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Urban planning in the ancient Greek colonies from their foundation until the Roman conquest in the western and northwestern Black Sea region

Master’s Dissertation

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Abstract

This paper is going to focus on the Greek colonies of the Western and North-Western Black Sea region, from their foundation until the Roman conquest and especially on their poleis meaning the urban centers - synonymous with the Greek term asty. This is the part that was enclosed by a defensive wall and where the agora, the sanctuaries, the political institutions and the other public buildings were situated. The ancient Greek cities under discussion are Apollonia Pontica, Mesambria, Odessos, Dionysopolis, Kallatis, Tomis, Istros, Orgame, Berezan and Olbia. The reasons why Greeks chose the specific locations for each establishment are going to be investigated. The presence or not of local sedentary population and the kind of the relations between these people and the Greek settlers are of major importance, since they affected the economic and demographic growth of the newly-founded poleis. Political events and especially military operations may have also affected the level of urbanization and the management of the urban territory of the colonies. One other issue that will be examined is in which way the ancient Greeks organized the urban space and when and how these cities evolved into typical Greek poleis by acquiring all the characteristic Hellenic features. Which were the priorities of the settlers when founding a new colony and city? What was the initial size of these cities and how much did they grow? What kind of boundaries did they demarcate them from the rural territory? Where there any areas reserved for sacred or public spaces? Was economic prosperity reflected in the construction activity? What was the architecture of the public buildings like? By analyzing the urban structure of these ancient Greek poleis a lot of remarks can be made concerning religious, political, economic and social matters. However, a complete analysis would not be possible because there is a small number of archaeological evidence, since many of the ancient cities have been buried under the modern ones and large parts of them have been submerged into the water.
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I. Introduction

During the extended colonization of the Black Sea area numerous Greek colonies emerged. This process was preceded, as the archaeological record seems to prove, by a first-contact phase with sporadic visits to the region (Greco-Torelli 1983, 224). The Greeks have decided to establish their settlements in places where they had previously explored. Their first contacts with the Black Sea area were made in order to explore the region, gather important information and get acquainted with it and its local population (Petropoulos 2005b, 217). According to Petropoulos (2005b, 217) this period could be called the “reconnaissance period”.

The colonization that followed the pre-colonial contacts can be divided in three phases. This assumption derives from the evidence of the ancient written sources, sometimes combined with archaeological data (Kacharava 2005, 12). The first phase, during the second half of the 7th century B.C. includes the foundation of Berezan, Apollonia Pontica, Istros and Orgame and must have been a period of adaptation to the new environmental conditions (Petropoulos 2005b, 217). The second phase, which is characterized by scholars as a period of mass migration, began in the second quarter of the 6th century B.C. (Petropoulos 2005b, 217) with the foundation of Odessos, Olbia, Pantikapaion, Nymphaion, Myrmekion, Tyritake, Kepoi, Hermonassa and Heracleia Pontica (Kacharava 2005, 13). The third and final phase is in the second half of the 6th century B.C. and among the colonies that were founded during this period are included Messambria, Tomis, Tyras, Nikonion, Kerkinitis, Chersonesos, Theodosia, Kimmerikon, Porthmion and Phanagoria (Kacharava 2005, 14).

The reasons why these particular sites attracted occupation could have been determined by various factors, such as the natural advantages, the topography of each site, strategic and economic factors (Wycherley 1962, 4). In the case of colonization, the selection of a place was the deliberate act of a person or a group and the settlements were established in order to become autonomous communities (Wycherley 1962, 4). The agricultural land, security and defense, availability of water supplies (Tomlinson 1989, 88), as well as the presence or not of local inhabitants must have determined the choice of the sites for the Greek settlers. In the Black Sea area most of the Greek colonies were established in coastal locations that had natural harbours, or on islands, peninsulas and river estuaries (Tsetskhladze 2004, 185).
The most common type of a Greek colony in the Black Sea area, according to Kacharava (2005, 16), was that of farming profile; it had large areas of fertile lands for cultivation outside the city, such as Olbia, Chersonesos and the colonies on the Kerch and Taman Peninsulas. A second type of colony was the one that did not have farming as the main economic resource, but played the role of the intermediary between the Greek world and the indigenous tribes or exploited the local natural resources of the hinterland, such as Apollonia Pontica and Mesambria on the Thracian coast (Kacharava 2005, 24-26).

A term that occurs often in relation to the Black Sea colonies is the term of *emporion*. Herodotus is the first to use the term; he mentions the *emporion* of the Borysthenites (Histories, 4.17.1, 4.24.1) probably referring to the inhabitants of Olbia and the trading activities that took place at the lower part of the city, where the port was (Hind 1997, 111). Demosthenes mentions the *emporion* of Theodosia (Demosthenes, Against Leptines, 20.33) and Pseudo-Scylax refers to the *emporion* of Chersonesos in Crimea (GGM, Pseudo-Scylax, Periplus, 68). Later on Memnon gives an account of the war over Tomis’ *emporion*, which occurred in the middle of the 3rd century B.C. (Memnon, History of Heracleia, fr.13). All written sources show that the *emporion* was not a settlement but an institution inside a settlement; a harbour, a part of a harbour, or next to a harbour, in other words a commercial station of foreign trade (Hansen 1997b, 85). According to Petropoulos (2005a, 121), referring to the Black Sea region, *emporion* had also another meaning; it was a proto-settlement, the settlement occupied by a small number of Greek colonists who came to the new land in order to settle permanently and prepare all the requisites for the arrival of the new settlers.

This paper is going to focus on the Greek colonies of the Western and North-Western Black Sea region, from their foundation until the Roman conquest and especially on their *poleis* meaning the urban centers - synonymous with the Greek term *asty* (Hansen 2003, 266). The *polis*, in the sense of an urban centre, was a town, which was the political centre of the *polis* (in the sense of a state) and in most states there was only one town that was called *polis* (Hansen 2004, 138). This is the part that was enclosed by a defensive wall and where the agora, the shrines, the political institutions and the other public buildings were situated. One of the issues that will be examined is in which way the ancient Greeks organized their *poleis* in terms of urban
space and when and how these cities evolved and developed into typical Hellenic 
poleis\(^1\), becoming the nucleus of poleis (states)\(^2\).

By analyzing the urban structure of these ancient Greek poleis a lot of remarks can be made concerning religious, political, economical and social matters. However, a complete analysis would not be possible because there is a small number of archaeological evidence\(^3\) and a large number of the ancient cities has been buried under the modern ones – in the Western part only Istros and Orgame are not under a modern city. In many cases the construction material of the ancient buildings has been reused in antiquity and some cities have suffered a complete destruction by barbarian attacks. Moreover, archaeological investigation becomes more difficult since a large part of the ancient colonies has been submerged into the sea, due to the geomorphologic changes, such as earthquakes, coastal erosion, landslides and the rise of the sea level\(^4\).

It would not be possible to ascribe a common development model in terms of urban space organization and planning for the whole Black Sea region. Each colony had its own specific characteristics and its own unique profile that was the result of various factors, such as topography, availability of construction materials and the colony’s historical background (Wasowicz 1999, 205; Tsetskhladze 2004, 183). They were all founded in different moments and they had different mother cities. Although Miletus dominated, since according to Strabo (Geography, 14.1.6), it has colonized everywhere in the Euxine Pontus, there were also other Ionian cities that took part in the colonization process. Teos founded Phanagoria (GGM, Pseudo-Scymnus, Periegesis, 886-887) and Apollonia Pontica was settled from Milesians and Rhodians (Stephanus Byzantinus, Περὶ Πόλεων, 68). Samos, Chios, Ephesos and Smyrna probably participated as co-settlers with Miletus (Tsetskhladze 2004, 185). Heracleia Pontica, a Dorian colony in the Southern Black Sea, founded Chersonesos in Crimea.

\(^1\) The earliest use of the term “πόλις Ελληνίς” in reference to the Black Sea cities occurs in the Periplus of Pseudo-Scylax. According to him the Hellenic poleis in the area under discussion are Apollonion, Mesambria, Odessopolis and Kallatis (GGM, Pseudo-Scylax, Periplus, 67). Appian adds two more: Dionysopolis and Istros (Appian, The Illyrian Wars, 5,30).

\(^2\) The states consisted of the polis and the chora – the extra-mural, geographically demarcated region. The ancient Greek city was inseparably connected with its countryside. See Hansen 1997a, 17-20 on the ancient terms polis and chora and their concept in antiquity.

\(^3\) The northern part of the Black Sea is the more systematically searched part (Tsetskhladze 2004, 185).

\(^4\) The so-called Phanagorian regression was a fall in the level of the Black Sea, which started in the end of the second millennium BC and continued until the middle of the first millennium A.D. During this period the water level was 4-5m lower than today (Hind 1983-1984, 72; Scott et al 2004, 219).

The relations that the colonies maintained with their mother cities do not necessarily imply that a colony should copy the lifestyle of its mother city, including within this term urban organization and architecture. Sometimes – the best examples come from the Western colonies of Sicily and South Italy that have been better explored – the colonies developed into bigger cities than their metropolis and could even afford more monumental architecture (Tsetskhladze 2004, 184).

It is also noteworthy that, independently of the mother city, these colonies existed in a varied demographical and ethnical context (Wasowicz 1999, 205). Local tribes, such as the Thracians and the Getae in the Western Black Sea, the Scythians on the North and North-West, the Taurians on the Crimean peninsula and the Sindians and Maeotians on the Taman peninsula, used to live in the region; the history and the development of the colonies is inseparable from the coexistence of these local inhabitants (Tsetskhladze 2004, 185). The relations of the Greek colonists with the local tribes that maintained a strong autonomy throughout antiquity – and even imposed their dominance on the Greek cities in some cases – is an element that characterizes the Greek colonies of the Black Sea and in the same time distinguishes them from their homologous in the West (Greco-Torelli 1983, 224).

II. The Greek city from the archaic period until the Roman conquest

Greek cities in general can be divided in two categories. The first category includes the cities that are the result of a natural and gradual development, without any element of formal planning, whose origins are unknown and may often go back to the Bronze Age and the Mycenaean world; Athens is such an example. The second category consists of those cities that were deliberately created by planning; these are many of the colonies and in general the cities created on new sites (Tomlinson 1989,

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5 See for example the inscription on *isopoliteia* (Miletus 57) and Graham 1971, 98-117 on relations between Miletus and Olbia, the adoption of the Milesian calendar evidenced in many colonies, such as Odessos (IGBulg I² 39, 47, 50), Tomis (ISCM II 1) and Istrys (ISCM I 26, 58, 54), or the adoption of the Megarian calendar in Kallatis (Avram et al 2004, 934).

In both cases, the general design of the city has followed the cultural, religious and political evolution of the Greeks (Wycherley 1962, 4).

The character of the Greek city is not determined by a particular position, shape or arrangement, but by the possession of certain essentially Hellenic features (Wycherley 1962, 12). The historical nucleus of many of the ancient cities was the acropolis, situated on a hill and being the fortress to watch over the city and the agricultural land. It was the seat of the king and a place of refuge in case of attack. The rest of the city extended around the slopes of the acropolis and its centre was the agora (Wycherley 1962, 5), a fairly level open space marked off by with *horoi* (IG I³ 1087-90), where the citizens gathered together for political, juridical, administrative and financial matters.\(^7\)

The agora is considered to have been the most important of the Hellenic features that compose a Greek city (Wycherley 1962, 7). As government evolved from monarchy and aristocracy towards democracy, the acropolis began to lose its role, although it could still be a sacred and religious place or serve occasionally as a fortress providing security. The agora, situated somewhere in the centre of the town, or often near the harbour in the coastal cities (Tomlinson 1989, 93) became gradually the most vital element of the city, the place of assembly, the market-place and a location for religious ceremonies and spectacles throughout antiquity (Ward-Perkins 1974, 12).

It is important to note at this point that the life of the city-states that emerged in the 8\(^{th}\) century B.C. was not primarily urban, but was based and remained dependent on agriculture (Wycherley 1962, 12). Thucydides states that most of the Athenians “had been always used to live in the country” (Thucydides, *Peloponnesian War*, 2.14.1-2); therefore they were not separated from the countryside as the inhabitants of today’s modern cities are. The same conclusion derives from Aineias the Tactician, who says that in case of danger from an enemy a signal must be given at sunset for those citizens who are cultivating their land outside the walls to leave their work and come into the city (Aineias the Tactician, *Poliorketika*, 7).

\(^7\) in ca. 600 B.C. the agora seems to have been used only for political meetings and the earliest evidence for the agora as a market place is an inscription of ca.480-450 B.C. from Gortyna ( IC IV 72 col. VII. 10-11) talking about slave trade (Hansen 1997a, 53)
**Archaic Period**

In the archaic period, cities were very small and their inhabitants must have known each other (Hansen 1997a, 53). Most of them were naturally developed without any regular plan. However, in the Western colonies in Magna Grecia, since the middle of the 8th century B.C. cities were planned and built on horizontal and vertical axes that created equal sized plots and straight roads (Hoepfner et al 2005, 144).

Around 700 B.C. the Greek world was found in a period of rearrangements. New laws were constituted, the writing was adopted and the formation of a cadastre separated the public from the private property within the cities (Hoepfner et al 2005, 150,158). The religious practices and the sacred buildings were also modified and the sacrifice on an altar in front of the temple became the main religious act (Hoepfner et al 2005, 158). The temples of the city’s deities multiplied and took a more imposing aspect. They were to be found everywhere in the city, but with a tendency to concentrate on the acropolis and in the agora (Wycherley 1962, 8-9).

The streets in the archaic cities were narrow and the main ones led from the gates to the agora, as a continuation of the roads outside the city. If there was a structure of a city-plan in the archaic cities this was the streets leading to and radiating from the agora. The public buildings – the council-house, the *prytaneion*, *stoas* and temples – tended to concentrate around the agora (Wycherley 1962, 9). The location of the theatre and the stadium was determined by the natural slopes of the ground (Tomlinson 1989, 55, 57). The *gymnasia* were situated outside the city limits, in the suburbs (Tomlinson 1989, 96). The houses were built closely together in irregular groups (Wycherley 1962, 9). Rectangular houses started to appear from the second half of the 7th century B.C.\(^8\)

Pipelines or other forms of channel and aqueducts made also their appearance in the 7th century B.C. in a number of cities (Hoepfner et al 2005, 150). They provided the city with potable and semi-potable water. Fountain-houses have also existed from the 6th century B.C. onwards (Morgan-Coulton 1997, 97). Cisterns tended to be used

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\(^8\) This may be relevant with the emergence of the constitution of *andron* after 700 B.C. The square or rectangular shape of *andron* affected the shape of the houses and thus it could also have determined the form of the settlements by giving the motive for building in a more organized way (Hoepfner et al 2005, 155-159).

Most of the archaic cities were unfortified and it was the acropolis that provided protection from danger when needed (Hansen 1997a, 52-53; Wycherley 1962, 10). Defensive circuits of walls were a later addition, when the growth of the cities was in someway complete. They probably became common in the 6th but mostly in the 5th century B.C. (Wycherley 1962, 10, 39). Aristotle states that they had to serve as an adornment as well as a protection (Aristotle, Politics, 7.1331a). By that time, walls loosely surrounded the urban space with an irregular outline, adapting their shape to that of the city or following the natural contours for defensibility (Wycherley 1962, 10).

Burial of the dead within the city's boundaries was prohibited (Tomlinson 1989, 92). The necropoleis were situated outside the city. An exception to this was the tomb, or the supposed tomb, of the hero-founder, the person that led the first group of colonists to the new land. For the inhabitants of the colonies the hero-founder was a very important figure, a cult figure that was worshipped as a god and his tomb, the heroon – which as a rule was located in the agora\(^9\) – was the cult nucleus of the city and its territory (Müller-Wiener 1995, 200; Manoledakis 2010, 563, 565).

**Classical period**

By the 6th century it can be asserted that the Greek city was complete in its essentials (Wycherley 1962, 10). At the end of the 6th – beginning of the 5th centuries B.C. two major events that caused significant political, economic and social changes, affected, eventually, the urban structure as well. The first was the fall of tyranny and the rise to power of Cleisthenes; that was the first step towards democracy. The second event was the victories against the Persian attacks, which strengthened the self-confidence of the Greek city-states (Hoepfner 2004, 205).

In order for the polis to be ruled by the citizens, new forms of administrative building complexes were introduced; the bouleuterion, the prytaneion, the theatre and the court rooms needed more space in the city’s centre. In the Classical period, the

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\(^9\) An exception to this rule is probably the “Tomb with Papyrus” in Kallatis and the tumulus T A95 in Orgame. They both could have been a heroon situated in the necropolis, outside the city’s borders (Lungu 2007, 346-347, 357).
public space got its biggest significance than in any other period and the extensive public areas within the city are characteristic (Hoepfner 2004, 205).

The fact that in the 6th and 5th centuries the Greeks were still creating new cities – either colonies or rebuilding of cities that had been razed by the Persians – has led them gradually to produce a way of urban planning, creating a city deliberately and not just letting it grow (Wycherley 1962, 15). The basic principle was the most elementary of plans, the so-called “gridiron”, with straight lines crossing at right angles. When creating a new city, this was the easiest and most convenient way to divide up the land with the less possible complications.

Aristotle in Politics and Plato in Laws have dealt with the ideal city and how its form should be. Their works however are theoretical and as Aristotle states: “The difficulty with such things is not so much in the matter of theory but in that of practice; to lay down principles is a work of aspiration, but their realization is the task of fortune.” (Aristotle, Politics, 2.1331b). Therefore, in practice, the founder of scientific urban planning is considered to have been Hippodamos of Miletus in the 5th century B.C. (Hoepfner et al 2005, 215). The most important source for him is Aristotle, who describes Hippodamos and his ideas and states that he “invented the division of cities into blocks and cut up Piraeus” (Aristotle, Politics, 2.1267b). In fact, Hippodamos has developed – not invented – the “gridiron” and has introduced a functional approach to the building of cities (Wycherley 1962, 18). When a city was planned from the beginning on the Hippodamian system, it meant the division of the city into sectors, the existence of a rectangular street network in each sector and that specific sites were reserved in advance for the various uses, public or private (McCredie 1971, 97-98). In this way, the former haphazard development was now carefully controlled. Some of the cities that he planned are Piraeus, Thurii in southern Italy, Rhodes and most probably Miletus in 479 B.C. after its destruction by the Persians.\(^{10}\)

The difference between regularly and irregularly developed cities was an external one, since all the vital Hellenic features that composed the Greek city, were present in both types (Wycherley 1962, 30). The Hippodamian method had limited application and never dominated the Greek world (Wycherley 1962, 34); many new cities, even after the 5th century B.C. continued to be built on less regular plans. In such cases, the

\(^{10}\) On Hippodamos and the cities he planned see McCredie 1971, 95-100. For Miletus see Hoepfner et al 2005, 221-224 and Ward-Perkins 1974, 14-15.
direction of the streets was adapted to the relief of the ground and terraces were constructed in order to create large and level surfaces \(^{11}\).

