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MERSİN ÜNİVERSİTESİ KILIKIA ARKEOLOJİSİNİ ARAŞTIRMA MERKEZİ (KAAM) YAYINLARI-XX

MERSIN UNIVERSITY PUBLICATIONS OF THE RESEARCH CENTER OF CILICIAN ARCHAEOLOGY (KAAM)-XX

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MERSIN UNIVERSITY 'RESEARCH CENTER OF CILICIAN ARCHAEOLOGY' JOURNAL 'OLBA'

Scope

Olba is printed once a year in May. Deadline for sending papers is November of each year.

The Journal 'Olba', being published since 1998 by the 'Research Center of Cilician Archeology' of the Mersin University (Turkey), includes original studies done on antropology, prehistory, protohistory, classical archaeology, classical philology (and ancient languages and cultures), ancient history, numismatics and early christian archeology.

The studies select their material from Asia Minor but articles (papers) dealing with the Mediterranean and Near East also form the content of Olba.

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Oppenheim 1973, 9, pl. 1

Miscellaneous Abbreviations:

| op. cit. | in the work already cited |
|----------|--|
| idem | an auther that has just been mentioned |
| ff. | following pages |
| et al. | and others |
| n. | footnote |
| see | see |
| infra | see below |
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THE ASSESSMENT OF THE 4TH CENTURY B.C. FINDS FROM THREE WELLS UNCOVERED AT CLAZOMENAE HBT (HAMDİ BALABAN TARLASI) SECTOR

İlkan HASDAĞLI*

ABSTRACT

The wells have great importance for discovering the functions of buildings to which they belong. The pottery finds both from use fills and abandonment debris of wells also reveal very important data for pottery chronology and typology. The three wells uncovered in the HBT sector at Clazomenae provided a great number of pottery finds from the 4th century. Most of them are water jugs clearly connected with the function of the wells. The remaining pottery assemblages consist of a few black glazed drinking cups and some household wares for different services other than water jugs. The first two of the three wells in the HBT Sector at Clazomenae, Well 1 and Well 2, probably opened for the service of industrial installations in the 6th century. Both wells were closed with the abandonment of the Clazomenian mainland in the beginning of the 5th century. Well 1 does not seem to have served as a water supply in the 4th century. However, Well 2 was in use during the first half of the 4th century before closing within the second quarter. Well 3, which was dug in a courtyard of a residential building dated to the second quarter of the 4th century, went into use in the second quarter and it lost its function as a water supply around the middle of the century. The pottery from the three wells under discussion can help us understand the ceramic culture of the first half of the 4th century; it also serves as the main criterion for dating the fills in the wells.

Key Words: Clazomenae, Wells, Water Jugs, Black Glazed Pottery, Household Pottery, The 4th Century B.C.

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ÖZET

Klazomenai HBT Sektörü'nde (Hamdi Balaban Tarlası) Açığa Çıkartılan Üç Kuyuda Ele Geçen M.Ö. 4. Yüzyıl Buluntularının Değerlendirilmesi

Su kuvuları ait oldukları yapıların işlevlerinin anlaşılmasında oldukça büyük bir öneme sahiptirler. Kuyulara ait kullanım ve terk dolgularında ele gecen seramik buluntular seramik kronolojisi ve tipolojisi açısından da çok önemli verileri açığa sunmaktadırlar. Klazomenai HBT Alanı'nda açığa çıkartılan üç adet su kuyusu M.Ö.4. yüzyıla ait çok sayıda seramik buluntu sağlamıştır. Bu seramik buluntuların büyük kısmı kuyuların kullanım işlevi ile bağlantılı olarak su kaplarıdır. Diğer buluntu gruplarını az sayıdaki siyah firnisli icki kabı ile cesitli amaclara yönelik diğer günlük kaplar oluşturmaktadır. Klazomenai HBT Sektörü'ndeki üç adet kuvudan ilk ikisi, Kuvu 1 ve Kuvu 2, M.Ö.6. yüzyılda alandaki endüstri tesislerinin kullanıma yönelik olarak açılmış olmalıdır. Her iki kuyu da M.Ö.5. yüzyılın başlarında Klazomenai Anakarası'nın terki ile birlikte kullanım dışı kalmışlardır. Kuyu 1 M.Ö.4. yüzyılda bir su kaynağı olarak hizmet vermemiş gibi görünmektedir. Kuyu 2 ise M.Ö.4. yüzyılda temizlenerek tekrar kullanılmış ve aynı yüzyılın ikinci cevreği içlerinde de kullanım dısında kalmıştır. M.Ö.4. yüzyılın ikinci çeyreğine tarihlenen ikamet işlevli bir yapının avlusunda yer alan Kuyu 3 ise yüzyılın ikinci çeyreği içlerinde kullanıma açılmış ve yüzyıl ortasında da su kaynağı olma islevini kaybetmiştir. Calışmanın konuşunu oluşturan üç kuyudan ele geçen şeramik buluntuların kuyulardaki tabakalar için tarihleme kriteri olmasının yanında M.Ö.4. yüzyılın ilk yarısına ait seramik kültürünün daha yakından tanınmasına yardımcı olması umulmaktadır.

Anahtar Kelimeler: Klazomenai, Kuyular, Sürahiler, Siyah Firnisli Seramik, Günlük Seramik, M.Ö.4. Yüzyıl.

The Description Of The Field

This paper aims to present an assessment of pottery found in three wells excavated in the HBT Sector (fig. 1) at mainland Clazomenae. Two of those wells (Well 1 - Well 2) were excavated during two campaigns in 1993 and 1995, whereas the third one (Well 3) was cleaned in 1996. Most of the finds in this study are confined to the 4th century. Some earlier diagnostic examples, as well as few isolated later pieces, are also included on the basis of their contribution to the stratigraphical sequence.

The earliest dated finds in the sector are the remains of an early Bronze Age defense wall accompanied by sporadic pottery from the same period. The earliest traces of the post Bronze Age settlement consist of a pottery kiln dated to the Protogeometric Period and several graves slightly later than the kiln but within the same period¹. The succeeding phase is represented by a fortification wall, which was most probably built in the first quarter of the 7th century². With the construction of the fortification wall in the 7th century, the area where the wells are also placed became the outskirts of the site and was particularly reserved for industrial activities, as it is clearly indicated by the presence of an olive oil extraction facility and a blacksmith's workshop³.

It is well known that the Clazomenian mainland was abandoned after the so-called "Ionian Revolt" and afterwards Karantina Island, which is situated just off-shore, was occupied as the main habitation area⁴. The Classical Period settlement in HBT Sector is defined with four different architectural phases dating from the end of the 5th to the middle of the 4th century. The Hellenistic Period is represented merely by a drainage canal built of rubble stone masonry and the remains of a water supply system of terracotta pipelines, several mould-made bowl fragments and few sherds decorated in West Slope Technique. The latest architectural remains in the sector belong to the late Roman Period.

The Stratigraphy Of The Wells (fig. 2)

Well 1: The bedrock in which Wells 1 and 2 were dug had already been leveled and a platform had been formed before the wells were opened as a water source, possibly in the 7th or in the first half of the 6th century. The leveling of the bedrock surface is probably to be associated with workshops of the Archaic Period established in the area. The Well 1 has a 90 cm. rim opening and its total depth is 7.05 m. Although some differences in soil and rubble between various levels of the fill were observed during the excavation, the almost homogeneous character of the fill from the top to the bottom suggests that the well was closed entirely at one time.

¹ For the kiln see Ersoy et. al 2010, 189-191, fig.7-9. For the graves see Ulusoy 2010, 11-17.

² Bakır, et al. 2008, 313-332, fig.8-14; Ersoy et al. 2010, 186-189, 191-194, fig.1-3, 14

³ Ersoy 2004, 56. Aside from an olive-oil extraction plant and a blacksmith, many other bedrock pits were unearthed by excavations in the sector. These pits possibly belonged to some other workshops of which functions have not been determined yet. For the olive-oil extraction plant especially see Koparal – Iplikçi 2004, 221ff. For the blacksmith see Ersoy 2007, 173-174.

⁴ Since the population moved to Karantina Island after the so-called "Ionian Revolt", habitation on the Clazomenian mainland was interrupted. No architectural remains dating to the 5th century were found in any sector of the Clazomenian mainland territory. Furthermore, ceramic material is also minimal. For the 5th century settlement on the island see Güngör 2004, 121f.

Layer I: The First Half of the 4th Century (closing fill) 0- (-7.05m.)

Layer I is thick debris which occupies the top 6.84m. of the well and is a typical closing fill⁵ including abundant building stones, boulders, and large terracotta fragments of big vessels such as pithoi and amphorae or roof tiles (Layer Ia). Below this huge layer of debris, typical sedimentation clay exists at the bottom of the well (Layer Ib). However, this lower part of the layer does not include any shapes such as water jugs or large joining pottery fragments which are clear indications of a use fill. Only a few potsherds confidently dated into the 4th century were gathered from the well, as opposed to the majority which belongs to the 6th century. The absence of indications of a use fill suggests a single abandonment fill (Layer Ia) above a thin layer (21cm.) of accumulation silt at the bottom (Layer Ib). However, the 4th century fragments collected both from the upper and the bottom levels of the filling debris clearly date the abandonment of the well. Nos. 1, 2, 5, 8, 18, 24, 35.

Well 2: Well 2 has a 98cm. rim opening and is in 8.45m. depth.

Layer I: The Second Quarter of the 4th Century (closing fill) 0-(-6.43 m.)

Almost the entire top layer of the filling in the well consists of numerous fragments of a lime floor mortar. The fabric of the filling as a kind of rubble indicates that this is a dumped fill formed during the closing process. A few potsherds from this fill are confidently dated in the first half of the 4th century. Layer I should have been formed during the second quarter of the century at the latest, due to its stratigraphic position above Layer II (dated to the second quarter of the century) as well as the abandonment of the Well 2, which must have been before or during the last occupation phase at the area. Nos. 17, 55

Layer II: The First Quarter and the Beginning of the Second Quarter of the 4th Century (use fill) (-6.43)-(-7.99 m.)

Layer II is a combination of sandy soil and wet clay. The pottery assemblage consists of table or water vases, such as a light cup-skyphos, an

⁵ For determining archaeological materials found in the wells whether belong to using or closing fills, definitions in article written by T.L.Shear in 1993 are used as main criteria. See Shear 1993, 384-386.

ample amount of water jugs, and a transport amphora, obviously indicate a use fill. Nos.4, 6, 19, 26, 34, 48, 57, 58, 65.

Layer III: The Late 6th Century? - the First Quarter and the Beginning of the Second Quarter of the 4th Century (Accumulation layer or Archaic Period destruction fill? (-7.99)-(-8.45m.)

The fill can basically be defined as compact sand. Some sherds dating to the 4th century were found in various depths of this peculiar debris, but the majority of pottery sherds belong to the late 6th century. The overall character does not imply a use fill, which would be characterized by a substantial number of water jugs accumulated at the bottom of the well. Still, however, homogenous examples dating to the late 6th century, although few in number (Nos. 3, 63), suggests that the well was quite likely used in the Archaic period and abandoned after until it's second use as a water source during the late Classical period (sometime in the first quarter or the beginning of the second quarter of the 4th century) (Nos.3, 27-29, 43, 56, 63).

Well 3: The construction of Well 3 caused serious damage to both the northern storehouse of the Archaic olive-oil extraction plant and to the drainage canal which runs across the north side of the well, as well as to a foundation wall belonging to a domestic building dated to the first or second decade of the 4th century. The inner diameter of the well wall, the stone of which masonry is preserved up to 1.30 m. above bedrock, is ca. 1.74m. and the total depth of the well is 5.12 m.

Layer Ia: The Late Roman Period (accumulated fill) 0-(-0.10m.)

A thin layer with few potsherds was definitely formed after the well was already out of use and it is homogeneous with Layer Ib, which lies just below it. No datable material was found in that layer, although its stratigraphic position above Layer Ib indicates a somewhat later date than Layer Ib, which can be dated confidently to the late Roman Period.

Layer Ib: The Late Roman Period (closing fill) (-0.10)-(-2.32m.)

Layer Ib is a typical closing fill as is indicated by its content, which mainly consisted of building or rubble stones and large terracotta fragments of pithoi and roof tiles. The grooved body fragments, Nos.69 and 70

clearly belong to the late Roman Period, and they are apparently the latest datable fragments within the whole pottery assemblage. Nos.12, 13, 15, 16, 64, 66-70.

Layer IIa: The Middle of the 4th Century (accumulated fill) (-2.32)-(-2.46m.)

The fill of thin sandy fabric is an accumulation layer, which was possibly formed during the time after the well had lost its function as a water supply.

Layer IIb: The Middle of the 4th Century (closing fill) (-2.46)-(-4.28m.)

Layer IIb is a closing fill typically containing many building stones, rocks and other rubbish. In addition to pottery sherds, some architectural elements⁶ and a few fragments of a lime floor mortar were found in the filling. The stratigraphic position of the fill above Layer IIIa, which is dated in the second quarter of the 4th century, suggests that it is likely to have been formed around the middle of the 4th century. Nos.10, 30, 31-33, 45, 53, 62

Layer IIIa: The Second Quarter of the 4th Century (use fill) (-4.28m.)-(-4.84m.)

