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Contents / Съдържание

Papers / Статии

Zheni Vasileva — The Early Iron Age pottery assemblage from site 1/1000 at the foot of Vrashka Chuka, northwest Bulgaria — 183
Жени Василева — Керамичен комплекс от ранножелязната епоха от обект 1/1000 в подножието на Връшка Чука, Северозападна България

Yiannis Mourthos, Despoina Tsiafaki — Contextualizing rare shapes of Athenian Kerameikos from coastal and inland Thrace (6th–4th c. BC): an approach through the Attic-POT repository — 217
Янис Муртос, Деспина Циафаки — За контекстите на редки форми от атинския Керамейкос в крайбрежна и вътрешна Тракия (VI–IV в. пр.Хр.): поглед през репозиториума на AtticPOT

Mariya Manolova-Voykova — Spanish lustreware from the western Black Sea coast, 14th–15th centuries — 245
Мария Манолова-Войкова — Испанска люстрова керамика от Западното черноморско крайбрежие XIV–XV в.

Reports / Съобщения

Svenja Simon — Thracian silver jewellery from the 4th c. BC: investigations on objects from the collection of the Roman–Germanic Central Museum, Leibniz Research Institute for Archaeology — 267
Свеня Симон — Тракийски сребърни накити от IV в. пр.Хр. Изследвания на предмети от колекцията на Римско-германския централен музей към Изследователския институт по археология „Лайбниц“

Amalia Avramidou, Jamieson C. Donati, Nikos Papadopoulos, Apostolos Sarris, Chrysa Karadima, Chrysafenia Pardalidou, Apostolos Garyfallopoulos, Philoxeni Aitatoglou, Marina Tasaklaki — The Peraia of Samothrace project: report on the 2020–2021 fieldwork campaign — 281
Амалия Аврамиду, Джеймисън К. Донати, Никос Пападопулос, Апостолос Сарис, Хриса Карадима, Хрисафения Пардалиду, Апостолос Гарифалопулос, Филоксени Айтатоглу, Марина Тасаклаки — Проектът Самотракийската переа: отчет за теренната работа през 2020–2021 г.

Archaeometry / Археометрия

Калин Чакъров, Никола Тонков — Проект „Никополис ад Иструм – геофизика *extra muros*“. Резултати от проучването през 2021 г. — 319

Kalin Chakarov, Nikola Tonkov — Project “Nicopolis ad Istrum – Geophysics *extra muros*“, Season 2021

Reviews / Рецензии

John Chapman — Kozareva Mogila. The Eneolithic Necropolis (excavations 2005–2018). Book review: Petya Georgieva, Veselin Danov. Kozareva Mogila. The Eneolithic Necropolis (excavations 2005–2018). With contributions by Victoria Russeva and Maria Gurova. Archaeologia Bulgarica Supplements, vol. 2, 2021, ISBN 978-954-92566-7-3 — 347

Джон Чапман — Козарева могила. Енеолитният некропол (разкопки 2005–2018). Рецензия на книга: Petya Georgieva, Veselin Danov. Kozareva Mogila. The Eneolithic Necropolis (excavations 2005–2018). With contributions by Victoria Russeva and Maria Gurova. Archaeologia Bulgarica Supplements, vol. 2, 2021, ISBN 978-954-92566-7-3

News / Отзиви

Петър Зидаров — Международна конференция „Нови хоризонти в праисторията. 50 години от откриването на Варненския некропол“, 2–4 ноември 2022, Варна, България — 351

Petar Zidarov — International conference “New horizons in Prehistory. 50 years since the discovery of the Varna necropolis”, 2–4 November 2022, Varna, Bulgaria

Кръстю Чукалев — PeBA 2022: Трета международна конференция „Перспективи на балканската археология“, 25–28 май 2022 г., Охрид, Република Северна Македония — 357

Krastyu Chukalev — PeBA 2022: 3rd PeBA International Conference “Perspectives on Balkan Archaeology”, 25–28 May 2022, Ohrid, Republic of North Macedonia

Julij Emilov — E-conference: Ancient Greek, Roman and Byzantine Fibulae, 12–13 May 2022, Izmir, Türkiye — 367

Юлий Емилов — Онлайн конференция: древногръцки, римски и византийски фибули, 2–4 май 2022, Измир, Турция

Maria Gurova, Miglena Stamberova, Pedro Cura — ERASMUS+ and experimental archaeology — 371

Мария Гюрова, Миглена Стамберова, Педро Кура — ЕРАЗЪМ+ и експериментална археология

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The Early Iron Age pottery assemblage from site 1/1000 at the foot of Vrashka Chuka, northwest Bulgaria

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ABSTRACT

In the course of rescue archaeological excavations of site 1/1000 at Baba Velika locality, located at the foot of Vrashka chuka in Northwest Bulgaria, the remains of an Early Iron Age site were encountered. This paper is focused on the pottery assemblage found during the rescue archaeological excavations at Vrashka chuka. The study presents the main characteristic of the Early Iron Age pottery found in the features and the general characteristics of the pottery found in the Early Iron Age cultural layer. It also discusses the recognizable shapes and decorative motifs and points out synchronous parallels.
The study of the pottery assemblage from Vrashka chuka provided us with the opportunity to shed a new light on the development of the Early Iron Age in Northwest Bulgaria, and especially the district of the modern city of Vidin. The intensive archaeological excavations in recent years have opened a new page in the studies of the Early Iron Age in this part of Bulgaria, which so far was not studied in details.

KEYWORDS

Early Iron Age; pottery; Gornea-Kalakača; Bosut; Basarabi; Vrashka chuka

Introduction

Far over the misty mountains cold
J. R. R. Tolkien

Site 1/1000[1] is situated in the vicinity of Izvor mahala village, Kula District in Northwest Bulgaria. The site is located at Baba Velika locality at the foot of Vrashka chuka. Vrashka chuka is an isolated mountain in the western part of the West Pre-Balkans at the border between Bulgaria and Serbia (fig. 1). The height consists of Jurassic limestone and has steep slopes. A low saddle (450 m) to the south connects this hill with the mountain Babin nos, and to the north a saddle of the same name Vrashka chuka (367 m) separates it from the flat watershed Bachiyata (Michev et al. 1980, 121–122).

Rescue archaeological excavations along a gas pipeline route were conducted in 2019 by Elena Vasileva. Area of approximately 12 552 m^2 was explored. Structures from the Middle Bronze Age, Early Iron Age, Roman period and Late Medieval period were found (Vasileva, Vasileva 2020, 1284–1289).

1 Site 1/1000 was registered in 2012 during rescue field surveys conducted by Nadezhda Kecheva and archaeologists from NAIM-BAS and RHM Vidin. AIS AKB number 10001171.

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Fig. 1.1. An overall view to the Vrashka Chuka (photo Z. Vasileva); 2. Aerial photo of site No. 1/1000 at the foot of Vrashka Chuka. View from east (photo M. Anchev)
Обр. 1.1. Общ изглед към Връшка чука (снимка Ж. Василева); 2 Въздушна снимка на обект 1/1000 в подножието на Връшка чука. Поглед от изток (снимка М. Анчев)

To complete the current state-of-the-art regarding the Early Iron Age (henceforth EIA) pottery repertoire we will discuss the EIA pottery assemblage found during the rescue archaeological excavations at Vrashka chuka. The study will first present the main characteristic of the EIA pottery found in the features, the general characteristics of the pottery found in the EIA cultural layer, followed by a discussion of recognizable shapes, decorative motifs and synchronous parallels.

The main purpose of this paper is to present the pottery assemblage coming from the excavated EIA features. The pottery is heavily fragmented; the surface of some of the sherds is highly washed out due to the local soil characteristic. Nevertheless, based on the stylistic and typological traits of the pottery several important observations can be made.

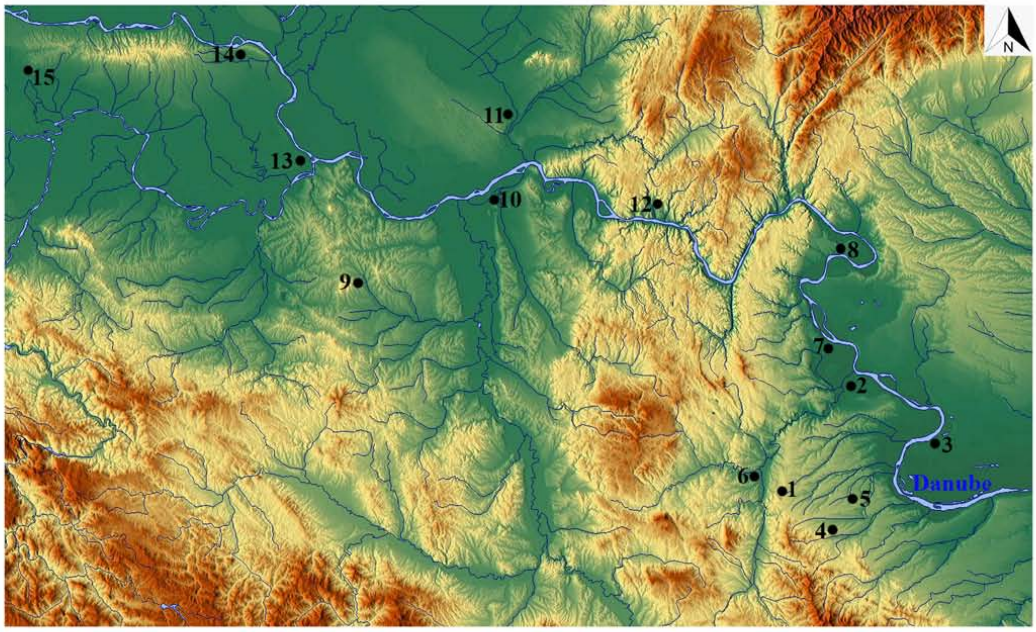
The state of research

The degree to which the EIA in Northwest Bulgaria has been studied so far underplays its significance in comparison to the other present-day Bulgaria regions, for example, north (Hänsel 1976; Antonova, Popov 1984; Shalganova, Gotzev 1995; Stoyanov 1997; Valentinova 2003; 2010; Agre 2008; Dintchev 2018; Stamberova 2020), the southwest region (Gergova 1990; Georgieva 2003; Dintchev 2008; Mihaylov 2005; 2016). The excavations of EIA sites in Thrace, south of the Balkan Mountains have led in the last 30 years to the accumulation of a solid database, especially pottery (Chichikova 1968; Gotzev 1994; Borislavov 1999; Agre 2004; Nekhrizov 2005a; 2008; Popov 2010; Bozhinova 2012; Dimitrova 2014; 2015; Nikov 2016; Nekhrizov, Tzvetkova 2018 with reference). In comparison with the rest of Bulgaria, where archaeological excavations have made possible for a much more detailed insight into its cultural and historical situation, our knowledge for Northwest Bulgaria is based on much less information.

Studies about the end of the Late Bronze Age (LBA) and the beginning of the EIA in the region of Vidin were launched and carried out first by Rumen Katincharov (NAIM–BAS) and Ana Yotsova (RHM Vidin) and in recent years a great contribution is made by a team from the NAIM–BAS led by Stefan Alexandrov, Tania Hristova, Georgi Ivanov and Nikolai Kazashki from the RHM Vidin. The AMS dates of the graves from the Baley necropolis span between 14th and 11th century cal BC, a period accepted to represent the LBA and the beginning of the EIA in the region (Alexandrov et al. 2013; Alexandrov et al. 2016).

Dwellings from the EIA were excavated in the Magura cave (Belogradchik municipality) located in Northwest Bulgaria. Of special interest is the pottery assemblage from the EIA. The vessels are divided into four main types: bowls, cups, deep vessels and deep thick-walled vessels. The most numerous type is bowls with inverted rim. Most of the bowls were decorated with shallow or deep channels, stamped S^{es} or combination of horizontal lines made by sharp tool. The bowls have polished black, grey-black or grey-brown surface. Only one cup with a small vertical handle has been found during the excavations. Deep vessels with cylindrical neck and slightly profiled rim are also known from the Magura cave. Most of them are decorated with wide horizontal shallow channels. As an exception, some of the vessels are decorated with repeating spirals. The vessels have well-polished surface. The deep thick-walled vessels are decorated with plastic band. The last category of vessels was used mainly to store grain and other products (Dzhambazov, Katincharov 1974, 128–129, obr. 26–31).

