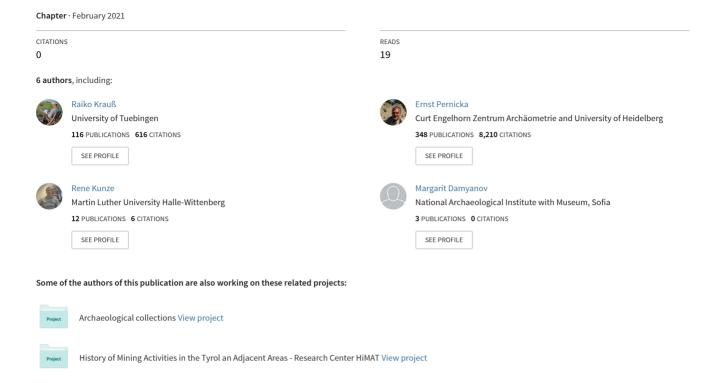
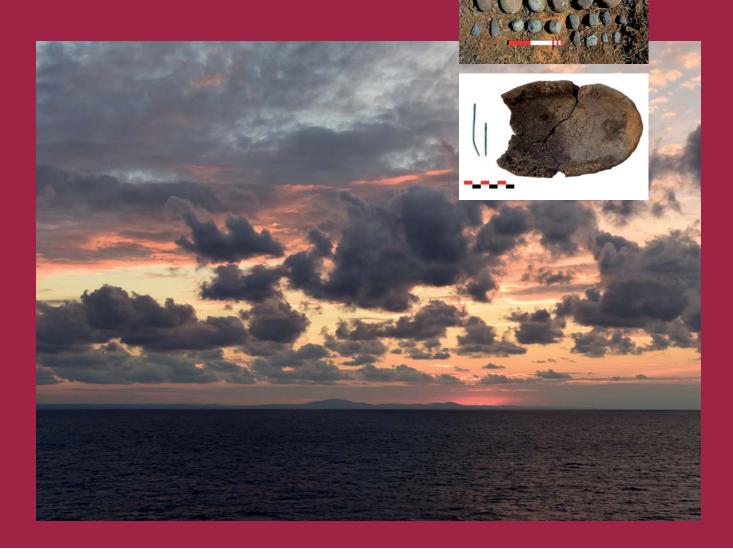
Apollonia Pontica and the South-Western Black Sea Coast in the Thracian and Antique Periods (Late 2nd Millennium BC to Early 1st Millennium AD)



RESSOURCENKULTUREN 12

PREHISTORIC MINING AND METALLURGY AT THE SOUTHEAST BULGARIAN BLACK SEA COAST



Raiko Krauss, Ernst Pernicka, René Kunze, Kalin Dimitrov & Peter Leshtakov (Eds.)



RESSOURCENKULTUREN



RessourcenKulturen Band 12

Serie's Editors:

Martin Bartelheim and Thomas Scholten

Raiko Krauss, Ernst Pernicka, René Kunze, Kalin Dimitrov & Peter Leshtakov (Eds.)

PREHISTORIC MINING AND METALLURGY AT THE SOUTHEAST BULGARIAN BLACK SEA COAST



Bibliografische Information der Deutschen Nationalbibliothek

Die Deutsche Nationalbibliothek verzeichnet diese Publikation in der Deutschen Nationalbibliografie, detaillierte bibliografische Daten sind im Internet über http://dnb.d-nb.de abrufbar.

Herausgeber der Reihe: Martin Bartelheim und Thomas Scholten



Der Text dieses Werkes ist unter der Creative-Commons-Lizenz CC BY-NC-ND 3.0 DE (Namensnennung - Nicht kommerziell - Keine Bearbeitung 3.0 Deutschland) veröf-

fentlicht. Den Vertragstext der Lizenz finden Sie unter

https://creativecommons.org/licenses/by-nc-nd/3.0/de

Die Abbildungen sind von dieser Lizenz ausgenommen, hier liegt das Urheberrecht beim jeweiligen Rechteinhaber.

Die Online-Version dieser Publikation ist auf den Verlagswebseiten von Tübingen University Press frei verfügbar (open access).

http://hdl.handle.net/10900/109816

http://nbn-resolving.de/urn:nbn:de:bsz:21-dspace-1098168

http://dx.doi.org/10.15496/publikation-51192

 Auflage 2020 Tübingen University Press Universitätsbibliothek Tübingen Wilhelmstr. 32 72074 Tübingen tup@ub.uni-tuebingen.de www.tuebingen-university-press.de

ISBN (Hardcover): 978-3-947251-27-8 ISBN (PDF): 978-3-947251-28-5

Redaktion: Uwe Müller, Marion Etzel, Henrike Srzednicki, Monice Timm

Umschlaggestaltung: Henrike Srzednicki

Coverfoto: Silhuette of Medni Rid seen from the Black Sea; stones for ore crushing and grinding from

Stublitsa; crucible and two copper awls from Akladi Cheiri

(Bildnachweis: Kalin Dimitrov)

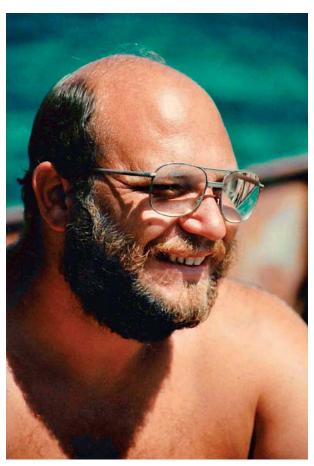
Layout: Büro für Design, Martin Emrich, Lemgo Satz und Bildnachbearbeitung: Henrike Srzednicki

Druck und Bindung: medialis Offsetdruck GmbH Unternehmesbereich Pro Business

Printed in Germany

To the memory of

Hristina Angelova 1955–2016 & Veselin Draganov 1956–2020



Veselin in 1994 during the underwater archeological survey in the port of Sozopol.



Hristina in 2015 after the first season of the Black Sea MAP project.

Content

Pr	eface	11
0.	Introduction	
No	Kalin Dimitrov Ites on the Landscape and Geology of the Investigated Area South of Burgas	15
Th	Raiko Krauss e Eastern Balkans in the Neolithic and Chalcolithic	29
	René Kunze and Ernst Pernicka e Beginning of Copper and Gold Metallurgy in the Old World	
I.	Archaeology of the Coastal Area in Southeast Bulgaria	
Th	Petar Leshtakov, Miroslav Klasnakov, Galina Samichkova, and Kathleen McSweeney e Prehistoric Site Akladi Cheiri, Chernomorets	89
	Radka Zlateva-Uzunova sults of the Technological, Typological and Raw Material Analysis of Chipped one Assemblages from Akladi Cheiri, Chernomorets	121
Th	Thilo Rehren, Petia Penkova, and Ernst Pernicka e Chalcolithic Copper Smelting at Akladi Cheiri	141
	Nikolai Spassov and Nikolai Iliev lalyses of Bone Remains from Wild and Domestic Animals from the Prehistoric Site ladi Cheiri, Chernomorets. Late Neolithic, Chalcolithic and Early Bronze Ages	161
	Elena Marinova ood Constructional Elements and Archaeobotanical Evidence from the Late Neolithic Early Chalcolithic Well of Akladi Cheiri, South-Eastern Bulgaria	171
	Raiko Krauss, Zoï Tsirtsoni, Yannis Maniatis, Christine Oberlin, Ernst Pernicka, and Petar Leshtakov solute Chronology of the Excavated Features at Akladi Cheiri and the Beginning of pper Metallurgy in the Eastern Balkans	
Su	Kalin Dimitrov, Veselin Draganov, and Nayden Prahov bmerged Prehistoric Settlements along the South Bulgarian Black Sea Coast	185
	Margarit Damyanov and Krastina Panayotova collonia Pontica and the South-Western Black Sea Coast in the Thracian and Antique riods (Late 2 nd Millennium BC to Early 1 st Millennium AD)	247

II.	Investigations in the Rosen (Medni Rid), Zidarovo and Varli Bryag Ore Fields	
	Tim Rödel	
Ge	ology of the Region	297
	René Kunze, Petar Leshtakov, Jonas Abele, and Kalin Dimitrov	
Re	sults of the Field Survey in Combination with LiDAR Laser Scanning in the	
Me	edni Rid Area	307
	Petar Leshtakov, Kalin Dimitrov, Jonas Abele, René Kunze, Ernst Pernicka, and Raiko Krauss	
Ca	talogue of Investigated Archaeological Sites and Mining Places	327
	René Kunze and Ernst Pernicka	
Pro	e-Industrial Mining in Medni Rid. Geochemical Analyses	391
	Raiko Krauss, Ernst Pernicka, Kalin Dimitrov, René Kunze, and Petar Leshtakov	
Th	e Transregional Significance of the South-East Bulgarian Copper Deposits	419

Preface

With this volume we present the results of our research on pre-industrial mining in the region along the southern Bulgarian Black Sea coast that were triggered by rescue excavations of several prehistoric settlements with traces of early copper processing. This initiated a thorough archaeometallurgical investigation of the copper ore deposits of Burgas, Rosen and Medni Rid that were mined until recently. In addition, an overview of the archaeological research of the coastal zone of the Black Sea in southern Bulgaria and the now flooded sites in its shore area are included.

In his seminal work on the early metallurgy in Bulgaria Evgeny Chernykh had already suggested that copper originating from the deposits on the southern Bulgarian Black Sea coast was used to manufacture the majority of copper objects found in the rich burials of Varna and Durankulak of the 5th mill. BC. Nevertheless, his exploration and excavations of early copper mining sites concentrated on Ai Bunar near Stara Zagora, because old trenches that were previously known seemed to be more promising for the study of chalcolithic mining, which turned out to be correct. Nevertheless, he pointed out the copper deposits of Rosen, Burgas and Medni Rid in south-eastern Bulgaria as another prospective region for similar studies. Chernykh also performed a large number of chemical analyses of chalcolithic copper objects from Bulgaria but it was difficult to relate the objects to specific deposits using just their elemental composition. Only when lead isotope analysis was introduced to this field of research by Noel Gale in Oxford and the Max-Planck-Institutes for Nuclear Physics in Heidelberg and for Chemistry in Mainz significant progress was achieved in the identification of copper ore sources in the Chalcolithic of south-eastern Europe. Contrary to the then widely accepted assumption that the chalcolithic mine at Rudna Glava in Serbia was a major source for

copper, it turned out that instead the very large copper deposits of Bor and Majdanpek in eastern Serbia and Ai Bunar were the major suppliers for copper in the central Balkans. However, in the data yet another source could be identified in the chemical and isotopic composition of a number of objects by highly radiogenic lead isotope ratios and it was suspected that this source may be located in the region of Medni Rid.

In the course of construction works for holiday resorts around the port of Sozopol during the years from 2007 to 2014 numerous new archaeological sites came to light. Most of these prehistoric settlement sites, dating from the Late Neolithic to the Copper Age, have been partially excavated under the direction of Petar Leshtakov, namely Budzaka, the urban stadium in Sozopol and Akladi Cheiri near the town of Chernomorets. The sites of the Late Neolithic, Garmitsa, Chernomorets and Aleppu were surveyed by geophysical methods. Finds of copper ore, jewellery items of copper, copper tools and even cast implements provided the first indications of metallurgical activities in the immediate vicinity of the deposits of Medni Rid. When pyrotechnological installations and numerous ceramic finds with adhering copper slag also appeared at Akladi Cheiri, the importance of these settlements for chalcolithic metallurgy became obvious. As part of our work on the chalcolithic gold in the Varna Museum, we were able to visit the excavation sites for the first time in spring 2011 and subsequently together developed this project as part of SFB 1070 Ressourcen Kulturen. The results of the four survey campaigns from autumn 2013 to spring 2016 and a number of accompanying studies of project A01 'Resources and the Creation of Inequality -Raw Materials and Communication Systems in Prehistoric South-Eastern Europe' are presented in this volume. Another two field surveys and geophysical prospections were carried out as part of the project 'Early mining and metallurgy in the eastern part of the Srenogorie metallogenic zone (5th–1st mill. BC)' of the Bulgarian Fund for Scientific Research and the results are included as well.

They are supplemented by a general overview and presentation of recent discoveries in the Black Sea coastal area of the Center for Underwater Archaeology in Sozopol and in the Greek colony Apollonia Pontica.

During the preparation of this volume, Hristina Angelova, the long-standing director of the Center for Underwater Archeology in Sozopol, and Veselin Draganov, a devoted researcher of the submerged prehistoric settlements, passed away. This volume is dedicated to their memory and their contribution to the study and the preservation of the marine underwater and coastal archaeological heritage in Bulgaria.

The editors

Margarit Damyanov and Krastina Panayotova

Apollonia Pontica and the South-Western Black Sea Coast in the Thracian and Antique Periods (Late 2nd Millennium BC to Early 1st Millennium AD)

Keywords: Apollonia Pontica, Bulgarian Black Sea coast, Greek colonisation, colonial chora, Greek-Thracian relations

In the late 7th cent. BC, settlers from the Ionian city of Miletos founded Apollonia at the south-eastern end of present-day Burgas Bay. The city became the main factor in the region's development during the following centuries, at least until the arrival of the Romans. However, Milesian colonists did not arrive in an empty country.

Late Bronze and Early Iron Age

The evidence from the southern Black Sea coast from the Late Bronze Age (LBA) is very meagre without a single properly investigated site, but the period deserves attention because of a few stray finds of particular significance. Among them, most important are copper ingots found in the region: an ox-hide shaped ingot from the village of Cherkovo to the west of Burgas, and a cargo (?) of bun-shaped ingots from the sea at Maslen Nos. The entire set of problems of the ingots' distribution in Thracian lands has been commented upon (see Leshtakov 2007; Paschalidis 2007, 437 f.; Doncheva 2012). The finds from the coastal area are not isolated, with other specimens found not that far in the interior, along the river Tundzha in Elhovo Municipality (and more in present-day northern Bulgaria). The latter seems to suggest both land and river transportation, but the hoard from Maslen Nos implies maritime trade and therefore the existence of coastal settlements.

The question remains open whether the ingots were imports from the Mediterranean, or rather were exported from the region under discussion that was rich in metals (Leshtakov 2007, 453 f.). Stray finds from the region of Burgas, including hollow celt axes, a mould for casting them and others, indicate the existence of a metallurgical centre in the LBA (see Класнаков 2006).

The so-called 'stone anchors', although enthusiastically dated to the LBA (see Димитров et al. 1982; Димитров 1982, 464–473; Порожанов 1989; Hiller 1991, 209; Paschalidis 2007, 438), should be kept out of the discussion, as none of them has been found in a secure context, their ubiquity does not correspond with other LBA evidence, and such objects remained in use in much later times (Leshtakov 2007, 454). One of the very few specimens that offer any possibility for independent dating is an anchor with two holes that was found in the sea off Sozopol and bears a Greek inscription, most probably Hellenistic (IGBulg. V, 5154).

Due to lack of information, it is difficult to trace the transition to the Early Iron Age (EIA). Coastal Strandzha belongs to the area of the Thracian 'megalithic culture' of the EIA with the typical dolmens, known from the surroundings of future Apollonia, to the north and south of it, on the western side of Medni Rid near the modern villages of Rosen and Ravna Gora and in the area of cape Maslen Nos and Kitka hill near present-day Primorsko (Делев et al. 1982, 345; Делев 1990, 143–149; Gyuzelev 2008, 106, 111, 115). The chronology of these family tombs reaches down to the 6th cent. BC (Делев et al. 1982, 321 f.; Агре/Дичев 2006), which indicates the presence of Thracians in the area by the time the Milesians arrived.

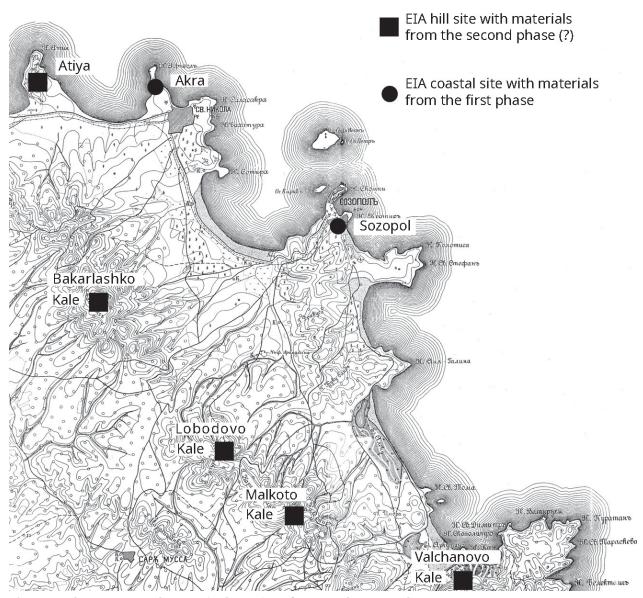


Fig. 1. Early Iron Age settlements in the region of present-day Sozopol.

There is evidence also of settlements: on several of the peaks of Medni Rid that delimits from the west the coastal plain of Apollonia, Thracian 'fortresses' have been detected: Bakarlashko Kale, Lobodovo Kale, Malkoto Kale, and Chengersko (Valchanovo) Kale (Венедиков et al. 1976; Gyuzelev 2008, 107–111) (fig. 1). Most probably, the sites relied on natural defences, as the documented remains of fortifications date from later times, as in the case of the 4th cent. BC at Malkoto Kale, which is the only one subjected to archaeological investigations (Венедиков et al. 1976, 131–155; Делев et al. 1982, 360–378). Several levels of habitation were identified and the analysis of the pottery dates the

emergence of the settlement to the 9th cent. BC; many of the vases are decorated with a combination of ornamentation techniques: fluted, incised and stamped (Domaradzki et al. 1991; Домарадски et al. 1992). Based on stratigraphic observations and the discovered Greek imports, a continuous habitation is tentatively presumed from before to after the colonisation (Shalganova/Gotsev 1995, 328; Archibald 1998, 34–36), although certain caution is necessary (the earliest certain Greek imports are dated to the 5th cent. BC, Делев et al. 1982, 367, and some are misidentified, see Gyuzelev 2008, 108). Nonetheless, it would appear that Milesians found a settled Thracian population in the

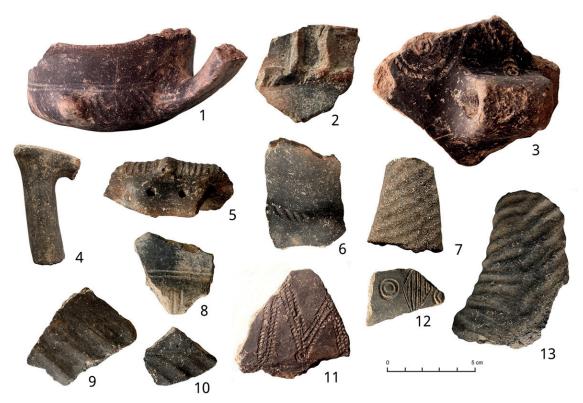


Fig. 2. Early Iron Age pottery from Harmanite neighbourhood of present-day Sozopol.

area. It should be remembered, however, that the so-called Thracian 'fortresses' are located in the hills, at a distance from the shore.

The situation on the coast, where the actual first encounter of Greeks and Thracians took part, remains less clear. Ceramic fragments from the EIA are reported from Sozopol's old town, the site of future Apollonia, but without a pronounced layer and with unspecified chronology (Nedev/Panayotova 2003, 95 f.; Gyuzelev 2008, 119 f.).

Recently, traces from EIA habitation, probably a settlement on the southern slope of a low hill close to the shore, were detected about a kilometre away, in the present-day Harmanite neighbourhood (Панайотова et al. 2014a, 268 f.; 2014b, обр. 2). However, the discovered pottery (fig. 2–3) dates from the first phase of the period, which suggests a considerable hiatus before the arrival of the Greeks.¹

Also, recently remains from the EIA were discovered on cape Akra, the northernmost spur of

the peninsula of present-day Chernomorets, several kilometres to the north-east of Sozopol. Initially, the pottery that is similar to that from the Harmanite neighbourhood (mainly with relief, incised, and fluted decoration, almost without stamps) has been dated from the 8th to the 6th cent. BC, probably early within this period (Христов 2013, 24 f.). Two radiocarbon samples, however, provided dates in the 9th cent. BC (Христов 2017b, 15), which fact supports the observations on the materials from Sozopol's new town.

