BURIAL CUSTOMS OF CLAZOMENAE IN THE IRON AGE (1100 – 500 BC)

A Master's Thesis

by
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January 2010

To my family

BURIAL CUSTOMS OF CLAZOMENAE IN THE IRON AGE (1100 – 500 BC)

The Institute of Economics and Social Sciences
of
Bilkent University

by

POLAT ULUSOY

In Partial Fulfillment of the Requirements for the Degree
of
MASTER OF ARTS

in

THE DEPARTMENT OF
ARCHAEOLOGY AND HISTORY OF ART
BILKENT UNIVERSITY
ANKARA

January 2010

I certify that I have read this thesis and that it is fully adequate, in scope and quality, as a thesis for the degree of Master of Arts in Archaeology and History of Art.

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Dr. Charles Gates
Supervisor

I certify that I have read this thesis and that it is fully adequate, in scope and quality, as a thesis for the degree of Master of Arts in Archaeology and History of Art.

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ABSTRACT

THE BURIAL CUSTOMS OF CLAZOMENAE IN THE IRON AGE (1100 – 500 BC)

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January 2010

The present work is a study on the burial customs of Clazomenae in the Iron Age and Archaic period. Special attention is given to Clazomenae, since it yielded significant information from the Protogeometric to the end of the Archaic period. The major aim here is to collect the specific grave and necropolis information and try to interpret them for reaching more holistic conclusions about the burial customs of Clazomenae. This work introduces the burials, burial grounds, and cemeteries of Clazomenae from the Protogeometric to the end of the Archaic period with respect to grave types, grave goods, burial practices, gender, and age. One crucial aim of this work is to understand settlement and necropolis relationship in different periods by the means of the location of the burial grounds; the significance of the extension, development, and changing burial customs of specific cemeteries and their importance with regards to the settlement pattern; and the importance of the continuity, discontinuity, and change of burial grounds through the periods.

Keywords: Clazomenae, burial customs, necropolis, Protogeometric, Geometric, Archaic.

ÖZET

CLAZOMENAE'DE DEMİR ÇAĞI ÖLÜM GÖMME GELENEKLERİ (1100 – 500 BC)

Ulusoy, Polat
Yüksek Lisans, Arkeoloji ve Sanat Tarihi Bölümü

Tez Yöneticisi: Dr. Charles Gates

Ocak 2010

Bu çalışma Clazomenae kentinin Demir Çağları ve Arkaik dönemdeki ölü gömme geleneklerini incelemektedir. Tez kapsamında Clazomenae kentine öncelik verilmesinin nedeni kentin Protogeometric dönemden Arkaik dönemin sonuna kadar yoğun bir bilgiye sahip olmasıdır. Burada temel amaç, mezar ve mezarlıklardan bilgileri toplayıp ve derleyip, Clazomenae ölü gömme gelenekleri için daha genel ve kapsayıcı bir sonuca ulaşmaktır. Çalışma, Clazomenae'de Protogeometrik dönemden Arkaik dönem sonuna kadar açığa çıkarılmış mezar, mezarlık alanları ve nekropolleri mezar tipleri, pratikleri, hediyeleri, yaş ve cins açısından tanıtacaktır. Çalışmanın en önemli amacı farklı dönemlerdeki kent ve mezarlık ilişkisini; mezarlıkların konumu; belirli mezarlıkların yayılımı, gelişimi ve gömme geleneklerinin değişimi; bunun yerleşim yapısındaki etkileri; mezarlıkların devamlılığı, devamsızlılığı ve değişiminden yola çıkarak anlamaya çalışmaktır.

Anahtar Kelimeler: Clazomenae, gömme gelenekleri, mezarlık, Protogeometrik, Geometrik, Arkaik.

ACKNOWLEDGEMENTS

The burial customs of Clazomenae have been studied by many colleagues and scholars in many aspects and in detail. This study should be seen as the holistic interpretation and discussion of these studies. Moreover, recently discovered intramural and extramural burial grounds dated to the Protogeometric, Geometric, and Archaic periods have been added to this study.

The subject of this MA thesis was suggested to me by Assoc. Prof. Dr. Yaşar E. Ersoy, director of the Clazomenae excavations. I am endlessly grateful to my advisor and professor Dr. Ersoy for recommending to me such an interesting subject for discussing and interpreting. I am also grateful to Dr. Ersoy who let me benefit from his experience and for the patience, unlimited support, and advice that he has given me as my advisor and teacher. The photographs and finds from Clazomenae excavations included in this thesis are used with his kind approval.

I am endlessly grateful to Assoc. Prof. Dr. Charles Gates who accepted to be the supervisor of my thesis, who showed me how to look and write an appropriate thesis and who commented on my idiomatic English mistakes.

I am thankful to Dr. Jacques Morin, the second examining committee member, who has helped me look for different aspects for this study.

I am endlessly thankful to Prof. Dr. Güven Bakır, former director of the Clazomenae excavations, for letting me participate in the Clazomenae excavations

from 2002 onwards, for giving me such an important undergraduate thesis subject, and for supporting all my efforts.

I am also thankful to Assistant Prof. Dr. Fikret Özbay and Dr. Hüseyin Cevizoğlu. I would also like to thank Dr. Ümit Güngör, who studied the Yıldıztepe necropolis and to Assistant Prof. Dr. Bilge Hürmüzlü, who studied the Akpınar necropolis in their dissertations. Both scholars shared very beneficial information and interpretations from the Yıldıztepe and Akpınar burial grounds. I am also thankful for her limitless support to Assistant and Ph.D. student Elif Koparal, who is studying the chora and settlement pattern of Clazomenae as a Ph.D. project and who is discovering much crucial information about the settlement patterns.

I also would like to thank my friends and colleagues who supported me all the time: Müge Durusu, F. Volkan Güngördü, and Mert Çatalbaş.

Special thanks go to my family. My mother, Özlem Ulusoy, and my brother, Tolga Ulusoy, supported and comforted me all the time. This study is dedicated to them.

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ABBREVIATIONS

PG : Protogeometric

EPG : Early Protogeometric

MPG : Middle Protogeometric

LPG : Late Protogeometric

HBT : Hamdi Balaban Tarlası

LMT : Limantepe Mound

KET : Kaya Elmalı Tarlası

FGT : Feride Gül Tarlası

MGT : Mehmet Gül Tarlası

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CHAPTER 1

INTRODUCTION

Clazomenae is one of the most important sites for Ionian archaeology, especially during the Iron Age and Archaic period **(Maps 1-3)**. The importance of the site depends on the rich archaeological evidence for the PG through the Classical period that unluckily cannot be observed at other Ionian centers. Among this evidence, burials have a special significance. Excavations have revealed many PG, Geometric, and Archaic period burials and burial grounds. The number of graves, specifically the PG and Archaic ones, has been increasing rapidly thanks to the current excavations ongoing since 1979[1]. Although many studies have been made, the new graves and burial grounds offer an opportunity for fresh and detailed survey and discussions.

Systematic excavations at Clazomenae started in 1979 under the direction of Güven Bakır. The excavations have been continuing under the direction of Yaşar E. Ersoy since 2006. The excavations have focused on the PG, Archaic, and Classical city, its changing settlement patterns including houses, a fortification wall, workshops, and acropolis as well as burial grounds. Many important books, articles,

1 Most recently, fifteen graves dated to the PG period were unearthed in the 2009 excavation season.

Ph.D. dissertations, and M.A. thesis have been produced, analyzing different aspects of the findings of the past thirty years. Among the most important for the present study are:

(1) On the settlement: A. Moustaka et al, eds. *Klazomenai, Teos and Abdera: Metropoleis and Colony* (2004); Y. Ersoy, *Clazomenae: the Archaic Settlement,* Ph.D. dissertation (1993); F. Özbay, *Klazomenai'deki M.Ö. 4. Yüzyıl Yerleşimi*, Ph.D. dissertation (2006).

(2) On the cemeteries: B. Hürmüzlü, *Klazomenai Akpınar Nekropolisi*, Ph.D. dissertation (2003); Ü. Güngör, *Klazomenai Yıldıztepe Nekropolisi*, Ph.D. dissertation (2006).

(3) On the pre-classical ceramics: B. Özer, *Klazomenai Siyah Figür Seramiği*, Ph.D. dissertation (2006); K. Uzun, *Klazomenai Dalgalı Çizgi Bezekli Seramiği*, Ph.D. dissertation (2007); N. Aytaçlar, *Klazomenai Orientalizan Seramiği*, Ph.D. dissertation (2005).

The history of exploration at Clazomenae goes back to the nineteenth century, however, with travelers such as Chandler (1775), Labahn (1875), and Zahn (1898) mentioning the site. G. P. Oikonomos made the first excavations at Clazomenae in 1921 and 1922, excavating the so-called Monastirakia cemetery and producing some preliminary reports (Oikonomos 1921; Kallipolitis 1972; Tzannes 2004). During the 1950s and 1970s the site was investigated by R. M. and J. M. Cook, when they carried out basic research concerning topography, the center of the site, pottery production, and ceramic styles. Two books in particular present important information on Clazomenean ceramics production. R. M. Cook, *Clazomenean Sarcophagi* (1981), catalogues and interprets sarcophagi. Most were

random finds; none came from systematic excavations. In 1998, R. M. Cook and Pierre Dupont published *East Greek Pottery*, which includes a section on the stylistic development of Clazomenean vases.

The site of Clazomenae is fragmented with many excavation sectors scattered over a large area (**Maps 6, 9; Plates 1-2**). This fragmentation is the result of the conditions of excavating in a settled area. Land becomes free for exploration only by accident, where a land or house owner wants to construct or sell, or when the government steps in and orders an expropriation. The city of Clazomenae is located under the modern settlement of İskele, in the district of Urla. Because of that reason, a small portion of İskele is considered as a First Degree Archaeological site, while its majority is listed as a Third Degree archaeological site. It is not possible to undertake any intervention or building practices in First Degree Archaeological sites, while Second or Third Degree areas potentially have archaeological remains. As a result, analyses of the expansion of Clazomenae from the eleventh to the fifth centuries BC depend on understanding of today's separate excavation sectors originally connected with each other. The excavated sectors and burial grounds are named and abbreviated, by period, as follows (**Maps 6, 9**):

PG:	Hamdi Balaban Tarlası	HBT
	Kaya Elmalı Tarlası	KET
	Limantepe	LMT
Geometric:	HBT, KET, LMT.	
Archaic:	HBT, KET, LMT; and	
	Devlet Su İşleri	DSİ
	Feride Gül Tarlası	FGT
	Mehmet Gül Tarlası	MGT

Acropolis, Akpınar, Çayır, Kalabak, Monastirakia, South, and Yıldıztepe.

Tumuli: located on hilltops to the west and north of the Archaic settlement. The earliest graves dating to the PG period have been found in sectors HBT, and LMT-KET. Two more PG graves were found on the south slope of Yıldıztepe and during the Third Degree Archaeological Site excavations by the İzmir Museum staff (**Maps 5-8)**. Geometric period graves were also found in the HBT and the LMT-KET sectors.

The cemeteries that surround Archaic Clazomenae appear around 650-630 BC. Seven main Archaic cemeteries were found during the excavations - Akpınar, Yıldıztepe, Monastirakia, DSİ, Kalabak, Çayır, and South (**Map 9)**. However, it is highly possible that the so-called DSİ, Kalabak, Çayır, and South cemeteries were parts of one large necropolis. Almost all cemeteries were actively used from 600 through the Hellenistic period. All cemeteries were used with different densities with respect to the number of graves, and burial types and practices during the sixth century BC. Between ca. 550- 530/525 BC, there is a break not only in burial but also settlement evidence. There is no grave securely dated to this 20-25 year period. The late sixth century was the best represented period in terms of grave numbers; afterwards the quantity and quality of graves rapidly decreased.

In this study, I intend to present and discuss the burial practices from the PG through the Archaic period, from the eleventh to the early fifth centuries BC. Characteristics of individual grounds and common features will be examined. Moreover, burials and burial grounds give much beneficial information about the settlement pattern. The expansion and the boundaries of the center of Clazomenae

through the periods have never been fully investigated. By comparing the location of burial grounds as they relate to contemporary settlement sectors, we can learn more about the evolution of the city in pre-Classical times.

Keeping these aims in mind, some specific issues to be addressed in this study are as follows:

1. What is the frequency of burials and burial grounds in different periods in Clazomenae?

2. What types of mortuary practices were in use from PG to the end of the Archaic period?

3. To what extent was there continuity of use of individual burial grounds?

4. To what extent can we demonstrate the presence of family clusters and their continuity or discontinuity?

5. Can we connect the localization of cemeteries and tumuli in the Archaic period and their importance with the boundary and expansion of the settlement?

6. Can the emergence of the city-state be observed in Clazomenae from burial evidence?

7. What do these mortuary practices imply when compared to other Ionian and Greek sites?

8. What does the existence of different burial grounds and cemeteries simultaneously used in the site imply for the organization of Ionian society? How similar or different was Clazomenae from other Ionian sites or the sites in Mainland Greece or the Aegean during these periods?

A great help for the study of Archaic period funerary practices are the Ph.D. dissertations of B. Hürmüzlü (2003) and Ü. Güngör (2009). Each is a detailed presentation and discussion of a specific Archaic burial ground, Akpınar and

Yıldıztepe, respectively. Other sectors have not yet been the subject of such careful study. For my presentation, for these two sectors, I have depended on data from these dissertations. However, although these are very thorough, because each is limited to a single sector, they lack a discussion of funerary customs of the city as a whole.

The methodological and theoretical approaches of this study are varied. Chapters 2 and 3, in which the material is introduced, are mostly descriptive. Discussion Chapter 4 was partly inspired from the study of Ian Morris, *Burial and Ancient Society: The Rise of the Greek City-State* (1987), but modified by critiques of many scholars and indeed of Morris himself (Morris 1998: 21-30). His processual and partly post-processual methodology and his demographic analyses inspired me to reach for more holistic interpretations for Clazomenae. The demographic and statistical analyses are important, since such analyses have never been made for Clazomenae. However, the dependability of the analyses is discussible in some respects. When the evidence is not sufficient, as in Kalabak, Monastirakia, DSİ, and South cemeteries, the ratios and results can show incoherent divergences. Because of that reason, I have avoided analyzing some burial grounds individually and instead, I have incorporated their data into general charts, where their deviations will not distort the overall results.

Chapter 2 is divided into three chronological groups: Protogeometric (1050-900), Geometric (900-700), and Archaic[2] (700-500/480)[3]. Only the PG and Geometric graves will be introduced in a detailed manner, because almost none of them are published yet. Archaic cemeteries will be introduced according to

[2] The Orientalizing period (700-610 BC) has been accepted as a part of the Archaic period in this study, because it represents only a pottery style, not an individual period.

[3] The chronology used in this study is based on Attic Greek chronology. Desborough's chronology for the Protogeometric and Coldstream's chronology for the Geometric periods are accepted. cf. Whitley 2006: 60-61, fig. 4.1.

chronological phasing for some burial grounds, total number of graves, grave types, grave good numbers and their quantity and quality, age distribution, gender, and uniformity of orientation.

In Chapter 3, other Ionian sites, which have yielded graves, will be introduced by periods: Protogeometric, Geometric, and Archaic Periods.

In Chapter 4, the descriptive information introduced in Chapters 2 and 3 will be discussed and interpreted. Aspects investigated will include burial practices and grave types, gender, age distribution, family clusters, grave goods, uniformity in orientation, rank, spatial relationships of cemetery and settlement in terms of intramural and extramural burials. Lastly, the emergence of Clazomenae as a city-state, as revealed by the development of the burial grounds, will be examined. Conclusions of the study are presented in Chapter 5.

CHAPTER 2

BURIALS AND CEMETERIES AT CLAZOMENAE
11th – early 5th c. BC

This chapter introduces Clazomenean burial grounds and burials dated to the PG, Geometric, and Archaic periods. Graves and cemeteries will be presented chronologically and according to burial grounds.

The site of Clazomenae, modern İskele, has been inhabited from the Late Neolithic to modern times. The prehistoric settlement is located on the so-called Limantepe mound. Evidence is abundant for the Early and Middle Bronze Age levels, less, so far, for the Late Bronze Age **(Map 4)**.

2.1 A historical overview of pre-classical settlement of Clazomenae

The settlement was refounded during the second half of the tenth century, it has usually been thought. However, the pottery and architectural evidence discovered during the new excavations suggest a much earlier date, perhaps at the end of the eleventh century (Aytaçlar 2004: 29). Excavations from 1998 to 2004 on the south slope of Limantepe mound (KET) unearthed a Protogeometric apsidal structure with two phases. The first phase is dated between the end of the eleventh century and the first half of the tenth century (Aytaçlar 2004: 24). Although there is only one area on the KET sector with architectural remains belonging to a building from the PG

period, there are many dispersed finds dating to PG from the south and west of the mound, for example in sectors FGT, MGT, and especially HBT (Aytaçlar 2004: 25). Recent excavations in HBT have brought to light much significant information. A PG period kiln has been recovered[4], as well as, numerous PG graves (Bakır et al. 2008: 323; Ersoy et al. 2008: 237-239). New evidence from the HBT sector indicates that the PG settlement expanded over an area extending nearly 700 m, southeast of the apsidal structure (**Maps 5-6, Pl. 3a)**.

Geometric period Clazomenae is little known, in terms of either settlement pattern or burials (Ersoy 2004: 43). The Early and Middle Geometric styles are not represented at Clazomenae, while the PG tradition most probably persisted until the middle of the eighth century and vessels of this tradition were found together with some Late Geometric period finds (Aytaçlar 2004: 43; Ersoy 2004: 44). To separate the architectural and other finds of the PG period from those of the Geometric period is not as easy as at other Aegean sites. The other important point is that some part of the Geometric and Archaic settlement, which is to the west of the Limantepe mound, sunk into the sea after severe tectonic changes (Ersoy 2004: 53). So far, the Geometric period settlement was placed in MGT, FGT, and KET and partly HBT sectors that are to the south and southwest of the Limantepe mound. There are some traces of structures and floors of the middle and late eighth century in MGT and FGT sectors (Ersoy 2004: 45-47; 2007: 154-157).

Archaic period Clazomenae, ca. 700-480 BC, is well represented in terms of both settlement pattern and burial grounds. Especially, the cemeteries of the period are rich and significant information about the period comes from them.

4 The kiln was first uncovered in 2007 and excavated in 2008 and 2009.

The seventh century settlement in Clazomenae is attested in both the southern and the western areas. The Limantepe mound, in contrast, yielded only dispersed pottery pieces and some wells during the Archaic period. On the south, seventh century structures have appeared in the MGT and FGT areas. There are two or perhaps three structures built between around 670 and 600/580 BC, two of them apsidal (Ersoy 2004: 53). In sector MGT, there are also some architectural remains dated to the late seventh century. To the west of the city, in the HBT area, five rectangular buildings of the early sixth century have been revealed. The Acropolis sector and HBT were most probably used as industrial areas during the sixth century (**Map 7)**.

There is a break between 550 and 530 BC in Clazomenae in terms of both settlement and burial patterns. During this phase, neither pottery fragments, nor architectural or grave remains are known. This period can be related with the first Persian attack against West Anatolia in 546 BC. The inhabitants must have abandoned the city. Around 530/525 BC Clazomenaeans returned and rebuilt the settlement. From this time to 499 BC was a golden age for Clazomenae. The last quarter of the sixth century is the best-represented period archaeologically. The pottery production and the trade with settlements in Ionia and elsewhere increased rapidly. The city walls and city gate were rebuilt on a monumental scale.

2.2 The Burials

2.2.1 Protogeometric Period

There are at least thirty-five graves attested to the PG period, with some others datable to either the LPG or the Geometric period. Twenty-five graves were

unearthed in HBT, seven in LMT-KET, one in Yıldıztepe, and one in the Third Degree Archaeological Site excavations from the west of the Archaic period city.

Graves dated to the PG period, especially these discovered from 2005 to 2009, have not been the subject of detailed study. Some of them are partly published in the *KST* in preliminary reports. Burials unearthed in the LMT-KET and HBT sectors will be introduced in the following pages.

2.2.1.1 HBT Sector

The HBT sector yielded forty-four graves in total **(Map 5, 7; Pls. 5a-b, 6a-b)**, at least twenty-six of which are dated to the PG period **(Tab. 3)**. All PG graves were found in the excavation seasons from 2005 to 2009. The number of graves may increase, since some of the graves that have been dated to the Geometric period might be re-dated to the PG period. This is because the transition from PG to Geometric in Clazomenae is not sharp and easily recognizable.

PG graves in the HBT sector were discovered at the same time as the Archaic fortification was being excavated **(Map 7, Pl. 8a)**. During the search for the traces of the Archaic city wall on the north and the south as well as the monumental city gate, many trenches and test sondages were opened, eventually leading to the discovery of many graves. The graves are mainly concentrated at the east of the fourth century BC "ruler's house" and under the Archaic fortification walls.

1) Grave 5

Location: Within the borders of the Archaic period city wall (**Pl. 7a**).
Rite: Inhumation. **Grave Form:** Pithos.
Dimensions: N.A. (= information not available)
Orientation: E-W (mouth to the W) **Skeletal Information:** Adult, dispersed bones.

Grave Goods: dispersed pottery fragments.

Date: LPG (Bakır et al. 2007: 190).

Additional Information: The pithos is lying on its side.

2) Grave 6

Location: Within the borders of the Archaic period city wall, just east of Grave 5.

Rite: Inhumation. **Grave Form:** Pithos **Dimensions:** N.A.

Orientation: E-W (head to the W) **Skeletal Information:** Adult, in flexed position

Grave Goods: scattered pottery fragments.

Date: LPG (Bakır et al. 2007: 190).

Additional Information: The pithos is lying on its side. (**pl. 7b)**.

3-7) Graves 17, 18, 19, 25, and 26 were found in the same area, which is located around 10 m southeast of the Archaic city gate. Graves 18-19 were found in Trench 15 **(Pl. 8b)**, approximately 20 cm under Grave 17.

3) Grave 17

Location: South of Trench 15 (**Pl. 8a)**.

Rite: Inhumation. **Grave Form:** Neck-handled Amphora. **Dimensions:** N.A.

Orientation: E-W (mouth to the W) **Skeletal Information:** Infant.

Grave Goods: None.

Date: LPG due to the amphora itself. It is decorated with semi-circles on the shoulder. Similar examples were found in Athens, Kerameikos (PG 43), and Marmariani (Lemos, I. 2002: 58-59, 152-153). The amphora was probably imported from Athens.

Additional Information: The body was inserted from the side of the vessel as is shown by the break in its walls.

4) Grave 18

Location: South of the Trench 15, approximately 20 cm under Grave 17 (**Pl. 9a)**.

Rite: Inhumation. **Grave Form:** Hydria. **Dimensions:** N.A.

Orientation: N-S (mouth to the S) **Skeletal Information:** Infant.

Grave Goods: None.

Date: MPG or LPG due to being found under Grave 17.

Additional Information: The rim of the pot is missing; the pot burial is closed with a rough circular stone.

5) Grave 19

Location: South of the Trench 15, approximately 1 m north of Grave 18 (**Pl. 9b)**

Rite: Inhumation. **Grave Form:** Handmade Pot . **Dimensions:** N.A.

Orientation: NW-SE (mouth to the SE) **Skeletal Information:** Infant.

Grave Goods: None.

Date: MPG or LPG.

Additional Information: Mouth of the pot is closed with a big slab and stones support its east side.

6) Grave 21

Location: In front of the Archaic period city gate (**Pl. 10a)**.

Rite: Inhumation. **Grave Form:** Pithos. **Dimensions:** N.A.

Orientation: N-S (mouth to the S) **Skeletal Information:** Adult, bone fragments.

Grave Goods: one: skyphos.

Date: LPG.

Additional Information: It is dug into bedrock and lying on its side, but the mouth of the pithos is slightly raised.

7) Grave 24

Location: In Trench 11, west of the seventh century BC city wall (**Pl. 10b)**

Rite: Cremation. **Grave Form:** Cremation Area **Dimensions:** 150 x 60 x 42 cm

Orientation: W-E **Skeletal Information:** Adult, Burnt human, maxilla, and animal bones **Grave Goods:** one: bronze fibula like-object (**Pl. 11b**).

Date: LPG. Objects similar to the "arched fibula" are known from Elateia (Dickinson 2006: 158-171, fig. 5.22.10); Athens, Kerameikos and Agora (Lemos, I. 2002: 109-110, fig. 2.1-2-3-5); and Lefkandi, Toumba (Lemos, I. 2002: 109-110, fig. 3.1-2).

Additional Information: It is cut into bedrock with one step. The traces of the mud-brick can be observed on its north side. It was full of very soft, dark gray and brown burnt earth. However, there are definitely human, notably a maxilla and animal bones.

8-10) Grave 26, a triple interment enclosed by a stone wall, was found at Trench 16, northeast of the PG period kiln, which dates the complex (**Pl. 11b)**. The burials consist of an amphora (Grv. 26.1), a coarse ware pot (Grv. 26.3) and a simple earth inhumation (Grave 26.2) **(Pls. 12a-b)**. The explanation comes to mind that the complex was a small family cluster. On the other hand, it is hard to determine whether the cluster was being used for generations or they were buried suddenly as a member of one family due to an unfortunate plague.

8) Grave 26.1

Location: North of the PG period kiln (**Pl. 11b, 12b)**.
Rite: Inhumation. **Grave Form:** Amphora. **Dimensions:** N.A.
Orientation: E-W (mouth to the W) **Skeletal Information:** Infant.
Grave Goods: None.
Date: PG.

9) Grave 26.2

Location: North of the PG period kiln (**Pl. 12a)**.
Rite: Inhumation. **Grave Form:** Simple Inhumation. **Dimensions:** N.A.
Orientation: - **Skeletal Information:** Adult.
Grave Goods: None.
Date: PG.

10) Grave 26.3

Location: North of the PG period kiln (**Pl. 12b)**.
Rite: Inhumation. **Grave Form:** Coarse Ware Pot. **Dimensions:** N.A.

Orientation: N.A. **Skeletal Information:** Infant.

Grave Goods: None.

Date: PG.

11) Grave 28

Location: Trench 17, SE of the Archaic bastion.

Rite: Inhumation. **Grave Form:** Cist. **Dimensions:** N.A.

Orientation: EW **Skeletal Information:** Child, scattered bones

Grave Goods: None.

Date: PG.

12) Grave 31

Location: East of the PG period kiln near graves 26-29 and 32 (**Pl. 14a)**.

Rite: Inhumation. **Grave Form:** Pithos. **Dimensions:** -

Orientation: EW (head to the E) **Skeletal Information:** Infant.

Grave Goods: Four: 2 small one-handled bowls; small oinochoe with firnis band system; small amphora with two vertical handles and long neck (**Pl. 14b**).

Date: LPG.

13) Grave 35

Location: Around 60 m north of the PG period kiln (**Pl. 16a)**.

Rite: Inhumation. **Grave Form:** Cist. **Dimensions:** 78 x 43 x ? cm

Orientation: NS **Skeletal Information:** Infant.

Grave Goods: One: one-handled olpe with two rows of wavy line decoration on the shoulder.

Date: PG.

14) Grave 38

Location: West of the BA fortification wall and bastion (**Pl. 17a)**.

Rite: Inhumation. **Grave Form:** Pithos. **Dimensions:** N.A.

Orientation: NW-SE (mouth to the SE) **Skeletal Information:** Child/Adolescent

Grave Goods: Seven: bronze astragalus, small trefoil oinochoe, small handmade vessel, one-handled close vessel, one-handled bowl, two conical formed foot fragments.
Date: LPG.

15) Grave 39

Location: Between 4th c. BC terrace wall and the Archaic city gate, above Gr. 40.
Rite: Inhumation. **Grave Form:** Pithos **Dimensions:** N.A.
Orientation: E-W (mouth to the E) **Skeletal Information:** Child.
Grave Goods: Five: 2 bowls; small olpe with three rows of semi-circles on shoulder; small closed vessel with a firnis band system; bronze ring (**Pl. 17a**).
Date: LPG.

16) Grave 40

Location: Between 4th c. BC terrace wall and the Archaic city gate, below Gr. 39.
Rite: Cremation. **Grave Form:** Cremation Area. **Dimensions:** 172 x 90 cm
Orientation: N-S **Skeletal Information:** Adult.
Grave Goods: None.
Date: LPG.
Additional Information: It is cut into bedrock. The north side of Grave 40 was totally gone during the burying process of Grave 39. It revealed burnt earth and a small number of burnt bones. A comparison of this cremation area with the one of Grave 24 shows that it was used much less intensively, maybe once or twice, until disturbance by a later pithos grave.

17-27) Graves 25, 29, 30, 32, 33, 34, 36, 37, 41, 42, and 43, all without grave goods, will not introduced in detail. For information see **Tab. 3**.

Discussion

The area produced one possible Bronze Age grave and twenty-seven PG period graves **(Maps 5-7, Pl. 3a)**. All graves with the exception of the cremation areas (Grave 24 and 40) are inhumation. Three types of inhumation were practiced in

the sector HBT: inhumation in pots (seventeen graves); cist graves (five graves); inhumation in the earth (three graves). Pithos graves are represented with six graves, coarse ware pots with seven, amphora with three, and hydria with one grave. There is no certain uniformity in orientation for graves. Nine are oriented east-west, six are north-south (hydria, pithos), five are northwest-southeast, and three northeast-southwest. The extramural burial ground was used both for adults and children. Adults were buried in pithoi, in simple earth inhumations, and in the cremation areas. Infants and children were buried in amphoras, hydrias, cooking ware pots, and cist graves. In total, there are eight adults, sixteen infants and three-child/adolescent graves.

The tradition of offering grave goods was not so popular during the PG. Only six graves contain grave goods. The grave good types are pottery and bronze objects. The pottery types are skyphos, olpe, oinochoe, bowl, small amphora, and jug. Grave goods made of bronze are fibula and bracelet.

2.2.1.2 Limantepe and KET Sectors

The LMT-KET-FGT sectors were probably the center of the settlement from the Bronze Age until the end of the Classical period (**Pl. 3a**) (Bakır et al. 2004: 102; 2006: 464; Ersoy 2007: 149). The Limantepe mound and the south slope of the mound, KET, and FGT sectors, produced seven graves dated to the PG period **(Map 8, Tab. 5)**. It is necessary to say that only a very small part of the KET sector has been excavated so far. It is highly possible that many undiscovered graves remain in this sector. Four of the graves were found in the Limantepe excavations and the only information about these graves comes from *KST*.

1) Grave 1

Location: South slope of the Limantepe mound, south of the MBA bastion.

Rite: Inhumation **Grave Form:** Cist **Dimensions:** length: 46 cm

Orientation: SE-NW **Skeletal Information:** Infant, in flexed position

Grave Goods: None.

Date: PG (Erkanal and Günel 1995: 273).

2) Graves 2-3-4

Location: South slope of the Limantepe mound (Erkanal 1999: 327)[5].

Rite: Inhumation. **Grave Form:** Cist. **Dimensions:** N.A.

Orientation: - **Skeletal Information:** -

Grave Goods: None. **Date:** Probably PG and maybe Geometric Period.

3) Grave 5

Location: Limantepe mound, in square VII, dug into the MBA debris (**Pl. 3b**).

Rite: Inhumation. **Grave Form:** Pithos. **Dimensions:** N.A.

Orientation: E-W (head to the E) **Skeletal Information:** Infant, 0-6 months old

Grave Goods: Four: an oinochoe decorated with semi-circles on the shoulder; a jug; a one handled-cup in gray monochrome style; and a one handled cup (**Pl. 4a)**.

Date: LPG. The oinochoe shows close affinities with Kos and Lefkandi materials. (Aytaçlar 2004: 27; Bakır et al. 2001: 32; Hürmüzlü 2005: 44).

4) Grave 6

Location: KET sector, under the PG curvilinear structure (**Pl. 4b**).

Rite: Inhumation. **Grave Form:** Cist. **Dimensions:** 95 x 46 cm

Orientation: NW-SE **Skeletal Information:** Infant, around 9 months old.

Grave Goods: One; a skyphos with a high conical foot and an irregular wavy line ornament.

Date: LPG (Aytaçlar 2004: 27).

5 It is not clear from the publication whether the architectural remains belong to the sixth or seventh century. There is a possibility that remains belong to the earlier period.

Additional Information: The mouth of the grave was closed with a stone slab. The grave was covered with vertical stones. It is disturbed.

5) Grave 7

Location: FGT Sector, NW of the FGT sector.
Rite: Inhumation. **Grave Form:** Cist. **Dimensions:** N.A.
Orientation: - **Skeletal Information:** Infant.
Grave Goods: None.
Date: Probably PG.

6) Some other scattered finds can be interpreted as graves from LMT-KET sectors. A find of an almost complete hydria is an interesting case. This hydria, which is dated to the PG period, was found during the cleaning of the section in KET and was interpreted by Aytaçlar as a possible urn grave (Bakır et al. 2004: 32). However, the insecure find spot of the vase and the lack of evidence of other graves from Clazomenae make this interpretation unlikely.

Discussion

The PG period is represented by seven graves in the LMT-KET sector. Six are inhumation graves in a cist and the last one is an inhumation grave in a pit. Both cist Graves 1 and 6 are oriented southeast-northwest. All cist graves are most probably infant graves. The burial type of inhumation in a pot is represented in only one example in Grave 5, which is the richest PG grave in the area.

Only two graves contain grave goods. Grave goods in Grave 5 and 6 are an oinochoe, a jug, one-handled cups, and a skyphos.

2.2.1.3. Yıldıztepe Cemetery

There is no securely dated PG grave in Yıldıztepe. During the excavations, however, fragments of a neck-handled amphora and associated burnt bones and soil were collected on the surface of the south slope of Yıldıztepe. The style of the sherds dates to them to the second half of the tenth century. (Aytaçlar 2004: 26; Hürmüzlü 2005: 44). Aytaçlar and Hürmüzlü interpreted the amphora as an urn grave.

2.2.1.4 Third Degree Archaeological Site Excavations

Iskele, Urla, because of the ancient remains, has been officially classified as an archaeological site. However, as a developing place, there have been many constructions during the past 10 years, especially for summer residences. During construction projects the İzmir Archaeological Museum excavates each building site; during these salvage excavations many archaeological remains have been found. One of these excavations revealed a PG period grave around 300 m northwest of the extramural burial ground in the HBT sector. The grave is an inhumation in a pot with one grave good.

Discussion: Burials of the Protogeometric Period

The thirty-six PG period graves were introduced in detail in the previous pages. Thirty-three are inhumation graves and the other three are cremation graves. The inhumation grave types are pithos, coarse ware pot, amphora, hydria, cist and simple inhumation. The cremation types are cremation areas that were cut into the rock in rectangular form and urn burial. There is no uniformity in orientation for graves, but the preferred orientation is east-west. Infant, child, adolescent, and adult graves are represented in the PG period. The LMT-KET sector has revealed only

infant and child graves. The HBT sector has been used for both infants and adults. Twenty-five graves belong to infants; three belong to children/adolescents, and eight belong to adults. Nine of thirty-six graves contain grave goods. The number of grave goods varies from one to seven. It is possible to say that the number of the PG graves will be increased in the coming years.

2.2.2. Geometric Period

The Geometric period is not well represented in Clazomenae either in settlement or burial patterns (Ersoy 2004: 44-49; 2007: 153-157; Hürmüzlü 2005: 44) (**Maps 5-7)**. There are no graves from the ninth century and only eight graves dated to the eighth century BC. The Geometric period burials were found in the KET and HBT sectors.

Graves dated to the Geometric period have not been studied before. Some graves are partly published at the *KST* in preliminary reports. Burials unearthed in the LMT-KET and HBT sectors will be introduced in the following pages.

2.2.2.1. HBT Sector

Six graves found in the HBT sector have been dated to the Geometric period. The usage of this extramural burial ground probably continued until the end of the Geometric period or the construction of the city wall.

1) Grave 7

Location: Under the fillings of the fortification wall at Trench 7 **(Pl. 18b)**.
Rite: Inhumation. **Grave Form:** Coarse Ware Pot. **Dimensions:** N.A.
Orientation: SE-NW (mouth to the SE) **Skeletal Information:** Infant.
Grave Goods: None.

Date: End of the eighth century BC due to the coarse ware. These types of pots were also found in Athens, in the Athenian Agora, and dated to the end of the eighth century (Brann 1962: 54, pl. 11-195,196).

2) Grave 8

Location: At Trench 7, 3 m east of Grave 7.

Rite: Inhumation. **Grave Form:** Coarse Ware Pot. **Dimensions:** N.A.

Orientation: - **Skeletal Information:** Infant/Child.

Grave Goods: None.

Date: LG.

Additional Information: Grave 8 was disturbed to a great extent when the city wall was being constructed; only a few pieces of the pot and small pieces of bones are preserved.

3) Grave 11

Location: Under the south bastion at Trench 8 **(Pl. 19a)**.

Rite: Inhumation. **Grave Form:** Simple Inhumation. **Dimensions:** Length: 146 cm

Orientation: NS (mouth to the S) **Skeletal Information:** Adult, in flexed position.

Grave Goods: None.

Date: Geometric.

Additional Information: The grave is covered with stones.

4) Grave 20

Location: In front of the Archaic period city gate, just north of Grave 21 (**Pl. 10a**).

Rite: Inhumation. **Grave Form:** Pithos. **Dimensions:** N.A.

Orientation: EW (mouth to the W) **Skeletal Information:** Adult, in flexed position.

Grave Goods: Four: a bronze spiral, 2 bronze rings, bronze earring.

Date: Geometric.

Additional Information: The pithos is placed in a shallow pit cut into the bedrock. The pithos is lying on its side. The upper side of the grave is missing; probably because during the construction of the monumental entrance of the late sixth century fortification wall, the upper side of the grave was cut. It belongs to an adult, due to dispersed skull, chin, foot, toe, and other bones.

5) Grave 22

Location: In Trench 11, at the east of the early Archaic period city wall **(Pl. 19b**).

Rite: Inhumation. **Grave Form:** Cist. **Dimensions:** N.A.

Orientation: EW **Skeletal Information:** Infant. Skull preserved.

Grave Goods: None.

Date: Geometric. The grave rests on the rectangular platform, which can be dated some time in the Geometric period. The grave should be dated to the period earlier than 670 BC due to being under the early Archaic city wall and later than LPG period due to being above the cremation area.

Additional Information: Grave 20 is placed on the bedrock. The grave consists of four vertical slabs and no cover (Ersoy et al. 2008: 240).

6) Grave 23 A

Location: In Trench 11, just under the Archaic city wall **(Pl. 19b**)

Rite: Inhumation. **Grave Form:** Simple Inhumation. **Dimensions:** N.A.

Orientation: EW (head to the W?) **Skeletal Information:** Adult. Dispersed bones.

Grave Goods: None.

Date: Geometric. It should be dated to earlier than 670 BC, and most probably to the LG period.

Additional Information: The grave was disturbed both during the construction of the Archaic city wall and by the filling of the fourth century. Not completely excavated.

7) Grave 23 B

Location: In Trench 11, south of Grave 23A. **(Pl. 19b**)

Rite: Inhumation. **Grave Form:** Simple Inhumation. **Dimensions:** N.A.

Orientation: NW-SE (head to the SE?)

Skeletal Information: Adult. Dispersed bones.

Grave Goods: None.

Date: Geometric.

Additional Information: Not completely excavated.

Discussion:

The Geometric period is represented with seven graves in the HBT sector. The types of burials are inhumation in pithos and cooking wares, cist grave, and simple earth inhumation. There are three simple inhumation graves and two of them have not yet been excavated completely. The burial customs from PG to Geometric period seem similar in HBT. There is no evidence of the practice of cremation in HBT. The grave goods are rare. There is no uniformity in orientation. Adults, infants and children are buried in the same ground as in the PG period. It seems that the area was used as a burial ground until around 700 and after that in 675-650 the fortification wall of the city was built in the same area. (Ersoy 2007: 175; Güngör 2006: 54, 142; Hürmüzlü 2005: 45-47)

2.2.2.1. KET Sector

1) Grave 7

Location: Under the early sixth century BC stone floor in the KET sector (**Pl. 18a**).
Rite: Inhumation. **Grave Form:** Coarse Ware Pot. **Dimensions:** N.A.
Orientation: E-W (mouth to the W) **Skeletal Information:** Infant.
Grave Goods: None.
Date: Earlier than early sixth century BC, probably LG period.
Additional Information: The upper side of the pot is removed, maybe to receive the body into the pot. It is supported by three stones.

2) Grave 8

Location: Under the early sixth century BC stone floor in the KET sector (**Pl. 18a**).
Rite: Inhumation. **Grave Form:** Coarse ware pot. **Dimensions:** N.A.
Orientation: N-S (mouth to the S) **Skeletal Information:** Infant.
Grave Goods: None.
Date: Earlier than early sixth century BC, probably LG period.

Additional Information: The upper side of the pot is removed, maybe to receive the body into the pot. Some pithos body fragments are used to cover the mouth of the grave (Bakır et al. 2005: 2-3; Hürmüzlü 2005: 44).

Discussion

Graves found in the KET sector show that the intramural burial tradition was practiced at least to the late eighth century there[6]. Only infants were buried in Geometric period KET sector as in PG (**Map 8)**. When we compare burial customs from PG to the Geometric period in KET sector, there are almost no differences in the practice of burials, grave goods are rare, used only for infants and children, and there is no practice of cremation. It seems that Clazomeneans practiced very similar burial customs both in the LMT-KET and HBT.

2.2.3. Archaic Period

Archaic Clazomenae is very rich in terms of the existence of graves and cemeteries compared with other cities in Ionia, West Anatolia, and even Mainland Greece. The existence of the rich burial records in the Archaic period helps us to understand the burial customs, the relationship between settlement and cemeteries, the selection of the settlement and necropolis areas, the development of the pottery and Clazomenean sarcophagus styles, comparison of the burial customs, the grave goods, pottery and sarcophagus types, and the chronology of different cemeteries.

Seven different cemeteries with varying numbers of graves have been recovered to date **(Map. 9; Pl. 1, 2, 20)**. In addition to the cemeteries, thirteen Archaic period tumuli have been found (Hürmüzlü 2003: 3-4; 2004a: 78; 2005: 47;

6 The graves found in the KET sector were dated to the end of the eighth century by the excavator, but she indicates that the graves were not securely dated due to lack of grave goods and they could be dated to later than the eighth century. The tradition of burying infants as an intramural burial probably goes as late as 630 BC, so graves found in the KET sector can be dated as late as 630 BC.

Ersoy 2007: 175). The cemeteries identified so far are Monastirakia, Yıldıztepe, Çayır, DSİ, Kalabak, Akpınar, and South. The South necropolis, the most recently discovered, was found during the Third Degree Archaeological Site excavations by the İzmir Museum in December 2008.