The unpublished materials from rescue archaeological excavation along the route of the gas pipeline near Gramada, Vidin District should also be mentioned here. The pottery sherds found during the excavations of site A10/1011 have technological, morphological and ornamental characteristics of the Basarabi culture (Ganetsovski, Miteva 2020, 406–409). A pit was discovered at site A10/1012 near Gramada, Vidin District dated in the 11th–10th c. BC (Dimitrov et al. 2020). Of special



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Fig. 2.1. Map of the main EIA sites mentioned in the text: 1. Vrashka Chuka; 2. Baley; 3. Basarabi; 4. Magura cave; 5. Gramada; 6. Felix Romuliana; 7. Prahova; 8. Vajuga-Pesek; 9. Mala Vrbica; 10. Kostolac; 11. Židovar; 12. Gornea; 13. Asfaltna baza – Zemun; 14. Kalakača; 15. Gradina na Bosutu (author Z. Vasileva; base map https://maps-for-free.com);
2. Feature 26 – stage of the investigations (photo M. Anchev)
Обр. 2.1. Карта на основните РЖЕ обекти, споменати в текста: 1. Връшка чука; 2. Балей; 3. Басараби; 4. пещера Магура; 5. Грамда; 6. Фелих Ромулиана; 7. Прахова; 8. Важуга-Песек; 9. Мала Врбица; 10. Костолац; 11. Жидовар; 12. Горнеа; 13. Асфалтна база – Земун; 14. Калакача; 15. Градина на Босут (автор Ж. Василева, карта базирана на https://maps-for-free.com);
2. Структура 26 – етап от проучването (снимка М. Анчев)

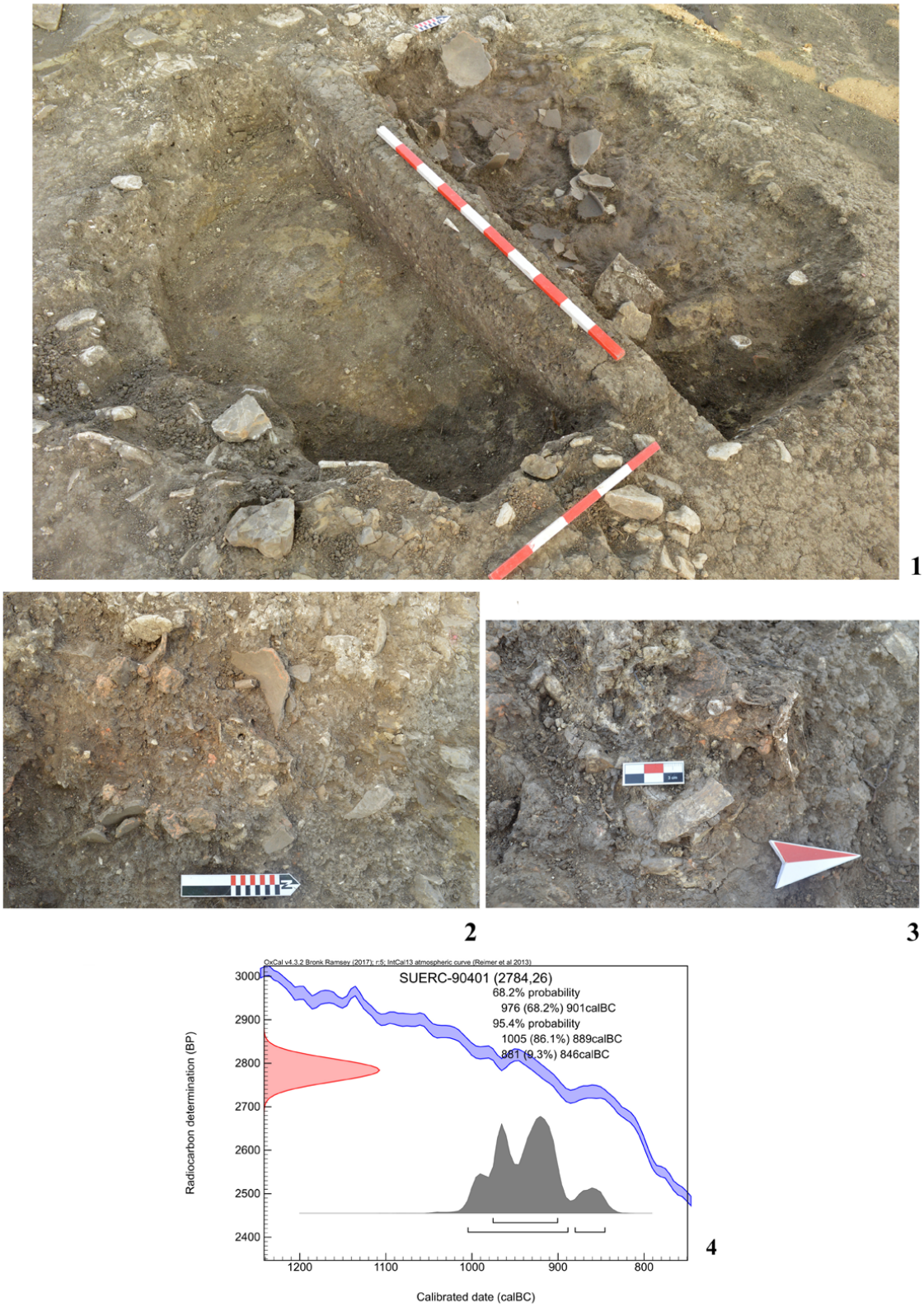


Fig. 3.1 Feature 37 during the excavations (photo M. Anchev); 2. Detail (photo Z. Vasileva); 3. Detail (photo Z. Vasileva); 3.4. Radiocarbon date from feature 37
Обр. 3.1. Структура № 37 по време на разкопките (снимка М. Анчев); 2. Детайл (снимка Ж. Василева); 3. Детайл (снимка Ж. Василева); 4. Радиовъглеродна дата от структура № 37



Fig. 4.1. Feature 27 during the excavations (photo M. Anchev); 2. Detail (photo Z. Vasileva); 3. Detail (photo Z. Vasileva); 4. Detail (photo Z. Vasileva)
Обр. 4.1. Структура № 27 по време на разкопките (снимка М. Анчев); 2. Детайл (снимка Ж. Василева); 3. Детайл (снимка Ж. Василева); 4. Детайл (снимка Ж. Василева)

importance are also the latest results from the rescue archaeological excavations near Sinagovtsi, Vidin region, where EIA settlement and necropolis were explored (Dimitrov, Tsvetkov 2021, 814; Dimitrov 2022, 45).

The research of the EIA along the River Danube and Oltenia was initiated by the discovery of the Basarabi necropolis published in 1968 by V. Dimitrescu (Dimitrescu 1968). The increased research interest of the EIA started in the 1970s, followed by the discoveries of numerous sites in the Central Balkan, such as Bosut (Medović 1978; Medović, Medović 2010), Kalakaća (Medović 1988), Gomolava (Tasić 1988), Feudvar (Medović 1991) and Zidovar (Jevtić 1997). Later, by the excavations of the necropolis Vajuga-Pesek (Popović, Vukmanović 1998) and the settlement Asfaltna baza

(Petrović 2010). Large number of EIA settlements are detected in north-eastern Serbia, and the Iron Gates' hinterlands belonging to the late Kalakača group and the Early Basarabi group, which has, it seems, emerged on the areas of Oltenia and the north-western Bulgaria (Vukmanović 1990, 44; Kapuran et al. 2007, fig. 2; Kapuran 2014, 84). High altitude EIA sites are detected in the vicinity of Felix Romuliana, located no more than 10 km from Vrashka chuka. A novelty in the settlement organization in the EIA in comparison to earlier periods is the groups (clusters) of, or several plain settlements dispersed at distance of around 500 m from one another, that has been characterized as a *complex of settlements* by A. Kapuran (Kapuran 2014, 76).

The territory of present-day Northwest Bulgaria is still poorly studied, and it is possible that there are more synchronous settlements to form such a settlement system. It is expected that forthcoming field surveys and analyses will probably significantly enrich the archaeological map of the EIA sites and our knowledge about this dynamic period.

The EIA features from site 1/1000

EIA materials and features were registered only in the Western sector of site 1/1000. The cultural layer from the EIA period in the excavated area has brown colour and is between 0.30 – 0.50 m thick. It is noteworthy that no architectural traces from the EIA were found on the site, no traces of ovens, thermal facilities, postholes or floors. The explored features (26, 27, 33 and 39) represent clusters of pottery sherds, no above ground features were identified. An exception is feature 37, which is the only EIA dug-into structure registered in the excavated area.

The archaeological evidence consists of pottery sherds. It is a hand-made pottery. The number of refitting sherds is very limited. Most of the preserved sherds without decoration are made of insufficiently refined clay, the surface is damaged or eroded. In the case of Vrashka chuka we encounter three main types of pottery based on texture. Coarse – high concentration of large and medium stones and sand grains. The surface of most of the sherds is damaged or heavily eroded, which has resulted in the loss of a significant part of the technological data. Semi-fine – small stones and sand grains. The surface of the vessels was smoothened or polished. Fine – made of refined clay with little concentration of sand grains.

The surface colours are in dark-red, grey-brownish, dark-brown, brownish or ochre nuances. The study of shapes is limited by the high degree of fragmentation of the vessels. The following hand-made vessels can be distinguished: cups, bowls, amphora-shaped vessels and storage vessels.

Feature 37

Feature 37 presents a pit dug into the rock terrain of Vrashka chuka. It has round shape with dimensions at the level of detection N–S 1.85 m and E–W 1.85 m; the walls are sloping; the bottom is relatively even with easy access not more than 0.40/0.45 m from the level of detection. A large fragment from a vessel containing human bone and mandible was found in the west part of the pit (fig. 3.1–3). Around them were found charcoal, stone and bone beads and pottery sherds. No other human remains were detected in the fill. The C14 date from feature 37 is 1005–889 cal BC (86.1%) and 881–846 cal BC (9.3%) (fig. 3.4).[2]

The pit yielded sherds from various vessels, heavily burnt house debris, stones, bone and stone beads (fig. 3), charcoal, remains of human skull and teeth (fig. 6.15).

Most of the pottery is fragmented, but there are few shapes that can be reconstructed. The surface of the vessels is well preserved in comparison with pottery from the other EIA features. The vessels were made of coarse or fine paste. The category of the coarse ware is presented by sherds from

2 The 14C date from feature 37 is the only available date from site 1/1000 due to the characteristics of the archaeological materials found in the EIA features. The samples were analyzed in the laboratory of the Scottish Universities Environmental Research Centre, Glasgow, Scotland, UK in 2019. Radiocarbon Age BP 2784 ± 26



1



2

Fig. 5.1. Feature 33 during the excavations; 2. Feature 33 during the excavations (photos M. Anchev)
Обр. 5.1. Структура № 33 детайл от разкопките; 2. Структура № 33 детайл от разкопките (снимки М. Анчев)

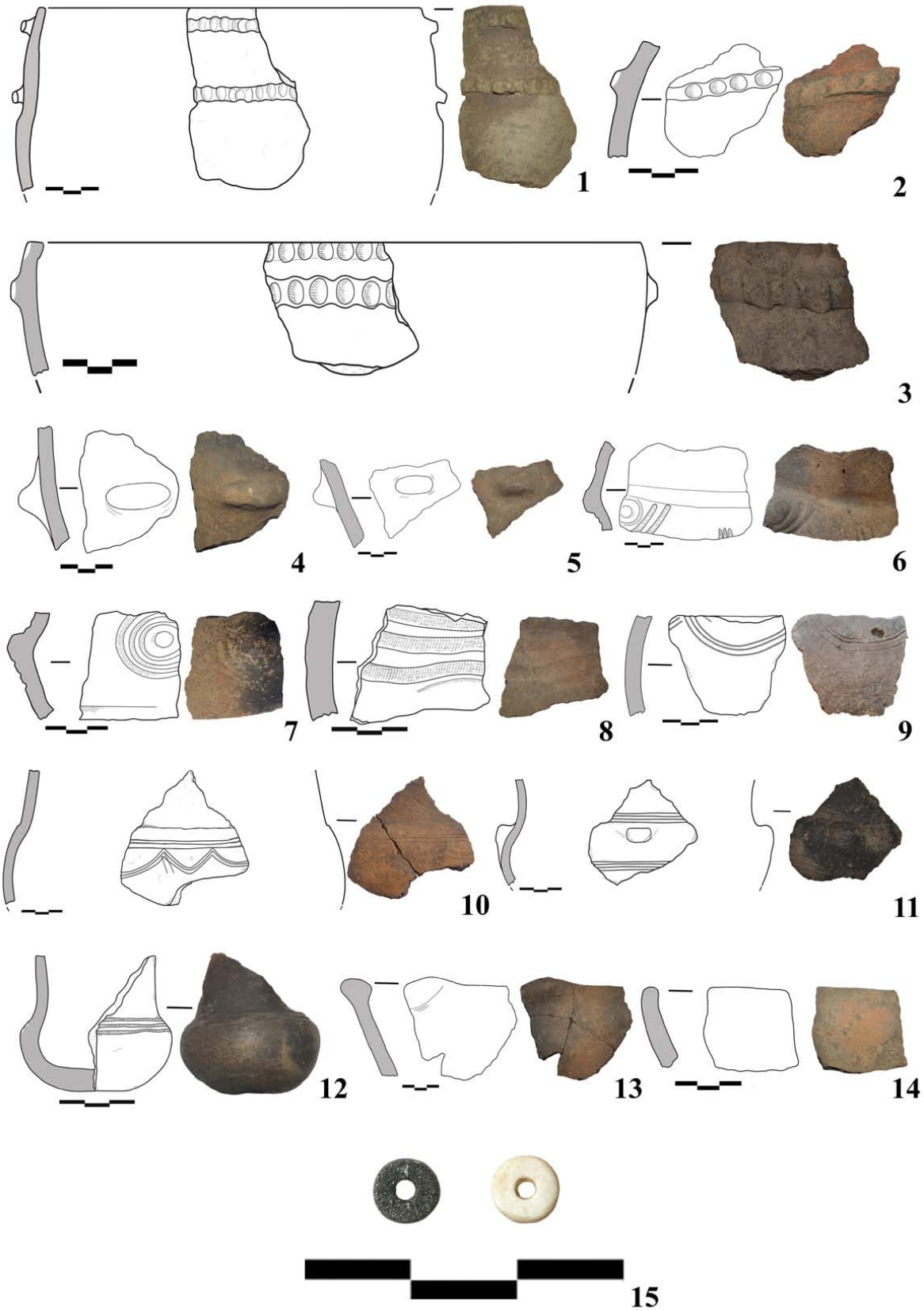


Fig. 6. Pottery sherds, stone and bone beads from feature 37 (drawings V. Georgieva, photos Z. Vasileva)
Обр. 6. Керамични фрагменти, каменно и костено мънисти от структура 37 (рисунки В. Георгиева, снимки Ж. Василева)