Other sites around Burgas Bay also hint at a possible hiatus between the Thracian occupation of the coast and the arrival of the Greeks. The best-known example is the peninsula of ancient Mesambria that also yielded pottery from the EIA (Venedikov 1980). The suggested continuity between the Thracian settlement and the Dorian colony (last in Preshlenov 2003, 164 f.) was quickly contested (Alexandrescu/Morintz 1982), and the results from new investigations confirm a long interval (Божкова et al. 2008, 306; Божкова 2009, 146; Божкова/Кияшкина 2014, 225).

EIA Thracian pottery has been discovered at Kostadin Cheshma near Debelt in the area of a

¹ We are grateful for the consultation of Dr. K. Nikov and Dr. G. Nehrizov from NAIM–BAS.

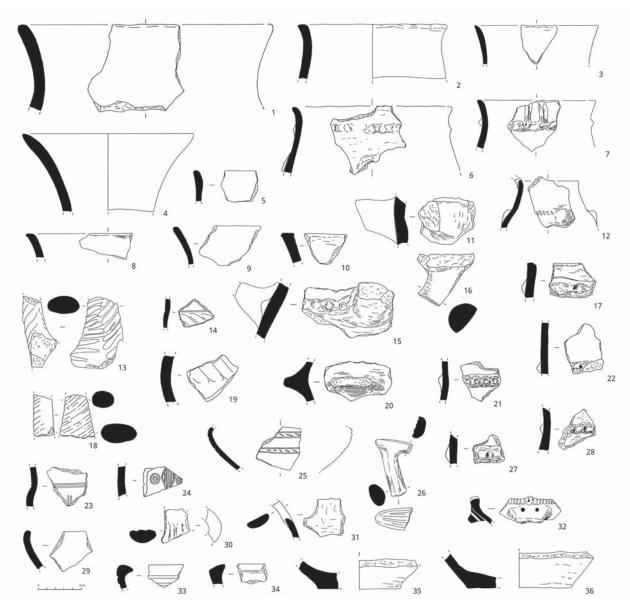


Fig. 3. Early Iron Age pottery from Harmanite neighbourhood of present-day Sozopol.

field of pits with Archaic Greek imports (see below), but not in the pits themselves (Балабанов 1999, 71 f.). Again, no clear contact situation could be registered.

To the south of Sozopol, pottery from the later phase of the EIA, after the 8th cent. BC² that is immediately before the arrival of the Milesian colonists, is known from a tumulus near modern Primorsko (Балабанов 2014; Балабанов/Пантов 2015). The context is not clear, as two Hellenistic

graves were investigated in the tumulus, and the early materials come from its base.

This rather vague situation is probably due mostly to the state of research and to the sometimes problematic dating of early Thracian pottery. Nonetheless, some accompanying evidence suggests a very early contact between the local Thracians and the Ionian colonists, for example, the presence of Thracian pottery in some of the earliest contexts on the island of St. Kirik. Besides, the chronology of the early imports from Kostadin Cheshma – almost immediately after the foundation of Apollonia – is another indication of the presence of natives in the area.

² We are grateful for the consultation of Dr. K. Nikov.

Archaic and Classical Period

The foundation of Apollonia in the late 7th cent. BC is the last episode of the first phase of the Ionian colonisation in the Black Sea region (Tsetskhladze 1994, 115–118) that began in the middle of the century with Istros (and Orgame) in Northern Dobrudzha and Boristhenes/is at the entrance of Dnieper-Bug estuary with respective historical dates of 657/656 BC and 646/645 BC (Euseb., Chron. 95b Helm). Some very early finds from the Northern Pontic area seem to corroborate such a chronology (Kerschner 2006; Buiskikh 2016).

The delay of Apollonia's foundation several decades later is somewhat puzzling, as the city provided a much-needed port of call for the ships sailing northwards, especially coming after the notoriously inhospitable Salmidessos (see Isaac 1986, 239 f., n. 167). It is probably not accidental that the anchor was the constant device on the coins of Apollonia. Certainly, the place had other advantages as well, for example, its proximity to the metal deposits of Medni Rid ('Copper Ridge' in Bulgarian) that were actively mined already during the Archaic period. Within the second half of the 7th cent. BC, between the foundations of the first colonies and the foundation of Apollonia, the Ionian settlers should have been able to obtain information about these resources despite the doubts voiced about the role of metals for the Archaic colonisation (Treister 1996, 169 f.; Tsetskhladze 2009, 335). In this respect, the foundation of Apollonia probably resulted not only from the difficult situation of Miletos in this period: for decades, the Ionian polis suffered from the Lydian expansion and lost territories, which probably prompted the city to send away some of its population (Tsetskhladze 1994, 123-126; Greaves 2002, 17). However, the analysis of the Milesian colonisation was able to identify other economic interests as well (Doonan 2006, 53 f.).

The historical date of Apollonia's foundation, provided by Pseudo-Skymnos (729–733), 'fifty years before Cyrus' (са. 610 BC) (see Бошнаков 2007, 91–110), conforms with the earliest finds: vases of Middle Wild Goat II style (or South Ionian Archaic Ic, see Kerschner/Schlotzhauer 2005, 8, 25–33) (Лазаров 1990, No 1; Недев 2016, 44 f., обр. 1) and North Ionian 'bird bowls' (Недев 2016,

45 f., oбp. 2). The new investigations on the island of St. Kirik that started in 2009 increased the quantity of early pottery (*fig.* 4–5) dramatically without visibly changing the chronology.

Pottery confirms the other part of Pseudo-Skymnos' information about the Milesian origin of the colonists partially: among the early materials, along with Milesian fine tableware, there are also numerous South Ionian transport amphorae, indicating close ties with that region. At the same time, the participation of groups from other poleis should be expected (Greaves 2002, 109; Tsetskhladze 2009, 335), including from northern Ionia. The Archaic monochrome pottery from the Pontic colonies, including Apollonia, reveals numerous Aeolian shapes (Ников 2012, 121-149) and indicates the participation of Aeolian Greeks as well (Handberg 2013). Later, additional settlers (epoikoi) strengthened the demographic potential of the apoikiai (Avram 2012, 198–207).

No written sources elucidate the history of Apollonia and the region in the Archaic period. The mention of Anaximander as Apollonia's oikistes (leader of the colonists) (Ael., Var. Hist. 3.17) could be circumstantial evidence for the arrival of a new group of colonists in the mid-6th cent. BC (Avram 2012, 201-205). Aristotle (Pol. 5, 3, 1303a) provides explicit information about epoikoi in Apollonia, but their connection with Anaximander and the chronology of the events, respectively, are not that obvious (see below). Herodotus (4, 93) mentions the Skyrmiadai, a Thracian people, living 'above Apollonia' in the context of the Scythian campaign of Darius, but pays no attention to the city itself. Archaeology is capable only partially to fill that void.

Ancient Apollonia consisted of two distinct parts: the offshore island of St. Kirik and the peninsula of present-day Sozopol's old town, with a combined area of about 25ha (fig. 6). This urban plan is paralleled by the city of Istros in Dobrudzha (see Avram 2003a, 280–282). In this respect, Strabo's information (7, 6, 1) that most of the city including the temple of Apollo was located on an island (St. Kirik) appears not to be true for the Archaic and the Classical periods. Archaeological evidence indicates a more or less synchronous settlement on both the island and the peninsula: at both places, the earliest pottery dates from the late 7th cent. BC

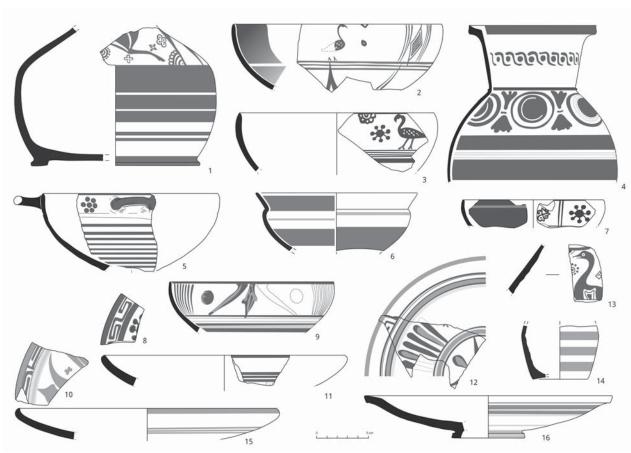


Fig. 4. Archaic East Greek pottery from the island of St. Kirik (late 7^{th} /early 6^{th} cent. BC).



Fig. 5. Archaic East Greek and Attic pottery from the island of St. Kirik (late 7th/6th cent. BC).

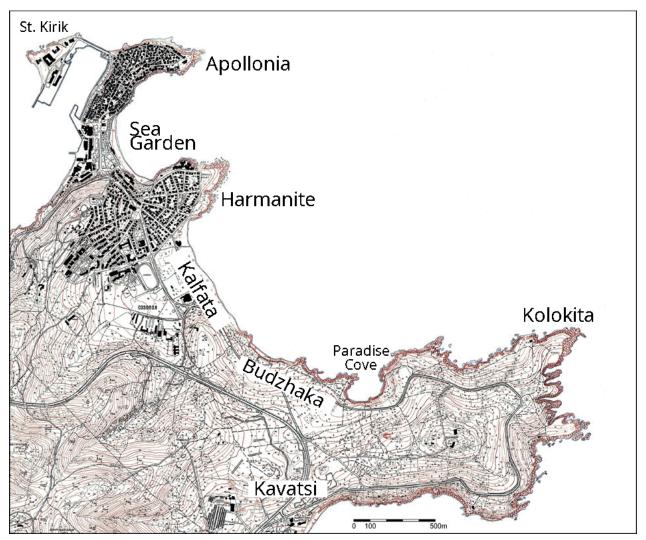


Fig. 6. Map of present-day Sozopol and its surroundings, with the location of the ancient city.

(Nedev/Panayotova 2003, 99; Panayotova et al. 2014, 596 f.; Недев 2016, 44 f.).

Strabo's description indicates that the main temenos with the sanctuary of Apollo was on the island of St. Kirik, but the inconclusive results of excavations in the early 20th cent. (Seure 1924, 320–323) led to other hypotheses about its location, such as on the island of St. John or the peninsula (see Nedev/Panayotova 2003, 97 f.; Gyuzelev 2008, 122 f.). The new investigations on St. Kirik solved this problem: among the uncovered architectural remains, there are a temple and a large altar, dated to the end of the Archaic period, the late 6th cent. BC (Панайотова et al. 2010; Panayotova et al. 2014, 595 f.; 2015, 296 f., Figs. 1-2) (fig. 7). The temple in Ionic order, probably with two columns in antis, was a modest building, with preserved dimensions of 11.75m by 6.8m. The platform of the altar in front of it was square, with a side length of 5.8m. The same building material was used for both structures, large blocks of *muschelkalk*, indicating they were constructed at the same time.

Bothroi with votive gifts reveal the functioning of the temenos already before the construction of the temple, most probably already from the late 7th cent. BC on. The association with the eponymous deity Apollo Ietros (the Healer) was confirmed by the discovery of a mid-6th cent. BC cup with a graffito: '[...]nas dedicated me to Apollo the Healer. From Knidos' (Martinez et al. 2015, 298, cat. 254) (*fig. 8*).

The excavations on the island of St. Kirik for the first time uncovered remains from Archaic Apollonia on a larger area and allowed for distinguishing two main phases (Panayotova et al. 2014, 595 f., Fig. 1). The first one comprises the late 7th and most of the 6th cent. BC and is characterised by



Fig. 7. The Late Archaic temple and altar on the island of St. Kirik.



Fig. 8. Archaic cup with a dedication to Apollo the Healer from the island of St. Kirik (mid-6th cent. BC).

modest dwellings (up to 20 to 25m²) with mudbrick walls on stone foundations and roofs of perishable materials (*figs. 9–10*). A few sunken structures were also detected. Nonetheless, the early houses have the same orientation, indicating a general plan; a main (?) street, 3m wide, was discovered (*fig. 11*).

In all investigated contexts (pits and remains of buildings) from the first phase, there were traces of metallurgy, most of all a huge amount of slag from copper smelting. Pieces of slag were used as an insulation for the floors of some of the early houses (already from the first half of the 6th cent. BC) (fig. 12). A similar practice has been registered in the early levels of habitation on the peninsula. In the western part of the excavated area, a bipartite structure may be identified as a metalworking workshop. The earliest materials date it to the end of the 7th or the very beginning of the 6th cent. BC (fig. 13).

In the early period, the temenos appears to have been smaller, without evidence of stone architecture. This situation changed in the last quarter of the 6th cent. BC, when the dwellings in this

part of the island were abandoned and demolished in order to open space for a much larger sacred precinct, where monumental structures were built: a temple and an altar (the latter overlays partly one of the earlier houses). The chronology is based on a geison block and eaves tiles and antefixes (Panayotova et al. 2014, 596, Fig. 2) with parallels in Miletos and Didyma (Busching 2013, 78 f., Taf. 18; Schneider 1996, 97-103, Abb. 74-76, Taf. 57-63, 102, 3-4); they add to the distribution of Archaic Milesian architectural terracotta in the Black Sea region (see Zimmermann 2007).3 It was a process that developed for several decades. Ceramic plaques with relief depictions of warriors (Martinez et al. 2015, Cat. 255-256) (fig. 15) belonged to the decoration of an unidentified building from ca. 500 BC. New analyses indicate that another temple, that was built immediately to the east of the Archaic one and was previously given an Early Hellenistic date based on roof tiles (Panayotova et al. 2015, 296), should be dated in

³ Analysis of Daniela Stoyanova, Sofia University.

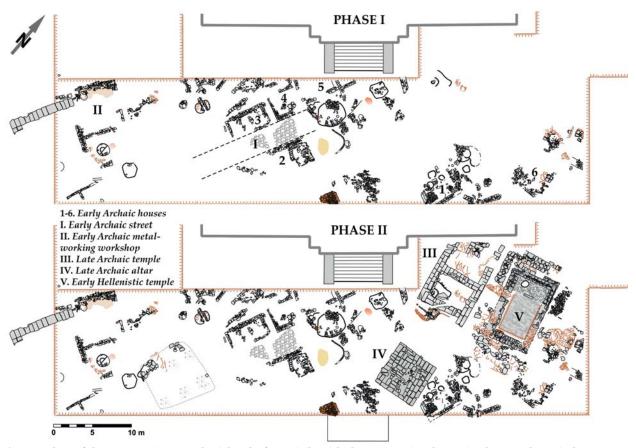


Fig. 9. Plan of the excavations on the island of St. Kirik with the two main phases in the Greek period.



Fig. 10. Dwelling No. 1 on the island of St. Kirik (first half of the 6^{th} cent. BC).



Fig. 11. Part of the Archaic street on the island of St. Kirik.



Fig. 12. Pieces of slag used as insulation for the floor of Dwelling No.1 on the island of St. Kirik.

the first quarter of the 5th cent. BC. Architectural details attest to the existence of other structures within the temenos, such as limestone and marble altars, also dated to the first quarter of the 5th cent. BC (Panayotova et al. 2014, 596, Fig. 2; Stoyanova/Damyanov forthcoming) (*fig. 14*).

The break with the previous phase is made evident by the different orientation of the new buildings that could be seen in other structures on a large area (see *fig. 9*). These changes in the appearance of Apollonia could be considered a 'monumentalisation phase' about a century after the city's foundation, a phenomenon that is observed in other Pontic colonies, including the temenos of

Istros (Avram 2003a, 320–322; Alexandrescu 2005, 66–86, Figs. 1.1–3.1).

It has been suggested that the construction of the first fortifications of Apollonia should be related to the monumental phase of the late 6th and early 5th cent. BC (Panayotova/Nedev 2015, 302), but still no positive traces from them have been identified. At present, the earliest testimony remains the mention of city gates by Aeneas Tacticus (20, 4) from the 4th cent. BC.

The observations presented above allow for the conclusion that Apollonia developed successfully in the first century of its existence, accumulating demographic potential and wealth. The



Fig. 14. Marble architectural details of Late Archaic altars.



Fig. 15. Ceramic plaques with relief decoration from a frieze of a Late Archaic building.



Fig. 16. Metallurgical kilns on the isthmus outside the ancient city, later 6^{th} cent. BC.

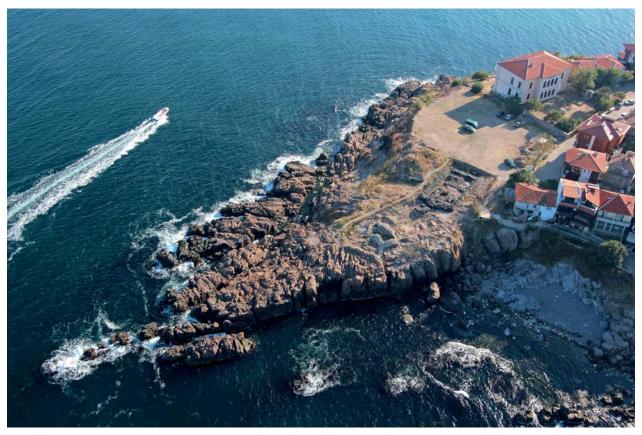


Fig. 17. Skamni promontory at the north-eastern end of the peninsula of Sozopol's Old Town.

evidence about its territory and the relations with the local population indicates the same (see below). Apparently, metallurgy played an important role in the city's economy. Traces have been uncovered in other places on the peninsula of Sozopol's old town (Nedev/Gyuzelev 2010, 37 f.; Baralis et al. 2016, 159), including a complex of kilns in the northern end of the isthmus that connects it to the mainland, immediately outside the ancient city (fig. 16). They are dated to the second half of the 6th cent. BC and reveal the creation of production areas extra muros (a slightly later pottery kiln was also discovered) (Baralis/Panayotova 2015, 964–966, Fig. 6; Baralis et al. 2016, 159, Figs. 6–7).

The remaining evidence about the Archaic urbanism of Apollonia on the territory of the peninsula of Sozopol's old town is very fragmentary. Only rescue investigations have been carried out, limited by the needs of modern construction works, and the results only rarely were published in more details (see Baralis et al. 2013). They indicate that the organisation of the urban spaces followed the natural terrain and topography of the

peninsula, without a comprehensive orthogonal plan, but with separate neighbourhoods with their own orientation (Nedev/Gyuzelev 2010, 36; Baralis et al. 2016, 156).

Observations on the Archaic pottery from Sozopol's old town indicate a higher concentration in the central and southern parts and lower to the north, probably due to the more unfavourable conditions because of the northern winds (Nedev/ Panayotova 2003, 99). The impression about a less intensive habitation of the northern end of the peninsula is corroborated by the discovery of a sanctuary of Demeter on the Skamni promontory (fig. 17), functioning already from the first half of the 6th cent. BC. The identification is based on the votives: terracotta figurines, mainly of females (fig. 18), miniature vessels for liquids and kernoi, artefacts that were typically dedicated at such sites in the Greek world (Панайотова 2013; Damyanov 2016). The location is also revealing, as the secret nature of the female rituals honouring Demeter (for example during the Thesmophoria) required a secluded place, away from other public



Fig. 18. Terracotta figurines from the sanctuary of Demeter on Skamni peninsula.

spaces and residential areas (see Schipporeit 2013, 245–250).

Inscriptions, graffiti on vases and other finds from Apollonia also attest the worship of Aphrodite, Gaia, Hecate, the Great Mother and Dionysos (see Nedev/Panayotova 2003, 102 f.; Nedev/Gyuzlev 2010, 34 f.).

The monumental phase from the end of the Archaic period on the island of St. Kirik sets the stage for the appearance of the 13m high bronze statue of Apollo by Kalamis (Str. 7, 6, 1; Plin., N.H, 34, 17) in the second quarter of the 5th cent. BC (Mattusch 1988, 140 f.). The huge amount of metal that was needed for the colossus is a clear indication that Apollonia still controlled the ore deposits of Medni Rid despite a recently voiced hypothesis that metallurgy declined at the turn of the 5th cent. BC (Baralis et al. 2016, 176). Another sign of the city's prosperity in the 5th cent. BC is the appearance of silver coinage that replaces the so-called 'arrowhead-money' from the previous century (Karayotov 2007, 127–131).

