of a handle base and a protruding ridge at the bottom of a trapezoid neck are visible, the amphora was found rimless, making its attribution even more difficult for the excavators. Concerning the place of origin, even today it is not always easy to postulate with certainty if a given Grey Ware pottery fragment was produced in Lesbos or in mainland Aeolis, since the Anatolian pedigree of a grey monochrome fabric is a well-known phenomenon.<sup>31</sup> Although through the ages the Grey

Ware was certainly not alien to the Aegean-Balkan milieu,<sup>32</sup> it has been noted that during the Bronze and Iron Age the Grey Ware from Lesbos, for instance, has much more in common with Anatolia than with any other region of mainland Greece.<sup>33</sup> Although some advances have been made recently in identifying various pottery workshops for different types of Grey Ware in Aeolis,<sup>34</sup> our knowledge concerning the workshops of the Grey Ware amphorae is far from satisfactory.<sup>35</sup>

Given the uniqueness of Tell Qudadi's allegedly Lesbian piece, it has been subjected to thin-section analysis (petrography/mineralogy) and neutron activation analysis (NAA). The same analyses were undertaken on a large piece of a Lesbian amphora (fig. 9), discovered in the late 7<sup>th</sup> century BC context at the site of Mezad Hashavyahu, located some 25 kilometers to the south of Tell Qudadi.<sup>36</sup> The

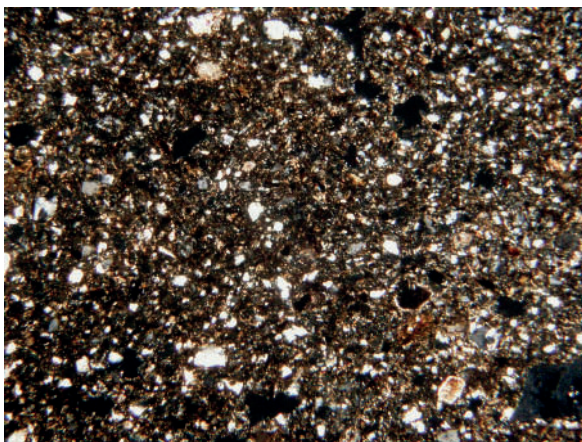


Fig. 10. Thin-section of the Lesbian amphora from Tell Qudadi (width of field 2.5 mm).

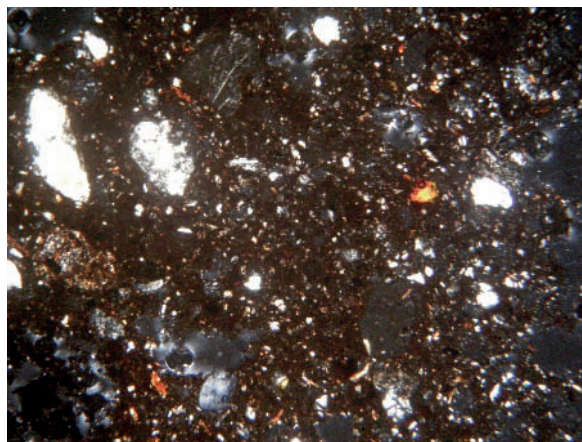


Fig. 11. Thin-section of the Lesbian amphora from Mezad Hashavyahu (width of field 2.5 mm).

petrographic examination conducted by Y. Goren largely confirms the earlier observations made by I.K. Whitbread and D.M. Master concerning the Lesbian fabrics,<sup>37</sup> and shows the following picture:

- \* Qudadi 362 (*fig. 8* (neck and body)): Dark tan, ferruginous matrix with silt dominated by mica laths, quartz and some epidote. Inclusions contain serpentine, quartzite, plagioclase, biotite mica and crystalline basalt (*fig. 10*).
- \* Mezad Hashavyahu C 30/1 (*fig. 9* (rim)): Dark tan, ferruginous matrix with silt dominated by mica laths, quartz and some epidote. Inclusions contain serpentine, quartzite, plagioclase, biotite mica and rarely finely crystalline basalt (*fig. 11*).
- \* Mezad Hashavyahu C 30/2 (*fig. 9* (base)): As Mezad Hashavyahu C 30/1, with additions of some grains of the basalt.

As can be seen above, the fabric of these samples is characterized by dark-grey micromass color, a sandy, well-sorted texture and inclusions of quartz, mica, epidote minerals and metamorphic and volcanic fragments, though rarely presented. These components are typically found throughout north-western Anatolia and on Lesbos.