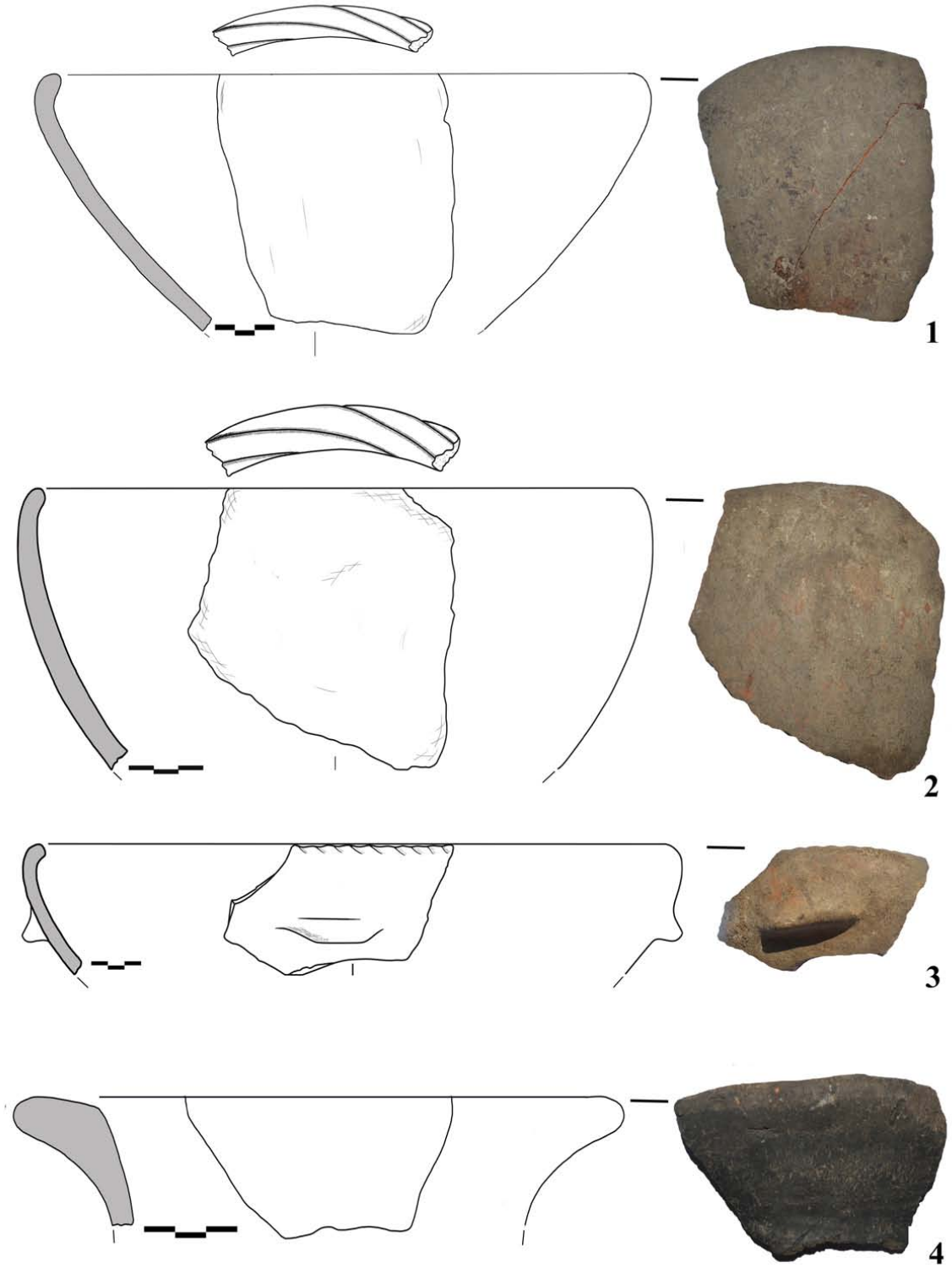


Fig. 7. Pottery sherds from feature 37 (drawings V. Georgieva, photos Z. Vasileva)
Обр. 7. Керамични фрагменти от структура 37 (рисунки В. Георгиева, снимки Ж. Василева)

storage vessels or jars, decorated with plastic band with finger impressions. The decoration is situated below the mouth or at the transition between the neck and the body (fig. 6.1–3). Tongue-shaped handles also belong to large vessels, probably storage vessels (fig. 6.4–5). Among the fragments are also sherds with buckles decorated with concentric grooves. They probably belong to amphora-shaped

vessels made of semi-fine clay. The decoration is usually situated at the maximum diameter of the vessel (fig. 6.6–7). A fragment of an amphora-shaped vessel with everted rim and long neck is also known. The vessel was made of coarse clay with sand grains. The surface is averagely smoothened, black colour (fig. 7.4).

Feature 37 contains also sherds with engraved horizontal lines or lines arranged in garlands (fig. 6.9–10, 12). They belong to vessels made of fine paste with polished surface. To a similar vessel belongs a fragment with conical knobs and incised horizontal lines. The surface of the vessel was polished (fig. 6.11). A sherd from miniature vessel with long neck and spherical body was also found in feature 37. The transition between the neck and the body is decorated with three horizontal incised lines. The vessel is made of fine clay, the surface is dark brown, polished (fig. 6.12).

Two bowls with inverted channelled rim was possible to reconstruct. They were made of semi-fine clay; the surface of the vessels is well smoothened (fig. 7.1–2). Of special interest is the reconstructed conical bowl with inverted twisted rim. The vessel has four tongue-shaped handles (fig. 7.3).

Feature 26

Feature 26 presents a cluster of fragmented vessels. No other archaeological materials were detected during the exploration of the feature (fig. 2.2). Most of the sherds are made of a coarse clay with sand grains and gravels. The surface of the vessels is damaged or heavily eroded, which has resulted in the loss of a significant part of the technological data. The vessels were decorated with plastic bands with oblique cuts. The bands were arranged below the rim or on the transition between the neck and the body (fig. 8.1–10).

There are also small sherds that do not permit reconstruction of the entire form but have characteristic decoration: pseudo-cord motif (fig. 8.11–12), incised lines (fig. 8.13), stamped S^{es} (fig. 8.15) and incised wavy lines (fig. 8.16).

Of special interest is a fragment of an amphora-shaped vessel with everted rim and long cylindrical neck. The interior of the rim is decorated with hatched incised triangles filled with incised lines. The neck is decorated with wide horizontal grooves and short oblique incisions. The vessel is made of semi-fine clay (fig. 8.17).

Also noteworthy is a fragment of a bowl with inverted rim enlarged with one horizontal facet. The vessel is made of semi-fine clay. The surface was well smoothened (fig. 8.18).

Feature 27

Feature 27 is the largest EIA structure explored during the rescue excavations. Three levels of pottery sherds were registered. They were situated in a space surrounded by the natural bedrock (fig. 4). There are no traces of house debris, house inventory or thermal facility.

The coarse pottery category found in structure 27 is presented by sherds from storage vessels and jars. The vessels are made of coarse paste with high concentration of pebbles and sand grains. The surface of most of the vessels is damaged or heavily eroded, which has resulted in the loss of a significant part of the technological data. The vessels have horizontal and vertical plastic bands, decorated with oblique cut or finger impressions. The bands are usually arranged below the rim or on the transition between the neck and the body (figs. 9–10). Some vessels have vertical handles located on the lower part of the neck (fig. 9.1, 7). The recognizable shapes are storage vessels with conical form and wide-open mouth. Tongue-shaped handles of large vessels (fig. 9.10–11) and small vertical handles probably from beakers are also found. Feature 27 contained sherds from a small cup with one vertical handle, rising above the rim. There are traces of pseudo-cord ornament below the rim of the vessel (fig. 10.9).

Fragments of vessel with everted rim and long neck are also found at structure 27. They were made of semi-fine clay with sand grains and pebbles and probably belong to amphora-shaped vessels (fig. 10.5–7). One of them is decorated with wide horizontal grooves below which three wavy lines

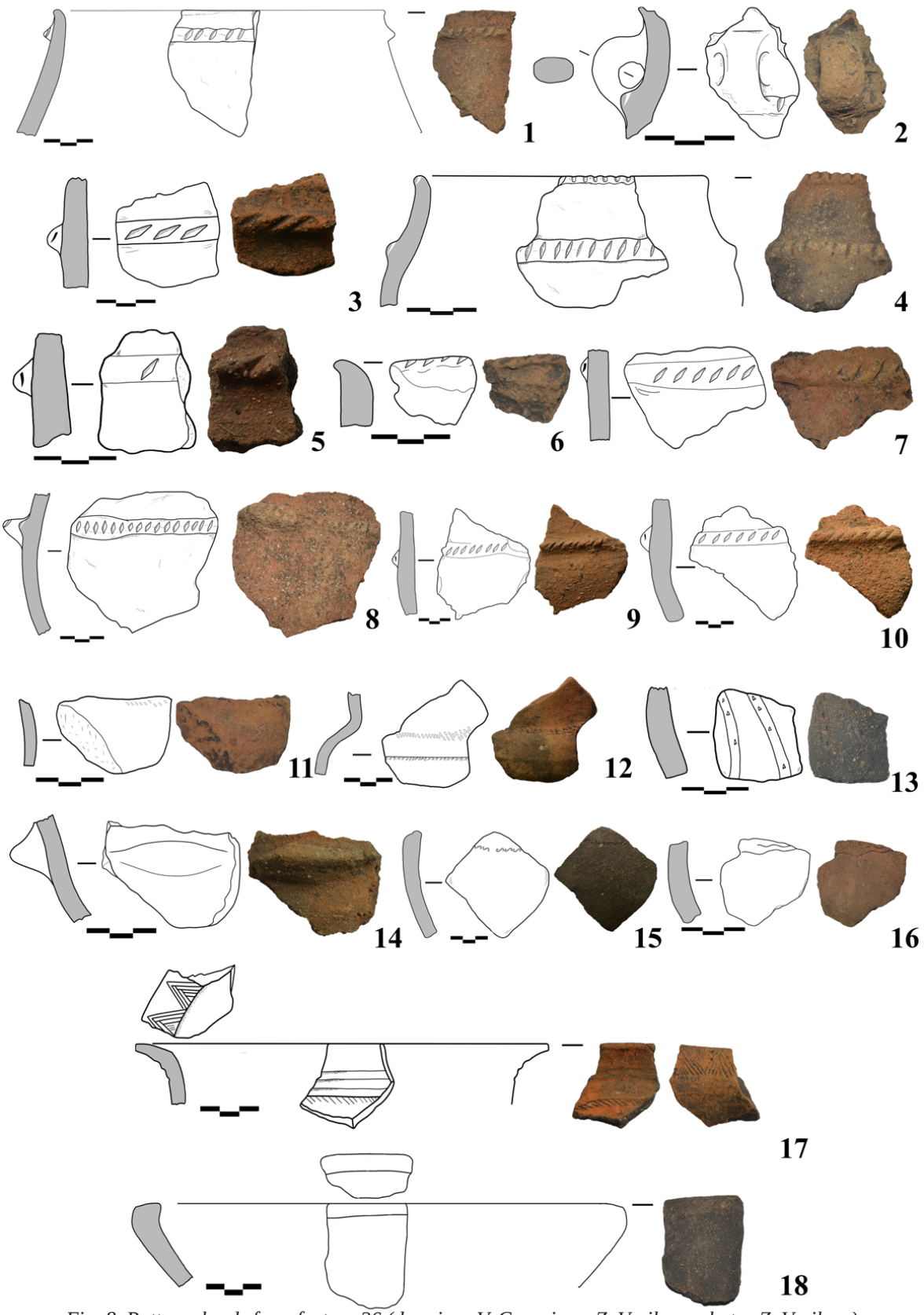


Fig. 8. Pottery sherds from feature 26 (drawings V. Georgieva, Z. Vasileva, photos Z. Vasileva)
Обр. 8. Керамични фрагменти от структура 26 (рисунки В. Георгиева, Ж. Василева, снимки Ж. Василева)