**Hellenistic Period**

During the Hellenistic period more cities were founded than ever before (Hoepfner et al. 2005, 463), while many of the already existing ones were renovated and embellished (Owens 2004, 217). The most important founder was Alexander the Great, followed by his Diadochi who brought about political, economic and social changes to the Greek and Asiatic world and consequently affected deeply the Greek city as an entity and as an urban centre (Owens 2004, 217; Ward-Perkins 1974, 18). Although in local level the democratic institutions were maintained, the Macedonian nobility and the royal courts became models for the wealthy citizens of the Greek cities (Hoepfner et al. 2005, 465).

The more quick and convenient method for the creation of cities was the systematic use of the Hippodamian system (Owens 2004, 218); thus, the newly founded cities were composed on an orthogonal plan. However, they differ radically from the cities of the Classical period. The Classical cities tended to demonstrate their independence through the uniqueness of their plan (Hoepfner et al. 2005, 463). The Hellenistic cities were established in a short time span and there was not adequate time for their exceptional planning. With the founding of Alexandria, a common urban design was established and was adopted from the newly-built cities. It consisted of square plots for the building of houses, which formed rows of repeated building blocks, the so-called *insulae*. The dimensions of the *insulae* were based on the simple analogy 2:1 and all the buildings were adjusted to their size or its multiples (Owens 2004, 218). Therefore, it could be claimed that in the Hellenistic period urban planning was characterized by a uniformity and standardization (Wycherley 1962, 35).

The biggest achievement of public architecture and town-planning in the Hellenistic period is represented by the development of the *stoa* (Owens 2004, 220). If earlier there was a *stoa* at one side of the agora, now *stoas* were built in all of its sides. In the old cities such as Athens and Miletus, the agora was transformed in a large

\(^{11}\) (Müller-Wiener 1995, 203-204) Terracing of the cities was a technique widely used in the Mediterranean and in the Black Sea area, like for example in Mesambria, Dionysopolis, Orgame and Olbia.
peristyle courtyard (Hoepfner et al 2005, 465). Apart from the agora, stoas of various shapes and sizes were built everywhere in the city (Owens 2004, 220).

One of the most important public buildings in the Hellenistic period was also the gymnasion. Its increasing significance was due to the fact that it contributed to the preservation of the Greek civilization in the Hellenistic kingdoms and thus became the establishment of educational and cultural superiority. While formerly the gymnasion was situated in the suburbs outside the city's walls, now it is included within the city and is often located near the agora (Owens 2004, 220).

The changes and the development of urban planning and architecture were not confined only to the new cities. Some of the already existing ones had also undergone radical changes thanks to the generosity of the kings and of the ruling class (Owens 2004, 222). The number of stoas, palaistras, and gymnasia was increased (Hoepfner et al 2005, 465). New agoras, theatres and monumental buildings were constructed. More grandiose architectural conceptions emerged and the Greek city was gradually monumentalized (Ward-Perkins 1974, 18). The new building-types of public architecture that were developed, introduced a completely new scale to the urban landscape, as for example the long stoas up to 200 m length (Müller-Wiener 1995, 206). The transformation of the city led to the modification of the urban way of living and provided a high level of facilities for its inhabitants (Owens 2004, 222).

III. Urban Planning in the Western Black Sea region

Apollonia Pontica

Apollonia Pontica is the southernmost known Greek colony on the West Coast of the Black Sea (fig.1). Buried under the modern city of Sozopol in Bulgaria, it extends over the rocky Skamniy peninsula and St Kyrikos Island. According to Pseudo-Scymnus\textsuperscript{12}, Apollonia was founded by Milesians\textsuperscript{13} fifty years before the reign of Cyrus, which means ca.610 B.C. (GGM, Pseudo-Scymnus, Periegesis, 728-733). Archaeological evidence seems to confirm this date. It is also probable that

\textsuperscript{12} Pseudo-Scymnus made use of the lost work of the historian Demetrius of Kallatis whose activity was during the second half of the 3\textsuperscript{rd} century B.C. He states, just before beginning the description of the West Black Sea coast, that Demetrius of Kallatis has left an accurate description of the area (GGM, Pseudo-Scymnus, Periegesis, 719-720).

\textsuperscript{13} Another version, according to Stephanos Byzantinus (Περί Πόλεων, 68), is that Apollonia was settled by Milesians together with Rhodians.
Apollonia’s foundation was a result of a verbal agreement between the Greek settlers and the local Thracian aristocracy, based on common economic interests (Nedev-Panayotova 2003, 100).

Despite the fact that the reasons for founding the colony are not clear and scholars disagree on whether it was established as an agricultural and self-supporting community (Isaac 1986, 244) or with the purpose of exploiting the local natural resources (Kacharava 2005, 24), Apollonia evolved into a naval base with active trade contacts and a point of transshipment and exchange of luxury goods between Greeks and Thracians (Nedev-Panayotova 2003, 99; Hoddinott 1975, 33). According to the written sources, the city had two big ports, which enabled safe landing to the ships sailing in the Black Sea (GGM, Anonymous, *Periplus Ponti Euxini*, 85). Archeological finds – anchors, a breakwater and transport-amphorae – suggest that the first port was on the west side of the isthmus, a well protected site, where also the modern port is situated and the second one was about 3 km south of Sozopol (fig.2).

Due to its strategic location and its control over the natural resources, Apollonia Pontica reached remarkable prosperity between c.460-430 B.C. and became one of the few major poleis of the Black Sea region in the Classical period (Hoddinott 1975, 37). The other major poleis are Sinope, Heracleia Pontica, Mesambria, Istros and Olbia (Avram et al 2004, 927). The city’s slow decline started in the middle of the 4th century B.C. (Hoddinott 1975, 39). The end of the Greek period for Apollonia was in 72 B.C. when the Roman legions of Marcus Lucullus conquered the city. One of the trophies transferred to Rome was the famous statue of Apollo, which according

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14 For the localization of the port see Porogeanov 1985, 196-203 and Morhange et al 2010, 26-28.
15 (Hoddinott 1975, 37) The other major poleis are Sinope, Heracleia Pontica, Mesambria, Istros and Olbia (Avram et al 2004, 927).
16 Aristotle speaks of a new wave of colonists in Apollonia (Aristotle, *Politics*, 5.1303a) but the date of this event is not known (Isaac 1986, 246).
17 This was probably the result of the expansion of the Macedonian kingdom in Thrace, Philip’s and Lysimachus’ campaigns (Nedev-Panayotova 2003, 120).
to Strabo and Pliny, was set up by Marcus Lucullus in the Capitolium at Rome (Strabo, *Geography*, 7.6.1; Pliny the Elder, *Natural History*, 34.18).

Archaeological research has proven that from the very beginning the ancient settlement occupied the whole territory of the Skamniy peninsula. Nevertheless, the distribution of the earliest archaic material suggests more density in the southeastern and central parts, perhaps due to the more favourable climatic conditions there (Nedev-Gyuzelev 2010, 33). It has been argued that the peninsula was once an island (Isaac 1986, 243), since according to the ancient geographer Strabo, the greater part of the city of Apollonia extended on an “isle” (Strabo, *Geography*, 7.6.1)\(^{18}\). The fact that the earliest necropolis\(^ {19}\) was in the immediate vicinity of the Skamni peninsula speaks in favour of a small number of inhabitants in the city (Nedev-Panayotova 2003, 126). There is a hypothesis, based on Aineias the Tactician’s *Poliorketika* (20.4) that in the 4th century B.C. the population of Apollonia reached about 3000 citizens (Nedev-Panayotova 2003, 102). Strabo’s previous testimony also implies that Apollonia Pontica remained modest in size in the early Roman period.

The most searched part of the peninsula is the southeastern part; there, the organization of the space remained the same from the first half of the 6th century B.C. to Late Antiquity. That is to say that in this site a constant pattern of orthogonal planning is demonstrated and a uniform orientation – north-northeast / south-southwest – of all the structures was adopted (Nedev-Panayotova 2003, 104). It seems probable that these uniform principles of urban planning were also followed in the whole surface of Apollonia. Moreover, all the building complexes, excavated in different parts of the city, show a high intensity of occupation and a dense built-up in the Classical and Hellenistic periods (Nedev-Gyuzelev 2010, 36).

There is no evidence so far of the fortification of Apollonia. The only information comes from the text of Aineias the Tactician, who quotes Apollonia as an example of a strong fortified city that its gates had very heavy fastenings and were plated with iron (Aineias the Tactician, *Poliorketika*, 20.4). The fortifications were probably constructed during the period of Apollonia’s prosperity. It is generally accepted that they surrounded the biggest part of the peninsula and that the gates mentioned in

\(^{18}\) Strabo’s testimony is rather problematic. See on that the geomorphologic study of Morhange et al (2010, 23-30).

\(^{19}\) Early graves of Apollonia’s first or Ionian phase have been found underwater at the Northwestern part of the Skamniy peninsula between the area of the harbour and St Kyrikos Island (Nedev-Panayotova 2003, 124; Hoddinott 1975, 36).
Aineias’ text were in proximity to the harbour, the place where the main revenues of the city came from (Nedev-Gyuzelev 2010, 34).

A sanctuary of Apollo Iatros existed in Apollonia probably from the very beginning of its existence; besides the city bears Apollo’s name (Nedev-Panayotova 2003, 97). Strabo refers to the temple and to the colossal statue of the god that stood there (Strabo, Geography, 7.6.1). Most of the scholars support the theory that the sanctuary was probably located on the southern part of St Kyrikos Island (fig.3.10) and as evidence they cite two inscriptions: one with a dedication to Apollo Iatros (IGBulg I² 403) found there and a decree found at Istros (IGBulg I² 388bis) mentioning a war between Apollonia and neighboring Mesambria. In this official document of the first half of the 2nd century B.C. it is clear that the Mesambrian fleet captured and profaned the sanctuary of Apollo, but did not manage to capture the city (Nedev-Panayotova 2003, 97-98); therefore, it is understood that the sanctuary was the first to be met from the sea and it is also implied that it was extra-urban20 (Avram et al 2004, 931). Moreover, architectural fragments from St Kyrikos – now in the Louvre museum – of the 5th century B.C. may have belonged to that sanctuary (Hoddinott 1975, 34). New material has come up from recent excavations (2009) on the site of St Kyrikos, which gives new proof for the location of the sanctuary of Apollo there: a late archaic temple and an altar, a tholos, and three bothroi21.

An inscription of the 5th-4th century B.C. mentioning a megaron of Gaia Chthonia (IGBulg I² 398) was found in Apollonia, but the construction has not been located yet. The earliest sanctuary archaeologically evidenced in Apollonia is the sanctuary of Aphrodite Syrie22 located in the southeastern part of the Skamniy Peninsula that functioned in the Classical period (fig.3.8). The thickness of the foundations and the large blocks used for the construction interpret it as a monumental public building, but there is no evidence about the plan of the ritual space (Nedev-Panayotova 2003, 102, 106). Another sanctuary unearthed in the southeastern part of the Skamniy Peninsula,

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20 Archaeological research has proven that many of the major sanctuaries in antiquity were extra-urban (Hansen 2004, 140). Such examples from the Black Sea are the Archaic sanctuary of Achilles on the island of Leuke (Snake Island) established by the citizens of Olbia (Okhotnikov-Ostroverkhov 2007, 537-562) and the Hellenistic cave-temple of the goddess Cybele on the Big Island in Lake Durankulak, erected by the Kallatians (Todorova 2007, 175-238).


22 The attribution to the goddess is due to a skyphos with a dedication to Aphrodite Syrie on its base that was found in situ and is dated to the third quarter of the 5th century B.C. (SEG 54:630).
located near the isthmus and dated to the Hellenistic period, is the sanctuary of Hekate\(^{23}\) (fig.3.2). The location of the sanctuary to the periphery of the city, near its southern boundaries can be referring to the functions of Hekate as protector of the travelers or to her chthonic functions, due to the nearby Hellenistic necropolis (fig.3.1) (Nedev-Panayotova 2003, 121-122). Both sanctuaries are situated on the southeastern side of the Skamniy Peninsula, possibly due to the fact that this location is well protected from the northern winds (Nedev-Panayotova 2003, 98). Six cisterns were also discovered in this area, dating from the second half of the 6\(^{th}\) to the 3\(^{rd}\) century B.C. and are connected with the function of the sanctuaries that needed well-organized water supply for the purifying rituals (Nedev-Panayotova 2003, 102). There is only fragmental evidence of monumental buildings of the Classical and Hellenistic periods in other parts of the city\(^{24}\) (fig.3.3, 3.4, 3.7).

Traces of craftsmanship were also discovered; a vast pottery workshop complex was excavated, dating from the end of 5\(^{th}\) to the third quarter of the 4\(^{th}\) century B.C. It was probably situated in the southeastern periphery of a trade or production complex (fig.3.6) (Nedev-Panayotova 2003, 104). In the northern part of the city that is open to strong northern winds, there was probably a craftsmen’s quarter, as it is suggested by the archaeological finds, but its exact dimensions are still unknown (fig.3.9) (Nedev-Panayotova 2003, 105). Near the centre of the Skamniy peninsula a black smith’s kiln was unearthed. It was found within a residential complex constructed during the 5\(^{th}\)-4\(^{th}\) centuries B.C.\(^{25}\) (fig.3.5).

Another testimony on the urbanization of Apollonia is the water supply that was secured through a terra-cotta canalization system destined to bring water from a spring situated 1.5 km far from the city. Part of the system has been traced in the Kalfata necropolis and is dated to the end of the 5\(^{th}\) –beginning of the third quarter of the 4\(^{th}\) century B.C. A monumental well dating from the Hellenistic period has been discovered in the eastern part of the Skamniy peninsula (fig. 3.7); its dimensions were 2.45 x 2.50 m and its depth 4.50 m and according to Nedev it might have been part of

\(^{23}\) The attribution to Hekate is due to a votive inscription of the 3\(^{rd}\)-2\(^{nd}\) century B.C. on the base of a statue found in situ (SEG 54:631).

\(^{24}\) A thick Classical ashlar-built wall, remains of a Classical building of public character and antefixes, fragments of a multicoloured wall-painting and marble architectural details from the Hellenistic period (Nedev-Panayotova 2003, 106, 122; Nedev-Gyuzelev 2010, 35).

\(^{25}\) Traces of metallurgic production dating from the 6\(^{th}\) to the 4\(^{th}\) century B.C. have been found all over the peninsula. It was probably destined for exportation (Nedev-Panayotova 2003, 104-105; Nedev-Gyuzelev 2010, 37-38).
a fountain or a *nymphaion*. Moreover, a network of cisterns, often situated in the courtyards, was disposed along the central axis of the peninsula, as well as on the coastal terraces and collected the rain water for cases of water-shortage (Nedev-Gyuzel 2010, 35-37).

There are few traces of the archaic houses of Apollonia. All the remains had a north-south orientation and were built of sun-dried bricks on a stone base (Nedev-Panayotova 2003, 99). Later on in the Classical period the houses evolved into the *pastas* or *peristyle* type\(^{26}\) and the rooms were arranged around a central inner courtyard. They occupied a relatively small surface and there are not any architectural remains to indicate the existence of ornamental details. In some cases there were found remains of sanitation – water conduits or sewerage (Nedev-Panayotova 2003, 106).

The necropoleis of Apollonia Pontica are the best excavated in the Black Sea coast\(^{27}\) (fig.4). They mostly occupied sandy land, unsuitable for farming and agriculture (Nedev-Panayotova 2003, 127) and they are indicative of the city’s extension or reduction throughout antiquity. Thus, as it was mentioned before, in the early phase of Apollonia’s life people were buried in immediate proximity to the city and probably on St Kyrikos Island, while in the second half of the 6\(^{th}\) century B.C. they started being buried on the southern slopes of Harmanite area. Later on, in the Classical period and until the beginning of the 2\(^{nd}\) century B.C., there was a considerable extension of the necropolis to the south and people were buried in the more distant coastal area of Kalfata and Budjaka (fig. 4.3-6) (Panayotova 2010, 39). This fact is indicative of an increase of population and of a probable extension of the urban territory. A concentration of the graves close to the city’s walls is noticed again in the period of the 3\(^{rd}-1\(^{st}\) century B.C. in the present day “Sea Garden” site of Sozopol (figs.3.1, 4.1) (Nedev-Panayotova 2003, 127). The necropoleis of Apollonia are typical of an urban Greek centre; they were situated outside the city’s walls and they occupied infertile land (Nedev-Panayotova 2003, 139).

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\(^{26}\) See Müller-Wiener 1995, 192 for houses of this type.

Mesambria

Mesambria, modern Nessebar, is located on the coast of Bulgaria, on a peninsula that is linked from west with the mainland through a very narrow isthmus 350m long (fig.1) (Preshlenov 2003, 158). The most reliable source on its foundation is considered Herodotus (Hind 1998, 138), who reports that refugees from Chalcedon and Byzantium left their own land at the time of the Ionian revolt (494/3 B.C.) and founded Mesambria. Archaeological excavations have shown that a fortified Thracian settlement preexisted on the site (Preshlenov 2003, 178). Strabo (Geography, 7.6.1) states that Mesambria, a colony of the Megarians, was formerly called “Menebria” that is “the city of Menas,” because the name of its founder was Melsas or Menas, while “bria” is the word for “city” in the Thracian language.

The interaction between Greeks and Thracians resulted in the formation of a Hellenic-Thracian urban centre that replaced the former bria (Preshlenov 2003, 178). This meant the administrative and urban reorganization of the territory but with all due respect of the newcomers to the Thracian hero-founder Melsas as it is obvious from the name of the colony (Ognenova-Marinova 1991, 40, 44). Ognenova-Marinova has made a hypothesis by restoring a fragmentary inscription; that there were two founders of Mesambria, the Thracian Melsas and the Greek Dioskourides and their tomb must have been situated near Mesambria’s north-west tower, where the inscription was found.

Mesambria had a favourable geographic location; it was a seaport and a crossroad of political, economic and cultural transactions with the local Thracian tribes.

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28 Megarian colonies in Propontis
29 (Herodotus, Histories, 6.33.2). Another version is that Mesambria was founded by Chalcedonians and Megarians during Darius’ Scythian campaign in 513/2 B.C. (GGM, Pseudo-Scymnus, Periegesis, 738-742).
30 On the Thracian defensive system see Ognenova-Marinova 1991, 34, 36
31 On the legend of Melsas and the variations of his name in the written sources see Nawotka 1994, 320-326.
32 There is also epigraphic evidence for the etymology of the name Mesambria (IGBulg P 345).
33 The adoption of a local hero as oikistes is an exception; the oikistes was usually the leader of the colonists (Manoledakis 2010, 563). A similar case where a hero associated with the particular region is adopted as oikistes is in Abdera, where according to the foundation myth, Heracles founded Abdera besides the grave of his companion Abderos (Apolllodorus, 2.5.8). The case of Abdera is more complicated, since it was firstly founded by Clazomenians with Timesios as oikistes and then by Teians who continued to honour Timesios (Herodotus, Histories, 1.168).
34 [Μέλσα καὶ] Διοσκουρίδα Ἑρώτις. (IGBulg P 335sept)
35 (Ognenova-Marinova 1991, 56) See also Nawotka 1994, 322.
It flourished about the middle of the 5th century B.C. as it is indicated by the issue of silver coins (Hoddinott 1975, 41) and became a major polis in the Pontic region (see note 15). Lysimachus’ campaign affected Mesambria as well as the other west Pontic cities, but after his death Mesambria regained its independence (Preshlenov 2003, 179-180). A war of Mesambria against Apollonia over Anchialos36 is known from an inscription dated to c.200-150 B.C. (IGBulg P² 388bis). The end of the Greek period for Mesambria is set in 72 B.C. when Gaius Cornelius invaded the city probably without causing any damages and placed a Roman garrison there (Ognenova-Marinova 1991, 69).