The NAA analysis, on the other hand, has yielded an unknown provenance group for both specimens. According to Mommsen, however, the Tell Qudadi piece is made of the same paste (fabric) as that of the above-mentioned amphora from Mezad Hashavyahu. Both pieces are very close in composition, i.e., 18 of the 25 elements have spreads (root mean square deviations = standard deviations) of less than 6% and 8 elements have even less than 3% (*table 1*).

Since the complete profile of Mezad Hashavyahu's amphora is widely considered to be of truly Lesbian origin,<sup>38</sup> we are inclined to believe that the Tell Qudadi piece must necessarily also be attributed to a Lesbian origin. Paradoxically, due to the lack of contemporary NAA analyses from Lesbos,<sup>39</sup> the fact that a particular chemical fingerprint detected in the Grey Series amphorae from Tell Qudadi and Mezad Hashavyahu fits none of the many known chemical pottery profiles from Anatolia strengthens our view that these amphorae were produced in Lesbos. Nevertheless, additional NAA analyses are needed, especially from Lesbos.

The discovery of the amphora from Lesbos in what is clearly an Iron Age IIB context in our region therefore comes as a complete surprise, since it is usually assumed that the production of these amphorae did not begin before the third quarter of the 7<sup>th</sup> century BC (above). Considering the absolute chronology of the Lesbian amphora

from Tell Qudadi, we must take into account that it was found in a clear context of Stratum IIIB, sealed by the second destruction layer (Stratum III), which can not be dated much later than the middle of the 7<sup>th</sup> century BC. Taking into consideration the period of existence of the second fortress, which came to a violent end at Stratum III, and the length of existence for the occupation level detected in the preceding Stratum IIIB (above the remains of the earlier fortress of Stratum IV), one may safely postulate that the Lesbian amphora from Tell Qudadi was deposited there not later than the very late 8<sup>th</sup> century BC or the very early 7<sup>th</sup> century BC. In this regard one should also consider a certain time-span between the production of this vessel on Lesbos and its arrival and depo-

	Mezad Hashavyahu		Tell Qudadi		Averages	
	1 sample (MeHa 1)		1 sample (QuDa 1)		2 samples	
	factor 1.00		factor 1.00		factor 1.00	
	C	± δ(%)	C	± δ(%)	M	± σ(%)
As	17.5	(0.9)	20.6	(0.8)	19.0	(11.)
Ba	1621.	(1.7)	1786.	(1.6)	1702.	(6.7)
Ca %	2.22	(10.)	2.41	(9.1)	2.31	(9.5)
Ce	152.	(1.4)	147.	(1.4)	149.	(2.3)
Co	15.8	(0.7)	15.8	(0.7)	15.8	(0.7)
Cr	84.1	(0.9)	93.4	(0.8)	88.7	(7.2)
Cs	8.91	(1.1)	7.31	(1.2)	8.11	(14.)
Eu	2.00	(1.5)	2.16	(1.4)	2.08	(5.4)
Fe %	4.03	(0.4)	4.38	(0.4)	4.20	(5.6)
Ga	23.2	(18.)	28.6	(14.)	26.1	(16.)
Hf	9.66	(0.8)	9.44	(0.8)	9.55	(1.9)
K %	3.03	(1.8)	2.93	(1.7)	2.98	(2.6)
La	76.6	(0.7)	76.8	(0.7)	76.6	(0.7)
Lu	0.46	(3.8)	0.46	(3.8)	0.46	(3.8)
Na %	2.12	(0.6)	1.80	(0.6)	1.96	(12.)
Nd	51.2	(2.1)	53.1	(2.1)	52.1	(2.4)
Ni	—		91.0	(35.)	91.0	(35.)
Rb	127.	(2.0)	122.)	(2.0)	124.	(3.3)
Sb	2.28	(3.9)	1.93	(4.2)	2.10	(12.)
Sc	16.0	(0.1)	14.9	(0.1)	15.4	(5.0)
Sm	8.38	(0.2)	8.96	(0.2)	8.67	(4.5)
Ta	1.20	(2.7)	1.22	(2.7)	1.21	(2.7)
Tb	0.83	(5.7)	0.89	(5.3)	0.86	(5.5)
Th	39.7	(0.3)	39.6	(0.3)	39.7	(0.4)
Ti %	0.48	(20.)	0.42	(23.)	0.45	(22.)
U	5.94	(2.2)	5.61	(2.3)	5.77	(4.3)
W	3.24	(7.2)	3.32	(6.6)	3.28	(6.9)
Yb	3.17	(2.0)	3.36	(1.9)	3.26	(3.9)
Zn	72.7	(2.7)	76.4	(2.6)	74.5	(3.3)
Zr	71.3	(74.)	80.4	(64.)	75.9	(68.)