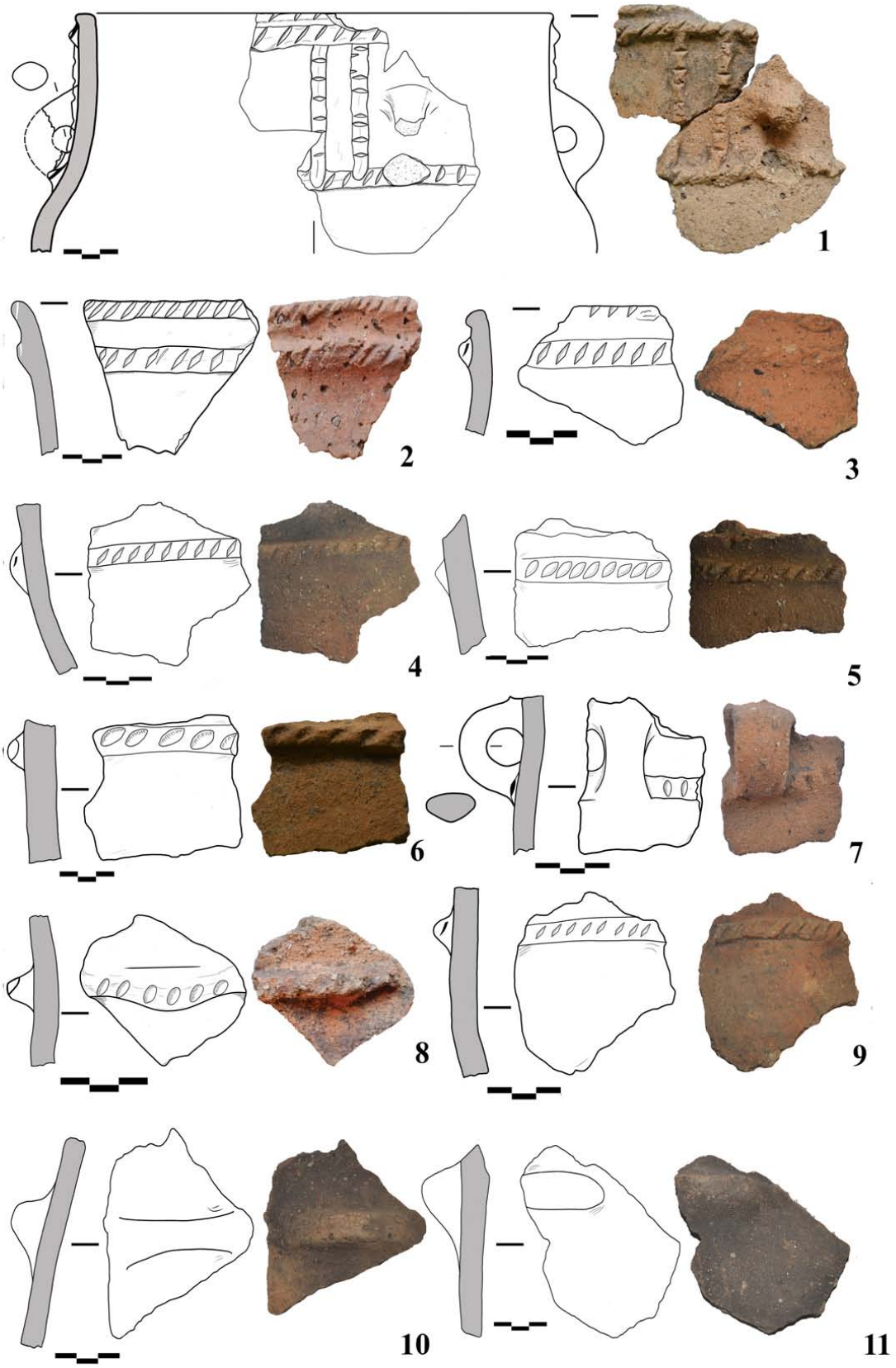


Fig. 9. Pottery sherds from feature 27 (drawings V. Georgieva, Z. Vasileva, photos Z. Vasileva)
Обр. 9. Керамични фрагменти от структура 27 (рисунки В. Георгиева, Ж. Василева, снимки Ж. Василева)

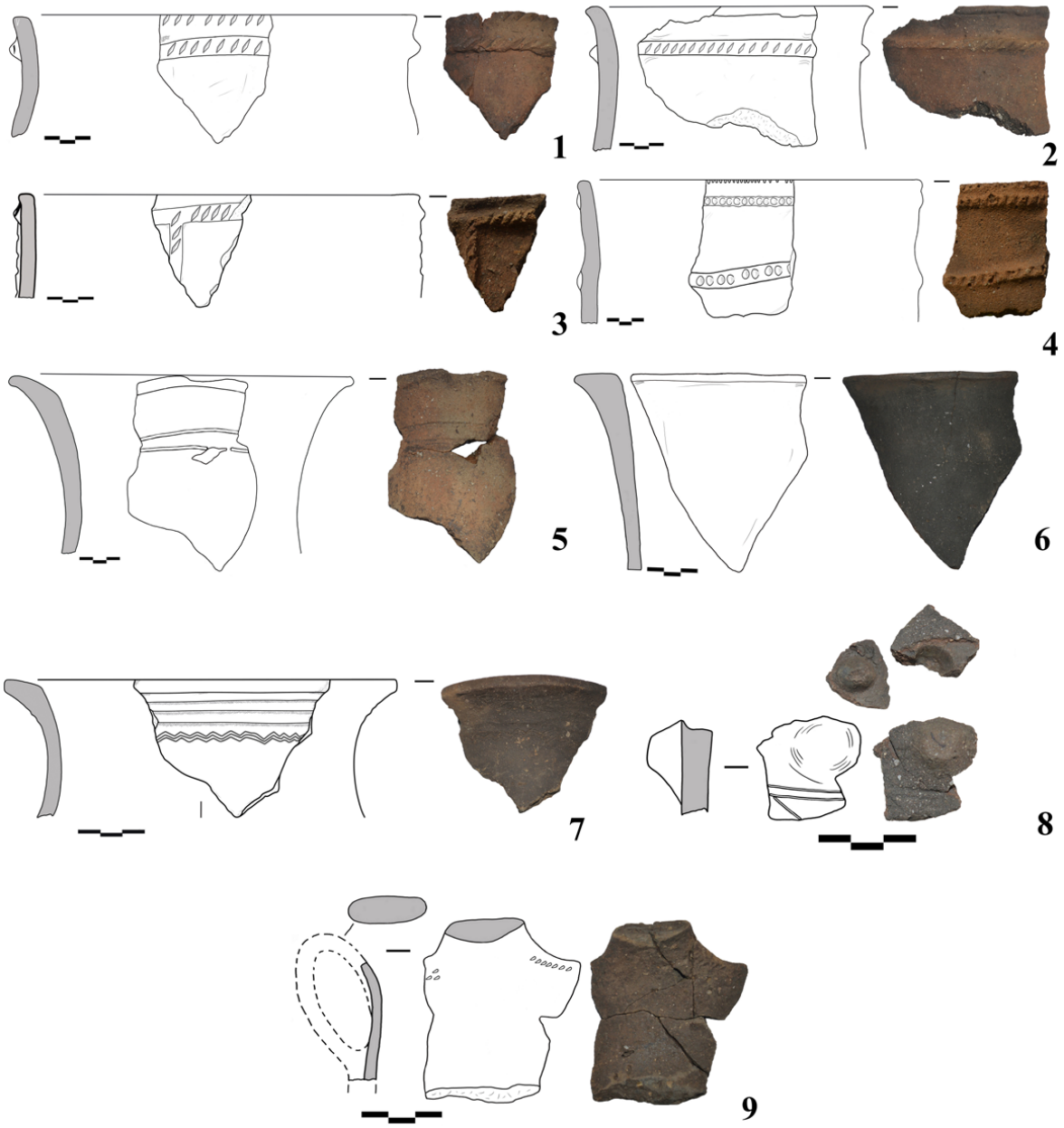


Fig. 10. Pottery sherds from feature 27 (drawings V. Georgieva, Z. Vasileva, photos Z. Vasileva)
Обр. 10. Керамични фрагменти от структура 27 (рисунки В. Георгиева, Ж. Василева, снимки Ж. Василева)

are incised (fig. 10.7).

Due to the highly fragmentary state of the sherds found in the structure, most of the vessel shapes cannot be recognized. Nevertheless, the decoration of some sherds deserves attention. There are sherds decorated with incised triangles (fig. 11.1), combination of incised lines and stamped S^{es} (fig. 11.2), one or two rows of stamped S^{es} (fig. 11. 3–6), combination of stamped S^{es} and pseudo-cord (fig. 11.7–9), incised horizontal lines (fig. 12.1–2), incised lines arranged as garlands (fig. 12.3–4), incised wavy lines (fig. 12.5–10).

The most numerous accumulation of bowls with inverted rim at Vrashka chuka derives from structure 27. Sherds from at least 15 vessels are recognized (figs. 13–14; 15.1–3). The vessels are made of semi-fine clay with sand grains and pebbles. The surface of most of the vessels was polished

or well smoothened. Of special interest is the decoration of the vessels: flutes (fig. 13.1–6), combination of flutes, stamped S^{es} and pseudo-cord (fig. 14.1–3), combination of oblique flutes and incised wavy lines (fig. 14.4), combination of oblique flutes, stamped S^{es}, incised wavy lines and conical knobs (fig. 14.5) and a bowl decorated with combination of stamped S^{es} and incised lines arranged as a ladder (fig. 15.3).

Feature 33

Feature 33 is a cluster of pottery sherds. No other archaeological materials were detected during the exploration of the feature (fig. 5). Most of the sherds belong to vessels made of coarse and semi-fine clay. The upper of the body of two storage vessels can be reconstructed. The first vessel has S-shaped vertical handles in the lower part of the neck. It is decorated with oblique incised lines over the rim, below which there is a horizontal plastic band with finger impressions and oblique incised lines. In the lower part of the neck another horizontal plastic band with finger impressions and conical knobs is arranged (fig. 16.1). The second vessel is decorated with oblique incisions over the rim. The neck of the vessel is decorated by a combination of vertical plastic bands, which are linked to a horizontal plastic band, below which two plastic bands in the form of garlands are arranged. All of them are decorated with oblique incised lines (fig. 16.2). Fragmented rims of two vessels decorated with oblique cuts on the rim also belong to the coarse ware category (fig. 16.4–5).

Among the sherds from feature 33, there are fragments of an amphora-shaped vessel with everted rim, long neck decorated with wide horizontal grooves. Between the neck and the body are placed (two or four) vertical handles, below which the body of the vessel is again decorated with wide horizontal grooves (fig. 16.3). Fragments with tongue-shaped handle and decoration of horizontal grooves and grooves arranged as garlands belong to a similar type of vessel (fig. 17.1). Fragments of a vessel with everted rim and long cylindrical neck are also found. The inner side of the rim is decorated with a row of pseudo-corded ornament. The neck of the vessel is decorated with wide horizontal grooves and rows of pseudo-cord motive (fig. 17.3). The other fragment represents an everted rim decorated with pseudo-corded ornament on the neck of the vessel (fig. 17.4).

Among the few cups identified at Vrashka chuka, the one found in structure 33 stands out. The vessel was made of fine clay with well smoothened surface. We can suggest that the sherds belong to a cup with one handle, long neck and rounded belly (fig. 17.6). Among the pottery repertoire of structure 33, there is a sherd from vertical handle, probably belonging to a beaker. The handle is decorated with two vertical incised wavy lines and vertical grooves (fig. 17.5).

The category of bowls with inverted rim is represented in feature 33 by two examples. The first bowl is decorated with a combination of oblique flutes, stamped S^{es}, pseudo-cord motives and incised hatched triangles filled with incised lines (fig. 17.7). Of special interest is also a sherd from a bowl with inverted rim and tongue-shaped handle (fig. 17.8).

Feature 39

Feature 39 is small cluster of pottery sherds, preserved in a very fragmentary condition. The recognizable forms and motives are: a storage vessel, decorated with oblique cut over the rim, a horizontal plastic band with oblique cuts below the mouth and a horizontal plastic band with oblique cuts on the transition between the neck and the body (fig. 15.4). There is also a fragment of a rim, decorated with short oblique cuts (fig. 15.5), fragment with tongue-shaped handle (fig. 15.6) and a sherd, decorated with stamped S^{es} (fig. 15.7). The sherds belong to vessels made of coarse clay with sand grains and pebbles. The surface is eroded.

Pottery from the EIA layer

The pottery sherds found in the layer have the same characteristics as those from the EIA features. There are no restorable vessels. The sherds belong to vessels made of fine, semi-fine or coarse paste. The coarse ware is presented by sherds from vessels made of insufficiently refined clay with

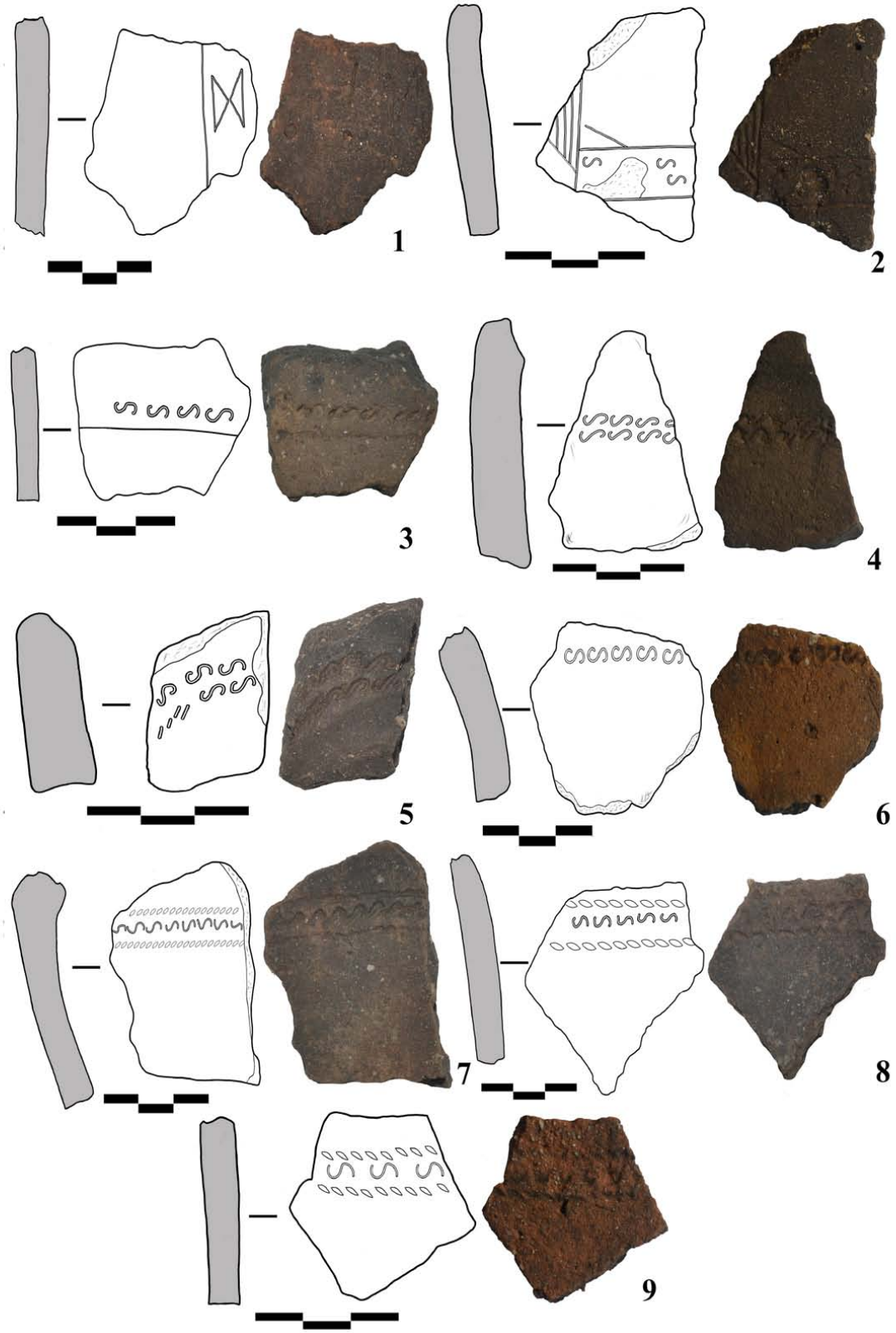


Fig. 11. Pottery sherds from feature 27 (drawings and photos Z. Vasileva)
Обр. 11. Керамични фрагменти от структура 27 (рисунки и снимки Ж. Василева)