Greek remains were found all over the Nessebar peninsula, under the modern city, as well as underwater up to 40 m away from the present coastal line (Isaac 1986, 253; Preshlenov 2003, 160). The fact that the steep cliffs on its north and east side were subjected to coastal erosion (Hoddinott 1975, 41), combined with earthquakes and the rise of the sea level, led to the submergence of a large part of the ancient city into the sea. Underwater investigations have shown that Mesambria covered a surface of 40 ha, while the remaining part above water today is 24 ha (Ognenova-Marinova 1991, 34). The population in the Classical period is estimated at about 3000-4000 inhabitants (Hind 1983-1984, 74).

The ancient city had two harbours, situated one in the north and one in the south of the Nessebar peninsula (fig.5.A) (Ognenova-Marinova 1991, 48). According to Hind (1983-1984, 73), they already existed from the epoch of the Thracian occupation37. Artificial terraces were constructed above the two harbours. The construction of terraces was in accordance to the urban planning traditions in the eastern Mediterranean, concerning the building of cities on sloping ground (Preshlenov 2003, 162). The street network was principally east-west orientated, which is suggested by the succeeding of the excavated houses on the same axis and is indicative of the existence of orthogonal planning in Messambria (Ognenova-Marinova 1991, 48, 50).

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36 Anchialos (modern Pomorie) was a small fortified town between Apollonia and Mesambria, probably an Apolionian foundation. The salt pans of Anchialos, in intensive use until today, were probably the main reason for the conflicts between the two colonies (Danov 1990, 155).

Although Mesambria was naturally fortified, defensive – and at the same time supporting – walls encircled the ancient city since the pre-Greek period. Remains of this fortification have been found underwater, as far as 300 m into the sea from the present coast of Nessebar peninsula (Ognenova-Marinova 1982, 74). The Greek fortification is dated to the 5th or the early 4th century B.C. (Hoddinott 1975, 42). Mesambria and Istros are the only cities on the west coast that have been archaeologically evidenced to possess massive fortification walls so early in the Classical period. This might be proof that Mesambria enjoyed prosperity almost from the beginning of its existence, which enabled such constructions (Coja 1982, 100). So far, a part of the western section has been traced; it includes the main gates to the classical city that were erected in the place of the former Thracian gates, on the left of the isthmus’ neck (fig.6) (Ognenova-Marinova 1991, 47). Another part of the wall that was discovered belongs to a reconstruction in the Hellenistic period; a section of the curtain wall and a hexagonal tower have been located underwater to the northern side of the Nessebar peninsula (fig.7) (Coja 1982, 100).

An external water-conduit was installed in Mesambria and the water was distributed to the consumers through a network constructed inside the city. The water was led through underground galleries, 5 to 7.5 m deep (Preshlenov 2003, 156). The aqueduct of the city was in use for several centuries and its primitive state was repeatedly modified (Ognenova-Marinova 1991, 48). The discovered tunnels of water-conduits testify in favour of large-scale constructions in the 5th century B.C. besides, it is well known that the Megarians had experience and ability in organising such enterprises.

Near the northern harbour, on a terrace supported by a wall, a Doric temple of Zeus Hyperdexios was built (fig.5.1). This harbour was under his protection (Ognenova-Marinova 1991, 48). Protector of the south harbour was Apollo, whose temple was built on another terrace above it (fig.5.3) (Ognenova-Marinova 1991, 48).

38 To prevent the ground from sliding down (Preshlenov 2003, 159)
39 Probably Apollonia Pontica as well, but this has not been archaeologically evidenced yet.
40 Eupalinus of Megara built the Water-Tunnel of Eupalinos on Samos Island in the second half of the 6th century B.C., which was the longest tunnel of its time with more than a kilometre length (Ognenova-Marinova 1991, 48). Herodotus describes the tunnel briefly (Histories, 3.60).
41 The identification of the temple was made by a votive inscription to Zeus Hyperdexios on the capital of a Doric column that was found at the site (Ognenova-Marinova 1991, 48).
A sanctuary with a second temple of Apollo\textsuperscript{42} was situated at the agora of Mesambria, probably under the ruins of St Sophia’s Basilica. This sanctuary served as the city’s record office, where all the duplicates of the city’s decrees were kept (fig.5.5) (Preshlenov 2003, 162).

The agora was the commercial and administrative centre of Mesambria and was located in the centre of the city and of the peninsula (fig.5.B) (Ognenova-Marinova 1991, 48). From there, an orthogonal, east-west orientated street network led to the acropolis, situated on the highest and easternmost terraced part of the peninsula (fig.5.C) (Preshlenov 2003, 162), that most of it slid down and is now submerged into the sea. In the acropolis there was a sanctuary with a temple dedicated to Zeus and Hera\textsuperscript{43} that probably existed from the 5\textsuperscript{th} century B.C. (fig.5.6) (Ognenova-Marinova 1991, 46-47). It is noteworthy that two temples of Zeus and two temples of Apollo existed also in Megara, a fact that indicates that the traditions of the metropolis were followed and respected in its colonies (Ognenova-Marinova 1991, 48).

Apart from the sanctuaries of Zeus and Apollo, there were also other ones in Mesambria, whose existence is known only from the epigraphic data\textsuperscript{44} dating from late 4\textsuperscript{th}-early 3\textsuperscript{rd} to the 1\textsuperscript{st} centuries B.C. They mention the sanctuaries of Dionysos, of Asclepios and of Sarapis, where lapidary copies of Mesambria’s decrees were kept (Preshlenov 2003, 175) and the sanctuaries of Demeter and Kore and of Hero Sosipolis. The city’s theatre, where public performances and celebrations were held in honour of Dionysos\textsuperscript{45} was probably somewhere on the south coast of Mesambria and according to the Greek criteria for orientation and placement, the rows of seats were placed on natural inclination, while the scene (stage) was outlined on the sea (fig.5.8) (Ognenova-Marinova 1991, 48). Epigraphic data mentioning a \textit{basileus-gymnasiarch} and dating from the 3\textsuperscript{rd} century B.C. is the only evidence for a \textit{gymnasion} in Mesambria (IGBulg P 322bis).

In the southwestern part of the acropolis, on the borders of Zeus’ and Hera’s temple and under the “house of Artemidoros” (see below), remains of metal

\textsuperscript{42} Apollo, probably Pythian Apollo, was the patron deity of Mesambria, as of many other Megarian colonies (Hoddinott 1975, 43)

\textsuperscript{43} The temple has been attributed to Zeus and Hera after two graffiti with dedications to the gods, on black-glazed pottery found in the temple’s \textit{bothros} (Ognenova-Marinova 1991, 47).

\textsuperscript{44} IGBulg P 307, 307bis, 308bis, 308ter, 308undec, 312, 315, IGBulg V 5094, 5095, 5103

\textsuperscript{45} IGBulg P 308bis, 308ter
workshops of the 5th century B.C. have been unearthed. Probably, not far from the temple, there was Mesambria’s mint, where bronze Mesambrian coins were struck during the first half of the 5th century and by which the high level of the local metalwork is verified (Ognenova-Marinova 1991, 60). Finds of terra-cottas and moulds indicate the presence of ceramic workshops in Mesambria; they where situated outside the city's walls as well as within the city (Ognenova-Marinova 1991, 64).

Remains of Hellenistic houses in Mesambria have shown that they had a rectangular plan with an inner peristyle courtyard and a cellar. They were built of sun-dried bricks plastered with grout, on a stone base and they covered a surface of about 120 m² (fig.5.7) (Preshlenov 2003, 164). An idea about the general characteristics of the houses of Mesambria can be given by the remains of the so-called "house of Artemidoros" that is dated between the end of 4th and the 2nd century B.C. (fig.8) (Ognenova-Marinova 1991, 50-51). The name of an architect, Euphamidas son of Epaminon, appears on an inscription of the Late Hellenistic period (IGBulg P 328) and is signed on decorative tiles found in Mesambria. Another name signed on decorative tiles is that of Antherestios, who could have been a ceramist or an architect (Ognenova-Marinova 1991, 32, fig.34-35; Preshlenov 2002, 22).

The necropolis on the territory of Mesambria, as in Apollonia Pontica, was situated where the ground was not arable, that is in the sandy area extending in the mainland, to the west of the isthmus (fig.5.D) (Preshlenov 2003, 158). From that point it continued along the coast to the southwest for 2-3 km (fig.9). The earliest burials discovered so far in the necropolis of Mesambria are dated to the 4th and mostly to the 3rd-2nd centuries B.C. There are no traces of burials from the Archaic and Classical periods yet (Hoddinott 1975, 41; Panayotova 2007, 86-87).

**Odessos**

The ancient city of Odessos is located on the Bulgarian coast, under the modern city of Varna, on the slopes and the medium height terraces in the southern part of the modern city and in the northwest corner of the Varna bay (fig.1). According to

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46 Kilns, slag deposits, holes in the ground for melting ingots, etc. (Ognenova-Marinova 1991, 60)

47 The name was engraved on the plaster of a wall (Ognenova-Marinova 1991, 50)

48 A funerary inscription found in Mesambria’s necropolis is confirming this practice; the tears of a grieving mother for her lost child fall on the sandy soil (IGBulg P 343sept) (Preshlenov 2003, 159). Likewise, Plato in *Laws* recommends that the dead should not be buried in the land that is tilled (*Laws*, 12.958).
Pseudo-Scymnus (GGM, *Periegesis*, 748-750), it was founded by Milesians “when in Media ruled Astiages”; that is about 585-570 B.C. (Hoddinott 1975, 49) or 585-558 B.C. (Minchev 2003, 213). The earliest Greek archaeological finds are dated to c.600-575 B.C. (Isaac 1986, 255). It has been argued that a Thracian settlement pre-existed on the site of Odessos but the evidence is not clear (Minchev 2003, 212). The region around Odessos was populated by Thracians and it is almost certain that there was a kind of a verbal agreement between them and the Greeks for the establishment of the colony, since there are indications that there was no interruption in the inhabitation of the local settlements around it, but instead there was coexistence of the two ethnic groups (Minchev 2003, 218; Isaac 1986, 256).

The ancient bay, the contemporary Varna bay, was naturally protected from the northern and northeastern winds by a high plateau, today named Franga. However, the deep gullies among the slopes and terraces, where many streams were running, were not very convenient for the building of the city (Preshlenov 2002, 13; Minchev 2003, 209-210). On the other hand, a big advantage of the site of Odessos was its favourable climatic conditions; a moderate continental climate with not very severe winter. In addition to that there was the fertile hinterland, the abundance of fresh water and the virgin forests in the vicinity of the city (Minchev 2003, 215). Furthermore, Odessos occupied a spot where ancient trade and communication roads were passing along the coast and inland and of course the main advantage of the city was its position on an important maritime route (Minchev 2003, 217). All these features led to the choice of the colonists to settle at the specific site.

Odessos was basically established as a trading colony (Hoddinott 1975, 49). Its inhabitants were also occupied with agriculture, cattle breeding, fishery, crafts and shipbuilding (Minchev 2003, 238-239). It developed into one of the main intermediary trade centers between the Greek world and the Thracians and reached its maximum prosperity during the late 4th and 3rd centuries B.C. (Minchev 2003, 236, 250). The traffic capacity of the ancient port – situated in the south of the city and today buried under the 19th century’s harbour constructions (Preshlenov 2002, 14) – was used in the early Hellenistic period by Lysimachus for the transportation of his

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49 Pseudo-Scymnus mentions the Thracian tribe of Krobyzoi (GGM, Pseudo-Scymnus, *Periegesis*, 750) and Strabo mentions the Odryssoi (Strabo, *Geography*, 7.fr.47)

50 The *chora* of Odessos was large enough to provide harvest to feed the population and to make exports (Minchev 2003, 220).

51 There is evidence for cattle breeding in or around the city’s walls (Minchev 2003, 238).

The earliest fortification wall traced in Odessos is a small section on its northwestern part that is dated to the middle of the 4th century B.C. Its presumable path followed the ground lines and in the west and southwest seems that it stopped before two natural gullies, with water running in the streams, creating this way an additional obstacle. The walls were reinforced by square towers on the corners of this part, two of which have been traced. The eastern and southeastern fortification wall most probably stopped before the graves of the middle of the 4th century B.C. that have been discovered on this side; these burials indicate an extra-urban area free of fortifications (Minchev 2003, 240-241).

The fortification wall enclosed an area of 13.5-16 ha, which means that the 4th century city must not have been a large one. The city’s expansion to the north and west, developing in a semi-concentric scheme, was predetermined by the topographic location of Odessos; the southern and the southeastern boundary was the Black Sea. It was not until the Roman period that Odessos almost doubled its size, as it is evidenced by the traces of the Roman fortifications (fig.10) (Preslhenov 2002, 16; Hoddinott 1975, 49). There is no exact data concerning the number of people that moved to Odessos in the beginning, but it is estimated that it must have been no more than a couple of hundreds, or even less. According to the above estimated area of the city, the population within the city's walls and around them, in the end of the 4th century B.C. must have reached, at maximum 2500-3000 inhabitants (Minchev 2003, 236).

The city life, the institutions and the urban spaces of Odessos were organized as those of a typical Greek *polis* (Minchev 2003, 231). One of the priorities of every city was the reservation of spaces for sanctuaries and the erection of temples. A sanctuary with a temple of Apollo was probably the most ancient religious space in Odessos, where the city’s public records were kept52. A small part of the temple has been located in the southeastern corner of the city, on the first terrace above the sea, on a

52 The sanctuary is mentioned only in one inscription, a decree of the 1st century B.C. (IGBulg P 43), found near the Doric temple mentioned below. However, there is also an unpublished votive inscription of the 5th century B.C. honoring Apollo Delphinios (Hind 1983-1984, 74).
small projected cape (fig.11.20). It is a Doric temple in antis with a longitudinal northeastern-southwestern orientation and its first construction phase – it has been reconstructed several times – is dated to “the earlier period of Odessos” (fig.12) (Minchev 2003, 243; Preshlenov 2002, 22).

Near the temple of Apollo, at about 80-100 m to the southwest, a zone was discovered with finds dating from the second half of the 6th century B.C., where at different time spans religious ceremonies and acts took place (fig.11.9). One of the four ritual pits (bothroi) that were excavated – used until the first quarter of the 5th century B.C. – was connected with ritual activities to Demeter, indicating that a sanctuary of the goddess existed there (Preshlenov 2002, 22). The sacred precinct of the sanctuary was found under the ruins of a Hellenistic construction (Hoddinott 1975, 50). The latter is almost square, measuring 4.30 x 4.20 m and was accurately oriented to the four cardinal points. It was probably erected in the late 4th century B.C. and existed until the middle of the 1st century B.C. Two votive reliefs53 discovered during the excavations made scholars assume that this was the sacred precinct of the sanctuary of Heros Karabazmos, a local Thracian deity, which served also to Phosphoros, a goddess related with Hekate and Artemis (fig.13) (Minchev 2003, 244; Preshlenov 2002, 24). The existence of a sanctuary dedicated to a Thracian god is indicative of the good relations between the Greeks and the locals and implies a peaceful penetration of Thracians54 in the city of Odessos (Minchev 2003, 227).

Another sanctuary is supposed to have existed in the Hellenistic period in the central zone of the ancient city within a radius of about 80 m (Preshlenov 2002, 34) (fig.11.21). In this sacred area a Samothrakion was built in the early Hellenistic years55. The temple, which was dedicated to the Samothracian Gods, is mentioned in an inscription of the 3rd-2nd century B.C. (IGBulg P 42) and its importance is understood by the fact that it served as the city’s public records archive. In the same area, fragments of another building have been discovered, dating from the same period. It was a tholos built in Doric order56; a reconstruction of it was possible thanks

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53 The first relief bears a dedication to Heros Karabazmos (IGBulg P 78bis) and second is dedicated to Phosphoros (IGBulg P 88bis). Both reliefs are dated to the 2nd-1st century B.C.
54 From the 3rd century B.C. and on, Thracian names are evidenced in the inscriptions among the citizens of Odessos (Hind 1983-1984, 74).
55 The temple has not been found yet, but there are archaeological finds that connect it with the sacred area under discussion. See Preshlenov 2002, 25.
56 This round-shaped public or religious building is not met very often in Greek architecture. In the Black Sea area tholoi of various diameters have been discovered in Apollonia Pontica (note 21),
to a marble architectural unit (fig.14). Its diameter was c.2.5 m and the authors of the reconstruction have suggested several possible functions; a monumental tomb, a cenotaph or a dedication to a god (Minchev 2003, 244-245; Preshlenov 2002, 25). The foundations and some parts of a third building have also been discovered in the vicinity of the tholos and within the supposed sacred area. It is a temple attributed to the Great God of Odessos and is dated to the early 1st century B.C. The temple’s dimensions were 14.5 x 7 m and it was northwest-southeast orientated (fig.15) (Minchev 2003, 244).

Terracotta figurines of Aphrodite, showing her standing in an Ionic temple, might have been of local production and thus, according to Minchev (2003, 256), they could represent the temple of the goddess in Odessos.

Odessos’ agora might have been located in the area of the Roman thermae (fig.11.22). The site is on a high and wide terrace with large open air space suitable for the erection of the public buildings. It is known that in the agora, apart from the public buildings, in the 4th century there were also erected statues and that during the Hellenistic period there was a sundial that stood there, on the top of a high column (Minchev 2003, 245).

The theatre in Odessos has not been traced yet, but a possible location seems to be outside the Greek city wall, on a southeastern slope between two gullies, overlooking the bay – at the contemporary Mussala square. It was erected not later than the 4th century B.C., since it is mentioned on an unpublished inscription found in Agathopolis – modern Akhtopol (Minchev 2003, 260). The only evidence so far for the gymnasion in Odessos is the inscription dated to the 1st century B.C., where a gymnasiarches is mentioned (IGBulg I² 44).

A workshop, producing terracotta figurines and decorations for wooden sarcophagi, has been excavated outside the city, in the area of the necropolis and is dated to the 3rd-2nd century B.C. The workshop was obviously producing objects to be

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57 Great God of Odessos was later syncretised with the Thracian male deity Derzelas and became the most popular deity during the Roman period (Minchev 2003, 244; Preshlenov 2002, 25).
58 The sundial in the agora is depicted on two gravestone reliefs from Odessos (Minchev 2003, 240, 259).
59 In this location an architectural part, dated to the 2nd century A.D., with theatre masks in relief has been found (Minchev 2003, 245).
used for the burials and that is the reason why it was situated within the necropolis area (Minchev 2003, 252). Pottery production traces, one of the most popular crafts, dating to the second half of the 4th century B.C. have also been found outside the city, near the presumable path of the southwest fortification wall. Moreover, a zone of ceramic production has been located in front of the path of the northeast fortification wall, where workshops were operating during the Hellenistic period. Due to the high temperatures that were used during the firing of the various objects, it was probably safer for the workshops to be situated outside the city, to prevent the breaking of fires (Preshlenov 2002, 34, 36). However, archaeological evidence has proven that this was not the rule. A small-scale pottery production workshop has been located inside the city's walls 60 dating from the second half of the 4th century B.C. (Minchev 2003, 251). A blacksmith's kiln of the 4th century B.C. has also been found in the same area indicating the existence of a metal smelting workshop (Minchev 2003, 252).