Table 1. NAA results for amphorae from Mezad Hashavyahu (Reg. No. C30/1) and Tell Qudadi (Reg. No. 362). Concentrations of elements C in µg/g (ppm), if not indicated otherwise, and experimental counting errors δ in % of C measured by NAA analysis, University of Bonn. The third column pair gives the average concentrations M and spreads σ in % of M.



sition at Tell Qudadi. The date of circa 700 BC for the production of this piece can therefore not be wide off the mark, making it the earliest Lesbian transport amphora documented so far in the Mediterranean and beyond. This being the case, the fragment of the Lesbian amphora from Tell Qudadi joins the rest of the archaic East Greek amphorae series, which, as stated above, began to appear as early as the second half of the 8<sup>th</sup>/beginning of the 7<sup>th</sup> centuries BC. Still, because of their rarity in such early contexts, the production and circulation of these transport amphorae was clearly on a modest scale between the end of the 8<sup>th</sup> and the end of the 7<sup>th</sup> centuries BC, and only during the 6<sup>th</sup> century BC did their production and circulation become widespread.<sup>40</sup>

#### NOTES

- \* We wish to express our gratitude to Y. Goren, who conducted the thin-section analysis and to H. Mommsen, who conducted the NAA analysis. These analyses have contributed immensely to the present study. Likewise, we are grateful to a number of colleagues who have offered their valuable comments during the preparation of this study: I. Bîrzescu, P. Dupont, B. Hürmüzlü, M. Kerschner, R. Posamentir and U. Schlotzhauer.
- <sup>1</sup> Clinkenbeard 1982; Abramov 1993; Dupont 1998, 156-163; Monakhov 2003, 43-49; Bîrzescu 2006, 22-56.
  - <sup>2</sup> It should be noted that the Lesbian Grey Series amphorae constitute an integral part of a larger contemporary ceramic family, which also includes the series of containers related in shape but made of oxidized clays (Whitbread 1995, 154-155; Dupont 1998, 158-159; Bîrzescu 2005). These oxidized containers, however, are not treated in the present study.
  - <sup>3</sup> Thus according to Cook 1953, 124: 'study of the archaic amphorae shows that the import of wine from Chios and from a centre exporting in grey jars can be dated as far back as the eighth century - in fact to Homeric times'; and see also Cook 1958-1959, 14.
  - <sup>4</sup> Brann 1961, 346, pls. 86, 89, F 80; Clinkenbeard 1982, 249; Dupont 1998, 159. For early material from Lesbos, see also Clinkenbeard 1982, 266, pl. 69a-d (from Antissa (of a 7<sup>th</sup> to first half of 6<sup>th</sup> century BCE date)); Spencer 1995, 301, fig. 12 (from Antissa (of a 7<sup>th</sup>-early 6<sup>th</sup> century BCE date)).
  - <sup>5</sup> Johnston 1993, 362-363; 2005, 365-367; Csapo/Johnston/Geagan 2000, 124, no 67; 125, no 74.
  - <sup>6</sup> For Metapontum, see Castoldi 1986, Pl. 39.4; Stea 2000, 473, Abb. 322; for a specimen from a cemetery of Siris, accompanied by a Late Protocorinthian cup, see Berlingo 1993, 9, Abb. 16.10; for Pithekoussai, see Di Sandro 1986, 85-86, Sg. 201.
  - <sup>7</sup> Boardman/Hayes 1966, 139, no 1416, pl. 90.
  - <sup>8</sup> Hürmüzlü 2003, 455-456, figs 101/m, 106/m; 2004, 82. It is worth noting that one of these specimens was accompanied by a locally produced Archaic ring-askos, dated to the last third of the 7<sup>th</sup> century BCE (Güngör 2006, 48, 53, no 3, pl. 1, fig. 3). According to Dupont (pers. comm.), the Archaic cemetery of the Clazomenian colony at Abdera on the Thracian coast has produced a number of late 7<sup>th</sup>-century BCE grey Lesbian amphorae