Cemeteries surround the city on the northwest, southwest, and east. The Akpınar cemetery is located to the west of the Archaic settlement. Monastirakia and Yıldıztepe cemeteries are located close to each other southwest of the settlement. The burial grounds to the east of the settlement are, from west to east, Çayır, DSİ, and Kalabak (Hürmüzlü 2003: 2-4; 2004a: 77-79; 2005: 45-47; Güngör 2006: 1, 54-56; Ersoy 2007: 174-177). The South cemetery is located around 2 km south of the Archaic city on the way leading to Urla. Recent excavations have shown that these last burial sectors, Çayır, DSİ, Kalabak, and South, are part of one big necropolis

Cemeteries and tumuli will be introduced in following pages. In some cases, because of the lack of systematic excavations, the information available is deficient

2.2.3.1 Akpınar Necropolis

The Akpınar necropolis was discovered in 1995 and excavated until 2002. It is one of the richest and most important cemeteries in Clazomenae, because luckily it was excavated systematically and produced very beneficial results with respect to tracking the changes of the burial types and burial customs from the early seventh century BC to the Hellenistic period, but most intensely between 650-500 BC. In addition, this cemetery has given very good information about the development and chronology of Clazomenean ceramics, sarcophagus types, and pottery styles. 262 graves were unearthed during excavations; 169 of these certainly belong to the Archaic period.

The Akpınar cemetery is located at the northwest of the Archaic settlement, southeast of Nalbanttepe. The cemetery lies parallel with the coastline (Hürmüzlü 2003: 8; 2004b: 195; 2004a: 79). The necropolis extends over an area of 5000 m^2. The south border of the necropolis is probably an ancient river, the west side is restricted by natural rocks, the east border most probably is under the sea today, and the north border is not known exactly (Hürmüzlü 2003: 10) **(Pl. 23a)**.

The Archaic period of the necropolis is divided into four phases by Hürmüzlü (Hürmüzlü 2004a: 84-88; 2004b: 195-196), which are:

Phase 1 (ca. 700-630 BC)

Phase 2 (ca. 630-600/590 BC)

Phase 3 (ca. 600/590-550 BC)

Phase 4 (ca. 530-500/490 BC)

The divisions are actually arbitrary and aim to clarify the changes of the burial customs through time. Moreover, Phase 3 and 4 can easily fit in with the historical situations; for example, the Persian invasion of 546 BC can be followed from the Akpınar necropolis. The division of Hürmüzlü is practical and there is no need to make a new chronology. The only difference is I subdivided Phase 3 into Phase 3a and Phase 3b (see p. 32). I will present the burials, burial types, and burial customs of the Akpınar necropolis following Hürmüzlü's division.

2.2.3.1.1. Phase 1 (ca. 700-630)

The first phase of the Akpınar necropolis lasted around seventy years and included only seven graves. The area, which was selected for a necropolis, had been leveled before being intensively used. Only one grave, a simple inhumation, was dug

before the leveling process. The other six graves all cremations, were dug after the leveling (Hürmüzlü 2003: 11-12).

The earliest burial in the Akpınar necropolis is a simple earth inhumation (Grave 171). The skeleton is in the flexed position. The corpse is placed as if looking down. The grave contains no grave goods and belongs to a 55-65 year-old woman (Hürmüzlü 2003: 207). The grave is dated to before 650 BC, because the person was buried before the leveling process of the area.

All the cremations took place in situ. Cremations both in Phase 1 and Phase 2 were practiced in a similar way. The cremation process took place in an oval or circular shaped depression approximately 3 x 4 m in dimension, 20-30 cm in depth. The floor of the cremation holes was hardened and the earth would become red in color (Hürmüzlü 2003: 241). After the burning process the bones were not collected. The condition of the bones shows that the burning process continued until the bones became very small fragments. The grave goods were placed in the cremation area, before the cremation process started, because many offerings were found partly burnt. In contrast, drinking vessels were only partly burnt, which shows that drinking vessels were most probably thrown into the grave at the end of the ceremony. After the cremation ceremony, the fire was covered with sand and pebbles. After the covering process, a ceremony was carried out on the grave, because many cooking wares, unburned, were found on top of the cremation burial (Hürmüzlü 2003: 242-245; 2004a: 80-81; 2004b: 195).

Cremation graves are spread throughout the necropolis and were found at the funerary enclosures A, B, C, E and N. Actually, the cremation graves in Phase 1 had been used when the enclosure system was being practiced; however, there is a

possibility that during Phase 1 the funerary enclosures were already being used in a simpler way, formed with a small number of stones (Hürmüzlü 2003: 12).

Grave goods of the cremation graves in Phase 1 are very rich and various **(Tab. 2)**. They include the following vessel types: oinochoe, rhyton-askos, lekythos, aryballos, skyphos, bowl, kylix, khytra, kotyle, kalathos, and amphora. Other offerings consists are astragali, bronze fibulae, and earrings. The poorest cremation grave (Grave 127) contains four grave goods and the richest contains twenty-five. The number of pottery offerings is higher than personal items.

2.2.3.1.2. Phase 2 (ca. 630-600/590)

Some important changes took place in the Akpınar necropolis beginning in 630 BC. The most important one is the usage of the funerary enclosures. Furthermore, new types of burials emerged, like the sarcophagus burials, and the practice of the inhumation in pots such as hydriae, amphoras, and pithoi came back in fashion. The practice of simple earth inhumation and cremation was also continued in this phase. Cist graves for infants returned.

The number of graves suddenly increased in Phase 2. The total number of graves assigned to this phase is seventy-five[7] (Hürmüzlü 2003: 484-487, table. 2.2) **(Tab. 5-6)**. Although the number of the cremation graves is doubled when compared with Phase 1, the ratio of cremations to inhumations decreased due to the introduction of new types of burials. The most common practice in this phase is inhumation in pots, used in more than half of the graves. The most common form of pot is the amphora, then the pithos and the hydria. The other important burial type is the sarcophagus grave, introduced at Clazomenae around 630 BC. Sarcophagus

7 The table about Phase 2 is compiled from the table 2.2 from Hürmüzlü's Ph.D. thesis.

graves show up for the first time in this phase, they became numerous, with many variations in form and decoration **(Pls. 26a-b)**. The total number of sarcophagi in this phase is eighteen. The third type burial, the simple earth inhumation, continues in this period. In Phase 2, simple earth inhumations are represented with four graves. The last grave type is the cist grave, represented with two examples.

The cremation tradition was practiced only for adults in this phase, as in Phase 1, and was practiced both for men and women (**Pl 24a-b)**. The sarcophagus graves belong to an adult (6), a child (6), and an infant (4). Although sarcophagus burials were used at Clazomenae both for male and female, in this group the gender of only six of eighteen skeletons was determined and all are male by anthropological analyses (Hürmüzlü 2003: tab. 2). All amphora and hydria graves belong to infants. On the other hand, inhumations in pithos graves belong not only to infants and children but also adults. Simple earth inhumations belong to adolescents and adults. The gender of the persons buried in three of the four simple earth inhumations has been determined; all are female. The cist graves belong to an infant.

There is no uniformity in orientation. The most preferred orientations are north-south and east-west at this phase.

The most important practice at this period is the usage of the funerary enclosure (**Pl. 25a)**. The practice of the cluster system was started around 650 BC with simple stones. Around 630 BC, clusters of graves were surrounded by a stone wall. The practice of the compartment tradition was continued until the mid-sixth century (Hürmüzlü 2005: 46). The usage of the funerary enclosures was practiced only in the Akpınar, DSİ, and South cemeteries.

The clusters are rectangles formed and surrounded by simple walls. Dimensions of the enclosures are approximately 4.5 x 7.0 m (Hürmüzlü 2003: 12;

2005: 46). The enclosures were separated by passageways from 50 cm to 1 m in width. Twelve enclosures were unearthed. N, C, D, A, B, G and E, a cluster of enclosures located on the north end of the Akpınar necropolis, may be the earliest at Clazomenae. The clusters of H, İ, and L are located on the south and F and K are located on the west (Hürmüzlü 2003: 13).

The total number of the graves dating between 630-550 BC in the clusters is eighty-three. Between 630-600 BC, the number of burials placed in the clusters was higher than between the period 600-550 BC. The number was fifty-seven between 630-600 BC and it decreased to twenty-nine between 600-550 BC. The number of burials placed in clusters varies from one to fourteen between 630-550 BC. The cluster A, E, and K contains ten burials each dating to 630-550 BC. Only cluster C contains fifteen graves. The average number of the burials placed in the enclosures is 7.1.

Fifty-three of the seventy-five graves contain grave goods (70.66%) **(Tab. 2)**. This ratio actually shows that the tradition of placing grave goods in the tomb was popular in this period. On the other hand, only twelve graves contain more than ten grave goods and the number in the others varies from one to nine. Although the total percentage of burials containing grave goods is high, the quality and quantity of the grave goods are poor. When we look at the numbers of grave goods, the richest grave types are sarcophagi, then cremation and pithos graves **(Pl. 25b)**. On the other hand, the frequency of cremation graves with grave goods is higher than for the sarcophagus burials. Almost half of the cremation graves contain more than ten grave goods, which can reach forty, but only four sarcophagus graves contain more than ten grave goods. It is necessary to mention that the richest grave goods in the sarcophagus graves belong to child graves. The adult sarcophagus graves contain a

maximum of six grave goods. In contrast, both the quality and quantity of goods in the amphora graves are very poor. Only nine of twenty-five amphora graves contain grave goods and the maximum number of offerings is four. The situation is similar for hydria graves. Interestingly, pithos graves are rich in both the quantity and quality of the grave goods. Offerings in pithos graves for children reach the number of twenty-five. Ten of the eleven pithos graves contain grave goods. The simple earth inhumations and cist graves are few in number, so it is hard to make solid interpretations about the significance of their grave goods.

Grave good types are diverse. The materials used were clay/pottery, bronze, stone, silver, gold, faience, bone, glass, etc. The most common grave offering is pottery. The pottery types which are given as grave goods are the bird-skyphos (32 examples), rosette-skyphos (10), band-skyphos (15), meander-skyphos (3), alabastron (16), aryballos (16), askos (9), oinochoe (15), coarse ware (7), Ionian bowl (5), bowl (8), one handled bowl (4), plate (8), lid (4), dinos (1), pyxis (3), khytra (13), lekythos (3), rhyton (1), figurine (2), and olpe (1). Another popular category of grave goods are personal items like a spiral shaped ornament (4), glass bead (2), astragalus (45), bracelet (11), pendant (6), fibula (8), earring (13), ring, pin, nail, and knife. The more valuable grave goods generally belong to sarcophagus and cremation burials. As we can see above, some finds are very common as grave goods and others are rare.

Phase 2 is an important period for the Akpınar necropolis and Clazomenae, because in this phase, some new practices emerge like sarcophagus burials, and the usage of the enclosure system as family clusters. The greatest variety in number, quality, and quantity of grave goods can be seen at this phase in the Akpınar necropolis.

Phase 3

Phase 3 is dated from 600/590 to 550 BC by Hürmüzlü, but I will separate it into two sub-phases as Phase 3a (600-575) and Phase 3b (575-550) for understanding the changes and the frequency of use of the necropolis more clearly. Some changes appeared during this phase in this necropolis. The most important one is that the practice of cremation suddenly disappeared at the beginning of this phase. Another important difference is that, although the practice of the family enclosures continues, some of the passageways between enclosures were abandoned and some graves were added above them. The tradition of giving grave goods also rapidly decreases in this period.

The total number of the graves attributed to this period is forty-one. The frequency of the graves suddenly decreased at this phase, when compared with Phase 2; especially in Phase 3a the percentage of the decrease is 80%. The number of the graves increased a little during Phase 3b, but it cannot be compared with Phase 2 or Phase 4.

2.2.3.1.3. Phase 3a (600/590 - 575)

Phase 3a is dated to 600-575 BC, a subdivision of Hürmüzlü's Phase 3 made here for a clearer understanding of the transition from Phase 2. The use of the cemetery suddenly decreased in this sub-phase. Phase 3a is represented with fifteen graves **(Tab. 7)**.

The variability of grave types lessened in this sub-phase. The most important change is that the practice of cremation was abandoned around 600-590 BC. Phase 3a is represented by sarcophagus **(Pl. 27a)** (6 examples, 40%), amphora (7, 46.66%) and pithos (2, 13.33%) graves. Cist graves were no longer used.

The practice of the funerary enclosure continued during this phase. There was no space in the enclosures for the further graves and some of the Phase 3a and also 3b burials were made above the preceding ones or even in passageways between enclosures (Hürmüzlü 2004a: 86).

The percentage of graves with grave goods decreased in Phase 3a **(Tab. 2)**. Furthermore, the diversity, quality, and quantity of the grave goods decreased surprisingly. We know ten graves had offerings. Four amphoras, four sarcophagi and all pithos graves contain grave goods. The number of grave goods per grave varies from one to ten. Only Sarcophagus Grave 210 contains ten grave goods. The total number of grave goods in Phase 3a is thirty-eight. Grave goods were placed inside and outside the graves (twice, graves 99 and 154) or only outside the graves (six times).

Grave good types are not as various as in previous phases. Materials are clay/pottery, bronze, and bone. The most common grave good type is pottery. Pottery forms, which are given as grave goods, are the rosette bowl (4 examples), coarse ware (3), lydion (2), lekythos (2), oinochoe (2), orientalizing skyphos (1), fruit plate (1), chalice (1), askos (1), aryballos (1), olpe (1), plate (1), tray (1). The other offering types are made of bronze and bone like bronze earring (1), spoon (1), and astragalus (15). Personal ornaments are very rare. The only personal ornament is a bronze earring.

The practice of burying both infants and adults in a pithos was continued in Phase 3a. Amphora graves were used for infants. All sarcophagus graves belong to an adult. Infant graves are eight, one pithos and seven amphora burials. There is no uniformity in orientation for the graves.

2.2.3.1.4. Phase 3b (575 - 550)

The following sub-phase, Phase 3b, can be seen as the continuity of the Phase 3a. Phase 3b is represented with twenty-six graves **(Tab. 8)**, an increase compared with Phase 3a. Grave types are more varied. The most common type is the sarcophagus grave (20 examples, 76.9%) **(Pl. 27b)**. Amphora graves are three (11.5%). Other grave types are represented with one grave each: coarse ware pot, (3.8%), pithos (3.8%), and simple earth inhumation graves (3.8%)

During Phase 3b, grave goods were mostly offered to infant graves (seven graves total: 6 sarcophagus, 1 pithos). During this phase the usage of the funerary enclosure continued.

The offering of grave goods decreased to 50% with thirteen graves containing them. Twelve of twenty sarcophagi and one pithos grave contain grave goods. The amphora, coarse ware, and simple earth inhumation graves contain no grave goods. In the burials with grave goods, the number of offerings varies from one to five. The total number of the grave goods in Phase 3b is twenty-nine. Grave goods were placed both in and outside the graves, inside only two burials, but outside ten.

Grave good types are not as varied as in the previous Phases 2 and 3a. Materials are clay/pottery and bone. As before, the most common grave good type is pottery. Pottery forms are the band bowl (6 examples), askos (5), amphoriskos (2), coarse ware (2), fruit plate (1), chalice (1), aryballos (2), plate (1). The other offering types are made of bronze and bone like bronze earring (1), spoon (1), and astragalus (2).

The total number of the infant graves is thirteen. The frequency of infant death is 48% among recovered graves. The frequency decreases a bit when we compare with previous phases.

The sarcophagi contained infants (8 graves), children (2), and adults (10). The amphora burials contained infants (3 graves). The coarse ware pot grave (1 grave), and pithos grave (1) were used for infants, the simple earth inhumation grave (1) contained an adult. Thirteen graves belong to an infant, two graves to a child, and twelve graves to an adult.

2.2.3.1.5. Gap in Settlement (550- 530/535 BC)

There is no clear evidence of activity from 550 to 530/525 BC in the Akpınar necropolis. Datable Corinthian pottery does not continue beyond Late Corinthian I. Attic pottery from this period is also absent (Hürmüzlü 2004a: 87). This situation is found throughout Clazomenae, in the burial grounds, the settlement, and the acropolis. The abandonment of the city is surely related with the first Persian attacks in West Anatolia, beginning in 546 BC (Ersoy 2004: 60-64).

2.2.3.1.6. Phase 4 (530 - 500/490)

The number of graves is almost doubled from the previous sub-phase 3b; the total number of graves dated to the last quarter of the sixth century BC is forty-eight **(Pls. 28-b; Tab. 9)**. There are no big differences in terms of grave types and numbers compared to the previous phase. The number of sarcophagi is almost the same: nineteen (40%). The only major difference is the increased number of amphora graves, from three to twenty-six (54%). Three additional pot burials complete the group, one each, a hydria, pithos, and coarse ware pot.

There is no uniformity in orientation for the graves during this phase, as before.

The most important change of this phase is the abandonment of the family enclosures. The interments were made in passageways, in the enclosure, and over the walls (Hürmüzlü 2004a: 87).

The quality and quantity of grave goods of this period are very poor. Only eight of the forty-eight graves contain graves goods (16.6%). The total number of grave goods is eighteen. The number of grave goods varies from one to six. Grave goods were offered only in infant graves. The burials in the hydria, pithos, and coarse ware pot contain no grave goods. Grave goods were placed both inside and outside six graves. Two graves (1 sarcophagus, 1 amphora) had offerings inside only (Hürmüzlü 2004a: 87).

The materials of the offerings are clay/pottery, as always the most popular, also bone, silver, and iron. The pottery types recovered are the lekythos (2 examples), band skyphos (3), skyphos (1), one handled bowl (1), askos (1), kylix (1), and oinochoe (1). Clazomenean Black Figured amphora (1), lydion (1), and rhyton in the form of a roe deer and grouse (1 each). The other offering types are made of metal and bone like silver pendant (1), bone amulet (1), iron amulet (1), and bracelet (2). As we can see, the number and quality of the grave goods suddenly decreased.

Interestingly, forty-six of forty-eight graves belong to infants. As a result of this situation the percentage of the infants seems around 96% among recovered burials, but there is the fact that the Akpınar necropolis did not reflect all Clazomenae. The Akpınar necropolis might have been reserved for infant burials in the last quarter of the sixth century BC.

There is a break in the usage of this necropolis of about 125 years. This situation can be related with the Persian invasion in West Anatolia in 499 BC, and with the fact that the settlers left the center of the Clazomenae.

2.2.3.2. Yıldıztepe Necropolis

This necropolis is located on the southwest of the Archaic city, on the southwest slopes of the Ay-Yıldız Tepe, near the Monastirakia necropolis (Güngör 2006: 53, 56, 120) **(Pl. 1-2)**. The excavations of this necropolis were carried out between 1979 and 1982 by Güven Bakır (Bakır 1981: 90; 1982: 66-67; 1983: 221-229). The findings were studied by Ümit Güngör in his Ph.D. dissertation (Güngör 2006).

The necropolis was established around the middle of the seventh century BC and used until the end of the fourth century BC. In total, 102 graves were recovered, with ninety-six dated between the mid-seventh century and the end of the sixth century BC **(Pl. 29a)**. The remaining six graves are dated to the fourth century.

The graves have been divided into four phases by Güngör; three of these phases are dated to the Archaic period (Güngör 2006).

Foundation Phase (Mid 7th c. - Early 6th c. BC)

Phase I (570/60-550 BC)

Phase II (530/525-500 BC)

Phase III (4^{th} c. BC)

2.2.3.2.1. Foundation Phase (Mid Seventh to Early Six Century)

The foundation phase dates from the middle of the seventh to the early sixth century BC. The graves belonging to this phase are located to the southeast of the

sector (Güngör 2006: 120). This phase is represented with three graves, two in-place cremations (Graves 81-15, 82-12) and one amphora burial **(Pl. 29b)** (Güngör 2006: 58, 62). Dispersed fragments of the kotylai that date to the late eighth – mid-seventh century BC show the possibility of earlier graves in the area (Güngör 2006: 120).

Grave 82-12 is a cremation, which is very badly damaged by later graves. The grave contains only one grave goods, maybe due to the later damage, a kotyle decorated with concentric circles: The grave is dated to 690-660/50 BC (Güngör 2006: 42-43).

Grave 81-15 is a cremation grave. The grave contains two grave goods, an early type bird of sktphos and a kotyle decorated with vertical zigzag motifs. The grave is dated to 650/40 BC (Güngör 2006: 29).

Grave 82-02 is an inhumation in an amphora and contains no grave goods. It is dated to the late 7^{th} – early sixth century BC due to the form of the amphora (Güngör 2006: 120).

Due to lack of analyses of the skeletal remains, there is no information about gender.

The necropolis area was leveled in the last quarter of the sixth century BC. Since this leveling layer contains many pottery fragments dated to 640-550 BC, graves belonging to the foundation phase may have been destroyed during this process.

Two of the three graves, both cremations, contain grave goods. The total number of the grave goods is three. The number of contemporaneous grave goods in the Akpınar necropolis is around 500.

The foundation phase is dated from 650/40 to 580 BC. During this 70 year period, there are only three graves, a very low number. Only two graves (both are

cremation) at the Yıldıztepe necropolis are dated to the middle of the seventh century; this number is seven (6 cremation, 1 simple earth inhumation) in the Akpınar necropolis. There is one grave (amphora) dated to the late seventh- early sixth centuries BC at the Yıldıztepe necropolis. In contrast, this number at the Akpınar necropolis is seventy-five (25 amphora).

2.2.3.2.2. Phase 1 (570/60-550 BC)

Phase 1 is dated to 570/60-550 BC. The transition from the Foundation Phase to Phase 1 is not clear. There is a break of around 10-15 years. Phase 1 is represented with only three graves, all sarcophagus graves (Grave 81-13, 81-35, 82-10) (Güngör 2006: 62). The sarcophagi were inserted into cists cut out of the bedrock. The three graves were located side by side (Güngör 2006: 62, 121, 127). There is no uniformity in orientation for them. The graves are oriented east-west, northeast-southwest and northwest-southeast. None contain grave offerings.

The sarcophagus Grave 82-10 was covered with a small mound of clay. There is a wall to the east of the sarcophagus most probably for protecting the grave. The grave is oriented east-west. It has a stone cover (Güngör 2006: 41). The decorated sarcophagus is attributed to the Stockholm 1671 painter (Müderrisoğlu 2001: 49-53; Güngör 2006: 128).

The dimensions of the sarcophagus Grave 35 are: length 200 cm; width at the head 69 cm, at the foot 66 cm; height at the head 66 cm, at the foot 38 cm **(Pl. 30b)**. The grave is oriented northwest-southeast. The cover is made of rough stone with one corner of the cover stone completed with clay (Güngör 2006: 37). The sarcophagus contains a skeleton of a 28-32 year old woman, and the skeleton of a 6-7

month old fetus in her abdomen (Güngör 2006: 37). The sarcophagus was painted by the Dennis Painter (Güngör 2006: 129; Yılmaz 2000: 25-30).

The dimensions of sarcophagus 81-13 are: length 205.5 cm; width at the head 75 cm, at the foot 65.5 cm; height 43 cm (Güngör 2006: 27) **(Pl. 30a)**. The sarcophagus has a local limestone cover. The grave is oriented northeast-southwest. The sarcophagus has been attributed to the Early Albertinum group by Yılmaz (Cook, R. 1974: fig. 20.1-2, 22.4-5, 23; Güngör 2006: 129-130, 137; Yılmaz 2000: 61-64).

2.2.3.2.2. Phase 2 (530/525-500 BC)

As in other areas in Clazomenae, there is no pottery and grave evidence dated between 550-530/525 BC in the Yıldıztepe necropolis (Güngör 2006: 137). Phase 2 is dated to 530/525-500/490 BC. This is the period of most intense use of this necropolis, with ninety-one graves (Güngör 2006: 53) (**Tab. 10)**.

During this phase, the quantity of graves in the necropolis changed dramatically. After, an initial levelling process in 530 BC (Güngör 2006: 57), the area gained its identity as a necropolis. The most common grave type is the sarcophagus grave (68.13%), followed by the amphora grave (29.67%). The cist and simple earth inhumation graves are represented with one example each (1.09%).

Sarcophagi are divided into groups according to their decorations. Sarcophagi at the Yıldıztepe cemetery can be categorized according to their decoration (Güngör 2006: 130-135; Cook, R. 1981: 2-8):

1. Wavy Line decoration: 28 sarcophagi.
2. Undecorated: 6 sarcophagi.
3. Decorated with meander: 5 sarcophagi.

4. Decorated with animal figures: 3 sarcophagi.
5. Decorated with lotus-bud and palmette: 2 sarcophagi.
6. Decorated with egg-and-dart rows: 1 sarcophagus.

Although there is no certain uniformity in orientation for the sarcophagus graves, thirty-nine (63%, 29 adult, 3 child, and 7 infant graves) of the sixty-two graves are oriented east-west. Eight were oriented northwest-southeast (13%, 6 adult, 2 children graves) and an additional eight northeast-southwest (13%, 6 adult, 1 child, and 1 infant graves). All the north-south (10%) oriented sarcophagi graves belong to adults. It can be said that the most common orientation for the Yıldıztepe necropolis during Phase 2 is east-west. Such a big preference for the uniformity in orientation was not observed in other contemporary cemeteries, especially at the Akpınar necropolis.

Forty-eight of the sarcophagus graves belong to adults, eight to infants, and six to children.

Thirty-seven of the sixty-two sarcophagus graves contain covers as a lid. Thirty graves have a local limestone cover, five have a clay cover, and two have cover made from a combination of local limestone and clay (Güngör 2006: 62).

Twenty-seven amphora graves belong to this phase. All belong to infants as in other cemeteries. Fourteen amphorae are productions of Clazomenae, one amphora is the production of Lesbos, and four amphoras are of unknown production. All amphoras are lying on their side. Sometimes the belly of the amphora is broken for inserting the corpse and closed with a lid of a lekanis or a lekane (Güngör 2006: 63).

Twenty-four amphora graves are oriented east-west, four are north-south, southeast-northwest, and two are southeast-northwest. The orientation of five cannot be determined.

The cist grave is represented by only one example. It is oriented east-west, contains no grave goods, and measures 80 (length) x 70 (width) cm (Güngör 2006: 64).

There is only one simple earth inhumation grave dated to this phase. The grave is damaged. It is oriented southeast-northwest, and contains no grave goods.

When we look at all the graves of this phase, fifty-two of the ninety-one graves are oriented east-west (57.24%). This high number indicates a clear preference in orientation for all types of graves. The second most preferred orientations are north-south, southwest-northeast, southeast-northwest with ten graves (11%). Three graves (3.3%) are oriented southeast-northwest. The north-south orientation was applied only for adult sarcophagus and amphora graves.

Sixteen graves contain grave goods **(Tab. 2)**. Ten of the sarcophagus graves (11% of the total ratio) and six of the amphora graves (6.7%) contain grave goods. The total number of graves with goods is forty-two. This number was eight in the Akpınar necropolis between 525-500 BC. The number of the grave goods varies from one to eleven. The infant sarcophagus graves contain grave offerings more than the children and adult ones. Placing of grave offerings in amphora graves is very rare.

Ceramics offerings are the band skyphos (3), rosette bowl (1), lekythos (1), ring askos (5), globular askos (1), olpe (3), pyxis (2), trefoil mouth small olpe (1), plate (1), feeding bottle (3), lekane/lekanis (2), cup (1), terracotta figurine (5), and a krateriskos (1). Other materials are the bronze ring (2), ring (1), ring stone (1),

bronze pendant (1), bronze plate (1), spearhead (1), astragalus (4). More precious personal objects like rings, ring stones, pendants and terracotta figurines were placed in the infant and child sarcophagus graves. Amphora graves contain simple and poorer grave goods compared with the infant sarcophagus graves.

The grave goods for sarcophagus burials are generally placed outside the grave (Güngör 2006: 62-63). Alternative positions are:

1. Outside the grave, near the cover (Grave 80.04).

2. Outside the grave under the cover where the cover overhangs the frame (Graves 80.34, 81.19).

3. Both outside and inside the grave (Grave 81-28: outside is a skyphos; inside is a lekythos).

The number of infant graves of this phase is thirty-six (39.6%) **(Tab. 1)**. The child graves are represented by six graves (6.6%). The rest are adult graves except for unidentifiable ones. The percentage of the infant graves is 39.6% among the recovered graves or 46.2% including the child graves. In both situations, the percentage of infants is much lower than in the contemporary Akpınar necropolis (96%).

2.2.3.3. Monastirakia Necropolis

The third burial area that is part of the Archaic city is the so-called Monastirakia Necropolis lying in between the Yıldıztepe and Akpınar sector, to the south and southwest of the ancient settlement (**Pl. 31a-b)**. This was the major area of investigation of Oikonomos in 1920-1921 (Güngör 2006: 53; Hürmüzlü 2004a: 77; 2005: 45, Oikonomos 1921: 63-74; Tzannes 2004: 97). Monastirakia was used as a cemetery from the seventh through the end of the sixth century.

Because of the lack of sufficient notes, we cannot tell how many graves were found during these excavations. It is certain, however, that their total number is more one hundred. M. C. Tzannes reports 138 burials (Tzannes 2004: 107-198) **(Pl. 31b, 32a)**. Ninety-two sarcophagi, partly intact, partly destroyed by later intrusions, were found (Tzannes 2004: 99). The number of simple earth inhumation burials could not determined and many of them were disturbed by later graves (Tzannes 2004: 105). Thirty-five amphora graves were found during the Oikonomos excavations (Tzannes 2004: 107). The total number of pithos burials is eleven.

The length of thirty-four sarcophagi varies from 1.67 to 2.15 m. However, the most common length is 1.95-2.00 m. (Tzannes 2004: 105). The short length of thirteen sarcophagi among ninety-two examples indicates the existence of child sarcophagi. These examples vary from 56 to 70 cm. All amphora graves belong to children and infants. The length of pithos graves varies from 73 to 159 cm and this shows that pithos graves were used for both adults and children. Unfortunately, only the length of ninety-two of 138 graves is determined. At least fifty-two graves belong to infants (57%); probably around thirteen graves belong to adolescents (14%).

No cremation graves were found during the excavations (Tzannes 2004: 108). Moreover, it is hard to differentiate the gender of death.

2.2.3. Other Burial Grounds

The continuing Third Degree Archaeological site excavations at the east and the south of the settlement have revealed many new burials and the vast area was probably used as one big necropolis. These burial plots found during the rescue excavations were probably part of it. The burial plots accepted as individual

cemeteries - Kalabak, DSİ, Çayır, and South - will be introduced in the following pages.

2.2.3.4. Kalabak Necropolis

The flat area to the east and south of the ancient city along the coastline was used extensively in the Archaic period (Bakır 1983: 67; Hürmüzlü 2004a: 77). Since the 1950s, salvage excavations directed by the İzmir Museum staff have yielded terracotta coffins. A single season of excavation in two different trenches in part of this large necropolis of the Archaic city produced four cremation burials dating to the middle of the sixth century (**Pl. 33 b-c, 34a)**, one simple inhumation, **(Pl. 34b)**, and one inhumation in a sarcophagus **(Pl. 33a)**. Moreover, during the excavations in 1981 some scattered Clazomenean sarcophagi fragments were found. The sarcophagi unearthed by the İzmir museum are attributed to the Borelli painter by R. M. Cook (Cook, R. 1981: 10, pl. 9).

The grave goods are not very rich in respect to number and quantity. The single stone sarcophagus contains an astragalus, a gold ring, and a spiral (Çaldıran 1983: 4). Only three cremation graves contain grave goods. Although cremation Grave 6 contains only a silver ring, cremation Grave 4 contains richer grave goods like two rosette skyphos, one lotus-skyphos, and a bone lid (Bakır 1983: 67; Çaldıran 1983: 5-6). Moreover, in addition to the grave goods, many pottery fragments were found in the cremation area, which are related to the feast. The main pottery fragments related with feast process are cooking wares, an oinochoe, a Chios chalice, a fruit plate, an amphora, a pyxis, and a kylix (Çaldıran 1983: 10-16)

The cremation tradition in the Kalabak necropolis is a bit different compared to the Akpınar necropolis. The bodies were cremated in deep pits. These pits

contained human bones, burnt earth, and some grave goods, also partly burned. After the burning process the pit was covered with a small tumulus of a sandy and pebbly earth (Çaldıran 1983: 18).

The active use of the cemetery spans the sixth century BC (Çaldıran 1983: 18). Cremation graves are dated to the first half of the sixth century. The stone sarcophagus is dated to the mid-sixth century BC. Only simple earth inhumation and Clazomenean sarcophagus burials are dated to the second half of the sixth century BC.

2.2.3.5. DSİ Necropolis

Another part of the vast Archaic area was discovered during the opening of the drainage channel in the 1980s. The salvage project produced thirty-six burials in total, ranging in date from the late eighth until the end of the sixth century BC (Hürmüzlü 2005: 45-48; Güngör 2006: 55) **(Pl. 35)**. The grave types revealed in the DSİ plot are sarcophagus (17 in total; 1 stone and 16 clay sarcophagi) **(Pls. 36a-b)**; cremation (9 graves); amphora (5 graves); pithos (3 graves); and hydria (1grave).

Cremation appears to be the prevalent custom during the seventh century in the DSİ sector. The earliest cremation grave is dated to the late eighth century due to the skyphos fragments found around the grave. The cremation tradition continued to the late seventh or early sixth century BC. Six of nine cremation graves contain grave goods. It is hard to determine the gender and age of the people who were cremated. The number of grave offerings varies from one to around twenty. Grave good types are the chalice, kylix, olpe, Ionian kylix, rosette and bird skyphos, lekane, lydion, alabastron, aryballos, dinos, cooking ware, plate, and oinochoe. Some graves contain burnt bones.

Sarcophagus graves are seventeen in total **(Pls. 36a-b, 37b)**. Sixteen are clay and one is of stone. Some additional sarcophagi graves were found scattered, in fragments. All sarcophagi are oriented north-south except sarcophagus Grave 9. Five of sixteen graves contain grave goods. All sarcophagi are attributed to the Monastirakia group except sarcophagus Grave 9. The gender of those buried in the sarcophagi could not be determined. At least nine graves belong to adults. The number of the sarcophagi graves attributed to children is four.

Amphora graves dated to the late sixth century BC are represented by five examples, all used for infants. Three of five graves contain grave goods, but only a few examples. Three pithos and one hydria grave probably should be dated to the sixth century BC.

Twenty-two of thirty-six graves belong to adults, at least ten to children and infants.

The 2008 campaign, a salvage project related with the construction of the sewage pipeline for the newly developed neighborhood of the modern city, produced further evidence of burials in the area, more numerous than previously thought **(Pl. 35)**. During the salvage excavations more than twenty graves were unearthed. At least ten belong to the Archaic period. Grave types found are the amphora, the pithos, and stone and clay sarcophagi. Moreover, during the rescue excavations a long and thick wall was found that goes under a modern house. This wall is probably a part of a funerary enclosure **(Pl. 38a)**. The enclosure wall probably should be dated to the late seventh-early sixth century BC. The preserved length of the wall is 6.6 m, its height 1.2 m.

The earliest grave is probably a cremation grave, which was seen under the late seventh century grave. Unfortunately, the excavations of this grave could not be completed.

Sarcophagus graves are represented with at least six examples. Only one grave was found almost complete, a stone sarcophagus (**Pl. 37b)**. Dimensions of the sarcophagus are 148 x 69 x 70 cm. Interestingly, the skeleton and the grave goods, which are twenty astragali, were partly burned. The meaning of this burning process is not clear. There is no similar example in Clazomenae. The remaining sarcophagi graves were found as scattered fragments.

During the salvage excavations an amphora grave was found which was partly disturbed during earlier excavations. The neck and mouth of the amphora are missing, but it seems that this part of the vase was cut in antiquity, because the shoulder of the amphora grave was closed by a stone slab. The amphora seems to be an import from Euboea and can be dated to the late seventh to early sixth century BC **(Pl. 37a)**. The grave contains only one offering, a Corinthian type kotyle placed just outside of the amphora.

Moreover, at least three pithos graves were found during the excavations. Only one of them was found in a good condition. It is dated to the early sixth century due to its grave goods, a lekythos and a bead. The other two pithos graves are badly disturbed.

The DSİ necropolis was first excavated with only two trenches in the 1985 campaign. With the results of the excavations, the expansion of the necropolis was calculated ca. 200 x 200 m. With the help of the recent salvage excavations in 2008, the borders of the DSİ necropolis were expanded to ca. 400 x 400 m and the number of graves attributed to the Archaic period is more than fifty **(Pl. 35)**. The reason for

such a low grave number for such a large area is that the necropolis is completely under the modern town and it is impossible to excavate it in its entirety.

The DSİ necropolis was used from the late eighth century to the Roman period. The latest Archaic graves are dated to the end of the sixth century BC. The earliest grave types are cremation graves, which disappear at the end of the first quarter of the sixth century BC. Family clusters in enclosure walls were found in the DSİ necropolis and dated to the late seventh to early sixth century BC. With the second quarter of the sixth century BC, the cremation tradition was abandoned and the corpses were inhumed in coffins and pots. This tradition continues to the end of the sixth century BC.

2.2.3.6. Çayır Necropolis

This sector is located just southeast of the Limantepe mound. Several burials were discovered in this area during the salvage excavation in 2003. The graves were partly destroyed during the construction of a sewage line but as we understand from the material, they are exclusively middle of the seventh to end of the sixth century BC in date.

The inspection of the finds revealed fifteen sarcophagi decorated with meander, wavy lines, palmette motives and animal friezes; around thirty amphora burials, mostly Clazomenean and with only a few Chios examples; then some pithos burials. Reports mention the existence of one cremation burial with burnt earth, bones, and pottery dated to the middle of the seventh century BC.

Moreover, reports also mention destroyed funerary enclosure walls. As we already know, the enclosure system was practiced in the DSİ necropolis that is just 400 m southeast of the Çayır necropolis.

It is impossible to know the ages and gender of the dead buried here. Grave goods were found dispersed. Grave good types are the skyphos, oinochoe, krater, plate, hydria, alabastron, lekane, and kylix.

2.2.3.7. South Necropolis

During the Third Degree Archaeological excavations by the İzmir Archaeological Museum in a private area, many graves dated from the Archaic to the Hellenistic period were found. Excavations show that this area was one of the important plots of the big necropolis. This sector is located around 1 km south of the Archaic settlement (HBT sector) on the İskele-Urla road.

Sondage excavations revealed twenty graves in total. Many sarcophagi and pottery fragments were found during the excavation, so the number of graves should be much higher than twenty. Twelve graves seem to belong to the Archaic period, especially the end of the sixth century BC. Grave types are sarcophagus, cremation, and simple earth inhumation.

Sarcophagi graves are represented with twelve examples **(Pl. 38b)**. One sarcophagus is made of stone (**Pl. 39b)** and the rest are made of clay **(Pls. 38b-39a)**. Sarcophagus graves are generally fine painted productions. Cremation and simple earth inhumation graves were represented with one example each.

Eight of twelve graves belong to an adult and three to a child/infant. Six sarcophagus graves belong to an adult and the rest belong to children/infants.

Seven of twelve graves contain grave goods. Grave goods are found in five sarcophagi. Grave offerings are placed in three ways: inside, outside, and inside and outside of graves. Cremation and simple earth inhumations contain grave goods. Their number varies from one to fourteen. The richest grave goods were found in the

sarcophagi graves. The richest grave is sarcophagus Grave 63/2. This grave contains twelve objects: a small pyxis[8], a marble alabastron, a bronze mirror, a thin and roller-formed metal object, two ovoid formed hooked bronze objects, four bronze goat's foot formed inlays, and two magnifying glasses.

Sarcophagus graves were covered with limestone slabs. There is no uniformity in orientation for the graves. Some graves were disturbed by later graves; it is hard to get enough information about them.

The other important characteristic of this necropolis was the existence of large and tall walls, 50 m in length. According to observation, walls were found mostly in the deepest levels of the sondages and interpreted as enclosure walls belonging to the different families as in Akpınar and DSİ burial grounds.

This necropolis was in use probably from the end of the seventh to the end of the sixth century BC. However, the inadequacy of the excavations makes any definite interpretation impossible. The south necropolis proved that the center of the Archaic settlement was surrounded by burial areas also on its south side.

2.2.3.8. Tumuli

The thirteen recorded tumuli are all located on hilltops to the west and south of the city (**Pl. 20)**. Ten are located west of the settlement, on Dubatepe (1) **(Pl. 21a)**, southwest of Dubatepe (2), on Nalbanttepe (5) **(Pls. 21b-c, 22a)**, and south of Nalbanttepe (2). The east of the settlement was not used for tumuli, most probably because of lack of hills. Almost certainly all tumuli graves belong to the Archaic

8 A similar example was found at the Yıldıztepe necropolis in an amphora grave and dated to 525-500 BC (Güngör 2006: 42, fig. 10).

period. In some cases they were used for multiple burials (Hürmüzlü 2003: 4; 2005: 47). Tumuli are also ringed by big stones in a peribolos wall (Hürmüzlü 2003: 4).

Only four tumuli have been excavated and cleaned so far, while many have been robbed and disturbed. One of the four excavated tumuli contains a cremation burial and it is dated to the late seventh century due to burnt Wild Goat Style pottery fragments (Hürmüzlü 2003: 4; 2004a: 78). The second tumulus contains two sarcophagi, of which one has been attributed to the Hannover painter (Hürmüzlü 2004a: 78) **(Pl. 22b)**. Two tumuli were plundered, but contain a stone sarcophagus.

CHAPTER 3

IRON AGE AND ARCHAIC PERIOD BURIALS AND CEMETERIES IN IONIA

Burials and cemeteries in the Iron Age and Archaic Period are not very well represented in Ionia except at Clazomenae. Especially, Protogeometric and Geometric period burials were very rarely discovered in the Ionia region. Although the number and quantity of the cemeteries and burials increased during the Archaic Period, the evidence is still insufficient to make more than general interpretations about the burial customs of individual sites.

In this chapter, the burials and cemeteries of Ionian sites will be presented chronologically. The aim of this chapter is to supplement the discussion of burial customs of Clazomenae.

3.1. Protogeometric Period

Protogeometric period graves and burials grounds are rarely represented in Ionia. The only notable information about this period comes from Clazomenae. Traces of PG period settlements are observed also in some Ionian sites like Smyrna, Ephesos, Miletos, Chios, Phokaia. However, the traces of burials from these sites are almost absent.

3.1.1. Chios

Early Iron Age Chios is not known very well. The only published grave dated to the PG period is found in Ayios Isidoros, Chios town. The grave is an inhumation in a pithoid-amphora with four grave goods and is dated to the middle of the ninth century BC (Lemos, A. 1986: 164-165; 1997: 80).

3.1.2. Teos

The only grave dated to the PG period was found at the deepest level of the rubbish pit. The grave is an amphora inhumation containing infant bone fragments dated to the LPG (Öğün 1964: 116-117).