Some remains of the earliest dwellings have been discovered in Odessos dating from the second quarter-middle of the 6th century B.C. (fig.11.18). They were made of wooden posts covered with by a mixture of clay. They were rectangular structures with one room and their dimensions were small. In the Late Classical and Hellenistic period houses were almost square and they had underground cellars, where the supplies were kept 61. They were made of stone or of sun-dried bricks and some of them had decorative tiles and antefixes (Minchev 2003, 245-246), an indication of private wealth and of the city's prosperity. On a decorative meander of a flat front roof tile (solenes hegemones) the name of Anthesterios is signed. The identical solenes hegemones that have been found in Mesambria (see above) could hypothetically relate Anthesterios in Mesambria with Odessos and house building. He could have been a master ceramist selling his signed ceramics to other cities, or an architect working in the region (Preshlenov 2002, 21-22).

There is no evidence yet for a water conduit in the Pre-Roman period (Minchev 2003, 246). A well was found next to a late Classical house that was in use during the Hellenistic period, from the beginning of the 2nd century B.C. (fig.11.19). It measured 40 x 40 cm (in the inner space) and it was built by rectangular limestone blocks. The stone masonry continued in depth up to 2 m and from that point on, through a

60 A pottery kiln has been excavated at San Stefano street
61 Remains of houses with cellars have been found near the sanctuary of Heros Karabasmos (Preshlenov 2002, 20).
cylindrical drilling the aquifer was reached. This seems to have been a widespread practice in Odessos (Preshlenov 2002, 22).

The fortified city of Odessos was encircled with necropoleis (fig.16). The earliest and largest necropolis extended on the southwestern part of the ancient city and along the northern shore of the Varna Lake. The burials are dated to the Classical and Hellenistic period and part of this necropolis was enclosed in the Roman fortifications, due to an extension of Odessos to the south and west during that period (Preshlenov 2002, 16; Panayotova 2007, 87). Most probably there was also an early necropolis to the west of the city, but the expansion of the urban territory of ancient Odessos led to its destruction. The earliest burials discovered in the later western necropolis are dated to the end of the 2nd century B.C. Another necropolis, in use from the 5th century B.C. to the 1st-2nd centuries A.D., was situated to the east, determining the location of the eastern boundary of Odessos (Panayotova 2007, 87).

Dionysopolis

The ancient Greek city of Dionysopolis has been located under the modern city of Balchik, on the southern end of Dobrudja, on the Bulgarian Black Sea coast (fig.1). The earliest written source is Pseudo-Scymnus, who states that Dionysopolis was previously named Krounoi, but after a statue of god Dionysos was washed up on the shore, the settlement's name was changed to Dionysopolis (GGM, Pseudo-Scymnus, Periegesis, 751-757). This event, that most probably concerned the official foundation of the polis, should be placed in the second half of the 4th or in the beginning of the 3rd century B.C. The origin and the foundation date of the initial settlement have not been specified yet. The most popular hypothesis among scholars is that it was an Ionian, probably Milesian, colony that was founded before the early 480s and most likely in the end of the 6th century B.C. Archaeological evidence seems to confirm the latter date (Damyanov 2007, 9-10).

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62 There is a large debate on whether Dionysopolis should be identified or not with Krounoi. See on this matter Gocheva 1996, 13-16.
63 The miraculous appearance of the god's statue can be considered an etiological myth for the choice of the divine protector (Damyanov 2007, 3).
64 The earliest epigraphic data so far, where the name Dionysopolitai appears, is dated to this period (IGBulg P 13bis) (Damyanov 2007, 3).
65 There is also a theory that the colony could have been a secondary foundation by one of the already existing Milesian colonies in the region, or by a group of colonists-worshipers of Dionysos, since the
In the surrounding territory of Dionysopolis lived the Thracian tribe of the Krobyzoi, the Scythians and some “µιγάδας” (mixed) Greeks (GGM, Pseudo-Scymnus, Periegesis, 759-757). In fact, according to Pseudo-Scymnus, Dionysopolis was the border between the Krobyzoi in the south and the Scythians to the north.

The geographic location of Dionysopolis is not considered to have been the favourite of the Greeks who tended to choose sites on peninsulas, or by the river estuaries, as for example Apollonia Pontica, Mesambria and Olbia. The area though, is rich in spring water and used to be covered with woods rich in woods (Damyanov 2007, 1; Tafrali 1927, 5). Despite the fact that this part of the littoral is considered dangerous for navigation, the high hills that face the south could provide protection to the ancient harbour from the strong northern winds. Furthermore, the ancient harbour’s location was favourable because there was a suitable way leading from the high Dobrudjan plateau down to the sea-shore (Damyanov 2007, 1-2; Isaac 1986, 259, note 293).

It seems that in the Hellenistic period Dionysopolis was a fully developed polis in the broader sense and that agriculture was the basis of its economy (Damyanov 2007, 15-16). The archaeological finds though, for the Greek period are really scarce, apart from some epigraphic evidence and the coinage that witness the intensive life of Dionysopolis in that period (Damyanov 2007, 10). In the end of the 3rd-beginning of the 2nd century B.C. the city began to mint its own coins. This lasted until the Roman campaign in 72 B.C. and probably reflects the period of economic upsurge, when Dionysopolis underwent a more intensive development (Damyanov 2007, 7; Gocheva 1996, 15-16). In the 1st century A.D. Dionysopolis was incorporated into the Roman province of Lower Moesia. In the middle of the 6th A.D. it was abandoned, after its destruction by a huge tidal wave caused by an earthquake in the sea (Lazarenko et al 2010, 13).

Insignificance of Apollo’s cult is notable in Dionysopolis (Damyanov 2007, 4-5; Avram 1996, 298-299).

66 The use of the word “µιγάδας”, referring to the Greeks, by Pseudo-Scymnus has been interpreted in many ways in relation to the ethnic synthesis of Dionysopolis population (Damyanov 2007, 19-21).

67 Earlier sources mention that the river Istros (Danube) on the north was the border between Thracians and Scythians (Herodotus, Histories, 4.80, 4.99; Thucydidies, Peloponnesian War, 2.97). Herodotus gives the additional information that the Thracians who lived just before the Istros River were called Getae (Histories, 4.93).

68 Underwater research – unpublished – has revealed that on the place of the modern port there was an ancient mole and a harbour (Damyanov 2007, 2).
The urban organization of the city was predetermined by the topography of the site. The shoreline reaches a high altitude on this part of the Black Sea coast; this was decisive for Dionysopolis’ amphitheatric organization in terraces, which is also the case for the modern city of Balchik (Damyanov 2007, 2, 10). It is important to notice that the geomorphologic changes due to coastal erosion, the change in the sea-level and intensive seismic activity that is characteristic for the region\(^{69}\), have deeply affected ancient Dionysopolis. As a result, the antique layers are today in a great depth that reaches at 15 m under the modern city, causing a lot of difficulties to the archeological research (Damyanov 2007, 2).

The centre of the ancient city was probably in the acropolis located on the second terrace above the sea (50-70 m), where most of the archaeological finds were discovered. Tafrali (1927, 29-31) was the first to propose a reconstruction of the acropolis by tracing the perimeter of the fortification wall, based on four points where remains of the earliest fortification, dated to Hellenistic period, were discovered (Damyanov 2007, 10). Three of these points define the eastern limit of the acropolis, following the edge of the terrace; from there the slope descends steeply to the deep ravine. The fourth point is indicative of the southern limit. The western and northern boundaries are determined by the lower hill-sides of two limestone hills (their summits on 108 m and 78 m) and the topography of the plateau (fig.17) (Tafrali 1927, 29-30). According to Tafrali’s reconstruction the acropolis extended on a surface of about 6 ha. Later on, M. Dimitrov proposed a somehow different reconstruction, as a result from the new evidence concerning the fortifications of Dionysopolis, including this time a larger area of 8-9 ha and keeping only part of Tafrali’s eastern boundary (fig.18) (Damyanov 2007, 10-11).

A very important fortuitous discovery of a Hellenistic temple was made in 2007. The temple is located about 250 m from the sea to the southwest of the acropolis. It is rectangular, 11.40 x 8.70 m, with two Ionic columns \textit{in antis}\(^{70}\) and its entrance is to the south through a wide four-stepped staircase (figs.19-21). Among the numerous epigraphic data that have been found there, two texts explicitly state that the temple

\(^{69}\) In the 1\textsuperscript{st} century B.C. and in the 6\textsuperscript{th} century A.D. there were natural disasters caused by tectonic movements (Damyanov 2007, 2).

\(^{70}\) The temples with two columns \textit{in antis}, in Doric or Ionic order, were widely used – particularly for treasuries – in the Greek world and were widespread in the Greek colonies in the Black Sea coast as well. See for example the temples of Apollo Iatros and Zeus in Olbia (see below), the Doric temple on the acropolis of Pantikapaion and the temples of Aphrodite in Kepoi and Phanagoria (Lazarenko et al 2010, 17; Krizhitskiy 2010, 97, 104-107, fig. 7.1, 8, 18, 20, and 22).
was used as one of the city’s archives, where the decrees were set up. The temple has been attributed to the Pontic Mother of Gods and its construction has been dated to 280-260 B.C., or to the second quarter of the 3rd century B.C. Until today, this is the only temple of the Pontic Mother of Gods ever discovered and the best preserved Hellenistic temple in Bulgaria.

Inscriptions are the only evidence of the existence of a sanctuary of Dionysos, of an altar dedicated to Demeter, of a sanctuary of the Samothracian Gods, “ιερὸν τῶν Σαμοθράκων”, of one of the Great God and another of Serapis. The sanctuary of Dionysos was without any doubt the earliest and most significant in Dionysopolis, since the city bears its name. A possible location might be in the acropolis, in the vicinity of today’s Bulgarian School (fig.17), where a small statue of god Pan, dedicated to Dionysos and dated to the end of the 3rd century B.C. was found. According to the dedicative inscription on its base, the statue was to stand in the sanctuary of Dionysos (Damyanov 2007, 7, 10; Tafrali 1927, 69 no.6).

The agora and a gymnasion are also mentioned in the previous inscriptions (notes 75 and 74 respectively). According to Tafrali (1927, 30), the agora of Dionysopolis was situated within the acropolis and therefore he suggests two possible locations. The first is in the southeastern limit of the acropolis, near a Romanian church, where a lot of inscriptions were found. The second possible location is at Reine Marie square, where a Roman monumental tomb was discovered (fig.17). It should be noted that in the eastern side of the square the “deecree of Akornion” was found, in which is mentioned that a statue will be erected at the “ἐπιφανέστατος τόπος” (most prominent place) of the agora (note 75) (Tafrali 1927, 31).

Apart from the acropolis on the second terrace, a part of the settlement must have been situated on the lowest terrace, next to the seashore, where the ancient harbour was. Traces of monumental buildings have been found in this area, but they are dated to the Roman period. This part of Dionysopolis probably remained unfortified until the 4th century A.D. (Damyanov 2007, 11).

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71 The temple is referred in the inscriptions (unpublished yet) as “Μητρῷον” and the dedications are made to “Μήτηρ θεῶν Ποντίων”, or “Μήτηρ Ποντία” (Lazarenko et al 2010, 28).
72 For more details on that temple see Lazarenko et al 2010, 13-62.
73 IGBulg P 20, 21 (3rd century B.C.)
74 Decree in honour of Polyxenes, son of Melson, citizen of Mesambria (14 century B.C., found in 1988, unpublished, now in the Historical Museum in Balchik) (Lazarenko et al 2010, 35)
75 Honorary decree of Akornion, c.48 B.C. (IGBulg P 13)
The necropoleis of Dionysopolis were scattered on several places, extending along the coastal roads leading out of the city, to the west and east, as well as to the north, on the upper plateau (fig. 18). The most known necropolis until today, dated to the 3rd century B.C., extends on the west, along the road to Odessos (Damyanov 2007, 11). It is believed that the western necropolis of Dionysopolis started immediately at the foot of the acropolis terrace and therefore the settlement developed mainly in an eastern direction (Damyanov 2007, 12). Some early Hellenistic graves were also revealed, among Roman and Medieval ones, in the only excavated so far burial mound, on the upper plateau (Panayotova 2007, 88).

**Kallatis**

Kallatis is located on the southern shore of the Romanian Dobrudja, under the present-day city of Mangalia (fig. 1) (Hind 1998, 139; Avram 2007, 239). It is the second Doric colony in the western Black Sea coast after Mesembria. Pseudo-Scyymnus states that it was founded by Heracleia Pontica in accordance with an oracle when “Amyntas became ruler of the Macedonians”76. Some scholars believe that Kallatis could have been founded between 540-500 B.C. in the time of Amyntas I (Avram 2007, 244). However, the most probable foundation date seems to be in the reign of Amyntas III that is between 394-369 B.C. (Hind 1998, 139-140). Archaeological evidence up to now confirms the latter date, since nothing earlier from the beginning of the 4th century B.C. has been discovered yet (Bilde et al, 2007-2008, 125).

The territory surrounding Kallatis was inhabited by Thracian Getae (Herodotus, *Histories*, 4.93). According to Pliny the Elder (*Natural History*, 4.18) a Thracian settlement named Acervetis pre-existed on the site. Other written sources mention Scythian presence in the Dobrudja area, since the revolt of the Greek Pontic cities against Lysimachos in 313 B.C.77 and there are also archaeological finds indicative of the existence of Scythians in the territory of Kallatis (Avram 2007, 249).

The choice of the site of Kallatis has puzzled scholars. As in Dionysopolis, there is no natural harbour, no peninsula or island, no access to a river. The location has

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been described as a third-choice site, left for the late-comers. Despite all these, Kallatis was a flourishing city. The small inlet on the coast developed as a port and the fertile black-earth agricultural land offered a big advantage to the colony’s economy (Hind 1998, 140; Isaac 1986, 261). The natural lagoon about 1 km to the south of the ancient city is another possible location for the port of Kallatis; underwater investigations seem to indicate the existence of ancient harbour arrangements there (Avram 2007, 243).

In the middle of the 4th century B.C. Kallatis was already prosperous (Hind 1998, 141). It was besieged two times by the troops of Lysimachos in 313 and 310 B.C. (Stillwell et al 1976, 431). Her leading role against Lysimachos indicates that Kallatis had a powerful position in the area, at least during the first siege. However, the second time 1000 Kallatians left their homes because they suffered from famine and Eumelus, ruler of the Bosporus, granted them a new place to live (Diodorus Sicilus, Library of History, 19.73, 20.25). In the early 3rd century B.C. the city flourished again and was involved in a war together with Istros against Byzantium over Tomis’ emporion, in order to control the trade monopoly (Memnon, History of Heracleia, fr.13). This happened between 256-255/4 B.C. (Buzoianu-Bârbulescu 2007, 294) and according to Memnon, the Kallatians suffered many losses. Despite all these, the archaeological evidence shows that the ancient city maintained a high economic and cultural level until the 1st century B.C. (Coja 1982, 101). In 72 B.C. Kallatis was conquered by the Romans, together with the rest of the Greek cities of the region (Avram 2007, 269).

A part of the ancient city has been submerged into the sea that has risen over 2 m (Hind 1983-1984, 75). Most of the finds under Mangalia belong to the Roman period (Isaac 1986, 264-265). The earliest defensive walls of Kallatis are dated to the middle of the 4th century B.C. and some sections of them have been traced, giving therefore the possibility to define the outline of the Hellenistic city. It appears that the space intra muros of the Greek period was much more widened (c.22 ha) than later in the Roman period; in the 2nd century A.D. it was diminished almost in half78 (fig.22).

The religious buildings of Kallatis are known only from the epigraphic data, apart from a sacred area, not attributed yet to some deity, which has been excavated by

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78 (Avram 2007, 241) Kallatis was reduced from west and south after a reconstruction of the fortifications in 172 A.D. (IScM III 97, 98, 99); the northern wall of the Hellenistic city coincided with that of the Roman period.
chance in Mangalia. It is situated near the post office, about 200 m to the southwest outside the perimeter of the Roman fortifications (fig. 22). The remains of a small temple (6.8 x 6 m) and three altars have been discovered and are dated to the 4\textsuperscript{th} century B.C. Their construction quality is characteristic of the best Greek techniques and reflects the economic prosperity of Kallatis in that period (Coja 1982, 101; Coja 1990, 164; Avram 2007, 241).

According to the inscriptions discovered up to now, the first sanctuary in Kallatis was the sanctuary of Heracles, the hero founder of its mother city Heracleia, in the beginning of the 3\textsuperscript{rd} century B.C. (IScM III 3). There was also a temple of the Samothracian Gods\textsuperscript{79} and a sanctuary of Gaia\textsuperscript{80}. Dionysos seems to have been very prominent in Kallatis (Isaac 1986, 264). An inscription dated to the late 3\textsuperscript{rd} century B.C. mentions a decision of the "\( \thetaι\alpha\sigma\rho\tau\alpha\)" to erect a temple dedicated to Dionysos from their donations (IScM III 35) and a sanctuary of Dionysos Dasyllios, the "\( \Delta\alpha\sigma\u0391\lambda\lambda\iota\epsilon\iota\nu\)", existed in the 2\textsuperscript{nd} century B.C., most probably outside the city (IScM III 47).

Epigraphic data is also the only evidence for public buildings in the Hellenistic period in Kallatis: the prytaneion and the theatre (IScM III 3 – early 3\textsuperscript{rd} century B.C.), the bouleuterion (IScM III 49 – 2\textsuperscript{nd} century B.C.) and the gymnasion, which is mentioned in later inscriptions of the 1\textsuperscript{st} century A.D. (IScM III 31, 109) but there is indirect evidence for its existence in the Greek period in an inscription from the 2\textsuperscript{nd} century B.C. (IScM III 18).

It is important to note also the discovery of a mosaic floor in the remains of a Hellenistic house (1\textsuperscript{st} half of the 2\textsuperscript{nd} century B.C.) in the southern part of Kallatis\textsuperscript{81}. Mosaic floors of the Greek period are rare finds in the Black Sea region and reflect a developed cultural level and prosperity. Mosaic floors have been also discovered in rich Hellenistic houses in Olbia (see below) and in Chersonesos; they most likely decorated the androns of the houses (CC 2003, 83, fig. 8.32).

The cemeteries of Kallatis surrounded the periphery of the ancient city, but extended mainly to the west and north beginning from the area near and outside the Hellenistic fortification walls. The earliest graves are dated in the 3\textsuperscript{rd} quarter of the 4\textsuperscript{th} century B.C. (IScM III 4, c.300-250 B.C. and IScM III 19, 2\textsuperscript{nd} century B.C.

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\textsuperscript{79} IScM III 4, c.300-250 B.C. and IScM III 19, 2\textsuperscript{nd} century B.C.

\textsuperscript{80} IScM III 48B, 2\textsuperscript{nd} century B.C.