- pieces as well. For excavation reports concerning this cemetery, see Skarlatidou 1986; 2004.
- <sup>9</sup> Bîrzescu 2006 (and also pers. comm.); an additional piece of what seems to be a late 7<sup>th</sup> century BCE grey Lesbian amphora was also attested in Taganrog (Kopylov/Larenok 1994, 58, Pl. 12:8).
  - <sup>10</sup> For an example from Meẓad Ḥashavyahu, which consists of a large rim and base fragments, see Fantalkin 2001, 94, fig. 34.2\*; for a base and body fragment of probable Lesbian origin from Ashkelon, see Master 2001, 40, 146-147, 155, fig. 2.9.8 (Category 18); Barako 2008, 445, Amphora 15.
  - <sup>11</sup> Sufficient summaries of the majority of the available evidence may be found in Dupont 1998, 159-161; Bîrzescu 2005, 2006. In addition, for the Black Sea area, see Monakhov 1999, 33-60; 2003, 43-49; for Troy and Gordion Aslan 2002; Lawall 2002; 2006, respectively; for quite a number of Lesbian Grey Ware amphorae from Egypt, starting mainly from the 6<sup>th</sup> century BC and continuing through the Hellenistic period, see Oren 1984, 27 (Migdol); Šmoláriková 2002, 25-26 (Migdol), 32 (Heliopolis), 40 (Iuffa), 43 (Qurna); and Şenol 2007 (for the Lesbian amphorae in Hellenistic Egypt).
  - <sup>12</sup> See, e.g., Abramov 1993; Dupont 1998; Twede 2002; Monakhov 2003; Lawall 2004; Seifert 2004; Sezgin 2004.
  - <sup>13</sup> See Docter 2000; Kerschner 2000.
  - <sup>14</sup> For sufficient archaeological summaries concerning the beginning of the Greek colonization at the Black Sea area, see, e.g., Boardman 1980, 238-255; 1991; Tsetskhladze 1994, 1998, 2002; Petropoulos 2003, 2005; Opperman 2005; Posamentir 2006; Kerschner 2006a; Dupont 2007; Vachtina 2007. For tracing the beginning of the Greek colonization of the Black Sea area as early as the 8<sup>th</sup> century BC, based on a limited number of late historical sources, see, e.g., Graham 1958; 1971; 1982, 119; 123; 1990; Drews 1976; Malkin/Shmueli 1988, 23; Gorman 2001, 65-71.
  - <sup>15</sup> Docter 2000.
  - <sup>16</sup> For Cook's suggestion, based on his findings from Smyrna, see above, n. 3. Likewise, in Kommos, some supposedly late 7<sup>th</sup>-century BC contexts, which included some Lesbian pieces, have yielded the earlier material as well (Johnston 2005, 365, no 206). Moreover, a few pieces of the Lesbian red-fired transport amphora handles were discovered in a 'stratigraphically intriguing' location; that is, in a level that 'is below that of the transition from pure MG to later material' (Johnston 2000, 218, no 108).
  - <sup>17</sup> Also known as Tell esh-Shûna and often erroneously referred to as Tell Kudadi.
  - <sup>18</sup> Yeivin 1960.
  - <sup>19</sup> Avigad 1993.
  - <sup>20</sup> See, e.g., Kaplan 1959, 66, 71; Wright 1985, 212; Mitchell 1991, 336; Becking 1992, 59.
  - <sup>21</sup> Avigad 1993.
  - <sup>22</sup> Tell Qudadi is located on the road that traversed the length of the coastal plain, linking Syria and Phoenicia with Egypt. Historical documents prove that during various periods the main international north-south highway crossed the Apeh Pass at the sources of the Yarkon Stream to the northeast. However, Tell Qudadi apparently controlled the ford of the Yarkon estuary, allowing those who held the site to monitor convoys and travelers who chose the coastal road. Still, there is no doubt that because of its strategic location at the mouth of the river, Tell Qudadi's main purpose was to protect and regulate maritime trade along the central coast of Palestine. The mound also afforded a view of the settlements on the banks of the Yarkon Stream in

antiquity. It is noteworthy that during various historical periods, the Yarkon Stream, being the widest of the country's Mediterranean coastal waterways, was considered a political, social and even cultural border (see Gilboa 2005, 66-67).