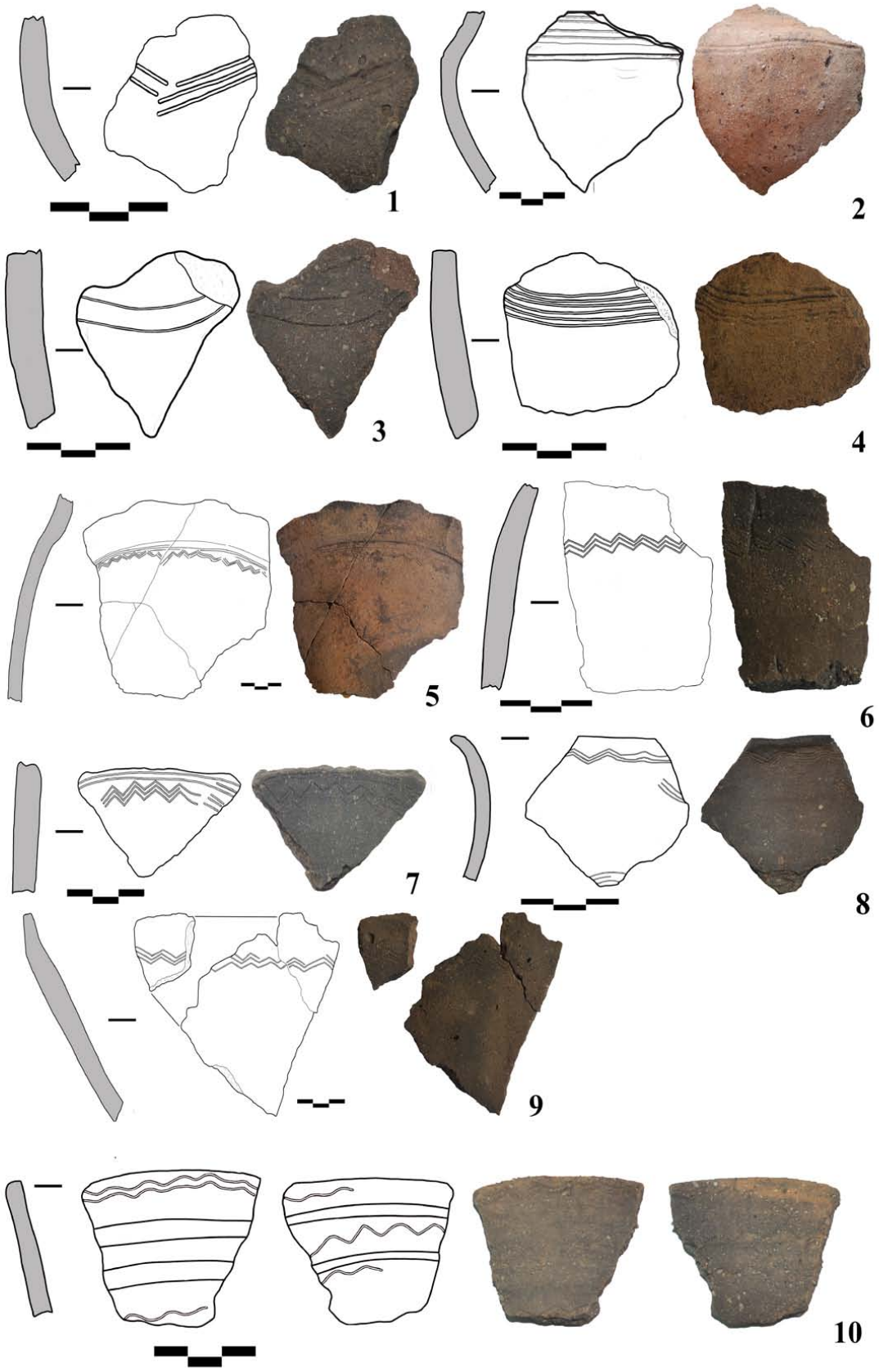


Fig. 12. Pottery sherds from feature 27 (drawings and photos Z. Vasileva)
Обр. 12. Керамични фрагменти от структура 27 (рисунки и снимки Ж. Василева)

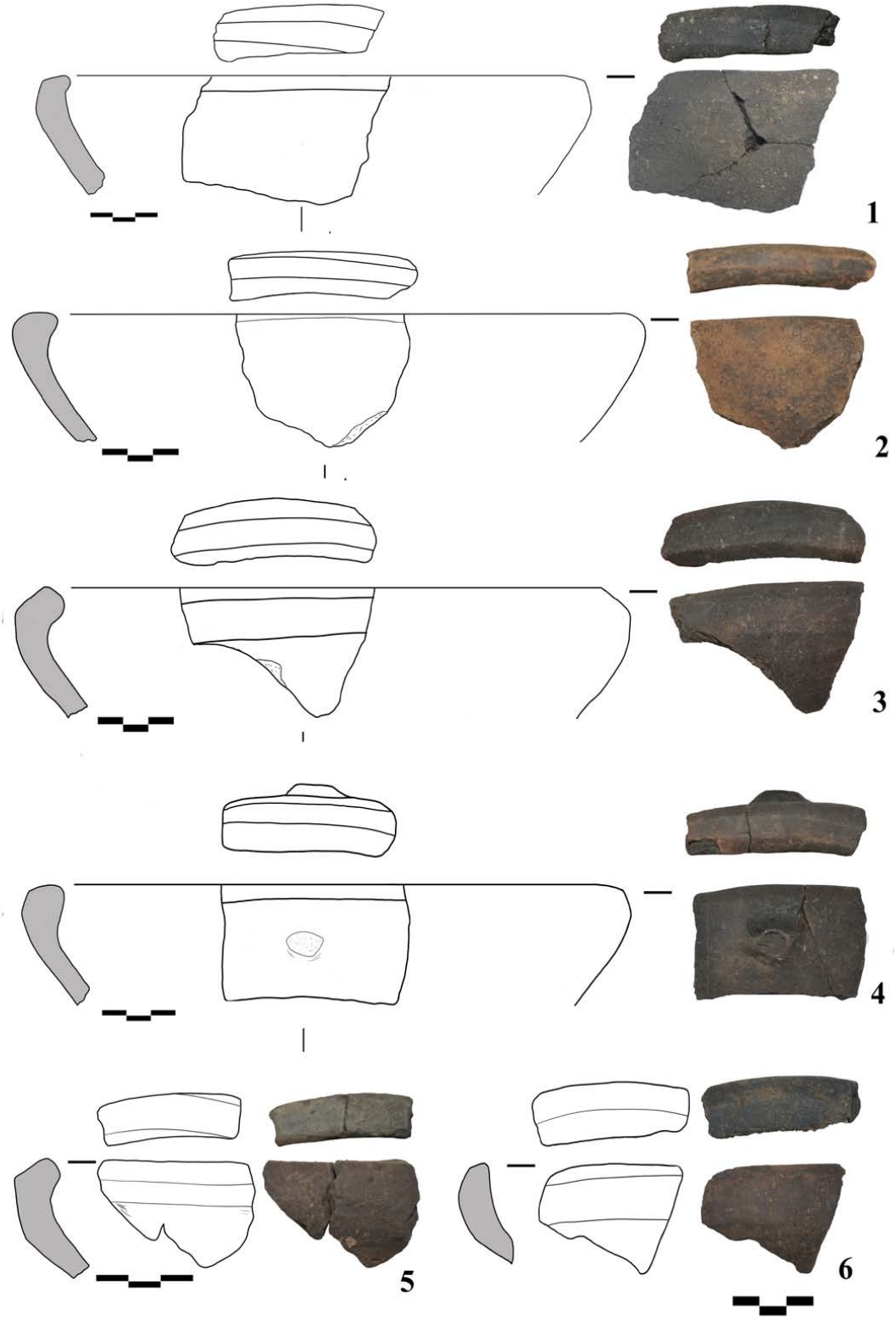


Fig. 13. Pottery sherds from feature 27 (drawings and photos Z. Vasileva)
Обр. 13. Керамични фрагменти от структура 27 (рисунки и снимки Ж. Василева)

sand grains and pebbles. The rim of some of the vessels is decorated with oblique short cuts or the body of the vessels has plastic bands with oblique short cuts. Most of the sherds have heavily eroded surface (fig. 18.1–8).

The decorative motifs on the sherds are presented by combination of stamped S^{es}, flutes and pseudo-cord (fig. 19.2–4), rows of stamped S^{es} (fig. 19.3), incised triangles (fig. 19.1, 6), incised wavy lines (fig. 19.5), button-shaped knobs (fig. 19.7–8). The recognizable shapes are conical bowls with inverted channelled rim (fig. 18.12–13) and bowls with everted rim, one of which is decorated with stamped S^{es} (fig. 18.11).

Characteristic vessels and parallels of the EIA pottery from site 1/1000

The best represented group of pottery from Vrashka chuka comprises of sherds from slightly conical or spherical bowls with inverted rim decorated with fluting, faceting, incised and stamped decoration. Bowls with inverted rim are among the most common shapes during the EIA. A. Bulatović described the type (IIa/turban dish) as inevitable part of the pottery inventory of nearly all cultural groups in the Balkans during Ha B-C. The author presents a map with the distribution of bowls type IIa during Ha B, including examples from Bulgaria – Tlachine, Tsepina and Pshenichevo (Bulatović 2009, see map 3). T. Stoyanov (1997, 61) and G. Nekhrizov (2008, 120 with reference) highlight that the shape is well-known during the LBA and becomes even more popular during the EIA. In present-day West Bulgaria similar vessels are known from an EIA context in the Kilera locality (Dintchev 2018, fig. 2.1–2), on the hill of Krakra, Pernik (Mihaylov 2005), Breznik (Georgiev et al. 2019, 94, fig. 3) etc.

The bowls with inverted rim are well known forms in Kalakača, Gornea–Kalakača, Basarabi and Insula Banului cultures / cultural groups (Bălan 2019, 39). P. Medović sorted this bowl type into several types: types 20–21 and 24 and 26 from Kalakača, and types 1, 22, 41–42 and 44–47 from Gradina na Bosutu (Medović 1978, T. CXX, T. CXXIV, T. CXXV).

In addition to the shape, there are wide parallels of the decorative patterns found on the bowls with inverted rim from Vrashka chuka. Bowls decorated with narrow horizontal or oblique channels are known also from Satchinez (Gumă 1993, pl. XL.2-3), Gelmar (Bălan 2019, figs. 3.12, 4.1, 5.1), Tărtăria–Podu Tărtăriei vest (Borş, Rumega-Irimuş 2017, fig. 14.1–3), Giroc–Mescal (Gogâltan 1996, abb. 7.1–3, 8.3–4), Ravna–Bojište and Brestovacka Banja (Kapuran 2014, tab. 25.1–2), Felix Romuliana (Kapuran 2014, tab. 25.26, 33), Gradina na Bosutu (Medovič, Medovič 2010), Kalakača (Medovič 1978, sl. 46.3) etc. Stamped rows of S^{es} or tiny false cord ornaments, organized as oblique sheaves appeared at Giroc (Gumă 1993, XLI.1), Vajuga–Pesek (Popovič, Vukmanovič 1998, pl. 15) etc.

Another recognizable shape among the EIA pottery sherds from Vrashka chuka are amphora-shaped vessels – long neck, spherical body and handles. The sherds found in the EIA features correspond to one of the most popular shapes during the EIA used for liquids (Stoyanov 1997, 63; Nekhrizov 2008, 118–119; Dimitrova 2014, 17 with reference).