\textsuperscript{81} The mosaic had two colours; its background was in green and white pebbles and had borders of greenish tesserae (Hind 1983-1984, 75).
century B.C. confirming, up to the present, a late foundation of the colony in the beginning of the 4th century B.C. (Lungu 2007, 356-357; Avram 2007, 243).

A very important discovery in the north-western part of the necropolis is the funerary complex with the so-called “Tomb with papyrus” and a rectangular construction 12 x 6 m with three cremation tombs (figs.22-23). It is dated in the last 3rd of the 4th century B.C. The location of the whole complex just in front of the northern fortification wall, the monumental organisation of the funerary space around the “Tomb with papyrus” 82, the rich funerary gifts and the unique find of the papyrus, suggest the possible presence of a heroon, or the burial of a prominent person (Lungu 2007, 357; Avram 2007, 243-244).

**Tomis**

Ancient Tomis, built on a peninsula, lies today under the modern city of Costantsa in Romania (fig.1). According to Pseudo-Scymnus, it was a Milesian foundation 83 at a site that was encircled by Scythian inhabitants (GGM, Pseudo-Scymnus, Periegesis, 765-766). Archaeological evidence indicates that Tomis was founded most probably towards the middle of the 6th century B.C. Its location on a peninsula provided protection from attack by land or by sea and the good harbour shelter to the ships from the strong northern and eastern winds (Isaac 1986, 266, 268). Some Late Hellenistic written sources refer to Tomis as an emporion (Memnon, History of Heracleia, fr.13) and as a polichnion (small town) (Strabo, Geography, 7.6.1).

The Greek period of Tomis, based on the stratigraphic evidence, is divided in two phases. The first phase is from its foundation until the war on Tomis’ emporion (256-255/4 B.C.) (Memnon, History of Heracleia, fr.13) and the second phase is from the end of the war until the Roman conquest in Dobrudja in 29/28 B.C. by M. Licinius Crassus (Buzoianu-Bărbulescu 2007, 290, 300). In the first phase, characteristic is the vivid economic activity through imports and the reduced inhabited area limited to the southern extremity of the peninsula, around the contemporary Cathedral Park area (fig.24.8) (Buzoianu-Bărbulescu 2007, 293). In the end of the 4th century B.C. a destruction layer caused by a large fire is evidenced in Tomis, probably related with

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82 The tomb was in the centre of a 14m-diameter enclosure (perivolos) of limestone blocks and in the interior of the enclosure on the west there was an altar made of limestone blocks. The deceased held the papyrus in his right hand (Lungu 2007, 357). Another case of a heroon, although of much bigger dimensions, is the tumulus T A95 found in Orgame (see below).

83 There is also a hypothesis that Tomis was founded by Istros (Avram 1996, 297-298).
the uprising against Lysimachos in 313 B.C. and followed by an economic decline (Buzoianu-Bărbulescu 2007, 292, 297). The consequences of the war on Tomis’ *emporion* seem to have been favourable for Tomis; the city began to develop and a broadening of the inhabited area on the peninsula is noticed (fig.24.10) (Buzoianu-Bărbulescu 2007, 295, 297). Trade became intense and coins were issued for the first time in the 2nd half of the 3rd century B.C. In fact, trade activities seem to have always prevailed over agricultural ones making Tomis evolve into an important commercial centre (Buzoianu-Bărbulescu 2007, 299; Lungu 2007, 352).

There are no traces of fortifications in Tomis until the Hellenistic period. The earliest proof for the existence of a Hellenistic circuit wall is an inscription of c.100 B.C.84. The perimeter of the Hellenistic wall has been placed hypothetically, based on the fact that the area occupied by the Hellenistic necropolis began immediately after the city’s walls. The estimated inhabited area covered by Tomis in that period is about 17 ha (Buzoianu-Bărbulescu 2007, 298, note 127). Tomis, like Odessos and unlike neighbouring Kallatis, almost doubled its size in the Roman period; the estimated inhabited area in the 2nd century A.D. is about 30 ha (Buzoianu-Bărbulescu 2007, 298, note 127).

The remains of monumental constructions that have been discovered in Costantsa are only isolated sections of walls of the ancient city and cannot therefore be related to the fortification wall, or to some public building (Buzoianu-Bărbulescu 2007, 298). The only evidence for the existence of religious and other public edifices in Tomis is the epigraphic data; the earliest official inscriptions discovered up to now are dated to the 2nd century B.C. (Buzoianu-Bărbulescu 2007, 295). A sanctuary of Apollo (IScM II 5, 6), of the Samothracian Gods (IScM II 1) and of Sarapis (IScM II 7) existed in Tomis in the late 2nd-late 1st centuries B.C. There was also an agora (IScM II 5) and a theatre (IScM II 4), characteristic features of the Greek city organisation.

Dwellings dug partly into the earth, dating from the second half of the 6th century B.C. have been discovered in Tomis, confirming the early foundation (Isaac 1986, 266-267; Coja 1982, 101). They were huts of the wattle and daub technique (Hind 1992-1993, 89), like those discovered in Istros (see below). In the next century stone houses began to be built above ground and stone was used for their construction (Isaac 1986, 267; Buzoianu-Bărbulescu 2007, 293).

84 “ὑπὲρ τοῦ περιβόλου τῆς πόλεως” (IScM II 2)
There have been found five necropoleis within a large area, in the periphery of the modern city, belonging to different periods. The earliest graves so far are dated to the Hellenistic period. The largest Hellenistic necropolis was found on the Tomitan peninsula, inside the area of the Late Roman city (end of 3rd – 7th century A.D.). Part of the necropolis was covered by the north-eastern section of the Roman-Byzantine fortification wall (fig.24.1c) and reached down to the contemporary Ovidiu Square, where the northwest side of the supposed Hellenistic fortification wall was erected (fig.24.10) (Buzoianu-Bărbulescu 2007, 297; Lungu 2007, 352).

Istros

Istros is located in the Danube (ancient Istros River) Delta in the historical area of Scythia Minor, in the territory of Dobroudja, modern Romania (fig.1). The site is free of modern buildings and is the best studied in the Western Black Sea coast. However, the thick Roman and Byzantine layer complicates the uncovering of Greek remains (Hind 1983-1984, 76). Istros was one of the first colonies founded by Milesians in c.656 B.C. a date suggested by Eusebius in his work Chronicles, or in the end of the 7th century B.C. according to Pseudo-Scymnus. It was established on a peninsula at the edge of a sandy plain, but today the ancient seashore has been transformed into the western shore of Lake Sinoe, as the Danube's silt deposits have formed a sandbank, which gradually closed off the ancient coastline. The region around Istros, has been previously occupied by people of the Babadag culture. However, there is no evidence yet of pre-colonial occupation by indigenous tribes at Istros specifically (Krebs 1997, 52-53).

The colonisation was peaceful and it seems that there was collaboration and exchange of goods with the local Getae from the very beginning of Istros’ life (Pippidi 1971, 44). Grave finds testify to the coexistence of Greeks and natives side

85 Coja 1990, 160
86 GGM, Pseudo-Scymnus, Periegesis, 767-772. There is a debate between scholars on whether Eusebius’ or Pseudo-Scymnus’ date is the correct one. See Avram 2003, 284; Coja 1990, 160; Dimitriu 1968, 406.
87 (Isaac 1986, 268; Boardman 1962-1963, 36) The formation of a sandbank in the Danube Delta is already evidenced since antiquity in the Histories of Polybius (4.41) and in Strabo’s Geography (1.3.4). Today’s Lake Sinoe was originally a gulf, named “Halmyris” in the ancient sources (Avram 2003, 281).
88 Archaeological finds attest at the area the third and final phase of the Babadag culture that had a violent end most probably in the beginning of the 7th century B.C. The end of this culture is not connected in any way with the colonisation of Istros (Krebs 1997, 48,52; Avram 2003, 280)
by side from the middle of the 6th century B.C. (Isaac 1986, 271-272). Istros was a maritime city and the basis of its economy was the fish trade (Pippidi 1971, 51). It was destroyed by a large fire in the end of the 6th century but soon regained its strength; it was reconstructed and experienced a period of great prosperity during the 5th century B.C. becoming one of the major poleis of the Black Sea region in the Classical period. Aristotle states that there was an oligarchic regime in Istros that was replaced by democracy (Aristotle, Politics, 5.1305b); this change probably took place in the beginning of the 4th century B.C., as it is documented in the epigraphic data referring to the city’s democratic institutions (Avram 2003, 298). A reconstruction of the fortification and the city’s monuments and a complete reorganization of the urban space were necessary after a second destruction of Istros around the middle of the 4th century B.C. This event is related to the invasion of the Scythians led by Ateas into the region south of the Danube and the Macedonian expedition against them, led by Philip II in 339 B.C. In the first half of the 1st century B.C. the fortification and the sacred zone of the city were completely destroyed by a third large fire (Avram 2003, 282; Pippidi 1971, 149). The size of the catastrophe points to a destruction caused by an invasion of the Getae leader Burebista, who during 55-44 B.C. had managed to subject all the Greek colonies of this side of the Black Sea coast, from Olbia to Apollonia Pontica. The “second foundation of the city”, mentioned in the inscriptions, is probably related to the rebuilding of Istros after this destruction (Pippidi 1971, 147, 149). Istros came under Roman jurisdiction in 3-2 B.C. The site was completely abandoned in the early 7th century A.D. (Avram 2003, 318-319).

The initial settlement consisted of two different parts-nuclei. The first nucleus was the acropolis situated on the highest and rocky edge of the promontory. There was the sacred area of the city with a large sanctuary on the northeast. The second nucleus was the habitation area on the sandy plateau, the so-called “sector X” about 800 m to the west of the acropolis (fig.25) (Avram 2003, 291). It covered a surface of 30 ha (Dimitriu 1968, 405), while the whole site, acropolis and habitation area

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89 The time corresponds with Darius’ expedition in 514-13 B.C. against the Scythians (Coja 1990, 162).
90 Greco-Torelli 1983, 224; Coja 1990, 163; Avram et al 2004, 927
91 The same situation is observed in neighboring Orgame; a destruction layer dated to the same period has been excavated there as well (Coja 1990, 166-167).
92 “δευτέραν κτίσιν τῆς πόλεως” (IScM I 191, 193)
together, occupied a surface of about 60 ha (Avram et al 2004, 933). Because of the fact that it is unlikely that the first settlement occupied such a large area, two contradictory hypotheses have been put forward by some scholars; that “sector X” was the initial settlement from where the city of Istros grew, or that it was a suburban quarter, a market place for the exchange of products with the locals and the initial city was situated on the acropolis, the preferable area of the Greek colonists (Isaac 1986, 272; Pippidi 1971, 46).

The habitation area was initially unfortified and a part of its boundary was set by a street paved with ceramic fragments (*opus signinum*), which was more than 9 m wide and run on the west and south of the habitation area. Later on, about 575 B.C. the first fortification wall was built, parallel to this street that was now included inside the wall circuit, while a second street of the same dimensions and technique was opened up outside the walls, resuming the function of the previous one (see below) (Coja 1982, 97-98). Recent excavations have identified a second archaic wall, near the Roman-Byzantine walls, which probably surrounded the acropolis and it may have preceded the construction of the previously mentioned wall on the plateau (Avram 2003, 281-282).

The acropolis was separated from the habitation area by a bay in the south, where the ancient harbour had been probably located (Avram 2003, 281). The communication of the harbour with the Getic hinterland was achieved via the peripheral street mentioned above (Coja 1990, 161). The location of the harbour and the archaic wall that probably surrounded the acropolis strengthens the possibility that the city was composed of two separate unities (Avram 2003, 281). Furthermore, the part of the Classical wall – built after the destruction in the end of the 6th century B.C. – that was revealed in the east of the plateau (fig.25.II), might represent the eastern boundary of the habitation area. Besides, another section of Classical fortification has been traced in the western extremity of the habitation area, which followed the path of the archaic wall (fig.25.I). On the other hand, the part of the Hellenistic wall

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93 This is supported by the large quantities of imported luxury ceramics and transport amphorae that have been discovered in this area (Pippidi 1971, 46-47).

94 Until recently it was believed that this wall represented a regression of the city’s urban surface in the Classical period (Avram 2003, 282). Such a hypothesis would be contradictory to Istros’ flourishing that is evidenced in this period.

95 This section is dated to the third quarter of the 4th century B.C. (Avram 2003, 282). It might have been a reconstruction after Istros’ second destruction.
that was traced to the west of the Roman-Byzantine walls seems logical to represent an extension of the Acropolis towards the port in the Hellenistic period\(^6\) (fig.25.III).

In the excavated sanctuary’s area on the acropolis of Istron a number of temples, altars, probably a propylon and some bothroi were unearthed (figs.26-27). The oldest construction of the sanctuary must have been the so-called temple A’, which is dated to the beginning of the 6\(^{th}\) century B.C. and has not been attributed to some deity yet (fig.26.A’). Initially the temples were made of wood; the first buildings of stone – two temples in antis – appear in the middle of the 6\(^{th}\) century B.C. The first building, the so-called temple A, whose façade was orientated towards the south, was parallel to temple A’ from west and is attributed to Zeus Polieus (fig.26.A) (Avram 2003, 320-321). Not far from the temple a big altar dedicated to the same deity was discovered. The epiclesis Polieus means that Zeus was protector of the city and therefore, there is a strong possibility that the whole sanctuary was dedicated to Zeus Polieus (Pippidi 1971, 57). The second building, to the south of Zeus’ temple, is the so-called temple I and was dedicated to Aphrodite (fig.26.I). The temple was built in Ionian order (Boardman 1962-1963, 36). Its façade was orientated to the south and it is probable that the western side of the temple’s podium was adjacent with the sanctuary’s enclosure (περίβολος) (Avram 2003, 320-321). This hypothesis for the western boundary at the specific location is strengthened by a construction (fig.26.C) found on the north of Aphrodite’s temple, which was most probably an entrance with a propylon to the sacred area. This monument is dated to the Hellenistic period, but another similar one must have existed there since the archaic period (Avram 2003, 322). An underground rectangular construction of unknown purpose, to the southeast of Aphrodite’s temple, inside a natural fault was unearthed. It was most probably some kind of a sacred pit (bothros), related to Aphrodite’s cult and is dated to c.400 B.C. (Avram 2003, 321). The temples of Zeus Polieus and of Aphrodite were destroyed at the end of the 6\(^{th}\) and were reconstructed in the early 5\(^{th}\) century B.C. (Hind 1983-1984, 76; Coja 1990, 162). The existence of monumental buildings embellished with special care, one century and a half after the foundation of Istron, and the potential to reconstruct them in a short time span, are indicative of the increased degree of urban development, the well-being of the citizens and the city’s prosperity (Pippidi 1971, 57)

\(^6\) It could not have been a further shrinkage of the city as it was believed until today (Avram 2003, 282)
In the Hellenistic period, after the second destruction of Istros, the reconstruction of the sanctuary’s monuments was again necessary. At the same time, the introduction of new cults, affected the organization of the sacred space. A new marble Doric temple (fig.26.D) (Boardman 1962-1963, 36) was built in the sanctuary in the first half of the 3rd century B.C. and was dedicated to Theos Megas. Its façade was oriented towards the east and a lot of small votive monuments were erected to its south. This affected the whole organization of the sacred space and probably a second entrance to the south of Theos Megas’ temple should be searched for (Avram 2003, 322).

A sanctuary dedicated to Apollo Iatros existed in Istros but it is known only from inscriptions (Avram 2003, 300). The sanctuary probably existed from the beginning, since the god was the patron deity of the city (Avram 2003, 299). According to Pippidi (1971, 58), the second sacred zone must have been situated somewhere in the southeast inside the acropolis, where an upper area is located. In the Hellenistic period a special place was reserved for the newly introduced cult of the Samothracian Gods; the Samothrakion served as the city’s archive for the decrees’ lapidary copies and it is only known from epigraphic data of the 3rd-2nd century B.C. (Avram 2003, 303; Cole 1984, 76). Another religious monument in Istros that was dedicated to the Muses – the Mouseion – is known only from one inscription (IScM I 1) of the middle of the 3rd century B.C. (Avram 2003, 304).

Epigraphic data are the only evidence for the agora of Istros, the theatre, the gymnasion and the agoranomion. Some of the information deriving from these inscriptions is that the feast of Hermaia was celebrated in the gymnasion, the agoranomion was built by a benefactor named Aristagoras, son of Apatourios and the agora had a stoa in the 3rd century B.C. According to Avram (2003, 281), the agora must have been located in the acropolis of the city, that consisted not only of the sacred but of the public space as well.

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97 The votive inscription to Theos Megas from a Thasian citizen, written on the temple’s architrave (IScM I 145), is indicating that this building was perhaps a private shrine rather than a public temple (Cole 1984, 76).

98 A votive inscription to Apollo Iatros (IScM I 144) from the 4th century B.C. is the earliest evidence for the existence of the temple (Isaac 1986, 275).

99 IScM I 11, 19, 58

100 Agora: IScM I 1, 3, 8, 19; theatre: IScM I 8, 25; gymnasion: IScM I 59; agoranomion: IScM I 54
In the western zone of Istros, within the habitation area, a Hellenistic sanctuary of Cybele might have existed in the so-called “sector X” (Bilde et al 2007-2008, 126). In the northwestern corner of that area pottery kilns from the middle of the 6\textsuperscript{th} century B.C. to the end of the Hellenistic period, testify to the continuous local ceramic production and to the existence of a potters’ quarter there (Coja 1990, 161).

Housing in Istros, in the habitation area, appears to have been extremely dense especially in the period from 550 B.C. until the destruction in 514 B.C. (Coja 1990, 161). A similar situation is observed later, when housing became progressively denser during the Hellenistic period; during this time also the number of Getae residents gradually increased (Coja 1990, 167-168). The first archaic dwellings seem to have been rectangular constructions on the ground, or semi underground huts\textsuperscript{101}, like those discovered in Olbia and Berezan (see below). Their dimensions were modest and they were made using the technique of wattle and daub. In the middle of the 6\textsuperscript{th} century B.C. rectangular houses made of raw brick appear, in southeastern orientation, one or two rooms and dimensions 4 x 4 m or 4 x 6 m (Dimitriu 1968, 405; Avram 2003, 323). All these archaeological data are indicative of urbanization and support the theory of methodical planning already from the archaic period (Bilde et al 2007-2008, 127). Moreover, the traces of roads and intersections\textsuperscript{102} from the Hellenistic period, suggest an urban organization system in building blocks (insulae) of dimensions c.72 x 36 m (Avram 2003, 323-324).

The water supply in Istros was provided by an aqueduct (Hind 1983-1984, 77). Next to and under the Hellenistic defensive wall a canalization system was excavated, consisting of two basic parts\textsuperscript{103}. It seems that each part was constructed in a different period and, depending on the period, it had different functions. The first part is probably the most ancient; it is dated to the Hellenistic period and seems that it secured the effluent out from the city. The second part, adjacent to the Hellenistic

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\textsuperscript{101} This type of dwelling appears in many Greek colonies in the Black Sea and is considered characteristic during the first years of colonization in order for the Greeks to adapt to the local construction techniques and the colder climatic conditions of the region. However, there is a large debate on that matter and many scholars do not accept that Greeks actually lived in huts. See the argument on that in Tsetskhladze 1998, 20-22 and Kuznetsov 2003, 918-921.