The other Ionian sites Miletos, Samos, Smyrna, Erythrai, Ephesos, and Colophon did not reveal any PG graves, but the existence of the PG period is known from settlement evidence. Myus, Priene, and Lebedos, however, have almost no evidence dated to the PG.

3.2. Geometric Period

Although the transition from the PG to the Geometric period is not very prominent, some important changes take place, like the plan and type of buildings and pottery styles. There are no significant traces of urbanization in Ionia during the Geometric period except at Smyrna. Megaron type structures and some early hints of changing social processes can be seen in the Geometric period especially in Smyrna and Miletos.

Although the number of graves increased in the Geometric period compared to the earlier periods, this number is still very limited. Graves were situated both

inside and outside of the settlements in some sites of Ionia as in Clazomenae. Most of the graves are inhumations in pots.

3.2.1. Chios

The only grave dated to the Geometric period, is an amphora inhumation found in the area of Ayios Ioannis Prodromos. It contains an oinochoe and one-handled cups and is dated slightly earlier than the Rizari cemetery, a nearby necropolis of the Archaic period (Lemos, A. 1997: 80).

3.2.2. Smyrna

No burial or burial grounds dated to the Geometric period have been recovered so far in Smyrna, except for the existence of intramural pot graves under the Geometric period houses mentioned by the director of the Old Smyrna excavation, Professor Meral Akurgal, at the KST in 2008. However, Dr. Akurgal did not give details concerning the number of graves, their types, contents or their specific dates. These graves show that the intramural burial custom was practiced during the Geometric period as in the following period.

3.2.3. Ephesos

Only one grave from the site dated to the Geometric period has been published so far. Many Geometric period pottery finds were reported, but they are generally scattered fragments unrelated with any grave and settlement pattern.

The rescue excavations by the Selçuk Museum staff on the east slope of the Ayasoluk Hill revealed burials, of which the majority is dated to the Classical period. Eight tombs were uncovered; seven were dated to the late fifth century BC in the preliminary reports, while only one tomb, an inhumation grave closed by large pithos

fragments, was dated to the late eighth century. The mouth of the grave is placed to the west, and the grave finds are a one handled small cup and a feeder (**Pl. 45a**). Grave goods were related with late eighth century Carian pottery style by the excavators (Evren and İçten 1997: 91-92).

3.2.4. Samos

Only three burials have been recovered and partly published. There is no detailed information for other burials. One of three graves, mentioned by Coldstream (1968: 168), yielded almost no information. The two other graves were found in the area of the Prosphygikos Synoikismos (Tsakos 1996).

3.2.5. Miletos

The Geometric period of Miletos is represented by buildings and pottery finds, but unfortunately no Geometric period grave has been revealed so far.

3.2.6. Colophon

Only a few graves were very briefly reported from three cemeteries at Colophon (Coldstream 1968: 262; Cook and Dupont 1998: 6).

The tholos tomb is reported to contain fragments of Mycenaean, Geometric, and fourth century BC pottery (Coldstream 1968: 262; Cook and Dupont 1998: 6). Geometric period pottery was burnt, which indicated that the practice of cremation was in use and that the tomb was most probably re-used during many periods.

Other Ionian sites, Teos, Phokaia, Myus, and Lebedos have yielded very limited information about both settlement and burial patterns.

3.3. Archaic Period

Many significant changes began to appear around 700 in Ionia, as throughout the ancient Greek world in terms of both settlement patterns and burial customs. The number of graves and burial grounds suddenly increased beginning with the Archaic period.

3.3.1. Chios

Chios has both settlement and burial evidence for the Archaic period. The areas that yielded such settlement evidence are Aiyo Gala, Nagos, Volissis, Kalatomi, Komi, Emporio, Chios town, and Kato Phana (Yalouris 1986: 143-152, map. 4) **(Map 10)**.

The excavations of Kourouniotes in Chios revealed thirty sarcophagi burials. Only one sarcophagus is made of stone, while the others are clay. Some sarcophagi are identified as Clazomenean production (Lemos, A. 1997: 75). This cemetery is located at Tourlote Hill to the northwest of the road leading to Latomi. There has been no further published information about the graves. Two more painted Clazomenean sarcophagi were found by David Hunt near Latomi town (Hunt 1945: 31-33, 37, 39; Lemos, A. 1997: 75).

A small cemetery was uncovered in the Rizari sector by the excavations of Contoleon in the 1950s. Among the twelve graves that this cemetery contains, four are stone sarcophagi, while eight are pithoi and pithoid/amphorae (**Pl. 40a)**. Behind the sarcophagi there was a large pyre, approximately 2.00 x 1.00 m, with north-south orientation, consisting of burnt earth, ashes, and carbonized fragments of hydriai and other pots (Lemos, A. 1997: 76). Eight pot graves and sarcophagi were surrounding the pyre. All pots were used as urn graves.

Two of the four stone sarcophagi were oriented east-west, while the other two were in north-south orientation. All had similar dimensions except for Grave 2 that is larger than the others **(Pl. 40b)**. The sarcophagi contained both a skeleton and grave goods. All grave goods belonging to the sarcophagi were hydriai except in Grave 3. The number of grave goods varied from one to four.

Three graves were pithoi and the rest were pithoid-amphorae graves (Lemos, A. 1997: 77). The pot graves contained cremations or child inhumations. Six pot graves contained grave goods. Their number varied from three to six. Grave good forms were votive vessels, including as a rule an oinochoe and one-handled cups (Lemos, A. 1997: 78).

The Rizari cemetery was dated from the last quarter of the seventh century to the first quarter of the sixth century. Moreover, just outside the trench, more burials were observed, but, unfortunately, they were not excavated (Lemos, A. 1997: 77-80).

The Rizari cemetery should have belonged to the a small Archaic settlement instead of being a part of the main cemetery of Chios (Lemos, A. 1997: 79).

3.3.2. Teos

Archaic period Teos is not adequately represented either in settlement or burial patterns. Some walls and multi-roomed structures of the seventh century have been reported, but no details have been given (Boysal 1963: 6-7; Boysal and Öğün 1962: 13).

The burial grounds of Teos probably should be located in the west side of the city on a steep hill. Many Clazomenean sarcophagi fragments were found on the surface of this slope (Boysal 1963: 7; Boysal and Ögün 1962: 13). This situation

shows that the extramural burial ground tradition was practiced in Teos as in the other Ionian centers (**Pl. 41a)**.

3.3.3. Smyrna

The Archaic period is relatively well represented at Smyrna. Excavations continuing since the 1950s have revealed three cemeteries and numerous tumuli dated to the Archaic period. The earliest discovered cemetery is a child and infant cemetery consisting of twelve graves with two phases (Cook, R, 1974: 44) **(Pl. 41b, 42a)**. This cemetery began to be used around the second quarter of the seventh century BC (Cook, R. 1974: 44). All graves were pot inhumations in amphorae, cooking wares and pithoi, with no uniformity in orientation (Cook, R. 1974: 44-46). Many graves did not contain any goods, and the others were not rich in finds. Grave goods were placed outside the jars. This small cemetery is an intramural cemetery, which is placed in the fortification wall of the site. A similar situation can be seen in Clazomenae.

A second small, cemetery is located southeast of the Archaic period fortification walls and south of the Archaic fountain **(Pl. 42b)**. The cemetery has yielded seven limestone sarcophagi and eight pot burials (Akurgal, M. 1999a: 52) **(Pl. 42c, 43a)**. At least five limestone sarcophagi were placed with the same direction as the fortification wall and they most probably were buried below the earth. One sarcophagus contained five pairs of gold earrings, and two astragali (Akurgal, M. 1999a: 35; 1999b: 51). This grave should have belonged to a young girl. Astragali were produced not for gaming, but as grave offerings. Askos, olpe, plate, pinax, and krater fragments were found outside the sarcophagus (Akurgal, M. 1999a: 35). The grave is dated to the early sixth century (Akurgal, M. 1999b: 52-54).

There is no exact uniformity in orientation for the sarcophagi and pot graves. One of the pithos graves contains a unique krater used as a cover for the grave. A lion hunt scene depicted between the handles dated this vessel to the end of the seventh or the beginning of the sixth century (Akurgal, M. 1999b: 54-55). This small cemetery, which was interpreted as an elite cemetery, was used from the late seventh to the early sixth centuries (Akurgal, M. 1999b: 52).

The main necropolis of Archaic and Classical Smyrna was located to the north and the northeast of the mound, on the south slopes of Yamanlar hill (Akurgal 1997: 51) **(Pl. 43b)**. More than a hundred graves and sixty tumuli were reported. Unfortunately, it is not clear how many of them belong to the Archaic period (Akurgal 1988: 52). However, seventeen sarcophagi belonging to the main necropolis were published by R. M. Cook (1974). The location of the graves among the necropolis is, however, not reported. The sarcophagi are Clazomenean productions and probably all of them belong to adults, with the possibility that some can belong to adolescents (Cook, R. 1974: 55-56). All graves belong to the first half of the sixth century. Some graves show that double burial in one sarcophagus was also practiced. There is no detailed information about grave goods, the position of the graves, and the extent of the necropolis.

Of the more than sixty tumuli reported, and some have been dated to the sixth century BC, the famous "Tantalos" tumulus is located on the south slope of the Yamanlar hill. This tumulus is dated to 620-590 (Akurgal 1988: 37). The Tantalos tumulus is surrounded with a crepis wall in polygonal style, which is very similar to the Archaic period Athena temple's walls in terms of the construction technique. In addition, this tumulus had a dromos and a stone chamber. The diameter of the tumulus is 31 m (Akurgal 1987: 2; Akurgal, M. 2002: 218).

Unfortunately there is no detailed information about the other Archaic tumuli. The Archaic and Classical period necropolis of Smyrna has been almost totally destroyed or robbed. Many graves and tumuli were swept away by modern urbanization.

3.3.4. Ephesos

Archaic period Ephesos was principally established at the mouth of the Kaystros and all early settlements were localized in the southern edge of Ephesos bay (Bammer 1961-1963: 131-157; Engelmann 1991: 286-292; Kerschner et al. 2000: 45). Ayasoluk hill has been suggested by many scholars as the center of ancient Ephesos both for the Bronze Age and the Iron Age (Benndorf 1905; Büyükkolancı 1997: 74-75; 2000: 42-43). Greeks settled on the southern coastline of the Ephesian bay, and expanded toward the northern end of the Arvala valley past the Bülbüğ Dağ (ancient Preon) (Scherrer 2001: 59-60; Kerschner 2000: 45) (**Pl. 44b**).

The only Archaic period cemetery discovered so far is located in the east section of the upper agora (the so-called Roman State Agora) (Langmann 1967: 103; Scherrer 2001: 59). The cemetery was used approximately for one hundred years from 550 to 450 BC (Langmann 1967: 122). The cemetery consists of twelve graves, at least seven of which are precisely dated to the mid-late sixth century BC. Three of them cannot be dated because of lack of grave goods; two of them are dated to the first half of the fifth century. All graves are inhumation, generally in a sarcophagus, but simple earth inhumation graves were also reported at the Embolos area and near the Tetragonos agora (Fabrizii-Reuer 1993: 25-40; Kerschener 2000: 46-49; Langmann 1967: 122; Scherrer 2001: 59.)

The sarcophagus graves can be divided into three groups, monolithic stone, clay, and plate sarcophagi (Langman 1967: 104-117). Graves show two orientations: southeast-northwest and northeast-southwest. All skeletons are in supine position. Many coffins were closed with covers. Sarcophagi were used both for adolescents/children, and adults. Grave goods were placed in the coffins or directly beside the coffins. The grave goods of sarcophagus Grave 1 were placed both inside and outside of the coffin. Only pottery was offered as a grave good. The main pottery types are the lekythos, skyphos, kylix, alabastron, and aryballos.

The earliest grave is dated to the middle of the sixth century because it is lower than the other graves and because of its grave gifts. At least three of the graves are dated to the second half of the sixth century. One grave was dated to the late sixth – early fifth century BC.

3.3.5. Phokaia

Only one small cemetery was found at Phokaia (**Pl. 45c**). The cemetery is located in the south part of the city at the area of the altars (Özyiğit 2003: 118-119). It contains twenty-four graves. Preliminary reports mention just four sarcophagi and eight pot graves belonging to the Archaic period. No other information is available. The excavator also mentions that cremation was practiced for all pot graves (Özyigit 2003a: 337). The cemetery is surrounded by walls on both west and east sides (Özyiğit 2000: 38-39; 2001: 4; 2003a: 337-338; 2003b: 118-119).

Some clay sarcophagi graves were found during Third Class Archaeological Site excavations. Sarcophagi graves were found at the north side of the ancient city (Özyiğit 2003: 119).

3.3.6. Samos

The Archaic city of Samos is located at modern Pythagoreion (Löwe 1996: 92-107; Tsakos 1996: 120-129). In the late seventh century BC, the limits of the city extended from the hill of Kastro to the area of the monastery Spiliani (Tsakos 1996: 120-121). The city was surrounded by fortification walls that enclose an area of ca. 6 km^2. To the west, 6 km outside the walls, the Samos Heraion is located.

Two main burial grounds dated to the Archaic period have been found. The North and West cemeteries are located just outside the Archaic city walls. These two main burial grounds were excavated by Bohleau in the 1890s. Unfortunately the excavations were not very systematic, with much information lost (Tsakos 1996).

Bohleau unearthed 161 graves in the west necropolis (**Pl. 46a**). Fifty graves were published in 1996 (Tsakos 1996); they include the following types: sarcophagi, pithoi, and other clay jars (Löwe 1996: 92-95). Forty-five graves are sarcophagi (**Pl. 46b**) of three different types: monolithic stone, stone, and clay sarcophagi. Clay sarcophagi are represented by two examples. Pithos graves are two in number. The lone amphora grave was reported as an urn grave. Moreover, there is also the tradition of steles on top of the graves. Four contain inscriptions and names (Löwe 1996: 100).

Forty of fifty graves contain grave goods, numbering more than 250. The number of grave offerings per grave varies from one to fifty-one. Grave goods generally consist of fine pottery and personal items. The most common are the lekythos, oinochoe, lydion, alabastron, pyxis, amphoriskos, figurines, kylix, and amphora. Tsakos (1996: 127) states that pottery finds are divided into two groups, which are the objects used for celebrations, like kylix, and a second group, that is grave goods.

There is no uniformity in orientation. All graves are single burials with the exception of two graves (Grave 34-35 and 46-47). At least thirty-four sarcophagus graves belong to adults and five belong to adolescents. There are no examples of sarcophagus burials for infants and children (Löwe 1996: 96).

The North necropolis is located just north of the site on the terrace before towers 9 and 10. This necropolis was excavated for a very short period and only six graves were recovered (**Pl. 46c**). They consist of two stone sarcophagi, two clay sarcophagi, and two small tumuli. The deceased most probably were cremated (Kienast 1996: 10-20). One tumulus grave is dated to 540-530 BC due to the kouros fragments found nearby. At least three graves are dated to the sixth century, but the information about them is very limited.

3.3.7. Miletos

Burials dated to the Archaic period were poorly represented in Miletos. (Müller-Wiener 1988: 254-266). The only necropolis was found during canalization excavations around Yeni Balat village. This necropolis was used from the sixth century to the Roman period. The Archaic period is represented by four graves. Reports mention the existence of more graves, but they are mostly disturbed and under the modern village. Three graves are stone sarcophagi and the last grave is a simple earth inhumation (Schultz and Schmidt-Schultz 1991: 165-182). Three belong to an adult and one belongs to a child (Schultz and Schmidt-Schultz 1991: 163-165).

The other important necropolis area was found on the slopes of Kazartepe, but among 123 graves only one grave is dated to the Archaic period (Forbeck and Heres 1997: 1-5, 49-52; Greaves 1996: 536-538; Phillip 1981: 149). The so-called Aslanlı Tumulus was found at Kazartepe. It has a 25 m long dromos (**Pls. 47a-b**), an

entrance with a triangular façade, and two rooms, an entrance and a grave room. Some clay and silver vases were found in the grave chamber as grave goods (Forbeck and Heres 1997: 22-38, 39-40). The most important feature of this tumulus is the existence of two life-size lion sculptures (**Pl. 47c**) placed just at the beginning of the dromos. The tumulus is dated to 540-530 BC because of the stylistic features of the lion (Boardman 1999: 146-147; Forbeck and Heres 1997: 9-22)

The Archaic period cemeteries unearthed so far are located outside the city, surrounding it, as at other Ionian sites. Moreover, the Archaic necropolis and the Lion Grave both are located on ancient roads (Greaves 2002: 89). A similar practice can be seen at some cemeteries of Clazomenae, such as DSİ, Kalabak, and Akpınar.

3.3.8. Erythrai

Erythrai is located on the northwest side of the Çeşme peninsula. Information about Erythrai, especially the Archaic and earlier periods, is limited compared to many other Ionian sites. The excavations were made from 1965 to 1979 by Ekrem Akurgal and Cevdet Bayburtluoğlu. New excavations have been started in 2005, under the direction of Ayşe Gül Akalın.

Information about Archaic period graves and burial grounds is fragmentary, but it is possible to make some important assumptions about issues such as the land usage, the extension of cemeteries, and the frequency of grave types.

Three different Archaic cemeteries have been proposed by different scholars. It is possible to say that these cemeteries surround the Archaic period acropolis and lower city. The total number of graves from these distinct cemeteries is six.

The first proposed necropolis is located between the acropolis and the old primary school just southeast of the acropolis. It was used from the Archaic to the

Byzantine period. Five or six clay sarcophagi fragments were reported. The important feature of Erythrai is sarcophagus production (Bayburtluoğlu 1978: 24). Local sarcophagi had figures and ornaments in relief (Bayburtluoğlu 1978: 24) (**Pls. 48b-c**). The relief sarcophagi are dated to the late sixth and early fifth century BC (Bayburtluoğlu 1978: 26-30).

Another Archaic period necropolis area is proposed by Özyiğit due to sondages. The sector is located just northeast of the acropolis. Only two different Archaic clay sarcophagus fragments have been found during the excavations. Özyiğit interpreted the area as part of the Archaic necropolis (Özyiğit 1989: 129,137, fig. 12).

The third necropolis area is located at some distance to the northwest of the acropolis (**Pl. 48a**). This area was not excavated. The Archaic period clay sarcophagi and sarcophagi fragments are visible under the sea. Probably, some part of the Archaic burial ground is under the sea now due to tectonic changes.

3.3.9. Other Ionian Cities

Colophon, Myus, Priene, and Lebedos have not revealed any Archaic period graves and we have no information about the Archaic period at these sites.

Burials and burial grounds were introduced in Ionia from the PG to the end of the Archaic period. Although the quantity and quality of burials were poor during the PG and Geometric periods, the situation changed at the Archaic period. However, no Ionian city has the rich evidence for burials that Clazomenae has.

CHAPTER 4

PATTERNS OF BURIAL PRACTICES

Burials and cemeteries in Clazomenae and Ionia in the PG, Geometric, and Archaic periods were introduced in the previous chapters. This chapter will interpret and discuss the burial customs, grave types, gender, age distribution, grave goods, and uniformity in orientation for graves, rank, spatial relationships of cemetery and settlement, and the emergence and development of cemeteries and city-state in Clazomenae using the data already presented. Each aspect will be discussed period by period.

4.1. Burial Practices and Grave Types

Grave types show variability at different periods in Clazomenae as in many other sites. Two main funerary rites, inhumation and cremation, were practiced during the PG. The appearance, disappearance, development, quality and quantity of grave types and rites will be discussed in this section.

4.1.1. Protogeometric Period

The PG period was represented by thirty-six graves **(Tab. 17)**. The two main funerary rites were practiced, cremation and inhumation.

Cremation was not very popular in Clazomenae and Ionia during the PG (around 8%). Only three cremation graves were found. One of them was found in Yıldıztepe, an urn grave in an amphora; and two others were discovered in the HBT sector. The cremation graves found in the HBT sector consist of a shallow, rectangular pit containing countless burnt bones and earth (**Pls. 6b-10b)**. The cremation areas are an interesting case, since there are no similar examples either in Ionia or in Mainland Greece. It is not clear whether it was used as a single burial or for multiple burials. Although analysis could not be made for the bones, it is certain that some of them belong to humans. The high number of burnt bones and the existence of a bronze fibula-like object show that the dead were cremated in the area. The existence of burnt animal bones led to the thought that the burial and the feast were probably made in the same cremation area.

The inhumations are represented by thirty-three graves (around 92%) in Clazomenae. Inhumation grave types are burials in a pot (19 graves), in a cist (11), and simple inhumations (3). The pots used for burial are coarse ware (8 graves), pithos (7 graves), amphora (3), and hydria (1).

Both inhumation and cremation burials were practiced contemporarily during the PG period in Mainland Greece and the islands. There are no important differences with respect to inhumation grave types between Clazomenae and Mainland Greece. The cremation rite was also practiced in Greece. The main cremation types were urn and trench-and-hole cremations (Lemos, I. 2002: 152). Both types were used in Clazomenae, although few in number. Cremation burials were commonly practiced for adults with some exceptions like the burial plot located south of the acropolis at Athens (Lemos, I. 2002: 154).

4.1.2. Geometric Period

The Geometric period is represented by nine graves, all inhumations (Ersoy 2004: 44-49; 2007: 153-157; Hürmüzlü 2005: 44). There is no example dated to the ninth century. All graves are dated to the late eighth century or later. Inhumation grave types are pots (5 examples), simple inhumations (3), and cist (1). The most preferred pot type is cooking ware (4 graves), whereas the pithos is represented by one grave.

Other Ionian cities also produced very limited graves. Only Chios (Lemos, A. 1997: 80), Smyrna, Ephesos (Evren and İçten 1997: 91-92), Samos (Tsakos 1996) and Colophon produced Geometric period graves. Grave types are inhumations in pots, cooking wares, and amphorae.

4.1.2. Archaic Period

When the Archaic period began, some major changes happened in Clazomenae both in settlement and burial customs. The most important change is the emergence of distinct and formal cemeteries and new types of graves **(Tab. 3)**. The beginning of the Archaic period, especially the first half of the seventh century BC, was as poorly represented as the Geometric period. However, beginning with the 650-630s, the quality and quantity of burial evidence rapidly increased. Both funerary rites, inhumation and cremation, were practiced.

The first new grave type is cremation **(Pls. 24a)**. Actually, cremation burials were known in PG period Clazomenae, but in a completely different manner. The cremation type was an "in place cremation" in the Archaic period **(Pl. 24b)**. Cremation graves were recovered in all cemeteries, with the exception of

Monastirakia. There are no big differences in practice of cremation among different cemeteries. All cremation graves belong to adults.

Cremation appears around 670-650 BC and continues until the middle of the sixth century BC with the possible exception of two cremations from the Akpınar and Yıldıztepe cemeteries, perhaps dated to 700-690 BC. The total number of unearthed cremation graves is thirty-five, so far **(Tab. 15)**. Cremation graves were actively used during 650-600 BC. At this phase, cremation was represented with thirty graves (30/79, ca. 38%) from Akpınar, Yıldıztepe, DSİ, and Çayır cemeteries. Cremation graves were also used between 600-550 BC. At this period, it is represented with four graves (4/119, ca. 3%) and can be seen in only Akpınar and the Kalabak burial grounds. Cremation disappeared around 550 BC.

Cremation burials were practiced for only around a hundred years in the Archaic period. The question why cremation burials suddenly appeared around 670-650 and lasted until 550 is a hard one to answer. It is possible that a relationship exists between the foundation of the city-state and the appearance of the cremation burials. Within that framework, it is possible that Clazomeneans tried to create their own identity and social structure and while doing that, they were influenced by mainland Greece and some other East Greek sites. The funeral of Patroklos (Homer, *Il*. 23.108-261) might be a good reflection of East Greek cremation practice in the Iron Age. The main reason for the disappearance of the cremation practice could be its loss of popularity to sarcophagus graves. Around 580 BC, sarcophagi burials became very popular at Clazomenae and other burial methods, such as cremation, were no longer much preferred.

There were two types of cremation in the East Greek world. The first one was "in place cremation" as in Clazomenae. In place cremations were found in Ialysos

and Kamiros on Rhodes (Gates 1983: 22-24, 73, Morris 1992b: 174-182); Vroulia on Rhodes (Gates 1983: 22; Kurtz and Boardman 1971: 174-175; Sorensen 2002: 242-249); South necropolis on Samos (Boehlau 1996: 8; Phillip 1981: 153); and Antandros (Polat and Polat 2007a: 96; 2007b: 2; Yağız 2005: 45; Yıldız 2006: 46). There are no big differences between those cremation processes. The only big difference is, although the cremation hole was oval in shape in Clazomenae, cremation holes at Ialysos and Kamiros were rectangular or square in shape (Gates 1983: 22).

Another cremation type was an urn tradition. After the cremation ritual, the ashes and burnt bones were placed in pots such as an amphora, khytra, hydria, or an oinochoe. These kinds of traditions were not found at Clazomenae in the Archaic period. On the other hand, there were many sites that used this tradition like Assos (Serdaroğlu 1992: 43-51; 1998: 47; Stupperich 1996a: 23-29); Abdera (Skarlatidou 1985: 99-108; 2004: 256); Chios (Lemos, A. 1997: 76); Samos (Boehlau 1996: 8); Phokaia (Özyigit 2003a: 337); Gryneion (Özkan 1993: 5-6); and Pitane (Akurgal 1961: 5-6).

The reason why urn cremation was not practiced in Clazomenae during the Archaic period is an unsolved question.

The inhumation rite was actively preferred during the Archaic period in Clazomenae. The inhumation types are inhumation in a sarcophagus, a pot (amphora, hydria, coarse ware), a cist, and simple inhumations.

The idea of placing a body in a receptacle appeared around 630 BC (Hürmüzlü 2004a: 195-196). The usage of sarcophagi was observed not only in Clazomenae, but also elsewhere in Ionia and East Greece. Different sarcophagus types with respect to shape and decoration appeared contemporarily around 630 BC

(Pls. 26a-b). The reasons of the emergence of the sarcophagus graves are not a simple matter. The most crucial reason lies in the institution of the city-state and urbanization of Clazomenae. They probably wanted to create their own burial customs when the settlement gained a character, maybe influenced or inspired from other cultures and civilizations. The earliest Clazomenean sarcophagi had an apsidal form (Grave 9 and 24) and the form of wooden chests as an inspiration (Grave 5, 69 and 196). Apsidal or chest formed sarcophagi were popular in Egypt for a very long time (Lapp 1993; Reeves and Wilkinson 1997: fig. 277). Ancient sources mention that Ionians and Carians were in relationship with Egypt. Carians and Ionians were hired in the army of Egyptian King Psammetichos I as mercenaries, and some settled in Egypt (Boardman 1999: 121-122; Cook 1937: 235-236; Herodotos 2: 152-154; Strabo: 17.1.8.801). These relationships probably influenced the burial customs of Clazomenae as in the case of the emergence of the sarcophagi burials (Hürmüzlü 2003: 246; 2004b: 196-197). A similar connection can be observed in Samos in terms of the burial customs (Boehlau 1996: 15, fig. 9-11; Hürmüzlü 2003: 246).

Sarcophagus graves were represented with 261 examples in Clazomenae between 630-500 BC **(Tab. 12, 17)**. The number of sarcophagi was actually much more than this number, but during the early twentieth century many sarcophagi were stolen. Moreover, during the Third Degree Archaeological Excavations by the İzmir Museum, numerous sarcophagi were found and taken to the museum. Unfortunately, we do not have all the information of these excavations. The number of sarcophagi per cemetery is: Monastirakia (ca. 92 examples), Yıldıztepe (65), Akpınar (64), DSİ (23), Çayır (ca. 15), and Kalabak (2). The earliest sarcophagi graves were found at the Akpınar necropolis, which are represented with eighteen graves. After the

standardization of the sarcophagus forms and ornaments, sarcophagus graves started to appear in the other cemeteries of the site.

The reason why the earliest sarcophagus graves appeared only in the Akpınar cemetery is an unsolved question. This phenomenon can be related to the unequal development of the cemeteries.

The number of the sarcophagus graves was eighteen (82%) between 650-600 BC, but eighty-seven (82%) between 600-550 BC. The number dramatically increased by 150 (55%) during the period 525-500 BC. Only six stone sarcophagi were found during the excavations and all were dated to 575-550 BC; they were found at Akpınar, DSİ, Kalabak, and South burial grounds.

As already mentioned, Clazomenean sarcophagi appear around 630 BC and their standardization was done around 580-575 BC (Hürmüzlü 2003: 415). It seems that Clazomenean sarcophagi were very popular during the sixth century, especially during its last quarter, maybe because of their quality. Ionian sites that have yielded Clazomenean sarcophagi are Erythrai, Teos (Boysal 1963: 7; Boysal and Ögün 1962: 13), Chios (Hunt 1945: 31-33, 37, 39; Lemos, A. 1997: 75), Ephesos (Langmann 1967: 104), Smyrna (Cook, R. 1974: 55-56). The other sites where Clazomenean sarcophagi were found are Rhodes (Cook, R. 1981: 155-156), Antandros (Özeren et al. 1996: 164; Yalman 1992; Polat and Polat 2006: 95; 2007b: 3), Pitane (Cook 1996: 179-184; 1981: 2-8, Plate. 3). Rhodes, Smyrna, Chios, and Antandros have revealed sarcophagi in good numbers. Exporting sarcophagi to other sites influenced burial practices of other sites also.

In Clazomenae, all amphora graves belong to infants. Amphora graves were represented by 149 graves (**Tab. 13)**, of which twenty-seven (27/79, around 34%) date between 650-600 BC. The earliest amphora graves were found in Akpınar,

Yıldıztepe, and DSİ cemeteries. Their number decreased between 600-550 BC (32/119, ca. 27%) partly due to maybe the popularity of the sarcophagus graves. The proportion and number of the amphora graves increased between 525-500 BC as in the case of sarcophagi. Amphora graves are represented by 108 examples (108/289, ca. 37%) in total at this phase. They are represented mostly in the Akpınar, Monastirakia, and Yıldıztepe cemeteries. All amphora were placed horizontally in the grave and closed with a stone slab. Many amphorae were Clazomenean production, but amphoras from Chios, Lesbos and Unknown Provenance were also used as graves.

Hydria and coarse ware graves were used alternatively with amphora graves. These two grave types also belong to adults. Hydria graves are represented by five and coarse ware graves by just two examples in the Archaic period **(Tab. 14)**. Three hydria and two coarse ware graves were dated to the last quarter of the sixth century BC.

Pithos graves, represented by around forty graves, were found mostly in Akpınar, Monastirakia, and Çayır cemeteries. Pithos graves belong to adults, and especially to children and infants. Pithos burials were popular between 650-600 and 525-500. A similar usage of pithos graves dated to the Archaic period can be seen at Pitane (Akurgal 1961: 6), Antandros (Özeren et al. 1996: 172; Polat 2004: 26), Tenedos (Özkan 1991a: 2), Assos (Stupperich 1992: 23-26; 1996b: 58-60), and Abdera (Skarlatidou 2004: 249).

Cist graves, found in the Protogeometric and Geometric periods, were represented by only three examples during the Archaic period. They were found in the Akpınar and Yıldıztepe cemeteries ranging in date from 600 to 500 BC. Two examples were found at Assos (Utuli 1999: 127-128). 354 examples were found at

the burial grounds of Ialysos and Kamiros with only five belonging to children (Gates 1983: 29-31, 74-75, table. 1). At Abdera, only one cist grave was discovered (Skarlatidou 1985: 101-102; 2004: 249).

Simple earth inhumation graves go back to the PG period in Clazomenae. They were used mostly for adults (Hürmüzlü 2003: 251). This type of burial is represented by eight graves in Clazomenae between 675-500. Although simple earth inhumation graves were not popular, they were represented by a few examples during all periods.

When we look at the grave types in Clazomenae, two types of graves stand out. One is an expensive grave like cremation and sarcophagus **(Tab. 18)**. Burying the dead especially with cremation is a very expensive process when compared to the simple earth inhumation, cist, coarse ware, amphora, hydria, and pithos graves. Especially simple earth inhumation and cist graves seem to be the cheapest way of burying the dead. Amphora, hydria, pithos, and coarse ware graves seem also relatively cheap. On the other hand, the cheaper and cheapest graves were not preferred very much by Clazomeneans. 212 of 506 graves were cheaper types (42%). The frequency of cheaper graves is 36% between 650-600 BC, 22% between 600-550, and 42% between 525-500. The frequencies show that generally cheaper graves were not preferred so much, with the highest percentage attested during the last quarter of the sixth century BC. The reasons for not using cheaper graves are not certain. It is hard to interpret by only these ratios that the economical situation of the citizens was good, so they preferred expensive graves. Moreover, the status of inhabitants can play a crucial role. In any case, it is certain that Clazomeneans gave special importance to their dead both for expensive and cheaper graves.

Thirteen tumuli dated to the Archaic period have been located in Clazomenae. Tumuli were placed mostly on top of hills around of the site. The tumuli that have their location determined are Dubatepe, Nalbanttepe, Cankurtarantepe, Bozavlu, and İçmetepe (Ersoy and Koparal 2009: 75). Many tumuli were robbed in various times. Tumuli graves were also recovered at some other Ionian sites like Smyrna (Akurgal 1997: 52), Samos (Kienast 1996: 10-20), Miletos (Boardman 1999: 146-147; Forbeck and Heres 1997: 22-38, 39-40).

4.2. Gender

The determination of the gender is one of the important issues for understanding burial customs. It depends on many factors. The most important is the analysis of the bones of the deceased, and the other is that of the grave goods. However, grave goods do not give logical results in many circumstances. The lack of sufficient analyses of skeletal remains especially from the PG and Geometric graves and from non-systematical excavations makes it difficult to determine the significance of gender in Clazomenean burial practices. Even in the Archaic period, the limited evidence makes generalizations difficult.

4.2.1. Protogeometric and Geometric Periods

Although thirty-six graves are attested from the PG and Geometric periods in Clazomenae, we have almost no information for the gender of the burials.

4.2.2. Archaic Period

The number and variation of graves increased in the Archaic period. Some anthropologists have examined skeletal remains from certain Archaic cemeteries (Gözlük 1998; Güleç 1986). However, the gender and age information about many

burial grounds is limited, for instance, at Çayır, Kalabak, Monastirakia, and South. The only information comes from the Akpınar necropolis and in very limited form, Yıldıztepe.

Analysis of graves of the Akpınar Cemetery of Phase 2 and Phase 3 shows that both males and females were cremated. However, it seems that simple earth inhumations were probably only for the female deceased. Moreover, the number of sarcophagi used for male burials is higher than the number used for females in the Akpınar necropolis (Hürmüzlü 2003: table 2).

4.3. Age Distribution

Age differentiation in the graves is another important phenomenon for burial customs. The patterns of use of graves and graveyards by people of different ages give many important clues about changing population density for different periods.

Grave types and their dimensions help to recognize the age of the deceased, even without skeletal examination. We are lucky on this point, because many graves from the PG, Geometric, and Archaic periods were found undamaged. On the other hand, excavations of some cemeteries like DSİ, Çayır, Kalabak, Monastirakia, and South were not made very systematically, so their information is limited compared with other burial grounds.

4.3.1. Protogeometric and Geometric Periods

The two main areas that have revealed a large number of graves are the LMT-KET and HBT Sectors. Determining the age distribution of the PG and Geometric graves is a fairly easy endeavor. All coarse ware, amphora, and hydria graves belong to infants, and many of the pithos and cist graves belong to infants, children, or adolescents.

The HBT sector revealed twenty-seven graves dated to the PG period (Bakır et al. 2007: 190). Sixteen graves belong to infants, eight belong to adults and three belong to children. In the LMT-KET sector all seven belong to infants **(Tab. 17)**. Other graves belonging to infants are from the slopes of Yıldıztepe and from the Third Degree Archaeological site excavations.

Of the thirty-six graves attested to the PG period from all sectors, twenty-five belong to infants, three belong to children/adolescents, and eight belong to adults. Only the HBT sector contains both infant/child and adult graves. The burial ground in the LMT-KET sector is probably reserved for infants only, during both the PG and Geometric periods.

All pithos graves (except Grave 5 in the LMT and Graves 38 and 30 in the HBT sector) belong to adults. Moreover, three simple earth inhumation graves belong to adults. Grave types belonging to the infant and child are the cist (except Grave 27 at HBT sector), amphora, hydria, and cooking ware. The usage of the cremation area in respect to the age and gender differentiation is uncertain, because of the lack of analysis of bones. However, the size of the bone fragments suggests that only adults were cremated.

Other Ionian sites have not revealed enough burial evidence dated to the PG period for useful comparison. However, mainland Greece and some Aegean islands contain very beneficial information. Evidence from tombs and burial grounds shows that infants and children were generally inhumed in pits, cists, and shaft graves, except at Athens, where children were cremated (Lemos, I. 2002: 189) and Torone (Dickinson 2006: 175; Musgrave 1990: 284). It is interesting that infants and children were buried intramurally with the exception of Nea Ionia and Asine near Argos (Lemos, I. 2002: 189). Especially, in the case of Asine, two areas were used

for tombs. One is located outside the PG settlement like the HBT sector, and contains forty -five graves, seventeen of them belonging to infants. Other graves were found among the PG period settlement. These intramural burials are eight in number, five for children and three for adults (Lemos, I. 2002: 157-158). The burial and age distribution of PG period Asine is very similar to that of Clazomenae.

There is also a tradition that encompasses the usage of double burials of child and mother together during the PG period, attested at sites such as Nea Ionia, Asine, and Kos (Lemos, I. 2002: 153, 157-158, 189). A similar practice was observed in three graves at the HBT sector. Grave 26.1 is an amphora containing an infant, 26.2 is a simple earth inhumation of an adult, and 26.3 is a coarse ware burial of infant.

Nine graves have been assigned to the Geometric period. Seven of them are found in the HBT sector and only three belong to infants. The LMT and KET sectors revealed two graves, both belonging to a child. Cooking ware and cist graves belong to infants and simple earth inhumation and pithos graves belong to adults.

4.3.2. Archaic Period

Many cemeteries started to be used continuously from ca. 675 BC to the middle of the fourth century. Luckily, we have information from this period about age differentiation in graves and burial grounds. However, this favorable age information comes only from certain cemeteries, not all.

The earliest graves in the Archaic period, dated from 700-650 BC, are represented by only three examples from Akpınar, Yıldıztepe, and the DSİ burial grounds. All graves belong to adults and are represented with two cremation and one simple earth inhumation graves.

Eight graves were dated between 650-630/25 BC and all are adult cremation graves found at Akpınar and Yıldıztepe.

No infant graves were found dated to 700-630/25 BC. This phenomenon brings to mind that, although adult graves started to be placed in the distinct extramural cemeteries, infants and children were buried intramurally until the third quarter of the seventh century BC.

Beginning with 630/25, the number of graves rapidly increased, especially in the Akpınar and DSİ cemeteries. The number of graves attested for 630/25-600 BC is eighty-seven. Of these, fifty belong to infants and children. They **(Tab. 1, 19, 20)** were buried in sarcophagus, amphora, pithos, coarse ware, and cist graves. The best information about this time span comes from the Akpınar cemetery. Four infants, five children, and eight adults were buried in sarcophagi. The situation is similar for pithos graves. Five infant, two child, and four adult pithos graves were found. There is no consistency for different burial grounds. Although the number of infant and child graves at Akpınar is forty-eight, the number is only one at the Yıldıztepe and DSİ cemeteries. The total number of graves increased when infants and children started to be buried in necropolis areas. When we look at this phase, the proportion of infants and children among the discovered graves is around 65%.

The next phase, 600 - 575 BC, is a relatively silent period. The total number of graves decreases to fifty-seven; of these, eighteen belong to infants and children. Graves dated to this time span were found at the Akpınar, Kalabak, and Monastirakia cemeteries. Infants and children were buried in amphoras and pithoi. Adults were buried in sarcophagi and pithoi or were cremated. The proportion of infant and child burials is around 30% **(Tab. 1)**.

The second quarter of the sixth century is represented by 104 graves, and increased compared with the earlier period. Forty-five (43%) belong to infants and children. Infants were buried in sarcophagus, amphora, pithos, and coarse wares. Burial types attested for adults are sarcophagus, simple earth inhumation, and cremation[9].

The third quarter of the sixth century was not represented by any graves in Clazomenae due to the sack of the Persians in 546 BC and the flight of the population.

The last quarter of the sixth century is the most favorable period for Clazomenae for both settlement and burial patterns. The number of graves suddenly doubled compared to 575-550 BC. The last quarter of the sixth century is represented by 242 graves. The main grave types are sarcophagus, amphora, pithos, hydria, coarse ware, simple earth inhumation, and cist graves. Adults were only buried in sarcophagi and pithoi. Infants and children were buried in sarcophagi, amphoras, pithoi, hydriai, coarse wares, and cist graves. One hundred sixty-five graves belong to infants/children, 68% among the recovered graves from all cemeteries. The proportion of infant and child burials is very high at this period. The highest frequency of infant burials is observed in Akpınar (96%), Monastirakia (ca. 87%), and Çayır (cannot be calculated exactly, but the percentage appears to be high).

When the cemeteries are analyzed for infant age distribution in the Archaic period, the highest percentage belongs to the Akpınar cemetery[10] (67%). The phenomenon also shows that the Akpınar cemetery is also dominant for infant and child burials. Especially, in the period 525-500 BC, forty-six of forty-eight graves

9 Cremation graves are represented with only two or three graves in the DSİ necropolis and disappeared around 550 BC.

10 The percentage of infant death rate at the Çayır necropolis may be higher than at the Akpınar cemetery, but the excavations of the Çayır necropolis are not reliable and many finds are dispersed.

belong only to infants. No child and adolescent graves were found. This situation brings to mind two interpretations. First, the Akpınar necropolis was reserved only for infants in the last quarter of the sixth century. Secondly, there might have been a sudden plague that caused the death of many infants and all were buried in the Akpınar cemetery; if adults died from this plague, they would have been buried in other cemeteries. However, this second explanation is just a possibility, not proved by archaeological data.

Other Ionian and East Greek settlements are not as well-documented as Clazomenae, due to the lower number of graves and cemeteries discovered. However, we can get some hints in respect to age differentiation. Many Clazomenean sarcophagi and fragments were found at other sites during early excavations, but it is hard to determine whether they belong to infants or adults. The so-called Rizari cemetery on Chios reveals twelve graves that are stone sarcophagi and pot cremation burials belonging to infants and children. Graves and cemeteries of Smyrna are relatively informative. Of the three burial grounds dated to the Archaic period, one is the so-called "children cemetery", containing twelve inhumation graves in amphoras, cooking wares, and pithoi. This cemetery is dated after 650 BC. A second cemetery, located just outside of the city walls, contains fifteen graves, seven limestone sarcophagi and eight inhumations in pots. The ages of the deceased were not indicated except for one child sarcophagus grave. The third, the main necropolis of Smyrna, was partly excavated and revealed seventeen sarcophagi, all belonging to adults. Ephesos has yielded eleven sarcophagus burials, dating 550-450 BC; most probably eight belong to the Archaic period. All Archaic clay and stone sarcophagi belong to adults. The remaining three sarcophagi, dated to 550-450 BC, belong to children and adolescents. At Phokaia, four stone sarcophagi

belong to adults, and eight urn graves probably belong to infants and children. Samos has two main cemeteries with at least 170 graves. Only sixty were published; however, of these, all sarcophagi belong to adults. Only one urn amphora grave was published, but the age of the deceased was not mentioned.