The fill is composed of a kind of wet clay. Its overall character is similar to Layer IIIb, defined below; although the presence of small stones mixed with large fragments of coarse vessels including roof tiles as well as storage jars makes it distinctive from the original bottom fill, discussed below. Many intact or almost intact water jugs clearly indicate a use fill. The structural difference between Layers IIIa and IIIb was possibly caused by the disruption of the upper levels of the bottom fill during the abandonment of the well. It may be stated that the rubble of the closing filling destroyed the upper part of the original using fill but it could not have penetrated to bottom of the well. Therefore, Layer IIIa should be interpreted as upper part of the original using filling (Layer IIIb). This view is also supported by joins between these two layers and by the general similarity of the pottery

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⁶ The architectural remains consist of some building stones probably related to a terrace wall built to the east of the area and few canal stones may be connected with drainage systems of courts of buildings of the fourth occupation phase.

assemblages collected from both fills. Ceramic material does not indicate a date later than the middle of the 4th century. Nos.11, 44, 51, 52

Layer IIIb: The Second Quarter of the 4th Century (using fill) (-4.84)-(-5.12m.)

Layer IIIb is the original bottom use fill and its pottery content is securely dated to the second quarter of the century. Nos.7, 9, 14, 20-23, 25, 36-42, 46, 47, 49-50, 54, 59-61.

The Assessment Of Pottery Finds

Finds of the Archaic Period (fig.3, nos.1-5): As stated above, this paper aims to present the 4th century material from these water wells. Still, however, few examples of earlier diagnostic pottery were also included in order to present the activity in the area. Finds earlier than the fourth century include isolated pieces ranging in date from the late eighth through the late sixth century. The Clazomenian amphora rim fragments, Nos.1-2, are dated in the second half of the 6th century⁷ while the bulbous Chian rim fragment, No.3, is not earlier than the last quarter of the century⁸. The preserved profile of No.4 suggests that it might have been a local imitation of the Attic stemmed dish, the greatest popularity of which was in the last quarter of the 6th century⁹. The wave-line decoration partially preserved on an oinochoe wall fragment, No.5, was one of the most popular decoration patterns on local household wares at Clazomenae during the late 6th century¹⁰.

Black Glazed Pottery (figs.4, 10, nos.6-18): Most of the black glazed vessels found in the wells are very fragmentary and it is difficult to draw

⁷ Nos.1 and 2 recall Type IV of E.Doğer and Type Kla.7 of Y.Sezgin. For Doğer's Type IV see Doğer 1988, 59-74. For No.1 see Doğer 1988, şek.21:41, 42 and for No.2 see Doğer 1988, şek.19:38. For Type Kla.7 of Y.Sezgin see Sezgin 2009, 96-101 and esp. see Lev.23:Kla.7.13, Lev.28:Kla.7.38. For Nos.1 and 2 see also Sezgin 2004, 176-178, fig.13-14; Ersoy 2004, 56, fig.15a-b.

⁸ No.3 recalls Type VI of E.Doğer and Type Khi.6 of Y.Sezgin. For close parallels dated to end of the 6th and early in the 5th century see Doğer 1988, şek.38: 92-95; Sezgin 2009, 180ff and esp. see Lev.53: Khi.6.01; Ersoy 2004, p.56, fig.15:c-d. For similar amphorae also see Anderson 1954, 175, fig.8:51 and 51a.

⁹ Most of the stemmed dishes from the Athenian Agora date to a period extending from the last quarter of the 6th to the second quarter of the 5th century. See Agora XII, 138ff, fig.9, pl.35: 957-989.

¹⁰ Uzun 2007, 276-277 and fig.205, also see fig.79, 84, 85

conclusions about their place of production¹¹. Light-walled cup-skyphoi are represented by two examples collected from the use fills of Well 2 and Well 3. In Smyrna, non-Attic examples of the shape, which first appeared at Athens in 440/430¹², were defined by J.M.Cook as the most delicate works of the western Anatolian workshops¹³. Although their production in Athens ceased after 380/375, by which time the new cup-kantharos series dominated the markets¹⁴, they were still very popular at Smyrna and Clazomenae during the second quarter of the century¹⁵. Examples similar to Nos.6-7 from Athens or elsewhere are generally dated to the early 4th century¹⁶, while local products at Smyrna are dated to the second quarter of the century¹⁷. The roulette stamp encircling a palmette cross on No.6 was executed as a thin band and it may be stated that its visual effect is

- ¹² Agora XII, 110.
- ¹³ Cook 1965, 145.

¹¹ It is suggested that products of Western Anatolian workshops followed Attica closely. J.M.Cook identified the Western Anatolian black glazed products in his important work on Smyrna finds in 1965. For this article see Cook 1965. A well known inscription dating before 321, but not long before that date, from Ephesos mentions that two Athenian brothers, Kittos and Bakchios, sons of Bakchios were providing the black pottery for the city, and the hydria for the goddess, becoming citizens of the site. For debates on the decree see Beazley 1943, 456-457; Trinkl 2003, 75. On the other hand, local black glazed pottery production in the region must have begun long before that event as clearly indicated by the excavations at Smyrna and Clazomenae.

¹⁴ Agora XII, 111. The absence of the light-walled cup-skyphoi in deposits dating into the second and third quarters of the 4th century in Attica and also at Olynthos is striking.

¹⁵ There is considerable amount of the light-walled cup-skyphoi at Smyrna from the second quarter of the 4th century. See Gürsoy 1987, şek.19-20:103-105,108-111. The version survived with later examples having totally glazed underside and large palmette stamps rise on flat bottom during the third quarter at Smyrna. See Gürsoy 1987, 22, lev.59-60:112-114.

¹⁶ Agora XII, pl.26:603 (Early 4th century), fig.6, pl.55:605 (The example dating to ca.375 has raised rings on its underside); Corbett 1949, pl.86:148 (The example of which handles are very vertical was found with some finds dating to the first quarter of the 4th century); Corbett 1955, fig.3, pl.71:24 (The example has scraped grooves on its underside); Shear 1970, 215, fig.18, pl.58:D8 (The example dating to 410-390 is greater in size than our examples); Kerameikos XIV, abb.75,9.1,1 (Early 4th century, thickness of its wall is bigger than our cup-skyphoi). For Corinth see Pemberton 1997, 60, fig.7:58,62 (The Late 5th – Early 4th century). For Thasos see Blondé 1989, 497, Fig.8:49,50,51 and for a foot especially close to No.6 see Blondé 1985, 303, p.fig.15:119.

¹⁷ J.M.Cook thought that the light-walled version appeared with the adoption of rouletting after the heavy-walled version, on the basis of their absences in the early 4th century layers at Smyrna. See Cook 1965, 146. For a close parallel to No.6 in aspects of proportion and stamp from Smyrna see ibid 145, fig.2, pl.45:d5 and c6. For other finds of Smyrna after J.M.Cook see Gürsoy 1987, şek.19:103. For a parallel from Clazomenae Akpınar Cemetery see Hürmüzlü 2004, 88, fig.22. For an example from Miletos see Pfrommer 1985, 55, abb.24, taf.18:5 (Handles of the vase which is dated to 375-350, do not exceed the rim and there are glazed bands on its underside, its stamp composition consists of a row of ovules encircling four linked central palmettes).

somewhat similar to an ovolo frieze than true rouletting. There is no indication of rouletting before 390/380 at Athens¹⁸. B.A.Sparkes and L.Talcott point out a series of light-walled cup-skyphoi dating to the late 5th and the early 4th century bearing hasty and careless ovolo friezes, which may be interpreted as precursors of rouletting¹⁹. The execution of a roulette stamp on some examples dating close to ca.380 at the Agora of Athens²⁰ is a kind of narrow band encircling a palmette cross or four central palmettes connected by arches. Among the Agora finds two more cup-kantharoi²¹ dated to ca.380 and 375/350 bear rouletting in rather a complex composition, encircling six central palmettes connected by arcs, but their rouletting was also executed as a narrow band. All the Agora examples mentioned above and dated probably to the end of the first or to the second quarter of the century seemed to be the examples most similar to $No.6^{22}$ in terms of decoration. On the basis of this information it may be claimed that No.6 is the earliest example of rouletting that has been found in the HBT sector. Furthermore, black glazed pottery with roulette decoration has not yet been reported in the other sectors of Clazomenae or Smyrna before the second quarter of the century²³. No.7 has a somewhat different stamp composition with four

¹⁸ P.E.Corbett wrote that rouletting first appeared by the end of the first quarter of the 4th century although its real popularity was in the following quarter (See Corbett 1951, 64 and note.4-5). This date is also the same date by which a totally glazed underside with a central nipple was introduced. Furthermore, beyond the shortage of finds from the Athenian Agora dating to this period there is also no indication of rouletting on Attic imports at Motya, which was destroyed in 397 (See Agora XII, 30).

¹⁹ Agora XII, 110 and pl.54:593, pl.55:597-599, 602-603. Stamps at similar stage can be observed on some red-figured cup-skyphoi. See Agora XII, 30. A.D.Ure informs us about the stamp on a cup-skyphos, which B.A.Sparks and L. Talcott also pointed out, in British Museum by the Q Painter from Benghazi, executed by slightly pressing. See Ure 1944, 74 (No.28) and 75; ARV2, 1519.21(4). Furthermore, another row of ovules on a stemless used in Ure's work seems to be a precursor of rouletting with its hasty and careless execution. See ibid 67 and 69, fig.3 (No.5); ARV2, 1414.98 (46).

²⁰ Agora XII, pl.55:604, 608 (light-walled cup-skyphoi dating ca.380 and 375, see 278-279). Also a stamp, consisting of a row of ovules encircling four central palmettes, on a heavy-walled cup-skyphos dating ca.380 (pl.56: 623 and p.280) has a roulette like visual effect. All those three vases come from deposit D 15:3 which is dated to ca.375-330 (See Agora XII, 278-280 and for the deposits see also 387).

²¹ Agora XII, pl.56:651 (It is dated to ca.380. For dating see p.282) and pl.56:660 (It is dated to 375-350. For dating see 283).

²² Particularly, a light-walled cup-skyphos (Agora XII, pl.55:608) bears a stamp which is very close to one on No.6.

²³ E.Gürsoy who worked on a considerable amount of local products from Smyrna thinks that rouletting did not begin before the second quarter at the site. See Gürsoy 1987, XI.

central ovules encircled by rouletting²⁴ and it belongs to a slightly later date within the second quarter of the century. A heavy-walled cup-skyphos foot fragment, No.8, stands among the few sherds dating to the 4th century from Layer Ia of Well 1. The production of heavy-walled cup-skyphoi ceased in the second quarter of the century²⁵ so most of the similar examples from other sites are generally dated in the first quarter of the century²⁶. No.9 from Well 3-Layer IIIb is a globular bodied cup-kantharos and belongs to a rather uncommon version of the shape²⁷. Similar examples from the Athenian Agora and elsewhere are mostly dated in the second quarter of the century²⁸ and some ribbed examples from Olynthus also indicate to a date before the middle of the century²⁹. Stamp compositions like the one on No.9, with rouletting encircling eight palmettes around a central circle and connected by arcs, were popular in the second quarter of the century³⁰. No.10 is a rim fragment of a small bowl³¹; similar examples from other

- ²⁶ Agora XII, fig.6, pl.27:621.
- ²⁷ Agora XII, 119.

²⁴ For four central ovules encircled by rouletting formed by bars set widely apart see Agora XII, pl.56:697 (kantharos, 375-350). For a similar design from Smyrna see Gürsoy 1987, lev.8:13 and for a similar design on a local small bowl see also lev.35:55.

²⁵ Agora XII, 112.

²⁸ Agora XII, fig.7, pl.28:667 (The Agora example is very close to No.9 except for having a more flaring rim and a bit more massive foot), pl.28:668 (ribbed) and Pl.28:670 (with more pointed lower body). Two of these come from a deposit dated to the second quarter of the 4th century; see ibid 283-284). For a similar example from the Eridanos Necropolis, Schicht A (Knigge 1966, 70:4.8 and 127). An example from Histria with slightly pointed lower body and flaring rim is dated to the middle of the century, see Histria IV, fig.14:571 and p.89. For an example with plain body but with a pointed lower body from Syria see Clairmont 1959, 23 and pl.VII:7.587. For an example from Clazomenae FGT Sector but having more flaring rim and plain body see Zeren 2004, şek.79:223; Özbay 2006, 259.