- <sup>23</sup> This project is currently undertaken by the authors on behalf of the Institute of Archaeology of Tel Aviv University, after receiving publication rights from the Institute of Archaeology of the Hebrew University of Jerusalem and the Israel Antiquities Authority.
- <sup>24</sup> Fantalkin/Tal 2009.
- <sup>25</sup> For Hazor, see Amiran 1969, 'Iron II C - North', 191-293, pls. 60-100, passim, which abundantly but selectively represent strata VII-VA at Hazor. One can also refer to the five volumes (I-V) of the Hazor final reports that were published by season and context resulting in the repetitive appearance of the same pottery types; for Beth-Shean, see Mazar 2006, 313-384, passim, esp. pls 26-42; For Lachish, see Zimhoni 2004, 1789-1899, passim; for comparative assemblages in the Shephelah (Judean foothills), see those of Tel Miqne (Ekron) II and IC, Gitin 1989, and Tel Batash III (Mazar/Panitz-Cohen 2001, esp. 159). For comparative assemblages in the southern coastal plain, see those of Ashdod VIII and VII (Dothan/Porath 1982, 28-41, figs 13-29, passim; Finkelstein/Singer-Avitz 2001, 244-246; idem 2004, 127-131; Ben-Shlomo 2003, 83-107; idem 2005, 63-246.
- <sup>26</sup> See, with slight alternations, Mazar/Panitz-Cohen 2001, 274-275; Herzog/Singer-Avitz 2004; Faust 2005; Fantalkin/Finkelstein 2006; Na'aman 2007.
- <sup>27</sup> Finkelstein 2008, 502.
- <sup>28</sup> For the 14C dates from Beth Shemesh, see Sharon et al. 2007, 40, 44; and for their re-evaluation, see Finkelstein/Piasetzky 2007, 78. For the actual transitional pottery assemblage of Beth-Shemesh 3, see Bunimovitz/Lederman 2006, 419-420.
- <sup>29</sup> See Finkelstein 1994; Finkelstein/Na'aman 2004, 72-73.
- <sup>30</sup> For the southern coastal plain and the Shephelah, the destruction layer of Ashkelon, which is dated to 604 BC, is of vital importance, and see Stager 1996, 61\*-74\*; Master 2001; Waldbaum 2002; besides Ashkelon and Lachish II, other chronologically important assemblages include those of Mezad Hashavyahu (Naveh 1962; Fantalkin 2001); Tel Miqne (Ekron) IB (Gitin 1989); and Tel Batash II (Mazar/Panitz-Cohen 2001).
- <sup>31</sup> See, e.g., Lamb 1932; Bayne 2000; Coldstream 2003, 262-264.
- <sup>32</sup> See, e.g., Jung 2007; Pavúk 2007.
- <sup>33</sup> Spencer 1995, 303-305; Rose 2008.
- <sup>34</sup> See, e.g., Kerschner 2006b; Mommsen/Pavúk 2007.
- <sup>35</sup> Dupont 1998, 158.
- <sup>36</sup> For historical significance and chronology of Mezad Hashavyahu's assemblage within the context of Egyptian imperial domination of the coast of Palestine in the last quarter of the 7<sup>th</sup> century BC, see Fantalkin 2001.
- <sup>37</sup> Whitbread 1995, 154-164; Master 2001, 40, 146-147 (Category 18).
- <sup>38</sup> See, e.g., Dupont 1998, 159; Birzescu 2006, 24-26.
- <sup>39</sup> The NAA analysis presented by Clinkenbeard (1982, 261-264, and table on p. 268) is conducted mainly on fragments that lack clear provenance and dates. Out of 18 tested chemical elements, however, some are close in composition to ours, while others are different, attesting to different origins.
- <sup>40</sup> Later classical sources point to an excellent reputation for Lesbian wine in antiquity (see Clinkenbeard 1982, 254-256, for a summary). However, it is not entirely

clear whether the Lesbian Grey Series amphorae were indeed intended to carry wine. Johnston, for instance, has suggested that the Lesbian Grey Series amphorae may have been used to carry oil, while the oxidized red Lesbian amphorae were used for wine (Johnston 1990, 41-42). Such a suggestion, compelling as it may be (see also Monakhov 2003, 45), should certainly await additional corroboration.

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