Although the city itself is poorly known, important information about Apollonia in the 5^{th} and 4^{th} cent. BC could be obtained from the

development of its necropolis (fig. 19). From the 1940s to present day, more than 2500 graves have been investigated, about one third of them published (Венедиков et al. 1948; 1963; Hermary et al. 2010; see also Nedev/Panayotova 2003, 123–140; Panayotova 2007). The huge majority date to the Classical and the Early Hellenistic period.

The necropolis of Apollonia developed mainly along a road that led from the peninsula to the south: crossing the isthmus (present-day Sea Garden park), along the north-eastern and the south-eastern slopes of the high hill across the city (the Harmanite neighbourhood of Sozopol's new town), then to the south-east following the shore of an open bay with a beach in the northern part (Kalfata locality). Then the coast becomes higher and rocky, and to the south of the bay, there is a large peninsula (Budzhaka), ending with the Kolokita promontory. The archaeological investigations were able to trace the ancient road for more than a kilometre in the Kalfata and Budzhaka localities (figs. 20–21).

The Archaic period remains poorly known. Recently, in the immediate vicinity of the city, several graves were discovered, dating from the first

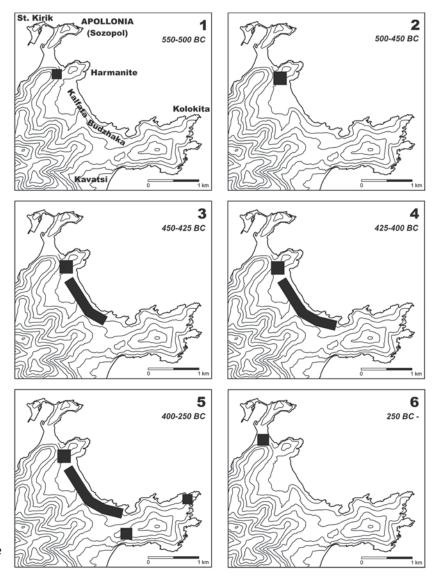


Fig. 19. Schematic presentation of the development of the necropolis of Apollonia from the Archaic to the Hellenistic period.

generation of colonists, that is from the late 7th to early 6th cent. BC (Дражева/Недев 2013, 469 f.; Baralis et al. 2016, 156–161). Around the middle of the 6th cent. BC, the necropolis had already reached the north-eastern slopes of the hill of the Harmanite neighbourhood. Excavations in the 1960s have yielded some early vases (Лазаров 1990, No. 3; Oppermann 2004, Taf. 10.1a–b). In the first half of the following century, it descended down the southern slopes of the same hill (see Иванов/ Недев 2014; 2015; Панайотова et al. 2014b; Дамянов et al. 2015).

The middle of the 5th cent. BC marks the beginning of an entirely new period in the development of the funerary spaces of Apollonia. Within the third quarter of the century, a more than one-kilometre long strip along the coast in the Kalfata

and Budzhaka localities was occupied by an extension of the necropolis, practically doubling its territory, and some 300m were added by the end of the 5th cent. BC, reaching present-day Paradise Cove (Damyanov forthcoming).

This is the most extensively investigated part of the necropolis of Apollonia, covering the period from the middle of the 5th to the middle of the 3rd cent. BC. There are several important publications, allowing for only a summary presentation of the funerary practices. Inhumation is almost exclusively dominant, with only about 3.6% cremation graves, the earliest known dated to the middle or the third quarter of the 5th cent. BC, with a visible increase after the middle of the 4th cent. BC and most of all in the Early Hellenistic period. Another specific is the considerably higher concentration

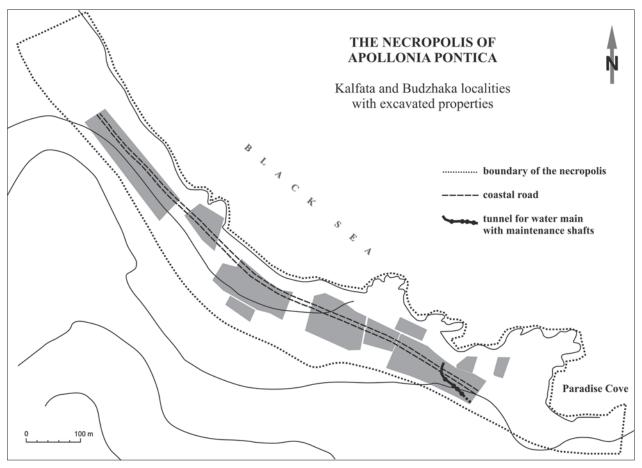


Fig. 20. Schematic plan of the necropolis in the Kalfata and Budzhaka localities, with the route of the ancient road and the tunnel for the water main.



Fig. 21. Part of the ancient road in the Kalfata locality, with burial enclosures on both sides.

of cremations in some parts, probably due to family preferences (Panayotova et al. forthcoming). Simple pits are most numerous throughout the period, and the earliest stone cists date from ca. 400 BC. They are also unequally distributed in the necropolis, possibly indicating different levels of wealth. Graves of roof tiles become widespread in the Hellenistic period. The inventory is typical of a Greek necropolis: containers for scented oils (lekythoi and unguentaria), drinking vessels, toilet accessories (strigils, mirrors), and others.

The sudden expansion of the necropolis after the middle of the 5th cent. BC creates the impression of a one-time act by the polis. In addition, the investigations of large areas of the necropolis allow for distinguishing family plots, particularly visible in the first half of the 4th cent. BC, when low stone walls were built to delimit them (see Baralis/Panayotova 2013). This fact again suggests a thorough reorganisation of the funerary space.

One of the possible reasons for these transformations could be a demographic surge (too sudden to be the result of natural population growth). As already mentioned, Aristotle's Politics mentions such an event: the arrival of epoikoi (additional settlers) in Apollonia and ensuing strife in the city (Arist., Polit. 5.3. 1303a). These new settlers could have contributed to the presumed demographic surge. A. Avram connected this episode with the information about Anaximander as leader and dated it to the middle of the 6th cent. BC (Avram 2012, 201-205), but there seems to be more reason to relate it to the large-scale transformations in the archaeological situation a century later (see Hermary et al. 2010, 15). The local historical context seems to be fitting: this is a period of apparent economic prosperity for Apollonia and the city could afford inviting more population to strengthen its positions.

Indirect support for such a scenario could be found in the presumed reforms in the funerary sphere. The study of the funerary monuments from Apollonia gave rise to the hypothesis about the introduction of regulations to limit ostentatious funerals (Петрова 2010, 265-269; Petrova 2015, 138). It is based on the absence of funerary reliefs after the very beginning of the 5th cent. BC and the well-known monument of Deines, son of Anaxander, 'the noblest of the citizens' (Petrova 2015, 166-168). It continued to the early 2nd cent. BC, having in mind that funerary reliefs from the 4th to the 3rd cent. BC are known from all other *poleis* in the region (Petrova 2015, passim). Such a change could be explained with the internal struggles after the arrival of the epoikoi, mentioned by Aristotle, or with the change of Apollonia's government from oligarchy to democracy (Arist., Polit. 5, 6, 1305b),



Fig. 22. Limestone quarries in the Budzhaka locality, in the area of the necropolis, 5^{th} cent. BC.



Fig. 23. Limestone quarries in the Budzhaka locality, in the area of the necropolis, 5^{th} cent. BC.

which again cannot be dated with any precision (the only terminus is the composition of 'Politics' in mid-4th cent. BC). The change of constitution could have happened under Athenian influence: Apollonia was a member of the Delian League and its name is convincingly reconstructed in the tribute lists for 425/424 BC (IG I³, 71, IV.128).

Despite these internal disturbances in Apollonia in the 5th cent. BC (possibly already in the first half of the century), the general impression is about a lasting prosperity. There are more signs of it in addition to the already commented bronze colossus of Apollo. In the southernmost part of the 5th cent. BC necropolis, traces of a limestone quarry have been detected (Панайотова et al. 2014c, 278, Обр. 3) (*figs. 22–23*), probably predating the first graves from the last quarter of the century. In the same area, an ambitious engineering project was



Fig. 24. Tunnel dug into the limestone for laying the pipes of a water main.

also brought to light: a tunnel for laying a water main of clay pipes dug in the soft limestone (fig. 24, see fig. 20) with service shafts at regular distances (Панайотова et al. 2008, 317; 2014c, 278). More than 80m of the tunnel have been traced, while its total length remains unknown; the water main itself is traced over more than a kilometre. The construction of the tunnel also seems to predate the expansion of the necropolis here.

The necropolis of Apollonia reached its largest area in the first decades of the 4th cent. BC, when graves appeared on the southern side of the peninsula of Budzhaka, facing the bay of Kavatsite. In this period appears the tumular necropolis on Kolokita promontory, where several unusual complexes have been investigated. At least two tumuli with numerous amphorae (more than 120 in one case) deposited in and around them could be dated to the first quarter of the century (Damyanov 2005, 214–216; 2011; Petrova 2011; Bozkova 2011). It appears that the place was deliberately chosen

because of its enhanced visibility; while the high hill of the Harmanite neighbourhood practically hides the necropolis in the Kalfata and Budzhaka localities, there is a beautiful view from the ancient city to the Kolokita promontory. Various interpretations are possible: the promontory could have served as a place for burying individuals with special merits to the polis (Панайотова 1994, 85), or they could have been representatives of Apollonian aristocracy, seeking a way to circumvent the limitations of the presumed funerary regulations (Damyanov 2012, 51–53).

All evidence indicates the stability and prosperity of Apollonia during the Classical period, at least to the middle of the 4th cent. BC and possibly somewhat later. The large necropolis continues to exist in the second half of the century and the first decades of the 3rd cent. BC, but the Early Hellenistic period brought changes to the region.

The emergence and the upward development of Apollonia in the Archaic and the Classical periods raise the question about its chora: farmland, other resources, and satellite settlements under the control of the polis that supported its economic existence. The topic has been discussed in the literature (Nedev/Panayotova 2003, 107-119; Gyuzelev 2008, 132-138)4, and the 'Inventory of Archaic and Classical Greek Poleis' assigned the territory of Apollonia to the fifth category: 500km² or more (Avram et al. 2004, 931, No. 682). While such a reconstruction could be challenged (see De Boer 2002, 137), archaeological investigations in the last decade led to a considerable increase of the data about the scope and the development of the chora of Apollonia in different periods.

The information that could be obtained from ancient written sources is scarce and controversial. Strabo (7, 6, 1) mentions Anchialo on the northern coast of Burgas Bay as a settlement (polichnion) of the Apollonians. This is confirmed by a Hellenistic inscription (ISM I 64 = IGBulg. I² 388bis) describing Anchialo as a fort (phrourion); the decree is the only document mentioning the term chora related to Apollonia, and Anchialo belongs to peran chora 'the territory beyond/across' (in this case on the opposite shore of the bay). Another piece

⁴ This part of the text is authored by M. Gyuzelev.

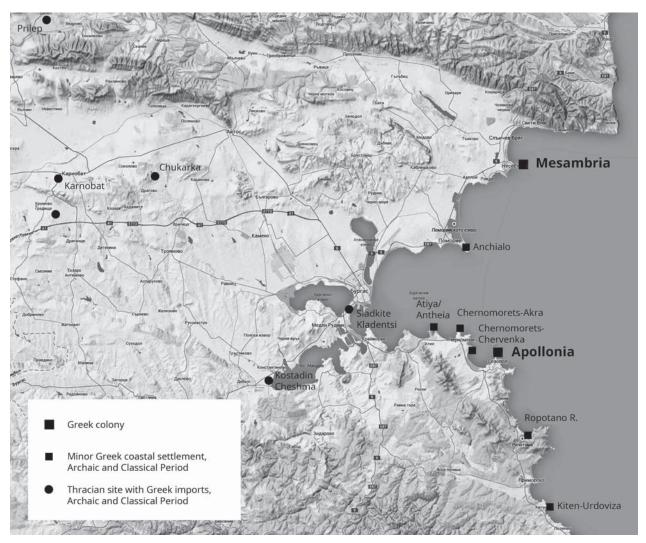


Fig. 25. The region of Apollonia in Archaic and Classical times: Coastal Greek (?) settlements and Thracian sites with Greek imports.

of evidence in the same passage of Strabo is more controversial: he assigns Thinias (modern Igneada in Turkey) to the territory of Apollonia, partly supported by Pseudo-Skymnos (728–730). This would mean that Apollonia controlled some 120km of the coast, which appears to be improbable having in mind the potential of the city. Probably, one should remember distinguishing the 'narrow' and the 'broad' meaning of the term *chora*: the actual land possessions of the polis and something that could be defined as 'zone of influence' respectively (Lepore 1968, 30 f.; 1973, 21).

A look at the topography of the region is sufficient to suggest the probable limits of the 'near' territory of Apollonia. The chain of Medni Rid encompasses a narrow coastal plain with a few hilly areas, between the Atiya promontory to the north

and the mouth of the Ropotamo to the south, with Apollonia situated practically in the centre (see *fig. 25*). Logic dictates that the properties of the citizens were precisely in this area: in the plain to the north of the city, and to the south in the interior around present-day Ravadinovo (Nedev/Panayotova 2003, 100; Gyuzelev 2008, 134).

At present, it is difficult to specify the time of the creation of the Apollonian *chora*, although some mostly indirect data hint at a very early moment in the Archaic period. Among them is the evidence of early metallurgy from the city itself (see above), indicating that the copper deposits of Medni Rid along the western border of the outlined territory have been mined at latest from the early 6th cent. BC on, within the first generation of colonists. This is supported by Archaic fragments

collected from the area of the mines (Лещаков/ Класнаков 2011, 584). Such a development presupposes some kind of control on the surrounding territories and some kind of agreement with the local population.

Although not numerous, the early materials from the Atiya promontory reveal an important Archaic settlement that continued to exist until the Hellenistic period (Gyuzelev 2008, 116 f., 266 f.). Among them is a marble Ionian draped kouros from the late 6th cent. BC (see Oppermann 2004, 37 with references; Martinez et al. 2015, Cat. 253), still unique for the Western Black Sea coast. A hoard of 'arrowhead-money' found together with a mould for casting them speaks of metallurgy and interest towards the Rosen ore-field nearby (see Черных 1978, 19-23). The status of the settlement, especially early in the Archaic period, remains unclear. For a long time already, it is accepted to identify Atiya promontory with Antheia, mentioned in the sources as a colony of Miletos and Phokaia (Steph. Byz., Ethnica: Ἄνθεια; Plin., N.H. 4, 11, 45; see Avram et al. 2004, 929), which fact suggests an early foundation. However, there is no evidence from later periods to indicate that Antheia developed as an independent polis. It is not mentioned in narrative sources or epigraphic monuments, and no coinage has been associated with it. It seems logical to assume that the settlement was included at some point in the territory of Apollonia, possibly by means of synoecism (Oppermann 2004, 12).

The presumed coexistence of Apollonia and Antheia for some time hints at a possible comparison with the north-western Black Sea area, where two similar cases have been studied: Orgame and Istros in northern Dobrudzha and Borysthenes/is (the island of Berezan) and Olbia in the Dnieper-Bug estuary (see Alexandrescu 1999; Буйских 2013). In both cases, the earlier settlement (Orgame and Borysthenes/is) is not attested as an independent polis in the Classical period and later. It has been suggested that Borysthenes/is (and possibly Orgame) emerged with mainly commercial functions and were later replaced by centres that were founded with the aim to control more land and resources (respectively with larger demographic potential). Antheia and Apollonia could fit within such a scenario: the former had access to limited farmland, but was close to ore deposits and to the navigable estuaries of Burgas Bay that provided communication with the Thracian interior; on the other hand, the location of the latter gave control over a much larger territory, in addition to the excellent harbour.

At present, there are more explicit data for permanent occupation of the adjacent territory of Apollonia from the Classical period. In the last few years, evidence emerged about Classical sites in the surroundings of modern Chernomorets between Apollonia and Antheia (see Gyuzelev 2008, 117, 266). Imported pottery from the 5th to the 3rd cent. BC (Девлова 2014, 51 f.) and contemporary roof tiles (Киров 2014) and amphorae have been found in Vromos Bay, facing Atiya promontory. The site has been interpreted as an emporion⁵ within the territory of Apollonia (Христов 2013, 199 f.), but it may be regarded just as a satellite settlement, related to the cultivation of the farmland in the area. Traces of another large settlement, possibly founded already in Archaic times, were detected on the Chervenka peninsula to the south of Chernomorets, facing Apollonia (Христов 2015, 21-26; 2017a, 23-50).

Although scarce and preliminary, the new data reveal a dense network of settlements along the coast between Apollonia and Antheia, with sites at suitable places at a few kilometres from each other. This situation reminds of what is known from other, better researched parts of the western Pontos, for example, the territories of Istros and Kallatis in Dobrudzha (Avram 2001; 2006). Such a network ensured an effective exploitation of the *chora* and its resources.

In 2010, a Bulgarian-French project for investigating the territory of Apollonia began and after a few seasons provided more detailed data about the city's expansion in Classical and Early Hellenistic times. The above-discussed development of the necropolis in the 5th and 4th cent. BC clearly illustrates the creation of new spaces in the period,

⁵ The bibliography on the meaning of the term *emporion* is enormous (among others Bresson 1993, Hansen 1997). For the sake of brevity, and in order to avoid a lengthy technical discussion, here it is used as a lesser coastal settlement dependent on a full-scale polis (Apollonia in this case) that could have had commercial functions. It is not meant as the administratively defined part of the city, dedicated to commercial operations.



Fig. 26. Ancient buildings at Mesarite locality at ca. 2km from Apollonia (photo: Loïc Damelet).

especially visible from ca. 450 BC onwards. At the same time or somewhat earlier, new sites related to the exploitation of the chora emerged in the close vicinity of the city. The earliest remains in the Mesarite locality on St. Marina hill at ca. 2km from Apollonia are dated to the first quarter of the 5th cent. BC (Baralis/Panayotova 2015, 983; Baralis et al. 2016, 168-170). From the second quarter of the century onwards, a large complex of structures develops on the hill and remains in use until the beginning of the 3rd cent. BC (Baralis/Panayotova 2015, 988-993, Figs. 14-15; Baralis et al. 2016, 171–174, Figs. 14–16) (fig. 26). The buildings were organised along a road that probably connected Apollonia with the territory to the north of it (fig. 27).6 In the Early Hellenistic period (the first half of the 3rd cent. BC), a necropolis related



Fig. 27. Part of the uncovered ancient road through the Mesarite locality, with visible ruts.

to the settlement emerged nearby (Панайотова/ Баралис 2018).

Not far, on the northern slope of the same hill, another structure has been investigated, most probably an individual farm, dated to the period from the middle of the $4^{\rm th}$ to the middle of the

⁶ Results from the ongoing investigations (see Панайотова et al. 2017, 244).



Fig. 28. Traces of ancient agriculture (vineyards?) on a hill above the necropolis in the Kalfata locality (photo: Loïc Damelet).

3rd cent. BC (Гюзелев/Господинов 2011; Гюзелев et al. 2012; Baralis/Panayotova 2015, 983–986, Figs. 11–12; Baralis et al. 2016, 170 f., Fig. 12).

Another new result from investigations in the immediate surroundings of Apollonia during the last few years is the detection of actual traces of agriculture. At several sites within two or three kilometres from the city, short shallow trenches arranged in regular rows were discovered covering a substantial area and dug into the clayey ground beneath the sandy topsoil (fig. 28). They could be interpreted as trenches for planting vineyards and the accompanying materials date them to Hellenistic times (see Панайотова/Дамянов 2016), but possibly also earlier (see Богданова et al. 2017a; Богданова et al. 2017b).

The new evidence considerably modified the picture of the Apollonian *chora* in the Archaic and Classical periods. There are sufficient grounds to presume the existence of more, not yet discovered

sites, shaping the dense fabric of the adjacent territory of the polis. $\space{-0.05in}^7$

The narrow coastal plain to the east of Medni Rid provided poor agricultural resources, which was probably the reason for the growing

In 2017, initial investigations of a site near the village of Ravadinovo, at ca. 7km from Apollonia and in immediate proximity to one of the ancient mines of Medni Rid yielded very important results. The site is a hilltop fortress of square plan (ca. 85m by 85m) with an additionally fortified inner part (20m by 20m) in one of the corners. The stone walls, preserved up to 2m, are 1.6m to 1.8m thick. The materials (black-glazed pottery and amphorae) indicate that the fortress appeared before the middle of the 5th cent. BC and remained in use during the 4th cent. BC. We are grateful for the information to Pavlina Devlova, National History Museum, Sofia. Having in mind the growth of Apollonia in the first half of the 5th cent. BC and the developments observed at Mesarite, the fortress could be related to the establishing of a settled and guarded Apollonian chora. It would appear that the protection of the mineral resources was especially important.