Amphora graves used for infants can also be seen at Miletos (Forbeck 1997: 126-127), Pitane (İren 2003: fig. 3), Assos (Utuli 1999: 128-131), Abdera, and Antandros (Polat and Polat 2006: 96; 2007: 2; Yağız 2005). Cist graves for infants can be found at Abdera (Kallintzi 1992: 817-818; Skarlaridou 2004: 249) and Ialysos and Kamiros. In the case of Rhodes cist graves were used both for infants and adults and the number of adult cist graves is numerous (Gates 1983: 29-31). Pithos burials are used both for infants/children and adults at Pitane (Akurgal 1961: 6), Tenedos (Özkan 1991b: 1-14; 1993b), Antandros (Polat 2003: 26), Assos (Stupperich 1992: 23-26), and Abdera (Skarlatidou 2004: 249).

In place cremations were practiced at Ialysos and Kamiros (Gates 1979: 242-251; 1983: 22), Vroulia (Kurtz and Boardman 1971: 174-175; Sorensen 2002: 247-249), Samos (Phillip 1981: 153), and Antandros (Polat and Polat 2007a: 96). The other cremation type is the urn cremation. For adults, urn cremation can be also seen in the Archaic period at Assos (Stupperich 1996b: 57-58; Utuli 1999: 113-122), Gryneion (Özkan 1991b: 5), Pitane (Akurgal 1961: 5), Antandros[11] (Polat and Polat 2006: 96; Yağız 2005: 13; Yıldız 2006: 45).

The age distribution of grave types shows similar features during the Archaic period in Ionia and the East Greek world. Infants are inhumed in sarcophagi, amphoras, hydriai, coarse wares, pithoi, and cist graves, and, exceptionally,

11 If the deceased is under 6 years old, it is inhumed. However, if it is older, it is cremated. See Polat and Polat 2007b: 2; Yıldız 2006: 46.

cremated, as in Chios and Antandros. Adults are both inhumed and cremated. Inhumation graves for adults include sarcophagi, pithoi, and simple earth inhumations. Adults were cremated in two ways. The first one is in-place cremations, as in Clazomenae; the second method is urn cremations. As we can see in the previous pages, all graves types and usage of age distributions were not observed at all Ionian and East Greek settlements. Although urn cremation was common in the region of Aeolis and Troad, in-place cremation was more common at Clazomenae. For Aeolis and the Troad, the preference for urn cremation seems related with the influence of traditionalism (Homer, *Il*. 23.108-261). On the other hand, Clazomenae was more experimental and creative in respect to grave types and their use for men and women of different ages.

4.4. Grave Goods

Giving gifts to the dead is a very old tradition that goes back to the Paleolithic period. The reasons of this phenomenon have been discussed by many scholars. Ancicent Greeks in most cases also preferred placing grave goods. Giving gifts to the dead was practiced in Clazomenae beginning with the PG period.

4.4.1. Protogeometric and Geometric Period

The PG period is represented by thirty-six graves in Clazomenae, but only nine graves contain grave goods. Grave goods were found in pithoi, cist graves, and cremation areas. Grave goods are found in four infant, two child/adolescent, and three adult graves.

Grave offerings are made of clay and bronze. The grave good types are the skyphos, bowl, small amphora, oinochoe, handmade coarse ware, olpe, lekythos, jug,

cup, astragalus, bronze bracelet, ring, and fibula-like object. The number of grave goods varies from one to seven.

Some graves contain a considerable number of grave offerings, such as Grave 4 in LMT. This pithos grave contains four offerings: an oinochoe decorated with semi-circles on the shoulder, a jug, a one-handled cup in gray monochrome style, and a one-handled cup that contains two reserved bands on the rim. The oinochoe shows close affinities with the LPG material of Kos (Coldstream 1968: 266, pl. 58g) and Lefkandi (Aytaçlar 2004: 27; Bakır et al. 2001: 32; Hürmüzlü 2005: 44). Similar oinochoes at Lefkandi have been found at Palia Perivolia, Pyre II and the fill of the Toumba building at Lefkandi (Lemos, I. 2002: 164-165). On Kos, a similar example was found at the Seraglio cemetery (Lemos, I. 2002: 180-182).

A skyphos decorated with wavy lines on the exterior rim has been found in Grave 6 in the LMT sector. Similar skyphoi have been found at Lefkandi (Bakır et al. 2004: 103; Popham et al. 1979: 298-300, fig 8E; pls. 13.28, 31-32, 152.7-8; Lemos 2002: 164-165, fig. 23.2) and Chalcis (Andreiomenou 1985: 49-75, nr. 2, fig. 1-2). One of the Lefkandi examples is dated to the MPG period; it comes from Palia Perivolia Pyre II.

The other important grave good comes from the cremation area (Grave 24) in the HBT sector. The object is a bronze fibula-like object. Similar fibulae, called the "arched fibulae", are known from Elateia (Dickinson 2006: 158-171, fig. 5.22.10); Athens, Kerameikos and Agora (Lemos 2002: 109-110, fig. 2.1-2-3-5) and Lefkandi, Toumba (Lemos 2002: 109-110, fig. 3.1-2). These types of fibulae are common during the PG period, and this object found in Clazomenae is similar to the LPG examples. To find a fibula-like object in a cremation area leads to the idea that maybe this place was used as a primary cremation site, the corpse placed here

clothed, or perhaps the fibula was added later as a grave good. It is hard to favor convincingly one of these options.

Teos and Chios feature one PG period grave each. The grave on Chios is an inhumation in a pithoid-amphora and contains four grave goods. Such a small sample makes it hard to offer any conclusion about practices throughout Ionia.

If the lower number of grave goods of Clazomenae during the PG period is compared with these of mainland Greece, a connection in practice with Athens and the Argolid can be observed (Morris 1987: 20; Lemos, I. 2002: 190). In contrast, Lefkandi, Skyros, Atalanti, coastal Thessaly and the Dodecanese were very rich in grave goods (Lemos, I. 2002: 189-190). The scarcity of grave goods at Athens and in the Argolid has been interpreted in different ways (Lemos, I. 2002: 189). In the Argolid, PG society was more egalitarian than in the Geometric period, so this social homogeneity is reflected in the grave good tradition (Hägg 1983: 27-31). According to Lemos (2002: 190) Athenians were interested more in the formalization of funeral ritual and distinctions of age and gender than wealth. For this reason, grave offerings both in number and quality are low. When we look at the situation in Clazomenae, both interpretations about the Argolid and Athens partly fit. Although the graves dated to PG period are few, the interpretation of homogeneity proposed for the Argolid may also be applied to Clazomenae. On the other hand, the formalization of funeral ritual with importance given to age and gender does not completely fit PG Clazomenae.

Geometric period graves in Clazomenae are represented by nine graves, excluding the earliest graves found in Archaic period cemeteries. Of these nine graves, only two contained grave goods; these are a simple earth inhumation and a pithos grave. The simple earth inhumation (Grv. 11, HBT sector) contains just pithos

fragments, interpreted as grave goods. However, grave goods from the pithos grave (Grv. 20, HBT Sector) are striking, a bronze spiral, two rings, and a bronze earring. The Geometric period grave types and the frequency of grave goods, similar with PG finds, indicate continuity of burial customs from the PG to the Geometric period.

Other Ionian sites have revealed only a limited number of graves, the result of a lack of excavations and publications[12]. Only Samos (Coldstream 1968: 168), Chios, Ephesos and Colophon contain Geometric graves. Graves found on Chios (Lemos, A. 1997: 80), at Ephesos (Evren and İçten 1997: 91-92), and at Colophon contain grave goods. The inhumation in a pithos from Chios and the simple earth inhumation at Ephesos featured a limited number of grave goods, such as an oinochoe, one handled cups, and a feeder.

Geometric period graves and grave goods on mainland Greece are represented with frequent examples compared to Clazomenae and other Ionian sites (Coldstream 1968: 399-429; 2003: 119-135; Morris 1987: 21).

4.4.2. Archaic Period

The practice of placing grave goods continued during the Archaic period. There were two types of grave offerings. The first one is given as a grave good to the dead, and the second one is the pottery used for funerary feasts placed over or around the grave.

The grave good types, variability, and quality increased compared to earlier periods in Clazomenae. The most active period of placing grave goods was between 700-600 BC. The situation is especially striking in the period 630-600 BC, when

12 For example, Meral Akurgal at *Kazı Sonuçları Toplantısı* Ankara (2008) mentioned that Geometric period pot graves were placed under the Geometric period houses. However, the 2007 Smyrna excavation reports were not published in *Kazı Sonuçları Toplantısı* (30).

sixty-three of ninety graves contain grave goods. After 600 BC, the number decreases gradually. The tradition of giving grave offerings lost its popularity in the last quarter of sixth century BC. Only twenty-nine of 161 graves dated 525-500 BC contained grave goods. The reasons for decreased grave goods are many. For instance, the declining popularity of the tradition of giving grave goods can be an important reason. In addition, the disappearance of cremation burials around 550 BC probably affected the practice.

Hürmüzlü (2003) and Güngör (2006) claim that Clazomeneans could have accepted the decorated terracotta sarcophagus itself as a grave good. This interpretation is not valid for amphora, pithos, simple earth inhumation or coarse ware graves, because these containers are not as valuable as the sarcophagus. It can intelligibly be observed that when the Clazomeneans returned to their city around 530/525 BC, many changes can be seen both in the settlement and cemeteries, so this sudden decrease at the end of the sixth century BC should be related with changing social, political, and economical conditions.

The comparison of grave types and grave goods shows that grave offerings were placed in all types of graves, but mostly in cremation, sarcophagus, amphora, and pithos graves. Grave types with fewer grave goods are simple earth inhumation, cist, coarse ware, and hydria graves. Both the number of graves and grave goods decreased periodically. Placing goods in an amphora graves was never as highly preferred as in cremation and sarcophagus graves.

The number of grave goods and offering types was the highest between 650-600 BC. Especially cremation, pithos and sarcophagus graves were very rich during this phase in the Akpınar necropolis. The number of grave goods reached fifty-five. Beginning with 590 BC, the number of grave goods, variability and quality per grave

gradually decreased. For instance, the number of grave goods per grave at the Akpınar necropolis in Phase 3a (600/590-575 BC) varies from one to ten.

Grave offerings are mostly clay pottery, but faience, metal - especially bronze - personal items, and glass were also present. The main pottery grave good forms are the kotyle, skyphos, oinochoe, aryballos, alabastron, (Ionian, Attica) kylix, pyxis, bowl, lekythos, lydion, chalice, amphora, askos, dinos, lekane, feeding bottle, kalathos, and khytra. The more precious metal, bone, and glass grave good types are present in smaller numbers compared with pottery offerings. These are astragalus, fibula, earring, spiral, glass bead, pendant, ring, pin, knife, spearhead, spoon, bracelet, and figurines. Precious grave goods are mostly placed in cremation and sarcophagus graves at all cemeteries.

It is hard to define relationships between grave goods, gender, and age. The main grave goods of infant/child graves are the alabastron, skyphos, askos, feeder bottle, and astragalus (Hürmüzlü 2003: 484-491, tables 2-4; Güngör 2006: 147-150, tables 3-4). Grave goods, which are placed in infant/children graves, are also given to adults. There is no clear distinction between infant/child and adult in respect to grave goods. The same situation can be applied to the male-female graves. For instance, some personal ornaments that would seem more appropriate for females were found in male graves like a pin or ring (Grave 208, Hürmüzlü 2003: 487) but some pieces that should belong to a male were also in female graves like a knife, or a plastic vase in the form of a helmet (Grave 174, Hürmüzlü 2003: 486). However, these are very few examples. Many pottery and personal ornaments were placed with both males and females.

Cremation graves generally contain grave goods and funerary feast pottery. Grave goods are placed near and around the deceased before the burning ceremony

started. This situation is certain because grave goods are found burnt among the burnt earth and bones. After this process, the feast was held and many pottery types were being used for a feast, such as cooking wares and drinking vessels. Vases that were full of liquid, such as wine, were thrown onto the cremation area to extinguish the fire. Such vessels were found partly burnt. After this ceremony the pyre was covered with earth and pebbles (Hürmüzlü 2004a: 80; 2004b: 196). This practice is well known at other East Greek settlements; the same practice occured at Chios, Abdera, and Antandros (Hürmüzlü 2004a: 81; Polat 2003: 25; 2002: 157). No separate central cremation spots were discovered in Clazomenae as in the Ialysos and Kamiros burial grounds on Rhodes (Gates 1983: 22). As we can see the process of placing grave goods in the cremation is not a unique practice for Clazomenae. However, almost all cremation graves contain rich grave goods, which indicate the importance and elitist nature of cremations. If we look at the funeral of Patroklos (*Il*. 23.108-261), we can see many parallel features concerning rich grave goods.

Grave goods were deposited in sarcophagus graves in three different ways. Grave gifts were placed in, out, and both in and out of the sarcophagus. Placing grave goods either inside or outside of the sarcophagus was preferred. The grave goods were placed near and just below the cover of the sarcophagus[13]. The third way can be seen only in some cases in Akpınar, Yıldıztepe, and South cemeteries (Güngör 2006: 62), Between 630 and 600 BC, there is no adult sarcophagus example with the grave good placed outside the coffin. Beginning in 600 BC, grave goods for infant/child graves mostly were placed outside the sarcophagus. In the Akpınar necropolis, between 600-500 BC, grave goods placed inside the coffin, or both inside

13 See Güngör 2006: 62. Grave goods were placed near the grave at Grave 80-04, but below the cover in Graves 80-34 and 81-19.

and outside the coffin, were seen in only one example each. Placing grave goods above the cover of the sarcophagus can be seen at the cemeteries of Smyrna (Cook, R. 1974: 55-60), Ephesos (Langmann 1967; 103-123) and Samos (Phillip 1981: 159).

In the Akpınar necropolis between 630-600 BC, the number of infant/child sarcophagus graves that contains grave goods is more than for adult sarcophagus graves (Hürmüzlü 2003: Tables 2-4). The same situation can be applied to Phase 2 of the Yıldıztepe necropolis. However, it is hard to make such an interpretation for the other cemeteries.

The placing of grave goods is a fundamental tradition for Clazomenae during the Iron Age. Beginning with the PG period, graves contain offerings in different frequency, number, and quality. The highest frequency is reached between 630-600 BC, and then it gradually decreases.

4.5. Uniformity in Orientation

The orientation of burials within the specific cemeteries and between different burial grounds is an important phenomenon. Some burying directions are preferred over others in specific periods and cemeteries. Clazomeneans placed their graves in the east-west and north-south directions, when possible. If not, they used the northwest-southeast and northeast-southwest orientations.

Graves were not oriented uniformally from PG to the Hellenistic times. However, some directions were preferred. The east-west orientation was the preferred direction from PG to the end of the Archaic period. The frequency was around 27% in the PG period. The frequency varies from 45% to 58% in the Archaic period[14]. Placing graves on an east-west orientation reached 58% at the Yıldıztepe

14 The analysis was compiled from only the Yıldıztepe and Akpınar cemeteries for the Archaic

necropolis between 530-500 BC. The frequency was 49% at the Akpınar necropolis between 530-500 BC.

The second preferred orientation from the PG to the end of the Archaic period was the north-south. The frequency varies from 19% to 41% at the burial grounds and cemeteries. The other directions were less popular in all periods, but the northwest-southeast orientation was preferred more than northeast-southwest.

The uniformity in orientation was also applied for many other Archaic cemeteries. Many stone sarcophagi from the small cemetery of Smyrna were placed in a north-south orientation (Akurgal, M. 1999a: 35; 1999b: 51). Inhumation graves, mostly in coffins, at Antandros dated to the first half of the sixth century were placed on an east-west orientation (Yalman 1992: 163; Polat and Polat 2006: 26, Yağız 2005: 13). All pithos graves at Assos were oriented northwest-southeast.

4.6. Rank

The social stratification at Clazomenae cannot easily be observed from either settlement or burial evidences. There can be many reasons for that. The first reason is the lack of enough evidence both for the PG, Geometric, and also Archaic period. The other reason is that social differentiation is not obvious, at least in burial customs.

Grave types, offerings, and burial grounds sometimes give clues about the social stratification. However, it is very hard to catch this phenomenon from graves at Clazomenae.

The PG period graves are represented by thirty-six graves. Grave types are cremation area, cist, and burials in pots: amphora, pithos, hydria, and coarse ware.

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period. The information about other Archaic period burial grounds is limited.

Grave types did not give any clue about social differences at the site. Pithos and cist graves were used for both adults and infants. Maybe burying in the cremation areas can be interpreted as a more expensive practice, but it does not mean that rulers or the richest people were necessarily buried in cremation areas. Grave goods also don't give any specific clue. It is possible to assume that PG and Geometric period inhabitants at the site were living in more egalitarian circumstances compared to later periods and to some other contemporary sites on mainland Greece.

Social stratification and economical differences in the Archaic period can be observed more clearly. The crucial evidence comes from tumuli **(Pl. 21a)**. At least ten tumuli were found, dated to the Archaic period (Ersoy and Koparal 2009: 74-75). Tumuli were placed on top of hills, where they can be seen easily. Tumuli should have belonged to the richest inhabitants of the site, since burying the dead in a tumulus is much more expensive than cremation, sarcophagus, or other type of graves. However, only being rich cannot be a reason to bury in a tumulus. The other crucial phenomenon should be status. The person who is buried in a tumulus should have high status in society, like a ruler. The same phenomenon is valid for Lydia, a neighboring kingdom with a highly developed tradition of tumulus burials in the Archaic period. The tumulus burials are accepted as the funerary monuments of Lydian elites and their families (Roosevelt 2009: 142). If we look at the beginning of the tumulus tradition in Lydia, the earliest datable tumulus in Lydia is dated sometimes between 585 and 560 BC (Roosevelt 2009: 144-145). This date is contemporary with or slightly later than the earliest tumulus in Clazomenae, so it is hard to argue in favor of Lydian influence on the Clazomenean tumulus tradition.

The other expensive burying method is cremation **(Pl. 24a; Tab. 18)**. The cremation process needs a high quantity of wood, time, and labor. It would have

been impossible to bury all the inhabitants of Clazomenae with this burial tradition. The number of cremation graves shows that it was not preferred very much, maybe just because of its expensiveness.

Sarcophagus graves are mainly two types, those decorated with figures **(Pl. 30a)** and those decorated with simple geometric and floral ornaments **(Tab. 18)**. The first type was probably more expensive than the second one, probably more expensive also than cremation burials, because the labor of painting the sarcophagus should probably be costly. Moreover, it requires a high quantity of wood. The analysis of the cemeteries show that the sarcophagus grave type was the most preferred. The percentage of the sarcophagus graves is 47% and the total of simple earth inhumation, cist, amphora, pithos, hydria, and coarse ware burials is 41%. The other types of graves seem the cheapest method. However, the existence of the cheapest graves can indicate either the economical distribution of the population or, although they were able to afford to bury their dead in more expensive graves, just a preference for cheaper graves. The other phenomenon to note is that cheaper grave types mostly belong to the infant and child.

The other issue is the economical and social differences of the different cemeteries. As already mentioned, Clazomenae had seven burial grounds in the Archaic period, but it is hard to determine any differences among these graveyards in respect to economical, political, and social conditions. The cemeteries may have belonged to the different phylai and families, so the differences of the cemeteries should give some clues about the economical and social differences among different phylai (concerning Ionian phylai, see below, pp. 99). However, the information concerning grave types and quantity of grave goods indicates that there are no clear distinctions between cemeteries. The expensive burying methods that were decorated

sarcophagi and cremation graves were practiced in almost all burial grounds. This phenomenon proves that the cemeteries had similar characteristics and none of them was reserved for noble class citizens, as has been interpreted at Smyrna (Akurgal, M. 1999: 51-55).

Phylai (tribes) consisted of different families. The practice of funerary enclosures in Akpınar, DSİ, and probably South burial grounds should belong to the different families in particular phylai. Family clusters probably did not reflect the richness of the inhabitants; they just wanted to indicate their dead with enclosures, because grave types and quantity of graves were the same both inside and outside the funerary enclosures.

Although it is hard to determine social status and rank from burial evidence, especially for the PG and Geometric periods, some important traces can be observed in the Archaic period. For instance, the tumulus burial was an indicator of high status and rank. The decorated sarcophagus and cremation graves also indicate social status, being expensive burial types.

4.7. Settlement and Burial

The burial grounds and settlement should also be investigated with respect to mutual relationships and influences, spatial and landscape relationships of burial ground and settlement, land preferences for burial grounds, the emergence of the city-state, and the clues from burials and burial grounds concerning the emergence of the city-state. The above-mentioned issues will be discussed period by period.

4.7.1. Spatial Relationships of Cemetery and Settlement in terms of Intramural and Extramural Burials during the Protogeometric and Geometric Periods

There were two types of burial grounds in the Iron Age Greece, the intramural and the extramural. Inside a settlement, the deceased were buried in two main areas, among the houses or under the floors of houses (Morris 1987: 62-63). The second type consists of the distinctive, reserved areas, which can be big main cemeteries, small burial grounds, or family clusters (Morris 1987: 31; Snodgrass 1980: 31). These are extramural burial grounds.

In the PG and Geometric periods, the intramural burial tradition was practiced in the LMT-KET sectors, which were the center of the settlement (Bakır et al. 2004: 103; Hürmüzlü 2005: 44). Intramural burial was only used for infants and children. However, the tradition may have continued until the 630s, because between 700-630 BC, there are no infant and child graves in the extramural burial grounds.

Although Clazomenae is the only Ionian site with graves in the PG period **(Map 5-7)**, intramural burials of this period are frequent elsewhere in the Aegean world. Intramural burials have been observed in Athens around the Acropolis (Lemos, I. 2002: 154; Whitley 1991: 61-62; Morris 1987: 63-65), and at Nea Ionia (Lemos, I. 2002: 154), Asine (Lemos, I. 2002: 157-158, 188), and Volos (Lemos, I. 2002: 175; Snodgrass 2001: 152-155). The characteristic of all the above-mentioned sites is that with the exception of Asine, they are all intramural cemeteries only for infants (Lemos, I. 2002: 158).

The extramural burial tradition was also represented at Clazomenae during the PG and Geometric periods **(Map 7, Pl. 3a)**. Graves revealed in the HBT sector prove that the area was reserved for burials during the PG and Geometric periods. Graves were often placed very closely to each other, and the burial ground extends

almost 150 m area in the north-south direction. A pottery kiln and some traces of other industrial activities were also unearthed in the HBT sector (Ersoy et al. 2009: 237-239). These finds prove that the area was used both as a burial ground and as an industrial area.

The extramural burial ground was probably located just outside the PG and Geometric settlement. Although graves were buried outside the settlement, the burial ground chosen was very close to the PG period settlement, just 400-500 m outside. In contrast, cemeteries of the Archaic period were located one or two km from the center of the Archaic city. This situation proves the compactness and simplicity of the PG period settlement, because the PG and Geometric period burial ground should be accepted as the outer limits of the PG period settlement.

In addition to graves in the HBT and LMT-KET sectors, two more graves were also found at the south slopes of Yıldıztepe, close to the Yıldıztepe necropolis and 400 m west of the HBT sector. These graves can be interpreted in two different ways. The first is that they were intramural burials just near or around the PG period houses, as at Thorikos, the Agora at Athens, Plasi, and Eleusis (Morris 1987: 62-69). If we accept this assumption as correct, it is possible to believe that PG period Clazomenae consisted of separate clusters of houses that expanded over a large area, as in mainland Greece. The second interpretation is that graves found in Yıldıztepe and to the west of the settlement were extramural burial plots, maybe just consisting of very few graves and belonging to specific houses or families. The scarcity of settlement evidence around the graves makes it hard to make specific interpretations.

Infants and adults were buried at different extramural grounds at Athens in the PG period, in contrast to Clazomenae. The mixed burying of adults and infants appeared in the Late Geometric II period in Athens (Morris 1987: 81-82). On the

other hand, in Clazomenae in the Late Geometric II period, infants and adults were buried in separate cemeteries. This situation shows that burial practices could differ in the Greek world.

The other important phenomenon is the continuation of burial grounds and family clusters for a very long time. This practice was known at Athens, as at the Agora Tholos, and Ag. Triada burial grounds (Morris 1987: 82-85). It seems that the Archaic cemeteries in Clazomenae were small family plots/clusters, also perhaps in the PG and Geometric times. Then these small family clusters became distinct main cemeteries, with some belonging to specific phylai and families. It is known that many Archaic burial grounds produced earlier Geometric pottery fragments. For instance, in the Yıldıztepe cemetery, many Geometric period fragments have been recovered; they probably belonged to burials, but during the leveling process of the area, the earliest graves were destroyed.

Herodotos (5.66, 69) mentions four different phylai of Ionians the Geleontes, Aigikoreis, Argadeis, and Hopletes. The existence of these phylai was known at Ephesos (Engelmann 1996: 94-100), Miletos (Ehrhardt 1983: 98-112), Chios, (Walter 1993: 89-97), and in Ionia (Huxley 1966: 31-35). Although the existence or the names of the specific phylai in Clazomenae are unknown, the existence of family clusters shows some sort of kinship or social grouping.

4.7.2. The Emergence and Development of Cemeteries and City-State

Seven main burial grounds have been recovered from Archaic Clazomenae **(Map, 9; Pl. 2)**. The emergence of distinct, formal and reserved burial grounds cannot be investigated without looking at other phenomena like the emergence of the

fortification system that surrounds the city, the sanctuaries (Whitley 2005: 168), and the increasing quantity and quality of living quarters inside the city walls.

Clazomenae is represented by three graves between 700-650 BC. The number increased between 650-625 BC, to eight. The number of graves increased further to ninety between 625-600 BC. This fact shows that the activity at the cemeteries goes back to 700 BC (but earlier scattered pottery fragments were also found), and designated areas become formal, distinct burial grounds around 630 BC. These possible burial grounds suddenly became formal cemeteries as a part of the process of urbanization. We already know that a fortification was built ca. 670-650 BC. Moreover, the external relationships in respect to trade, mercenaries, religion, and burial customs also developed in the same period.

Clazomenae became a city-state around 650-630 BC. The emergence of the cemeteries should be accepted as a result of this institutionalization. Some might suggest that these changes were the result of outside influences. However, in my opinion, this assumption underestimates Clazomeneans. Clazomeneans and Ionians found their own way of thinking in order to create their own identity. Moreover, the urbanization process happened on the Greek mainland, earlier, around 725-700 BC (Morris 1994: 25-58; Snodgrass 1980; 15-24; 1994: 1-24; 2006: 198-220; Whitley 1991: 39-45; 2005: 167). Clazomeneans were surely aware of this process and were influenced by it.

Although influences of Greece, the Near East, and Egypt are clear, the institutionalization of Clazomenae was an independent progression. Their independent efforts can be seen clearly in many different situations, like the appearance of sarcophagi and the standardization of sarcophagi styles, and the development of different pottery styles like the “Mix Technique”, which was a

mixture of orientalizing and Black figure styles, and the "Clazomenean Black Figure" technique.

The other point, as I have already proposed, is that the Archaic cemeteries probably belonged to the different family groups originating in the PG. The Archaic period burial grounds probably were small burial grounds during the PG and Geometric periods, as in Mainland Greece (Morris 1991: 147-159). The reason these small cemeteries were selected should be related with this family usage. The enclosure walls that surround clusters of graves can be interpreted as being the continuation of this tradition. For example, in the Akpınar necropolis, the family enclosures **(Pl. 25a)** appear after the leveling processes of the necropolis and continue through the Archaic period.

The funerary enclosures were only observed in Akpınar, Çayır, DSİ, and South burial grounds (**Pls. 25a, 36a-b).** This fact suggests that only these cemeteries belonged to the phylai or that the funerary enclosures at these cemeteries were reserved for different families that may have belonged to either specific phyle or not. Other cemeteries may be reserved just for inhabitants of the site. The archaeological evidence does not give enough hints to decide between family and non-family cemeteries. However, at least three burial grounds were reserved for family clusters.

The other phenomenon is the number of graves per enclosure. Unfortunately, the only reliable information comes from the Akpınar necropolis, where the total number of the graves dating between 630-550 BC in the clusters is eighty-three in number. The number was fifty-seven between 630-600 BC and it decreased to twenty-nine between 600-550 BC. The number of burials placed in enclosures varies from one to fourteen between 630-550 BC. The average number of the burials placed in the enclosures is 7.1. The situation shows that some enclosures belong to more

extended families. For instance, cluster C contains fourteen graves dated between 630-600 BC, but, the number decreases to one between 600-550 BC. There is no consistency in the number of graves for many clusters. All grave types and rites were practiced both inside and outside of the enclosures. Moreover, there is no difference between the grave goods types, the quality of grave goods, gender, and age. It seems that the enclosures were used only for marking the different families, but there may not be any economical, social differences among these families. Even if there was, it is it is hard to achieve such results from the available data.

The localization of the burial grounds is an important matter. It seems that the choice of the location of cemeteries did not happen randomly. One of the reasons to select a specific place is that the areas were used as a burial ground earlier. The other reason is that inhabitants chose areas not suitable for settling or cultivation activities (Güngör 2006: 55), such as Akpınar, Çayır, DSİ, Kalabak, and Yıldıztepe (**Pls. 23a, 35)**. The selection of the non-cultivation areas can be seen at the cemeteries of Teos (Béquignon and Laumonier 1925: 291; Boysal and Öğün 1962: 13; Boysal 1963: 7), and Smyrna (Akurgal 1988: 51) The other important fact is that cemeteries were located on the ancient roads leading to the other centers **(Pl. 2)**. The Çayır, DSİ, and Kalabak burial plots were probably located just south of the ancient road leading to Smyrna. The Yıldıztepe and Monastirakia cemeteries were possibly placed on the road leading to Teos and Erythrai. Moreover, this road perhaps was leading to secondary settlements of Clazomenae, to small settlements and villages. A similar selection can be seen at necropolis areas at Miletos (Greaves 2002: 89).

The localization of the cemeteries and tumuli is crucial for understanding the boundary and expansion of the settlement in the Archaic period **(Pl. 2)**. The settlement, burial grounds, and tumuli can be investigated under three different

classifications **(Pl. 20)**. Number 1 is the center of the city, enclosed by city walls (see **Pl. 20**). Number 2 is cemeteries, which surround the city on the west, south, and east. Number 3 is tumuli, placed at the outer limits of the city center. There were probably rural and cultivation areas, and small settlements belonging to Clazomenae beyond the tumuli[15]. The modern topography of Clazomenae shows that some areas that belong to the cemeteries seem to be fertile and cultivatable areas, mostly between the DSI and South necropolis. During the Third Degree Archaeological Site excavations by İzmir Archaeological Museum, in recent years, many burials and burial grounds have been found between the Kalabak and South burial sectors. The area between these two sectors is clearly part of one big necropolis.

In the PG and Geometric periods, the settlement extends over a distance of ca. 700 m east-west **(Maps 5-6, Pl. 3a)**. The Archaic period settlement, including the cemeteries is much larger, extending ca. 5 km east-west, and 2 km north-south **(Map 9, Pl. 20)**. The center of the settlement seems very similar in the PG-Geometric and Archaic period. The big difference is that this settlement area was much more densely inhabited in the Archaic period than in earlier times. There are traces of houses and structures at almost all points of the Archaic period settlement, such as FGT, HBT, LMT-KET, MGT, the acropolis, and under modern houses and lands. However, in the PG and Geometric period only some small areas were settled, like the LMT-KET sector.

Around 630 BC all cemeteries of the Archaic city had been selected and started to be used constantly. No new necropolis was added after ca. 600 BC. These

15 The outer boundary of Clazomenae and the boundary of other Ionian cities; the location, settlement pattern and development of the secondary settlements belonging to Clazomenae; and the expansion and relationship of the rural areas and cultivation areas between the center of the city are being studied by Elif Koparal (METU, Settlement Archaeology) as a Ph.D. dissertation. The extensive survey project, ongoing since 2006, has been addressing these issues.

cemeteries seem to have been accepted by Clazomeneans, because many burial grounds were used into the Hellenistic and even the Roman period. Clazomeneans utilized the necropolis selection of their ancestors for a long time.

Between 700-630 BC, the number of graves is eleven. The number of graves increased rapidly, to eighty-seven between 630-600 BC. This situation should be related to the increase of population and also to the beginning of urbanization and the emergence of Clazomenae as a city-state. After this date, the number of graves continuously increased with exceptions of 600-575 BC and the overall gap in occupation of 550-530/525 BC. However, when Clazomeneans returned to the settlement ca. 530/525 BC, they settled systematically. The number of graves attested to the late sixth century was at least 250. This situation shows that the population of the site increased dramatically at this period. The settlement pattern also supports this fact with many late sixth century houses, restored and renewed city walls, and industrial structures. Graves then suddenly drop in number, represented with only a few graves from 500 to 400 BC. This abandonment of settlement and burial grounds should be related with the second Persian sack in 499 BC.

CHAPTER 5

CONCLUSION

Clazomenae is a crucial site for Ionian archaeology, in particular during the Iron Age and Archaic period. Excavations have recovered much evidence for the PG, Geometric, Archaic, Classical, and even Hellenistic and Roman periods. Among this evidence, burials have a major importance. The city has yielded many PG and Geometric period burials and seven cemeteries dated to the Archaic period. Some of the Archaic period cemeteries have already been studied by scholars. However, the PG and Geometric period burials have not been studied before. In this thesis, I intended to introduce and interpret this data in order to expand the results for archaeology of Clazomenae. Although the conclusions are not totally new, the overall discussion aims to bring a fresh understanding of the archaeology and burial customs of Clazomenae and Ionia.

5.1 Protogeometric Period

The PG period has yielded not only settlement but also burial evidence from excavations continued from 1998 to 2009. The number of the graves dated to the PG period has reached thirty-six. The material gives much important information about the burial customs of the early period of Clazomenae.

Both intramural and extramural burial grounds were used contemporaneously from the PG to the end of the Geometric period. The intramural burial ground in the LMT-KET sector belongs only to children, but the extramural burial ground in the HBT sector was used both for infants/children and adults.

The location of the extramural burial ground limits the outer boundary of the PG and the Geometric period settlement that measured approximately 700 m east-west. The existence of PG graves at Yıldıztepe and also 300 m west of this PG settlement suggests that the PG settlement consisted of separate clusters of houses with graves belonging to these family groups as both intramural or extramural burial grounds.

Grave types and goods did not indicate any social and economical differentiation for the PG period. Although both inhumation and cremation were practiced, inhumation graves are more frequent.

5.2 Geometric Period

The Geometric period is not extensively represented either in settlement or burial evidence. The number of the graves dated to the Geometric period is eight. Graves are found in the HBT and LMT-KET sectors, as in the PG period.

There is almost no cultural difference between the PG and the Geometric period. The big change is the abandonment of cremation and the decrease of grave types and numbers. This phenomenon can be interpreted with a way of living that did not change in the Geometric period. Moreover, the boundary of the settlement seems the same. The Geometric period can be interpreted as a silent period of Clazomenae.

5.3 Archaic Period

The character of the burial customs and settlement dramatically changes in the Archaic period. Archaic period graves are represented with more than 500 examples between 650-500 BC. Seven burial grounds have been identified so far.

The total number of graves between 700-630 BC is eleven. The number suddenly leaps to eighty-seven between 630-600 BC. The burial grounds started to be used actively ca. 630 BC, almost contemporary with the surrounding of the site with fortification walls. Moreover, the cremation and sarcophagus graves also appeared at the same time. These phenomena must relate to the process of urbanization at Clazomenae.

Some cemeteries dated to the Archaic period were probably small family clusters in the preceding periods and that were selected as a formal burial grounds during the urbanization of the site. The existence of the funerary enclosures in the Akpınar, DSİ, and South burial grounds confirms this idea.

Both cremation and inhumation were practiced in the Archaic period. Cremation reappears ca. 650 BC and disappears ca. 550 BC. The sarcophagi appear ca. 630 BC. The earliest sarcophagi were mostly experimental, both in shape and decoration. They were probably influenced by art and burial customs of other civilizations, especially Egypt. Moreover, in ceramic production, the orientalizing and Mix techniques were also influenced by Near Eastern art. These phenomena can be interpreted as Clazomeneans trying to create their own art forms, style, and identity.

Clazomenae was active in trade during the sixth century. Clazomenean sarcophagi were exported to many Ionian and East Greek sites like Ephesos, Teos, Erythrai, Smyrna, Chios, Rhodes, Gryneion, and Antandros. This exporting of the

sarcophagi should not be seen merely as trade, since this relationship also should be influencing the burial customs of other sites.

The frequency of the graves in different periods can indicate population changes in Clazomenae. The last quarter of the seventh century was one of the important periods. The number of the graves suddenly increased, which should be related with the urbanization process. The other important period was the last quarter of the sixth century, represented with more 250 graves. Some important changes occurred in both settlement and burial patterns at this period. The quality of the graves decreased, while the number dramatically increased. Many crucial changes can be observed in industrial, religious, commercial and architectural activities. This activity stopped suddenly in 499 BC with a second Persian attack.

Cemeteries surrounded the city on the west, south, and east. Tumuli were located on the zone immediately surrounding the necropolis areas. The distribution of tumuli coincides with the necropolis areas. The center of the Archaic period city extended around 1 km east-west, ca. 5 km including the burial grounds and tumuli. This phenomenon indicates that the entire city, intramural and extramural, expanded greatly when compared to the PG and the Geometric periods. The selection and localization of the cemeteries and tumuli did not happen randomly, but was probably part of the urbanization process of Clazomenae.

What I have intended in this study is to collect information from different burial grounds and to discuss and interpret them from different perspectives that were not explored earlier. The interpretations depend completely on available and unearthed data. Burials and burial grounds to be found in future excavations will be help make more extensive and precise interpretations.

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TABLES

	Akpınar			Yıldıztepe			DSİ			Kalabak			Monastirakia			Çayır			Total			Percentage
	Infant/ child	Adult	Child %	Infant/ child	Adult	Total	Infant/ child	Adult	Total	Infant/ child	Adult	Total	Infant/ child	Adult	Total	Infant/ child	Adult	Total	Child/Adult			Infant/Child Death Rate
700-650	-	1	0%	-	1	0%	-	1	0%	-	-	-	-	-	-	-	-	-	-	3	3	0%
650-630/625	-	6	0%	-	1	0%	-	-	-	-	-	-	-	-	-	-	1	0%	-	8	8	0%
630/625- 600	48	27	64%	1	-	100 %	1	10	0.9%	-	-	-	-	-	-	-	-	-	50	37	87	65.5%
600-575	8	7	54%	-	-	0%	-	-	-	-	2	0%	10	30	25%	-	-	-	18	39	57	32%
575-550	13	13	50%	-	3	-	4	2	67%	-	2	0%	20	32	38%	5	10	33%	45	59	104	43%
530/525-500	46	2	96%	36	52	40%	13	14	48%	-	3	0%	40	6	87%	30	-	100 %	165	77	242	68%
Total	115	56	171	37	57	97	18	27	45	-	7	0	70	68	128	35	11	46	275	216	491	56%
Percentage (%)	67%	33%	100	38%	62%	100	40%	60%	100	0%	100	100	55%	45%	100	76%	24 %	100	56 %	44 %	100	-

Table 1: Infant/Adult death numbers and ratios, cemeteries of Archaic Clazomenae.

	Akpınar		Yıldıztepe		DSİ		Kalabak		Monastirakia		Çayır		Total	
	Grave goods	%	Grave goods	%	Grave goods	%	Grave goods	%	Grave goods	%	Grave goods	%	Total	%
700-650	0/1	0%	-	-	1/1	100%	-	-	-	-	1/1	100%	2/3	66%
650-630/625	6/6	100%	2/2	100%	-	-	-	-	-	-	-	-	8/8	100%
630/625- 600	53/75	71%	-	-	8/12	66%	2/3	66%	-	-	-	-	63/90	70%
600-575	10/15	66%	-	-	-	-	2/2	100%	-	-	-	-	10/17	59%
575-550	13/26	50%	0/3	0%	3/11	27%	2/2	100%	-	-	-	-	18/42	43%
530/525-500	8/48	16.6%	16/91	17.5%	5/21	24%	0/1	0%	-	-	-	-	29/161	18%
Total	90/166	54%	18/91	20%	17/45	38%	6/7	86%	-	-	-	-	130/321	40%

Table 2: The number and percentage of graves goods in the cemeteries of Archaic Clazomenae.