The sherds from amphora-shaped vessels from Vrashka chuka are few but their decoration is noteworthy. A close parallel to the vessel decorated with wide grooves from structure 33 (fig. 16.3) are known from the cemetery Vajuga–Pesek. According to the authors amphora-shaped vessels with high neck decorated with horizontal channels found at the cemetery are typical for the horizon Gornea–Kalakača (Popovič, Vukmanovič 1998, pl. 33.6). Of special interest is also a sherd from structure 27 (fig. 10.7) decorated with incised zig-zag lines. Similar decoration appeared at Dejani,

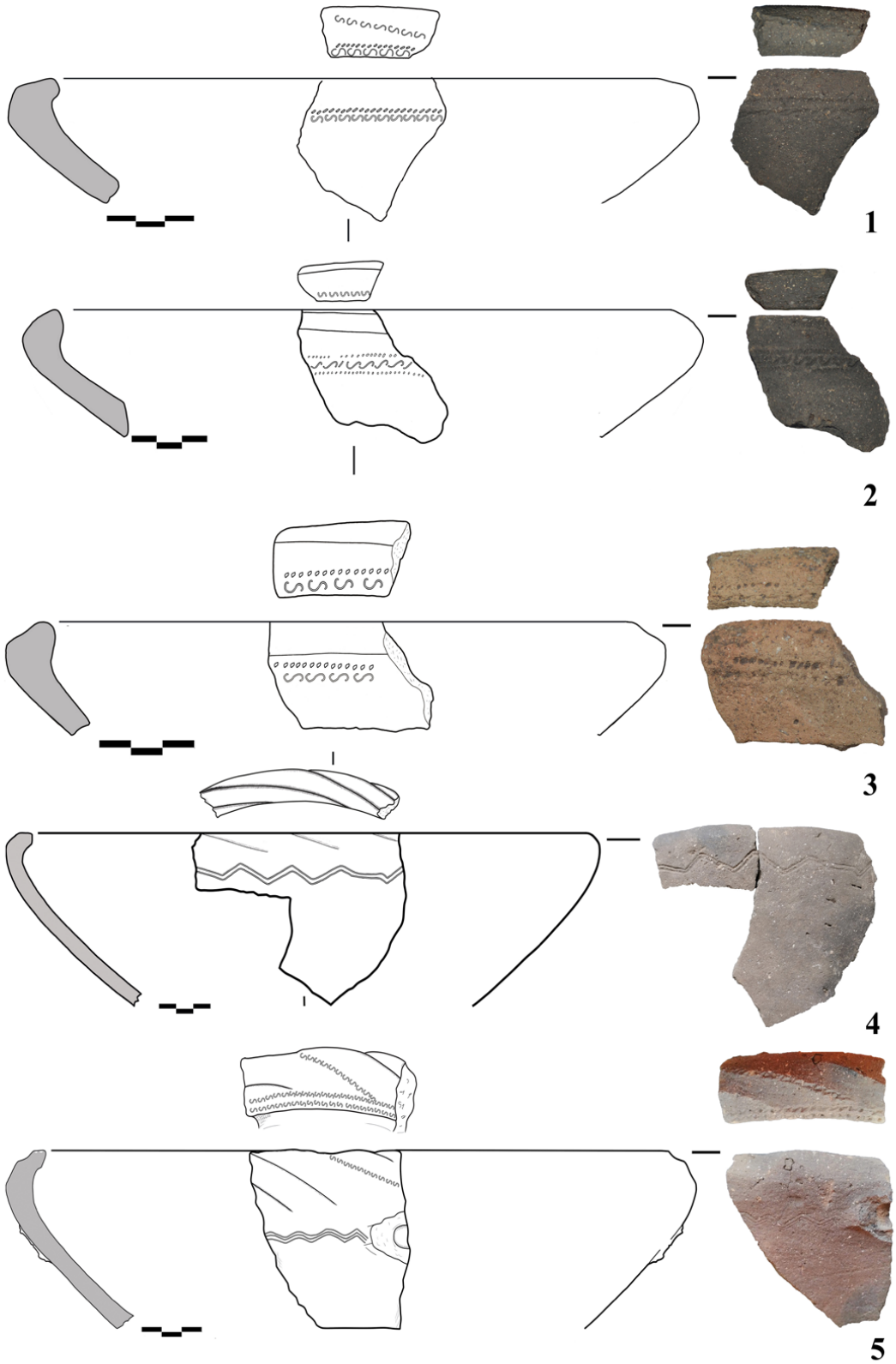


Fig. 14. Pottery sherds from feature 27 (drawings V. Georgieva, Z. Vasileva, photos Z. Vasileva)
Обр. 14. Керамични фрагменти от структура 27 (рисунки В. Георгиева, Ж. Василева, снимки Ж. Василева)

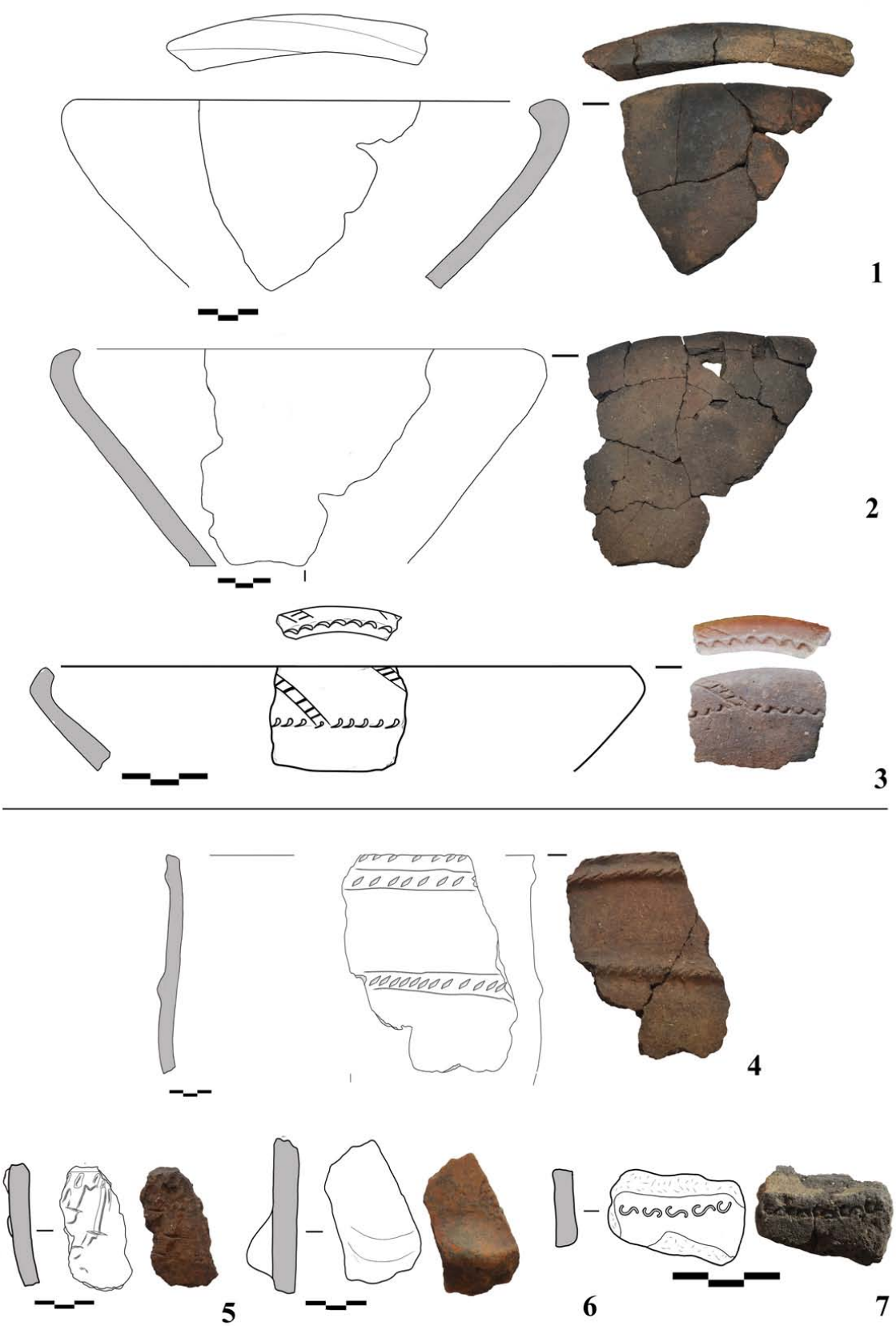


Fig. 15. 1–3. Pottery sherds from feature 27; 4–7. Pottery sherds from feature 39 (drawings and photos Z. Vasileva)

Обр. 15.1–3. Керамични фрагменти от структура 27; 14–7. Керамични фрагменти от структура 39 (рисунки и снимки Ж. Василева)

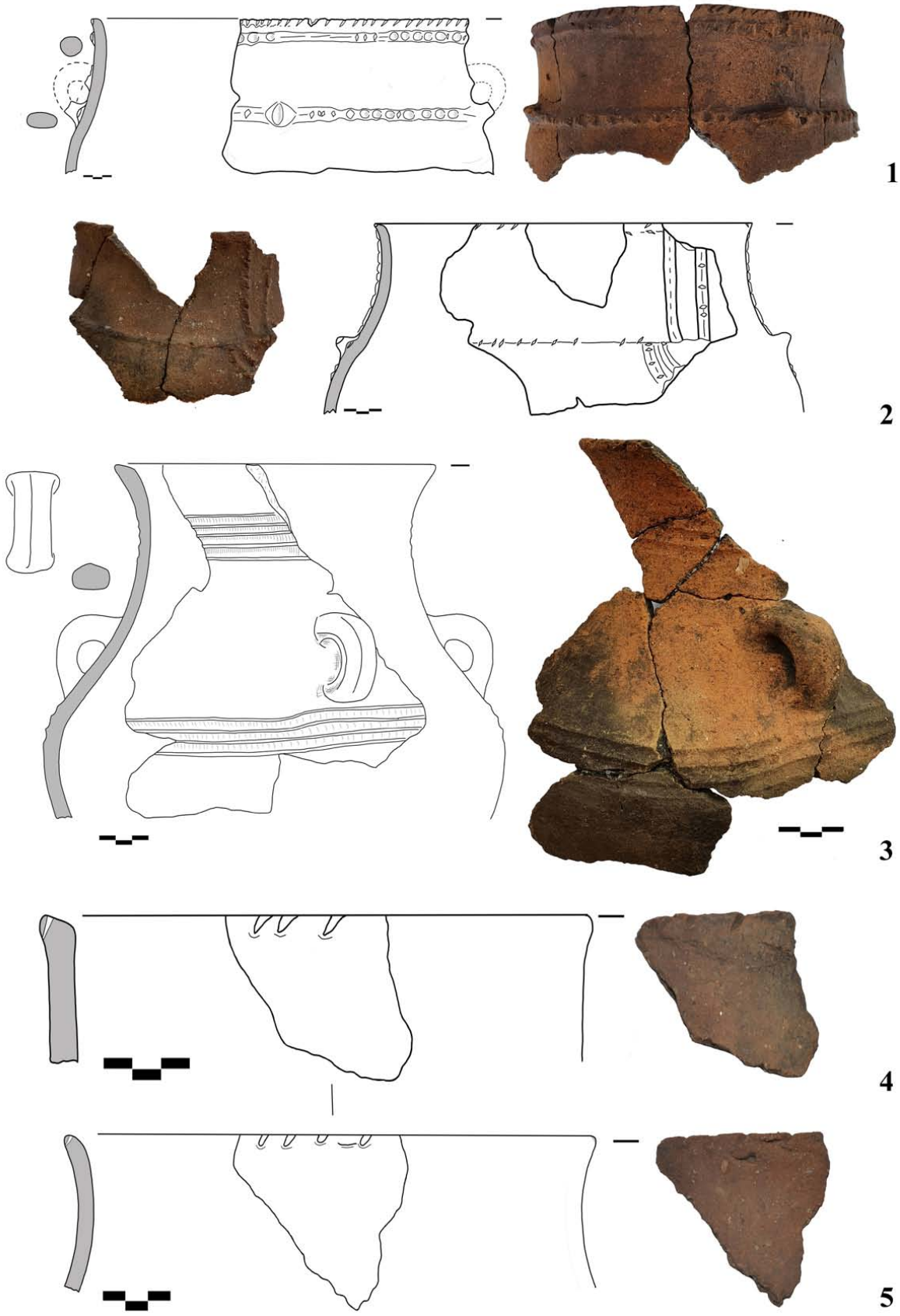


Fig. 16. Pottery sherds from feature 33 (drawings V. Georgieva, Z. Vasileva, photos Z. Vasileva)
Обр. 16. Керамични фрагменти от структура 33 (рисунки В. Георгиева, Ж. Василева, снимки Ж. Василева)

Giroc and Satchinez (Gumă 1993, pl. XL.5; XLV.2–3, 6–7), Giroc–Mescal (Gogâltan 1996, abb. 9.1), Tărtăria–Podu Tărtăriei vest (Borş, Rumega-Irimuş 2017, fig. 16.2); Kostolac (Jevtič 1983, t. II.6), Boljetin (Jevtič 1983, t. IV.7–8), Gradina na Bosutu IVa and IVb (Medovič, Medovič 2010, sl. 27b.4, sl. 78.1), Asfaltna baza (Petrović 2010, pl. 15.5), Kalakača (Medovič 1988, figs. 28.3; 60.5; 83.1; 87.2; 142.1; 144.2, 164.1) etc.

Amphora-shaped vessel appeared also in structure 26 (fig. 8.17) and from the EIA layer (fig. 19.1) decorated with triangles, filled with oblique lines. The analogies are Felix Romuliana (Kapuran 2008, sl. 7.3), Gradina na Bosutu IVa (Medovič, Medovič 2010, sl. 27b.21), Asfaltna baza (Petrović 2010, pl. 10.31, pl. 15.9), Kalakača (Medovič 1988, fig. 13.3), Kostolac (Jevtič 1983, t. III.1), Gelmar (Bălan 2019, fig. 5.1), Tărtăria–Podu Tărtăriei vest (Borş, Rumega-Irimuş 2017, fig. 20.1), Giroc–Mescal (Gogâltan 1996, abb. 8.1, 11.2) etc.