Apollonian polis to search for more farmland elsewhere. Such an opportunity was offered by the 'chora beyond' around Anchialo on the northern shore of Burgas Bay, 15km as the crow flies from Apollonia (and at 10km from Antheia). Despite the fact that the earliest mention of Anchialo as an Apollonian *phrourion* dates only from the 2nd cent. BC, the scarce archaeological data allow for a considerably earlier date, including in the Archaic period (Gyuzelev 2008, 95-97, 226-229). Some indirect observations also support such a hypothesis. On the one hand, Apollonia was on the rise in the 6th and 5th cent. BC and this is the period when one could expect a major expansion. On the other hand, the appearance of Anchialo as a satellite of Apollonia most probably predated the foundation of Mesambria as a second Greek colony in the region of Burgas Bay in the late 6th cent. BC. And finally, newly discovered materials from Urdoviza to the south (see below) attest the existence of coastal settlements, apparently related to Apollonia, already in the first half or the middle of the 6th cent. BC. Therefore, Anchialo most probably existed as an Apollonian 'enclave' since the Archaic period; there are no reasons to believe that Apollonia controlled the entire length of Burgas Bay, which, however, provided communications with the interior (see below). In the case of Anchialo, one should have in mind the direct visibility across the bay.

The borders of the Apollonian territory to the south are harder to trace. Ancient finds, including a North Ionian eye-cup from the first decades of the 6th cent. BC, have been discovered at the mouth of the Ropotamo (Karayotov 2002, 560 f.; Gyuzelev 2008, 136, 236). It has been suggested that an *emporion* of Apollonia existed here, identified as Cherronesos in the periplus of Arrian (Karayotov 2002, 562; De Boer 2002, 129 f.; De Boer/Stronk 2002, 235). The site is at the presumed southern end of the territory of Apollonia, and the location at the mouth of a navigable river could serve as an indirect argument in favour of commercial functions.

There are more data about ancient settlements at modern Kiten on the Urdoviza peninsula and near the mouth of the Kitenska river (former Karaagach) (see fig. 25). Based on a funerary monument from the 5th or 4th cent. BC (IGBulg. V 5155)

found in the area, the latter site has been identified provisionally as a satellite settlement (*emporion*?) of Apollonia, named Perinthos (De Boer 2002, 128 f.; De Boer/Stronk 2002, 235 f.; Gyuzelev 2008, 229–231; for an opposing view see Karayotov 2002, 564–566). Moreover, the funerary monument with the names of a father and a son indicates long-term habitation. Therefore, G. Mihailov suggested the existence of a farm, owned by a citizen of Apollonia.

In 2012 and 2013, excavations of a limited area around the Late Antique and Medieval fortress wall at the Urdoviza peninsula (Панайотова et al. 2013; Даскалов/Панайотова 2015) brought to light numerous fragments of Archaic and Classical imported pottery, covering a long period from the 6th to the 4th/3rd cent. BC. The earliest fragments could be dated as early as the first half of the 6th cent. BC, and the Archaic ceramic assemblage is very similar to that from Apollonia (from the island of St. Kirik): numerous Aeolian and Ionian amphorae (Chios, Klazomenai, Miletos) (fig. 29), East Greek drinking vessels (fig. 30), etc. Pottery indicates the settlement also existed in Classical times, down to the beginning of the Early Hellenistic period (fig. 31). Among predominantly Greek materials, there are a handful of fragments from coarse hand-made jars with relief bands (fig. 32). A similar picture is also attested on the island of St. Kirik in the Archaic period (see below).

Despite their preliminary character, the results from Urdoviza are very important in respect to the development of Apollonia, as they illustrate the activity of the polis along a longer stretch of the cost, Kiten being at almost 30km to the south. The numerous Archaic materials for example provide indirect support for an early date for the foundation of Anchialo. On the other hand, the great distance and the difficult communications between Apollonia and Urdoviza raise the question about whether the latter could have been part of a continuous Apollonian territory. Some evidence speaks against such a reconstruction, at least for the Hellenistic period (see below). Another possibility is to see Urdoviza as a separate dependent settlement serving as a harbour along the coastal sailing route and probably controlling some farmland. Such an interpretation would make Strabo's information about Thinias more

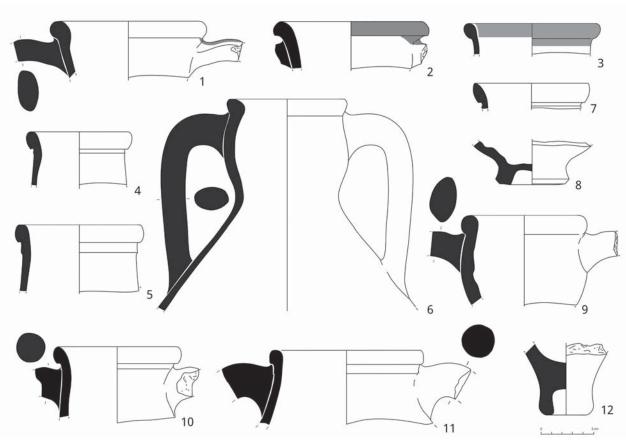


Fig. 29. Archaic and Early Classical transport amphorae from the Urdoviza peninsula, Kiten.

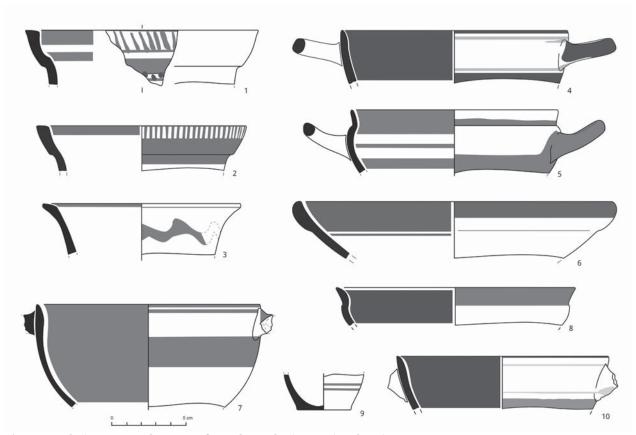


Fig. 30. Archaic East Greek pottery from the Urdoviza peninsula, Kiten.

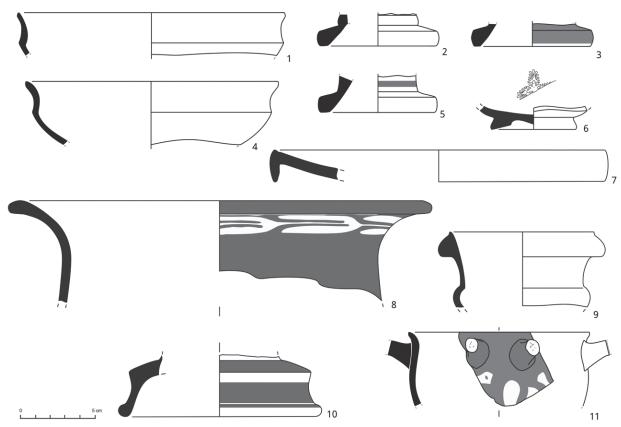


Fig. 31. Late Archaic and Classical pottery from the Urdoviza peninsula, Kiten.

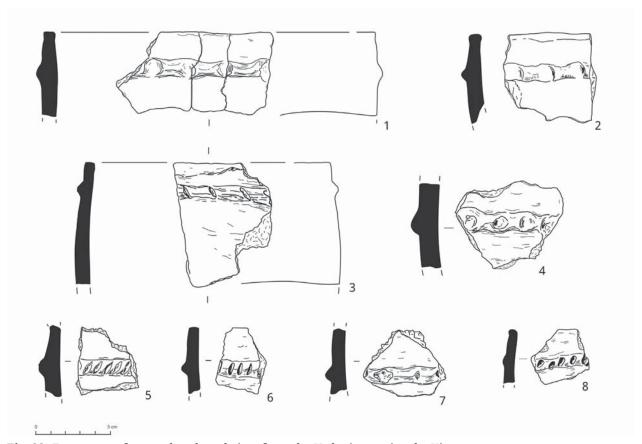


Fig. 32. Fragments of coarse hand-made jars from the Urdoviza peninsula, Kiten.

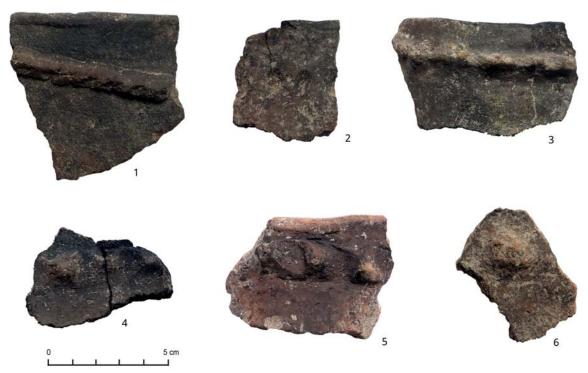


Fig. 33. Fragments of coarse hand-made jars from the island of St. Kirik.

credible as belonging to Apollonia; the polis could have controlled a network of small harbours along the 100km long coast to the south. They could have had commercial ('emporial') and other economic functions. This network might outline Apollonia's 'zone of influence'. The lack of detailed information allows for very limited speculations about the nature of these settlements. They should have existed with the consent of the local Thracians, and a mixed population cannot be excluded.

Another similar settlement may have existed at the site of modern Ahtopol – possibly Aulaiouteichos – known from the peripli (Arr., Per. Pont. Eux. 36). The archaeological material from the site is meagre (see Делев 1990, 145; De Boer 2005, 173–177; Gyuzelev 2008, 146–148) and the main discussion revolves around two Greek inscriptions found in the sea. One opinion regards them as evidence for a 5th cent. BC Athenian foundation, related to Perikles' Pontic expedition (Velkov 1994; De Boer 2005), while the other treats them as Apollonian decrees from the 3rd cent. BC (Avram 2002).

Observations on the territory of Apollonia naturally raise the question about its relations with the local Thracian population from the foundation of the colony to the Macedonian expansion in the third quarter of the $4^{\rm th}$ cent. BC that definitely changed the general historical setting.

The steady development of the polis through the Archaic and Classical periods is reflected indirectly in the connections with the Thracian hinterland. The moment of the first contact remains blurry, but as already mentioned, Apollonia could hardly have gained access to the metal riches of Medni Rid without the consent or even the cooperation of the local Thracians. The presence of fragments of hand-made vases of Thracian shapes already in the earliest contexts on the island of St. Kirik, as early as ca. 600 BC, confirms early contacts (fig. 33–34, see also fig. 13).

Already in the end of the 7th or the very beginning of the 6th cent. BC, Greek imports appeared at sites around Burgas Bay, for example at Kostadin Cheshma near Debelt (at the western end of the Mandrensko lake, a navigable estuary in ancient times) (Tzochev 2011) and illustrated the quick establishing of connections between the Greeks and the local population. In the first half and down to the end of the 6th cent. BC, an important concentration of imported goods is observed in the area

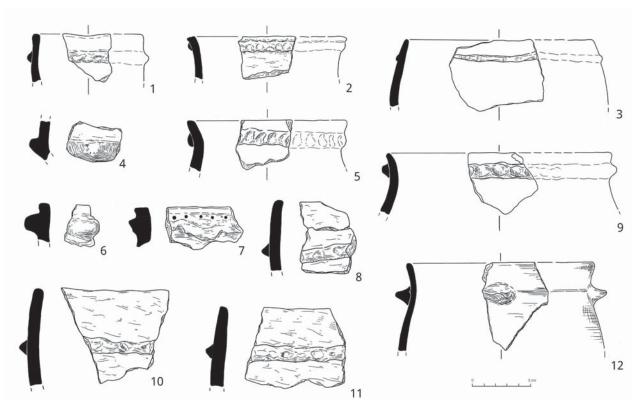


Fig. 34. Fragments of coarse hand-made jars from the island of St. Kirik.

of Karnobat, where the ceramic assemblage displays similarities with coastal sites on the Black Sea and particularly with Apollonia (Ников 2009, 118–120; Цочев 2009, 124 f.; Георгиева/Ников 2010, 142–149) (see *fig. 25*). The penetration of early imports could be traced at least to the region of modern Yambol (Караджинов 2012), where however the traffic from the Black Sea merged with the one from the northern Aegean coast (see Tzochev 2010, Pl. 56.1) and it is difficult to tell them apart.

The rise of the Odrysian Kingdom brought changes in Thrace, but the process apparently did not have negative effects on Apollonia. In the 5th cent. BC, a site emerged at Sladkite Kladentsi on the shore of Burgas Bay (Isaac 1986, 249; Oppermann 2004, 89 f.; Gyuzelev 2008, 98 f., 187–192); its location at the entrance of the navigable estuaries (lakes at present) and the abundance of Greek materials are the reasons the place to be interpreted as *emporion*. The pottery demonstrates clear similarities with Apollonia (see Oppermann 2004, 111–120). However, the necropolis of cremation graves near the settlement (Балабанов/Дражева 1985) suggests a mainly non-Greek

(Thracian) population, an indication that the inner parts of Burgas Bay did not belong to the territory of Apollonia.

Materials from the region of Karnobat also speak of continuity (Ников 2009, 120 f.; Цочев 2009, 124 f.; Георгиева/Ников 2010, 149-153), and some symptomatic finds reveal direct connections with Apollonia. Among them are the two red-figure mugs (or small jugs) with Thracian warriors: one from Apollonia (Лазаров 1990, No 16; Reho 1990, No. 190) and the other from a tumulus near Karnobat (Георгиева 2005). For a long time, the first one was considered unique and was interpreted as a special commission by an Apollonian client (Lezzi-Hafter 1997, 359-365). The appearance of a second one, almost identical, in the Thracian hinterland seems to suggest special relations with the Pontic colony. Another similar case is presented by several oinochoai of VIII B type, another rare shape in the Attic red-figure pottery from the late 5th cent. BC: one from Apollonіа (Панайотова et al. 2011, 266, обр. 3), one from Sladkite Kladentsi (Лазаров 1990, No 38; Reho 1990, No. 412) and two from the Svetitsata tumulus near Kazanlak (Kitov 2005, 35 f., Figs. 18–22). These finds could trace Apollonia's interests deep in the Odrysian territories.

One may also add the observations on the distribution of the Herakleian amphorae (with englyphic stamps) in the first half of the 4th cent. BC. They are numerous in Apollonia (Gueorgieva 2001, 289-293; see Bozkova 2011; Damyanov 2011, 95-99) and represent the majority of the imports at Kostadin Cheshma (Balabanov 2011, 124; Balabanov et al. 2016), apparently a Thracian site with (redistributive?) commercial functions (and with continuity from the Archaic period). The area of domination of the Herakleian amphorae could be traced to the west to modern Nova Zagora, and it has been suggested that it marks the economic influence of Apollonia (Tzochev 2010, 99 f., Pl. 56.2). In the last few years, another Thracian site with numerous imports and Herakleian amphorae, in particular, was investigated near the village of Malenovo, Yambol region, and seems to confirm previous conclusions (Божкова et al. 2016; 2017).

The available evidence indicates that this favourable for Apollonia situation changed after the Macedonian expansion in the third quarter of the $4^{\rm th}$ cent. BC. It brought down the Odrysian Kingdom and modified the balance in the Thracian interior, with inevitable consequences for the political and economic ties of the Ionian polis.

Early Hellenistic Period

The Hellenistic period is among the poorest known in the history of the Black Sea coast to the south of the Balkan range, and of Apollonia and its hinterland in particular, which fact seems strange having in mind the important processes that unfolded in the ancient world and also affected more peripheral regions.

In fact, there is no information whatsoever about the period of the Macedonian domination over the region that lasted some six decades from the campaigns of Philip II to the death of Lysimachus in 281 BC. About 340 BC, Apollonia is mentioned as an intermediary between the Scythian king Ataias and Philip II (Just. Epit. 9, 2, 1; Делев 2004, 231–236; last in Лазаренко 2015, 128–141) and afterwards disappears from the sources. According to Arrian, in 323 BC Lysimachus received

territories that reached to Salmidessos to the north, considerably farther to the south from Apollonia (Делев 2004, 343 f.). The presumption that the Diadoch relatively quickly took hold of the territories to the east of the river Tundzha and the Black Sea coast with Apollonia, Anchialo, and Mesambria (and established garrisons there) seems to be logical (Делев 2004, 150 f., 346 f.), but is not yet supported by any solid evidence.

For the following period, the scarce written sources focus on the Greek cities to the north of the Balkan range, mainly in the context of the revolt of Kallatis; Istros and Odessos are also explicitly mentioned (Diod. 19, 73). These events provide context also for the information of Tirizis (presentday Kaliakra) as a treasury of Lysimachus (Str. 7, 6, 1). Special attention should be paid to Odessos as the port used by Kassander to send reinforcements to Lysimachus before the Battle of Ipsos (Diod. 20, 112; Делев 2004, 182 f.): It remains unclear why Pleistarchos chose to cross the Balkan passes to Odessos, instead of opting for Apollonia or Mesambria that were closer. One of the possible explanations puts under question Lysimachus' control over the region of Burgas Bay.

Archaeology is unable to replace the lack of ancient sources adequately but provides some directions. Some changes in the traffic of Greek imports in the hinterland of Burgas Bay could be related to the campaigns of Philip II: for example the disappearance of Herakleian amphorae after the middle of the 4th cent. BC. As mentioned above, there are sufficient reasons to believe that Apollonia was behind this trade and the changes indicate disruptions in the ties of the polis with the Thracian interior that most probably had negative effects on its economy. In a slightly later period, this void seems to have been filled by Mesambria (see below).

Around the middle of the 4th cent. BC, a fortified site appeared on the northern shore of Mandrensko lake (Балабанов 1984; Gyuzelev 2008, 101–103). It had a rectangular plan, with one of the enclosure walls ca. 50m long and up to 1.5m thick (the rest was destroyed by the waters of the lake) with a tower protruding from it. The complex had a residential building, probably with rich decoration, and farm buildings. The site underwent reconstruction in the second half of the

3rd cent. BC and possibly existed into the early 2nd cent. BC. It has been interpreted as *tyrsis*, the centre of the domain of a rich Thracian family, but it is important to note that its emergence and first period could be dated precisely to the period of the Macedonian expansion in Thrace. As mentioned above, the situation in the region is particularly unclear, but another possibility would be to relate the site to the Macedonians, for example, as a residence of a local governor or of a nobleman who was endowed with lands in the area.

The available evidence from Apollonia itself and its immediate surroundings does not suggest any major disruptions related to the establishing of the Macedonian power and the inclusion of the western Pontic coast into the kingdom of Lysimachus. Preliminary observations date the reconstruction (with a new roof) of at least one of the temples in the temenos on the island of St. Kirik to the Early Hellenistic period. In the same period, the appearance of monumental buildings is registered in other *poleis* as well, for example in Odessos (Stoyanov/Stoyanova 1997) and Istros (Alexandrescu 2005, 109–127).

The evidence from the funerary spaces also indicates stability: the use of the large necropolis in the Kalfata and Budzhaka localities continues without visible interruptions in the second half of the 4^{th} and the first decades of the 3^{rd} cent. BC. In the first half of the 3^{rd} cent. BC, new areas were added: for example next to the satellite settlement in the Mesarite locality (Панайотова/Баралис 2018).

Having in mind the new trends in the Early Hellenistic period, a few unusual burial structures should be mentioned, unfortunately, most of them already plundered and at least partially destroyed when discovered. The use of the 'non-normative' necropolis on the Kolokita promontory continues with two structures that have been interpreted as tombs (Кацарова 2007; Кацарова/Стоянова 2009; Миков 2007; Миков/Стоянова 2010); the associated materials provide a chronology in the first quarter of the 3rd cent. BC (Миков 2007, 344; вж. Кацарова, Стоянова 2009, Табл. XII). Monumental family tombs appear elsewhere as well, at places that are relatively far from the main necropolis and could be related to individual farms or estates. To this group belongs the tomb in the Mapite locality in the bay of Kavatsite, dated to the same period (Seure 1924, 335 f.). In 2016, another such structure was investigated closer to Apollonia, on a hill above the necropolis in the Budzhaka locality. It was used during the very end of the 4th and the first quarter of the 3rd cent. BC and one of the associated graves yielded golden jewellery from the Early Hellenistic period (Богданова et al. 2017c, 257–260) for the first time in Apollonia.