	Location	Type	Grave/Head Location	Condition of Corpse	Grave Goods	Date
Gr. 5	City gate, south bastion.	Pithos	E-W	Adult Dispersed	-	LPG?
Gr. 6	City gate, south bastion.	Pithos	E-W	Adult Flexed position	-	LPG?
Gr. 17	Trench 15, southeast corner.	Amphora	E-W. Mouth placed to the west.	Infant	-	LPG
Gr. 18	Trench 15, south section.	Hydria	N-S. Mouth is placed to south	Infant	-	MPG/LPG
Gr. 19	Trench 15, north section.	Coarse Ware	NW-SE. Head is east	Infant	-	MPG/LPG
Gr. 21	Trench 12, In front of city entrance.	Pithos	N-S. Head is south	Adult	Fragments of one skyphos	PG
Gr. 24	Trench 16. East section. northwest of the kiln.	Cremation Area	NW-SE. Mouth is placed to the SE	Burnt human/animal bones.	Bronze fibula-like object	LPG
Gr. 25	Trench 16. East section. northwest of the kiln	Simple earth inhumation	-	Infant	-	PG
Gr. 26.1	Trench 16. East section. northwest of the kiln.	Amphora	E-W. Mouth is placed to the west.	Infant	-	PG
Gr. 26.2	Trench 16. East section. northwest of the kiln.	Simple Earth Inhumation	-	Adult	-	PG
Gr. 26.3	Trench 16. East section. northwest of the kiln.	Coarse Ware	-	Infant	-	PG
Gr. 28	Trench 17, east of the bastion.	Cist	E-W. Covered with slabs.	Infant Dispersed	-	PG
Gr. 29	Trench 19. East of kiln	Coarse Ware	NE-SW. Mouth is placed to the NE.	Infant	-	PG
Gr. 30	Trench 19. East of kiln	Coarse Ware	NE-SW. Mouth is placed to the SW.	Infant		PG
Gr. 31	Trench 19. East of kiln	Pithos	E-W. Head is placed to the east. bones partly disturbed.	Adult	4 grave goods found in grave. 2 bowl 1 oinochoe 1 small amphora	LPG
Gr. 32	Trench 19. East of kiln	Simple earth inhumation	Disturbed. Grave is closed with big pithos fragment	Adult	-	PG

Gr. 33	Trench 19	Coarse Ware	N-S. Mouth is placed to the north. Fragments of animal bones.	Infant	-	PG
Gr. 34	Trench 20. West of the Bronze Age bastion	Amphora	NW-SE. Mouth is placed NW. Probably disturbed by later walls.	Infant	-	PG
Gr. 35	Trench 22, East of trench	Cist	N-S. Covered with slabs but the west side is missing	Infant	1 grave good. small oinochoe	LPG
Gr. 36	Trench 19	Coarse Ware	N-S	Infant	?	PG
Gr. 37	Trench 19	Cist. Covered with mudbrick fragment and small stones.	E-W	Infant	?	PG
Gr. 38	Trench 20	Pithos	NW-SE. Mouth is located SW.	Child/ Adolescent	7 grave goods found in grave. small trefoil oinochoe bowl small handmade coarse ware 2 conical food bronze astragalus bronze bracelet ?	LPG
Gr. 39	Trench 12	Pithos	E-W. Mouth is located to the east. Upper side of pithos is missing.	Child	5 grave goods 2 small olpe 1 one handled bowl 1 two handled bowl 1 bronze ring	PG
Gr. 40	Trench 12	Cremation Area	N-S	-	-	PG
Gr. 41	Trench 20	Cist	E-W. 64 x 32 cm. Disturbed by pithos Gr. 38	Infant	-	PG
Gr. 42	Trench 19, east of Graves 26	Coarse Ware	NW-SE. Mouth is located NW.	Infant	-	PG
Gr. 43	Trench 19, south of PG kiln.	Cist	NE-SW. 110x50 cm.	Child	?	PG, Earlier than Gr. 33 and 36.

Table 3: Protogeometric period graves in the HBT sector.

	Location	Type	Grave/Head Location	Condition of Corpse	Grave Goods	Date
Gr. 1	LMT. South of the bastion.	Cist	SE-NW	Infant. Flexed position	-	PG
Gr. 2	LMT. South of the bastion.	Cist	-	Infant	-	PG
Gr. 3	LMT. South of the bastion.	Cist	-	Infant	-	PG
Gr. 4	LMT. South of the bastion.	Cist	-	Infant	-	PG
Gr. 5	LMT, VII plansquare.	Pithos	E-W. Head is east	Infant. 6-12 months old	oinochoe 2 cup, jug	PG
Gr. 6	KET, in the curvilinear building.	Cist	SE-NW. Head is south	Infant. 9 months old	skyphos	LPG
Gr. 7	FGT, north sector, Trench 1.	Cist	-	Infant. Flexed position	-	PG

Table 4: Protogeometric period graves in the LMT-KET sectors.

	Location	Type	Grave/Head Location	Condition of Corpse	Grave Goods	Date
Gr. 7	Trench 7. Under the early city wall.	Inhumation. Cooking ware-Amphora	SE-NW. Mouth placed SE.	Infant (5-6 months old) Flexed position	-	LG
Gr. 8	Trench 7. Under the early city wall. East Side.	Inhumation. Cooking ware	Disturbed	Disturbed. Infant ?	-	LG
Gr. 11	Trench 8. under the south bastion.	Simple Earth Inhumation	N-S. Head placed South.	Adult. Flexed position	Pithos fragments	Geo. ?
Gr. 20	Trench 12. In front of city entrance.	Inhumation Pithos	W-E. Mouth placed East.	Disturbed. Adult	Bronz spiral, two rings, bronze earring	Geo.
Gr. 22	Trench 11. East side.	Cist	W-E	Infant	-	Geo.
Gr. 23 A-B	Trench 11. East side, under the city wall.	Simple earth inhumation. (2 different grave)	-	Adult	-	Geo. ?

Table 5: Geometric period graves in the HBT Sector.

Akpınar Phase 2	Grave Number	Percentage (%)	Type	Number	Percentage (%)
Sarcophagus	18	24	-	18	24
Inhumation in jars	38	50.66	Amphora Hydria Pithos	25 2 11	33.33 2.66 14.66
Simple Earth Inhumations	4	5.33	-	4	5.33
Cremation	13	5.33	-	4	17.33
Cist	2	2.66	-	2	2.66
Total	75	100	-	75	100

Table 6: Akpınar necropolis, Phase 2 (630-600/590), grave types and grave numbers.

Akpınar Phase 3a	Number	Percentage (%)	Age Differentiation (adult/infant)	Grave Goods
Sarcophagus	7	46.66	7/-	4
Amphora	6	40	6/-	4
Pithos	2	13.33	1/1	2
Total	15	100	52/48%	10

Table 7: Akpınar necropolis, Phase 3a (600-575). Grave numbers and grave goods.

Akpınar Phase 3b	Number	Percentage (%)	Age Differentiation (Adult/Child/Infant)	Grave Goods
Sarcophagus	20	76.93	10/2/8	12
Amphora	3	11.53	-/-/3	-
Pithos	1	3.84	-/-/1	1
Coarse Ware	1	3.84	-/-/1	-
Simple Earth İnhumation	1	3.84	1/-/-	-
Total	26	100	44/8/48%	13

Table 8: Akpınar necropolis, Phase 3b (575-550). Grave numbers and grave goods.

Akpınar Phase 4	Number	Percentage (%)	Age Differentiation (Adult/Infant)	Grave Goods
Sarcophagus	19	39.6	2/17	6
Amphora	26	54.16	-/26	2
Hydria	1	2.08	-/1	-
Pithos	1	2.08	-/1	-
Coarse Ware	1	2.08	-/1	-
Total	48	100	44/8/48%	8

Table 9: Akpınar necropolis, Phase 4 (530-500/490). Grave and grave good numbers.

Yıldıztepe Phase 2	Number	Percentage (%)	Age Differentiation (Adult/Child/Infant)	Grave Goods
Sarcophagus	62	68.13	48/6/8	10
Amphora	27	29.67	-/-/27	6
Cist	1	1.09	-/-/1	-
Simple Earth Inhumation	1	1.09	1/-/-	-
Total	91	100	52/6/39%	16

Table 10: Yıldıztepe necropolis, Phase 2 (530/525-500). Grave and grave goods numbers, and gender.

Sarcophagus	Akpınar	Yıldıztepe	DSİ	Kalabak	Monastirakia	Çayır	Total
630-600	18	-	-	-	-	-	18
600-550	27	3	11	1	app. 30	app. 15	87
525-500	19	62	12	1	app. 62	-	156
Total	64	65	23	2	92	15	261

Table 11: Numbers of sarcophagi at cemeteries of Clazomenae.

Amphora	Akpınar	Yıldıztepe	DSİ	Kalabak	Monastirakia	Çayır	Total
650-600	25	1	1	-	-	-	27
600-550	9	-	-	-	5	-	14
525-500	26	27	5	-	30	20	108
Total	60	28	6	-	35	20	149

Table 12: Numbers of amphorae at cemeteries of Clazomenae.

Pithos	Akpınar	Yıldıztepe	DSİ	Kalabak	Monastirakia	Çayır	Total
650-600	11	-	-	-	-	-	11
600-550	3	-	-	-	11	app. 10	28
525-500	1	-	3	-			
Total	15	-	3	-	11	10	39

Table 13: Numbers of pithoi at cemeteries of Clazomenae.

Hydria	Akpınar	Yıldıztepe	DSİ	Kalabak	Monastirakia	Çayır	Total
650-600	2	-	-		-	-	2
600-550	-	-	-	-	-	-	2
525-500	1	-	-	1	-	-	
Total	3	-	-	1	-	-	4

Table 14: Numbers of hydriai at cemeteries of Archaic Clazomenae.

Cremation	Akpınar	Yıldıztepe	DSİ	Kalabak	Monastirakia	Çayır	Total
650-600	6	1	10	-	-	1	17
600-580	13	-	-	-	-	-	13
580-550	-	-	-	4	-	-	4
Total	19	1	10	4	-	1	34

Table 15: Numbers of cremation graves at cemeteries of Archaic Clazomenae.

Inhumation	Akpınar	Yıldıztepe	DSİ	Kalabak	Monastirakia	Çayır	Total
650-600	63	1	-	-	-	-	64
600-550	41	3	14	1	128	15	349
525-500	48	91	21	2		30	
Total	152	95	35	3	128	45	413

Table 16: Numbers of inhumation graves at cemeteries of Archaic Clazomenae.

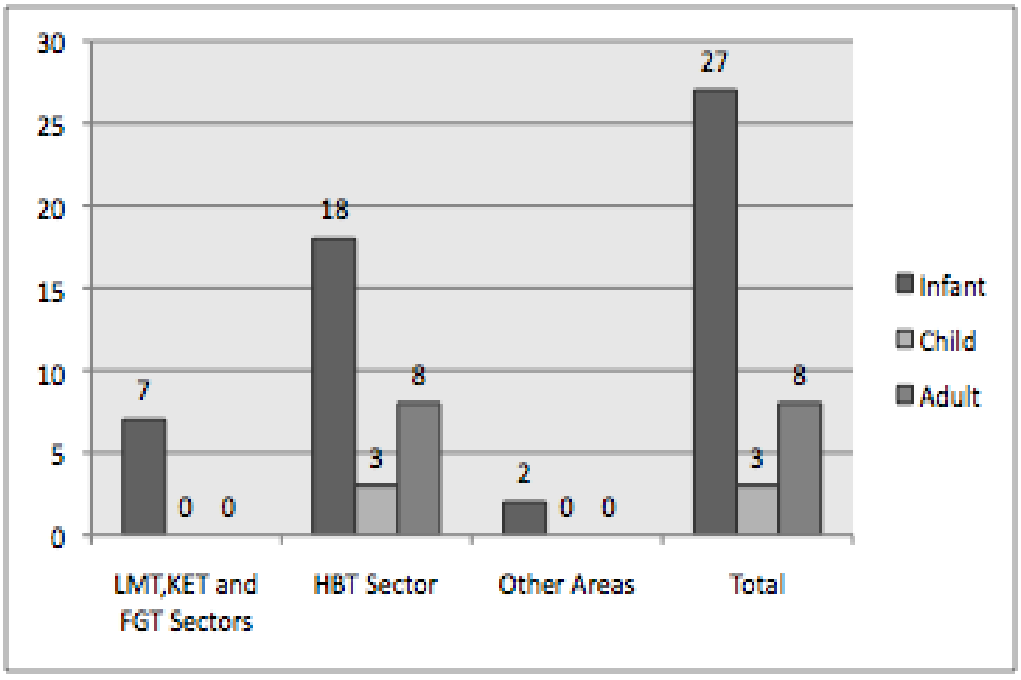


Table 17: Infant/Child/Adult grave numbers in Protogeometric period.

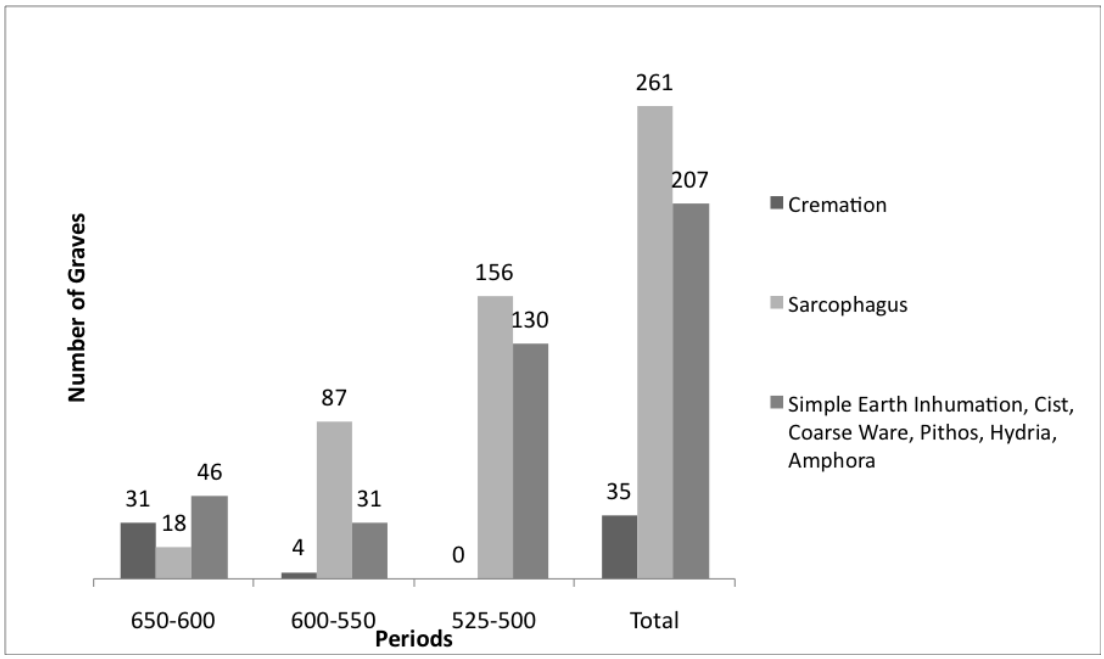


Table 18: The Distribution of main grave types in the Archaic period.

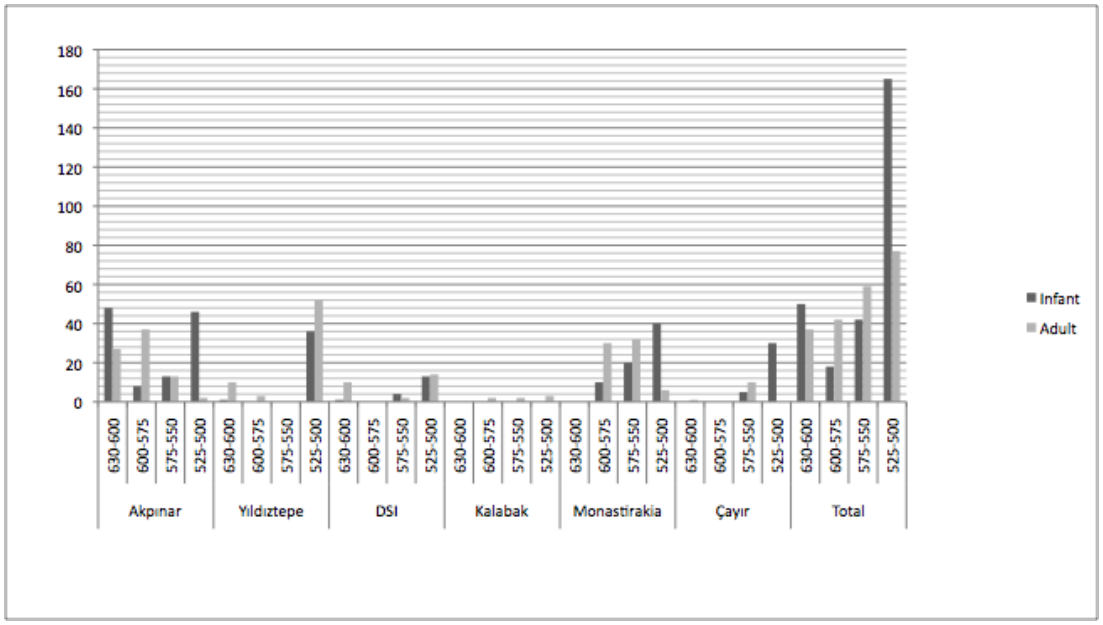
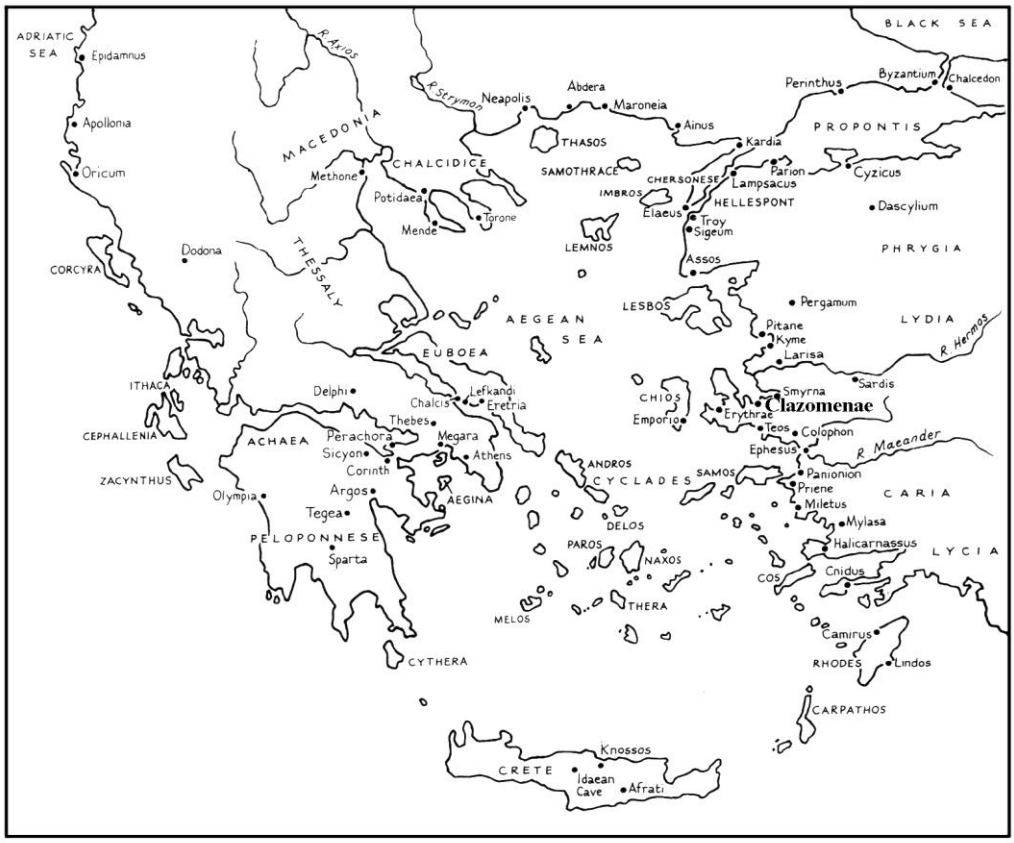


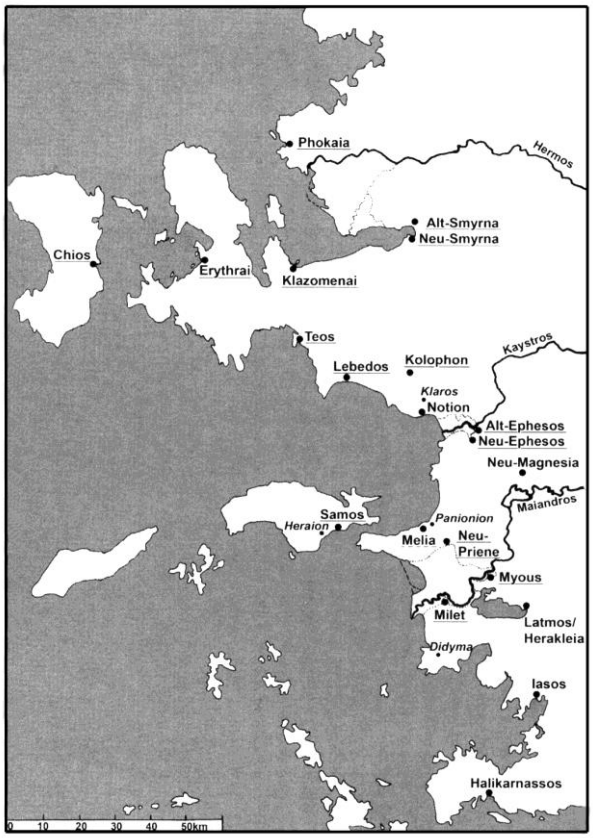
Table 19: Infant/Adult grave numbers in the Archaic period.

MAPS

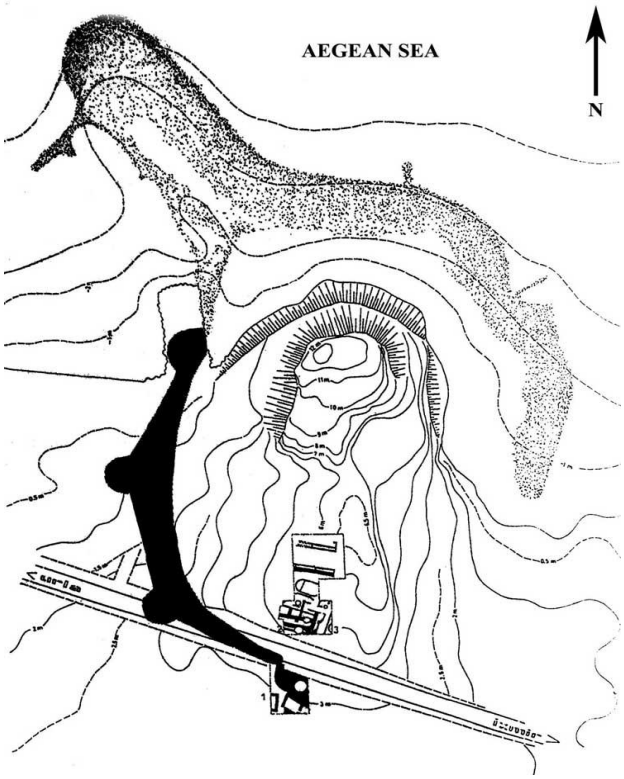


Map 1: Mainland Greece and West Anatolia in the Iron Age and Archaic Period (Boardman 1999).

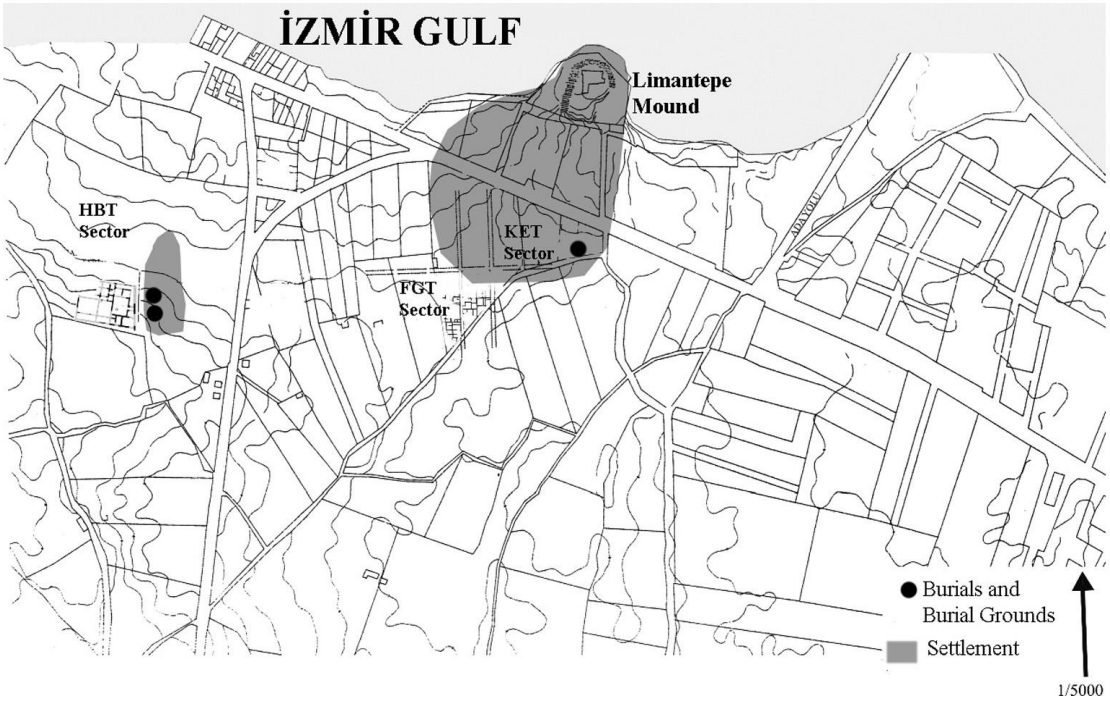
Map 2: Regions in West Anatolia in the Iron Age and Archaic Period (Moustaka et al. 2004).



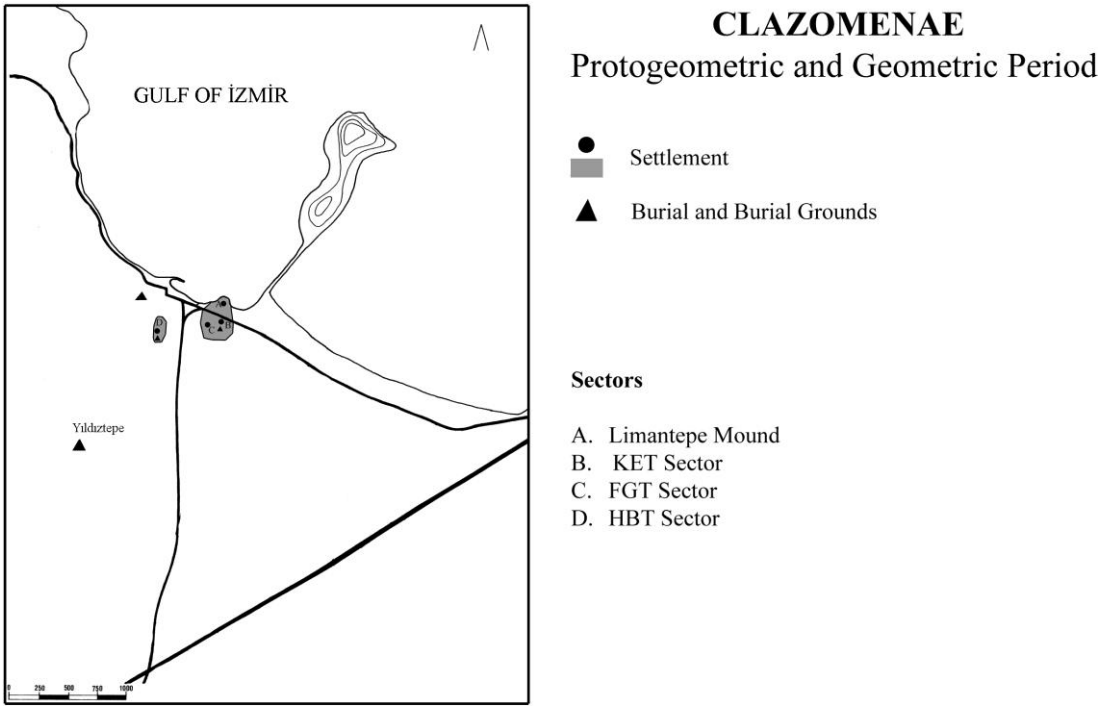
Map 3: Ionian sites.



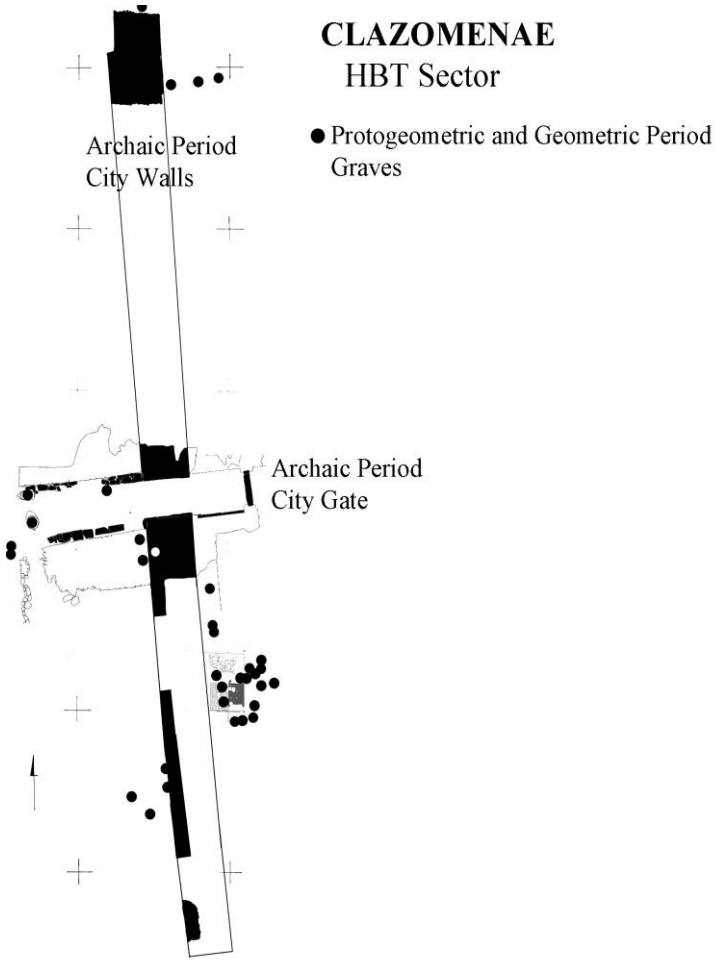
Map 4: Limantepe mound, structures and EBA city walls (Erkanal 1999).



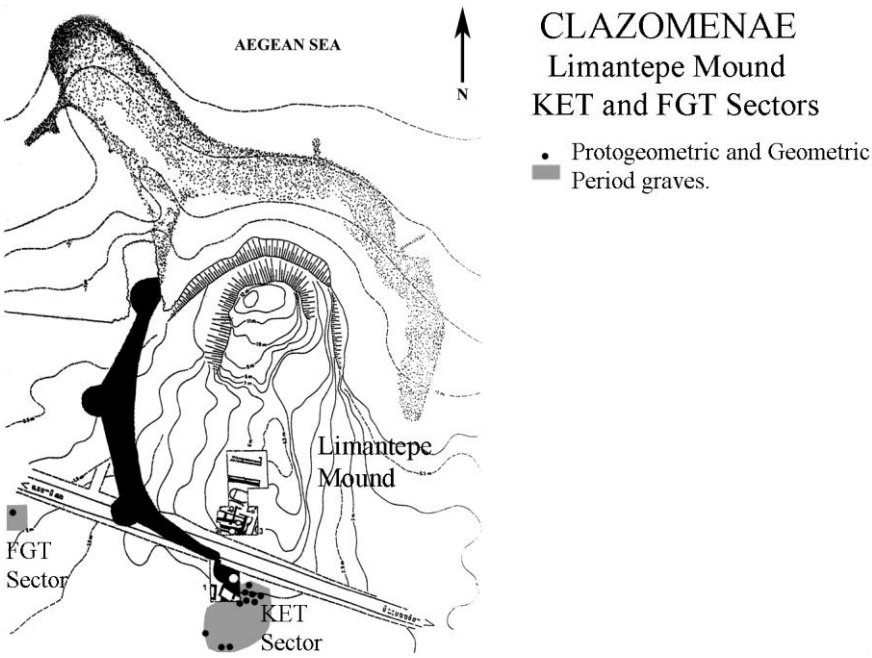
Map 5: Possible extent of the Protogeometric and Geometric settlement and burial grounds.



Map 6: The expansion of the settlement and burial grounds in the Protogeometric and Geometric periods.

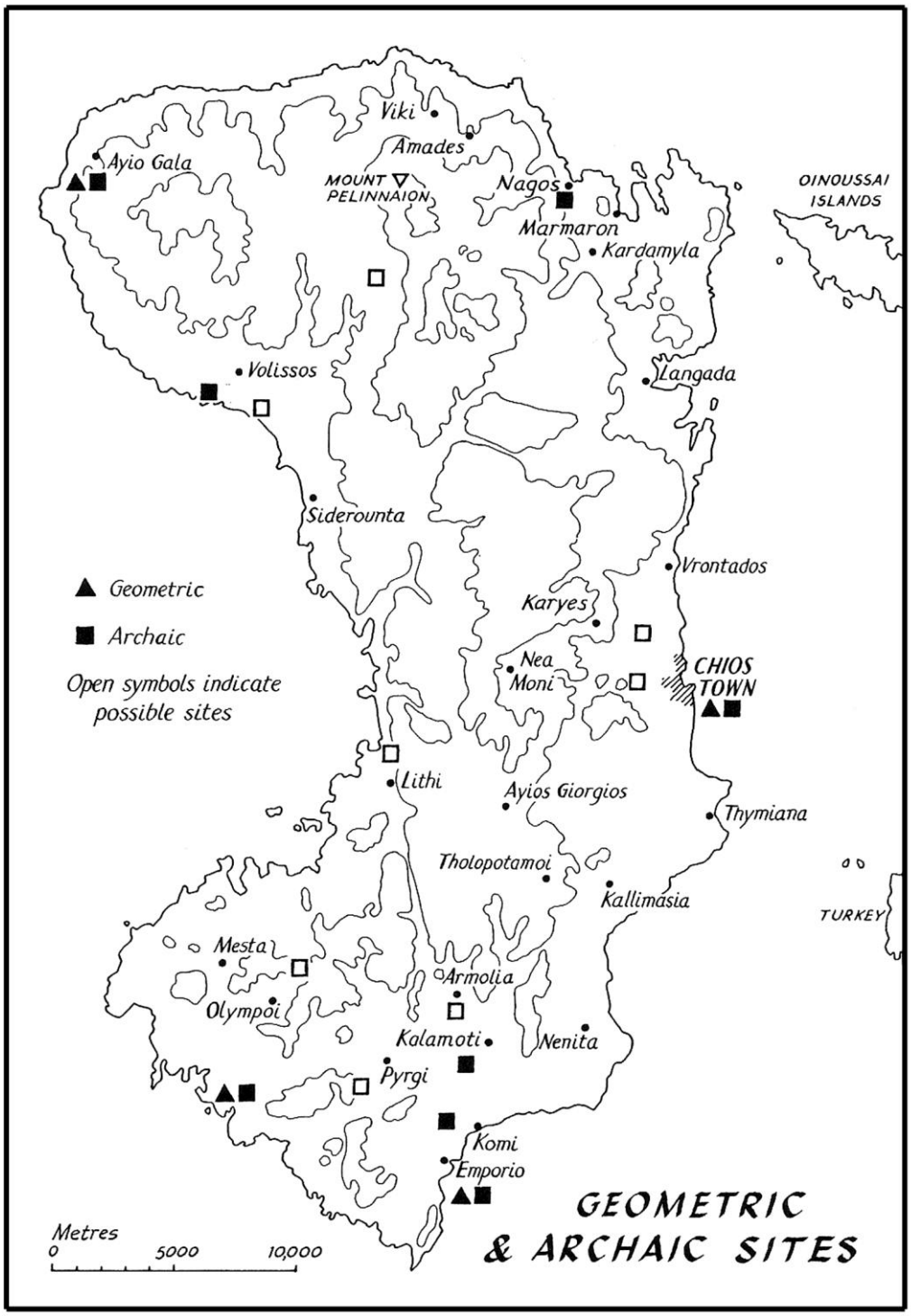


Map 7: Protogeometric and Geometric period graves in the HBT sector.



Map 8: Protogeometric and Geometric period graves in the LMT-KET and FGT sectors.

Map 9: The location and expansion of the Archaic period settlement, burial grounds, and tumuli.



Map 10: Settlements on Chios in the Geometric and Archaic periods (Yalouris 1986: map 4).

PLATES

Plate 1

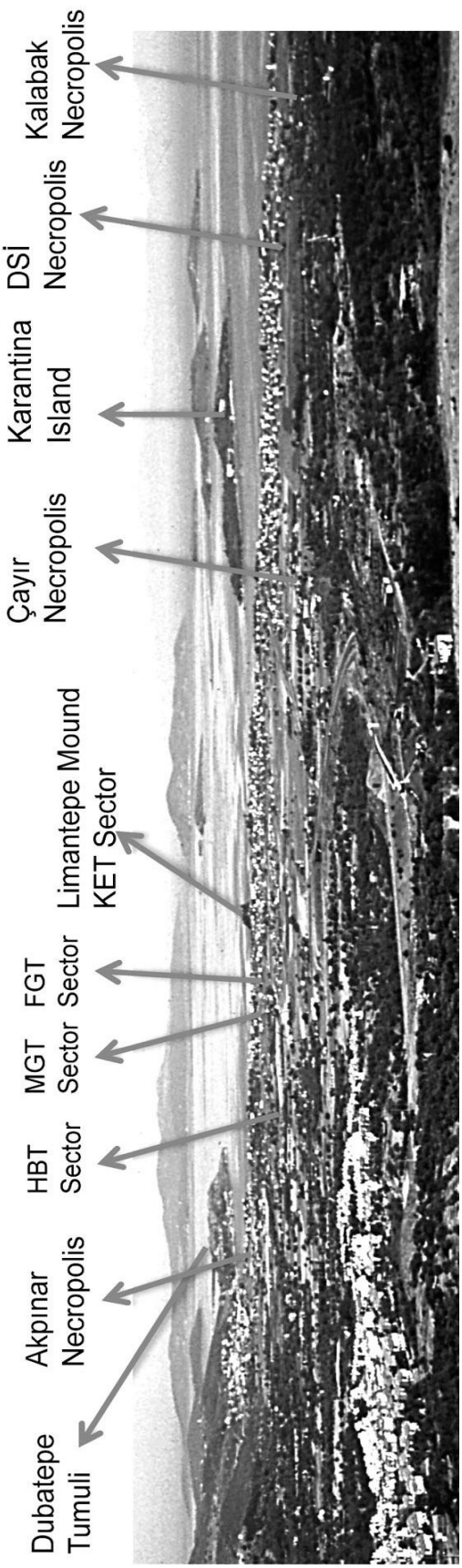


Plate 1: Panoramic photograph: sectors in Clazomenae.

Plate 2

Plate 2: Satellite photograph: Archaic period living quarters, cemeteries and tumuli.

Plate 3a: Living quarters, burials and burial grounds in the Protogeometric and Geometric periods.

Plate 3b: Grave 5, Protogeometric period, Limantepe-KET Sector.

Plate 4

Plate 4a: Grave goods of Grave 5, Protogeometric period, Limantepe-KET Sector.

Plate 4b: Grave 6 and its grave good, Protogeometric period, Limantepe-KET Sector.

Plate 5

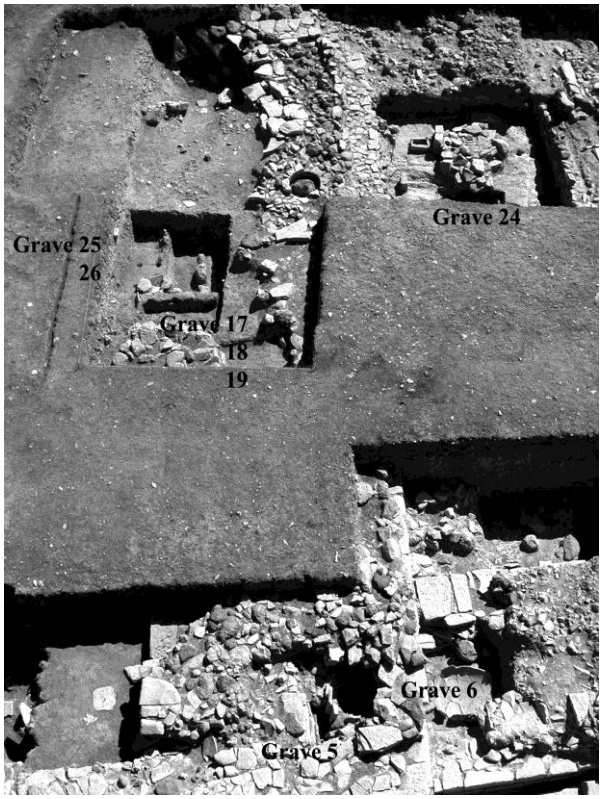


Plate 5a: Burials dated to the Protogeometric and Geometric period in the HBT sector.

Plate 5b: Burials dated to the Protogeometric and Geometric period in the HBT sector.

Plate 6

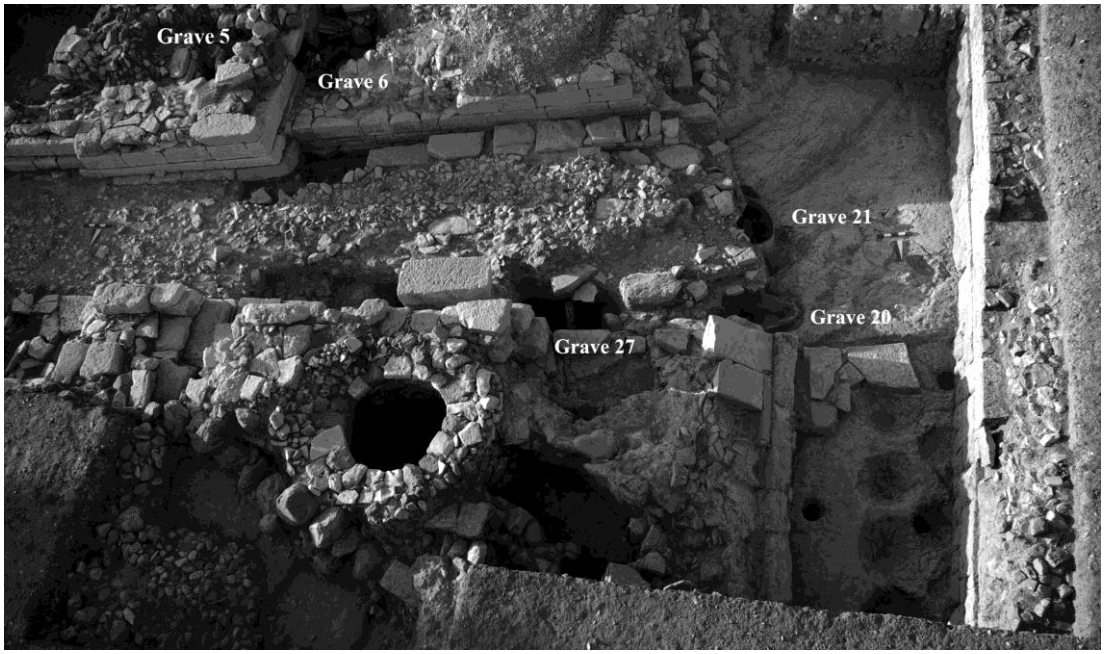


Plate 6a: Burials under the Archaic period city gate in the HBT sector.