²⁹ All examples of globular cup-kantharoi from Olynthus are ribbed. See Olynthos XIII, pl.82 and pl.191:521, pl.189:517, pl.191:520 (nos.520 and 521 are dated to the end of the second quarter. See 292); Olynthos V, pl.150:526,528,529 (their lower bodies are more pointed than No.9). For other ribbed examples from elsewhere also see Histria IV, 88, fig.14:571 (its profile is somewhat different than No.9), pl.66:568. For a ribbed example from Apollonia see Apollonia, o6b.74, taf.103:447. For Samos see Samos XIV, abb.236A. For Thasos see Blondé 1989, 501, fig.9:71,72; Blondé 1989, fig.8:48. For Halicarnassus see Maussolleion 7, 31, fig.13, pl.12:D13. For a similar body fragment from Knossos see Coldstream 1999, pl.26:P4 (it comes from Deposit P dated to ca.350). For an example with a pointed lower body from the El Sec Shipwreck see Cerdá 1987, fig.59, Lam.V:278. For a ribbed example from the Kerameikos see Kerameikos XVII, abb.36:947 (Bau Z3) (it is the sole example in Bau Z, see 225).

³⁰ For example see Agora XII, pl.56:759 (one-handled bowl).

³¹ Agora XII, 132-134.

sites point to a date in the last guarter of the 5th century³². Another rim fragment of a small bowl with incurving rim, No.11, preserved no trace of its foot or stamp decoration by which a precise dating could be offered. However, the profile of the rim suggests a date not very far from the second quarter of the 4th century³³. No.12 is a footed saltcellar the dating of which is more problematic than for other black glazed shapes. No similar examples from other sites are known to me, but the profile may suggest a date around the mid 4th century³⁴. The foot fragment of a fish-plate, No.13, with its slightly rising body and reserved underside decorated with glaze bands, can be dated to the second quarter of the century³⁵. No.14 found in Well 3-Layer IIIa possibly belongs to a bell crater that might have been decorated in red figure technique. Its preserved profile unfortunately does not allow precise dating³⁶, although its stratigraphic position indicates that it cannot date before the second quarter of the century. No.15 is thought to be a "bowl with reserved stripe" on the basis of its preserved profile and local fabric³⁷. The "bowl with reserved stripe" has not thus far been reported from sites other than Clazomenae, Smyrna and Larisa³⁸. It is almost impossible to date this vessel on the basis of its rim profile. J.M. Cook

³² For Athens, see Agora XII, fig.9:870. For Miletos see Pfrommer 1985, 62, Abb.12. For Smyrna see Gürsoy 1987, Şek.11:53. For Clazomenae's itself see Özbay 2006, 296 picture below and 306 picture above (1st Period).

³³ For two similar examples see Agora XII, pl.33, fig.8:828; Blondé 1985, 300:103.

³⁴ Decreasing width of the resting surface and thickness of the rim, aside from giving more emphasis to the curve of the wall, are among the most important dating criteria. See Agora XII, 137-138. A saltcellar dating into 350-325 from the Athenian Agora (Agora XII, fig.9:949) has a narrower resting surface than No.12 and its underside with central nipple was totally covered with glaze. Weak similarities between No.12 with the one from the Athenian Agora suggest that they are about contemporary, but a slightly earlier date can be suspected for the first.

³⁵ For fish-plates from Athens Agora see Agora XII, 147-148.

³⁶ For a similar profile on a red-figured krater dating to 450-350 from Torone see Cambitoglou et al (ed.) 2001, fig.56:8.59 and for dating see 368. For a red-figured krater from Eretria dated to the first half of the 4th century see Eretria IX, taf.20:S 268 and for dating see 123. Vases similar in profile but decorated with black glaze solely can be found among Olynthian material. See Olynthos V, pl.195:1109-1114 (esp.see pl.195:1113). For an example from Tetragonos Agora dating to the 5th century see Scherrer – Trinkl 2006, taf.42:325 and p.180, 222.

³⁷ The name "bowl with reserved stripe" was first used by J.M.Cook. See Cook 1965, 147-148.

³⁸ These bowls were first found at Larisa although they were classified as Attic there. See Larisa III, 184, abb.89d. Furthermore, F.A.Winter thinks that a group of non-Attic bowls from Gordion might be related to "the bowl with reserved stripe". See Winter 1984, 127-135, fig.5:42-47. When profile drawings of the bowls F.A.Winter mentioned is seen, it became clear that his view should not to be overlooked. Another related bowl, where the lower body is left unpainted, like the Gordion bowls, was reported from the Heraion at Samos (see Technau 1929, abb.33:1) and its profile has also a convincing similarity to the "bowl with reserved stripe".

classified this shape in two types, defined by the small or medium sizes of bowls found at Smyrna, and he dated the smaller ones at the beginning of the 4th century³⁹. Subsequent work on the Smyrna material have provided the opportunity to establish a line of development on the basis of nuances of foot profile, the manner of decorating the underside and stamp details, and the latest examples are now dated to ca.330⁴⁰. The stamp preserved on No.16, also a "bowl with reserved stripe," reveals only a large palmette, which does not spring from volutes but sits on a flat base. A date later than most of the black glazed material from the wells can be offered, since this kind of palmette was very common during the latest phase of the shape at Smyrna, dated into 365-330⁴¹. Both Nos.17 and 18 bear ovolo stamps, the greatest popularity of which was in the first quarter of the 4th century⁴².

Household Wares

One-Handled Jugs: Many examples of one-handled jugs were collected from the Wells 2 and 3. The frequency of the shape in the wells seems to be linked with their function. The large number of complete vases and large fragments let us identify sub-shapes and discuss them more fully than the other household containers.

Jugs with cylindrical necks, flaring rims and large capacity (Type 1a, nos.19-29) (figs.5, 13): The shape is constituted of a flaring rolled or profiled rim, a tall, cylindrical neck, a strap handle originating from the shoulder and attached just below the rim, a conical body and a flaring ring foot. Some mica, sand, lime inclusions and few inclusions can be observed in the fabric and the clay in red or yellow tones is usually well fired. This kind of fabric is very familiar also from the other household wares found in the 4th century fills at Clazomenae. The outer surface of the jugs was smoothed and covered with a thin layer of creamy slip. There is no uniform practice for the application of the slip, although it is often slightly thicker around the rim and neck than on the other parts of the vase. The heights and the capacities of the vases vary, but full profiles indicate an average

³⁹ Cook 1965, 147-148.

⁴⁰ Gürsoy 1987, 1-5.

⁴¹ Gürsoy 1987, 4-5. At Smyrna and Clazomenae, this kind of palmettes can also be seen on local light-walled cup-skyphoi aside from the bowl with reserved stripe. For Smyrna finds, see Gürsoy 1987, lev.11:16, lev.12:17 (365-350/330).

⁴² Agora XII, 30.

height ranging between 33 and 38cm. The rim diameters range from 12cm. to 16cm. but for most examples, a diameter around 12-13cm. seems to be typical and the diameter of the foot is approximately 11cm. No. 25, classified under this group, is an odd example because of the absence of ring foot and more globular shape than the rest of the specimens.

Jugs with cylindrical necks, simpler rims, and smaller capacity (Type 1b, nos.30-34) (figs.5, 13): The morphological features and the fabric of the Type 1b jugs are very similar to those of Type 1a, but they are smaller in size. No.30, collected from Well 3-Layer IIb, preserves almost the full height of a typical example, which is about 25cm. without the rim. Unfortunately No.31 of similar size, but slightly narrower in proportions than the previous one, gives no further information about the rim⁴³. This group of jugs may have had rims like those of Type 1a. However, some plain and less flaring rim fragments (Nos.32-34) collected nearby to No.30 have smaller diameters than the Type 1a jugs and they possibly belong to the Type 1b Jugs.

The one-handled jugs found in the three wells share some morphological features with jugs from elsewhere. However, one should be aware of hazards when considering analogies between examples from different sites, regions or periods, since useful shapes like jugs do not always change significantly over time⁴⁴. Some of the general morphological features familiar from the 4th century examples can be seen on some similar shapes even from the Roman period⁴⁵. Contemporary jugs from the Athenian Agora are very different from our jugs and the trefoil rim examples of Athens are not represented either in the HBT sector or in any other sectors of Clazomenae⁴⁶. An example from Olynthus⁴⁷ dated to the late 5th or early

⁴³ An uncatalogued body and foot piece shows almost same features with No.30 and it was found in the Well 2 Layer II but unfortunately without a rim again.

⁴⁴ For example, A.M.Berlin points out that jugs dated to the late 4th – early 3rd century from Troia stand at the end of a tradition with roots very deep in the Troad and the northeastern Aegean. See Berlin 1999, 101.

⁴⁵ For a jug of the Roman Period, see Knipowitsch 1929, taf.VI:2.

⁴⁶ Agora XII, 204-209, fig.14,17, pl.73-79: 1612-1708. No.1617 which is dated into 425-400 is the most similar vase to Type 1a among Agora finds with its height around 32cm. Long necked jugs were very rare at Athens before the end of the 5th century. See Agora XII, 20. For the later examples of trefoil-rim jugs dated to the second half of the 4th century see Agora XXXIII, 71, fig.1, pl.1: No.6.

⁴⁷ Olynthos V, pl.166:733. For another similar jug from Larisa see also Larisa III, 159, abb.67a.

4th century by D.M.Robinson, recalls No.30, but its handle connected to the rim separates it from our Type 1. The jugs classified as "Type A" by E.Trinkl from Ephesos may be identified as a close parallel⁴⁸, but the closest comparanda for the Type 1 jugs found at HBT are those from another sector of the site, namely Chyton settlement in FGT sector at Clazomenae⁴⁹.

Nos.19-23, 25, 26 from Well 2-Layer II and Well 3-Layer IIIb belong to the second quarter of the 4th century. The similarity of No.24 from Well 1-Layer Ic to other examples of the shape suggests a similar date, but Nos.27-29 found in Well 2-Layer III may be slightly earlier than the examples mentioned above on the basis of their finding place. The peculiarity of thick white slip on a large and flat rim fragment, No.29, suggest it should be suspected to be classified in this group.

For some smaller examples, like Nos.30 and 33 from the closing filling of Well 3 or No.32 found just below them, a date around the middle of the 4th century may be proposed. Due to their find spots, they might date somewhat later than the Type 1a despite the fact that Nos.31 and 34 are confidently dated to the second quarter.

No forerunners to these jugs have so far been reported in the Archaic layers at Clazomenae. Furthermore, no precursor has been found in various strata excavated on the Karantina Island, which supplied a somewhat larger pottery assemblage for other shapes of the 5th century. The subject of precursors for that type is therefore still open for discussion⁵⁰. Evidence both from the wells and the HBT Area itself gives us an opportunity to date their appearance to the late 5th or early 4th century. On the other hand, their real popularity was in the second quarter of the 4th century.

⁴⁸ Scherrer – Trinkl 2006, 89-90, abb.101, taf.12-14, p.115:119-121, for catalogue see also p.113-114. Some of Ephesian jugs have more marked shoulders. See ibid taf.12:81-82 and most of Ephesian "Type A" jugs are undecorated. See ibid p.101. The Well S-AB in which those jugs were found has a historical consistency from the last third of the 5th to the first quarter of the 4th century. See ibid 106. For a close parallel see also ibid taf.12:Kat.Nr.83.

⁴⁹ For vases or fragments similar to Type 1a see Özbay 2006, 366 picture above (1st Period floor). For a particularly close rim fragment but with a groove on its neck from Area J in HBT North Sector see ibid 408 picture above. For examples similar to No.26 see ibid 209 picture below (2A Period Dumped Fill) and 388. For parallels to No.27 see ibid 200 picture above (2B Period Construction Fill). For No.28 see ibid 227 picture below (1st Period Construction Fill). For examples similar to Type 1b see 310 picture above (2B Period Construction Fill). For No.32 see 107 picture below (2B Period Floor). For an example similar to No.34 but with a more flaring rim see 94 picture above (2A Period Floor).

⁵⁰ E.Trinkl thinks that Ephesian "Type A" jugs might have been produced locally on the basis of lack of convincing parallels at other sites. See Scherrer – Trinkl 2006, 105.

Jugs with ovoid or biconical body with bigger size (Type 2a, nos.35-43) (figs.6, 13): The shape consists of a simple rim with slightly outturned profile, a short concave neck, a strap handle oval in section, attached at the shoulder and at the rim, and rising high above it, an ovoid or biconical body and a ring foot. They are generally less well fired and produced in a less careful manner than jugs of Type 1. The fabric is in yellow or red tones with some sand, mica and white inclusions. The outer surface is covered with a creamy or yellowish slip, applied more thickly than the slip on jugs of Type 1. The height is about 23,5-27cm., diameter of the rim is around 10cm. and diameter of the foot is around 8-10cm. Almost all examples bear thin bands inside and outside the rim, a large band on the shoulder and some glaze dots or bars on the handle, but one example (No.35) has an extra band on its foot.

Most of the vases were found in Well 3-Layer III, but Well 1-Layer 1a also provided a single example. Find spots of most suggest that they belong to the later phase of the second quarter of the 4th century, but No.43 from Well 2-Layer III might be earlier than the others due to its find place. The closest parallels are from the Chyton Settlement at Clazomenae⁵¹.