These unusual burials belong chronologically to the reign of Lysimachus and could hint at changes in the land use and the emergence of new wealthy families. It is possible to search for parallels in other western Pontic poleis, such as Odessos and Kallatis, where Early Hellenistic barrel-vaulted tombs have been investigated. Due to the specific architectural type and the clear evidence from the sources about Macedonian activity in the area, they could be related to the actual presence of noble Macedonians, for example officers from the garrison (Damyanov 2010, 272–274; 2012, 59–61; Ştefan/Sirbu 2016, 217–219). At present, the evidence from Apollonia is more difficult to interpret.

Another burial from the same period, discovered recently in the closer hinterland of Apollonia, appears to be more important: a dismantled tomb under a tumulus near the town of Primorsko, several kilometres in the interior along the course of the Ropotamo, to the south of the river, yielded a set of gold ornaments for a horse harness (Балабанов/Пантов 2017; Balabanov/Pantov 2018). It belongs to a very uniform group of such sets from Thrace, dated to the first half (mostly the second quarter) of the 3rd cent. BC (Tonkova 2010). At present, the tumulus in the Silihlyar locality is the first clearer archaeological testimony about the presence of Thracian aristocracy in the surroundings of Apollonia. It also raises the question about the borders of the Apollonian territory. As stated above, the settlement on Urdoviza peninsula (in modern Kiten) was founded already in the Archaic period and should have been dependent on Apollonia; it was suggested that it could have been an isolated 'enclave' (an emporion?) and was not part of the near chora of the polis. The available evidence indicates it existed at least to the late 4th or early 3rd cent. BC. The presence of a noble Thracian family along the lower reaches of the Ropotamo additionally modifies the picture, at least for the Early Hellenistic period, the time of Lysimachus and immediately after it, but possibly also earlier. Even if the settlement on the Urdoviza peninsula still existed as a satellite of Apollonia, the Apollonian presence was probably limited to a narrow coastal strip.

Probably, to the same period belongs a looted and partially destroyed barrel-vaulted tomb near the village of Brodilovo, some 20km to the south and several kilometres away from the coast (Arpe/Дичев 2009). For the moment, this aristocratic burial does not have a clear context, but offers a glimpse to certain developments in the Early Hellenistic period.

The situation in Apollonia's surroundings changed visibly around the middle of the 3rd cent. BC, when a series of negative developments could be observed. The most obvious among them is the contraction of the necropolis of the city. Archaeological data indicate that the large necropolis in the Kalfata and Budzhaka localities was abandoned at about that time (Hermary et al. 2010, 51-81; Baralis et al. 2013, 322; 2016, 160-164). The chronology of the process is not completely elucidated, but the latest materials could hardly be dated considerably after 250 BC (see Damyanov forthcoming); the use of the necropolis in this period is supported by the discovery of coins of Antioch II (261-246 BC) in graves in the Kalfata locality (Герасимов 1963, 339, No. 1253-1254; see Юрукова 1982 and last in Paunov 2015, 271). From the second half of the century, Apollonians buried their dead closer to the city, mainly on the isthmus that connected it to the mainland (present-day Sea Garden park) (see Венедиков et al. 1963, 60-64, 343).

Contemporary changes have been registered at other archaeological sites in the immediate surroundings of Apollonia. At the same time at latest, the buildings in Mesarite and St. Marina localities were also demolished and abandoned (Baralis et al. 2011, 222–227; Baralis/Panayotova 2015, 982–999; Baralis et al. 2016, 168–177). The site at Messarite could indicate a gradual development of the crisis, as some of the later graves appear to be dug in the ruins of buildings (Baralis et al. 2016, 174 f.; Панайотова/Баралис 2018). However, they could hardly date from after the mid-3rd cent. BC.

Some scholars relate the collapse of the Apollonian territory and necropolis to the troubled period of the struggles between Seleucids and Ptolemies (Гюзелев et al. 2012, 250). Others tend to see not a single conflict, but a lasting uncertainty that forced the city to abandon its surroundings; the reasons for it remain unclear (Baralis et al. 2016, 176 f.).

The activity of Antioch II in the area is attested both by his coins (considerably more numerous in the Thracian interior, Юрукова 1982; Paunov 2015, 271) and a badly damaged and extensively discussed decree (IGBulg. I2, 388) that was found in Apollonia but probably originates from Mesambria, as indicated by the Doric dialect. The name of Antioch (II) is plausibly reconstructed and the wording suggests military help (for Apollonia and Mesambria?) rendered by a general of the Hellenistic ruler. Traditionally, the Celts have been identified as the enemies of the Greek cities (and Antioch) (Михайлов 1948, 63–66; IGBulg. I², 388). However, the Celts were not the only factor in Thrace in the second and the third quarter of the 3rd cent. BC (Delev 2003, 107–115; 2015, 60–63) and such a reconstruction remains hypothetical (Emilov 2005, 327-329). The presence of Thracian dynasts could be presumed in the hinterland of Burgas Bay, and one example could be Sadalas from the famous Mesambrian decree (IGBulg. I2, 307; see IGBulg. V, 5086), for which a wide range of dates has been proposed, including later than the time immediately before the arrival of the Celts. Another inscription from the region is usually dated to the first half of the 3rd cent. BC: a decree (IGBulg. I², 389) that mentions the Thracian king Kotys who sent (to Apollonia?) his son Rhaiskouporis as a warrant/hostage; lately, however, a considerably later date has been suggested (Манов 2015).

The campaign of Antioch II in Thrace, respectively his presence on the western Pontic coast, is dated to shortly before the middle of the 3rd cent. BC, most often to 255–253 BC (Delev 2015, 61; Paunov 2015, 271). Based on the scarce narrative sources and scattered epigraphic monuments, A. Avram (Avram 2003b) has drawn an ambitious reconstruction of the events along the Black Sea coast in the 250s BC (including the war for the 'emporion Tomis'), which he sets in the context

of a conflict between Antioch II and Ptolemy II. Avram envisions a large alliance of the West Pontic cities from Istros to Apollonia in support of the Seleucid, and a swift reaction against it on the part of Ptolemy II, as early as 254 BC (see Archibald 2007, 253 f., 258 f., 262). Besides, following an early hypothesis of the late Y. G. Vinogradov, Avram presumes that the actions of the general of Antioch in IGBulg. I2 388 could have been directed against the Astai (see Oppermann 2004, 145 f.). Last, in his opinion, 254 BC marked the beginning of a 'remarkable domination of Ptolemy II Philadelphus in the Black Sea', although Antioch II probably preserved his positions in the interior of south-eastern Thrace until the conquests of Ptolemy III (Avram 2003b, 1209-1211).

It is probably not by accident that the decline and the crisis in Apollonia in the second quarter and the middle of the 3rd cent. BC coincided with the rise of Dorian Mesambria that apparently emerged stronger from the period of Lysimachus' reign. The distribution of the recently identified Mesambrian amphorae is dated precisely to the second quarter of the century. They are attested at many sites in the Black Sea area, but also in the Thracian interior, and indicate an economic prosperity of the polis (Stoyanov 2011; 2016) that continued in the second half of the 3rd cent. BC (Stoyanov 2011, 199 f., n. 36). In this period, Mesambria issued gold and heavy silver coinage (Karayotov 1994, 60-62, 67 f.; 2007, 139-142). Rich burials with golden jewellery appeared already in the first half of the 3rd cent. BC and became particularly numerous in the necropolis of Mesambria in the late 3rd and the first half of the 2nd cent. BC (Kiyashkina et al. 2012, Nos. 63-73; Tonkova 1997, 87-91; 2007, 284-289). All evidence speaks of a modified balance in the region of Burgas Bay, with Mesambria becoming the leading power.

Later Hellenistic Period

The evidence about the development of Apollonia and its surroundings after the crisis in the middle of the 3rd cent. BC is insufficient. Meanwhile, at a certain point in the penultimate decade of the century the Celtic kingdom of Tylis, the influence of which is hard to detect around Burgas Bay and

along the southern Black Sea coast, was destroyed by the Thracians (Polyb. 4, 46, 2). In 179 BC, the Bastarnae that were called in by Philip V of Macedonia passed (twice) near Apollonia and Mesambria (Liv. 40, 58, 8) and could have caused troubles, but more likely near the Balkan passes (Oppermann 2004, 231 f.).

Despite the decline, Apollonia managed to preserve at least partially its territory. Anchialo remained under its control to a certain moment in the first half of the 2nd cent. BC, as revealed by the well-known decree honouring the Istrian admiral Hegesagoras (ISM I, 64 = IGBulg. I², 388 bis), relating about a military conflict with Mesambria. Initially, Mesambrians took the *phrourion* ('fort') of Anchialo, but were expelled by the joint forces of Apollonians and Istrians. Eventually, the fort was razed and abandoned (see last in Bounegru 2007). With this episode, the Dorian polis imposed its complete domination over Burgas Bay. A series of funerary reliefs from Apollonia date from the same period. The deceased have been honoured by the polis and in some cases were depicted as warriors; probably, they were citizens that fell for Apollonia, another testimony for the troubled period (Petrova 2005).

The adjacent territory up to Atiya/Antheia to the north, together with the mines of Rosen ore field, most probably remained under the control of Apollonia. A 'large settlement of metalworkers' dated to 2nd and 1st cent. BC is mentioned at some distance to the southwest of Atiya (Черных 1978, 20). Hellenistic materials are known from the site in Vromos Bay (Девлова 2014, 52–57) and the Chervenka peninsula (Христов 2017а, 28–50), indicating that the network of settlements in the Apollonian territory continued to exist. Probably, it was this part of the *chora* that Hegesagoras helped safeguard.

The higher parts of Medni Rid were also inhabited in the Hellenistic period. Traces of occupation have been detected at Malkoto Kale. There, the last phase is dated to the period from the late 4th and early 3rd cent. BC to the middle of the 2nd cent. BC, with an artificial levelling of the terrain that separates it from the previous phase (Делев et al. 1982, 369–374; Gyuzelev 2008, 108 f.). A tumulus that was excavated nearby dates from the second half of the 3rd cent. BC (Делев et al. 1982, 374–377).

Having in mind the changes around Apollonia in the Hellenistic period, it is difficult to say whether it belonged to the *chora* of the polis in that period. A revival and reconstruction of the fortifications is dated to the Late Hellenistic period, in the second half of the 2nd cent. BC, when the overall situation in the region changed (see below).

The development of the region to the south is even less clear. A Mesambrian decree for an Astean aristocrat (IGBulg. I², 312) is dated to the 2nd cent. BC. Traditionally, the territories of the Astai are located in the coastal area of southeastern Thrace, between the northern shores of Propontis and the region of Apollonia (Str. 7, 6, 2; 7, 6, fr. 47; Plin. N.H. 4, 45; Ptol. Geogr. 3, 11, 6; Ps.-Skymnos 728–229; see Делев 2010, 101 f.). The Mesambrian inscription attests their presence in the northern part of this area. The Astai appear in the sources in the early 2nd cent. BC (Liv. 38, 40, 6–15), if one rejects the hypothesis that they were the enemies of Antioch II in the above-discussed Mesambrian (?) decree IGBulg. I² 388.

In the last decades of the 2nd cent. BC, silver and bronze coins of king Mostis appeared in the same area. Based on his tetradrachms, it is known that his rule lasted at least 38 years, but its chronology remains controversial. Based on his presumed ties with Mithridates VI Eupator, on parallels in the iconography of his coins with issues of Bithynia and Cappadocia, and on epigraphic evidence, the end of his reign is usually dated to 86 BC (Юрукова 1992, 165-172), са. 90 ВС (Карайотов 2000, 63) ог to 89-88 BC (Лозанов 2017, 20). Lately, a slightly earlier period has been suggested, with a lower limit of about 97-95 BC (Yordanov/Agre 2016, 182) or even ca. 100 BC (Paunov 2014, 458, 467-469; see De Callataÿ 2016, 364-366). However, the latter date is dependent on the identification of Mostis as a ruler of the Kainoi (Loukopoulou 1987, 81, n. 97; Sayar 1992, 191), which kingdom was conquered by the Romans in 101/100 BC (see Paunov 2014, 469; Delev 2015, 70; Lozanov 2015, 76).

Based on the distribution of Mostis' coins and two inscriptions from Bisanthe and Heraion Teichos (Loukopoulou 1987, 80 f.; Sayar 1992), the territory under his control has been defined from Byzantion and Bisanthe to the south up to Apollonia and Mesambria to the north, with a core

probably in the southern part (Карайотов 2000, 63; Paunov 2014, 458, 469 f.), hence the connection with the Kainoi. Nonetheless, taking into account the accumulation of numerous finds of coins in a clear archaeological context in the northern parts of the above-defined territory (see below), it seems more probable to identify Mostis as an Astean ruler (Лозанов 2017, 20; see also Delev 2015, 69). This assumption eliminates the need to limit his reign to the conquests of Titus Didius.

During the last few years, several sites have been investigated to the south of Apollonia that added more substance to Mostis and shed light on the history of the region in the Late Hellenistic period. In Farmakida locality near modern Primorsko, not far from the Early Hellenistic tumulus of Silihlyar and next to a crossing of the Ropotamo, a fort was investigated and dated from the late 2nd cent. to the middle of the 1st cent. BC. It is a rectangular fortified space with a single tower and a single residential building in the interior (Hristov/Pantov 2016, 33-43; Христов/Пантов 2017). The site, interpreted as tyrsis by the excavators, could hardly be assigned to the territory of Apollonia, despite the fact that the proximity to the city is reflected in the numismatic material, as eleven bronze coins of Apollonia were found. However, they are less numerous compared to the coins of Mostis (21) (Hristov/Pantov 2016, 119-143).

The situation is complemented by two Late Hellenistic graves, one with a full set of weapons, dug into an earlier mound, also near Primorsko but closer to the shore (Балабанов 2014). At the present state of research, it is not possible to trace any continuity between the Thracian presence in the region during the Early Hellenistic period (the tumulus in the Silihlyar locality) and the evidence from the 2nd and 1st cent. BC. Nonetheless, it could be claimed that the territory of Apollonia in the Hellenistic period, at least after the death of Lysimachus, probably did not reach beyond the river of Ropotamo.

Two more sites still more to the south add to the picture. One is a fortified site overlooking the mouth of the river Veleka near modern Sinemorets, dated to the period from the middle of the 2nd to the early 1st cent. BC (Agre 2016, 208; Arpe/Дичев 2017). Part of the wall with a tower

has been uncovered (Agre 2016, 11-38). This site again has been identified as a ruler's residence, but a more modest interpretation as a border fort has been suggested (De Callataÿ 2016, 366). Nearby, a tumulus with a rich female burial has been investigated, dated to the late 3rd or (rather) early 2nd cent. BC (Arpe 2007, 77 f.; Agre 2009; Arpe 2013; Agre 2016, 211). It seems to support the former interpretation, but one should have in mind the slightly different chronology. While the tumulus illustrates the presence of Thracian aristocracy in the area at the turn of the 2nd cent. BC, the hoard of silver coins that was discovered at the fortified site points to a direct connection with Mostis: out of 199 tetradrachms, 36 are his (Yordanov/Agre 2016). The bronze coins of the king are also the most numerous (Koychev 2016, 193–200). The chronology and the coins provided grounds for considering the site a residence of a Thracian nobleman, a governor in Mostis' state (Agre 2016, 212). The hiding of the treasure is related to the Roman expansion in Kainika in 101/100 BC.

The third contemporary site is located in the interior, along the course of the Veleka near the village of Brodilovo, and is again a fortified place with a tower (Дичев 2014; 2016; 2017). There are again coins of Mostis and the functioning of the site is dated to the period from the last quarter of the 2nd to the first quarter of the 1st cent. BC. It was probably destroyed in the late 70s BC.

These three sites create a rather uniform picture of the late 2nd cent. BC, when the coastal region to the south of the Ropotamo was undoubtedly under Thracian control, the name of Mostis being very prominent. His coins have also been discovered to the north, around Apollonia and Mesambria. The available evidence indicates that his rule was implemented by means of a network of fortified sites at strategic locations. The excavators interpret them as residences of aristocrats or governors, but it is equally possible that they were forts with garrisons that controlled the exploitation and the traffic of resources in the region (Лозанов 2017, 18-20, 45). The chronology of the sites is very similar and clearly indicates changes in the last decades of the 2nd cent. BC, the time of Mostis. Nonetheless, a certain retrospection is also possible due to the slightly earlier burial mound

at Sinemorets and the Early Hellenistic tumulus in Silihlyar locality near Primorsko.

These observations raise one more time the question about the 'large' territory of Apollonia, reconstructed based on the information of Strabo (7, 6, 1) and Pseudo-Skymnos (728–730) as reaching as far to the south as Thynias. Certainly, such a hypothesis seems implausible for much of the Hellenistic period, at least after the middle of the 3rd cent. BC, judging by the clear signs of a crisis in Apollonia. The information about the coastal settlements is very sparse. The available evidence from Urdoviza, however meagre, is quite positive for the time from the 6th to the late 4th and early 3rd cent. BC, but then seems to discontinue. Still more unclear is the picture of the ancient settlement under modern Ahtopol (Aulaioteichos?), far to the south, near Sinemorets and Brodilovo. The overall analysis of the region again places it within the kingdom of Mostis in the late 2nd cent. BC, possibly as an administrative centre (Лозанов 2017, 38, 45). Against this background, it appears quite probable that the network of Apollonian emporia presumed for the earlier period did fall apart under the new historical circumstances.

In the early 1st cent. BC, the entire western Pontic coast, including Apollonia, came under the influence of Mithridates VI Eupator, who won over 'the Greeks around the Black Sea and the barbarian people beyond them' (App. Mithr. 15) (see Oppermann 2004, 233 f.). The clearest testimony for the relations between Apollonia and the Pontic ruler is provided by a decree for a general of Mithridates, discovered on the island of St. Kirik; the general was in command of troops that were sent due to a military alliance (symmachia) (IGBulg. I², 392). The date of the alliance remains unclear, but the establishing of Mithridates' domination over the western Black Sea area is usually dated to the first decade of the 1st cent. BC, before the First Mithridatic War (Gaggero 1978, 296; Avram/Bounegru 1997, 156).

In this context, it is important that Mostis has been identified as an ally of Rome and not of Mithridates VI (Delev 2015, 69; Лозанов 2017, 20). The fortified sites at Brodilovo, Sinemorets, and Farmakida, as well as the distribution of the coins of the Thracian ruler, suggest an expansion

to the north that probably threatened the Greek *poleis*. It could explain the alliance between Apollonia and Mithridates VI, a famous champion of the Greeks against the neighbouring 'barbarians' (Gaggero 1978, 296–298). Possibly, some of the above-discussed sites could have been targeted by Mithridates' campaign in the region in 89/88 BC (Лозанов 2017, 19).

The details of the alliance between Apollonia and Mithridates VI remain unclear. Nothing suggests the city regained its importance after the crisis in the 3rd/2nd cent. BC; it is probably not by accident that of all major West Pontic poleis only Apollonia did not mint heavy coinage in the period of the Mithridatic Wars (see De Callataÿ 1997). On the other hand, there is an explicit epigraphic testimony to the military alliance with the Pontic king. It could be that some special relations with Mithridates predetermined the sack of Apollonia during the campaign of the proconsul of Macedonia Marcus Lucullus in 72/71 BC (Eutrop. Brev. 6, 10), when the Romans carried away the colossal statue of Apollo (Plin. N.H. 34, 18). Apparently, the other West Pontic poleis had better fate (see Lozanov 2015, 77); neighbouring Mesambria has yielded a decree honouring an officer of Lucullus (IGBulg. I2, 314a), indicating some kind of agreement.

In the middle of the century, another calamity could have befallen Apollonia, which was the southernmost West Pontic city to have suffered from the campaign of the Getic ruler Burebista (Dio Chr. 36, 4; see Nawotka 1997, 48–54). A Mesambrian inscription explicitly mentions a conflict with Burebista (IGBulg. I², 323).