Pottery sherds from coarse (kitchen) ware are among the most numerous at Vrashka chuka. The sherds belong to typical for the EIA repertoire – storage vessels with S profilation or in the form of an upside-down bell. The plastic decoration is often placed in the upper part of the vessels – below the rim or at the transition between the neck and the body. It is presented by horizontal plastic band with oblique incisions (figs. 8.1–5; 9.1–9; 10.1–3; 18.1–8), combination of horizontal and vertical plastic bands with incisions (figs. 9.1; 10.3), conical knobs, included in the plastic band (figs. 8.8; 16.1) or horizontal plastic band with finger impressions (fig. 6.1–3). Similar vessels appeared at Felix Romuliana (Kapuran 2008, sl. 5.1–5), Vajuga–Pesek (Popovič, Vukmanovič 1998, pl. 14.1; pl. 32), Gradina na Bosutu IVa and IVb (Medovič, Medovič 2010, sl. 27b.4), Kalakača (Medovič 1978, sl. 80.5), Giroc (Guma 1993, XLI.4), Asfaltna baza (Petrovič 2010, pl. 28.9, pl. 59.3) etc.

Decoration patterns and parallels of the pottery from site 1/1000

The relatively modest repertoire of pottery shapes and the fragmentary condition was enhanced significantly by the various ornamental techniques and motifs (fig. 20). The decoration on the vessels at Vrashka chuka is made through incision, stamping and grooving. The incised motifs are presented by:

(a) incised horizontal lines, usually marking the transition between the neck and the body (figs. 6.10–12; 12.2).

(b) incised oblique lines (fig. 12.1).

(c) short oblique incised cuts (fig. 8.17).

(d) vertical incised lines, filled with small incised triangles (fig. 8.13).

(e) incised wavy lines (figs. 8.16; 12.10) or zig-zag lines (figs. 10.7; 12.5–9; 19.5) and one case incised vertical lines (fig. 17.5).

(f) triangles, filled with oblique lines (figs. 8.17; 19.1–6).

(g) parallel lines, arranged as garlands (fig. 6.9–10).

(h) short cuts on the rim (fig. 16.4–5).

The stamped decoration on the vessels is presented by a row of flowing unconnected S^{es} stamps (figs. 8.15; 11.6; 18.11; 19.3–4;). Pseudo-cord motifs appeared as a single row (fig. 17.3–4) or in combination with stamped S^{es} (fig. 11.7–9). It is suggested that this type of ornamentation was executed with special tool made of clay or bone (Jevtič 1993, 113) and every tool has its unique shape (Nekhrizov 2005a, 11). Tools for decoration were not found during the excavations of site 1/1000 but such kind of instruments are known from other EIA sites in Romania (Laszlo 1969, fig. 1.4; Hänsel 1976, taf. 43,1–3, 5–7; Vulpe 1986, 31, abb. 8/8; Morintz 1987, fig. 11/2), Serbia (Stojiћ 1980) and Bulgaria (Nehrizov 2005b with reference).

The most numerous pottery sherds from Vrashka chuka are the sherds from slightly conical or

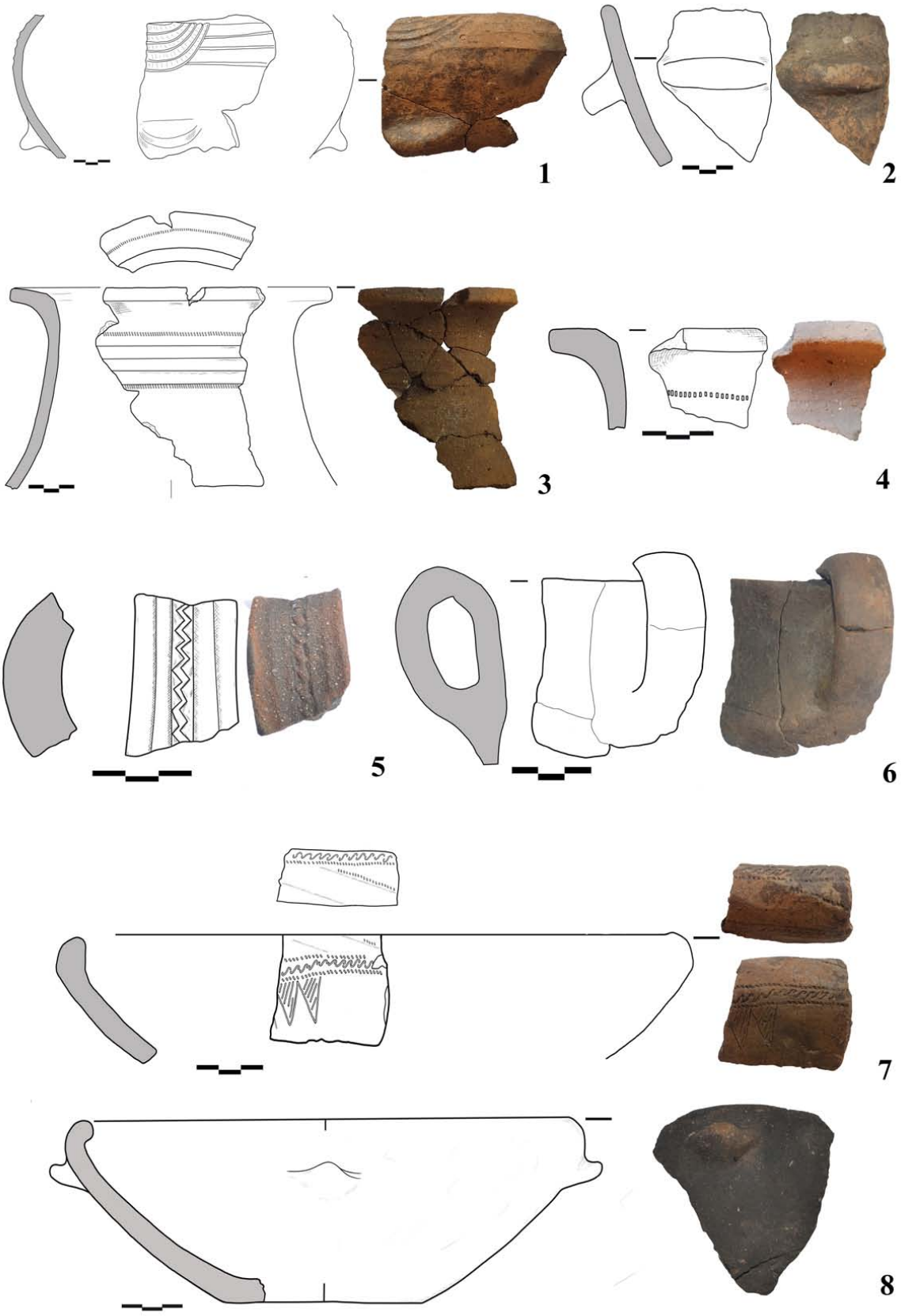


Fig. 17. Pottery sherds from feature 33 (drawings V. Georgieva, Z. Vasileva, photos Z. Vasileva)
Обр. 17. Керамични фрагменти от структура 33 (рисунки В. Георгиева, Ж. Василева, снимки Ж. Василева)

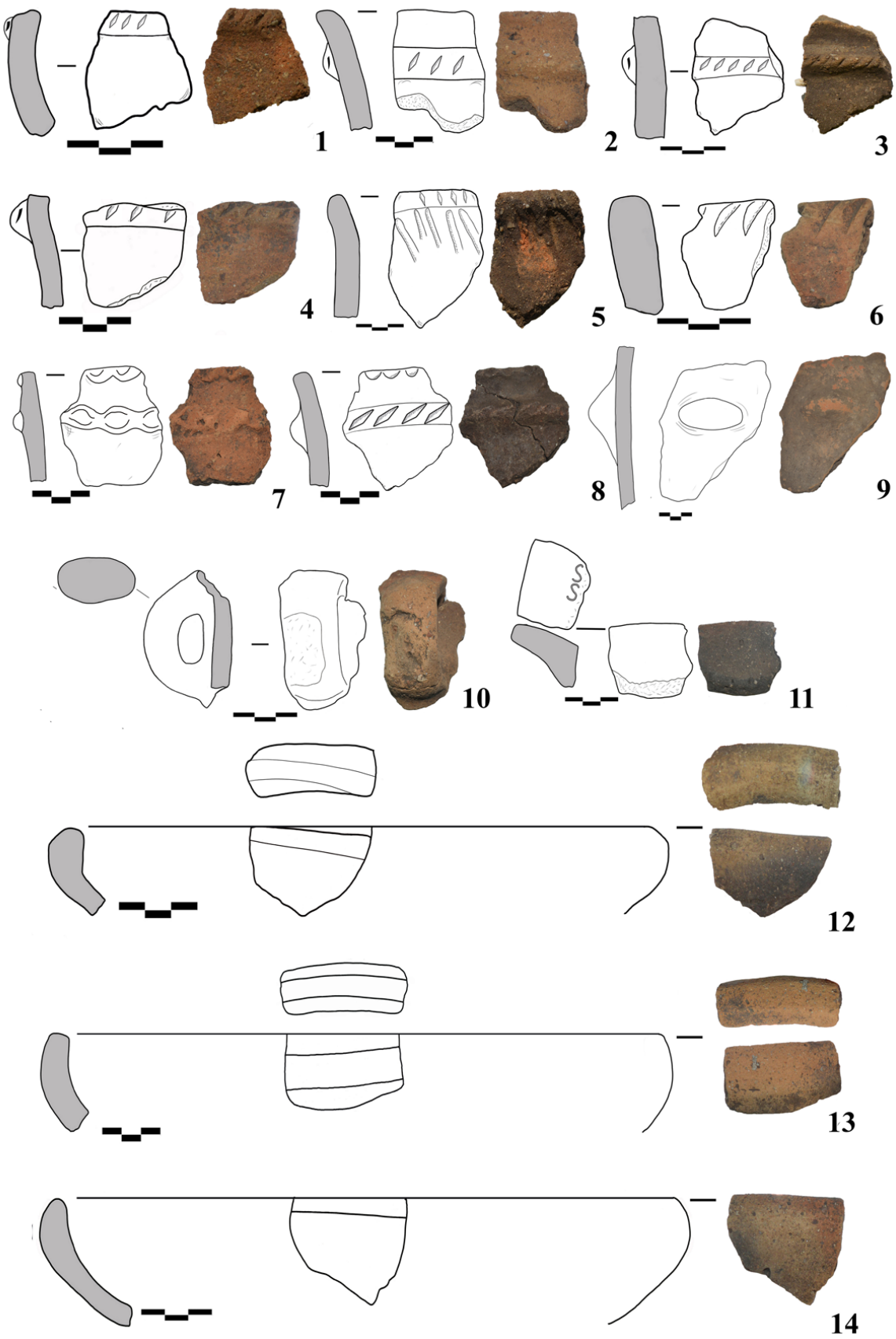


Fig. 18. Pottery sherds from the EIA layer (drawings and photos Z. Vasileva)
Обр. 18. Керамични фрагменти от РЖЕ пласт (рисунки и снимки Ж. Василева)

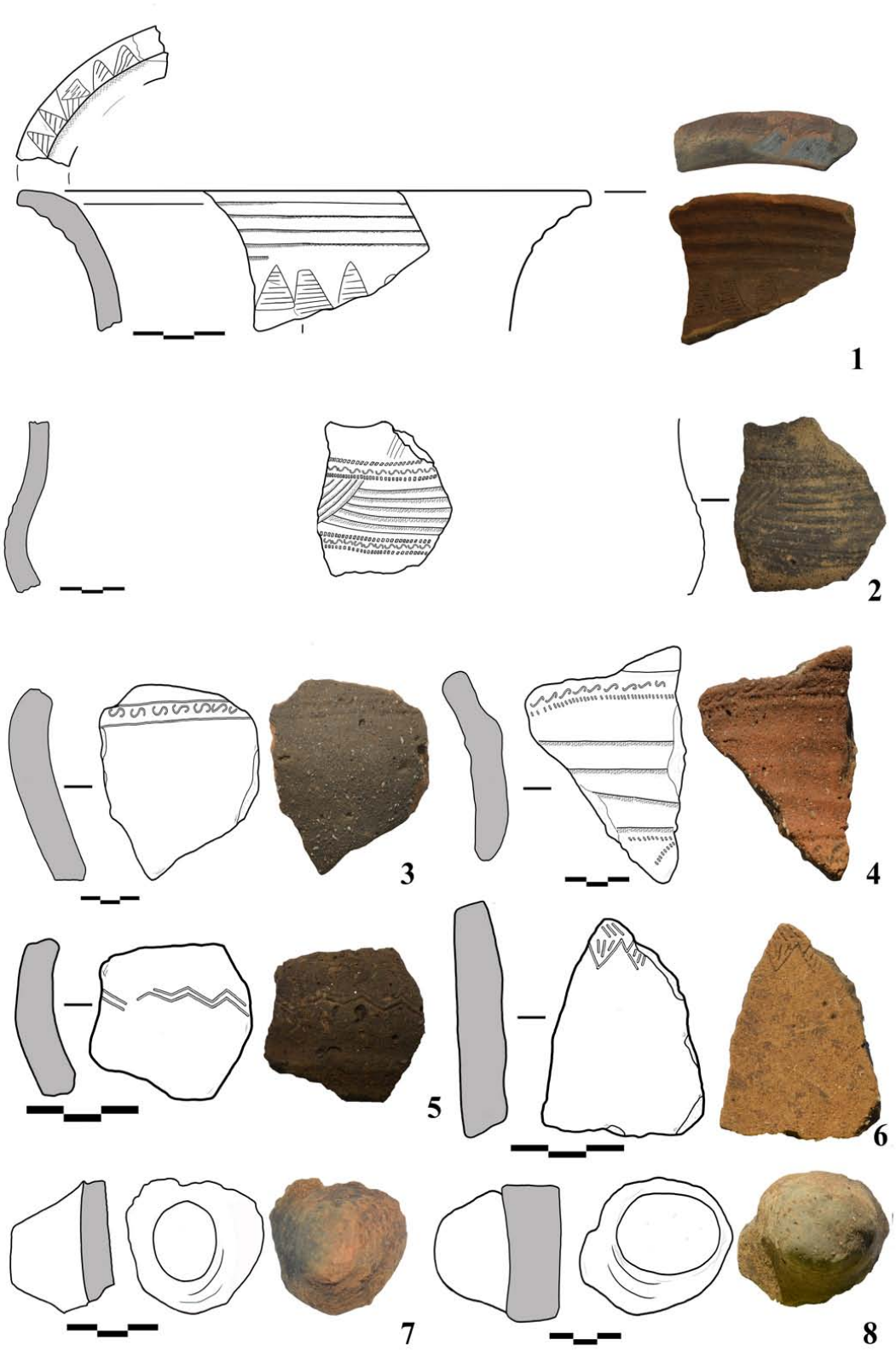


Fig. 19. Pottery sherds from the EIA layer (drawings V. Georgieva, Z. Vasileva, photos Z. Vasileva)
Обр. 19. Керамични фрагменти от РЖЕ пласт (рисунки В. Георгиева, Ж. Василева, снимки Ж. Василева)