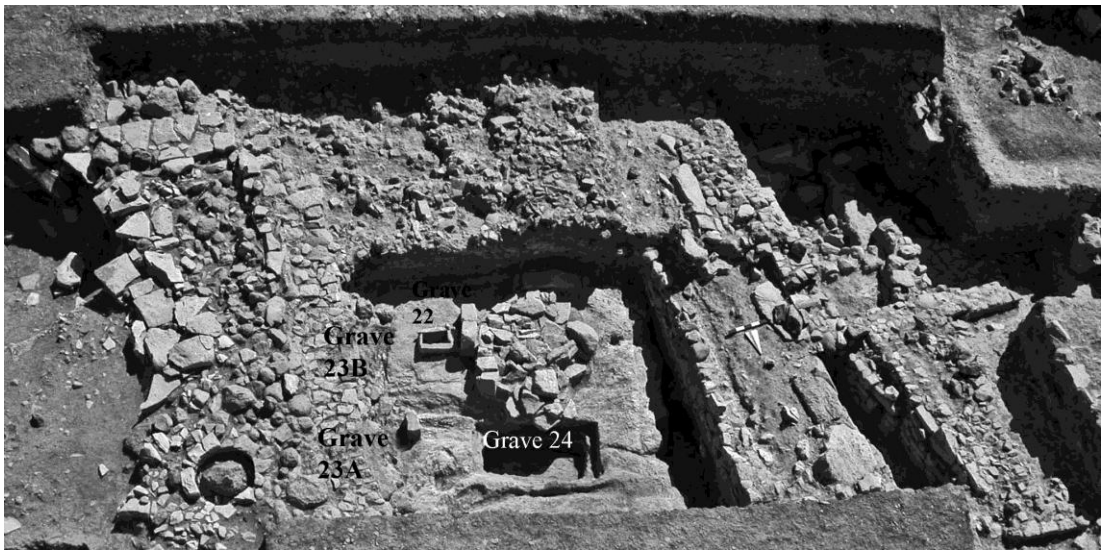


Plate 6b: Burials dated to the Protogeometric and Geometric periods in Trench 11, HBT sector.

Plate 7

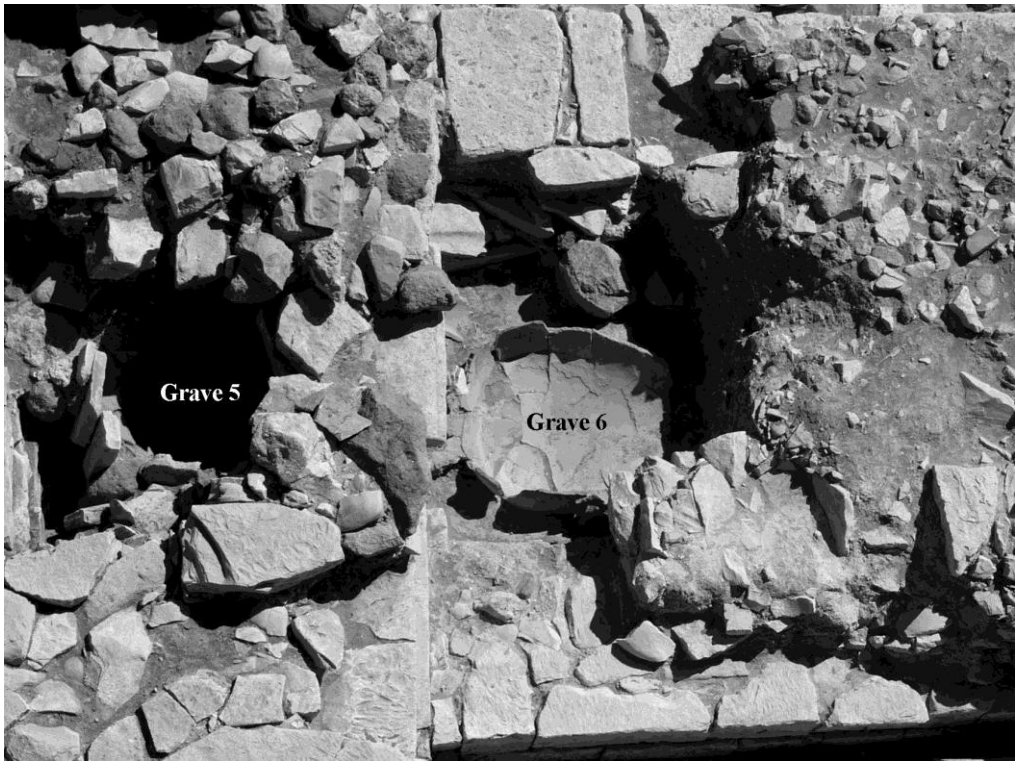


Plate 7a: Grave 5 and 6 under the Archaic period city walls, Progeometric period, HBT sector.

Plate 7b: Grave 6, Protogeometric period, HBT sector.

Plate 8

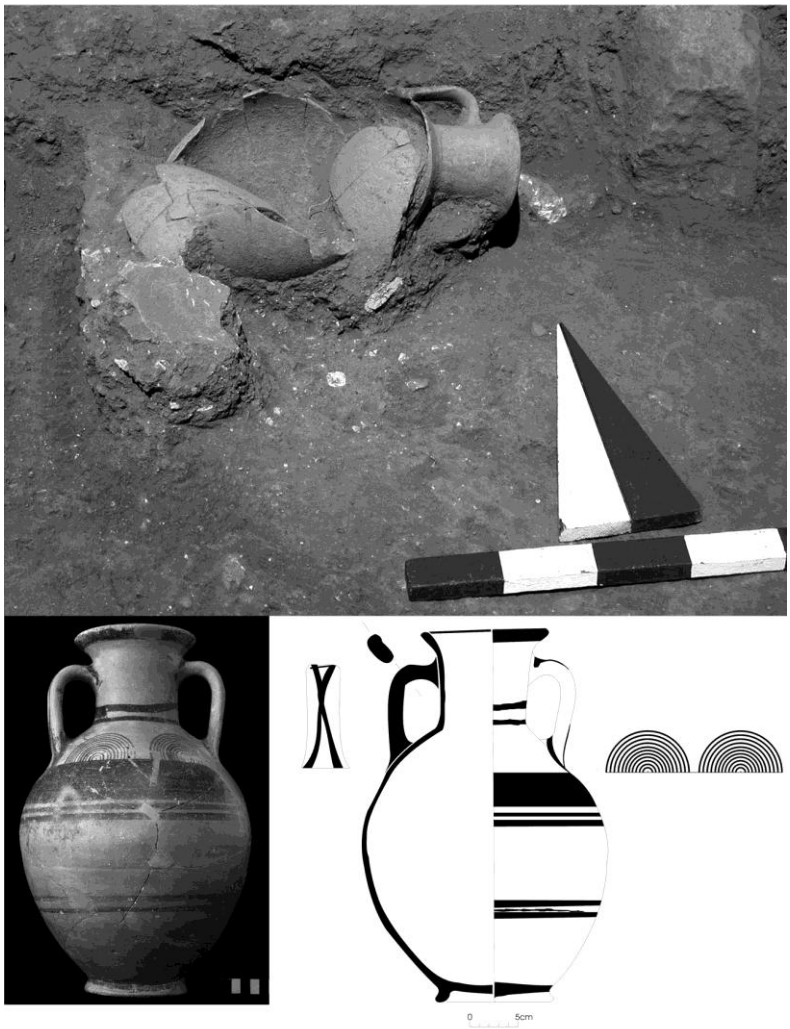


Plate 8a: Grave 17, Amphora, Protogeometric period, Trench 15, HBT sector.

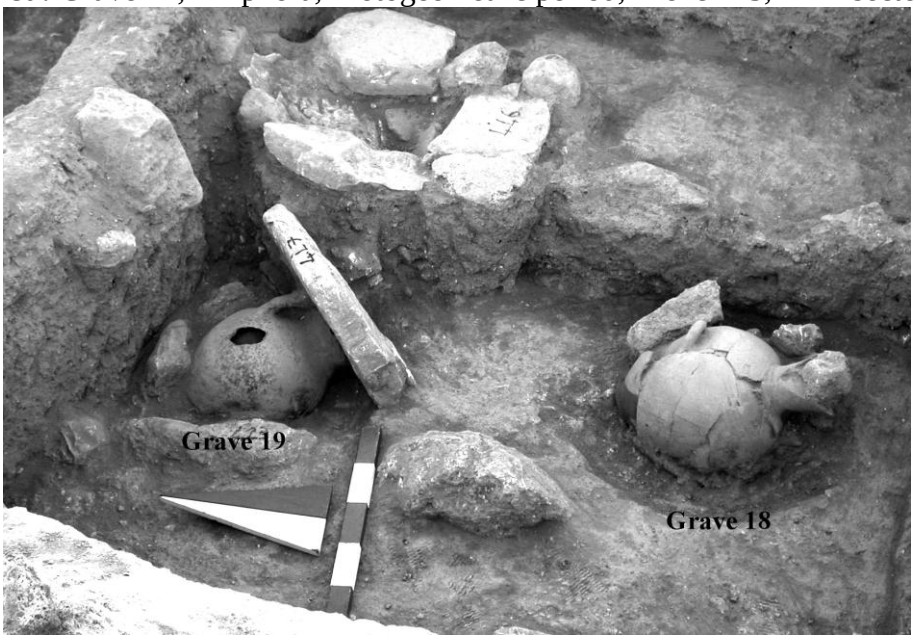


Plate 8b: Grave 18 and 19, Protogeometric period, Trench 15, HBT sector.

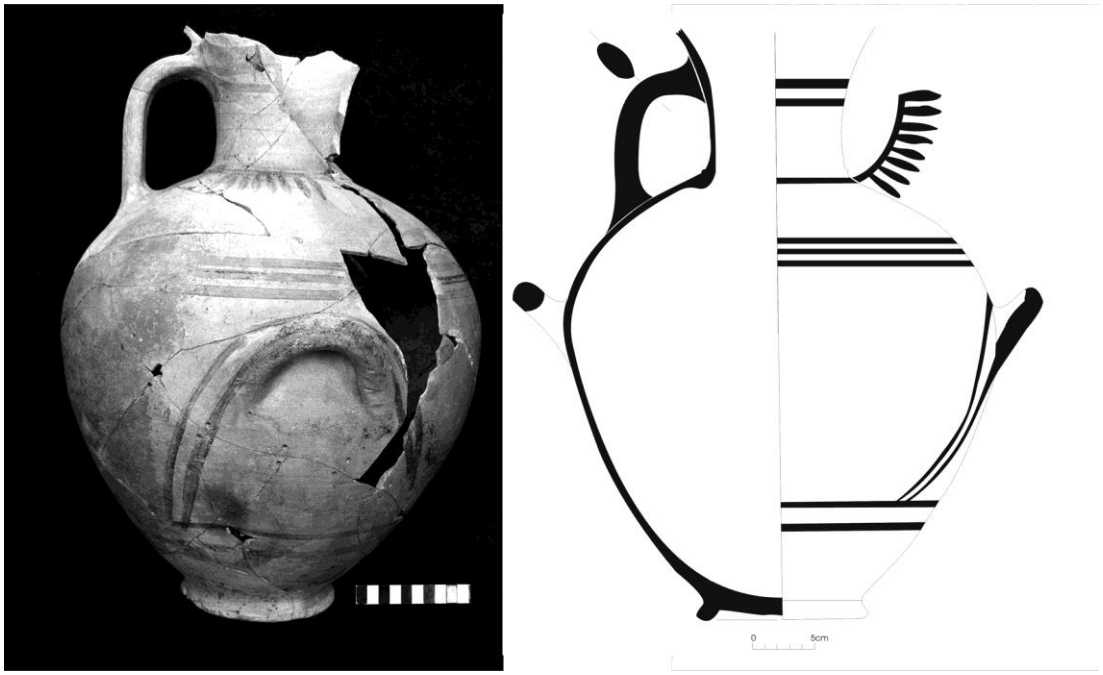


Plate 9a: Grave 18, Hydria, Protogeometric period, Trench 15, HBT sector.

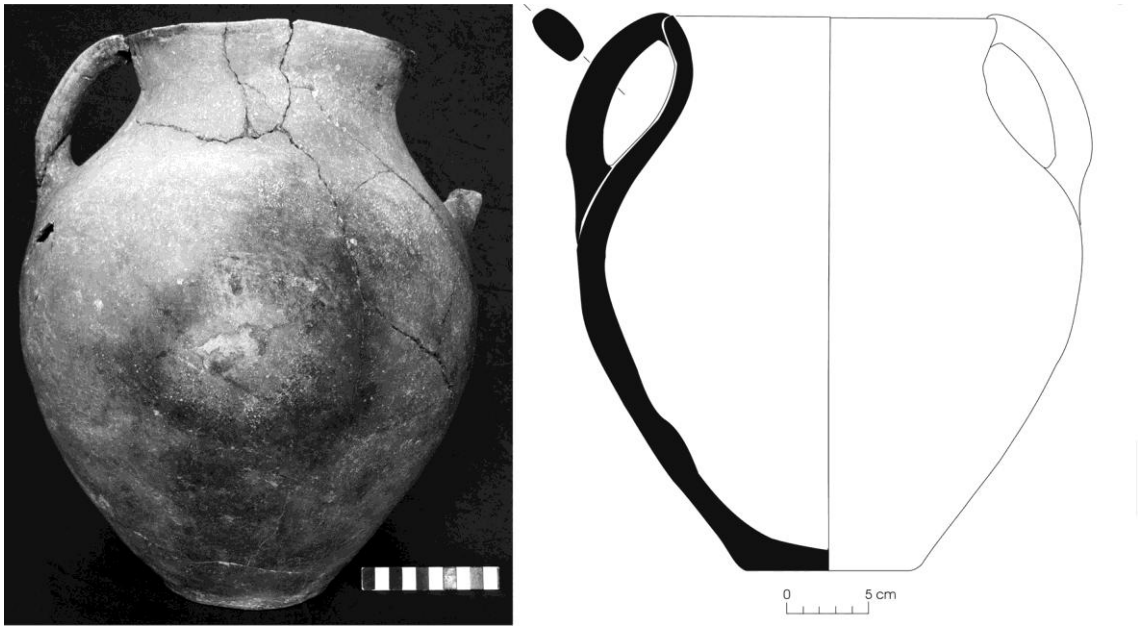


Plate 9b: Grave 19, Coarse ware, Protogeometric period, Trench 15, HBT sector.

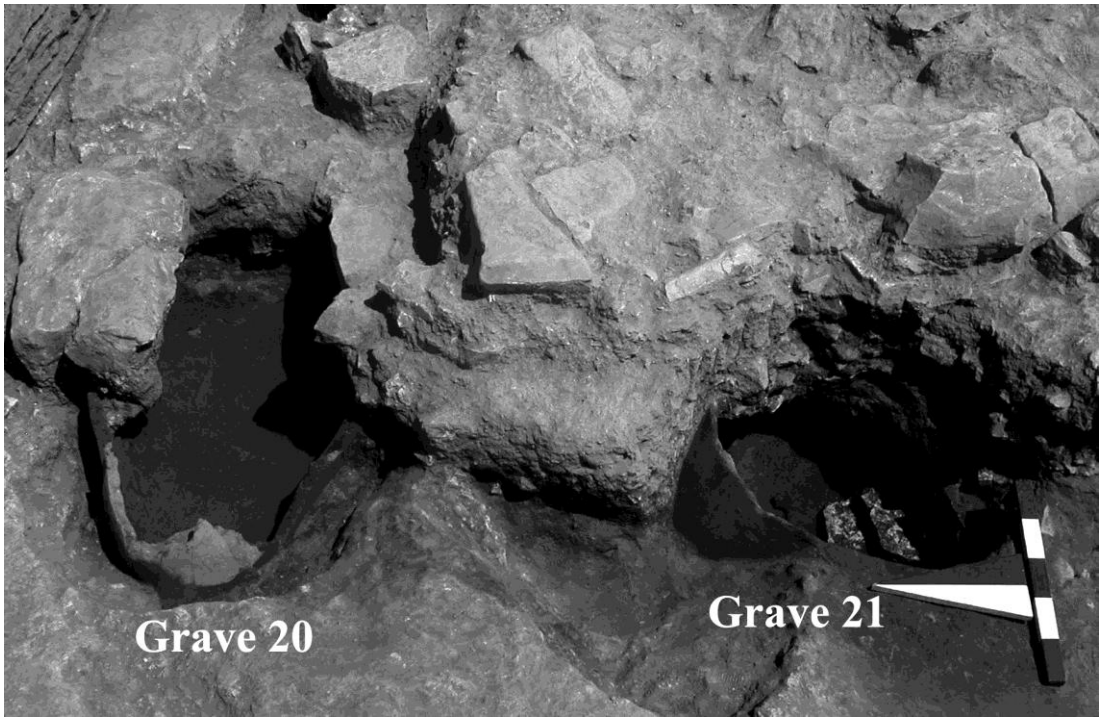


Plate 10a: Protogeometric Grave 21 and Geometric Grave 20, Trench 12, in front of the Archaic period city gate, HBT Sector.

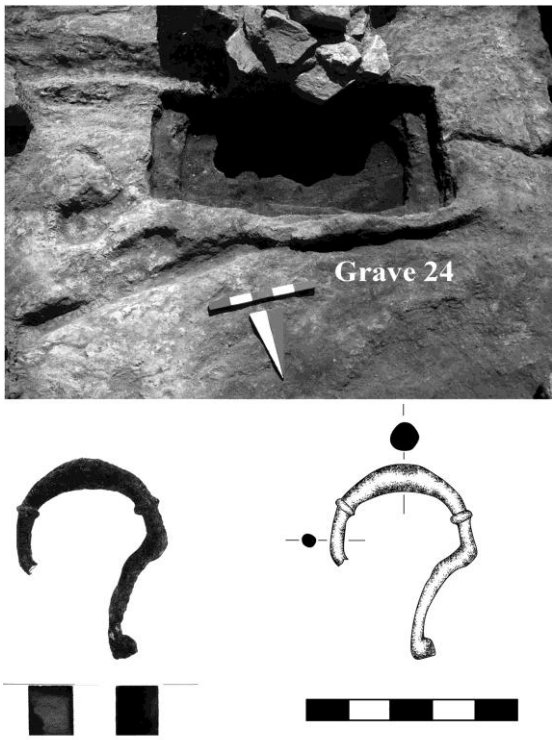


Plate 10b: Grave 24, Cremation area and fibula-like object, Protogeometric period, Trench 11, HBT sector (Photos and drawings by Polat Ulusoy).

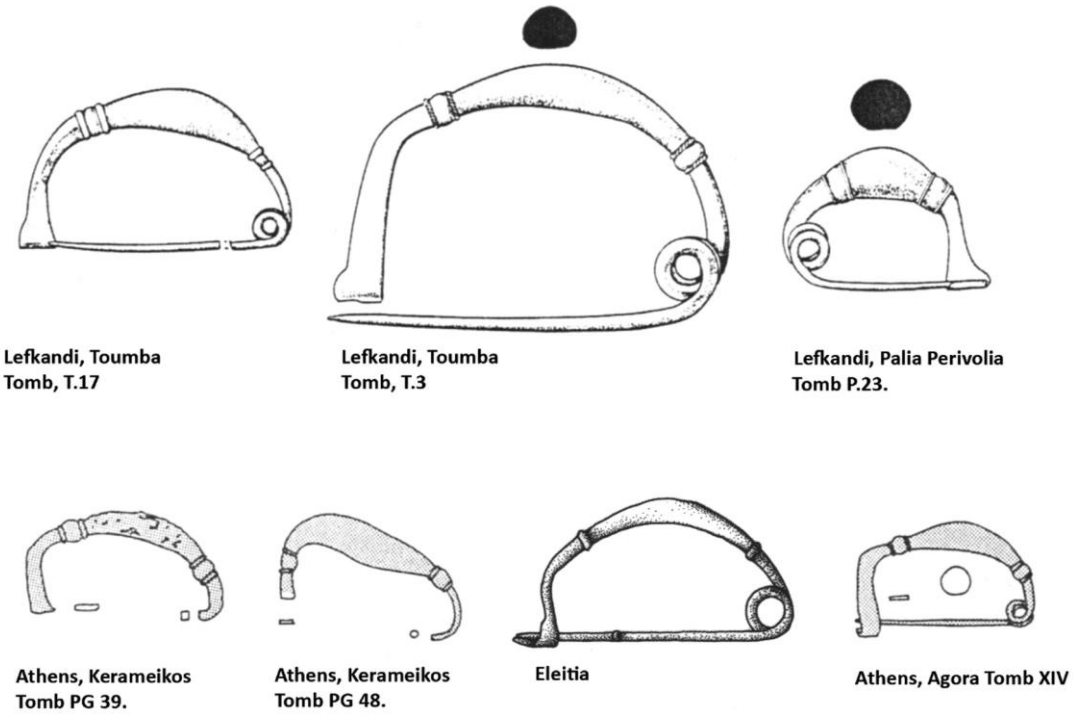


Plate 11a: Fibulae found at other PG sites (Lemos, I. 2002).

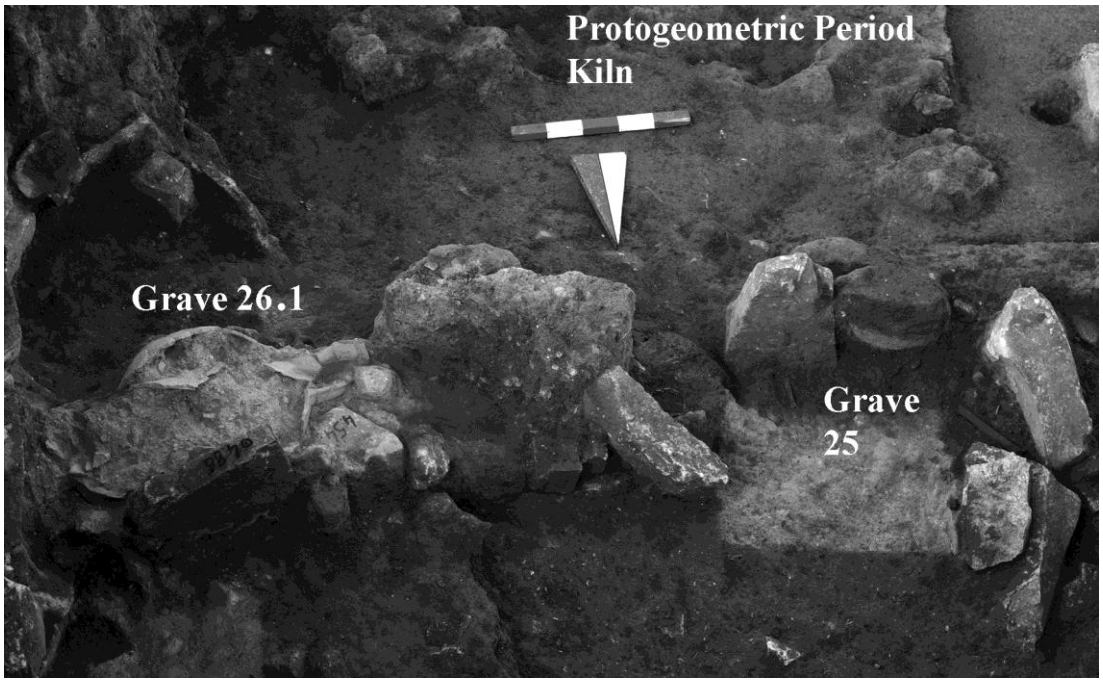


Plate 11b: Graves 25 and 26.1, Protogeometric period, Trench 16. HBT sector.

Plate 12

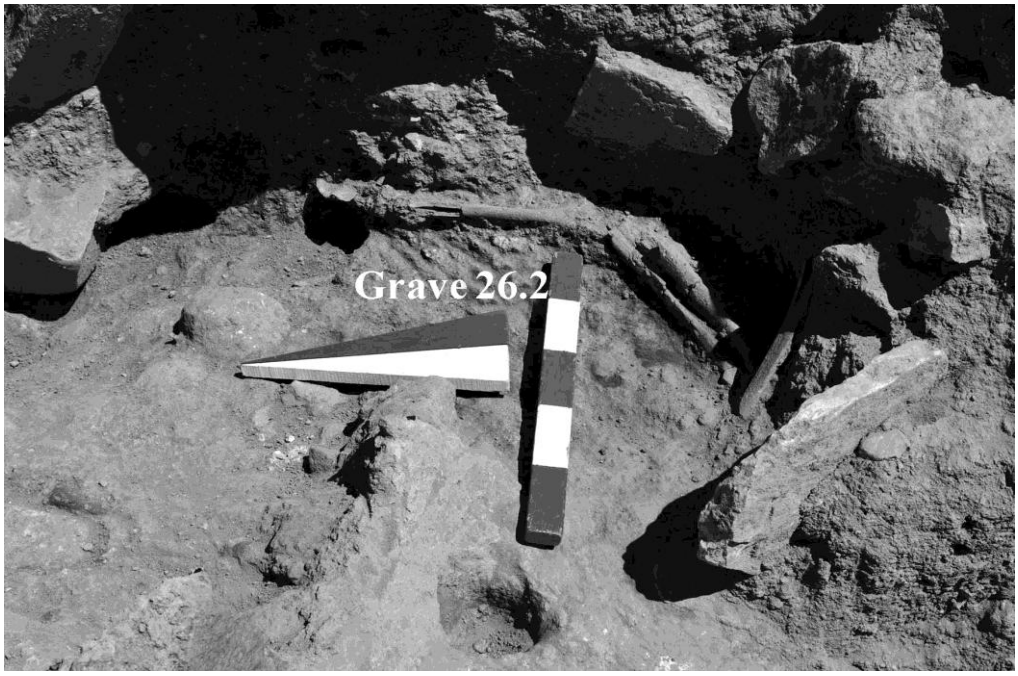


Plate 12a: Grave 26.2, Protogeometric period, Trench 16, HBT sector.

Plate 12b: Grave 26.1 (left) and 26.3 (right), Protogeometric period, Trench 16, HBT sector (Photo by Polat Ulusoy).

Plate 13a: Grave 29, Protogeometric period, Trench 19, HBT sector.

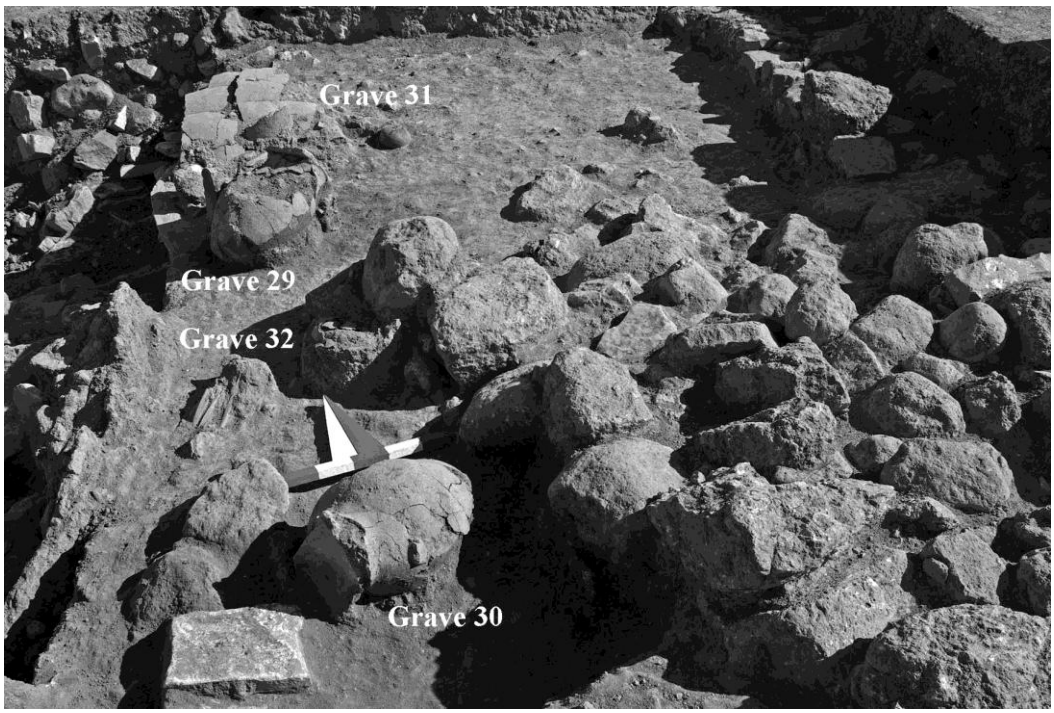


Plate 13b: Graves 29-30-31-32, Protogeometric period, Trench 19, HBT sector.

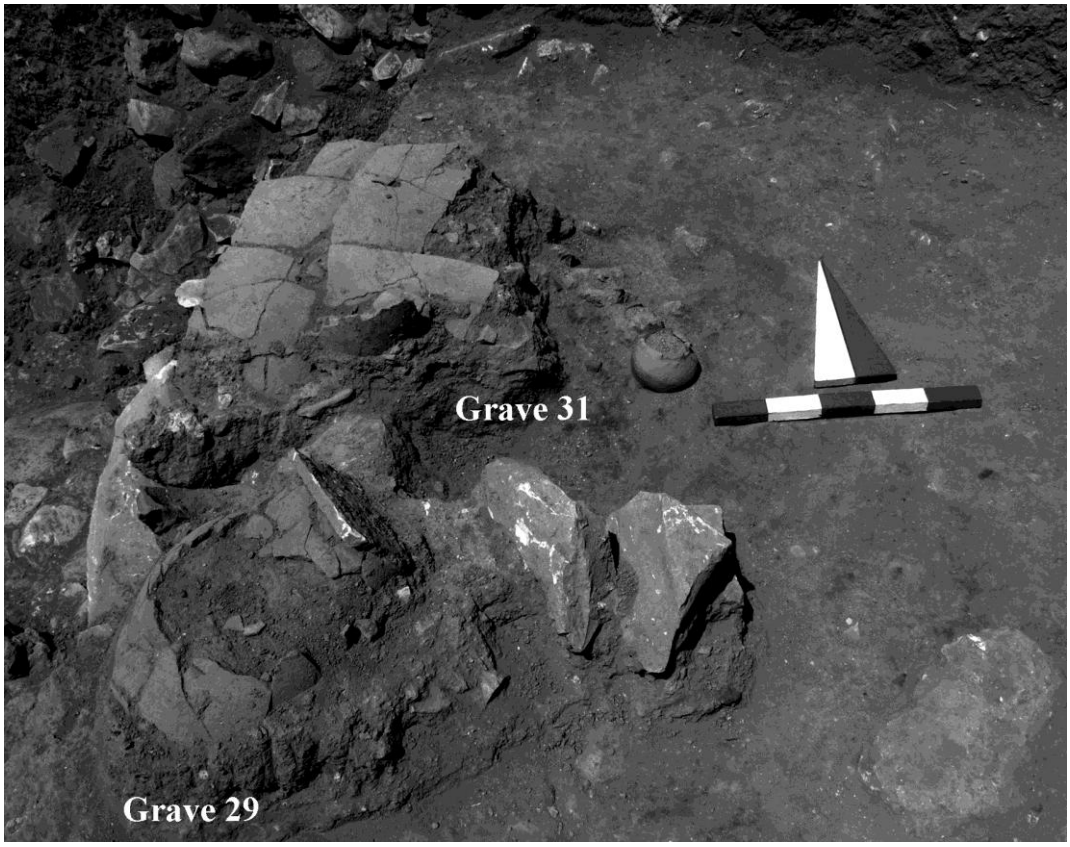


Plate 14a: Graves 29 and 31, Protogeometric period, Trench 19, HBT sector.

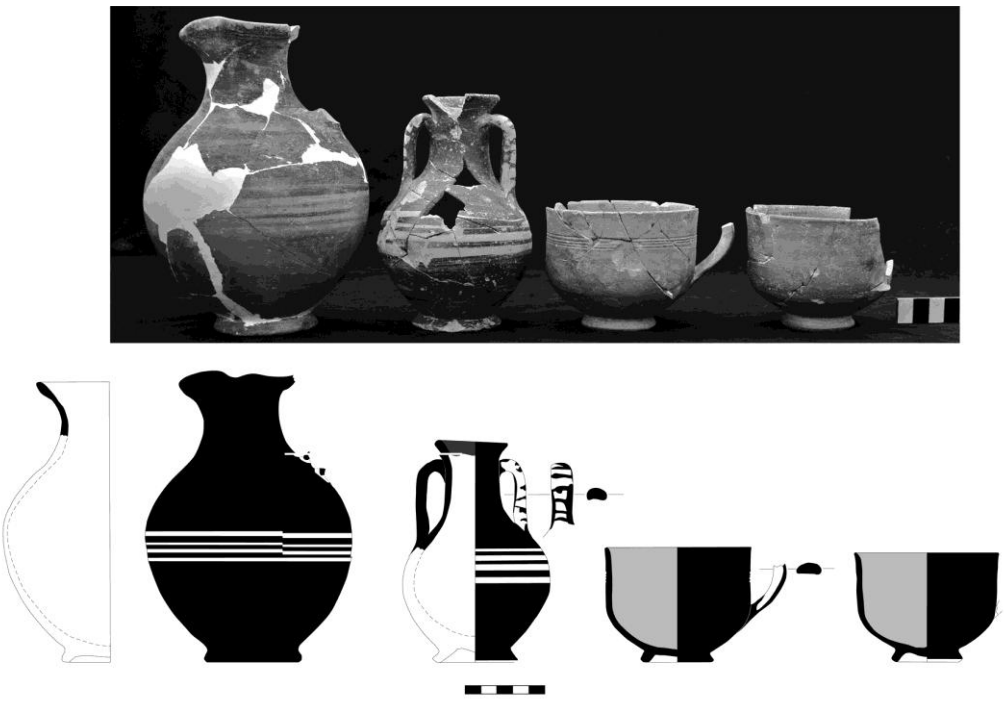


Plate 14b: Grave goods found in Pithos grave (Grv. 31), LPG period, Trench 19, HBT sector (Photos and drawings by Polat Ulusoy).

Plate 15

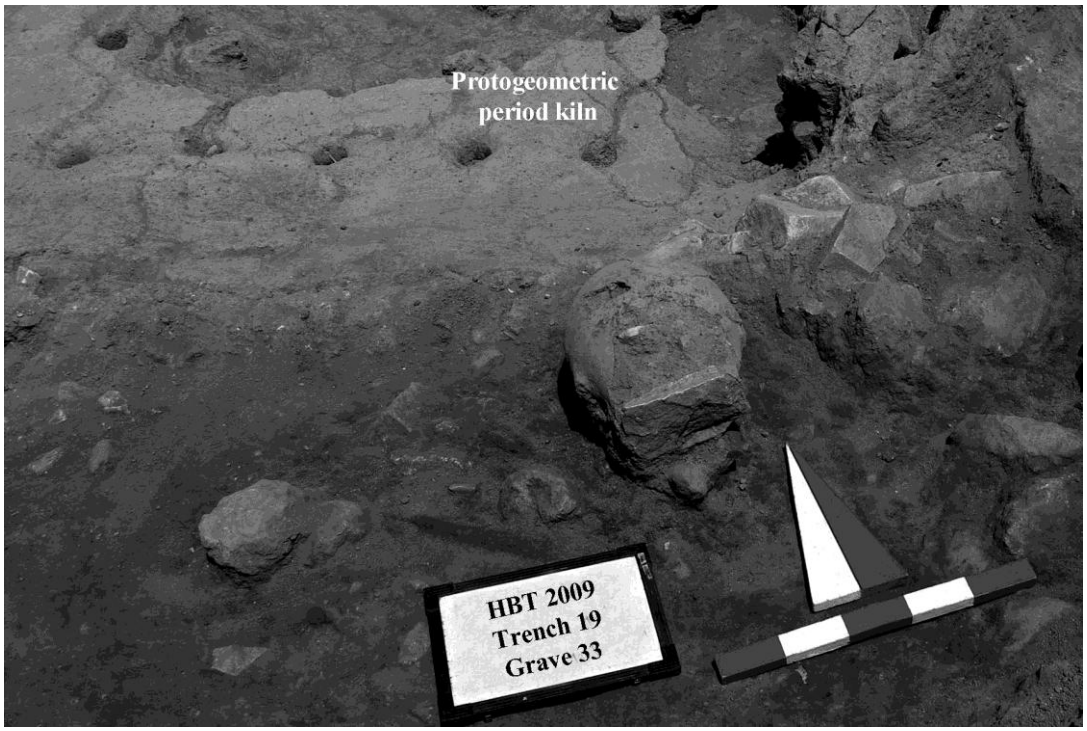


Plate 15a: Grave 33, Coarse Ware, Protogeometric period, Trench 19, HBT sector.

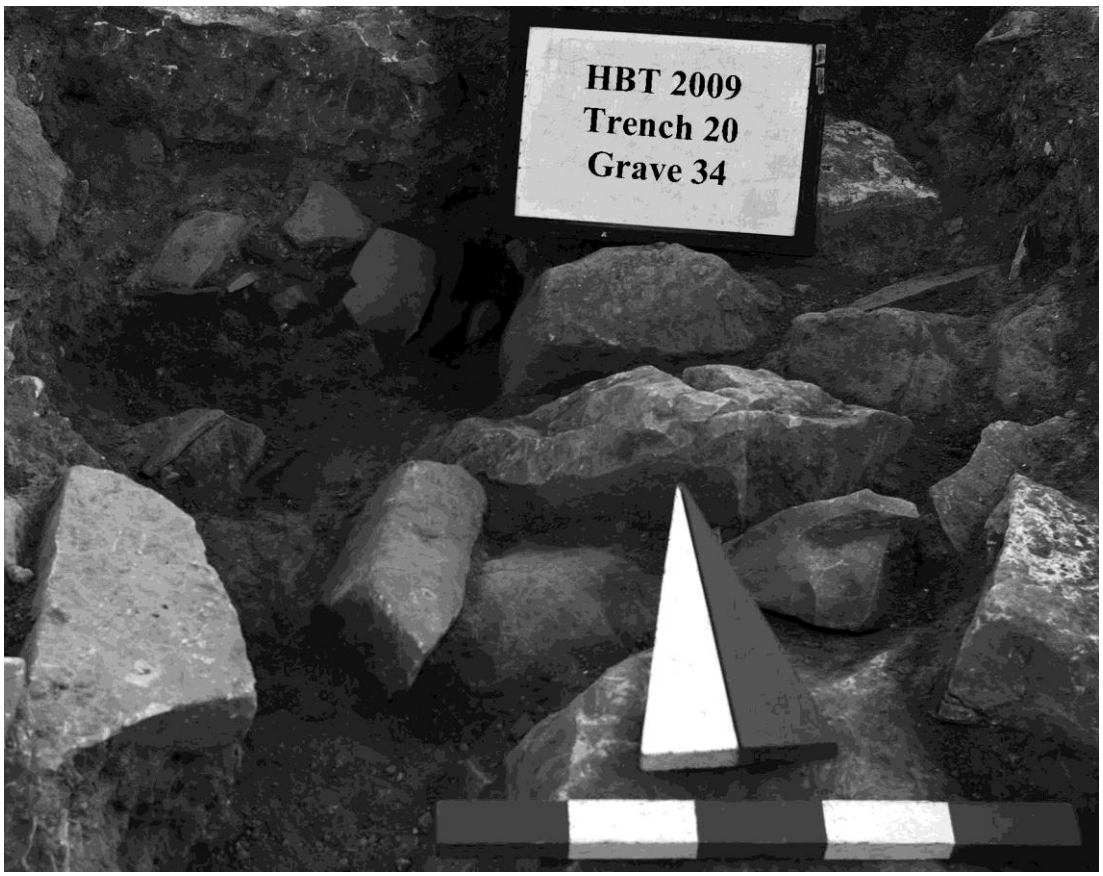


Plate 15b: Grave 34, Amphora (partly disturbed), Protogeometric period, Trench 19, HBT sector.

Plate 16

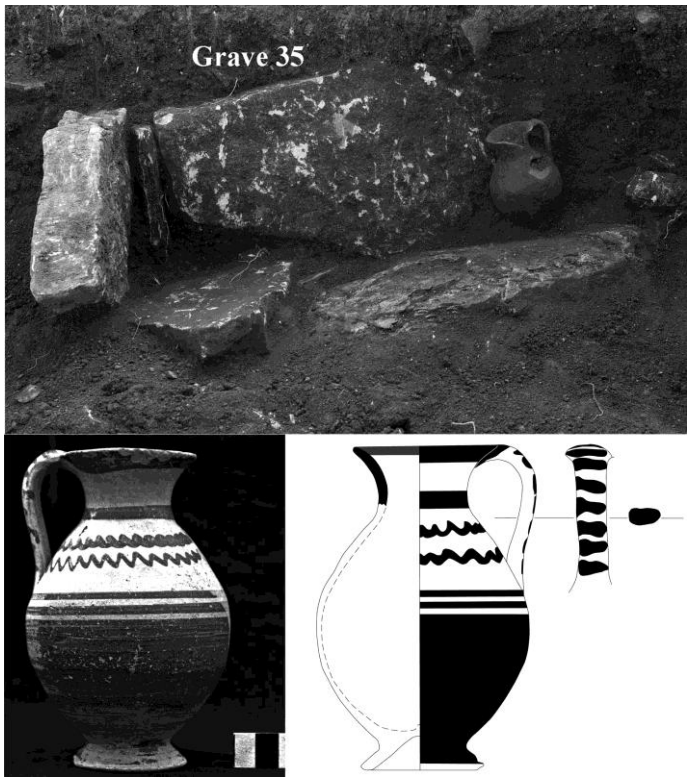


Plate 16a: Cist Grave 35 and grave good found in it. LPG period, Trench 22, HBT sector (Drawings by Polat Ulusoy).

Plate 16b: Grave context of Grave 38 (Pithos) and 41 (Cist), Trench 20, HBT sector (Photos and drawings by Polat Ulusoy).

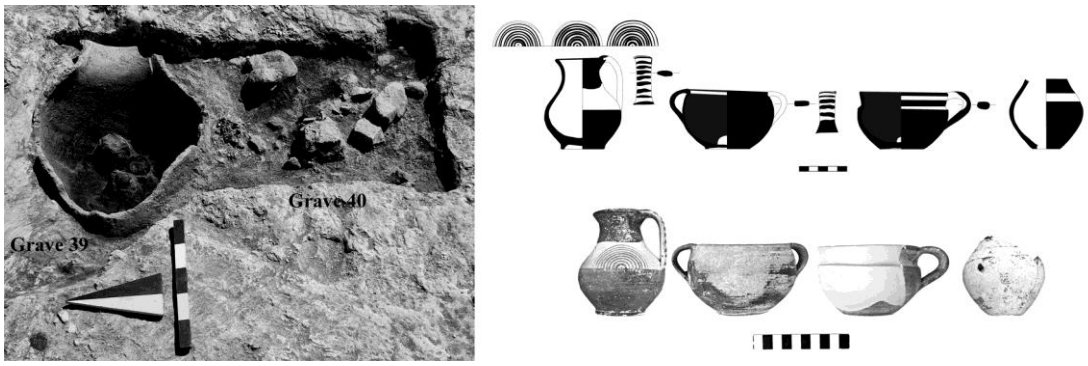


Plate 17a: Grave context of Graves 39 (pithos) and 40 (cremation area), Protogeometric, Trench 12, HBT sector (Photos and drawings by Polat Ulusoy).