Roman Period

Before the creation of the Roman province of Thrace, Apollonia maintained relations with the rulers of the 'client' Thracian kingdom of Bizye, and the city was given as a reference point for Ptolemy's strategy of Astika, which was located in the coastal region from the city of Perinthos to Apollonia (Ptol. 3, 11, 6). Several inscriptions shed some light on the situation in the area. The decree about Rhaiskouporis, son of King Kotys, sent as a

hostage to the city at a certain moment in the second half of the 1st cent. BC has been re-dated to this period (IGBulg. I², 389; see Манов 2015).

Another monument (IGBulg. I², 399) is a dedication to Apollo Ietros for the good health and safety of Rhoimetalkes II and Pythodoris II (after AD 19); the monument attests the functioning of Apollonia's main sanctuary after the sack in 72/71 BC. Particularly active in the region of Burgas Bay was Apollonios, son of Eptaikenthos, strategos of Rhoimetalkes II, who resided in Anchialo: dedications by him are known from Anchialo and the sanctuary at Aquae Calidae. Recently, a dedication to Zeus Patroos by his wife Leonto, found in Apollonia (IGBulg. I², 402), was complemented with another find from the city: a base with a dedication to Zeus Progonikos by Tiberius Claudius Proclus, son of Rhoimetalkes, identified as grandson of Apollonios. The inscriptions reveal the existence of a sanctuary of Zeus in Apollonia and suggest the family had Apollonian roots (Шаранков 2015, 64–68).

The presence of important Thracian families in Apollonia is confirmed by another inscription, dated to the 1st or 2nd cent. AD (IGBulg. I², 400). It praises Metokos, son of Taroulas, as *ktistes* ('founder') of the city after an unknown disaster; he also constructed a *tripylon* and another unclear monumental structure for Apollo Ietros. Due to chronology, it is not possible to relate these works in Apollonia to Lucullus' sack of the city.

It appears that the city enjoyed stable and close ties with the Thracian kingdom and depended on the generosity of wealthy local aristocracy, a situation that differs greatly from the Classical or even earlier Hellenistic times and reveals the general changes in the overall historical picture and the modest resources of Apollonia.

Political developments in the region kept Apollonia apart from the other western Pontic poleis. With the establishment of direct Roman rule to the north of the Balkan range, the cities from Istros in the north to Mesambria in the south were organised in the *praefectura orae maritimae* (*ripae Thraciae*) under the governor of Macedonia and were later added to the province of Moesia (Nawotka 1997, 58 f., 77; Lozanov 2015, 81). Apollonia remained in the territory of the Thracian

Kingdom until it was abolished and became part of the province of Thrace. Therefore, the city was left out of the Pontic *koinon* in the 2nd and 3rd cent. AD (Nawotka 1997, 216–221). The importance of Apollonia should have declined even more with the foundation of the Roman colony of Deultum at the head of the navigable Mandrensko lake in the 70s AD; the territory of the new city practically surrounded Apollonia and whatever land possessions it was left with (Балабанов/Петрова 2002, 238 f.; Delev 2009, 247).

Archaeology is unable to add significantly to the picture. The discovery of two votive tablets of the Thracian Horseman on the island of St. Kirik (Панайотова et al. 2010, 297) suggests the introduction of new cults in the city, in addition to the epigraphic evidence of the worship of Apollo Ietros and Zeus, and indicate the sacred precinct was still in use. Archaeological investigations have revealed traces of Roman habitation in the central part of the peninsula of Sozopol's old town, but the excavations in the southern periphery could indicate a shrinking of the occupied area (Baralis et al. 2013, 318), consistent with the presumed decline of Apollonia.

The isthmus to the mainland and the lower slope opposite the city continued to be used as the main necropolis in the Roman period, with burial practices that indicate continuity from the Hellenistic period. Cremations, mainly in situ, are more numerous than in earlier times, and pits, tile and cist graves have been investigated (Цанева/ Панайотова 1991).

Burials from the Roman period have been detected also farther away from the city, probably related to land ownership. Two cremation graves from the 1st cent. AD were discovered in the higher parts of the Budzhaka locality, next to an Early Hellenistic family tomb (Богданова et al. 2017c, 259). Burials from the 2nd cent. AD are also reported from the area of the Kolokita promontory (Лазаров 1972). In both cases, it is not possible to trace a clear continuity with finds from the previous periods.

Based on the available evidence and the unclear administrative status of Apollonia, it is impossible to say what remained from the territory of the city in the Roman period. It may be

presumed that at least some of the coastal settlements from the previous periods continued to exist. For example, traces from habitation have been detected in Vromos Bay (Христов 2014a; 2014b).

More significant changes occurred with the Christianisation of the Roman Empire. A mention in Eusebius of Aelius Publius Julius, bishop of Debeltum, indicates that the new religion was spreading in the region already in the 2nd cent. AD (Euseb., Hist. eccl. 5, 19, 3). In the 4th cent. AD, the establishment of Christianity as official religion of the empire brought a change in the name of Apollonia. The pagan pedigree was renounced, and the city was renamed Sozopolis, 'City of Salvation' (Anonym., Peripl. Ponti Eux. 84–87).

Summary

In the late 7th cent. BC, settlers from Miletos in Ionia settled on an offshore island and a peninsula at the south-eastern end of present-day Burgas Bay and founded Apollonia Pontica (Sozopol in Bulgaria). The site did no command extensive agricultural resources, but had an excellent harbour and offered access to the metal riches of Medni Rid. The Greeks most probably found a settled Thracian population in the hills and appear to have formed quickly peaceful relations with them. Within the first generation of colonists, Apollonians were already exploiting the copper mines, which probably served as a basis for the steady and upward development of the city in Archaic and Classical times. Stone architecture appeared in the temenos in late 6th cent. BC, followed by the famous bronze colossus of Apollo several decades later. There is evidence of a population surge and changes in the city in the middle and the second half of the 5th cent. BC. Apollonia controlled some arable land in the coastal plain, up to Atiya in the north, and already in the first half of the 6th cent. BC started to found satellite settlements, some as far away as 20 to 25km. There is ample evidence of trade with the Thracian interior, via the navigable estuaries of Burgas Bay. This prosperity continued at least to the mid-4th cent. BC, when the campaigns of Philip II and the collapse of the Odrysian kingdom disrupted the balance in the area. During the first half of the 3rd cent. BC, Apollonia emerged from Macedonian domination in a visible decline, while Mesambria was gaining strength to the north of Burgas Bay. A major crisis is attested archaeologically around the middle of the century. In the following centuries, Apollonia gradually lost its importance, while archaeological and epigraphic data reveal interactions with the local Thracian rulers. Another major blow was the sack by Marcus Lucullus in 72 BC and, after the creation of the Roman province of Thrace, Apollonia was totally obscured by the new Roman cities.

Margarit Damyanov

National Archaeological Institute with Museum, Bulgarian Academy of Sciences 2, Saborna str., 1000 Sofia, Bulgaria mmdamyanov@gmail.com

Krastina Panayotova

National Archaeological Institute with Museum, Bulgarian Academy of Sciences 2, Saborna str., 1000 Sofia, Bulgaria kpanayotova@abv.bg

Bibliography

- *Agre 2009*: D. Agre, Hellenistic Gold Plate with Inscription from a Tumular Grave near Sinemorets, Tsarevo Region. Archaeologia Bulgarica 13.2, 2009, 21–27.
- Agre 2016: D. Agre (ed.), A Thracian Ruler's Residence near the Village of Sinemorets, Volume I (Sofia 2016).
- *Alexandrescu 1999*: P. Alexandrescu, Colonisation occidentale et colonisation pontique. In: L'aigle et le dauphin. Etudes d'archéologie pontique (Bucarest 1999) 17–24.
- *Alexandrescu 2005*: P. Alexandrescu, La zone sacrée d'époque grecque (Fouilles 1915–1989). Histria, les résultats des fouilles 7 (Bucureşti 2005).
- *Alexandrescu/Morintz 1982*: P. Alexandrescu/S. Morintz, A propos de la couche précoloniale de Mesambria. Pontica 15, 1982, 47–55.
- Archibald 1998: Z. Archibald, The Odrysian Kingdom of Thrace. Orpheus Unmasked (Oxford 1998).
- Archibald 2007: Z. Archibald, Contacts between the Ptolemaic Kingdom and the Black Sea in the Early Hellenistic Age. In: V. Gabrielsen/J. Lund (eds.), The Black Sea in Antiquity. Regional and Interregional Economic Exchanges. Black Sea Studies 6 (Aarhus 2007) 253–271.
- Avram 2001: A. Avram, Les territoires d'Istros et de Callatis. In: Istituto per la Storia e l'Archeologia della Magna Grecia (ed.), Problemi della chora coloniale dall' Occidente al Maro Nero, Atti del Quarantesimo Convegno di Studi sulla Magna Grecia (Taranto 2001) 593–633.
- Avram 2002: A. Avram, Zu zwei Inschriften aus Agathopolis. In: К. Бошнаков/Д. Ботева (eds.), Jubilaeus V. Сборник в чест на проф. Маргарита Тачева (София 2002) 17–22.
- *Avram 2003a*: A. Avram, Histria. In: D. Grammenos/E. Petropoulos (eds.), Ancient Greek Colonies in the Black Sea, Volume I (Thessaloniki 2003) 279–340.
- *Avram 2003b*: A. Avram, Antiochos II Théos, Ptolémée II Philadelphe et la mer Noire. Comptes-rendus des séances de l'Académie des Inscriptions et Belles-Lettres 147.3, 2003, 1181–1213.
- Avram 2006: A. Avram, The Territories of Istros and Kallatis. In: P. G. Bilde/V. F. Stolba (eds.), Surveying the Greek Chora. Black Sea in a Comparative Perspective. Black Sea Studies 4 (Aarhus 2006) 59–80.
- Avram 2012: A. Avram, Le rôle des epoikoi dans la colonisation grecque en mer Noire. Quelques études de cas. Pallas 89, 2012, 197–215.
- Avram/Bounegru 1997: A. Avram/O. Bounegru, Mithridates al VI-lea Eupator și coasta de vest a Pontului Euxin. În jurul unui decret inedit de la Histria. Pontica 30, 1997, 155–165.

- Avram et al. 2004: A. Avram/J. Hind/G. Tsetskhladze, The Black Sea Area. In: M. H. Hansen/T. H. Nielsen (eds.), An Inventory of Archaic and Classical Poleis (Oxford 2004) 924–973.
- Balabanov 2011: P. Balabanov, The Fourth Century BC Amphora Complex from the Locality Kostadin Cheshma near the Village of Debelt. In: C. Tzochev/T. Stoyanov/A. Bozkova (eds.), PATABS II. Production and Trade of Amphorae in the Black Sea. Acts of the International Round Table Held in Kiten, Nessebar and Sredetz, September 26–30, 2007 (Sofia 2011) 117–128.
- *Balabanov/Pantov 2018*: P. Balabanov, D. Pantov. Treasure of Gold Appliqués for Horse Harness from Primorsko. Be-JA, Bulgarian e-Journal of Archaeology 8, 2018, 1–16.
- Balabanov et al. 2016: P. Balabanov/Y. Garlan/A. Avram, Les timbres amphoriques grecs d'Héraclée Pontique et quelques autres centres de production (première moitié du IVe siècle av. J.-C.) recueillis dans l'établissement de Kostadin Tchechma près de Debelt (Bulgarie). Pontica, XLVIII–XLIX, Supplementum IV (Constanța, 2016).
- Baralis/Panayotova 2013: A. Baralis/K. Panayotova, Burial Enclosures and Spatial Organization of the Classical and Early Hellenistic Necropoleis of Apollonia Pontica, Kalfata/Budjaka Area. In: K. Sporn (ed.), Griechische Grabbezirke klassischer Zeit. Normen und Regionalismen. Akten des internationalen Kolloquiums am Deutschen Archäologischen Institut, Abteilung Athen, 20.–21. November 2009, Athenaia 6 (München 2013) 241–259.
- Baralis/Panayotova 2015: A. Baralis/K. Panayotova, Apollonia du Pont, les travaux de la mission archéologique franco-bulgare. Comptes rendus des séances de l'Académie des Inscriptions et Belles-Lettres 2015, 2, 945–999.
- Baralis et al. 2011: A. Baralis/P. Dupont/M. Gyuzelev/M. Iacob/V. Lungu/M. Manucu-Adamesteanu/D. Nedev/K. Panayotova, Le programme ANR Pont-Euxin. Bilan des campagnes 2011 à Apollonia du Pont (Sozopol, dpt. de Bourgas, Bulgarie) et Orgamè/Argamum (Jurilovca, dpt. de Tulcea, Roumanie). Dialogues d'histoire ancienne 37.2, 2011, 220–234.
- Baralis et al. 2013: A. Baralis/M. Gyuzelev/D. Nedev/K. Gospodinov/T. Lorain, Aperçu sur l'organisation urbaine d'Apollonia du Pont. La parcelle UPI XI–XII–515. In: G. Tsetskhladze/S. Atasoy/A. Avram/S. Donmez/J. Hargrave (eds.), Bosporus. Gateway between the Ancient West and East (1st Millennium BC–5th Century AD). Proceedings of the Fourth International Congress on Black Sea Antiquities, Istanbul, 14–18 September 2009. BAR. International Series 2517 (Oxford 2013) 315–323.
- Baralis et al. 2016: A. Baralis/K. Panayotova/T. Bogdanova/M. Gyuzelev/D. Nedev/K. Gospodinov, Apollonia Pontica (Sozopol, Bulgaria). The Results of the Franco-Bulgarian Archaeological Mission. In: M. Manoledakis (ed.), The Black Sea in the Light of New Archaeological Data and Theoretical Approaches. Proceedings of the 2nd International Workshop on the Black Sea in Antiquity held in Thessaloniki, 18–20 September 2015 (Oxford 2016) 153–179.
- *Bounegru 2007*: O. Bounegru, L'expedition navale de l'amiral histrien Hegesagoras et la guerre sacrée d'Apollonie du Pont. Pontica 40, 2007, 85–92.
- Bozkova 2011: A. Bozkova, Englyphic Amphora Stamps from Tumulus 8 on Kolokita Promontory near Sozopol (the Ancient Apollonia Pontica). In: C. Tzochev/T. Stoyanov/A. Bozkova (eds.), PATABS II. Production and Trade of Amphorae in the Black Sea. Acts of the International Round Table Held in Kiten, Nessebar and Sredetz, September 26–30, 2007 (Sofia 2011) 111–116.
- Bresson 1993: A. Bresson, Les cites grecques et leurs emporia. In: A. Bresson/P. Rouillard (eds.), L'Emporion (Paris 1993) 164–226.
- Busching 2013: A. Busching, Das Dach des archaischen Panionion. Dachstuhl und Dachhaut. In: H. Lohmann/G. Kalaitzoglou/G. Lüdorf (eds.), Das Dach des archaischen Panionion. Forschungen in der Mykale 3.2 (Bonn 2013) 1–121.
- *Buiskikh 2016*: A. Buiskikh, A Sub-Geometric Skyphos from Borysthenes. On the Question of Pre-Colonial Ties in the North Pontic Region. Ancient Civilizations from Scythia to Siberia 22, 2016, 1–17.

- Damyanov 2005: M. Damyanov, Graves with Circles of Amphorae in the Greek Necropoleis in the Black Sea. In: Т. Стоянов/Ст. Ангелова/И. Лозанов (eds.), Stephanos Archaeologicos in honorem Professoris Ludmili Getov. Studia Archaeologica Universitatis Serdicensis, Supplements IV (Sofia 2005) 214–223.
- *Damyanov 2010*: M. Damyanov, Greeks and Natives in the Region of Odessos. In: H. Treziny (ed.), Grecs et indigènes de la Catalogne à la Mer Noire (Paris 2010) 265–276.
- Damyanov 2011: M. Damyanov, Amphorae from a Tumulus on Kolokita Promontory near Sozopol (Apollonia Pontica). In: C. Tzochev/T. Stoyanov/A. Bozkova (eds.), PATABS II. Production and Trade of Amphorae in the Black Sea. Acts of the International Round Table Held in Kiten, Nessebar and Sredetz, September 26–30, 2007 (Sofia 2011) 87–100.
- *Damyanov 2012*: M. Damyanov, Normative and Non-Normative Burial Practices in the Necropoleis of the Greek Colonies in the Western Black Sea Area. Ancient West and East 11, 2012, 35–68.
- Damyanov 2016: M. Damyanov, Votive and Other Pottery from a Sanctuary of Demeter in Apollonia Pontica. In: M. Manoledakis (ed.), The Black Sea in the Light of New Archaeological Data and Theoretical Approaches. Proceedings of the 2nd International Workshop on the Black Sea in Antiquity held in Thessaloniki, 18–20 September 2015 (Oxford 2016) 119–138.
- Damyanov forthcoming: M. Damyanov, Spatial Developments in the Necropolis of Apollonia Pontica, 5th to 3rd Centuries BC. In: O. Cordovana/C. Manetta/V. Stolba (eds.). Bifocal Perspectives on the Black Sea. Macro- and Microcosms, Proceedings of the International Conference in AIAS, Aarhus, April 6–8, 2016.
- De Boer 2002: J. de Boer, Apollonia Pontica and its Emporia, Ports of Trade? In: M. Faudot/A. Fraysse/É. Geny (eds.), Pont-Euxin et commerce. La génese de la "route de la soie" (Paris 2002) 125–138.
- *De Boer 2005*: J. de Boer, The Foundation of Agathopolis/Aulaeouteichos and the Athenian Black Sea Policy in the 5th Century BC. In: D. Kachavara/M. Faudot/É. Geny (eds.), Pont-Euxin et polis. Polis hellenis et polis barbaron (Besançon 2005) 167–180.
- De Boer/Stronk 2002: J. de Boer/J. Stronk, Two Greek Emporia South of Apollonia Pontica. Talanta 32–33 (2000–2001), 2002, 233–238.
- De Callataÿ 1997: F. de Callataÿ, L'histoire des guerres mithridatiques vue par les monnaies (Louvaine-la-Neuve 1997).
- *De Callataÿ 2016*: F. de Callataÿ/D. Agre (ed.), A Thracian Ruler's Residence near the Village of Sinemorets, Sofia, 2016. Revue belge de Numismatique et de Sigillographie 162, 2016, 361–367.
- *Delev 2003*: P. Delev, From Corupedion towards Pydna. Thrace in the Third Century. Thracia 15, 2003, 107–120.
- Delev 2009: P. Delev, Once More on the Thracian Strategies of Claudius Ptolemy. In: X. Попов/А. Тенчова (eds.), Сборник в памет на професор Велизар Велков (София 2009) 245–253.
- *Delev 2015*: P. Delev, From Koroupedion to the Beginning of the Third Mithridatic War (271–73 BCE). In: J. Valeva/E. Nankov/D. Graninger (eds.). A Companion to Ancient Thrace (Chichester 2015) 59–74.
- *Domaradzki et al. 1991*: M. Domaradzki/I. Karaiotov/A. Gotzev, L'Habitat du premier Age du Fer de Malkoto kale. Thracia Pontica 4, 1991, 119–132.
- Doncheva 2012: D. Doncheva, The Northern "Journey" of Late Bronze Age Copper Ingots. In: E. Paunov/S. Filipova (eds.), ΗΡΑΚΛΕΟΥΣ ΣΩΤΗΡΟΣ ΘΑΣΙΩΝ, Studia in honorem Iliae Prokopov sexagenario ab amicis et discipulis dedicate (Veliko Turnovo 2012) 671–714.
- Doonan 2006: O. Doonan, Exploring Community in the Hinterland of a Black Sea Port. In: P. G. Bilde/ V. F. Stolba (eds.), Surveying the Greek Chora. A Region in Comparative Perspective. Black Sea Studies 4 (Aarhus 2006) 47–58.