Jugs with ovoid body with smaller size (Type 2b, nos.44-45) (figs.7, 13): The features of both shape and fabric are very similar to those of Type 2a, but Type 2b is smaller. Two examples of this type discussed in this paper have thin glaze bands inside and outside the rim but the band on the shoulder is omitted, in contrast to Type 2a. The thickness of the surface coat is considerably less than on Type 2a. The examples mentioned here come from Well 3-Layer III, which is dated to the second quarter of the 4th century⁵².

⁵¹ For an example of which rim and handle are missing see Özbay 2006, 211 picture below (2A Period), for a upper body fragment see 200 picture below (2B Period Construction Fill), for rim fragments see 210 picture above (2A Period Dumped Fill), 331 picture above (2A Period Construction Fill), 351 picture below (2B Period Levelling Fill of Lime Floor). For a similar vase dated to the 5th and early 4th century from Histria see Histria IV, 101, fig.22:664 (It was decorated with bands). For a vase dated to the second half of the 4th century from Vari House at Attica, see Jones et al. 1973, 382 and for dating see also 415, pl.72, fig.8:60 (The handle originates below the rim and attaches to the shoulder without exceeding the rim and it was also decorated with three plastic bands on its body). For a similar rim fragment found in a layer dated into 225-130 from Troia see Berlin 1999, 97, pl.7:95 and for dating see also 118 and 74-75).

⁵² A jug with trefoil rim from Athens Agora is dated to a slightly later period (340-310) than our finds. Agora XII, pl.74:1631.

Jugs with globular body (Type 3, nos.46-48) (figs.7, 13): Type 3 jugs from layers dating to the second quarter of the 4th century have a simple rim, a small globular body, a strap handle set just below the rim and attached to the body just above the point of greatest diameter and a ring foot⁵³. The height of these jugs is around 15cm., the rim diameter is 9cm. and the diameter of the foot is approximately 7cm. The fabric with dense micaceous inclusions is very close to the fabric used for some cooking pots.

Small Oinochoae (fig.7, nos.49-52): The shape consists of a trefoil rim, a short neck, a conical or biconical body, a strap handle rising from the edge of the rim and attaching to the shoulder and a flat bottom. The fabric is yellowish red or pink color and it is rich of mica and lime as well as few black inclusions. A very thin layer of slip is visible around the rim and the neck. The height without handle is between 9–12cm. and the diameter of the bottom is approximately 3-4cm.

The examples mentioned here may be classified into two sub-groups: Nos.49-50 have larger trefoil rims with bigger curvature and marked shoulders, while Nos.51-52 bear narrower trefoil rims and less marked shoulders. No.51 also shows that the upper body of these miniatures may be decorated with horizontal glaze bands.

The first two examples come from Well 3-Layer IIIb while the rest were found in Layer IIIa in the same well and all might belong in the second quarter of the 4th century. However, the find places suggest that Nos.51 and 52 may be somewhat later than the others. Fragments similar to Nos.49 and 50 from other deposits of the HBT Sector can be dated within the first quarter of the century. There are many types of similar vases at Olynthus⁵⁴ but only a few Olynthian vases share more than one feature with examples from the HBT Sector. Most of them have handles that do not rise to the rim or are totally glazed, unlike the examples under discussion here. Parallels from other sites are generally dated from the 5th to middle of the 4th century⁵⁵.

⁵³ Scherrer – Trinkl 2006, abb 105 (right end, "Type B" recalls the HBT finds). For Ephesian jugs see Scherrer – Trinkl 2006, 93-94, abb.105, and for catalogue see also 119-120, and see especially taf.24:Kat.Nr.143. However, the last one differs from our finds in its handle, which is attached to the rim. The height of the Ephesian jugs is also different, and some have more slip than is present on the HBT examples. See ibid 93.

⁵⁴ Olynthos XIII, pl.152-166, Olynthos V, pl.162-166.

⁵⁵ Olynthos XIII, pl.152-159: 286 (The First Half of the 4th century, see 215), pl.152: 291 (The First Half of the 4th century, see 216), pl.153-155: 298 (The 5th or The First Half of the 4th century, see

One-handled miniature bowl (Fig.7, no.53) and mortars (fig.8, nos.55-56): Many examples of locally produced one-handled miniature bowls similar to No.53 can be found elsewhere. However, the simple and useful features of this shape make it difficult to date confidently⁵⁶. Nonetheless, some examples very similar in terms of shape indicate a date within the first half of the 4th century⁵⁷. Mortars with coarse fabric and a thick white coat, Nos.55 and 56, recall a type that first appeared at Corinth before the end of the 5th century⁵⁸. The two examples included here should belong in the first half of the 4th century on the account of their find spots and comparison with similar examples⁵⁹.

Table Amphora (fig.7, no.54): No.54 from Well 3-Layer IIIb exemplifies some typical morphological features of the table amphora type of Clazomenae in the 4th century. Its upper body, neck and rim are lacking, but the missing information about the upper portions of the shape can be supplied with the help of another amphora, No.54a, which comes from a

^{218),} pl.155-156: 297 (The 5th or The First Half of the 4th century, see 218), pl.159: 391 (The First Half of the 4th century, see 239), Olynthos V, pl.166: 724 (The 5th or The Early 4th century, see 212), 725 (The 5th or The Early 4th century, see 212), 726 (The 5th or The Early 4th century, see 212), 727 (The 5th or The Early 4th century, see 212), pl.164: 695 (The 5th century, see 208), pl. 170: 788 (The 5th century, see 220), pl.171: 795 (The 5th century, see 210). For unglazed examples see Olynthos XIII, pl.166: 721, Olynthos V, pl.165: 712 (The 5th century, see 210); Histria II, 506, pl.74: XXIII, 4 (The Second quarter of the 5th century, see Zeren 2004, şek.35:93-96, şek.36:97-98; Özbay 2006, 386.

⁵⁶ For example, many of vases or fragments having similar features can be found in layers dated from the last quarter of the 5th to the middle of the 4th century at Clazomenae.

⁵⁷ No.53 is reminiscent of the 4th century types at Attica and Olynthos with its rim and handle. However, unlike those, it is unglazed, and it has a ring foot rather than the flat bottom of most of those found at Olynthos. For a black glazed example from Olynthos see Olynthos V, pl.180:923. For black glazed examples from the Athenian Agora see Agora XII, pl.31:772 and 774 (425-400). A very similar vase from Clazomenae FGT Sector was found in a layer dated to 365-356. For a similar example but with a more rolled rim see also Özbay 2006, 219 picture above (2B Period Floor).

⁵⁸ With this new type, spout and lugs became a decorative feature (see Agora XII, 223). For example, a representative of this new type (Agora XII, fig.16, pl.91:1912, 450-425) with its round-topped massive rim, is a mortar comparable to No.55 and 56. Furthermore, No.55 fits well with Agora standards with its rim diameter of about 37cm. For the standards see Agora XII, 223. For heavy-rim mortaria from Corinth see Villing – Pemberton 2010, 590-594, figs.17-21.

⁵⁹ For similar rim profiles to No.55 see also Blondé 1989, 520, fig.16:191; Blondé 1985, 342, fig.61: 384. For an example from Alonnesos Shipwreck see Hadjidaki 1996, fig.15 (425-400). For a similar example with a disk foot from Corinth see Villing – Pemberton 2010, fig.21:51. The reel lug ribbed vertically on No.56 was a common decorative element in the 5th and the 4th century. For a similar example dated to 425-400 from the Athenian Agora see Agora XII, pl.92:1914.

construction fill dating to an earlier period in the same century. It is similar in profile but has a slightly more bulbous body. An outturned rim, a plastic ridge on the neck, and a thin plastic band at the junction of the neck and the shoulder are among the characteristics of the shape. Both the inside and outside of the rim are painted with glaze and there are some additional glaze bands both on the shoulder and on the foot as well as glaze dots or bars on the handles. A group of bands on the shoulder consists of a large dark glaze band between two thin added white lines⁶⁰. All glaze bands were executed on a thin layer of creamy slip.

On the table amphorae found at Athenian Agora some features such as slip, a thin plastic band at the junction of the neck and the shoulder and bichrome banding are thought to be related to Eastern Greek imports from the last quarter of the 7th century⁶¹. Precursors of the shape in Rhodes go back to the Archaic Period⁶² and a series of 5th century examples from Emporio on Chios⁶³, Apollonia⁶⁴ and the Tektaş Shipwreck⁶⁵ can be compared with Nos.54 and 54a in terms of the shape and manner of the decoration. Many rim fragments are also reported from a test trench on Karantina Island at Clazomenae with potsherds dating to the 5th century⁶⁶. Nos.54 and 54a clearly prove that the Eastern Greek table amphora type of the 5th century was still in use in the region as late as the second quarter of the 4th century.

⁶⁰ The missing lower added white band on No.54 may have faded or flaked away.

⁶¹ Agora XII, 189, pl.62:1469, 1473, 1474. A Rhodian vessel dating to 425-400 at the Athenian Agora, can be compared to Nos.54 and 54a in the manner of decorating the rim and the handles, a plastic ridge on its neck and a thin plastic ridge on junction of the neck and the shoulder. See ibid pl.63:1497.

⁶² ClRh VII, fig.179: upper left and left one in second line from the top (It was undecorated and smaller in size), 177, fig.166: upper left and left one in third line from the top, fig.93:upper left.

⁶³ Height of the Chian example is 15cm and it was totally painted red. It was found with a group of finds which were dated to the end of the 5th century or slightly later. See Boardman 1967, 176, pl.67:922.

⁶⁴ Vases from Apollonia bear three thin bands on the middle of their bodies and there are additional bands outside of the rim and the foot with some glaze dots on the handles. They date to the 5th century are smaller than Nos.54 and 54a. See Ivanov 1963, Tao.129 and 135:744, Tao.129:745.

⁶⁵ The Tektaş vase recalls Nos.54 and 54a with its shape and decoration but with a higher foot. See Carlson 2003, 591, fig.13. Within the cargo of the shipwreck, 13 examples of these table amphorae at least in three different sizes exist and the smaller ones among them show similar proportions and sizes to Nos.54 and 54a. See Carlson 2004, 3-4 and Fig.4.

⁶⁶ Güngör 2004, 128, fig.16c.

Transport Amphorae

Clazomenian Amphorae (figs.9, 12, nos.57-61): The most frequent amphora type, occurring not only in the wells but in any 4th century layer at Clazomenae, is a type that bears a plastic band just below the rim. This type has a cylindrical neck opening slightly towards the shoulder, strap handles oval in section, and a conical or rather bulbous body rising on a toe mostly encircled with a plastic band. This amphora type⁶⁷ was first identified⁶⁸ by E.Doğer and ascribed to Clazomenae itself⁶⁹. The distribution of these amphorae encompasses a region focusing on Clazomenae and its vicinity, with only a few examples reported from the overseas⁷⁰. The fabric is in red or yellow tones with some micaeous, sand, lime inclusions and few black/brown inclusions. The full height of the amphorae is approximately 70cm. and diameter of the rim ranges between 10-12cm. as shown by Nos.57 or 58.

A difference between the capacities of Nos.57 and 58, both of which were found in Well 2-Layer II, is obviously visible on the profile drawing (figs.9). No.58 has a much more capacious and bulbous body, while No.57 has a narrower almost conical body⁷¹. These two examples show clearly that two alternatives in terms of carrying capacity were present in

⁶⁷ The shape apparently began to be produced by the end of the 5th or beginnings of the 4th century under the influence of "New Style" Chian amphorae. See Doğer 1990, 107-108.

⁶⁸ Doğer 1982, 19-21, şek.lev.11-15:30-46; Doğer 1986, 469, fig.15 and 16; Doğer 1990, 107-108, res.115-116.

⁶⁹ Doğer 1982, 19 and note 3; Doğer 1986, 469; Doğer 1990, 108. The excavations at Clazomenae supplied a few misfired fragments which may indicate production activity at the site.

Outside of Clazomenae itself, these amphorae, which were probably produced locally, only spread to some sites such as Smyrna, Leukai, Erythrai and Cymae, none of which is far away from their potential home. Only one amphora is preserved in Museum of Underwater Archaeology in Bodrum. See Doğer 1982, 19 and note 3; Doğer 1990, 108; Doğer 1991, 707. For a rim fragment found in the context of the foundation phase in FGT Sector see Özbay 2006, 233 picture above (1st Period Floor). For a very similar example to No.56 but with a sharper shoulder from Clazomenae Akpınar Necropolis see Hürmüzlü 2004, 88, fig.22. For Thasos see Muller et al. 1991, fig.9:55-57 (Rim fragment, No.55, and toe fragment, No.57, adhere exactly to the type of the Clazomenian amphorae, but No.56 does not show the most characteristic feature, a plastic band just below the rim. The placing of its handles also presents a disputable case for its production center. For Nymphaion see Čistov – Domżalski 2002, fig.14:3; A rim fragment from Maussolleion is also an arbitrary example even if it was not classified as Clazomenian. See Maussolleion 7, pl.19:G 47.