Plate 17b: Grave 43, Trench 19, HBT sector (Photo by Polat Ulusoy).

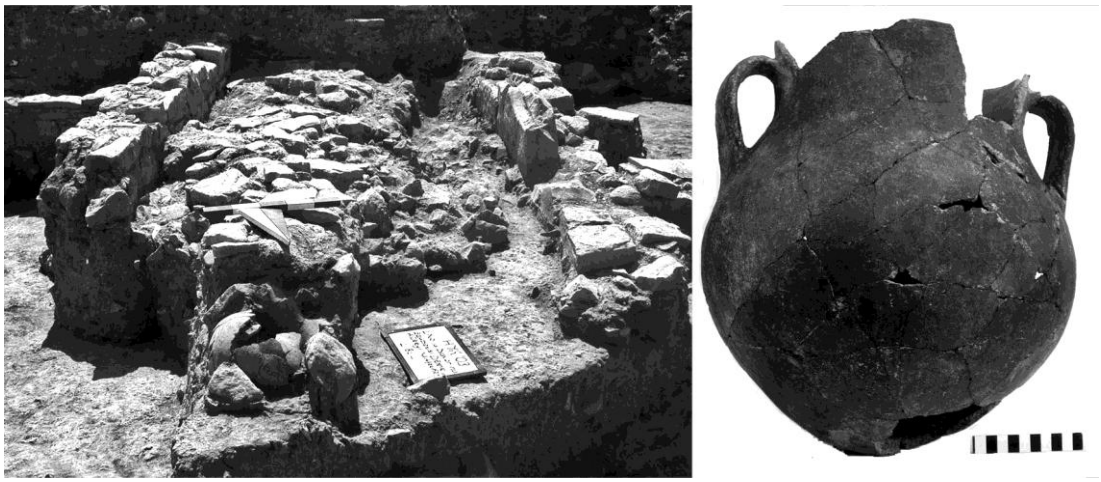


Plate 18a: Grave 7, Geometric period, KET sector.

Plate 18b: Grave 7, Geometric period, Trench 7, HBT Sector.

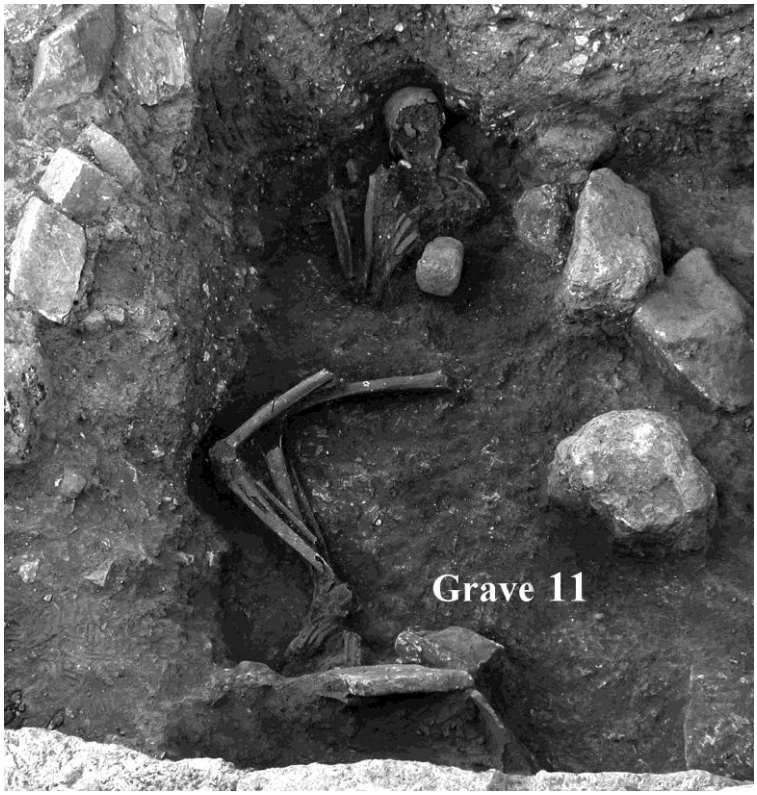


Plate 19a: Grave 11, Geometric period, Trench 8, HBT sector.

Plate 19b: Grave 22, Geometric period, Trench 11, HBT sector.

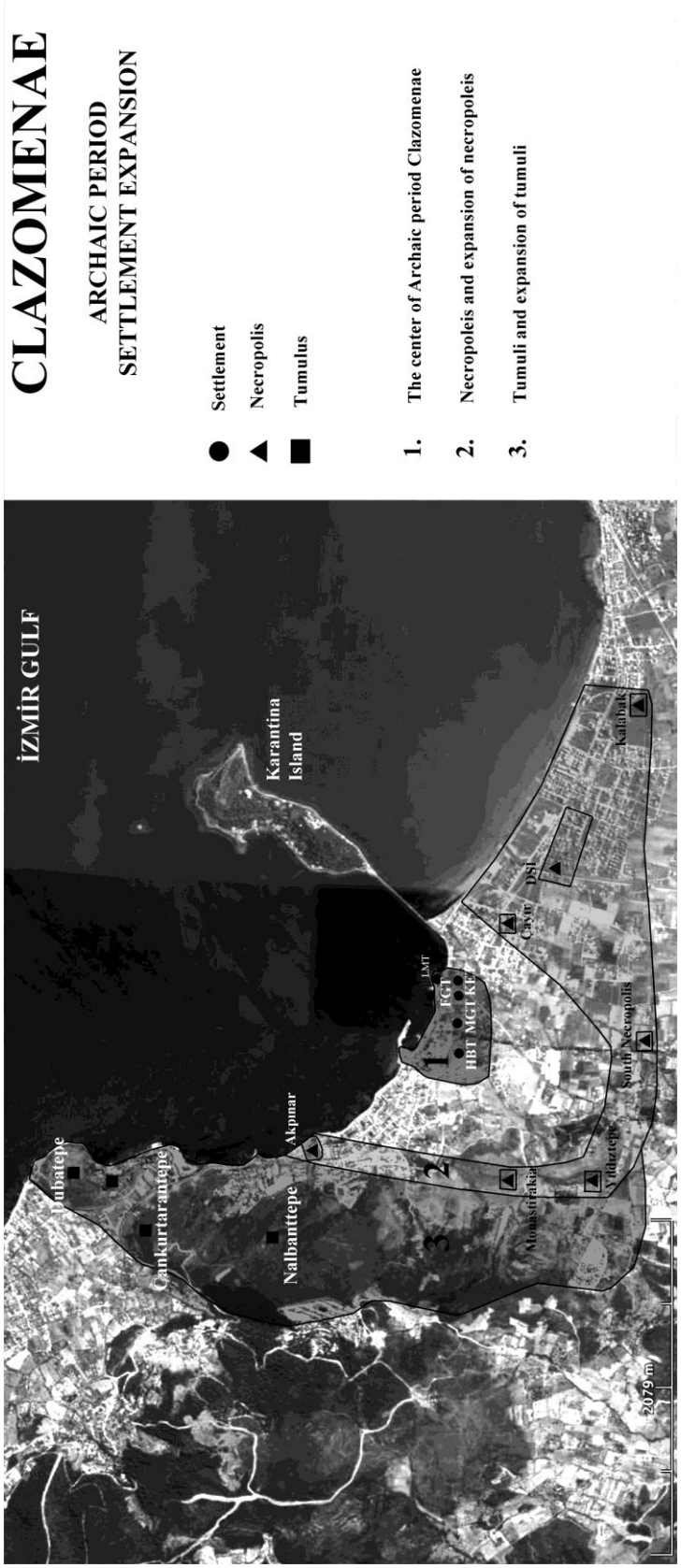


Plate 20: The Archaic period settlement, cemeteries, and expansion.

Plate 21a: Dubatepe, Tumulus, Archaic period.

Plate 21b: Nalbanttepe, Tumulus IV, Archaic period.

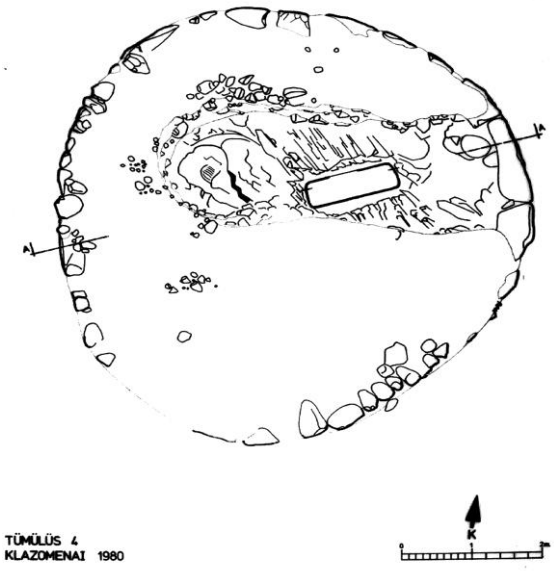


Plate 21c: Nalbanttepe, plan of Tumulus IV, Archaic period.

Plate 22a: Nalbanttepe, Tumulus I, Archaic period.

Plate 22b: Clay sarcophagi found in tumulus, Archaic period.

Plate 22c: Stone sarcophagi found in tumulus, Archaic period.

Plate 23

Plate 23a: Satellite photograph, location and boundaries of the Akpınar necropolis.

Plate 23b: Inhumation grave, Phase 1 (700-630 BC), Akpınar necropolis (Hürmüzlü 2003: Lev. 53).

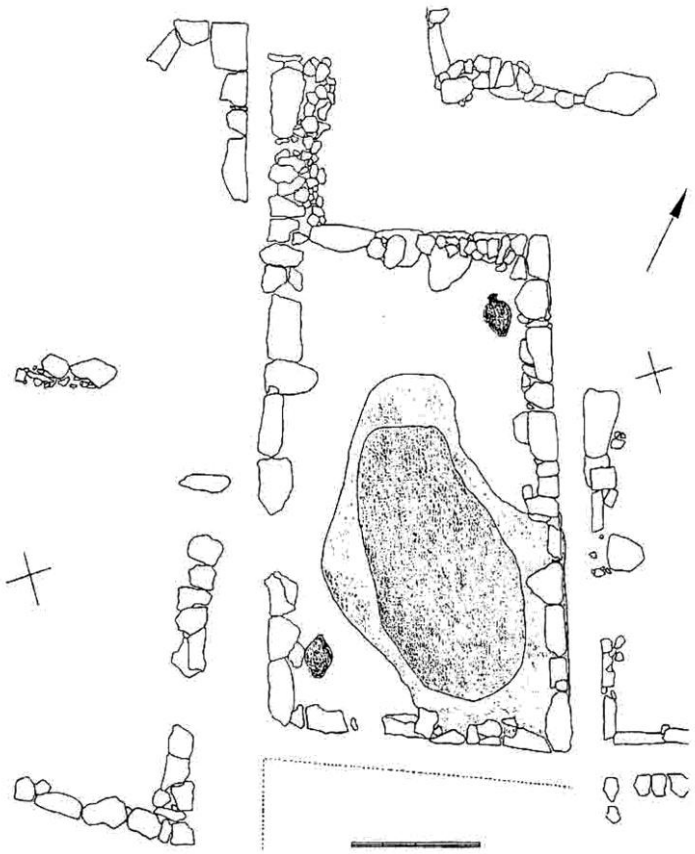


Plate 24a: Cremation and amphora burials, Phase 2 (630-600/590 BC), Akpınar necropolis (Hürmüzlü 2004a: fig. 4).

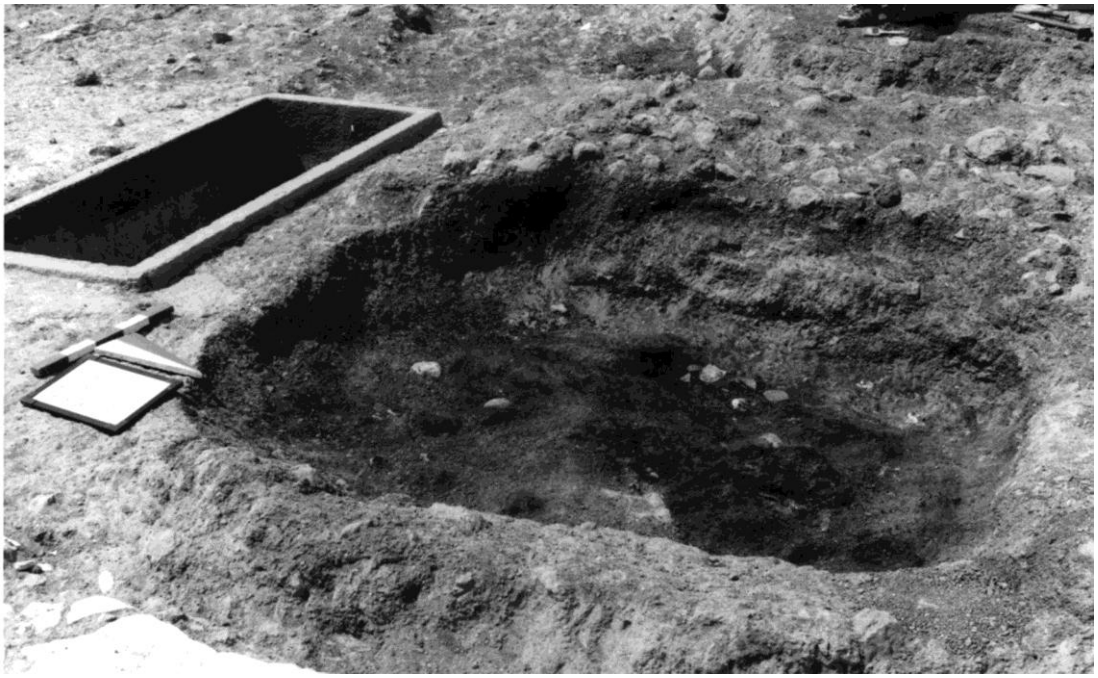
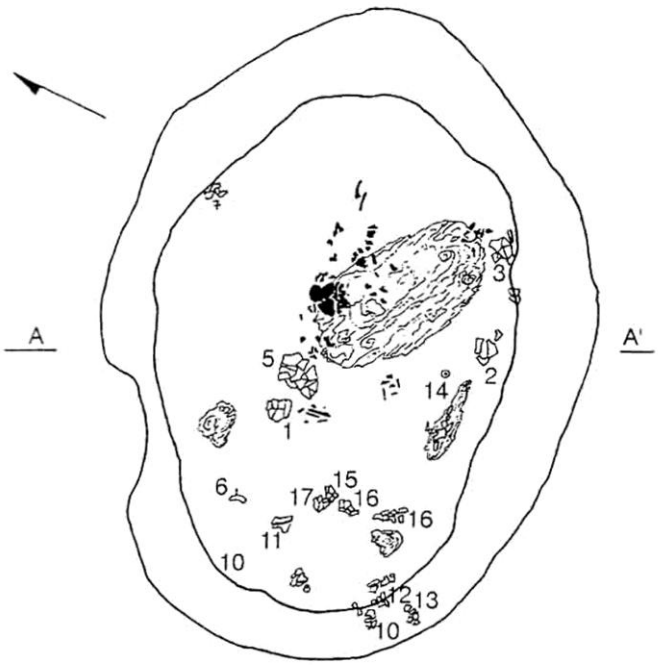


Plate 24b: Cremation grave (Grave 217), Phase 2 (630-600/590 BC), Akpınar necropolis.

Plate 25a: Funerary enclosures (A-B-C), Phase 2 (630-600/590 BC), Akpınar necropolis.



Scattered finds in the cremation area: band bowl (188/1): 6, 10, 15, 17, 18; loomweight (188/2): 14; bird bowl (188/3): 7, 10, 18; bird bowl (188/4): 6, 8, 11, 19; bowl (188/5): 9, 10, 12, 13; oinochoe (188/6): 16; chytra (188/7): 1, 4, 5; chytra (188/8): 2, 3.

Plate 25b: Cremation grave 188 and grave goods, Phase 2 (630-600/590 BC), Akpınar necropolis (Hürmüzlü 2004a: fig. 6).

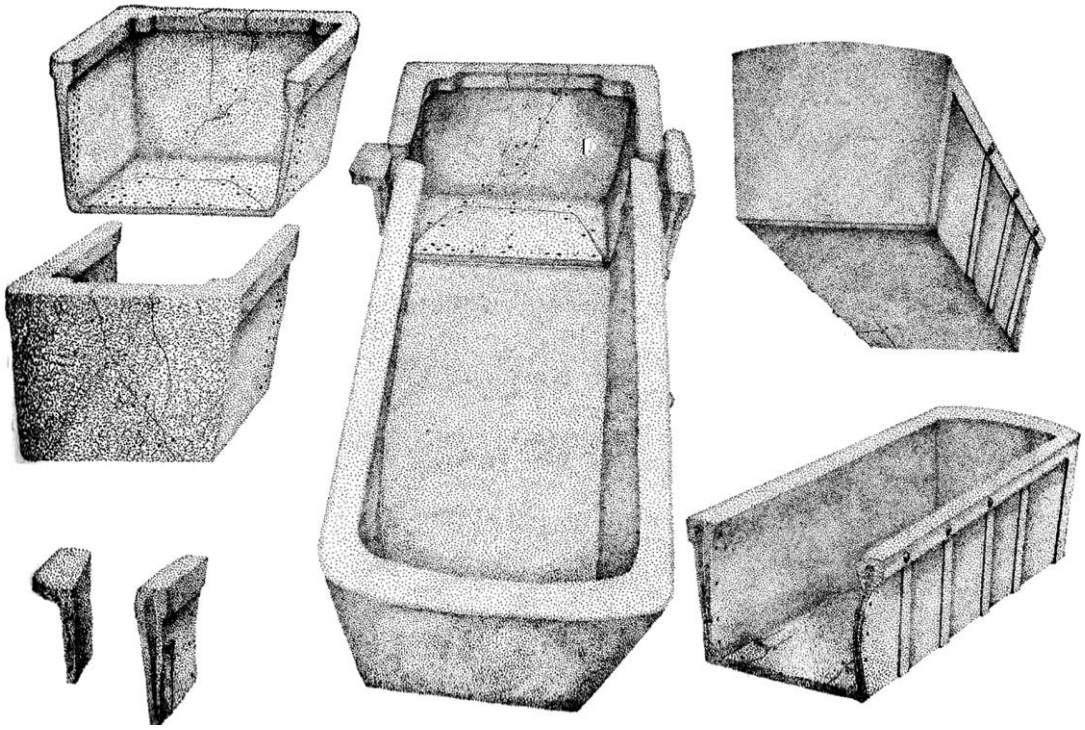


Plate 26a: Sarcophagus grave (Grave 196), Phase 2 (630-600/590 BC), Akpınar necropolis (Hürmüzlü 2003: fig. 94).

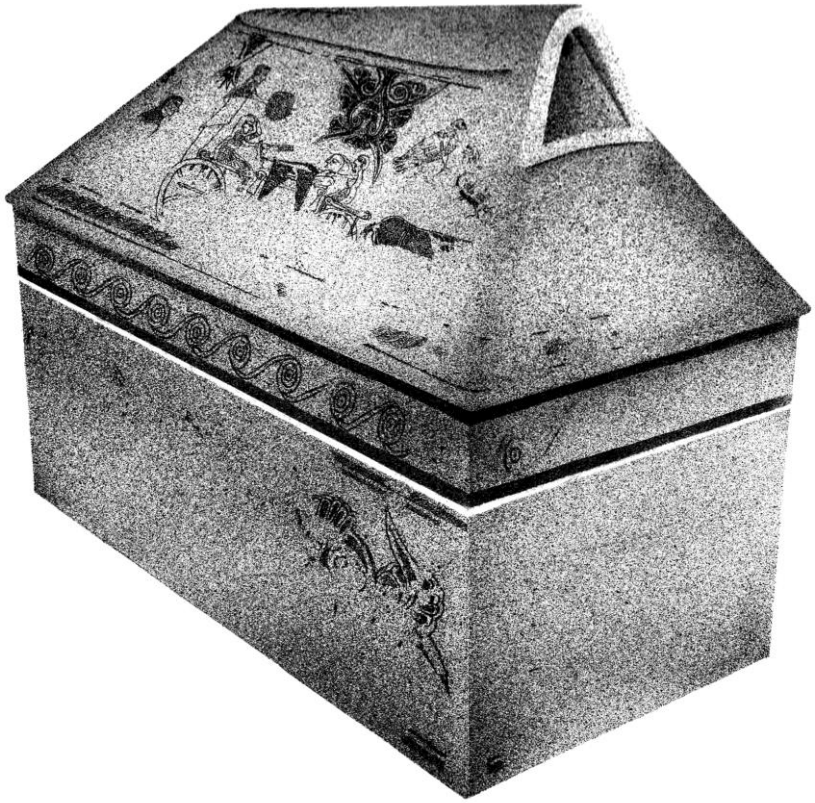


Plate 26b: Sarcophagus grave (Grave 1), Phase 2 (630-600/690 BC), Akpınar necropolis (Hürmüzlü 2003: fig. 75).

Plate 27a: Sarcophagus grave (Grave 80), Phase 3a (600/590-575 BC), Akpınar necropolis (Hürmüzlü 2003: fig. 84).

Plate 27b: Sarcophagus grave (Grave 123), Phase 3b (575-550 BC), Akpınar necropolis.

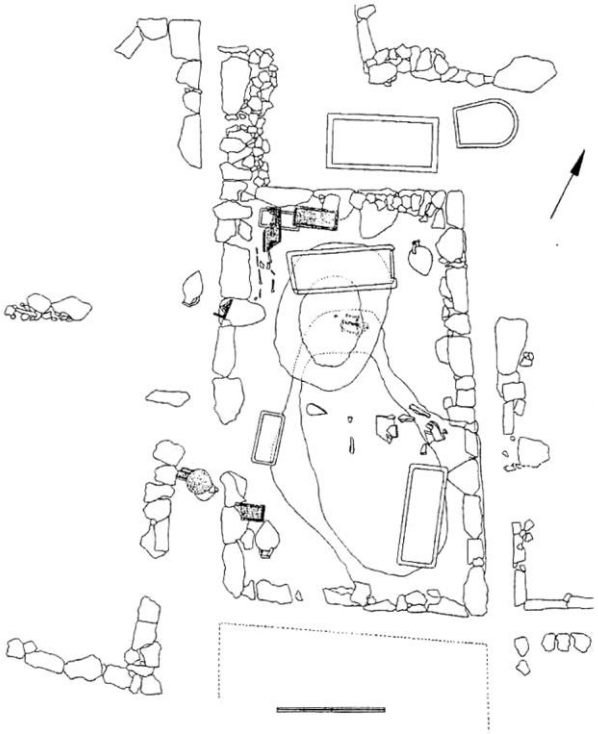


Plate 28a: Graves of the fourth phase (530-500/490 BC), Akpınar necropolis (Hürmüzlü 2004a: fig. 21).

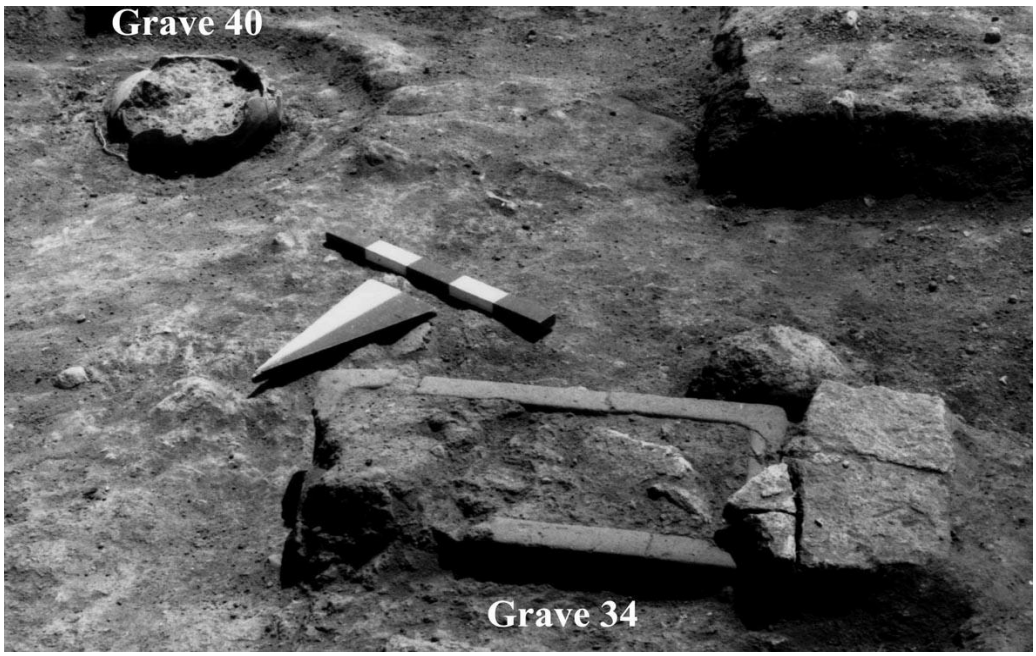


Plate 28b: Grave 34 and 40, Phase 4 (530-500/490 BC), Akpınar necropolis.

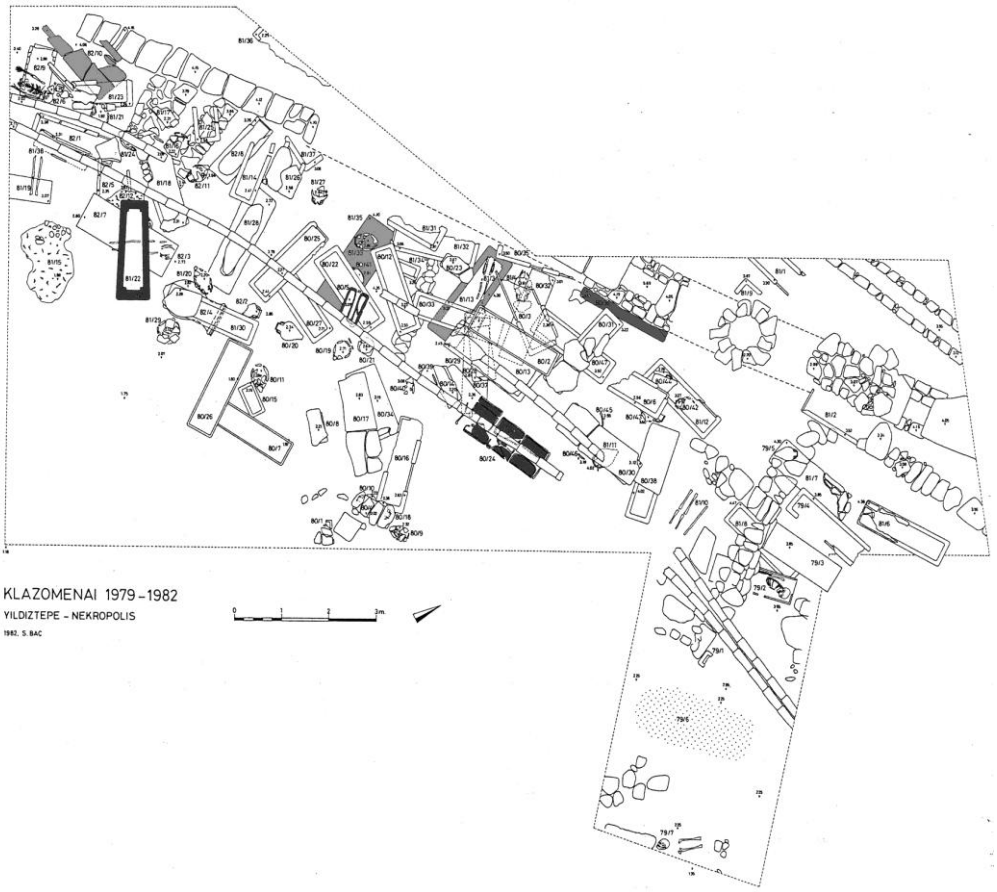


Plate 29a: Plan of the Yıldıztepe necropolis showing all graves of all phases. (Güngör 2006: plan 1).

Plate 29b: Amphora grave (Grave 82-02), Foundation phase, Yıldıztepe necropolis (Güngör 2006: fig. 37).

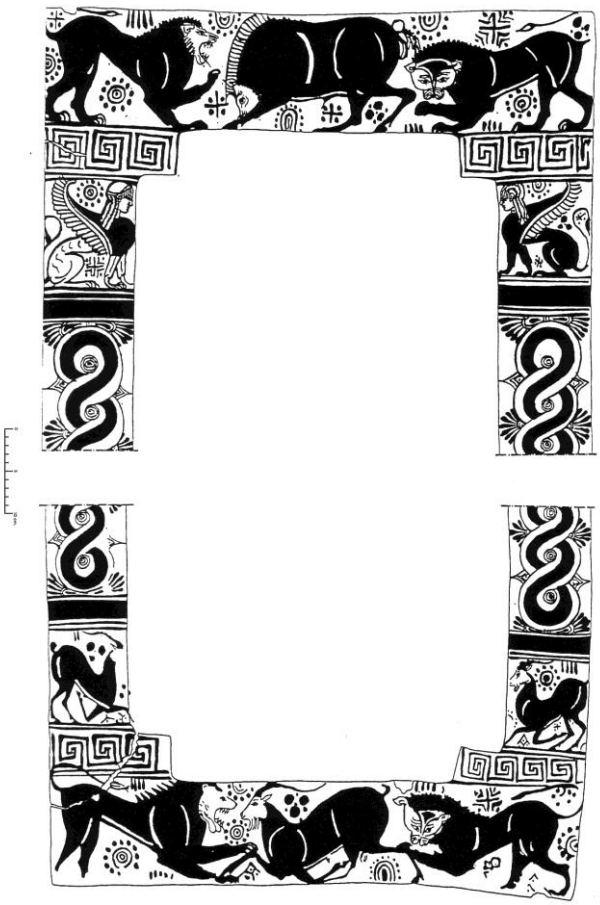


Plate 30a: Sarcophagus 81-13. Early Albetinum Group, Yıldıztepe necropolis (Güngör 2006: Plate 27).

Plate 30b: Grave 81-35 and other graves, Phase 1 and 2, Yıldıztepe necropolis.

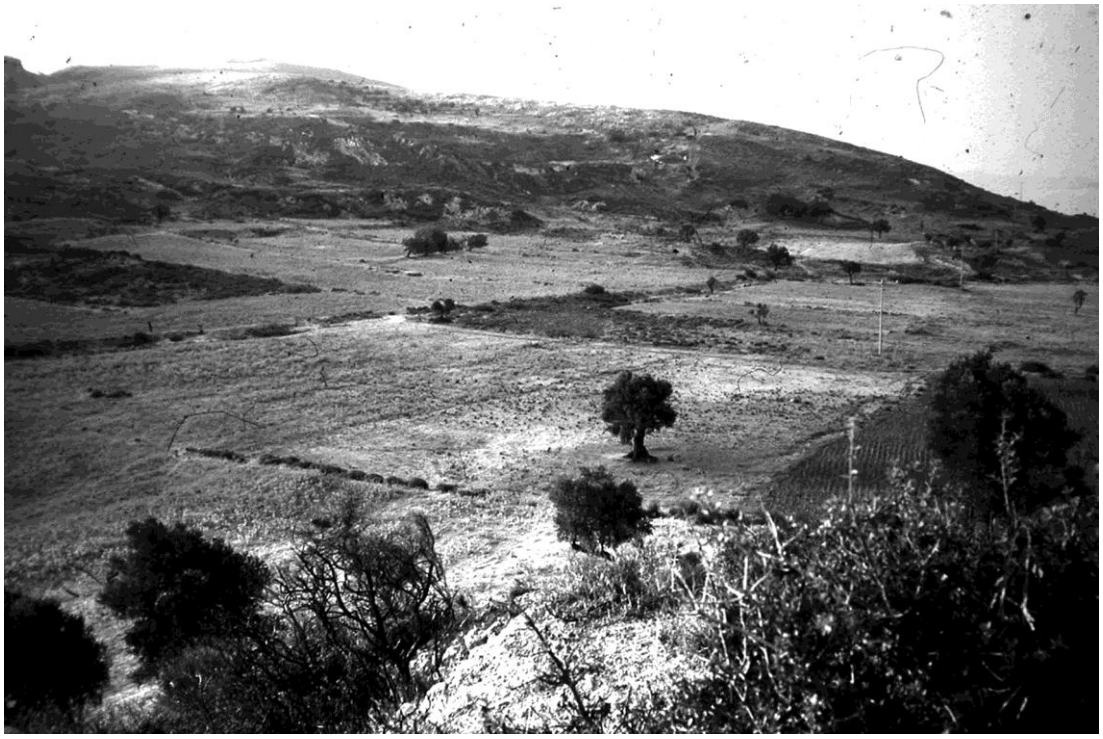
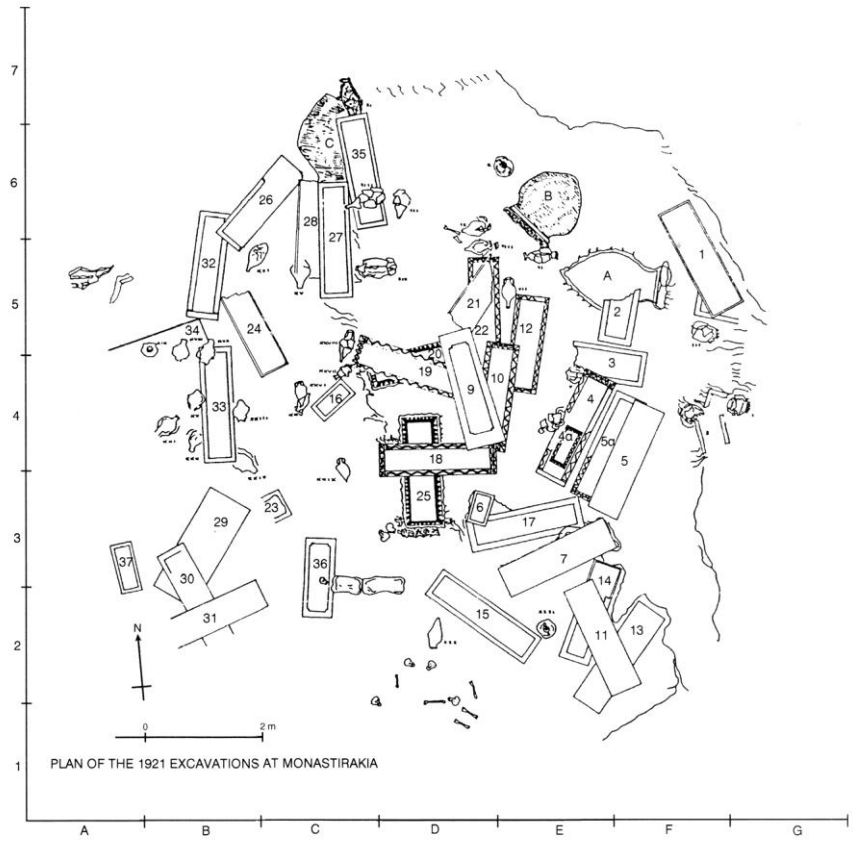
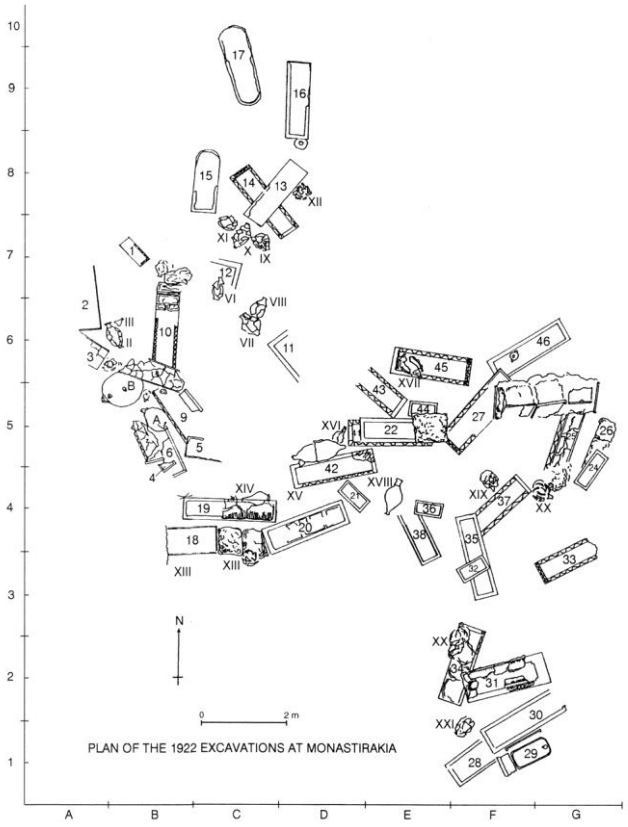


Plate 31a: Monastirakia necropolis, general area view (Photo by Güven Bakır).



Plan of the 1921 excavations at Monastirakia (AAS Archive)

Plate 31b: Plan of 1921 excavations at Monastirakia necropolis (Tzannes 2004: fig. 4).



Plan of the 1922 excavations at Monastirakia (based on G. Oikonomos' drawings and photographs)

Plate 32a: Plan of 1922 excavations at Monastirakia necropolis (Tzannes 2004: fig. 5).

Plate 32b: Graves 21/29, 21/36, 21/25 at Monastirakia necropolis. (Tzannes 2004: fig. 11).

Plate 33

Plate 33a: Sarcophagus grave and its cover, Kalabak necropolis.

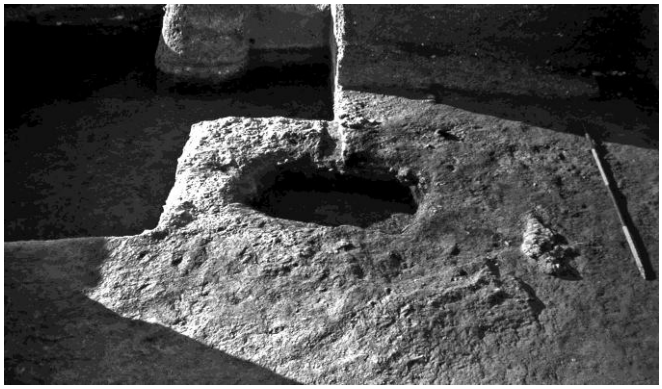


Plate 33b: Cremation grave, Kalabak necropolis.

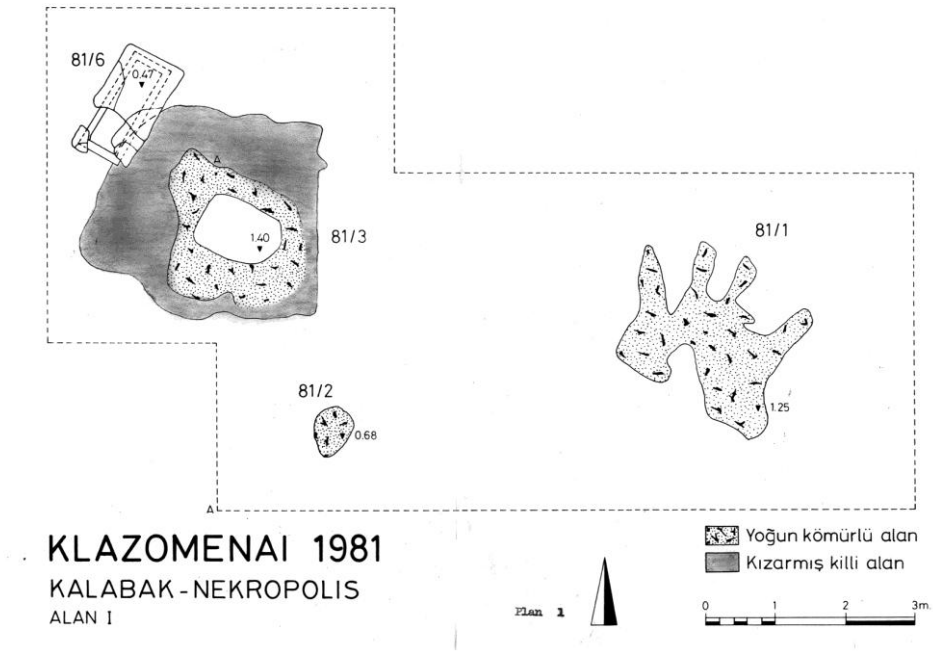


Plate 33c: Plan of Section 1, Kalabak Necropolis.

Plate 34

Plate 34a: Burnt earth and the cremation area, Kalabak necropolis.

Plate 34b: Simple earth inhumation grave, Kalabak necropolis.

Plate 35: The location and known boundaries of DSİ necropolis.

Plate 36a: Enclosures and sarcophagus graves, DSİ necropolis.

Plate 36b: Enclosures and sarcophagus graves, DSİ necropolis.

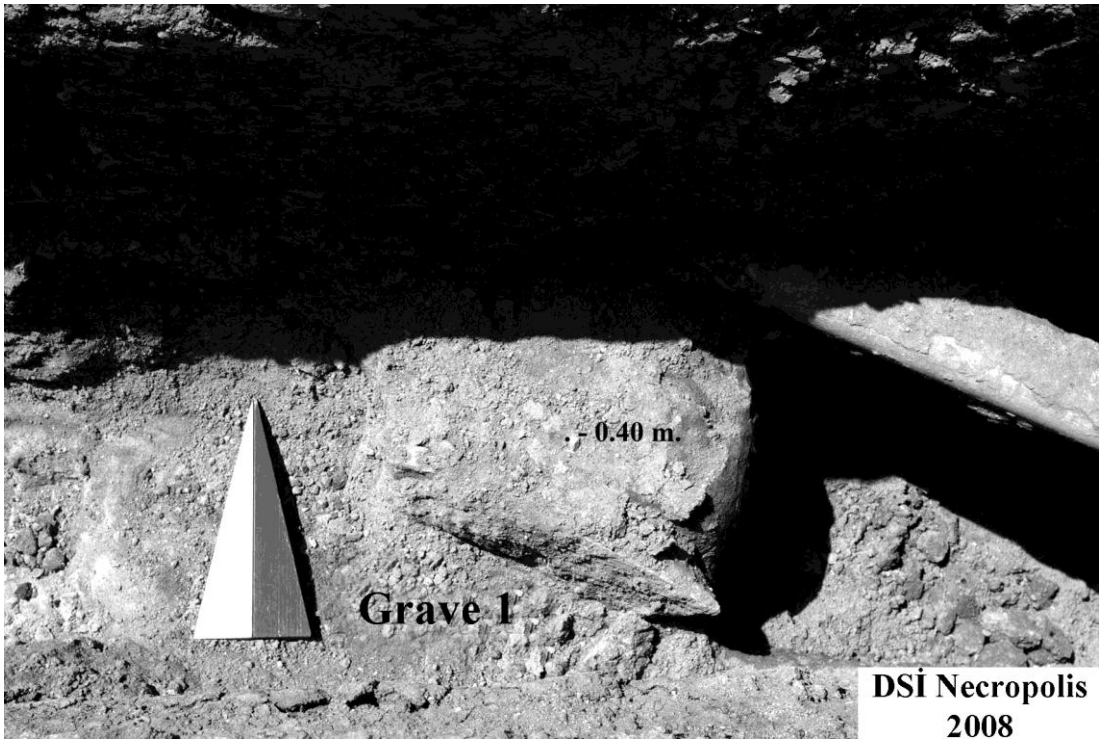


Plate 37a: Amphora grave, late eighth - early seventh century BC, DSİ Necropolis.