\textsuperscript{102} Specifically, there is a street (a) from where another street (b) departs in right angle, leading northward. In a distance approximately 40 m there is another street (c), parallel to street (b) delimiting this way a building block. Another street crossed the plateau towards the centre (Coja 1982, 99).

\textsuperscript{103} For more details on that system see Preda-Doicescu 1968, 326-327, 424, fig.81 and pl.XX.
wall, served probably for the collection of the rain waters from the zone of the defensive walls (Preda-Doicescu 1968, 424, pl.XX).

The necropolis of Istros extends to the north and northwest of the city (Isaac 1986, 268). The graves practically stop to the walls of the city, but on the other side lay in a long distance into the interior of Dobrudja (fig.28) (Lungu 2007, 338). The traces of ancient roads, which radiate out from Istria and are seen in the aerial photographs, reveal a pre-Hellenistic rectangular grid, perhaps as early as the late 7th century B.C., which testifies to the establishment of a system of allotment. The plots have regular dimensions of 500-600 x 200 m. This system indicates a planned landscape that it might have been prepared in advance by the Istrian community for the arrival of a new wave of colonists, so that the plots could be immediately distributed. Furthermore, the allotment system has been connected with the funerary tumuli that were built along these roads and has been interpreted as evidence for the first example of funerary allotment in the Greek world104.

Orgame

Ancient Orgame is located on Cape Dolojman, on the estuary of the Danube River (ancient Istros), near the small town of Jurilovca, in Romania (fig.1). The only evidence for the Greek toponym is found in the works of Hekataeus of Miletus in the end of the 6th century B.C. (HMF 1831, 85, fr.152) and of Stephanus Byzantinus much later in the 6th A.D. (Περί Πόλεων, 329). The archaeological evidence points to a Milesian foundation in the middle of the 7th century B.C. about the same time with Istros, or maybe even earlier105. Some scholars believe that Orgame might have been a sub-colony of Istros, or a mixed settlement of Greeks and Getae (Hind 1992-1993, 90; Coja 1982, 96). What is more certain is that a layer with remains belonging to phases II and especially III of the Babadag culture appears to have been interfered with the Archaic layer, providing evidence for the existence of a pre-colonial native population on the site, just before the Greek establishment (Coja 1990, 162).

It seems that Orgame never issued coins and there has not been found yet any inscription on the site of the ancient city. This fact has puzzled scholars, since it is not at all clear if Orgame was a polis in the political sense, or just a polis in the sense of a

105 (Bilde et al 2007-2008, 128; Mănucu-Adameșteanu 2003, 345-346) For a foundation before Istros see note 86.
city. The lack of such evidence, together with archaeological finds that link Orgame with Istros, indicate that Orgame was dependent on Istros at least until the end of the Classical period (Avram 2003, 287). The name of the settlement changed to Argamum in the Roman Period and in the beginning of the Middle Ages it was completely abandoned (Mănucu-Adameșteanu 2003, 353, 372).

There are no modern constructions on the site of ancient Orgame. There is, however, a thick Roman layer above the remains of the Greek period. This fact, as well as the geomorphologic changes due to coastal erosion, tectonic movements and the rise of the sea-level, impedes the archaeological research (Mănucu-Adameșteanu 2003, 346, 378). As a result of these changes the shoreline has been gradually altered and the bay in the south of the ancient city – where hypothetically the ancient port was – has been filled with alluvial deposits (Mănucu-Adameșteanu 2003, 372-373).

No traces of archaic fortification have been found in Orgame until today. The earliest section of the fortification wall that has been traced belongs to the end of 5th – beginning of 4th century B.C. (Mănucu-Adameșteanu 2003, 349). Evidence of destruction towards the middle or the end of the 4th century B.C. is related with the same events as in Istros – the expansion of the Macedonian kingdom that seriously affected the Greek cities. In that time there was a partial reconstruction of the city’s wall (Coja 1990, 167). It seems that in the Greek period Orgame was larger than later, since traces of habitation from the 3rd-2nd centuries B.C. have been found inside and outside the fortified circuit of the Late Roman city, which today encloses an area of c.3.5 ha (fig.29) (Coja 1982, 100; Mănucu-Adameșteanu 2003, 357, 375).

Orgame most probably extended on terraces that were created by excavating the rock of the cape (Mănucu-Adameșteanu 2003, 347). The more ancient traces of habitation are two houses dated to the 6th century B.C. They had small dimensions (c.3.5 x 2.5 m) and were made of stone (Mănucu-Adameșteanu 2003, 346; Bilde et al 2007-2008, 128). There are not many traces of Classical and Hellenistic dwellings. The common orientation of the walls of some houses of the 4th-3rd centuries B.C. and the alignment of these buildings with a paved street indicate a spatial organization of the inhabited area (Mănucu-Adameșteanu 2003, 348-349). According to Mănucu-Adameșteanu (2003, 347), the terracing of the site, the spatial organization of the

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106 This is the unique street of the Greek city, of which a 3m section has been traced up to now (Mănucu-Adameșteanu 2003, 349).
inhabited area and the construction of the fortification wall should be dated in the same period – the end of 5th–beginning of 4th century B.C.

Among the dwellings, a building with a long life period – second quarter of the 4th-first quarter of the 3rd century B.C. – was discovered. The bigger dimensions and the abundance of archaeological material\textsuperscript{107} found inside the rooms of the building seem to indicate that it bore some kind of a religious role (Mănuću-Adameșteanu 2003, 348-349).

Craft production workshops have been found in two areas of ancient Orgame, inside and outside the city’s walls. Two pottery-kilns have been discovered near the Archaic houses, inside the city and are dated to approximately the same period with the houses – in the 6th century B.C. The next discovery was outside the Greek and Late Roman fortifications, in the southeastern extremity of Cape Dolojman and concerned a Hellenistic artisan’s quarter that produced ceramic objects (Mănuću-Adameșteanu 2003, 346, 348).

The large necropolis of Orgame has been occupied by tumuli that covered a surface of c.100 ha to the west of the ancient city. In sector II, situated on the northern part of the necropolis, mostly Archaic (7th-6th centuries B.C.) and some Hellenistic burials have been discovered, while sector I, in the south-western part, has been occupied by burials of the 4th and 3rd centuries B.C. (fig.29) (Lungu 2007, 345). The arrangement of the tumuli in family groups is obvious and judging from their distribution on the ground, the groups seem to follow a systematic model of occupation of the space; they succeed one another by parallel alignments, of east-west orientation, following the roads which cross the necropolis. Three similar roads have been identified; their width was 5 to 7 m and they were separated by intervals of 15 m. The access to the funeral parcels was achieved via intermediate paths (Mănuću-Adameșteanu 2003, 350). The alignment of the tumuli along the roads, their grouping in units by kinship and the distribution of the funerary gifts are indicative of a homogeneous community with the same traditions and aware of the importance of respecting and following the specific organization model in the use of space. The information offered from the study of the necropolis organization is pertinent for understanding the urban development of the city of Orgame, ‘because the imprint of

\textsuperscript{107} Pottery, bronze coins, arrow-head money, statuettes representing Greek goddesses, etc.
the regulations which governed the “city of the alive” appears in the order revealed by the “city of the dead” (Mănucu-Adameșteanu 2003, 352).

The diameter of the tumuli in the Orgame necropolis ranges from 2 to 8 m. An exception to this is the tumulus T A95 that stands out because of its monumental dimensions; a circular pit for offerings with an external diameter of 42 m is surrounding it (fig.30). The tumulus was placed at the entrance of the Archaic necropolis and has been dated to c.650-630 B.C. So far it is the oldest Greek funerary monument discovered in the western Black Sea region\(^\text{108}\). The particular character of this monument lies in the fact that the funerary practice of the offerings lasted for many centuries – from the middle of the 7\(^{\text{th}}\) until the first half of the 3\(^{\text{rd}}\) century B.C. It appears that tumulus T A95 has been the centre of an important cult of an exceptional personality and it is very likely that this personality has been the founder of the colony, the oikistes, who after his death was promoted to a hero and therefore he was deified. If this hypothesis is correct, then tumulus T A95 was the tomb of the hero-founder – the so-called heroon. It also proves that the choice of the site for the placement of the tomb of the hero-founder was among the priorities of the first group of colonists. It is interesting though that this specific heroon is not placed in the agora, or the entrance of the city, as it used to happen according to the literary sources\(^\text{109}\) and the archaeological evidence, but it is placed in the entrance of the necropolis; this case is a rare exception (Lungu 2007, 347; Mănucu-Adameșteanu 2003, 351). It is noted that another exception of a heroon placed outside the city’s walls might be the “Tomb with Papyrus” found in Kallatis (see above).

IV. Urban Planning in the North-Western Black Sea region

Berezan (Borysthenes)

Berezan is a small island at the mouth of the Bug (Hypanis) and Dneiper (Borysthenes) estuary (fig.1). According to the geological theory, Berezan was a peninsula in antiquity that was separated from the mainland sometime in the 3\(^{\text{rd}}\)-4\(^{\text{th}}\)

\(^{108}\) (Avram 2003, 287) This fact could be pointing to an earlier foundation of Orgame before the date that Eusebius gives for Istros that is 657-656 B.C. (Lungu 2007, 347).

\(^{109}\) See for example Strabo (Geography, 12.3.11) on Autolycus, the hero-founder of Sinope, who had an oracle and a statue in the city. The oracle and the statue suggest the existence of a temple in Sinope, dedicated to the deified hero (Manoledakis 2010, 565).
A.D. due to the rise of the sea level\textsuperscript{110}. The earliest Greek settlement on the Northern Black sea area, established in c.647/6 B.C., has been discovered on Berezan (Kryzhitskij-Krapivina 2001a, 11). The settlement has been identified with Borysthenes, a Milesian colony – a name that is also closely connected with Olbia\textsuperscript{111}.

A significant part of the ancient settlement has been eroded by the sea, or is now submerged into water; its northern and northwestern limits extend about 180-250 m off the present shoreline. It is estimated that the Berezan settlement had reached the size of 16-20 ha, while today the remaining area occupies about 10-12 ha, of which 1.5-2 ha have been studied so far (fig.31). Military constructions in the 18\textsuperscript{th}-20\textsuperscript{th} centuries have caused major destruction to the archaeological site (Nazarov 1997, 133; Solovyov 1999, 11, 17).

In the beginning, the inhabitants on Berezan were very few in number. According to Solovyov (1998, 212-213) it is probable that the first colonists settled among local population\textsuperscript{112}; on the other hand though, the anthropological research suggests homogeneity in the structure of the settlement (Kryzhitskij et al 2003, 472). Most of the building structures are concentrated on the north-central and northeastern part of the island – the eastern shore is the only location that is suitable for a port (Hind 1983-1984, 79) – while the necropolis occupies the northwestern part (Kryzhitskij et al 2003, 466-467). The economy of the settlement was probably based on trade and particularly on metal exports, which is evidenced by the presence of highly specialized copper smelting workshops as early as the end of 7\textsuperscript{th}-first half of the 6\textsuperscript{th} century B.C., whose production seems to have exceeded by far the needs of the inhabitants\textsuperscript{113}. Berezan seems to have flourished in the last quarter of the 6\textsuperscript{th} until the first quarter of the 5\textsuperscript{th} century B.C., which was a period of rapid urbanisation\textsuperscript{114}; by that time the settlement had reached its maximum extent. The gradual decline that started in the 5\textsuperscript{th} century B.C. is related to the growing danger of the Scythians as well as to the loss of the political independence of Borysthenes and its incorporation into

\textsuperscript{110} See Nazarov 1997, 131-135; Solovyov 1999, 11-13
\textsuperscript{111} (Solovyov 2001, 117) Some scholars identify the emporion Borysthenes mentioned in Herodotus (Histories, 4.17.1, 4.24.1) with the settlement on Berezan, while some others with Olbia. See Hansen 1997b, 101-102; Hind 1997, 107-111. See also “Olbia” in this paper.
\textsuperscript{112} Solovyov’s assumption is based on the variations of the typology of the first dwellings
\textsuperscript{113} See Domanskij-Marčenko 2003, 29-36.
\textsuperscript{114} According to Solovyov (2001, 131) the large-scale urbanisation was achieved through the establishment of city-organisation organs, due to the influx of a new massive wave of colonists.
the Olbian polis\textsuperscript{115}; this is reflected in the decline in construction activity, the abandonment of the western part of the settlement\textsuperscript{116} and the reduction of the population – a part of which might have moved to Olbia – by the end of the first third of the century. The gradual loss of the urban characteristics transformed Berezan into a rural settlement of Olbia\textsuperscript{117}. Moreover, in the 4\textsuperscript{th} century B.C., its harbour lost its commercial importance and its residential area was limited to the northeastern corner of the initial settlement. It was completely abandoned in the end of the first third of the 3\textsuperscript{rd} century B.C.\textsuperscript{118}. A major lacuna exists in the archaeological layers until the 2\textsuperscript{nd} century A.D.; it seems that life returned on Berezan in the middle of the 2\textsuperscript{nd} century A.D. (Solovyov 1999, 114-116).

The first dwellings of the Greek colonists seem to have been rectangular or oval underground and semi-underground constructions. They occupied an area between 5 and 14 m\textsuperscript{2} and the earliest ones are dated to the last quarter of the 7\textsuperscript{th} century B.C. (Treister-Vinogradov 1993, 539). It is evident that in the beginning there was no organized layout and the dwellings developed haphazardly, mainly near the northeastern coast (fig.32) (Solovyov 1999, 31). In the second and third quarters of the 6\textsuperscript{th} century B.C. there was a significant increase in the number of these constructions expanding towards the north-central part of Berezan (Solovyov 1998, 216). In the last quarter of the 6\textsuperscript{th}-first quarter of the 5\textsuperscript{th} century B.C. the underground dwellings were replaced by above ground multi-roomed typical Greek houses of stone and mud bricks. The Late Archaic houses had inner courtyards and occupied an area of 100-260 m\textsuperscript{2}. They also had wells, drains, heating and ventilation systems\textsuperscript{119}. The remains of the Classical houses are similar to the Archaic ones (Kryzhitskij et al 2003, 472).

During this period (last quarter of the 6\textsuperscript{th}-first quarter of the 5\textsuperscript{th} century B.C.), which corresponds to the period of the settlement’s economic prosperity, there was intensive building activity and the first results of urban planning and urbanization started to appear; the urban character of the houses is demonstrated by the relatively

\textsuperscript{115} Olbia, in contrast to Berezan, was entering a prosperity period
\textsuperscript{116} In this part of Berezan, a suburb of underground dwellings appeared in the 5\textsuperscript{th} century B.C. in the place that was previously occupied by above ground houses. According to Solovyov (2001, 134), this was the result of indigenous activities.
\textsuperscript{117} Kryzhitskij-Krapivina 2001a, 14; Solovyov 1999, 111; Solovyov 2001, 132-133
\textsuperscript{118} As most of the rural settlements of the Olbian chora (see “Olbia” in this paper)
\textsuperscript{119} See the houses description in Solovyov 1999, 67-77.
small courtyards\textsuperscript{120} (figs.33-34). Rectangular blocks of 8 or more houses combined with a street network indicate an approximately orthogonal planning (figs.35-36). Each house-block occupied an area up to 2000 m\textsuperscript{2} and two or more wide streets (5 m) divided the ancient city in smaller parts. There were also smaller streets wide up to 3.5 m and alleys up to 1.2 m (fig.37) (Solovyov 1999, 77-79). Furthermore, drainage was installed, streets were paved and a sanctuary, probably dedicated to Aphrodite, was established in the beginning of the 5\textsuperscript{th} century B.C. (Hind 1983-1984, 79; Bilde et al 2007-2008, 129). The principles of the city’s layout seem to have existed throughout the 5\textsuperscript{th} and the 4\textsuperscript{th} centuries B.C. (Solovyov 1999, 100). All data indicate that the Berezan settlement must have been a city, the nucleus of a \textit{polis} that had all the typical features of an urban centre (Kryzhitskij et al 2003, 469).

The sanctuary of Aphrodite speaks in favour of the \textit{polis} status of the settlement on Berezan (Domanskij-Marčenko 2003, 29). It has been located in the northwestern boundary of the archaic city, which was later occupied by the necropolis. The sanctuary was enclosed by a fence and contained a small temple \textit{in antis} (5.72 x 4.25 m) northwest-southeast orientated and a round stone altar (figs.38-40) (Kryzhitskij et al 2003, 469). Another building, unique in the Black Sea region, has been discovered in the eastern part of the city, in excavation sector “O” (fig.31); it was a rectangular structure measuring 21 x 5.4 m with an apse on its northern side, dating from the first half of the 5\textsuperscript{th} century B.C. (fig.40). The area was enclosed by a fence, part of which has been preserved. The function of this building has not been determined yet; it was certainly not residential and it might have been religious or public\textsuperscript{121} (Kryzhitskij et al 2003, 469; Solovyov 1999, 64-65)\textsuperscript{122}.

The necropolis of Berezan, located on the northwestern coast had the features of a typical Greek necropolis in the Black Sea area (fig.41); this fact testifies to the existence of an urban centre on Berezan. Most of the burials are dated to the second half of the 6\textsuperscript{th}-first half of the 5\textsuperscript{th} century B.C. The eastern boundaries of the necropolis were not fixed and changed accordingly to the extension or the reduction of the urban territory (Solovyov 1999, 79, 84; Kryzhitskij et al 2003, 468).

\textsuperscript{120} In contrast to rural dwellings, where the inner courtyard occupied a large surface

\textsuperscript{121} See for example the archaic temple of Apollo in the Athenian agora (Thompson-Wycherley 1972, 136-137, plate 4) or the archaic council-house in Olympia (Wycherley 1962, 125-127, fig.35).

\textsuperscript{122} For the reconstructions of the temple of Aphrodite and the apsidal structure see Kryzhitskij 2010, 97-98.
Olbia

The ancient city of Olbia is situated in the Lower Bug region, on the west bank of the river (ancient Hypanis), near the village Parutyne in Ukraine and is the best archaeologically searched site in the Northern Black Sea area (fig.1) (Maslennikov 2000, 53). It was founded by Milesians\textsuperscript{123} in the second quarter of the 6\textsuperscript{th} century B.C. (Kryzhitskij-Krapivina 2001b, 15). There are two toponyms related to the ancient city: Olbia and Borysthenes. It is generally accepted that the first Milesian settlement named Borysthenes was on the island of Berezan (Avram et al 2004, 937). According to the interpretation of an oracular inscription found on Berezan, it is assumed that the latter was included in a political union with the settlement on the Bug estuary, under the name Borysthenes; after the arrival of a new wave of colonists (\textit{epoikoi}), which probably took place in the middle of the 6\textsuperscript{th} century B.C. the new \textit{polis} received the name of Olbia\textsuperscript{124}.