⁷¹ E.Doğer classified the 4th century amphorae into two types in aspect of capacity. For typology established by E.Doğer see Doğer 1982, lev.14:41 and p.21; Doğer 1991, 706-707, res.10-12 (Tip Va and Vb); Doğer 1986, Type 6A and 6B, p.468-469, fig.15-16.

the second quarter of the 4th century at the latest⁷². No.59 repeats the lower body of No.57 but No.60 has a squat and simple toe. No.61 repeats the upper body of No.57 and all of the examples here come from the layers dated to the second quarter of the century.

Transport Amphorae other than Clazomenian (fig.9, nos.62-65): An amphora with mushroom rim, No.62, found in Well 3-Layer IIb, has a tall, slightly bulbous neck, straight handles oval in section, an almost triangular body and a hollowed toe; the full height is about 85cm. The outer surface is covered with a very thin creamy slip. The mushroom-rimmed amphorae from kurgans dating to the 4th and 3th centuries in the north of the Black Sea were classified as "Solocha I" by I.B.Zeest⁷³ but they were produced by many other centers⁷⁴, including Clazomenae⁷⁵, for a long period of time. Their existence at Clazomenae goes back to the end of the 5th century⁷⁶. Most of the mushroom-rimmed amphorae, which can be distinguished easily by their odd rim shapes, have a globular body and button toe. However, some examples similar to No.62 with an almost triangular body are also reported from other sites⁷⁷. No.62 can be dated confidently to the mid 4th century on the basis of its find spot.

A pointed lower body fragment, No.63, comes from Well 2-Layer III. The brown color of its fabric indicates that it may be related to "fractional"

⁷² Most of the samples used by E.Doğer in his typology, were found in layers from the third quarter of the 4th century. However, Nos.57 and 58 can be claimed to be basically suited to the two types of E.Doğer.

⁷³ Zeest 1960, taf.XIV-XVI: type 32. According to V. Grace, the Solokha Type I amphorae "... possibly they show too much variation to be grouped as one type..." See Grace 1971, 67, 78-79, note 66-68, pl.15:11,13.

⁷⁴ For detailed lists of production centers see Lawall 1994, 226-229; Norskov 2004, 289-29; Maussolleion 7, 61-62; Avram 1989, 247-252. The territory of Knidos was also among the important production areas of these amphorae. See Empereur – Picon 1986, 113ff; Tuna 1991, 350-351.

⁷⁵ Doğer 1986, 469-471, fig.18 and the pottery kiln dated to the third quarter of the 4th century see also ibid fig.17; Doğer 1991, 707-708, res.13 (Type VI). Some fragments from Clazomenae FGT Sector are dated to the middle of the century by E.Doğer. See Doğer 1982, lev.VII: 17,18,19 and 15-16).

⁷⁶ M.Lawall points out that the first appearance of the type was in deposits closed during the third quarter of the 5th century at Athens. See Lawall 1994, 220 and fig.88. Accordingly, in the earliest fills dating to the late 5th century in HBT Sector there are many of fragments belong to this type.

⁷⁷ Zeest 1960, taf.16:32ж (slight bulge on the neck is missing, the shoulder is less sharp and the handles do not descend vertically like those on No.62 but proportions as a whole represents the closest parallel); Samothrace II, 176, 757, 758: S113-A (The amphora dated to ca.350 has a somewhat bulbous body and a knob-toe); A knob-toe fragment from a deposit of around 365 from the Maussolleion (Maussolleion 7, pl.7: A93 and for the deposit see also p.85) recalls No.62.

examples of Lesbian amphorae⁷⁸. Other pottery found along with No. 63 includes considerable number of late 6th century examples⁷⁹. A Chian rim fragment, No.64, belongs somewhere in the 4th century⁸⁰. No.65 with its micaceous fabric and lighter color may be identified as a Mendean amphora⁸¹ and comes from the Well 2-Layer II, which is dated to the second quarter of the 4th century⁸².

Finds of the Hellenistic and the Roman Periods (Fig.11, nos.66-70): Certain examples of later pottery that provide a terminus for the termination of Well 3 are included. All come from Well 3, Layer 1b and include Mould-made bowl fragments, Nos.66 and 67, and a rim fragment of West Slope skyphos, No.68. These pieces are so far the only material that belongs to the concerning period in this part of the settlement⁸³. The grooved

⁷⁸ Clinkenbeard 1982, 250ff. For some amphorae that might be related to No.63 see also ibid pl.70,71:4 (Ca.520-490, p.265) and pl.70,71:8 (From the middle to the second half, p.266). For a gray parallel from the Maussolleion see Maussolleion 7, pl.25: G131. For the fabrics of Lesbian amphorae see Whitbread 1995, 158-164. For a discussion about continuation of the "red" fabric in the 4th century and a possible Thasian production see Clinkenbeard 1986, 354.

⁷⁹ In the same fill with No.63 was also found a flat bottomed gray lower body fragment which is not included in this paper, suggesting that a date in the Late Archaic Period would be appropriate for No.63. The lower body fragment mentioned here can be compared to Clinkenbeard 1982, pl.70,71:2 (ca.500).

⁸⁰ For a similar piece from Chios see Anderson 1954, 175, fig.8:272-273.

⁸¹ M.Lawall warns about many of morphological features of Mendean amphorae "also characterize other amphoras from northern Greek region so the distinctively coarse, micaeus Mendean fabric often with many large quartz inclusions plays a primary role in assigning examples to the Mendean type". See Lawall 1994, 118. The fabric of the Mendean amphorae, with sand inclusions, is divided into two distinctive groups, see Whitbread 1995, 201-209.

⁸² Proportions of No.65 seem no further to those found in Porticello Shipwreck which was dated to the early 4th century by M.L.Lawall. For Mendean amphorae from the shipwreck see Eiseman 1973, fig.1 and 2; Eiseman – Ridgway 1987, fig.4-1, 4-2. M.L.Lawall emphasizes morphological features of the amphorae and compares them with those found in Deposit U 13:1 at Athens Agora when he offers early 4th century for the shipwreck. See 16-21, fig.2 and 5. Furthermore, an amphora dated to ca.390 by S.Ju.Monachov (Monachov 1999, taf.68:1 and p.182-184) has hardly a slightly larger body portion than No.65. Nevertheless, body portion of No.65 is narrower than Porticello amphorae so a date between Porticello and ElSec Shipwrecks can be offered for it. For ElSec amphorae see Cerdá 1987, fig.126:627 and for a detailed discussion about the Mendean amphorae found in it see also Lawall 2006, 43-47, note 107-108 and fig. 4.

⁸³ For No.66 see Thompson 1934, 362, fig.47:C29 (The second half of the 3rd – beginnings of the 2nd century, for dating of the deposit see 345-347); Agora XXII, pl.1-2, 73:1-12 (those bowls were produced in the late 3rd and early 2nd century, see ibid 16). For mould-made bowls with meander motive like No. 67 see ibid pl.55.291 (The last quarter of the 3rd century, see 80) and pl.67,88.391 (It was found in a context of the 2nd century, see ibid 90); Samos XIV, Abb.252:A-F (they were dated to the 2nd century, see ibid 156). For examples similar to no.68 see Schafer 1968, taf.12: D13; Behr 1988, p.515, abb.55-58, taf.15:11 (Kat.Nr.55, The 2nd century, see 148).

body fragments, Nos.69 and 70, which may date to the Roman period, come from Well 3, Layer I.

Conclusions

Excavations conducted at the HBT Sector since 1990 have revealed a late Classical Period settlement having four architectural sub-phases. The many small finds, taken together with the architectural remains, let us set the chronological span of the settlement between the later years of the 5th and the middle of the 4th century. The first period, dated to the later years of 5th century, is represented by a few small houses that can be identified as "Prostas houses" on the basis of their ground plans. This initial phase is followed by an uncompleted architectural attempt, with remains of thick foundation walls indicating buildings that were possibly more than modest houses. The third architectural phase consists of some houses with foundation walls sloppily built of stone masonry. The settlement layout is not in grid plan but at least one of the houses can clearly be defined as a "Prostas house". The last architectural phase is formed by an insula consisting of three large, adjoining, extra-ordinary "Prostas houses". Particularly during the establishment of the last phase a great leveling process took place in the area and the foundations of the buildings were placed directly on the bedrock in most cases. With the aid of small finds from construction fillings and use deposits, the third period is dated to the later years of the first quarter and the early years of the second guarter of the 4th century⁸⁴ and the fourth period is dated from the second quarter to the mid 4th century⁸⁵.

Wells 1 and 2 were dug into the bedrock, which seems to have served as a platform for workshops dating to the Archaic Period (fig.1). Both of the wells are larger at the bottom than at the rim. Diameters of the rim openings are very close each other, and there are stone carved footsteps on

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⁸⁴ Most of the pottery from the construction fills of the third phase of in the sector belongs to the first quarter of the 4th century. However, a few somewhat later pieces come from use deposits of the same phase. For example, a cup-skyphos, No.6, with roulette decoration from Well 3 suggests that activities of the phase must have extended into the beginnings of the second quarter at least.

⁸⁵ Many of the potsherds obviously dating to the second quarter were collected from leveling fills of the last phase. The cup-kantharoi and the bowls with incurving rim are the most typical samples of the pottery assemblage. Furthermore, few sherds, dated to the middle of the century, were identified in the use deposits of the same phase. The absence of objects associated with the second half of the century presents a clear chronological proof for the abandonment of the settlement sometime in the middle of the fourth century.

the walls of the both wells. These similarities suggest that the both were opened simultaneously during the Archaic Period. Well 1 has neither a use fill which shows that it was used during the 4th century nor a closing filling which shows that it was terminated in the late Archaic Period (fig.2). But it must have been closed by the fourth construction phase of the Classical Period settlement at latest. Several potsherds dating to the first half of the 4th century provide a chronological evidence for the closing date of the well (Nos.8, 18, 24, 35). Therefore, Well 2 must have been terminated before the fourth construction phase of the settlement in the area, as is shown by its location under a wall dating to the fourth phase. The latest finds, Nos.17 and 55, associated with closing debris of the well, belong to the first half of the 4th century and they do not contradict with the sequence of overall stratigraphy in the area. The builders of the well did not respect a terrace between two levels of the bedrock platform that was shaped during the Archaic period, and the well was placed directly on the terrace, thereby destroying it. Therefore, this well should have been opened at a relatively later date, quite likely in the Archaic period, or perhaps during the reoccupation of the area in the late Classical Period. Some pieces dating to the late 6th and the early 4th century from the bottom filling, however, do not belong to a use fill (Nos.3, 27-29, 43, 56, 63). This filling suggests that Well 2 may have been terminated after the so-called "Ionian Revolt" and that an Archaic Period filling was disturbed when the well was cleaned up for re-use in the 4th century (fig.2). Well 2 is located in an open area to the west of the domestic buildings of the third architectural phase and most likely it served as a water source for several buildings. The similar character of the pottery assemblage from the use fill of the well (Layer II) and that found in Well 3-Layer III suggests at first glance that these two fillings were formed contemporaneously. However, the presence of rouletting on No.6, which comes from Well 2-Layer II dating to third phase of the settlement, and the fact that the well should have been closed before the fourth phase allows us to date this filling to a narrower span of time, between the late first quarter and the early years of the second quarter of the 4th century.

Well 3, which is located in the courtyard of a building, belongs to the last construction phase of the area (fig.1); and it has a use fill in which there are many potsherds and vases of the second quarter of the 4th century (for example Nos.7 and 9). The presence of some stone architectural pieces in the closing filling of the well suggests that the buildings of the last occupation phase in the area might have been at least partially destroyed. Date of

this event must have been around the middle of the century since there is no architectural indication that shows the fact that HBT Area was occupied during the second half of the century. Well 3 was quite likely terminated in two individual stages. Its first filling related with its abandonment must have taken place sometime during the middle of the fourth century (Layer IIa and IIb). Following its partial filling, it was then completely piled up in the late Roman period as suggested by diagnostic material from Layer Ib) (fig.2). The two original deposits, Well 2- Layer II and Well 3-Layer III, associated with the a layer characterized by an accumulation of broken pottery and therefore both are related with their use as a water source, which produced similar pottery that consist of considerable amount of water jugs, several transport amphorae and few black glazed service pots such as cup-skyphoi and cup-kantharoi. The domestic character of these fillings is in harmony with the modest household activity in the area of which these wells might have been originally associated with.

Catalogue of Selected Finds

Munsell Soil Color Charts, Baltimore, 1975 Edition is used for the catalogue. Resting surface is used for calculating diameters.