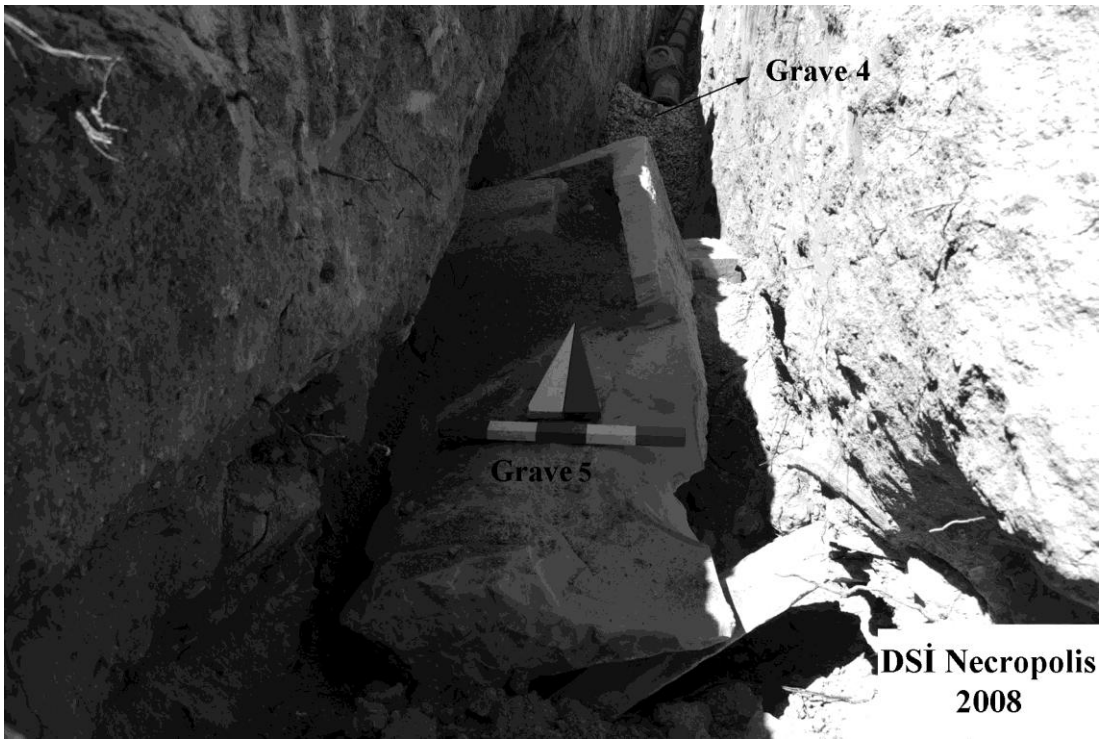


Plate 37b: Stone sarcophagus, middle of the sixth century BC, DSİ necropolis.

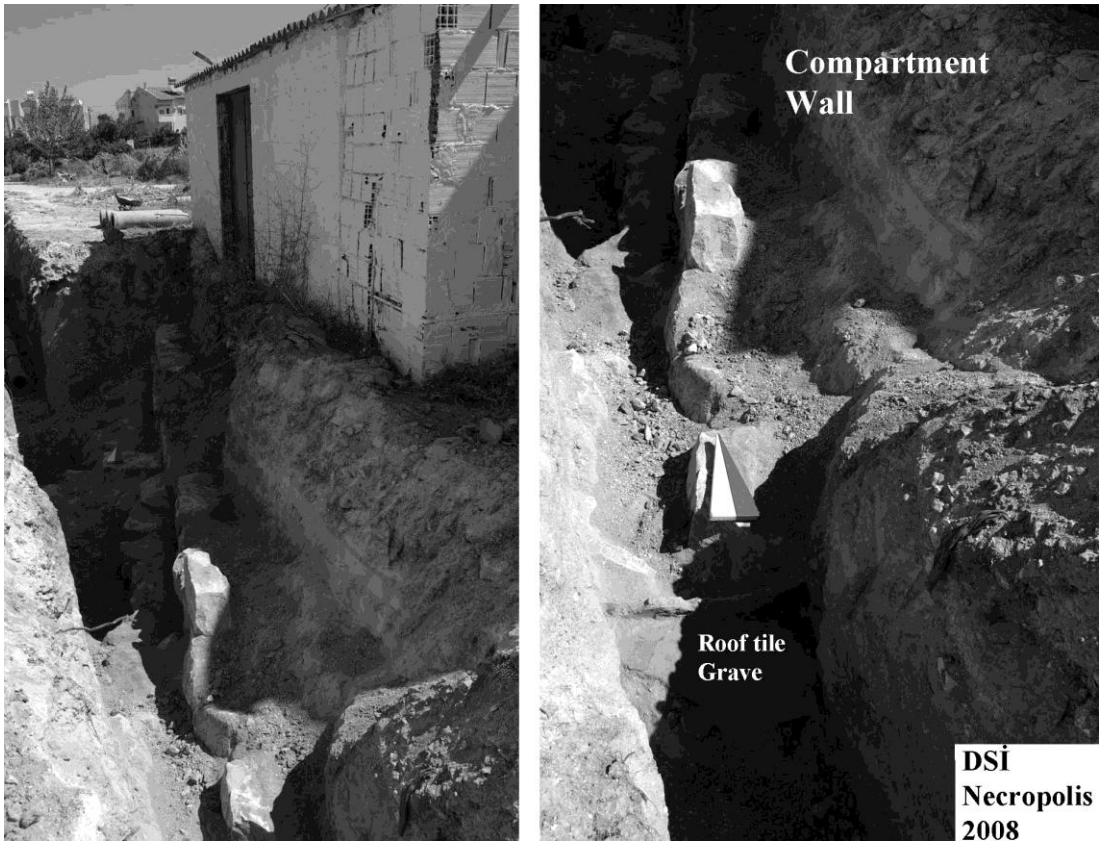


Plate 38a: Roof tile grave (fourth century BC) and Archaic period possible enclosure, DSİ necropolis.

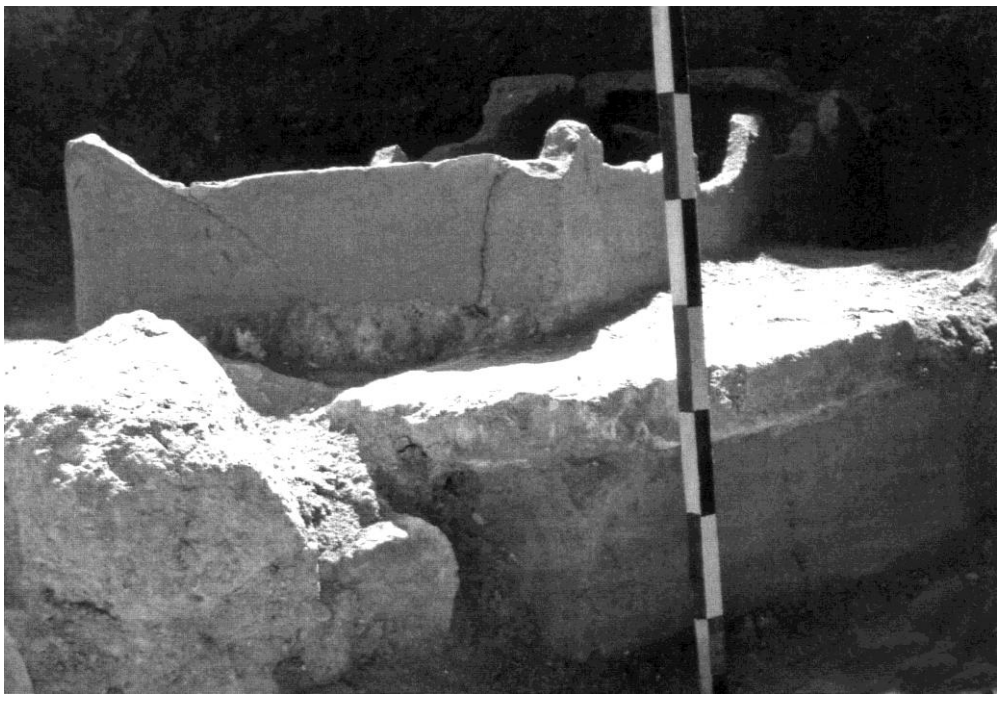


Plate 38b: Sarcophagi graves found at South necropolis.

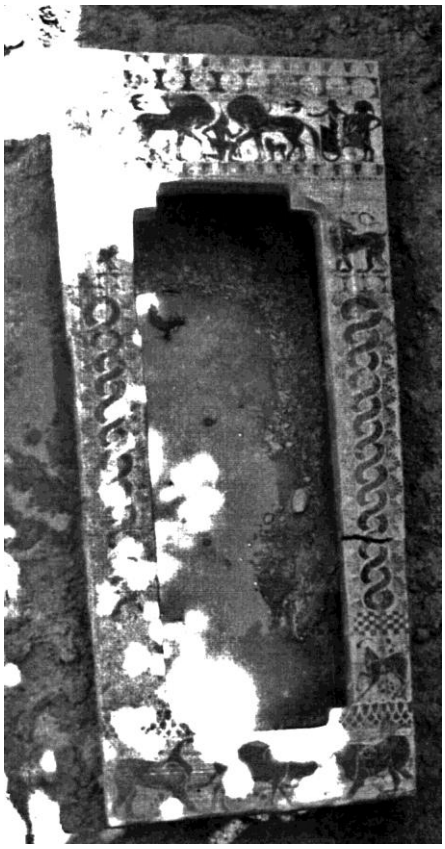


Plate 39a: Sarcophagus grave found at South necropolis.

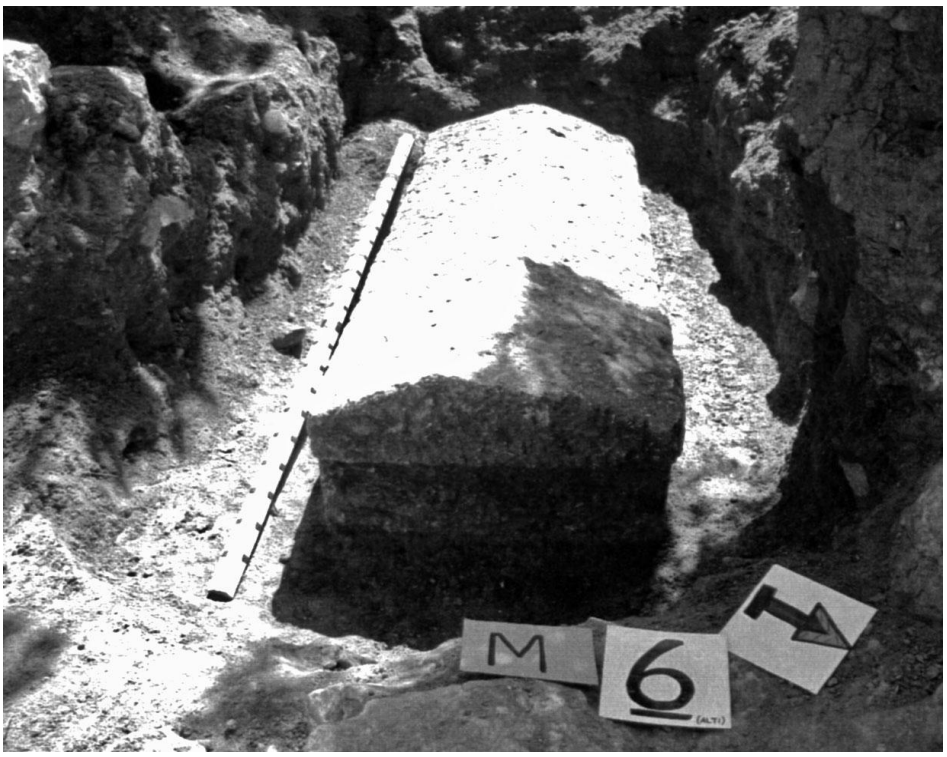


Plate 39b: Stone sarcophagus with cover found at South necropolis.

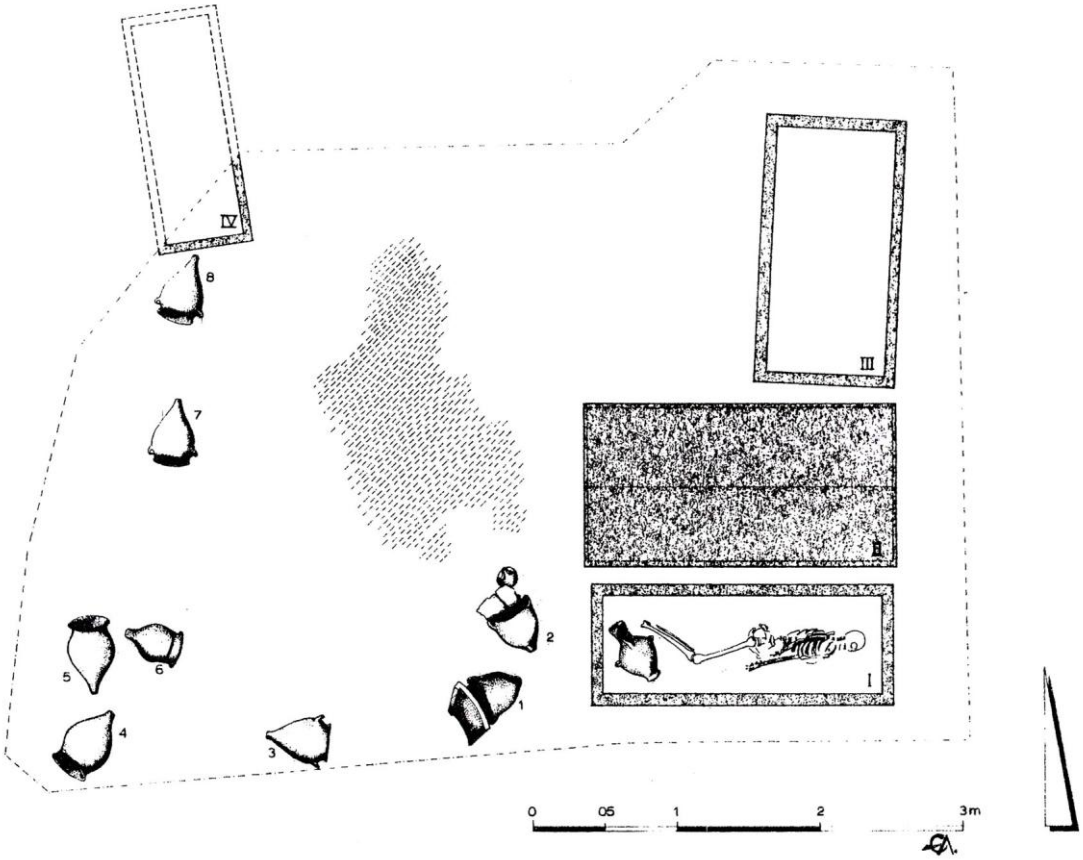


Plate 40a: Plan of the excavation on the Pipinia plot at Rizari, Chios Town (Lemos, A. 1997: fig. 1).

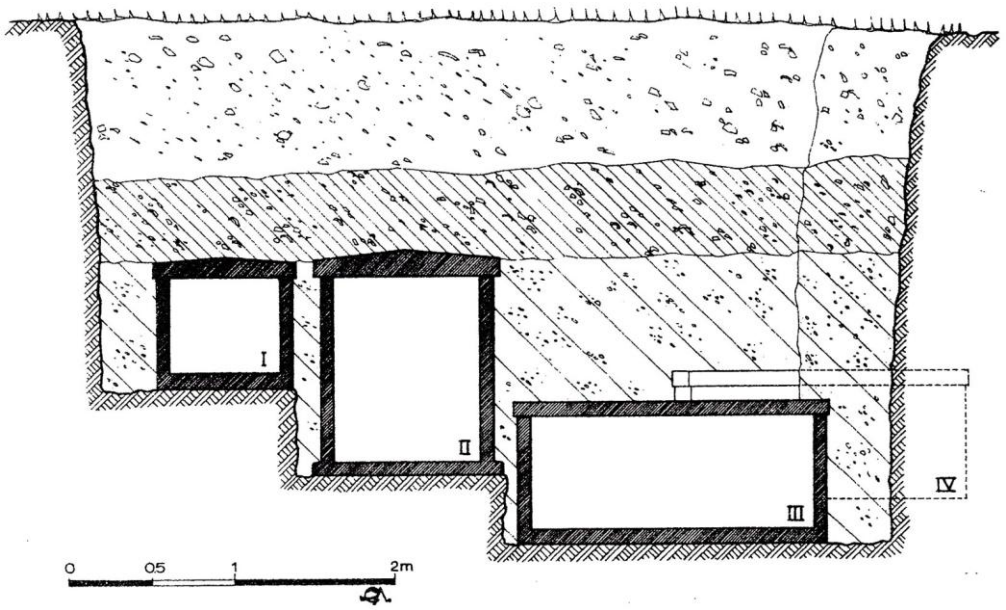


Plate 40b: Profile from the east side with the sarcophagi, Rizari, Chios Town (Lemos, A. 1997: fig. 2).

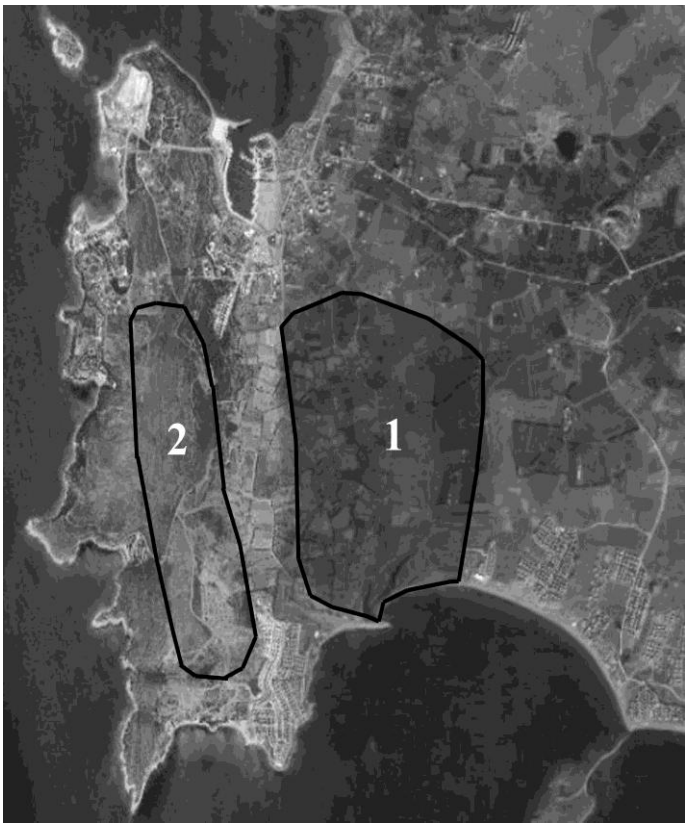


Plate 41a: Teos, 1. Possible Arcahic settlement, 2. Possible necropolis area.

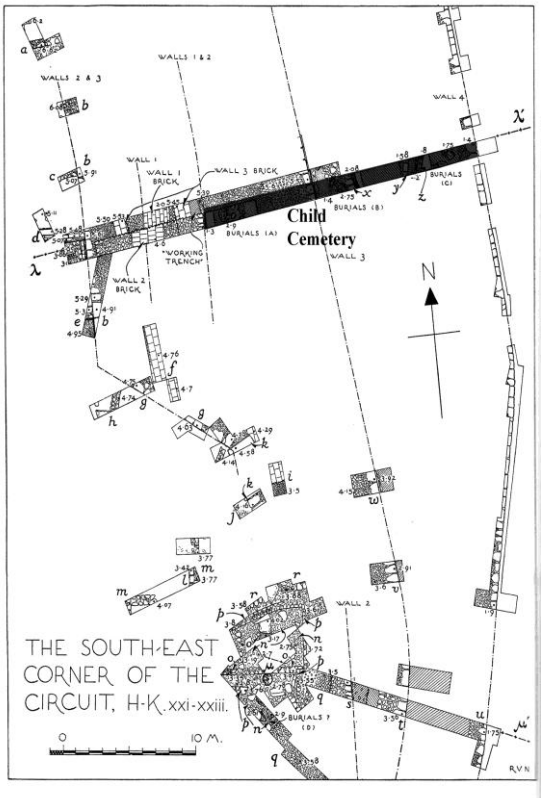


Plate 41b: Smyrna, child cemetery, second half of the seventy century (Nicholls 1953-54: fig. 2).

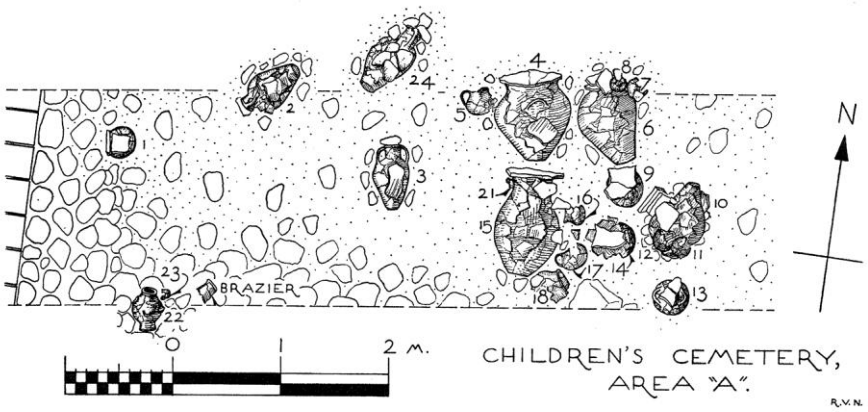


Plate 42a: Smyrna, plan of the Archaic child cemetery (Nicholls 1953-54: fig. 3).

Plate 42b: Smyrna, Archaic period burial ground.

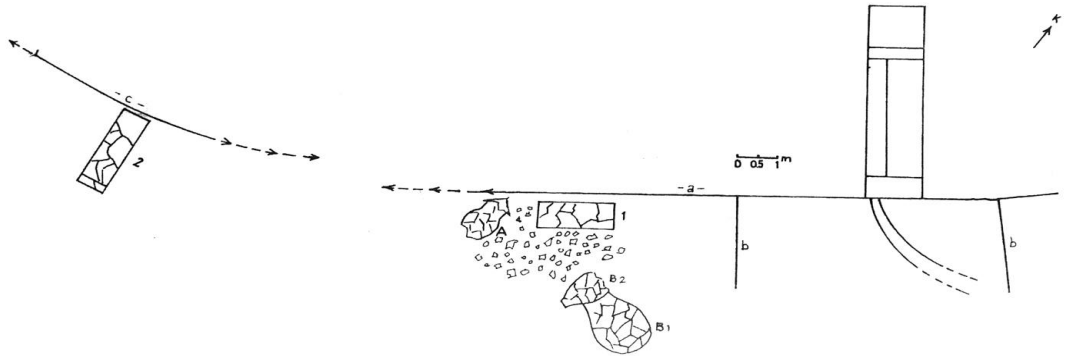


Plate 42c: Smyrna, plan of the Archaic period burial ground (Akurgal, M. 1998, fig. 2).

Plate 43a: Smyrna, Archaic period burial ground.

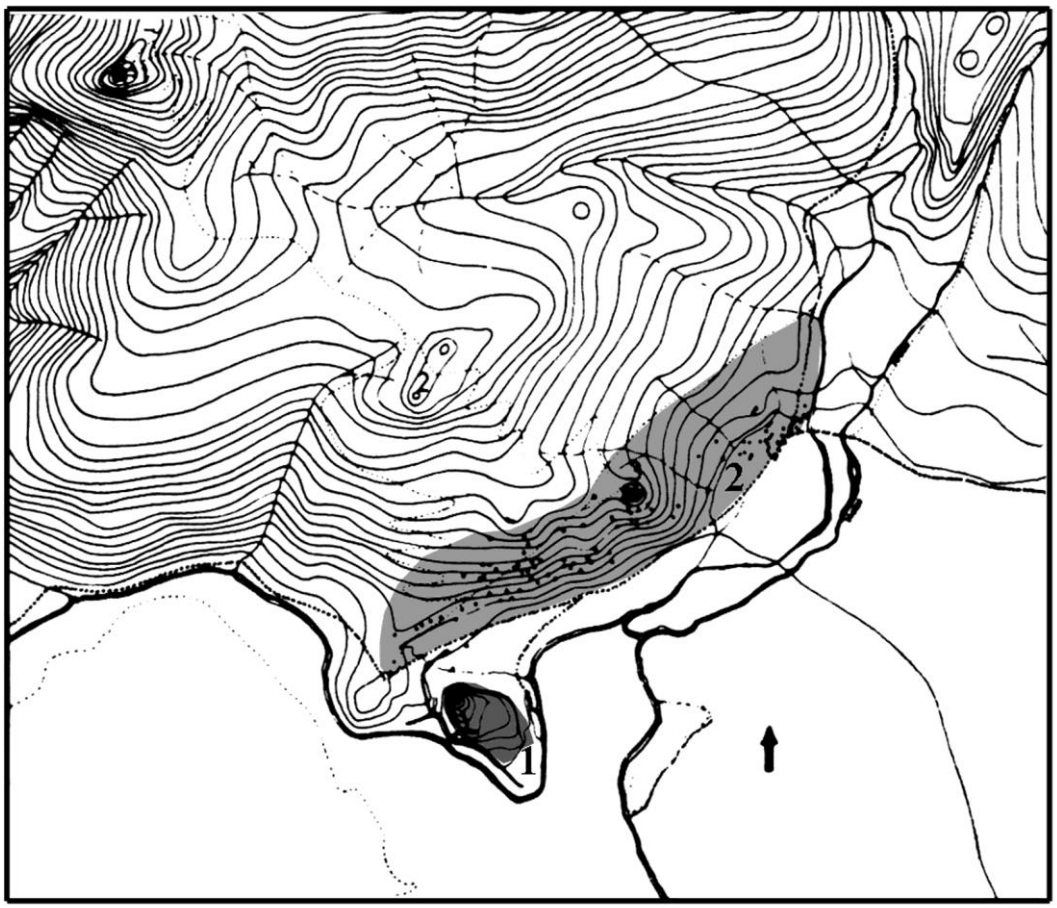


Plate 43b: Plan of the Archaic period settlement (1) and necropolis (2) of Smyrna.

Plate 44a: Clazomenean sarcophagi found at Archaic necropolis of Smyrna (Cook, R. 1974: pl. 8a).

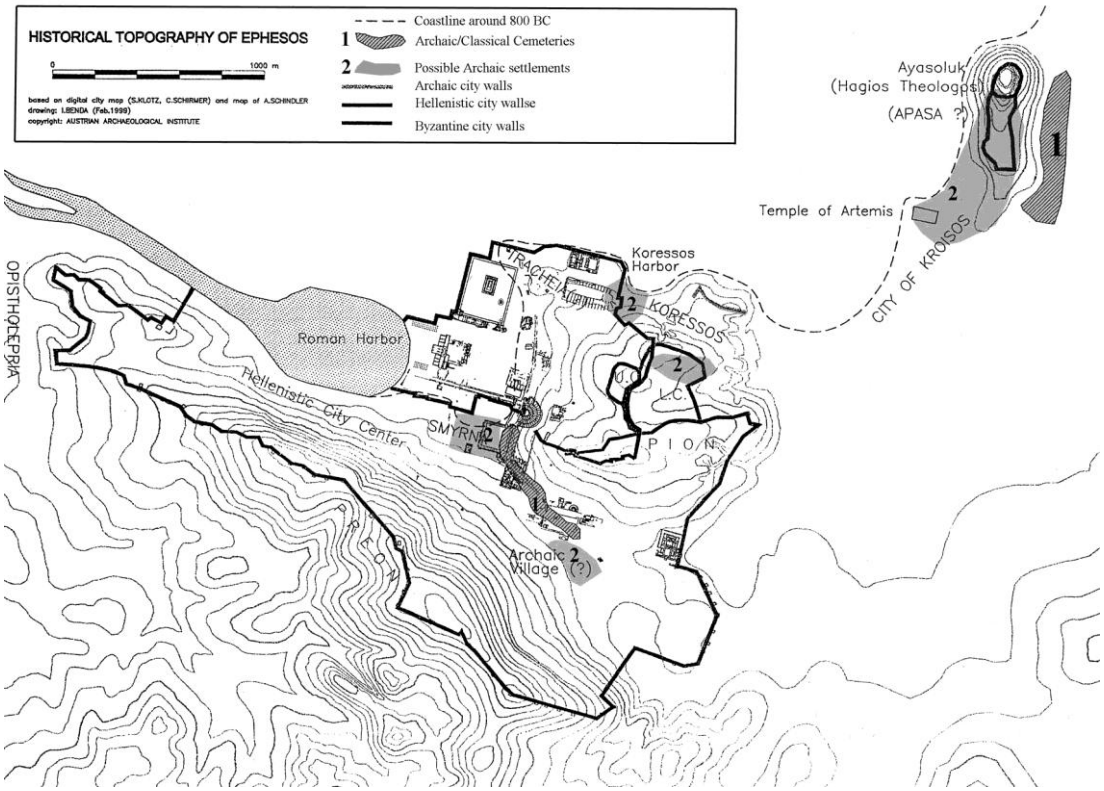


Plate 44b: Plan of historical topography of Ephesos from Geometric period to the end of the Byzantine Period (Scherrer 2001: fig. 3.1, with modifications).

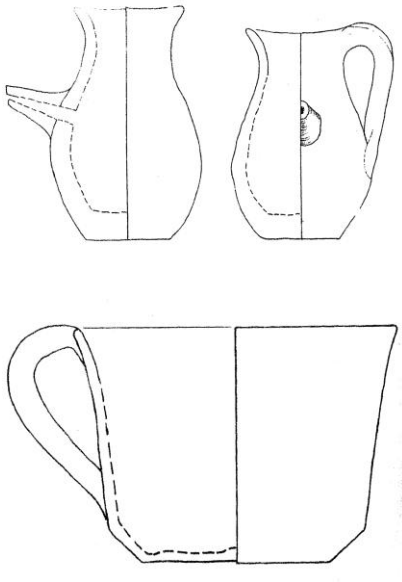


Plate 45a: Ephesos, Grave goods of the LG burial located of the slopes of Ayasuluk Hill (İçten 1988: fig. 10-11).

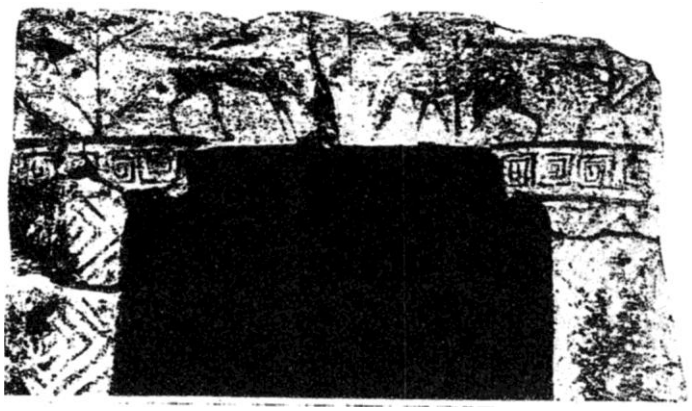


Plate 45b: Ephesos, Clazomenean sarcophagus, Archaic cemetery (Langmann 1967: pl. 43).

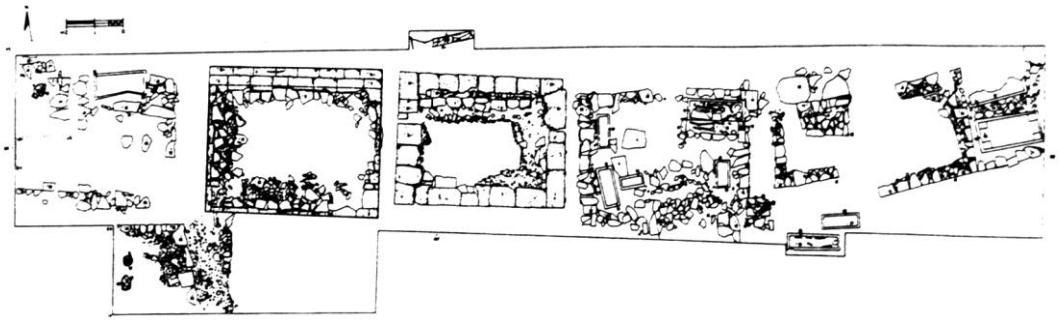


Plate 45c: Phokaia, Archaic period altars and Archaic and Roman period graves (Özyiğit 2001: fig. 2).

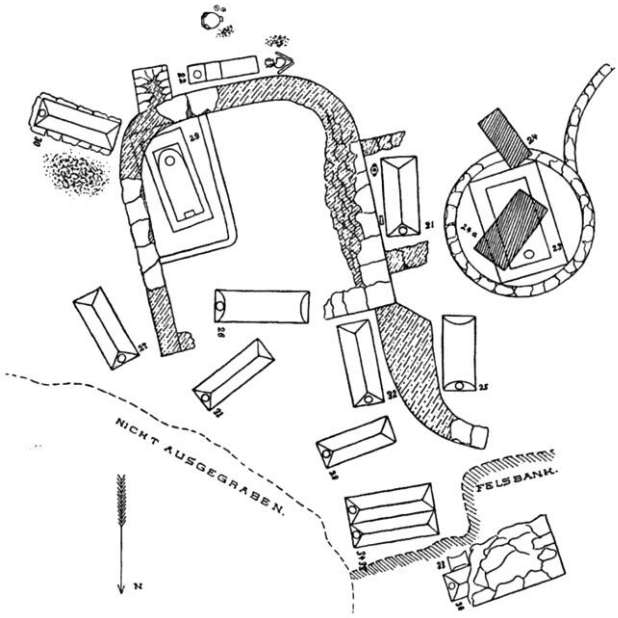


Plate 46a: Samos, Pythagoreion, plan of the West Necropolis (Löwe 1996: fig. 18).

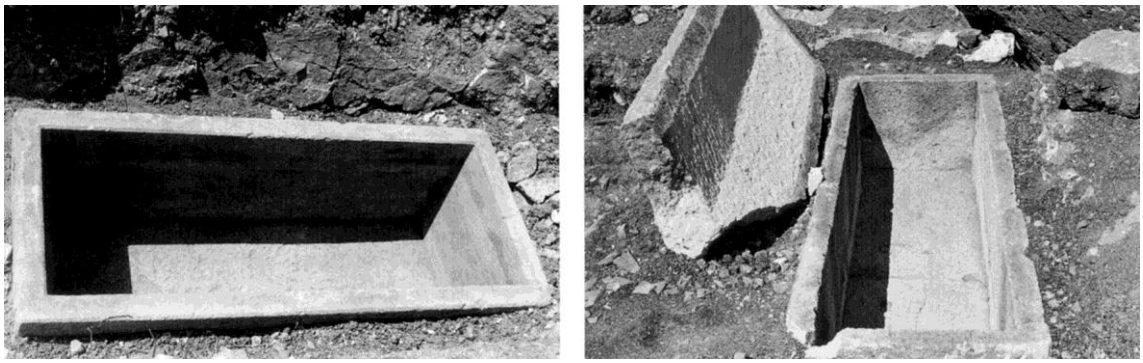


Plate 46b: Samos, Pythagoreion, Stone sarcophagi, West Necropolis (Tsakos 1996: pls. 4-5).

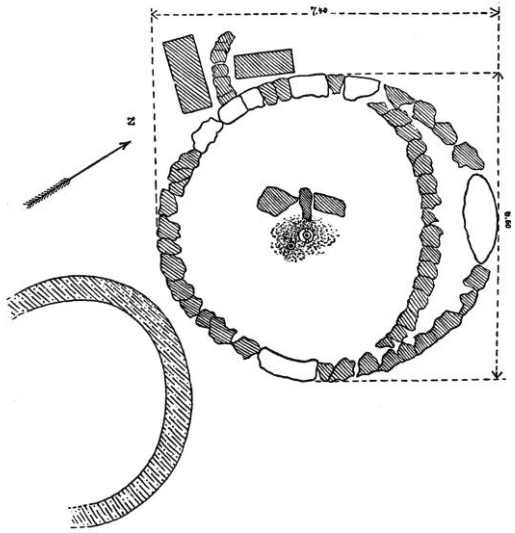


Plate 46c: Samos, Pythagoreion, plan of the North Necropolis (Löwe 1996: fig. 20).

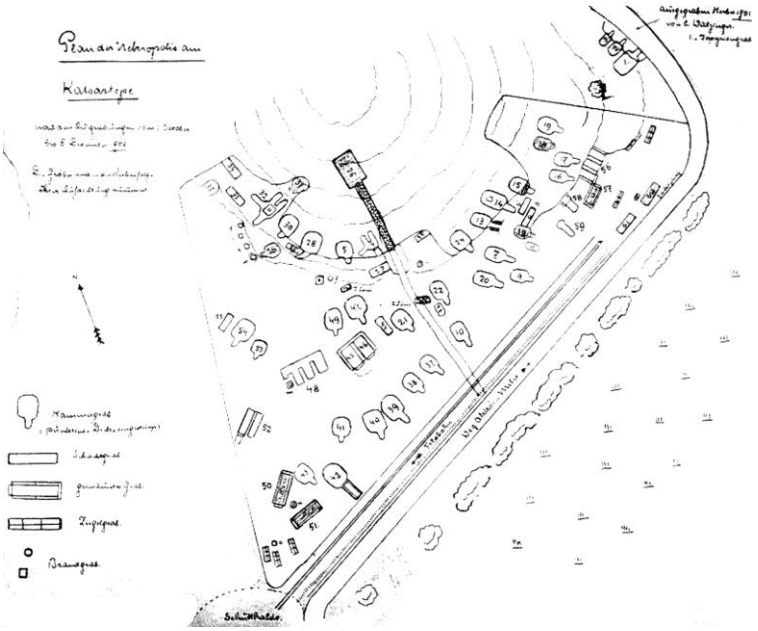


Plate 47a: Miletos, Kazartepe, Lion tomb and later graves (Forbeck et al. 1997: abb. 2).

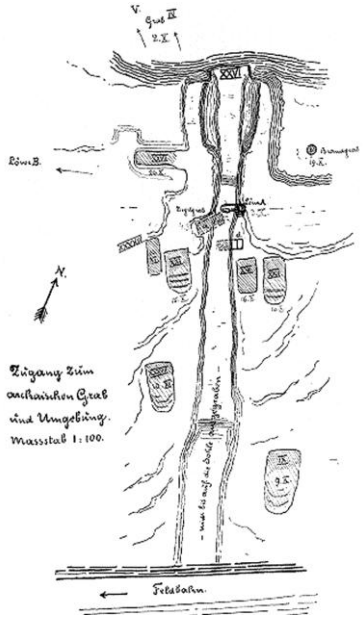


Plate 47b: Miletos, Kazartepe, Lion tomb and later graves (Forbeck et al. 1997: abb. 3).

Plate 47c: Miletos, Kazartepe, Lion sculpture located in front of the dromos, 550-540 BC (Forbeck et al. 1997: abb. 9).

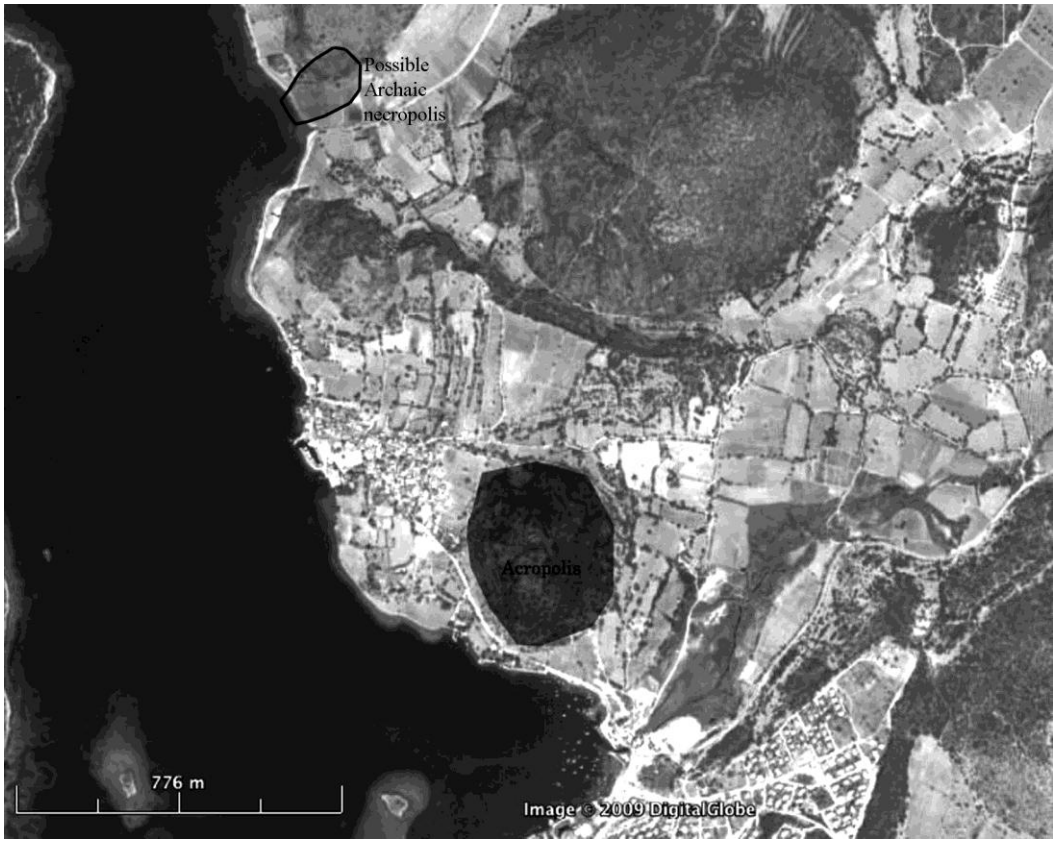


Plate 48a: Erythrai, Acropolis and possible Archaic period necropolis area.

Plate 48b: Fragment of a clay sarcophagus produced in Erythrai (Bayburtluoğlu 1977: pl. 43).

Plate 48c: Fragment of a clay sarcophagus produced in Erythrai (Bayburtluoğlu 1977: pl. 43).