The first colonists chose an advantageous location for the establishment of Olbia at the crossroad of the rivers Bug and Dneiper with the Black Sea trade routes. Moreover, the Lower Bug region was rich in natural resources and fertile lands that favoured the development of agriculture, stock breeding and crafts. At the site of the city itself two aquifers on 1.5 m and 4.5 m above sea level provided sufficient potable water for its inhabitants (Kryzhitskij 1997, 102). Deep ravines on both sides and the river estuary on a third one formed the triangular shape of Olbia and served as natural defensive barriers (fig.42). The city’s harbour was protected from the western and southern strong winds due to its optimal location (Kryzhitskij-Krapivina 2001b, 22; Kryzhitskij et al 2003, 390).

By the arrival of the Greeks there was no sedentary indigenous population in the region. The earliest non-Greek settlements, located at some distance from the Greek habitation, emerged in the end of 6\textsuperscript{th} –beginning of 5\textsuperscript{th} century B.C. (Kacharava 2005, 18). According to Herodotus, the port of the Borysthenites – referring to Olbia (Hind 1997, 111) – was situated in the territory of Scythia and northward of the port lived a Greco-Scythian tribe called the Callipidae (Herodotus, \textit{Histories}, 4.17). The relations with the Scythian nomads were peaceful (Solovyov 1999, 113). Trade relations with

\textsuperscript{123} Herodotus, \textit{Histories}, 4.78.3; GGM, Pseudo-Scymnus, \textit{Periegesis}, 804-809.

\textsuperscript{124} (IGDOlia 93) The inscription is supposed to be a prophetic or a retroactive statement on the four stages of development of Borysthenes/Olbia: from being a weak settlement on Berezan to becoming the prosperous city of Olbia (Hind 1992-1993, 93). See also Petropoulos 2010, 287; Solovyov 1999, 96-97).
the Scythian elite have been traced since the first half of the 5th and in the 4th centuries B.C. (Kryzhitskij et al 2003, 403). The Scythian king Scyles who was half-Greek had a luxurious big house in Olbia and visited often the ancient city, participating in the worship of the Greek gods (Herodotus, Histories, 4.78-79). There is a hypothesis that in two phases of Olbia’s history, in c.475-430 B.C. and in the middle of the 2nd century B.C., the city was a Scythian protectorate (Maslennikov 2000, 51; Hind 1992-1993, 95).

Olbia consisted of three parts, a typical feature of Greek cities in the Mediterranean area: the upper city (up to 42 m above the Bug level), the lower city (up to 10 m) and the terraced city located in-between (fig.42) (Kryzhitskij 1997, 105; Kryzhitskij et al 2003, 390). Today a large part of the lower city has been submerged into the waters of the Bug River. It is estimated that about 20-25 ha of Olbia were destroyed due to coastal erosion and the rise of the sea level that started in the 1st century B.C. as a result of the Phanagorian transgression (Kryzhitskij 1997, 107). Furthermore, two major landslides, evidenced archaeologically, occurred in antiquity; one in the end of the 3rd century B.C. that seriously damaged the northern part of the lower city and a second one in the 1st century B.C. in the terraced part, in the supposed area of the theatre (Kryzhitskij-Lejpunskaja 2010a, 23; Kryzhitskij 1997, 108). It is assumed that this environmental instability was one of the factors that led to a considerable reduction of the urban space in the first centuries A.D. (Kryzhitskij 1997, 108).

Apart from the natural factors, there were also human interventions that caused extensive damages to the ancient city. Already in antiquity, in the end of the 2nd century B.C. during a heavy crisis in Olbia, houses collapsed, temples were disassembled and material from the religious buildings was reused in the repair of the city’s fortifications. Olbia at that time was continuously exposed to barbarian seizures and attacks. The invasion of the Getae in c.55 B.C. under the leadership of Burebista was the most disastrous of all for the urban landscape (Dio Chrysostom, Orationes, 36.4); the inhabitants abandoned the city and life did not return in Olbia until several decades later (Krapivina 2005, 256). Moreover, in the beginning of the previous century the Parutyne inhabitants, who disassembled the antique constructions in search of building materials and illegal excavations, completed the destruction of what had been left (Kryzhitskij et al 2003, 389).
The invasion of the Getae is considered the end of the first period, the Hellenic one, in the history of Olbia (Kryzhitskij-Krapivina 2001b, 23-24). The Hellenic period started with the foundation of Olbia and the urban development of the city within this time span is closely connected with and determined by the historical events in the city.

The first phase of Olbia’s urban development is dated between the second quarter of the 6th and the beginning of the 5th century B.C. Once more, the reservation of spaces for the worship of the gods was among the priorities of the settlers. Therefore, during this initial phase, an area was reserved in the upper city for the western temenos that arose in the second quarter of the 6th century B.C. In front of the temenos a wide street (10-11m) running north-south was constructed to accommodate religious festivals and processions (fig.43) (Rousyaeva 2003, 93). The rest of the territory, mainly the central and southern part of the upper city was occupied by underground or semi-underground single-room dwellings (figs.44, 45) (Kryzhitskij et al 2003, 414; Kryzhitskij-Krapivina 2001b, 24). Later on, in the end of the third quarter of the 6th century B.C., the central (eastern) temenos and the agora were established in the centre of the upper city, on the east side of the main street at an area that has been previously occupied by underground dwellings (fig.43) (Kryzhitskij t al 2003, 414, 426; Gorbunova 1971-1972, 50). In the last quarter of the 6th century B.C. underground dwellings appeared also in the northern part of the lower city, in the so-called excavation sector NGS (fig.46.XXIX), evidencing the beginning of development in this part of Olbia (Kryzhitskij-Lejpunskaja 2010a, 20). By that time it is estimated that the city covered a surface of about 16-20 ha and had c.2000 inhabitants. Fortifications, according to the evidence so far, didn’t exist (Kryzhitskij et al 2003, 414).

In the next two centuries major changes in economy were reflected in the city’s growth. In the beginning of the 5th century B.C. the agricultural territory was reduced and people moved into the city, where trade and crafts developed significantly. In the end of the 5th century B.C. a revival of Olbia’s chora led to a large volume of agricultural production and to a new flourishing in economy for the next century (Kryzhitskij et al 2003, 400-401). During the second phase of Olbia’s development

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125 These dwellings have been discovered up to the southern extremity of the upper city – sector XXV (Kryzhitskij 2007, 12).
126 It eventually became clear that this part of the lower city was built on terraces and it is better to be regarded as part of the terraced city, rather than part of the lower city (Kryzhitskij 2007, 12, note 11).
monumental construction began and not later than 450 B.C. Olbia possessed fortification walls, whose gates and towers are mentioned in Herodotus (Histories, 4.78-79). The first inscriptions that mention Olbia’s port (IosPE P 20) are also dated to this century (Kryzhitskij et al 2003, 400, 414). Commercial, administrative and other public buildings began to be constructed around the agora, especially in the 4th century B.C. (fig.47). Under the main street a water-drain was constructed and on a slope east of the central temenos a decorated fountain functioned until the end of the 4th century B.C.\(^{127}\). By the end of the first quarter of the 5th century B.C. the underground dwellings had disappeared and were replaced by the typical aboveground multi-roomed Greek houses grouped in blocks, with stone bases and brick walls. There is enough evidence to suggest that during this phase the basic layout of the lower city was created, consisting of house-blocks situated along streets or alleys. It is estimated that Olbia occupied by that time more than 40 ha (Kryzhitskij et al 2003, 402, 414, 429; Kryzhitskij-Lejpunskaja 2010a, 20).

Olbia was besieged by Alexander the Great’s commander Zopyrion in 331 B.C. This information derives from the text of Macrobius, a Roman author in the 5th century A.D. (Macrobius, Saturnalia, 1.11.33) and is archaeologically evidenced by traces of an immense fire on the defensive wall near the western gates and in the northwestern part of the lower city (Kryzhitskij-Lejpunskaja 2010a, 21-22; Kryzhitskij-Krapivina 2001b, 32). After the end of the siege Olbia entered in the period of the biggest economic prosperity throughout its existence, which lasted until the middle/last quarter of the 3rd century B.C. (Kryzhitskij et al 2003, 406). This is reflected, in particular, in the major building activities that were undertaken in the entire territory of the city; it was the beginning of the third phase of the city’s urban development. During this phase, especially from the last quarter of the 4th until the beginning of the 3rd century B.C., the defensive works were reorganized – the walls were repaired and new parts were constructed on the part of the estuary (Krapivina 2005, 249; Karjaka 2008, 179; Kryzhitskij et al 2003, 414). The slopes of Olbia were terraced and were completely built up, new temples and altars were erected, old houses were reconstructed and new ones were built. In the northeastern part of the upper city houses were built in the former territory of the 6th-5th century B.C.

\(^{127}\) The water-drain is dated to the 5th century B.C. The reservoir of fresh water that has been discovered probably functioned as a fountain; it is dated to the end of the 5th century B.C. and is a unique find in the Northern Black sea coast (Kryzhitskij et al 2003, 427, 432).
necropolis (fig.46.II). In the southern part of the lower city rich houses with *peristyles* were constructed (fig.46.XVII). The street network was completed; now longitudinal streets up to 500 m ran from north to south in both the upper and the lower city (Kryzhtskij-Lejpunskaja 2010a, 22; Kryzhtskij et al 2003, 415, 417, 431). Olbia during this period reached its maximum size (50-55 ha) and population (13000-16000) (fig.48) (Kryzhtskij 1997, 104).

The second half of the 3rd century B.C. is characterized by a decrease in building activity. No new temples and public buildings were constructed and the old ones were not restored. This was the result of a heavy crisis in Olbia that was due to social, economic, military and political reasons. Most of the rural settlements of the Olbian *chora* had ceased to exist about the middle of the 3rd century B.C. The *polis* lost its agricultural basis. Moreover, this was the time when barbarian attacks started to threaten Olbia (Krapivina 2005, 249; Kryzhtskij et al 2003, 407-408). The above situation is evidenced in two decrees of the third quarter of the 3rd century B.C. honoring Anthesterios and Protogenes, two rich Olbian citizens, as benefactors of the city. Things continued to worsen in the next century; another decree in honour of Neikeratos mentions continuous attacks against Olbia and citizens escaping to Hylaia (IosPE Π 34). In the end of the 2nd century B.C. the central, the western and the southern quarters in the area of the agora were abandoned. The water conduit and the reservoir were filled up with earth. The central *temenos* had already ceased to function by that time and its monuments were being disassembled and reused in urgent repairs of the city’s fortifications. Only the western *temenos* continued to function without interruption until the invasion of the Getae. Most of the houses in the northern and southern part of the lower city were abandoned. The absence of new constructions, the destruction of the already existing ones and the appearance of “empty” territories within the city reflect the decline in Olbia’s building activity. Around the middle of the 2nd B.C. the necropolis moved closer to the western part of the city’s walls, at an area that during the 5th century B.C. was occupied by a residential suburb (fig.46.XI). It is likely that some of the inhabitants had already

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128 The decree in honour of Anthesterios mentions military actions, hunger, abandoned altars and disorder in the *polis* (SEG 34:758). Protogenes gave financial aid to Olbia to purchase grain, to repair the granary and to reconstruct the fortifications (IosPE Π 32).

129 According to Rousyaeva (2010, 68-69), despite falling into decay the ritual activity of the central *temenos* continued almost until the Getae invasion.
abandoned Olbia before the Getae invasion (Krapivina 2005, 252-253; Kryzhitskij-Leipunskaja 2010a, 23).

Dio Chrysostom has left a very vivid description of what the city looked like in the 1st century A.D. after Burebista’s destruction (Orationes, 36.6). When life finally returned in Olbia in the end of the 1st century B.C.-beginning of the 1st A.D. a new phase in the polis’ history began; the Greco-Roman period (1st-2nd centuries A.D.) (Kryzhitskij et al 2003, 398). The city though, was poorly restored and its territory was reduced to almost one third (1/3) that was limited to the southern part. The agora and the sacred precincts (temeni) were left out of the city’s shorter and thinner new walls and in the northern part of the old city a manufacturing suburb was established (Kryzhitskij 2007, 157-158; Krapivina 2005, 253). The Roman troops appeared in Olbia at about 60-70 A.D. and in 197/198 A.D. the city was incorporated into the Roman province of Lower Moesia. Olbia never again reached the development level of the Hellenic period and eventually in the third quarter of the 4th century A.D. was completely abandoned (Kryzhitskij et al 2003, 415; Kryzhitskij-Krapivina 2001b, 57, 60, 70).

It is understood from the previously mentioned description by Dio Chrysostom, that Olbia had once strong fortification walls with numerous towers that surrounded the city (περίβολος) (fig.48). Herodotus (Histories, 4.78-79) is the earliest proof on Olbia’s defensive system; the only archaeological evidence for fortifications at his time is a fragment of a stone wall that has been traced near the western gates and belongs to the 5th century B.C. Most of the evidence belongs to the end of the 4th-beginning of the 3rd century B.C. and there have also been several reconstructions and repairs. In the Early Hellenistic period Olbia had two entrances: the northern and the western gates (fig.46.I, X). The western gates existed from the 5th century B.C. They were destructed, probably in 331 B.C. during Zopyrion’s siege and were reconstructed during a general reorganization of the defensive system in the end of the 4th century. The new construction was monumental, with two big towers on the left

130 For commentary on Dio’s description see Bäbler 2007, 156-160
131 For Olbia’s defensive system see Wasowicz 1982, 82-85.
132 Herodotus states that when the Scythian king Seyles visited Olbia “would leave his army in the suburb of the city (προάστειον) while he himself, entering within the walls and shutting the gates, would take off his Scythian apparel and put on Greek dress” (Herodotus, Histories, 4.78.3-4). It is very likely that Herodotus is referring to the western gates, in front of which a residential suburb, like the one found on Berezan (Solovyov 2001, 136), appeared in the 5th century B.C.
133 Excavation sectors I, II, X, XVIII, XX, XXIV, XXVIII, XXIX,
and on the right of the gates\(^{134}\) (fig.49). The northern gates were constructed in the end of the 4\(^{th}\)-beginning of the 3\(^{rd}\) century B.C. (fig.50) (Kryzhitskij et al 2003, 419-420; Kryzhitskij-Lejpunskaja 2010a, 21-22). The archaeological evidence testifies that probably the whole northern defensive line was constructed after Zopyrion’s siege, due to the extension of the city to the north in the third and most prosperous phase of Olbia’s history (Karjaka 2008, 179; Wasowicz 1982, 84). The defensive line along the Hypanis estuary, which is now submerged into the river\(^{135}\), must have been a later addition in the 3\(^{rd}\) century B.C. in the context of the defensive reorganization\(^{136}\).

Olbia’s harbour is mentioned in the epigraphic data starting from the 5\(^{th}\) century B.C. (IosPE P 20). Underwater research has most probably revealed the harbour’s warehouses (fig.46.XXVII) and, on the northeast part of the (underwater) lower city, the “old” fish market mentioned in the decree of Protogenes (IosPE P 32), which were probably constructed in the Classical period (Kryzhitskij-Lejpunskaja 2010a, 21).

The layout of Olbia’s urban space seems to have been the result of a spontaneous development that followed the relief of the ground. There was not a uniform orthogonal plan; traces of a grid-plan dated to 500 B.C. seem to have been found in a quarter of the city north of the agora (fig.47) (Boardman 1962-1963, 42). In the lower city, in sector NGS, the house-blocks of the 3\(^{rd}\) century B.C. that were revealed, although they tended to be rectangular, had a rather irregular layout with numerous deviations from the grid (fig.51). The sizes of the building blocks in Olbia varied from 500 to 3000 m\(^2\) and were not based on any analogy\(^{137}\). Although there was not a systematic plan, the concept of functionality of urban space seems to have been followed from the very beginning (Wasowicz 1999, 207). The main longitudinal street – the wider street in Olbia – connected the northern gates with the two temeni, the agora and the public buildings and led to the southern part of the upper city. The width of this street varied from 6m to 11m. Another street connected the agora with the western gates (fig.43) (Kryzhitskij et al 2003, 416, 422). The minor streets’ width

\(^{134}\) These gates might have been “the big gates” mentioned in the decree of Protogenes (IosPE P 32) (Kryzhitskij et al 2003, 420).

\(^{135}\) The ruins probably of a big tower have been traced underwater in sector XXVIII (Kryzhitskij et al 2003, 417). An “admirable” tower by the river is also mentioned in an inscription (IosPE P 179).

\(^{136}\) In the decree of Protogenes dated to the 3\(^{rd}\) B.C. is mentioned that that most of this part was previously ‘un-walled’: “\(\text{ἐτι δὲ τὸν πλείστον μέρους τὸν πρὸς τὸμ ποτ[α]μον τῆς πόλεως ἄτειχστον ὄντος}” (IosPE P 32).

was 2.2-3.6 m in the upper city, while in the lower city, in sector NGS, streets were generally more narrow and their width varied along their length\textsuperscript{138} (1.3-3.6 m\textsuperscript{139}) (fig.51). The longitudinal streets in the lower city were oriented along an almost north-south axis, parallel to the shoreline. Stairs made of rectangular calcareous blocks connected the latter with the upper terraces (Kryzhitskij-Lejpunskaja 2010b, 38-39; Kryzhitskij et al 2003, 439). Some of the streets in Olbia, including the main one, as well as the square of the agora were paved with a mixture of clay and ceramic fragments\textsuperscript{140}.

One of the earliest drains, a stone channel of triangular form dated to the 5\textsuperscript{th} century B.C., passed under the main longitudinal street. The waste water from the drain was collected in a tank. Under the curtain wall next to the western gates passed another drain that according to the evidence, was connected with the main street’s tank; it seems that the whole construction was part of a drainage system that led the waste-water out of the city\textsuperscript{141}. In the Hellenistic period water supply conduits made of stone or ceramic pipes were found under the majority of the streets in the upper city (Kryzhitskij et al 2003, 418, 427). There were also cisterns for storing water in almost every house. In the southern part of the lower city (fig.46.XVII) a well has been discovered that was connected to a spring\textsuperscript{142}; it supplied houses with water via stone pipes. In sector NGS (fig.46.XXIX) no such facilities have been discovered yet. Moreover, the street gutters found there seem to have been a private initiative of the house owners\textsuperscript{143}.

The agora – the commercial and administrative centre – was situated in the central area of the upper city, where the two basic street axes met (fig.43). It was established in the end of the third quarter of the 6\textsuperscript{th} century B.C. The agora had an almost rectangular shape and occupied a surface of 2000 m\textsuperscript{2}. According to the evidence so far, it seems that in the beginning it was only an open space east of the

\textsuperscript{138} The irregular streets in sector NGS are similar to the streets of Greek cities in the Mediterranean that did not have a regular plan, as for example the “Theatre Street” in Delos (Kryzhitskij-Lejpunskaja 2010b, 39). In cities with orthogonal plan streets tended to be wider and their width remained constant along their length, as for example in Chersonesos in Crimea (Zolotarev 2003, 612-613; CC 2003, plan of Chersonesos p.59).

\textsuperscript{139} See Kryzhitskij-Lejpunskaja 2010b, 38, table 2

\textsuperscript{140} (Kryzhitskij et al 2003, 417; Rousyaeva 2010, 66; Kryzhitskij-Krapinina 2001, 33) This technique, which is characterized by a remarkable durability, has also been met in Istros (see above).

\textsuperscript{141} A similar drainage system has been found under the Hellenistic walls in Istros (see above).

\textsuperscript{142} The spring pours out water even now (Kryzhitskij et al 2003, 439).