Finds of the Archaic Period

- Claz.amph.rim fr. Fig. 3, Inv.3017, W1 Lay.Ia (The Late 6th century)
 H:7.6cm. Diam.of rim:11.8cm. Rolled rim. Strap handle, oval in section. micaceous, sand and lime inclusions (5 YR 7/6 reddish yellow). Glaze: Outside of rim and handle.
- Claz.amph.rim fr. Fig. 3, Inv.3018, W1 Lay.Ia (The Late 6th century)
 H.9cm. Diam.of rim:14cm. Rolled rim. Monogram on neck. micaceous, sand and lime inclusions, dense tiny stone inclusions. Glaze: Outside of rim.
- 3 Chian amph. rim fr. Fig. 3, Inv.6023, W2 Lay.III (The Late 6th century) H.3.8cm. Diam.of rim.9.8cm. Rolled rim, Bulbous neck. micaceous, sand and lime inclusions, some tiny stone inclusions (5 YR 5/6 yellowish red). Thin creamy slip (10 YR 8/2 white). Glaze: outside of the rim (2.5 YR 5/6 red).
- 4 Stemmed dish rim fr. Fig. 3, Inv.6021, W2 Lay.II (The Late 6th century)
 H.2.7cm. Diam.of rim.13cm. Thickened lip. Shallow body. A small amount of micaceous and sand inclusions (5 YR 7/3 pink). Glaze: Inside and upper half of outer surface (5 YR 4/1 dark gray).
- 5 Oinochoe wall fr. Fig.3, Inv.3022, W1 Lay.Ib (The Late 6th century)
 H.12.8cm. Wall fragment. micaceous and lime inclusions (5 YR 8/4 pink). Glaze: Two bands and wave line (2.5 YR 5/6 red).

Black Glazed Pottery

6 Light-walled cup-skyphos (Complete except small parts). Figs 4,10, Inv.6019, W2 Lay.II Preserved in İzmir Museum of Archaeology (380-350)

H.5.7cm.(without handle) Diam.of rim.11.6cm. Diam.of foot.6cm. Rim offset inside, slightly outturned. High moulded ring foot. Reserved groove above junction of wall and foot. Reserved underside, decorated with glaze bands. Decoration: Rouletting encircling four central palmettes. Fabric information is missing.

7 Light-walled cup-skyphos. (Complete except small parts), Figs 4,10, Inv.032, W3 Lay. IIIb (380-350)

H.5.9cm.(without handle) Diam.of rim.12.8cm. Diam of foot.6.2cm. Rim offset inside, slightly outturned. High moulded ring foot. Reserved groove above junction of wall and foot. Reserved underside, decorated with glaze bands. Decoration: Rouletting encircling four ovules. Grey core depends on miss-firing with a small amount of micaceous and lime inclusions (5 YR 7/6 reddish yellow – 5 YR 7/1 light gray).

- 8 Heavy-walled cup-skyphos foot fr. Fig.4, Inv.024d, W1 Lay.Ia (400-375)
 H.2.1cm. Diam.of foot.6.8cm. High moulded ring foot. Reserved groove above junction of wall and foot. Fabric without inclusions (2.5 YR 6/4 light reddish brown).
- 9 Cup-kantharos. (Complete except small parts) Figs.4,10, Inv.033, W3 Lay.IIIb (380-350)

H.8.3m.(without handle) Diam.of rim.7.5cm. Diam. of foot.5cm. Moulded rim. Globular body. Moulded foot, concave beneath, with scraped groove in resting surface. Scraped line with miltos just above junction of body and foot. Reserved groove with miltos at junction of two mouldings of foot. Totally glazed underside with central nipple. Decoration: Rouletting encircling (preserved seven of) eight linked palmettes. Fabric without inclusions 7.5 YR 6/4 (light brown).

- Small bowl rim fr. Fig.4, Inv.017, W3 Lay.IIb (425-350)
 H.2.4cm. Diam.of rim.7.6cm. Slightly incurving rim. Fabric without inclusions (5 YR 6/6 reddish yellow).
- Incurving rimmed bowl rim fr. Fig.4, Inv.027, W3 Lay.IIIa (380-350)
 H.2.4cm. Diam.of rim.8.4cm. Incurving rim, thickened just below the top. Fabric without inclusion and with grey core (7.5 YR 6/4 light brown 5 YR 7/1 light gray).
- 12 Footed saltcellar. Half. Fig. 4, Inv.012, W3 Lay.Ib (380-350)

H.3.3cm. Diam.of rim.5.5cm. Diam.of foot.3.5cm.

Incurving rim. Outturned ring foot. Reserved resting surface and underside. micaceous and lime inclusions (10 R 6/6 light red). Matt glaze in red and brown colours (10 YR 3/2 very dark grayish brown – 2.5 YR 5/8 red).

13 Fish-plate foot fr. Fig.4, Inv.009, W3 Lay.Ib (380-350)H.2.2cm. Diam.of foot.9.1cm.

Ring foot with reserved resting surface. Reserved underside, decorated with glaze bands. Reserved band at junction of body and foot. Scraped groove around central

depression. Fabric without inclusions except thin lime particles (5 YR 7/4pink). Black glaze tends to be green in places.

- Bell crater body fr. Fig.4, Inv.034, W3 Lay.IIIb (425-350)
 H.9.4cm. Thin plastic band outside of foot. Fabric without inclusions except dense thin micaceous particles (5 YR 7/4 pink). Matt black glaze, peeled in places.
- Bowl with reserved stripe rim fr. Fig.4, Inv.010, W3 Lay.Ib (400-350)
 H.2.6cm. Diam.of rim.14.7cm. Rim projecting outwards and rounded on top. Fabric with a few micaceous and sand inclusions (5 YR 4/2 dark brown).
- 16 Bowl with reserved stripe body fr. Fig.10, Inv.012, W3 Lay.Ib (380-350) Decoration: A large palmette sprouting from flat line. Matt glaze, peeled in places. Fabric with a few micaceous and sand inclusions (7.5 YR 6/6 reddish yellow).
- 17 Open vessel body fr. Fig.10, Inv.029a, W2 Lay.I (400-375)Decoration: Trace of enclosed ovules. Red glaze. Fabric without inclusions.
- 18 Open vessel body fr. Fig.10, Inv.024d, W1 Lay.Ia (400-375) Decoration: Traces of palmette encircled by enclosed ovules. Fabric without inclusions but with a grey core (5 YR 7/4 pink).

Household Wares

Jugs with cylindrical necks, flaring rims and large capacity (type 1a)

19 Complete except small parts. Fig.5, Inv.6021, W2 Lay.II Preserved in İzmir Museum of Archaeology (380-350)

H.38.3cm. Diam.of.rim.12cm. Diam.of foot.11.4cm. Heavy outcurved rim. Cylindrical neck. Ovoid body. Outturned ring foot. Strap handle, oval in section. Fabric information is missing.

20 Complete except small parts. Figs.5, 13, Inv.33, W3 Lay.IIIb (380-350)

H.37.4cm.Diam.of.rim.12.8cm. Diam.of foot.10.8cm.

Description same as No:19. Fabric with dense micaceous inclusions, sand and a few lime inclusions, tiny stone inclusions (2.5 YR 6/6 light red). Thin creamy slip outside (10 YR 8/3 very pale brown).

- 21 Upper body fr. Fig.5, Inv.031, W3 Lay.IIIb (380-350)
 H.20.8cm. Diam.of.rim.13.3cm. Description same as No:19. Fabric same as No:20 (5 YR 6/6 reddish brown). Thin creamy slip outside (5 YR 7/1 light gray).
- Body and foot fr. Fig.5, Inv.033, W3 Lay.IIIb (380-350)H.25cm. Description same as No:19. Fabric and slip same as No:20.
- 23 Complete except small parts. Fig.5, Inv.033, W3 Lay.IIIb (380-350)

H.33.3cm.Diam.of rim..14.2cm.Diam.of foot.10.5cm.

Description same as no:19. Fabric same as No:20 but with some over-fired areas (2.5 YR 5/4 reddish brown). Thin creamy slip outside (7.5 YR 8/4 pink).

- Body and foot fr. Fig.5, Inv.3022, W1 Lay.Ib (400-350)
 H.22.3cm. Diam.of.foot.9.7cm. Description same as No:19. Fabric same as No:20 (5 YR 7/6 reddish yellow).
- Lower body fr. Fig.5, Inv.033, W3 Lay.IIIb (380-350)
 H.17.3cm. Globular lower body without any trace of foot. Fabric with sand, micaceous and lime inclusions (2.5 YR 6/6 light red).
- 26 Rim fr. Fig.5, Inv.6019, W 2 Lay.II (380-350)
 H.5.7cm. Diam.of.foot.15.6cm. Heavy outcurved rim. Fabric with dense of sand, micaceous and lime inclusions and with grey core (5 YR 7/6 reddish yellow). Thin creamy slip outside (7.5 YR 8/6 reddish yellow).
- 27 Rim fr. Fig.5, Inv.6023, W2 Lay.III (400-380)
 H.1.4cm. Diam.of foot.12.4cm. Heavy outcurved rim. Fabric with sand, micaceous and lime inclusions and with grey core (2.5 YR 6/8 light red).
- 28 Rim fr. Fig.5, Inv.6024, W2 Lay.III (400-380)H.2cm. Diam.of foot.15.2cm. Description and fabric same as previous one.
- Rim fr. Fig.5, Inv.6024, W2 Lay III (400-380 ?)
 H.1.75cm. Diam.of.rim.13.4cm. Broad-outturned rim. Fabric with micaceous, lime, sand inclusions and tiny stone inclusions (5 YR 6/6 reddish yellow). Thick white slip on rim (2.5 Y 8/2 white).

Jugs with cylindrical necks, simpler rims, and smaller capacity (type 1b)

- 30 Neck-body-foot fr. Figs.5,13, Inv.025 W3 Lay.IIb (380-350)
 H.25.3cm. Diam.of foot.8.8cm. Cylindirical neck. Ovoid body. Outturned ring foot. Strap handle, oval in section. Fabric with dense of sand, micaceous and lime inclusions (2.5 YR 6/6 light red).
- Body and foot fr. Fig.5, Inv.026, W2 Lay.IIb (380-350)
 H.15.5cm. Diam.of foot.8.7cm. Ovoid body. Ring foot. Fabric with dense micaceous and sand inclusions, a few lime inclusions (5 YR 6/6 reddish yellow). Thin creamy slip outside (5 YR 8/4 pink).
- Rim fr. Fig.5, Inv.026, W3 Lay.IIb (380-350)
 H.3cm. Diam.of rim.10.8cm. Slightly outturned and rounded simple rim. Thin creamy slip outside (7.5 YR 8/6 reddish yellow). Fabric same as No:31.
- Rim fr. Fig.5, Inv.022, W3 Lay.IIb (380-350)
 H.6.3cm. Diam.of.rim.9.7cm. Description same as No:32. Thin creamy slip outside (5 YR 8/4 pink). Fabric with micaceous and a few sand and lime inclusions (5 YR 6/6 reddish yellow).
- Rim fr. Fig.5, Inv.6015, W2 Lay.II (380-350)
 H.8.2cm. Diam.of rim.10.9cm. Collar rim concave on exterior. Cylindirical neck. Thin creamy slip outside (5 YR 8/4 pink). Fabric with micaceous, sand and lime inclusions (5 YR 6/4 light reddish brown).

Jugs with ovoid or biconical body with bigger size (type 2a)

35 Complete vase. Fig.6, Inv.024b, W1 Lay.Ia (400-350)

H.23.1cm.(without handle) Diam.of rim.9.4cm. Diam.of foot.9.5cm. Slightly outturned simple rim. Ovoid body. Ring foot. Strap handle, oval in section. Decoration: Glaze bands outside of rim, middle of body and outside of foot, glaze dots on handle.

36 Complete except small parts. Fig.6, Inv.033. W3 Lay.IIIb (380-350)

H.24.6cm.(without handle) Diam.of rim.10.4cm. Diam.of foot.8.3cm. Slightly outturned simple rim. Ovoid body. Ring foot. Strap handle, oval in section. Decoration: Thin glaze bands both sides of rim (2.5 YR 5/6 red). Fabric with lime, sand and few micaceous inclusions (2.5 YR 6/6 light red). Thin creamy slip outside (2.5 Y 8/2 white).

37 Complete except handle. Fig.6, Inv.031-033, W3 Lay.IIIb (380-350)

H.23.9cm. Diam.of rim..9.8cm. Diam.of foot.9.9cm. Description same as No:36. Fabric with sand and lime inclusions (7.5 YR 7/4 pink). Decoration: Thin glaze bands both sides of rim, glaze band on middle of body (5 YR 5/3 reddish brown). Thick white slip outside (2.5 Y 8/2 white).

38 Complete except foot. Fig.6, Inv.033., W3 Lay.IIIb (380-350)

H.21.4cm.(without handle) Diam.of rim.9.5cm. Description same as No:36. Decoration: Thin glaze bands both sides of rim, glaze band on middle of body, glaze bars on handle (7.5 YR 4/2 dark brown). Thin creamy slip outside (10 YR 8/3 very pale brown). Fabric same as No:36 (5 YR 6/6 reddish yellow).

39 Complete except small parts. Fig.6, Inv.033, W3 Lay.IIIb (380-350)

H.23.4cm.(without handle) Diam.of rim.9.4cm. Diam.of foot.8.1cm. Description same as No:36. Decoration: same as No:38 (5 YR 3/3 dark reddish brown). Thin creamy slip outside (7.5 YR 8/2 pinkish white -5 YR 7/6 reddish yellow). Fabric with dense of sand, micaceous and lime inclusions (2.5 YR 6/4 light reddish brown).