- Emilov 2005: J. Emilov, The Galatians and Cabyle. A Fragmentary Inscription and its Contex. In: Т. Стоянов/С. Ангелова/И. Лозанов (eds.), Stephanos Archaeologicos in honorem Professoris Ludmili Getov. Studia Archaeologica Universitatis Serdicensis, Supplements IV (Sofia 2005) 324–332.
- Gaggero 1978: E. S. Gaggero, Relations politiques et militaires de Mithridates VI Eupator avec les populations et les cités de la Thrace et avec les colonies grecques de la Mer Noire occidentale. Pulpudeva 2, 1978, 294–305.
- Greaves 2002: A. Greaves, Miletos. A History (London 2002).
- *Gueorgieva 2001*: N. Gueorgieva, Amphorae and Amphora Stamps from Apollonia Pontica (PhD-Thesis University of London 2001).
- *Gyuzelev 2008*: M. Gyuzelev, The West Pontic Coast between Emine Cape and Byzantion during the First Millennium BC (Burgas 2008).
- Handberg 2013: S. Handberg, Milesian Ktiseis and Aeolian Potters in the Black Sea Region. In: M. Manoledakis (ed.), Exploring the Hospitable Sea. Proceedings of the International Workshop on the Black Sea in Antiquity, held in Thessaloniki, 21–23 September 2012. BAR. International Series 2498 (Oxford 2013) 1–18.
- Hansen 1997: M. Hansen, Emporion. A Study of the Use and Meaning of the Term in the Archaic and Classical Periods. In: T. Nielsen (ed.), Yet More Studies In the Ancient Greek Polis. Historia Einzelschriften 117 (Stuttgart 1997) 83–105.
- Hermary et al. 2010: A. Hermary/K. Panayotova/A. Baralis/M. Damyanov/A. Riapov, Apollonia du Pont (Sozopol). La nécropole de Kalfata (Ve–IIIe s. av. J.-C.) (Paris 2010).
- Hiller 1991: S. Hiller, The Mycenaeans in the Black Sea. Aegaeum 7, 1991, 207–221.
- *Hristov/Pantov 2016*: I. Hristov/D. Pantov, Farmakida. Study of a TYPΣIΣ from the Hellenistic Period in the Farmakida Locality, Primorsko Municipality, 2^{nd} – 1^{st} c. BC (Sofia 2016).
- *IG I*³: D. Lewis/L. Jeffery (eds.), Inscriptiones Graecae I. Inscriptiones Atticae Euclidis anno anteriores 3 (Berlin 1981, 1994).
- *IGBulg. I*²: G. Mihailov, Inscriptiones graecae in Bulgaria Repertae, Volume I: Inscriptiones orae Ponti Euxini ² (Sofia 1970).
- *IGBulg. V*: G. Mihailov, Inscriptiones Graecae in Bulgaria Repertae, Volume V: Inscriptiones novae, addenda et corrigenda (Sofia 1997).
- Isaac 1986: B. Isaac, The Greek Settlements in Thrace before the Macedonian Conquest (Leiden 1986).
- ISM I: D. Pippidi, Inscriptiones Scythiae Minoris graecae et latinae I. Inscriptiones Histriae et viciniae (Bucarest 1983).
- *Karayotov 1994*: I. Karayotov, The Coinage of Mesambria, Volume 1: Silver and Gold Coins of Mesambria (Veliko Turnovo 1994).
- *Karayotov 2002*: I. Karayotov, Nouveaux monuments des villes antiques du littoral Ouest de la Mer Noire. In: R. Gičeva (ed.), Pitya. Studia in honorem Prof. Ivani Marazov (Sofia 2002), 558–567.
- *Karayotov 2007*: I. Karayotov, Le monnayage de Messambria et les monnayages d'Apollonia, Odessos et Dionysopolis. In: D. Grammenos/E. Petropoulos (eds.), Ancient Greek Colonies in the Black Sea 2, Volume 1. BAR. International Series 1675 (Oxford 2007) 127–174.
- Kerschner 2006: M. Kerschner, Zum Beginn und zu den Phasen der griechischen Kolonisation am Schwarzen Meer. Die Evidenz der ostgriechischen Keramik. Eurasia Antiqua 12, 2006, 227–250.
- *Kerschner/Schlotzhauer 2005*: M. Kerschner/U. Schlotzhauer, A New Classification System for East Greek Pottery. Ancient West and East 4, 2005, 1–56.

- *Kitov 2005*: G. Kitov, Thracian Tumular Burial with a Gold Mask near the City of Shipka, Central Bulgaria. Archaeologia Bulgarica 9.3, 2005, 23–37.
- Kiyashkina et al. 2012: P. Kiyashkina/A. Bozkova/T. Marvakov, A Guide to the Collections of the Archaeological Museum of Nessebar (Nessebar 2012).
- *Koychev 2016*: A. Koychev, Bronze Coins from the Thracian Ruler's Residence by Sinemorets. In: D. Agre (ed.), A Thracian Ruler's Residence near the Village of Sinemorets, Volume I (Sofia 2016) 185–200.
- Lepore 1968: E. Lepore, Per una fenomenologia storica del rapporto città-territorio in Magna Grecia. In: Istituto per la Storia e l'Archeologia della Magna Grecia (ed.), La città e il sou territorio, Atti del VII convegno di studi sulla Magna Grecia, Taranto 1967 (Napoli 1968) 29–66.
- Lepore 1973: E. Lepore, Problemi dell'organizzazione della chora coloniale. In: M. Finley (ed.), Problèmes de la terre en Grèce ancienne (Paris-La Haye 1973) 15–47.
- Leshtakov 2007: K. Leshtakov, The Eastern Balkans in the Aegean Economic System during the Late Bronze Age. Ox-Hide and Bun Ingots in Bulgarian Lands. In: I. Galanaki/H. Tomas/Y. Galanakis/R. Laffineur (eds.), Between the Aegean and Baltic Seas. Prehistory across Borders. Aegaeum 27 (Liège 2007) 447–458.
- Lezzi-Hafter 1997: A. Lezzi-Hafter, Offerings Made to Measure. Two Special Commissions by the Eretria Painter for Apollonia Pontica. In: J. H. Oakly/W. D. E. Coulson/O. Palagia (eds.), Athenian Potters and Painters (Oxford 1997) 353–369.
- Loukopoulou 1987: L. Loukopoulou, Provinciae Macedoniae finis orientalis. The Establishment of the Eastern Frontier. In: M. B. Hatzopoulos/L. D. Loukopoulou (eds.), Two Studies in Ancient Macedonian Topography. Meletimata 3 (Athens 1987) 61–100.
- Lozanov 2015: I. Lozanov, Roman Thrace. In: J. Valeva/E. Nankov/D. Graninger (eds.), A Companion to Ancient Thrace (Chichester 2015) 75–90.
- Martinez et al. 2015: J.-L. Martinez/A. Baralis/N. Mathieux/T. Stoyanov/M. Tonkova, L'épopée des rois thraces. Des guerres médiques au invasions celtes 479–278 avant J.-C. Découvertes archéologiques en Bulgarie. Catalogue de l'exposition présentée au musée du Louvre, à Paris, du 16 avril au 20 juillet 2015 (Paris 2015).
- *Mattusch 1988*: C. Mattusch, Greek Bronze Statuary. From the Beginnings through the Fifth Century B.C. (Ithaca 1988).
- Nawotka 1997: K. Nawotka, The Western Pontic Cities. History and Political Organization (Amsterdam 1997).
- *Nedev/Gyuzelev 2010*: D. Nedev/M. Gyuzelev, Présentation de l'espace urbain et du territoire. In: A. Hermary (ed.), Apollonia du Pont (Sozopol). La nécropole de Kalfata (Ve–IIIe s. av. J.–C.) (Paris 2010) 31–38.
- *Nedev/Panayotova 2003*: D. Nedev/K. Panayotova, Apollonia. In: D. Grammenos/E. Petropoulos (eds.), Ancient Greek Colonies in the Black Sea, Volume I (Thessaloniki 2003) 95–155.
- Oppermann 2004: M. Oppermann, Die westpontischen Poleis (Langenweißbach 2004).
- Panayotova 2007: K. Panayotova, Burial and Post-Burial Rites in the Necropoleis of the Greek Colonies on the Bulgarian Black Sea Littoral. In: D. Grammenos/E. Petropoulos (eds.), Ancient Greek Colonies in the Black Sea 2, Volume 1. BAR. International Series 1675 (Oxford 2007) 85–126.
- Panayotova/Nedev 2015: K. Panayotova/D. Nedev, L'urbanisme et l'architecture domestique des colonies grecques ouest-pontiques: Apollonia du Pont. In: J.-L. Martinez/A. Baralis/N. Mathieux/T. Stoyanov/M. Tonkova (eds.), L'épopée des rois thraces. Des guerres médiques au invasions celtes 479–278 avant J.-C. Découvertes archéologiques en Bulgarie. Catalogue de l'exposition présentée au musée du Louvre, à Paris, du 16 avril au 20 juillet 2015 (Paris 2015) 302.

- Panayotova et al. 2014: K. Panayotova/M. Damyanov/D. Stoyanova/T. Bogdanova, Apollonia Pontica. The Archaic Temenos and Settlement on the Island of St. Kirik. In: J. M. Alvarez/T. Nogales/I. Roda (eds.), Centre and Periphery in the Ancient World. Proceedings of the XVIIIth International Congress of Classical Archaeology, Volume I (Merida 2014) 595–598.
- Panayotova et al. 2015: K. Panayotova/M. Damyanov/D. Stoyanova, Sanctuaires et architecture monumentale dans les colonies grecques du littoral occidental du Pont-Euxin. In: J.-L. Martinez/A. Baralis/N. Mathieux/T. Stoyanov/M. Tonkova (eds.), L'épopée des rois thraces. Des guerres médiques au invasions celtes 479–278 avant J.-C. Découvertes archéologiques en Bulgarie. Catalogue de l'exposition présentée au musée du Louvre, à Paris, du 16 avril au 20 juillet 2015 (Paris 2015) 296–297.
- Panayotova et al. forthcoming: K. Panayotova/M. Damyanov/M. Reho, Cremations in the Necropolis of Apollonia Pontica. Patterns of Distribution in Space and Time. In: O. Cordovana/C. Manetta/V. Stolba (eds.). Bifocal Perspectives on the Black Sea. Macro- and Microcosms, Proceedings of the International Conference in AIAS, Aarhus, April 6–8, 2016 (forthcoming).
- Paschalidis 2007: C. Paschalidis, Euboea at the Crossroads of the Metal Trade. The Aegean and the Black Sea in the Late Bronze Age. In: I. Galanaki/H. Tomas/Y. Galanakis/R. Laffineur (eds.), Between the Aegean and Baltic Seas. Prehistory across Borders. Aegaeum 27 (Liège 2007) 433–445.
- Paunov 2014: E. Paunov, The Coinage of the Thracian King Mostis. Recent Finds, Chronology, Distribution and Localisation. In: K. Dörtlük/O. Tekin/R. B. Seyhan (eds.), Proceedings of the 1st International Congress of Anatolian Monetary History and Numismatics, Antalya, 25–28 February 2013 (Istanbul 2014) 457–480.
- *Paunov 2015*: E. Paunov, Introduction to the Numismatics of Thrace, ca. 540 BCE–46CE. In: J. Valeva/E. Nankov/D. Graninger (eds.), A Companion to Ancient Thrace (Chichester 2015) 265–292.
- Petrova 2005: A. Petrova, Shield, Altar and Wreath. Gravestones of Fallen Citizens from Apollonia Pontica. In: Т. Стоянов/С. Ангелова/И. Лозанов (eds.), Stephanos Archaeologicos in honorem Professoris Ludmili Getov. Studia Archaeologica Universitatis Serdicensis, Supplements 4 (Sofia 2005) 591–598.
- Petrova 2011: A. Petrova, Storage Amphorae from Tumulus 8 on Kolokita Promontory, Apollonia Pontica. In: C. Tzochev/T. Stoyanov/A. Bozkova (eds.), PATABS II. Production and Trade of Amphorae in the Black Sea. Acts of the International Round Table Held in Kiten, Nessebar and Sredetz, September 26–30, 2007 (Sofia 2011) 101–109.
- *Petrova 2015*: A. Petrova, Funerary Reliefs from the West Pontic Area (6th–1st Centuries BC). Colloquia Antiqua 14 (Leuven 2015).
- *Preshlenov 2003*: H. Preshlenov, Mesambria. In: D. Grammenos/E. Petropoulos (eds.), Ancient Greek Colonies in the Black Sea, Volume I (Thessaloniki 2003) 157–208.
- Reho 1990: M. Reho, La Ceramica attica a figure nere e rosse nella Tracia Bulgara (Roma 1990).
- Sayar 1992: M. Sayar, Der Thrakische König Mostis. Tyche 7, 1992, 187–195.
- Schipporeit 2013: S. Schipporeit, Kulte und Heiligtümer der Demeter und Kore in Ionien. Byzas 16 (Istanbul 2013).
- Schneider 1996: P. Schneider, Der Baubefund. In: K. Tuchelt (ed.), Ein Kultbezirk an der Heiligen Straße von Milet nach Didyma. Didyma 3.1 (Mainz am Rhein 1996) 1–115.
- Seure 1924: G. Seure, Archéologie Thrace. Revue Archéologique 19, 1924, 307–350.
- Shalganova/Gotsev 1995: T. Shalganova/A. Gotsev, Problems of Research on the Early Iron Age. In: D. Bailey/I. Panayotov (eds.), Prehistoric Bulgaria (Madison 1995) 327–343.

- *Ştefan/Sirbu 2016*: M.-M. Ştefan/V. Sirbu, Early-Hellenistic Barrel-Vaulted Tombs from Kallatis. In: V. Sîrbu/C. Schuster (eds.), Late Prehistory and Protohistory. Bronze Age and Iron Age. Proceedings of the XVII UISPP World Congress (1–7 September 2014, Burgos, Spain) Volume 9 / Sessions A3c and A16a, 2: Aegean-Mediterranean Imports and Influences in the Graves from Continental Europe Bronze and Iron Ages (Oxford 2016) 211–221.
- Stoyanov 2011: T. Stoyanov, New Evidence of Amphorae Production in Early Hellenistic Mesambria Pontica. In: C. Tzochev/T. Stoyanov/A. Bozkova (eds.), PATABS II. Production and Trade of Amphorae in the Black Sea. Acts of the International Round Table Held in Kiten, Nessebar and Sredetz, September 26–30, 2007 (Sofia 2011) 191–201.
- Stoyanov 2016: T. Stoyanov, More on the Amphorae Production in Early Hellenistic Mesambria Pontica. In: M. Slavova/N. Sharankov (eds.), Monuments and Texts in Antiquity and Beyond. Essays for the Centenary of G. Mihaylov (Sofia 2016) 362–370.
- Stoyanov/Stoyanova 1997: T. Stoyanov/D. Stoyanova, The Tholos of Odessos. Archaeologia Bulgarica 3, 1997, 22–33.
- Stoyanova/Damyanov forthcoming: D. Stoyanova/M. Damyanov, Late Archaic and Early Classical Monumental Architecture on the Island of St. Kirik, Apollonia Pontica. In: O. Cordovana/C. Manetta/V. Stolba (eds.), Bifocal Perspectives on the Black Sea. Macro- and Microcosms, Proceedings of the International Conference in AIAS, Aarhus, April 6–8, 2016 (forthcoming).
- *Tonkova 1997*: M. Tonkova, Hellenistic Jewellery from the Colonies on the West Black Sea Coast. Archaeology in Bulgaria 1, 1, 1997, 83–102.
- *Tonkova 2007*: M. Tonkova, Jewellery Fashion of the Western Pontic Colonies in the Hellenistic Times (From the Territory of Bulgaria). In: M. Stefanovich/C. Angelova (eds.), PRAE. In honorem Henrieta Todorova (Sofia 2007) 279–294.
- *Tonkova 2010*: M. Tonkova, Les parures d'harnachement en or de Thrace et l'orfèvrerie de la haute époque hellénistique. Bolletino di Archeologia on line I, Volume speciale C/C10/4, 2010, 44–63.
- Treister 1996: M. Treister, The Role of Metals in Ancient Greek History. Mnemosyne Supplemente 156 (Leiden 1996).
- Tsetskhladze 1994: G. Tsetskhladze, Greek Penetration of the Black Sea. In: G. Tsetskhladze/F. de Angelis (eds.), The Archaeology of Greek Colonisation. Essays Dedicated to Sir John Boardman (Oxford 1994) 111–135.
- Tsetskhladze 2009: G. Tsetskhladze, The Black Sea. In: K. Rauflaub/H. van Wees (eds.), A Companion to Archaic Greece (Malden-Oxford-Chichester 2009) 330–346.
- Tzochev 2010: C. Tzochev, Between the Black Sea and the Aegean. The Diffusion of Greek Trade Amphorae in Southern Thrace. In: D. Kassab Tezgör/N. Inaishvili (eds.), PATABS I. Production and Trade of Amphorae in the Black Sea. Actes de la Table Ronde Internationale de Batoumi et Trabzon, 27–29 Avril 2006 (Paris 2010) 97–101.
- Tzochev 2011: C. Tzochev, Archaic Amphora Import from Thracian Sites around the Bay of Burgas. In: C. Tzochev/T. Stoyanov/A. Bozkova (eds.), PATABS II. Production and Trade of Amphorae in the Black Sea. Acts of the International Round Table Held in Kiten, Nessebar and Sredetz, September 26–30, 2007 (Sofia 2011) 73–86.
- Velkov 1994: V. Velkov, Le port de la colonie grecque Agathopolis. Thracia Pontica 5, 1994, 105-112.
- Venedikov 1980: I. Venedikov, La Mesambria thrace. In: V. Velkov (ed.), Nessebre, Volume 2 (Sofia 1980) 7–22.
- Yordanov/Agre 2016: S. Yordanov/D. Agre, The Coin Hoard from Sinemorets. In: D. Agre (ed.), A Thracian Ruler's Residence near the Village of Sinemorets. Volume I (Sofia 2016) 45–184.

- Zimmermann 2007: K. Zimmermann, Frühe Dachterrakotten aus Milet und dem Pontosgebiet. In: J. Cobet/ V. von Graeve/W.-D. Niemeier/K. Zimmermann (eds.), Frühes Ionien. Eine Bestandsaufnahme. Panionion-Symposion, Güzelçamli, 26. September – 1. Oktober 1999 (Mainz am Rhein 2007) 631–636.
- *Агре 2007*: Д. Агре, Аварийни спасителни археологически разкопки на тракийска надгробна могила в землището на с. Синеморец, общ. Царево. Археологически открития и разкопки през 2006 г., 2007, 77–78.
- *Агре 2013*: Д. Агре, Захоронение фракийской аристократки близ с. Синеморец, округ Царево. In: Д. В. Журавлев/К. Б. Фирсов (eds.), Фракийское золото из Болгарии: Ожившие легенды (Москва 2013) 284–291.
- *Агре/Дичев 2006*: Д. Агре/Д. Дичев, Класификация на фибулите от долмените в Странджа. In: IV международен симпозиум "Поселищен живот в Тракия" (Ямбол 2006) 9–30.
- *Агре/Дичев 2009*: Д. Агре/Д. Дичев, Аварийно-спасителни разкопки на две могили, разположени в м. Св. Богородица край с. Бродилово, Царевска община. Археологически открития и разкопки през 2008 г., 2009, 276–279.
- *Агре/Дичев 2017*: Д. Агре/Д. Дичев, Археологически разкопки на укрепен дом в м. "Голата нива" край с. Синеморец, община Царево. Археологически открития и разкопки през 2016 г., 2017, 201–205.
- *Балабанов 1984*: П. Балабанов, Тракийски тюрзис близо до Бургас. Известия на музеите в Югоизточна България 7, 1984, 11–39.
- *Балабанов 1999*: П. Балабанов, Тракийски ритуални ями край с. Дебелт, Бургаско. Археология 40.3/4, 62–77.
- *Балабанов 2014*: П. Балабанов, Надгробна могила "Ченгер" №1. Археологически открития и разкопки през 2013 г., 2014, 188–191.
- *Балабанов/Дражева 1985*: П. Балабанов/Ц. Дражева, Тракийски некрополи в кв. "Победа" в гр. Бургас. Известия на музеите в Югоизточна България 8, 1985, 9–29.
- *Балабанов/Пантов 2015*: П. Балабанов/Д. Пантов, Надгробна могила Ченгер 1 в община Приморско. Археологически открития и разкопки през 2014 г., 2015, 237–238.
- *Балабанов/Пантов 2017*: П. Балабанов/Д. Пантов, Тракийска надгробна могила в м. "Силихляр" под връх Канара, гр. Приморско, през 2016 г. Археологически открития и разкопки през 2016 г., 2017, 242–245.
- *Балабанов/Петрова 2002*: П. Балабанов/С. Петрова, Довелт-Деултум-Девелт. In: Р. Иванов (ed.), Римски и ранновизантийски градове в България (София 2002) 237–250.
- Богданова et al. 2017a: Т. Богданова/М. Попова/Д. Недев/М. Крумова, Късноантична сграда и следи от селскостопанска дейност от гръцкия период в обект "Супермаркет, паркинг, трафопост и съпътстваща инфраструктура", "УПИ XIII 5194, 5195, 5259, 5260, 5261, УПИ I–5.859 и ПИ 67800.5.160", гр. Созопол. Археологически открития и разкопки през 2016 г., 2017, 245–247.
- *Богданова et al. 2017b*: Т. Богданова/Д. Недев/М. Попова, Следи от селскостопанска дейност от предримския период на територията на некропола на Аполония Понтика в м. "Каваците/ Солинария", ПИ 67800.8.236, гр. Созопол. Археологически открития и разкопки през 2016 г., 2017, 248–250.
- *Богданова et al. 2017с*: Т. Богданова/М. Попова/Д. Недев/М. Крумова, Фамилна гробница от елинистическата епоха и погребения от римския период в охранителната зона на некропола на Аполония Понтика, гр. Созопол. Археологически открития и разкопки през 2016 г., 2017, 257–260.