\textsuperscript{143} Kryzhitskij et al 2003, 440; Kryzhitskij-Lejpunskaja 2010a, 22; Kryzhitskij-Lejpunskaja 2010b, 39
main street, but gradually, as Olbia developed and flourished, various buildings were constructed around it (fig.52). At the entrance to the agora from the main street, on the northwestern corner, was situated the dikasterion\textsuperscript{144} (fig.53.2). It was probably a two storey building with an inner courtyard and a portico on the east facing the main street. The dikasterion was firstly constructed in the 4\textsuperscript{th} century B.C. and was reconstructed after Zopyrion’s siege, in the end of the century during the intensive building activity in Olbia. On the northern side of the agora was a long stoa, probably of commercial character, constructed, in the end of the 4\textsuperscript{th} century B.C.\textsuperscript{145}. Its dimensions were 45 x 17 m and had a portico facing the agora, with two rows of columns; an external in Doric order and an internal most likely in Ionic (figs.47, 52). To the east there was another long building of commercial character, with a portico facing the agora (figs.52, 53.1). The building consisted of ten rooms of similar size, with underground cellars. One of the oldest buildings discovered so far in the area of the agora, existing since the 5\textsuperscript{th} century B.C., was located on its southeastern corner (fig.52). It had an inner courtyard with a peristyle, rooms for hot and cold water and drainage system (fig.53.3). The function of this building has not been determined with certainty; it could have been the gymnasion or the public baths. On the left corner of the southern side of the agora, another building, probably of administrative character, was situated (figs.47, 52). It was constructed in the 3\textsuperscript{rd} century B.C. Opposite this building to the west, facing the main street and near the agora, there was another one consisting of four isolated rooms with cellars, dated to the end of the 4\textsuperscript{th} century B.C. According to the excavating team, it had administrative character and it might have housed the boards of the city’s authorities. Trade activities – four rooms with cellars facing the main street and the agora – were also evidenced on the southwestern corner of the agora, on the eastern side of a habitation block (figs.47, 52). The construction was monumentally executed with walls of limestone blocks covered with plaster. Its first building phase is dated to the 5\textsuperscript{th} century – the second oldest building discovered

\textsuperscript{144} Among the finds were plenty of ostraca and two psefoi for voting (Kryzhitskij et al 2003, 425).

\textsuperscript{145} At this point, it is important to notice that the technique used in the foundations of the stoa and the dikasterion – alternating layers of yellow clay and clay mixed with ash – has also been traced in the foundations of the fortification walls in the upper and lower city. This building technique – referred to as “Olbian foundations” – used especially in the Hellenistic period for increasing the strength and durability of massive walls, is considered characteristic for the Olbian builders. It has also been traced in Istros, in sector X (Gorbunova 1971-1972, 50; Karjaka 2008, 165; Avram 2003, 323; Dimitriu 1968, pl.XVI).

East of the agora behind the building with a portico, on the terraced part of Olbia, the slopes become very steep; probably the theatre was located in this area, but its ruins – probably destructed by a landslide – have not been traced yet (Kryzhitskij et al 2003, 417, 425). So far its existence is known only from Olbia’s inscriptions; the earliest mention is on an inscription of the 4th century B.C. (IosPE I² 25).

The two temeni were situated to the north of the agora, very close to each other and were separated by the main longitudinal street, where religious festivals took place (fig.43). In the first stage of Olbia’s development (second quarter of the 6th-beginning of the 5th century B.C.) a large area of more than 6000 m² was reserved for both and within it a lot of sanctuaries of various deities were situated; these features are a unique case in the Black Sea region so far (Rousyaeva 2010, 66).

The central temenos was situated on the east of the main street and was adjacent to the agora on the south (fig.54). Its location on the eastern edge of the upper plateau provided a splendid view of the lower city, the port and the river (fig.55) (Kryzhitskij-Krapivina 2001b, 33). The temenos was established in the third quarter of the 6th century B.C. and was dedicated to Apollo Delphinios. It seems that in the beginning there were no other constructions in the temenos apart from a main altar in its central area. A special place was probably planted with a grove of sacred trees.

In the beginning of the 5th century B.C. the temenos was enclosed by a low stone fence that has been traced on its east and west side. There were two entrances to the sacred area: one in the west and another in the east; the western entrance was the main one and was adorned with a propylon. In the same period some small new altars were constructed as well as a treasury, a large water tank and a workshop producing votive copper objects. Later on, during the intensive building activity in Olbia in the last quarter of the 4th-beginning of the 3rd century B.C., the central temenos underwent a complete reorganization. Its whole surface was raised 0.60 cm by a thick layer of imported clear clay. The long stoa separated it from the agora, reducing the temenos’ territory. The main altar was decorated with marble details and a small Doric temple,

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146 The institution of Apollo Delphinio’s cult as the main cult in the polis is connected with a new wave of colonists (epoikoi) that had come to the region and with the change of the name of the polis to Olbia. See Rousyaeva 2003, 96; Petropoulos 2010, 286-287. On apoikoi and epoikoi see Rousyaeva 2003, 99.

147 Sacred groves were a common feature in the ancient Greek sanctuaries (Dinsmoor-Anderson 1950, 113). It is also the only evidence for public green areas in the Greek cities (Kryzhitskij et al 2003, 418).
probably *in antis*, was built in the northwestern part; its dimensions were 15.30 x 7.80 m and it was dedicated to Zeus\(^{148}\) (fig.56). Moreover, inside the *temenos* the deepest water tank in Olbia was constructed, as well as terracotta and copper objects production workshops adjacent to the eastern fence. It is also supposed that a large *peripteral* temple of Apollo Delphinios was built in the second half of the 4\(^{th}\) century B.C. in the centre of the *temenos*\(^{149}\) (fig.57). However, there is not enough evidence yet to support this hypothesis; suggestions have been made that the discovered remains belonged to a building of some other purpose (Rousyaeva 2010, 67-68; Kryzhitskij et al 2003, 425-426; Rousyaeva 2003, 111).

The western *temenos* was situated on the west of the main street, to the northwest of the central *temenos* (fig.58). It was dedicated to Apollo Iatros\(^ {150}\) and its establishment was probably contemporary with the foundation of the *polis*, thus being the most ancient *temenos* in Olbia. It occupied a very large territory (c.3000 m\(^2\)), which was divided in many separate smaller sanctuaries that were dedicated to various deities\(^ {151}\). The largest area was reserved for two sanctuaries, which functioned since the beginning of its establishment; the sanctuary of Apollo Iatros, which occupied a central area and on the east of the latter the sanctuary of the Mother of Gods. No division between the two sanctuaries has been traced in the early period.

The first temple in the western *temenos* (and in Olbia) was probably built in the third quarter of the 6\(^{th}\) century B.C. and it seems that it was dedicated to both Apollo Iatros and the Mother of Gods. It was probably a small Ionic temple *in antis* made of mud bricks and wood and had a small limestone altar in front of it; it soon collapsed and a new one was built in the end of the 6\(^{th}\)-beginning of the 5\(^{th}\) century B.C. at a distance of 8 m to the south of the old temple (Rousyaeva 2010, 69, 74; Rousyaeva 2003, 95-98). It was an Ionic temple probably *in antis* with dimensions 15 x 7.30 m. According to the epigraphic data, the new temple was named “Ἡητριθνηου”\(^ {152}\) and it is so far the only Olbian temple with a reliable reconstruction\(^ {153}\) (figs.40, 59). A third smaller sanctuary in the *temenos* was the sanctuary of Aphrodite; the earliest reference to the

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\(^{148}\) For the reconstruction of the temple of Zeus see Kryzhitskij 2010, 107.

\(^{149}\) For the reconstruction of the supposed temple of Apollo Delphinios see Kryzhitskij 2010, 97.

\(^{150}\) Apollo Iatros was the patron god of most of the Milesian colonies in the Black Sea area (Rousyaeva 2003, 95-96), as for example of Apollonia Pontica and Istrons.

\(^{151}\) Among them there are some sanctuaries of anonymous deities (Rousyaeva 2010, 69).

\(^{152}\) IGDOlbia 59, c.525-500 B.C.

\(^{153}\) See Kryzhitskij 2010, 97.
goddess is dated to the first half of the 5th century B.C. However, it is believed that her sanctuary existed from the very beginning in the temenos. A sanctuary of Dioskouroi functioned in the western temenos since the last quarter of the 6th century B.C. or perhaps even earlier (Rousyaeva 2010, 75; Rousyaeva 2003, 96). Another archaic sanctuary with an altar dedicated to Athena was probably located next to the sanctuary of the Mother of Gods (Rousyaeva 2010, 76). In the 5th century B.C., in the beginning of the second phase of Olbia’s development, the appearance of the western temenos changed. New stone altars were erected and some sanctuaries were enclosed by low stone fences. A new sanctuary with a big common altar to Hermes and Aphrodite was established. Next to it, warehouses were built, in which a lot of amphorae with wine for the rituals were kept. Similar structures of small size with one or two rooms were discovered in the northeastern part of the temenos along the main street; they could have served for warehouses, treasuries or shops for selling votives (Rousyaeva 2010, 76; Rousyaeva 2003, 102-103). During the considerable renovation of the city after Zopyrion’s siege, in the peak of Olbia’s prosperity, the changes in the western temenos were not very large-scaled. A new temple of Apollo Iatros was built on a large clay platform (0.30 cm) and the sanctuary was enclosed on the west by a low stone fence. Moreover, in the temenos some new monumental altars were placed and two deep cisterns were constructed. As archaeological evidence suggests, despite the economic prosperity in Olbia in that period most of the worshiped deities in the temenos did not get their own temple (Rousyaeva 2010, 70; Rousyaeva 2003, 108). In the end of the 2nd century B.C. during the heavy crisis in Olbia, large buildings, probably houses were constructed on the temenos’ northern and western sides, reducing its territory (Rousyaeva 2003, 70). After the Getae invasion in 55 B.C., the temenos and the surrounding area were turned into a cemetery; the burials discovered, probably belong to the Olbiopolitai that were killed in the invasion (Rousyaeva 2010, 111).

Outside the sacred area of the temeni remains of a Doric temple has been discovered in the southern part of the upper city dating from the second half of the 4th century B.C. It was probably dedicated to Aphrodite (Bilde et al 2007-2008, 130).

154 Αφροδίτη (τής) Δίκαι[α]. (IGDOlbia 71,b)
155 The discovery of the archaic sanctuary of Aphrodite on Berezan (middle of the 6th century B.C.), of her archaic temple in Istros (middle of the 6th century B.C.) and in Miletus (7th-5th centuries B.C.) provides evidence for the fact that Aphrodite was worshiped by the Milesians as patroness of the colonization and thus testifies to the earliest existence of her sanctuary in Olbia (Rousyaeva 2010, 76).
As it was mentioned above, by the end of the first quarter of the 5th century B.C. the underground dwellings disappeared and were replaced by the typical aboveground multi-room Greek houses. The building remains are mostly from the Hellenistic period; nevertheless, the fragmental remains of the Classical period suggest that Classical houses did not differ much from their posteriors. Olbia’s houses were made of stone and mud-bricks. They were of the pastas type and they all had inner courtyards that in the richer houses were surrounded by porticos or peristyles (Kryzhitskij et al 2003, 429-430). Their sizes varied from c.90 to 550 m² and they were grouped in blocks of 2 to 10 houses covering a surface from c.500 to 3000 m². The habitation quarters near the agora (fig.46.VI, VII, XII) were occupied mostly by rich Hellenistic houses, whose sizes varied from 125 to 400 m². The largest building block excavated (c.3000 m²) is located to the southwest of the agora (fig.47) and is the only one up to now that combined commercial and administrative functions with habitation (10 houses of 125-350 m²). A rich Hellenistic house was also discovered in the central terraced part (fig.46.XXXI) and other two – the richest up to now – in the southern lower city, in sector NGF (fig.46.XVII). The size of each one was about 550 m² and they had porticos, peristyle courtyards and mosaic floors (fig.60) (Kryzhitskij et al 2003, 439-440). It seems that the houses on the northern part of Olbia that was close to the walls were more modest. In excavation sectors I and NGS (figs.46.II, 61) the size of the houses varied from 57 to 279 m² and they were grouped in blocks of 3-4 houses bordered by irregular streets and covering a surface from c.500 to 1100 m² (figs.62-64). Apparently, these were smaller houses most likely representing the middle class of the Olbian community157.

Craft production activities were practiced inside and outside the city of Olbia. Metal cutting workshops of the 6th- first half of the 5th century B.C. have been revealed under Hellenistic houses in the northern and central part of the upper city (img x.II, VII, XII). Moreover, a coroplastic art workshop has been located in the area of the central temenos adjacent to the eastern fence (Kryzhitskij et al 2003, 442-443).

The necropolis of Olbia occupied a large territory of almost 500 ha surrounding the city from north and west (Kryzhitskij et al 2003, 444). Extension or reduction of

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156 Kryzhitskij et al 2003, 431-432; Kryzhitskij-Lejpunskaja 2010b, 39 and 50, 63, 74, 81; tables 4, 5, 8, 9 respectively

the urban space due to demographic changes and economic conditions, as were described above, has determined the size and the location of the necropolis in relation to the city, throughout the history of Olbia.

V. Conclusion

To sum up, as it is attested from the described above cities, Greeks tended to establish them at coastal locations, with a special preference for peninsulas that were naturally fortified places and favoured the Greeks’ expertise, maritime trade. The first steps towards the development of the colonies were determined by two important factors; the positive attitude of the locals and the facility of communications with the rest of the Greek world (Pippidi 1971, 44).

The archaeological data concerning ancient urban planning and organization in the western and northwestern Black Sea region, apart from Olbia, are very few. It seems that the urban territories of the Greek colonies occupied a fairly small area in the beginning and reached maximum extent during the period of their economic prosperity. Some of the cities – Odessos, Tomis – continued to develop in Roman times and even doubled their size, while in most of the rest the urban territory was significantly diminished. Political events may have determined the foundation of the Greek colonies and seem to have affected their growth in cases of military actions (wars, expeditions, sieges, invasions) that caused major destructions resulting in the complete reorganization of the cities (e.g. Istros, Orgame, Olbia).

The first Greek establishments had no fortifications and the urban boundaries were demarcated by the necropoleis, or were set by a peripheral street (e.g. Istros). The earliest fortifications have been found in Istros dating from c.575 B.C. In Mesambria and Olbia remains of 5th-early 4th century B.C. fortifications have been traced. The rest of the evidence belongs to the Hellenistic times. According to Coja (1982, 102), referring to the western colonies, the monumentality and variety of the defensive walls is not comparable to similar constructions in the Mediterranean.

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158 Mesambria for example, was probably founded on a site where a Thracian settlement pre-existed. Moreover, the establishment of the Greek colonies might have attracted the indigenous population to settle nearby and towards the coast, as for example in Olbia and in Istros (Wasowicz 1999, 218; Taylor 1987, 13)

159 Mesambria 40 ha, Odessos 13.5-16 ha, Tomis 17 ha, Berezan 16-20 ha, Olbia 50-55 ha

160 It has been archaeologically attested by the excavation of the more ancient layers in the western colonies and it indicates the peaceful coexistence with the locals (Coja 1982, 96-97).
The structure of the newly founded cities was gradually formed according to the Greek models. There are no traces of urbanization in the beginning of their establishment; the earliest constructions archaeologically attested are underground or semi-underground one-roomed dwellings similar to the local models and construction techniques. It was after the late archaic period that the colonial cities began to look typically Greek by gradually acquiring, each time depending on their economic status, the features that every Greek city possessed. These are mostly evidenced and reflected in the example of Olbia, where all the basic functions were established; the temeni, the agora, the public buildings, the residential quarters formed by rectangular typical Greek houses, the paved streets and the public networks (water conduits, sewerage).

Orthogonal planning must not have been preferable in the Greek colonies of the western and northwestern Black Sea region. There is a hypothesis by Solovyov (1999, 77-79) that the settlement of Berezan was organized on a grid-plan, but in the rest of the cities, although there have been traced streets crossing at right angles (e.g. Hellenistic Istros), or uniform house-block orientation that indicates parallel and vertical axes (e.g. Mesambria), the evidence is very scarce to result in any conclusion for the urban territory as a whole. In Olbia it has been attested with certainty that there was no grid-plan. However, there was a functional land-use plan and buildings were organized in more or less rectangular blocks, resulting from the shapes of the houses. The streets were fairly straight, were organized in main and minor ones and their width was irregular along their length. Part of the city was built on artificial terraces connected between them through stairs. Terracing seems to have been used in many of the other cities as well (e.g. Mesambria, Odessos, Dionysopolis).

The reservation of spaces for religious purposes at the same time with the foundation of the colony seems to have been among the priorities of the settlers (e.g. Istros, Olbia). The patron deity and numerous other deities were worshipped in their own sanctuaries that were scattered within the city (e.g. Apollonia, Odessos) or concentrated in larger areas (e.g. Istros, Olbia). The sanctuaries did not necessarily have a temple; an altar stood in their central area and a precinct demarcated the sacred area. The earliest temples discovered so far are the temples of Zeus and Aphrodite in

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161 Such constructions have been attested in Tomis and Istros (middle of the 6th century), on Berezan (last quarter of the 7th century) and in Olbia (second quarter of the 6th century B.C.)
Istros (middle of the 6th century B.C.). In general, the temples were built in Ionic as well as in Doric order, were mainly in antis and had modest dimensions\(^\text{162}\).

Epigraphic data mostly from the Hellenistic period are the only evidence so far for the agora, the theatre and public buildings (gymnasion, stoa, agoraonion, prytaneion, bouleuterion) in the western colonies. Nevertheless, in Olbia, on the northwestern Black Sea coast, have been discovered many public buildings (dikasterion, stoa, etc.) concentrated around the agora that seems to have been the commercial and administrative centre of the city. Public buildings were constructed around the agora since the 5th century B.C. (public baths or gymnasion, trading-activities building).

Craft production workshops were situated outside as well as inside the city’s limits, concentrated in special quarters, in the sanctuaries, or scattered within the city.

Extension or reduction of the urban space due to demographic changes and economic conditions, has determined the size and the location of the necropoleis in relation to the cities (e.g. Apollonia, Odessos, Olbia).

The level of urbanization of the Greek cities was affected by political events (e.g. Berezan-Borysthenes/Olbia), military actions and the economic conditions in each colony and reflects the high level of development and the culture of the Greeks. The poleis of the Greek colonies in the area under discussion were typically Greek being the centre of habitation, defense, political institutions, economy, cults, education and entertainment (Hansen 2004, 140-141).

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\(^\text{162}\) The largest ones so far in the area under discussion are the temples of Zeus and Aphrodite in Istros (c.17 x 8 m). Next are the temples of Apollo and of the Great God in Odessos (15 x 7-9 m), of Apollo Iatros and Zeus in Olbia (c.15 x 7.3-7.8 m) and of the Pontic Mother of gods in Dionysopolis (11.40 x 8.70 m). The smaller ones are an anonymous temple in Kallatis (6.8 x 6 m) and the temple of Aphrodite on Berezan (5.72 x 4.25 m).
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<td><em>Inscriptiones Graecae I: Inscriptiones Atticae Euclidis anno anteriores</em>.</td>
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