40 Complete except small parts. Fig.6, Inv.033, W3 Lay.IIIb (380-350)

H.24.5cm.(without handle) Diam.of rim.10.3cm. Diam.of foot.9cm. Description same as No:36. Decoration: same as No:38 (5 YR 2.5/1 black). Thin creamy slip outside (10 YR 5/2 grayish brown – 7.5 YR 5/4 brown). Fabric with sand, micaceous and dense lime inclusions (5 YR 6/3 light reddish brown).

41 Complete except small parts. Figs.6,13, Inv.033, W3 Lay.IIIb (380-350)

H.26.3cm.(without handle) Diam.of rim.9.7cm. Diam.of foot.8.3cm. Description: same as No:36. Decoration: same as No:38 (5 YR 3/3 dark reddish brown). Thin creamy slip outside (10 YR 6/3 pale brown). Fabric with dense sand, micaceous and lime inclusions (5 YR 7/4 pink).

42 Complete except handle. Fig.6, Inv.032, W3 Lay.IIIb (380-350)
H.23.8cm. Diam.of rim.9.2cm. Diam.of foot.8.5cm. Description same as No:36. Decoration: Glaze band on middle of body (10 YR 5/3 brown - 10 R 6/6 light red). Thin creamy slip outside (10 YR 8/3 very pale brown). Fabric with dense lime, sand and micaceous inclusions and tiny stone inclusions (5 YR 6/6 reddish yellow).

43 Complete except small parts. Fig.6, Inv6023-6024, W2 Lay.III (400-380)

H.27cm.(without handle) Diam.of rim.9.5cm. Diam.of foot.8.9cm. Description same as No:36. Decoration: Thin glaze bands both sides of rim, handle (2.5 YR 6/8 light red). Thin creamy slip outside (5 YR 8/4 pink). Fabric with sand, lime and dense micaceous inclusions and tiny stone inclusions (5 YR 6/6 reddish yellow).

Jugs with ovoid body with smaller size (type 2b)

44 Complete except handle. Fig.7, Inv.027-028, W3 Lay.IIIa (380-350)

H.20.1cm Diam.of rim.7.9cm. Diam.of foot.7.3cm. Slightly outturned simple rim. Ovoid body. Ring foot. Decoration: Glaze bands both sides of rim (10 R 5/8 red). Fabric with dense of sand, micaceous and lime inclusions (5 YR 6/6 reddish yellow).

45 Complete except small parts. Figs.7,13, Inv.022, W3 Lay.IIb (380-350)

H.18.5cm.(without handle) Diam.of rim.8.2cm. Diam.of foot.6.9cm. Description same as No:44 but with a outturned ring foot and small part of strap handle, oval in section. Decoration: Glaze bands both sides of rim, glazed places on handle (5 YR 4/1 dark gray). Thin creamy slip outside (10 YR 8/3 very pale brown). Fabric with dense sand, micaceous and lime inclusions and tiny stone inclusions (5 YR 7/4 pink).

Jugs with globular body (Type 3)

46 Complete vase. Fig.7, Inv.031, W3 Lay.IIIb (380-350)

H.14.9cm. Diam.of rim.9cm. Diam.of foot.7cm. Slightly outturned simple rim. Globular body. Ring foot. Strap handle. Decoration: Some scraped grooves just below rim. Fabric with dense micaceous inclusions, sand and a few lime inclusions, close to fabric of cooking wares (2.5 YR 6/8 light red).

- 47 Complete vase. Fig.7, Inv.033, W3 Lay.IIIb (380-350)
 H.15.2cm. Diam.of rim.7.6cm. Diam.of foot.7.1cm. Description same as No:46. Decoration: same as No:46. Fabric same as No:46 (2.5 YR 6/6 light red).
- 48 Complete vase. Figs.7,13, Inv.6012, W2 Lay.II, Preserved in İzmir Museum of Archaeology (380-350)

H.14.2cm. Diam.of rim.8.4cm. Diam.of foot.6.6cm. Description same as No:46. Decoration: same as No:46. Fabric with dense micaceous inclusions, very close to No:46 and 47.

Small Oinochoae

49 Complete except small parts. Fig.7, Inv.033, W3 Lay. IIIb (380-350)

H.11.7cm.(without handle) Diam.of bottom.4.1cm. Trefoil rim. Ovoid body. Flat bottom. Strap handle, oval in section. Decoration: Glazed place on handle (5 YR 5/4 reddish brown). Thin creamy slip outside(7.5 YR 8/4 pink). Fabric with dense micaceous, sand and lime inclusions (5 YR 7/6 reddish yellow).

50 Complete except small parts. Fig.7, Inv.033, W3 Lay. IIIb (380-350)

H.10.4(without handle) Diam.of bottom.3.8cm. Description same as No:49. Fabric with dense lime, micaceous, sand inclusions and tiny stone inclusions, misfired in places (5 YR 7/4 pink – 10 YR 6/2 light brownish gray).

- 51 Complete vase. Fig.7, Inv.027, W3 Lay. IIIa (380-350)
 H.9.2cm.(without handle) Diam.of bottom.3.3cm. Trefoil rim, narrower than No:49-50. Ovoid body, narrower than No:49-50. Flat bottom. Strap handle, oval in section. Decoration: Horizontal glaze bands on shoulder and neck. Fabric same as No:50 (5 YR 6/6 reddish yellow).
- 52 Complete except handle. Fig.7, Inv.027, W3 Lay. IIIa (380-350)H.10.1cm. Diam.of bottom.3.2cm. Description same as No:51. Fabric same as No:51.

One-handled miniature bowl

53 Complete vase. Fig.7, Inv.020, W3 Lay.IIb (380-350)

H.2.4cm.(without handle) Diam.of rim.6.8cm. Diam.of bottom.3cm. Simply rounded rim. Shallow body. Flat bottom. Horizontal handle, round in section. A very thin creamy slip outside. Fabric with micaceous and a few sand inclusions (5 YR 7/6 red-dish yellow).

Table Amphorae

54 Body-foot-handle fr. Fig.7, Inv.033, W3 Lay.IIIb (380-350)

H.12cm.(without handle) Diam.of foot.7.6cm. Ovoid body. Ring foot. Strap handle, oval in section. Decoration: a thin added white line (7.5 YR 8/4 pink) and a thick glaze band on shoulder, a glaze band outside of foot, glazed places on handle (5 YR 4/3 reddish brown – 5 YR 5/4 reddish brown). Thin creamy slip outside (5 YR 7/6 reddish yellow). Fabric with micaceous, sand and lime inclusions (2.5 YR 6/6 light red).

54a Rim-body-foot-handle fr. Fig.7, Inv.5014,

Levelling Fill of 4th Construction Phase of HBT Sector (400-350)

H.19,1cm. Diam.of rim.8,9cm. Diam.of foot.8,4cm. Broad horizontally projecting rim. Cylindrical neck with a ridge. A thin plastic band at junction of neck and shoulder. Ovoid, almost globular body. Ring foot. Strap handles, oval in section. Decoration: glazed place inside of rim, outside of rim to midpoint of neck glazed, a thick glaze band (10 R 4/8 red) between two added white thin bands (2.5 Y 8/2 white) on shoulder, glaze band outside of foot. Fabric same as No:54 (5 YR 6/6 reddish yellow).

Mortars

55 Rim-body-foot fr. Fig.8, Inv.6006, W2 Lay.I (400-350)

H.11.4cm. Diam.of rim.37cm. Diam.of foot.44cm. Heavy round-topped rim. Reel lugs ribbed vertically. Massive ring foot. Covered with thick white slip (7.5 YR 8/4 pink). Coarse fabric with dense lime, sand and micaceous inclusions, and tiny stone inclusions (2.5 YR 6/6 light red).

56 Rim fr. Fig.8, Inv.6022, W2 Lay.III (400-380)
H.5.7cm. Diam.of rim.30cm. Description same as No:55. Covered with thick white slip (2.5 YR 8/2 white). Fabric with dense lime, sand, micaceous and chaff inclusions, and tiny stone inclusions (5 YR 6/6 reddish yellow).

Transport Amphorae and Table Amphorae

Clazomenian Amphorae

57 Complete vase. Figs.9, 12, Inv.6.021, W2 Lay. II (380-350)

H.66.5cm. Diam.of rim.12.3cm. Diam.of toe.3.3cm. Outturned rim with a plastic band just below. Cylindrical neck, Ovoid body. Toe with a plastic band. Handles oval in section. A thin plastic ridge at junction of neck and shoulder. Fabric with micaceous and lime inclusions and tiny stone inclusions (7.5 YR 6/6 reddish yellow). Thin creamy slip outside 7.5 YR 6/6 reddish yellow).

58 Complete vase. Fig.9, Inv.6.021. W2 Lay.II (380-350)

H.70cm. Diam.of rim.10.4cm. Diam.of toe.3cm. Description same as No:56 but with a more capacious body. Fabric same as No:56 (7.5 YR 5/4 brown). Thin creamy slip outside (7.5 YR 8/6 reddish yellow).

- 59 Body fr. Fig.9, Inv.031, W3 Lay. IIb (380-350)
 H.49.2cm. Diam.of toe.2.9cm. Description same as No:56. Fabric same as No:56 (2.5 YR 6/6 light red). Thin creamy slip outside (5 YR 7/8 reddish yellow).
- 60 Lower body fr. Fig.9, Inv.032, W3 Lay. IIIb (380-350)

H.24.4cm. Diam.of toe.2.6cm. Ovoid body. Toe without plastic band. Thin creamy slip outside (10 YR 8/2 white). Fabric with little few micaceous, lime and sand inclusions, grey core and peeled in places (5 YR 6/6 reddish yellow – 10 YR 7/2 light gray).

61 Rim-neck-handle fr. Fig.9, Inv.033, W3 Lay.IIIb (380-350)
H.15.6cm. Diam.of rim.9.4cm. Description same as No:56. Thin creamy slip outside (5 YR 8/4 pink). Fabric with micaceous, lime and sand inclusions (5 YR 7/6 reddish yellow).

Transport Amphorae other than Clazomenian

62 Complete vase. Fig.9, Inv.022, W3 Lay.IIb

Preserved in İzmir Museum of Archaeology (ca.350)

H.85.2cm. Diam.of rim.11.3cm. Diam.of toe.3cm. Mushroom rim. Tall, slightly bulbous, cylindirical neck. Ovoid body with a sharp shoulder and pointed lower portion. Hollowed-toe. Strap handles, oval in section. Thin creamy slip outside (5 YR 8/2 pinkish white). Fabric information missing (5 YR 7/6 reddish yellow).

63 Bottom fr. Fig.9, Inv.6022, W2 Lay.III (The Late 6th century - 380)

H.22cm. Diam.of bottom.3.4cm. Pointed lower body fr. Fabric with micaceous and a few lime and possibly sand inclusions with a grey core, peeled in places (7.5 YR 6/4 light brown – 7.5 YR N 6/7 gray). Possibly Lesbian.

64 Rim fr. Fig.9, Inv.012, W3 Lay Ib. (400-350)

H.7.5cm. Diam.of rim.13.4cm. Slightly rounded rim with a scraped groove just below. Cylindirical neck. Thin creamy slip outside (5 YR 8/4 pink). Fabric with micaceous, sand, lime and a few quartz inclusions (2.5 YR 6/6 light red). Possibly Chian.

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65 Lower body and toe fr. Fig.9, Inv.6021, W2 Lay.II (380-350) H.30.3cm. Diam.of toe.4cm. Ovoid lower body with a slightly hollowed-toe. A very thin creamy slip outside (7.5 YR 8/4 pink). Fabric with dense lime, sand and micaceous inclusions, and tiny stone inclusions (7.5 YR 6/4 light brown). Possibly Mendean.

Finds of the Hellenistic and the Roman Periods

- 66 Mould-made bowl body fr. Fig.11, Inv.007, W3 Ib (The Late 3rd Early 2nd century) Pine-cone scale decoration. Fabric with a few lime, sand, micaceous inclusions but misfired (7.5 YR N 4/ dark gray). Greeny glaze (5 Y 4/2 olive gray).
- 67 Mould-made bowl body fr. Fig.11, Inv.010, W3 Ib (The Late 3rd Early 2nd century) Meander decoration. Fabric with lime, sand and micaceous inclusions (7.5 YR 6/6 reddish yellow). Matt brown glaze (7.5 YR 4/2 dark brown).
- 68 West-Slope bowl body fr. Fig.11, Inv.003, W3 Ib (The 2nd century) Decorated with added white (2.5 Y N 8/white) leafs between two scraped lines. Fabric with few lime, sand and micaceous inclusions (5 YR 7/6 reddish brown). Matt black glaze (5 YR 4/2 dark reddish gray).
- 69 Grooved body fr. Fig.11, Inv.002, W3 Lay.Ib (The Late Roman Period) Wall fr.decorated with grooves of which upper surfaces smoothed. Fabric with lime, few micaceous inclusions and tiny stone inclusions (2.5 YR 6/6 light red).
- 70 Grooved body fr. Fig.11, Inv.002, W3 Lay.Ib (The Late Roman Period) Description and fabric similar to previous one.