- *Божкова 2009*: А. Божкова, Късноархаичен керамичен фрагмент от Несебър (или още за основаването на Месамбрия). In: X. Попов/А. Тенчова (eds.), Сборник в памет на проф. Велизар Велков (София 2009) 143–147.
- Божкова/Кияшкина 2014: А. Божкова/П. Кияшкина, Редовно археологическо проучване на археологически комплекс при Западната порта северозападен сектор в Стария Несебър, УПИ II, кв. 1 по плана на град Несебър. Археологически открития и разкопки през 2013 г., 2014, 224–226.
- *Божкова et al. 2008*: А. Божкова/П. Кияшкива/М. Даскалов/Т. Марваков/К. Трендафилова, Спасително археологическо проучване на ул. "Крайбрежна" в ААР "Старинен Несебър. Археологически открития и разкопки през 2007 г., 2008, 304–307.
- Божкова et al. 2016: А. Божкова/С. Александров/Н. Тодорова/В. Милчева, Спасително археологическо проучване на Обект No 7 по трасето на газопровод 2 за Република Турция, землище на с. Маленово, община Стралджа, област Ямбол. Археологически открития и разкопки през 2015 г., 2016, 221–224.
- *Божкова et al. 2017*: А. Божкова/С. Александров/В. Милчева/И. Киров, Спасително археологическо проучване на обект от неолита, бронзовата епоха и класическата епоха при с. Маленово, Ямболско. Археологически открития и разкопки през 2016 г., 2017, 142–145.
- *Бошнаков 2007*: К. Бошнаков, Псевдо-Скимнос или Семос от Делос. Проучвания върху сведенията на елински автори за Западния Понт (София 2007).
- *Буйских 2013*: А. Буйских, Греческая колонизация Северо-западного Причерноморья (Новая модель?). Вестник древней истории 1, 2013, 21–39.
- Венедиков et al. 1948: И. Венедиков/Т. Иванов/Ц. Дремсизова/Г. Михайлов, Аполония на Черно море. Разкопки и проучвания II (София 1948).
- Венедиков et al. 1963: И. Венедиков/Т. Герасимов/Ц. Дремсизова/Т. Иванов/Я. Младенова/В. Велков, Аполония. Разкопките в некропола на Аполония през 1947–1949 г. (София 1963).
- Венедиков et al. 1976: И. Венедиков/Б. Димитров/М. Домарадски/И. Карайотов/М. Цанева, Тракийски крепости и селища в Странджа. In: И. Венедиков/А. Фол (eds.), Тракийски паметници, Том I. Мегалитите в Тракия (София 1976) 128–157.
- *Георгиева 2005*: Р. Георгиева, Каничка от Карнобат с изображение на тракийски воини. Археология 46, 1–4, 2005, 32–40.
- *Георгиева/Ников 2010*: Р. Георгиева/К. Ников, Ранни трако-елински контакти (по археологически данни от Карнобатско). In: Р. Георгиева/Т. Стоянов/Д. Момчилов (eds.), Югоизточна България през II–I хилядолетие пр.Хр. (Варна 2010) 142–157.
- *Герасимов 1963*: Т. Герасимов, Монетите от некропола на Аполония. In: И. Венедиков/ Т. Герасимов/Ц. Дремсизова/Т. Иванов/Я. Младенова/В. Велков, Аполония. Разкопките в некропола на Аполония през 1947–1949 г. (София 1963) 331–340.
- Гюзелев/Господинов 2011: М. Гюзелев/К. Господинов, Спасително археологическо проучване на обект "извънградска селищна структура от територията на Аполония Понтика" в м. Св. Марина, община Созопол, област Бургас. Археологически открития и разкопки през 2010 г., 2011, 262–264.
- Гюзелев et al. 2012: М. Гюзелев/К. Господинов/Д. Недев/А. Баралис, Археологически проучвания на обект Извънградска селищна структура от територията на Аполония Понтика в м. "Св. Марина", община Созопол, област Бургас. Археологически открития и разкопки през 2011 г., 2012, 248–250.

- Дамянов et al. 2015: М. Дамянов/К. Панайотова/М. Чачева. Спасителни археологически проучвания в некропола на Аполония (VI–IV в. пр.Хр.) в кв. "Харманите", ПИ 67800.502.424, гр. Созопол. Археологически открития и разкопки през 2014 г., 2015, 356–358
- Даскалов/Панайотова 2015: М. Даскалов/К. Панайотова, Археологическо проучване на крепостната стена на п–в Урдовиза, гр. Китен. Археологически открития и разкопки през 2014 г., 2015, 908–911.
- Девлова 2014: П. Девлова, Чернофирнисова, трапезна и кухненска керамика от залива Вромос. In: И. Христов (ed.), Подводни археологически проучвания в залива Вромос, акватория на гр. Черноморец (емпорион в хората на Аполония Понтика) (София 2014) 49–64.
- Делев 1990: П. Делев. Археологически и епиграфски паметници. In: Д. Попов/П. Колев/А. Орачев (eds.), Странджа древност и съвремие (София 1990) 139–264.
- Делев 2004: П. Делев, Лизимах (София 2004).
- Делев 2010: П. Делев, Някои проблеми на етнонимията в Централна и Югоизточна Тракия. In: Р. Георгиева/Т. Стоянов/Д. Момчилов (eds.), Югоизточна България през II–I хилядолетие пр.Хр. (Варна 2010) 96–111.
- Делев et al. 1982: П. Делев/И. Карайотов/М. Домарадски, Странджа планина. In: А. Фол (ed.), Тракийски паметници, том III. Мегалитите в Тракия, част II. Тракия Понтика (София 1982) 263–390.
- Димитров 1982: Б. Димитров, Контактите на Черноморска Тракия с басейна на Източното Средиземноморие (XVI–VII в. пр.н.е.). In: А. Фол (ed.), Тракийски паметници, том III. Мегалитите в Тракия, част II. Тракия Понтика (София 1982) 459–487.
- Димитров et al. 1982: Б. Димитров/К. Порожанов/А. Орачев, Пристанищата на Аполония и Месамбрия. In: А. Фол (ed.), Тракийски паметници, том III. Мегалитите в Тракия, част II. Тракия Понтика (София 1982) 438–458.
- Дичев 2014: Д. Дичев, Археологически разкопки на "Тракийски династичен дом" в м. Пастич, община Царево. Археологически открития и разкопки през 2013 г., 2014, 174–176.
- Дичев 2016: Д. Дичев, Археологически разкопки на обект "Укрепен дом от елинистическата епоха" в м. Пастич до с. Бродилово, община Царево, 2015 г. Археологически открития и разкопки през 2015 г., 2016, 274–277.
- Дичев 2017: Д. Дичев, Археологически разкопки на укрепен дом от късноелинистическата епоха в м. Пастич, община Царево. Археологически открития и разкопки през 2016 г., 2017, 205–208.
- Домарадски et al. 1992: М. Домарадски/И. Карайотов/А. Гоцев, Керамика от ранножелязната епоха от крепостта Малкото кале при с. Равадиново, общ. Созопол. Археология 34.4, 1992, 29–42.
- Дражева/Недев 2013: Ц. Дражева/Д. Недев, Спасителни археологически проучвания на обект "Крепостна стена и прилежащите й съоръжения" в участъка на пл. Пан Крум, църква "Св.св. Кирил и Методий" и южна крайбрежна алея, УПИ XIX–523 и 525, УПИ XXII–526 и УПИ XXI–527, кв. 27 по плана на гр. Созопол. Археологически открития и разкопки през 2012 г., 2013, 468–470.
- Иванов/Недев 2014: Я. Иванов/Д. Недев, Археологически наблюдения и спасителни разкопки в рамките на интегриран проект за воден цикъл в Созопол: "Строителство на канални помпени станции, напорни тръбопроводи и колектори". Археологически открития и разкопки през 2013 г., 2014, 273–275.
- Иванов/Недев 2015: Я. Иванов/Д. Недев, Археологическо наблюдение и спасителни разкопки в рамките на интегриран проект за воден цикъл в Созопол: "Строителство на канални помпени станции, напорни тръбопроводи и колектори". Археологически открития и разкопки през 2014 г., 2015, 368–371.

- *Караджинов 2012*: И. Караджинов, Фрагмент от "чаша с птици" от Драма-Кайряка. Bulgarian e-Journal of Archaeology 2, 2012, 25–35.
- *Карайотов 2000*: И. Карайотов, Месамбрия и Митридат VI Евпатор. In: Jubilaeus IV, Сборник в памет на чл.-кор. Веселин Бешевлиев (София 2000) 60–69.
- *Кацарова 2007*: В. Кацарова, Спасителни археологически проучвания на надгробна могила 10 на н. Колокита, гр. Созопол. Археологически открития и разкопки през 2006 г., 2007, 307–310.
- Кацарова/Стоянова 2009: В. Кацарова/Д. Стоянова, Надгробна могила No 6000010 по АКБ на н. Колокита, гр. Созопол. In: X. Попов/А. Тенчова (eds.), Сборник в памет на професор Велизар Велков (София 2009) 186–210.
- Киров 2014: И. Киров, Предримска строителна керамика от Вромос. In: И. Христов (ed.), Подводни археологически проучвания в залива Вромос, акватория на гр. Черноморец (емпорион в хората на Аполония Понтика) (София 2014) 65–100.
- *Класнаков 2006*: М. Класнаков, Находки от бронзовата епоха край Мандренското езеро. Археология 47.1–4, 2006, 118–129.
- Лазаренко 2015: И. Лазаренко, Скитите в Тракия (VII в. пр.н.е.–I в. от н.е.). Част І. Писмени извори за скити в Тракия (Варна 2015).
- *Лазаров* 1972: М. Лазаров, Римски гробове от Созопол. Известия на археологическия институт 33, 1972, 153–158.
- Лазаров 1990: М. Лазаров, Антична рисувана керамика от България (София 1990).
- *Лещаков/Класнаков 2011*: П. Лещаков/М. Класнаков, Теренни археологически издирвания в Медни рид. Археологически открития и разкопки през 2010 г., 2011, 581–584.
- *Лозанов 2017*: И. Лозанов, Град и територия в Югоизточна Тракия. 148 г. пр. Хр. 46 г. Автореферат на дисертация за присъждане на образователната и научна степен "доктор" (София 2017).
- *Манов 2015*: М. Манов, Декрет на Аполония с ново датиране. Нумизматика, сфрагистика и епиграфика 11, 2015, 167–173.
- *Миков 2007*: Р. Миков, Спасително проучване на надгробна могила №9 от некропола на н. Колокита. Археологически открития и разкопки през 2006 г., 2007, 341–344.
- Миков/Стоянова 2010: Р. Миков/Д. Стоянова, Строителна керамика от Могила No 9, нос Колокита, Аполония Понтика. In: Р. Георгиева/Т. Стоянов/Д. Момчилов (eds.), Югоизточна България през II–I хилядолетие пр.Хр. (Варна 2010) 228–236.
- *Михайлов 1948*: Г. Михайлов, Надписи намерени в Созопол през 1946 г. In: И. Венедиков/Т. Иванов/ Цв. Дремсизова/Г. Михайлов. Аполония на Черно море. Разкопки и проучвания II (София 1948) 59–67.
- *Недев 2016*: Д. Недев, Източногръцка рисувана керамика (кр. на VII–VI в. пр.Хр.) от Аполония Понтика (по данни от археологически проучвания в старата част на Созопол). Известия на Националния исторически музей XXVIII (Юбилеен сборник Божидар Димитров), 2016, 41–58.
- *Ников 2009*: К. Ников, Трапезна керамика, работена на колело. In: Д. Момчилов/Р. Георгиева (eds.), Спасителни археологически проучвания по трасето на АМ "Тракия", Лот 5, обходен път на град Карнобат, км 6+400 6+800 (Варна 2009), 108–123.
- Ников 2012: К. Ников, Сивата монохромна керамика от Аполония: към въпроса за нейния произход и първоначална поява (кр. на VII–VI в. пр.Хр.) (Велико Търново 2012).
- Панайотова 1994: К. Панайотова, Надгробни могили в районите на гръцките колонии по българското Черноморие. In: Надгробните могили в Югоизточна Европа. Първи международен симпозиум "Севтополис", Том 1 (Велико Търново 1994) 81–88.

- Панайотова 2013: К. Панайотова, О культе Деметры и Персефоны в Аполлонии Понтийской. In: Боспорский феномен. Греки и варвары на евразийском перекрёстке (Санкт-Петербург 2013) 561–567.
- Панайотова/Баралис 2018: К. Панайотова/А. Баралис, Некропол на Аполония в м. Месарите, Созопол. In: И. Вълчев (ed.), Stephanos archaeologicos ad 80 annum professoris Ludmili Getov (София 2018) 77–92.
- Панайотова/Дамянов 2016: К. Панайотова/М. Дамянов, Спасителни археологически проучвания в охранителната зона на некропола на Аполония Понтика в м. Калфата/Буджака, ПИ 67800.5.807–810 (= УПИ І–5253), гр. Созопол. Археологически открития и разкопки през 2015 г., 2016, 394–397.
- Панайотова et al. 2008: К. Панайотова/М. Гюзелев/Д. Недев, Спасителни проучвания на територията на некропола на Аполония Понтийска. Археологически открития и разкопки през 2007 г., 2008, 317–321.
- Панайотова et al. 2010: К. Панайотова/М. Даскалов/Р. Пенчева/К. Трендафилова, Спасителни археологически проучвания на о. Св. Кирик. Археологически открития и разкопки през 2009 г., 2010, 295–298.
- Панайотова et al. 2011: К. Панайотова/М. Дамянов/Р. Пенчева, Спасителни проучвания в некропола на Аполония Понтика (Созопол) в местността Буджака през 2010 г. Археологически открития и разкопки през 2010 г., 2011, 264–266.
- Панайотова et al. 2013: К. Панайотова/М. Даскалов/Б. Драганов/В. Тодоров, Археологически разкопки на полуостров Урдовиза в гр. Китен. Археологически открития и разкопки през 2012 г., 2013, 428–430.
- Панайотова et al. 2014a: К. Панайотова/М. Дамянов/М. Чачева, Спасителни археологически проучвания в некропола на Аполония (VI–IV в. пр. Хр.) в кв. Харманите, ПИ 67800.502.413 и ПИ 67800.502.414 от землището на гр. Созопол. Археологически открития и разкопки през 2013 г., 2014, 267–270.
- Панайотова et al. 2014b: К. Панайотова/М. Дамянов/М. Чачева, Спасителни археологически проучвания в некропола на Аполония (VI–IV в. пр. Хр.) в кв. Харманите, ПИ 67800.502.410 и ПИ 67800.502.424 от землището на гр. Созопол. Археологически открития и разкопки през 2013 г., 2014, 270–273.
- Панайотова et al. 2014с: К. Панайотова/М. Дамянов/М. Чачева, Спасителни археологически проучвания на античния некропол на Аполония Понтика в м. Калфата/Буджака (V–III в. пр.Хр.), ПИ 67800.4.39, град Созопол. Археологически открития и разкопки през 2013 г., 2014, 276–279.
- Панайотова et al. 2017: К. Панайотова/Т. Богданова/А. Баралис, Селищна структура и некропол на територията на Аполония Понтика в м. Месарите, гр. Созопол. Археологически открития и разкопки през 2016 г., 2017, 241–245.
- Петрова 2010: А. Петрова, Погребално законодателство в Аполония? Опит за реконструкция на базата на надгробните паметници от VI–II в. пр.Хр. In: К. Рабаджиев (ed.). Stephanos Archaeologicos in Honorem Professoris Stephcae Angelova. Studia Archaeologica Univesitatis Serdicensis, Supplements 5 (София 2010) 261–276.
- *Порожанов 1989*: К. Порожанов, Датировка на каменните котви с отвори от Българското Черноморие постижения и проблеми. Археология 31.1, 1989, 6–15.
- Христов 2013: И. Христов, Акра между Анхиало и Созопол (София 2013).

- *Христов 2014а*: И. Христов, Археологически материали от римската епоха. In: И. Христов (ed.). Подводни археологически проучвания в залива Вромос, акватория на гр. Черноморец (емпорион в хората на Аполония Понтика) (София 2014) 101–120.
- *Христов 2014b*: И. Христов, Строителна керамика. In: И. Христов (ed.), Подводни археологически проучвания в залива Вромос, акватория на гр. Черноморец (емпорион в хората на Аполония Понтика) (София 2014) 121–132.
- *Христов 2015*: И. Христов, Χρυσοσωτήρα. Ранновизантийска крепост на полуостров Хрисосотира при град Черноморец, V–VII в., 1 (София 2015).
- *Христов 2017а*: И. Христов, Χρυσοσωτήρα. Ранновизантийска крепост на полуостров Хрисосотира при град Черноморец, V–VII в., 2 (София 2017).
- *Христов 2017b*: И. Христов, Тракийската Акра. Проучване на ями от IX в. пр.Хр. на нос Акра, землище на гр. Черноморец. Известия на Националния исторически музей 29, 2017, 9–38.
- *Христов/Пантов 2017*: И. Христов/Д. Пантов, Археологическо проучване на тюрзис от I в. пр.Хр. в околностите на гр. Приморско. Археологически открития и разкопки през 2016 г., 2017, 208–210.
- *Цанева/Панайотова 1991*: М. Цанева/К. Панайотова. Антични некрополи на Аполония. Археологически открития и разкопки през 1990 г. (Ловеч), 1991, 77–79.
- *Цочев 2009*: Ч. Цочев, Транспортни амфори. In: Д. Момчилов/Р. Георгиева (eds.), Спасителни археологически проучвания по трасето на АМ "Тракия", Лот 5, обходен път на град Карнобат, км 6+400–6+800 (Варна 2009) 124–148.
- *Черных 1978*: Е. Черных, Горное дело и металлургия в древнейшей Болгарии (София 1978).
- Шаранков 2015: Н. Шаранков, Нови данни за тракийските стратези. Археология 56.1/2, 2015, 62–78.
- *Юрукова 1982*: Й. Юрукова, Политическата обстановка в югоизточна Тракия около средата на III в. пр.н.е. (по нумизматични данни). Археология 24.2, 1982, 1–8.
- Юрукова 1992: Й. Юрукова, Монетите на тракийските племена и владетели (София 1992).

RESSOURCENKULTUREN 12

PREHISTORIC MINING AND METALLURGY AT THE SOUTHEAST BUI GARIAN BLACK SEA COAST

This volume presents the results of research on pre-industrial mining in the region along the south-eastern Bulgarian Black Sea coast. During rescue excavations some prehistoric settlements with traces of early copper processing were uncovered. This initiated a thorough investigation of the copper ore deposits of Burgas, Rosen and Medni Rid that were mined until recently. Their archaeometallurgical investigation was a project of the Tübingen SFB 1070 ResourceCultures. The research results include an overview of the archaeological research along the southern Bulgarian coastal zone of the Black Sea and the now flooded sites in its shore area. The timeframe ranges from the earliest use of metals in the 5th millennium BC to the period of the 'Greek Colonisation' and later.