Summary of other finds not included in this paper

Well 1-Layer Ia

| Early Ware Archaic Ware | : A few PG and LG body frags. : A few 6th century Attic BG cup frags., a few Orientalizing body frags., a Corinthian krater body frag., many frags. of the 6th century household ware, many frags. of 6th century amphorae (mostly Clazomenian, one Lesbian lower wall, and one Corinthian rim). |
|----------------------------|--|
| Classic Ware | : 4th century North Aegean transport amphora toe fr. |
| Coarse ware and tiles | : One large pithos fr., one mortar fr., a few cooking ware body frags. |
| Objects | : One grind-stone fr., small iron object fr. |
| Organics | : Bones and shells. |

Well 1-Layer Ib

| Archaic Ware | : A few 7^{th} and the 6^{th} century body sherds. |
|--------------|--|
| Classic Ware | : A few 4 th century water jug frags. |
| Organics | : Bones and shells. |

Well 2-Layer I

The fill almost entirely consists of fragments of a lime floor mortar.

| Early Ware | : A few LG body frags. |
|-----------------------|--|
| Archaic Ware | : A few 7 th and the 6 th century body frags., several frags. of 6 th century transport amphorae (Clazomenian and Central Aegean ⁸⁶). |
| Coarse ware and tiles | : A few frags. of pithoi, mortar and roof tiles. |
| Objects | : Stucco fr. |

Well 2-Layer II

| Early Ware | : A few LG body frags. |
|-----------------------|--|
| Archaic Ware | : A few 7 th and the 6 th century body frags., some frags. of 6 th century transport amphorae (Clazomenian, Central Aegean and Chian), some 6 th century Attic BG cup frags. |
| Coarse ware and tiles | : A few frags. of pithoi, mortar and roof tiles. |
| Objects | : Discoid loom-weight fr. |
| Organics | : Wood frags., bones and shells. |

Well 2-Layer III

| Early Ware | : A few LG body frags. |
|-----------------------|---|
| Archaic Ware | : A few 7 th and the 6 th century body frags., some frags. of the 6 th century transport amphorae (Clazomenian, Chian and a flat bottom fr. of a gray Lesbian), a few Orientalizing frags., a 6 th century oil lamp fr. |
| Coarse ware and tiles | : A few mortar frags. |
| Objects | : An iron knife (?) fr. |

| Organics | : Bones and shells. |
|----------|---------------------|
|----------|---------------------|

Well 3-Layer Ia

| Classic Ware | : The 4 th century BG cup body frags. |
|--------------|--|
| Objects | : Stucco fr. |

Well 3-Layer Ib

| Early Ware Archaic Ware | : A few LG body frags. : A few 7th and 6th century body frags., some Orientalizing body frags., a single fr. of the 6th century transport amphora (Clazomenian) |
|----------------------------|---|
| Classic Ware | : 4 th century transport amphora fr. (Chian), many frags. of the 4 th century household ware (mainly water jugs), a few BG body frags. |
| Roman | : A few grooved body frags. |

⁸⁶ For the class, see Ersoy 1993, p.416-420.

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|-----------------------|--|
| Objects | : A few loom-weight frags. both of discoid and pyramidal types, a terracotta draped youth figurine, bronze coin (extremely worn out), a bronze needle fr., a grind-stone fr., a few stucco frags., a few lime floor mortar frags. |
| Organics | : Bones and shells. |
| Well 3-Layer IIa | |
| Archaic Ware | : A few 7 th and the 6 th century body frags. |
| Classic Ware | : A few BG body frags., a few household lekane body frags. |
| Objects | : bronze coin (extremely worn). |
| Organics | : Bones and shells. |
| Well 3-Layer IIb | |
| Early Ware | : A few LG body frags. |
| Archaic Ware | : A few 7 th and the 6 th century body frags., some Orientalizing body frags., some frags. of the 6 th century amphorae (Clazomenian). |
| Classic Ware | : A few Type 1 and Type 2 water jugs, the 4 th century transport amphora frags. (Clazomenian and Mushroom-rim), some frags. of the 4 th century household ware, few BG body frags. |
| Coarse ware and tiles | : Roof tile fr. |
| Objects | : A glass bead fr., a small iron object fr., architectural elements ⁸⁷ , a few stucco frags. |
| Organics | : Bones and shells. |
| Well 3-Layer IIIa | |
| Archaic Ware | : A few the 7 th and the 6 th century body frags. |
| Classic Ware | : Many frags. of the 4 th century household ware (mainly water jugs and miniature oinochoe), a Clazomenian amphorae toe fr. |
| Organics | : Bones and shells. |
| Well 3-Layer IIIb | |
| Archaic Ware | : A few 7 th and the 6 th century body frags., some frags. of the 6 th century transport amphorae (Clazomenian and Central Aegean). |
| Classic Ware | : The 4 th century Type 1 water jug frags., many body frags. of miniature oinochoe, few transport amphorae of the 4 th century (Clazomenian and Chian). |
| Coarse ware and tiles | : A few mortar and roof tile frags. |
| Objects | : A stucco fr. |
| Organics | : Wood fr., bones and shells. |

⁸⁷ See above note 6.

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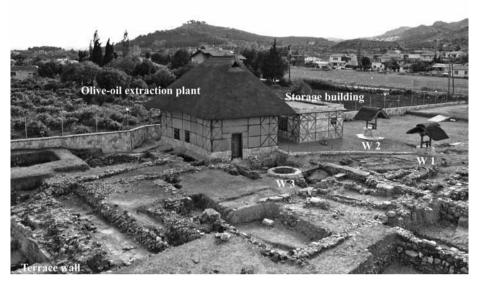
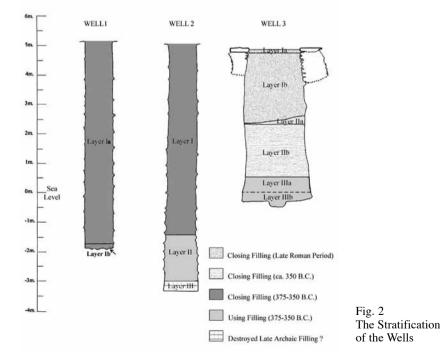


Fig. 1 HBT Sector



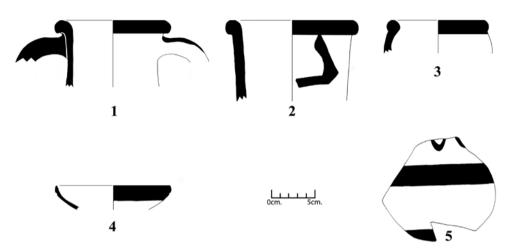


Fig. 3 Finds of the Archaic Period

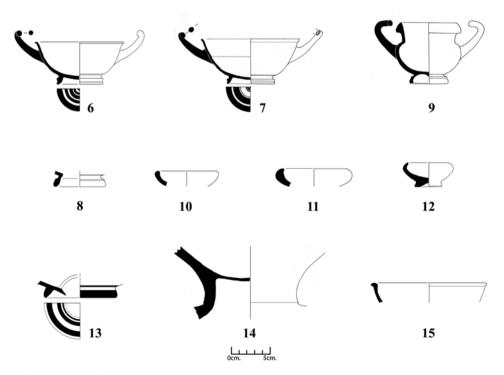


Fig. 4 Black Glazed Pottery

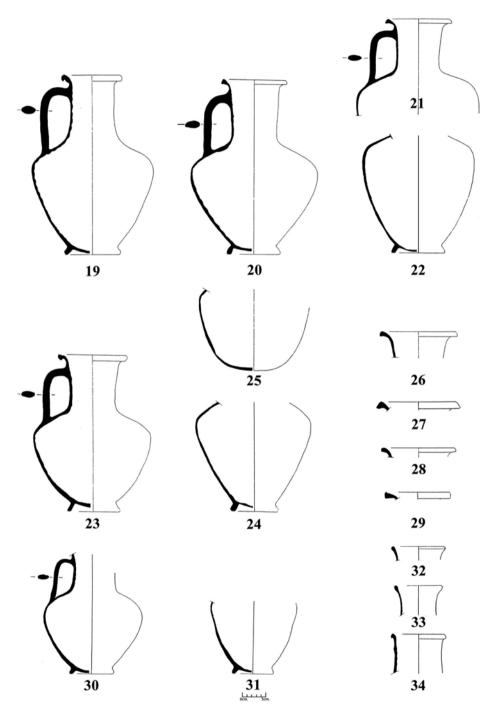


Fig. 5 One-Handled Jugs (Type 1)

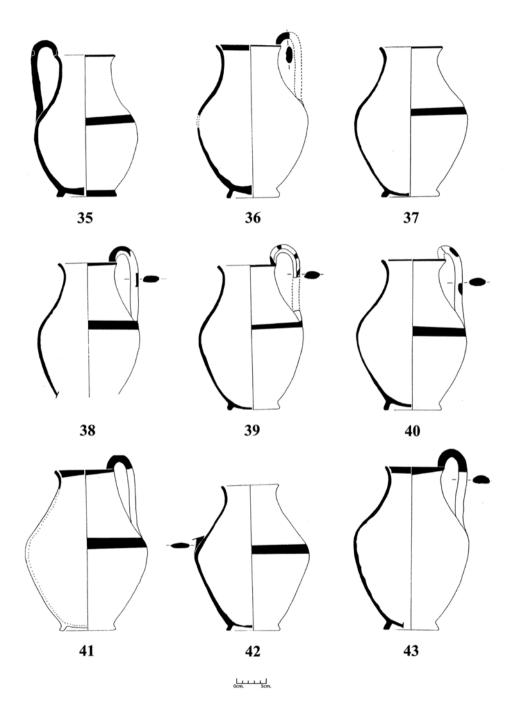


Fig. 6 One-Handled Jugs (Type 2a)

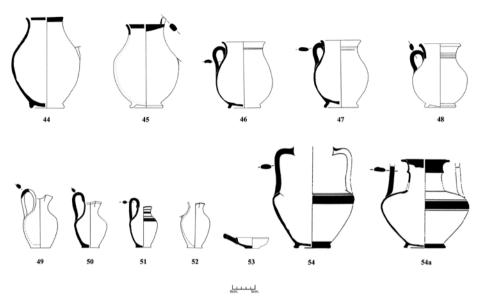


Fig. 7 One-Handled Jugs (Types 2a and 3), Miniature Oinochoe, Small Bowl and Table Amphorae

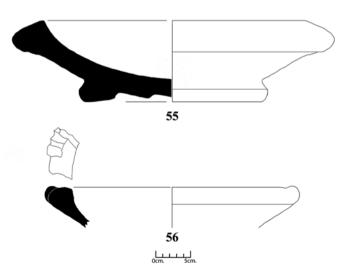


Fig. 8 Mortaria

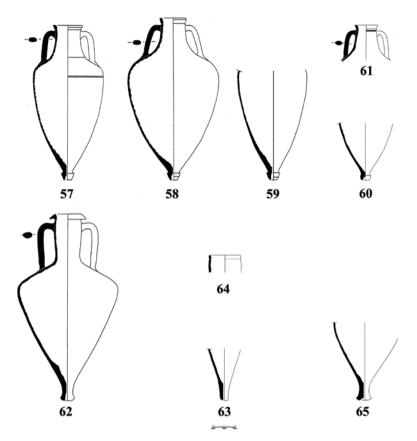


Fig. 9 Transport Amphorae

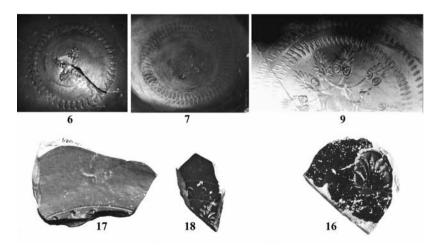


Fig. 10 Stamps Preserved on the Black Glazed Pottery

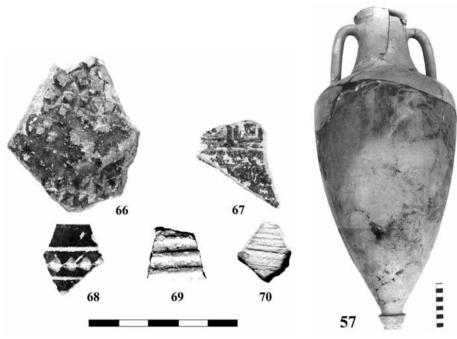


Fig. 11 Sherds from the Hellenistic and Roman Periods

Fig. 12 Clazomenian Amphora (No. 57)

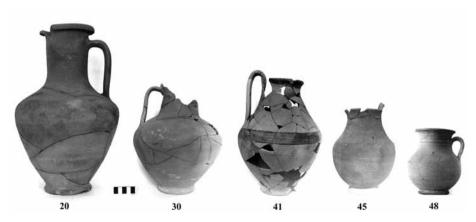


Fig. 13 One Handled Jugs (Nos. 20, 30, 41, 45, 48)