spherical bowls with inverted rim decorated with fluting, faceting, incised and stamped decoration. The upper part of the bowls with inverted rim found at Vrashka chuka is often decorated with:

(a) narrow horizontal or oblique channels (fig. 13).

(b) stamped rows of S^{es} or tiny false cord ornaments, organized as oblique sheaves (fig. 14).

(c) channels combined with incised wavy lines (fig. 14.4).

(d) channels, stamped S^{es} and incised wavy lines (fig. 14.5).

(e) channels, stamped S^{es}, pseudo-cord ornaments and incised triangle filled with oblique lines (fig. 17.7).

The plastic decoration is often placed in the upper part of the vessels – below the rim or at the transition between the neck and the body. It is presented by:

(a) horizontal plastic band with oblique incisions (figs. 8.1–5; 9.1–4, 9; 10.1–3; 18.1–6).

(b) combination of horizontal and vertical plastic bands with incisions (figs. 9.1; 10.3).

(c) conical knobs, included in the plastic band (figs. 8.8; 16.1).

(d) horizontal plastic band with finger impressions (fig. 6.1–3).

Concluding remarks

Our knowledge regarding the level of organization of the settlement pattern of the isolated hight Vrashka chuka is still too fragmented and far from providing complete picture about the settlement system. The archaeological excavations in the region are the first step towards addressing this issue. Together with future field surveys, the materials presented here will help to elucidate the EIA settlement pattern. Based on the features from the excavated area of site 1/1000 we suggest that the site is a single-layer settlement. The absence of thermal facilities, traces of destructions and house inventory suggests that the investigated features have seasonal, temporary characteristic. Nevertheless, we must emphasize once again that these observations are based only on the excavated area and future excavations of the site can provide more information about the habitation during the EIA.

The pottery sherds from features № 26, № 33 and the only dug-into structure № 37 in Vrashka chuka bear the stylistic traits of the Gornea–Kalakača horizon. The pottery sherds from feature № 27 bears characteristics of late Kalakača group, or early Basarabi group.

M. Gumă dates the Gornea–Kalakača group to the Ha B2-B3 phases. Besides the fluted and faceted ornamentation on the turban-shaped bowls and the conical knobs, another specific element of the fine pottery of Gornea–Kalakača, according to the author, is also the incised ornamentations. During the final stage of Gornea–Kalakača some stamped ornamentations has appeared, too, due to the connections with the group of Insula Banului type, and according to M. Gumă, due to the appearance of the earliest elements of Basarabi type (Gumă 1993; 1995, 113). The research on the Basarabi phenomenon confirms the opinion of most of the researchers that three cultural traditions contributed to its formation. These are Gornea–Kalakača with incised decoration, Insula Banului with stamped decoration and Gava–Medias with plastic ornamentation (Zverev 2001–2002, 252–253).

R. Vasic assumes that the Iron Age in Eastern Serbia has three phases – first, represented by the pottery of Kalakača–Basarabi group (combination of channels and S motifs with white incrustation), second, consisting of metal imitations of the Basarabi pottery group, and third comprising finds connected with the Ferigile group in Oltenia (Vasić 1997, 95). The largest number of settlements in north-eastern Serbia and the Iron Gates hinterlands belong to late Kalakača group, or early Basarabi group, which has, it seems, emerged in Oltenia and Northwest Bulgaria (Kapuran 2014, 84 and cited literature), and in the case of this study, at site 1/1000 at the foot of Vrashka chuka.

When the results from excavations and field surveys of other EIA sites are published, our knowledge about lifeways in Northwest Bulgaria during this period will be significantly enriched.

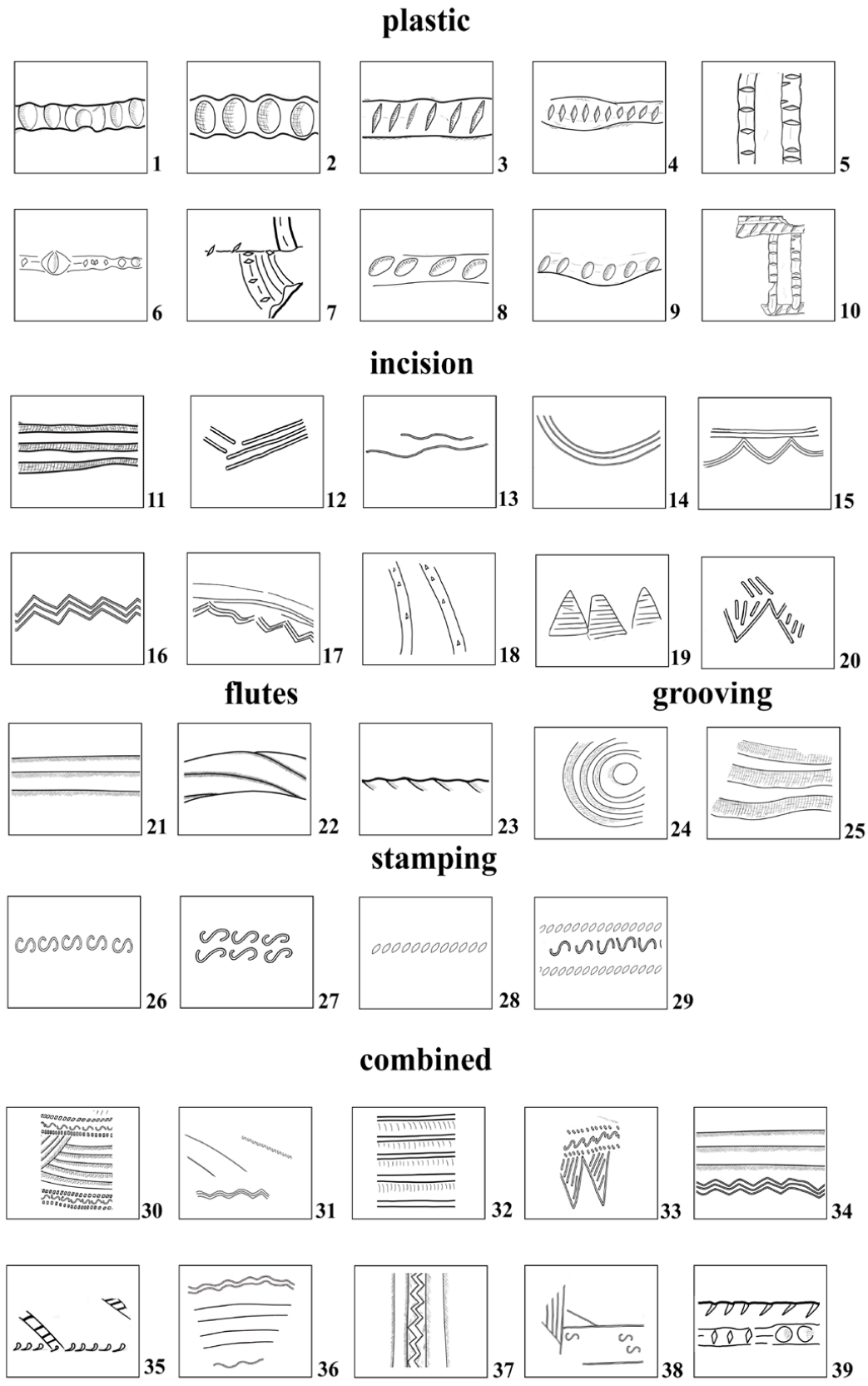


Fig. 20. Decoration patterns of Vrashka Chuka EIA pottery sherds (author Z. Vasileva)
Обр. 20. Декоративни мотиви на РЖЕ керамични фрагменти от Връшка чука (автор Ж. Василева)

The EIA pottery assemblage from Vrashka chuka sheds a new light to the studies of the EIA in Northwest Bulgaria and places one so far unknown site on the archaeological settlement map.

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Керамичен комплекс от ранножелязната епоха от обект 1/1000 в подножието на Връшка Чука, Северозападна България

Жени Василева

(резюме)

Статията представя керамичен материал от ранната желязна епоха (РЖЕ), открит по време на спасителни археологически проучвания по трасето на изграждащият се газопровод между България и Сърбия. Обект 1/1000 в землището на с. Извор махала, община Кула, област Видин е разположен в подножието на изолираната планина Връшка чука. По време на спасителните археологически проучвания през 2019 г. са проучени структури от средната бронзова епоха, ранната желязна епоха, римски период и късно средновековие.

Статията представя керамичния материал от проучените структури (№ 26, 27, 33, 37 и 39), както и керамиката, открита в запазеният пласт от РЖЕ. Въз основа на характеристиките на проучените структури – струпвания от керамични фрагменти и камъни, липсата на запазени термични съоръжения, липсата на останки от деструкции и жилищен инвентар може да се предположи, че проучените структури са съоръжения с временен, сезонен характер.

Структура № 37 е единствената вкопана структура. Керамичният материал е представен от фрагменти от гърнета с украса от релефни ленти, паници с извит ръб на устието и украса с коси канелюри, съдове с украса от врязани линии, оформящи гирлянди. По време на проучванията е взета и 14C проба с резултат 1005–889 пр.Хр. (86.1%) и 881–846 пр.Хр. (9.3%).

Останалите структури, както и пластът от РЖЕ, са представени от фрагменти, характерни за периода късна Горнеа–Калакача – ранна Басараби. Най-често гърнетата са украсени с пластични хоризонтални или вертикални ленти с коси врязвания. Най-характерният елемент от украсата на съдовете са щамповани S-ове, самостоятелно или в комбинация с украса от псевдошнур, врязания и т.н. Често срещани са и фрагменти с врязани вълнообразни линии. Най-интересната категория съдове са характерните за цялото РЖЕ паници с извит ръб на устието. Устието на паниците е украсено от коси канелюри, в някои случаи и в комбинация с щамповани S-ове и т.нар. фалшив шнур.

Представеният в статията керамичен материал от проучванията на Връшка чука дава нова ценна информация за развитието на РЖЕ в този район, период, който все още остава слабо проучен.

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Contextualizing rare shapes of Athenian Kerameikos from coastal and inland Thrace (6th–4th c. BC): an approach through the AtticPOT repository

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ABSTRACT

Although Attic pottery is found even at the edges of the ancient world, different geographic areas constituted different markets, thus Attic production was to fulfil various needs. Shapes seen in context has always been a fundamental way of tracing the interrelation between ancient markets and the production of Athenian Kerameikos. However, not all shapes share the same popularity. And although studying those that come in large numbers is the first and understandable impulse, tracking the distribution of rare shapes in space as well as time can also be very fruitful. For more than three years the team of the project Attic POttery in Thrace (AtticPOT; http://atticpot.athenarc.gr/) has recorded and studied a substantial part of the published Attic figured pottery dated between the 6th and the 4th c. BC, from numerous sites of ancient Thrace. With this article, we aim to outline the spatial as well as temporal distribution of shapes that appear with 20 items or less (vessels or sherds) in the extensive geographic area covered by ancient Thrace and to study them within their contexts. In this effort, we will use all the tools provided by our digital repository and the archaeological GIS laboratory of the Athena R.C. (http://aegis.athenarc.gr/).

KEYWORDS

Attic pottery, ancient Thrace, AtticPOT, context, pottery distribution

1. Introduction

AtticPOT [Attic PO(ttery in) T(hrace)] is a research project aiming to examine various aspects of the Athenian presence in Thrace, in the period between the 6th and the 4th c. BC through the study of published Attic figured pottery (http://atticpot.athenarc.gr/). For this reason, a digital repository was developed with access for researchers (https://atticpot.athenarc.gr/repo/el/), which is equipped with tools for measuring and visualisation of the spatial and temporal distribution of the recorded vessels, and which is also able to process huge numerical data (Tsiafaki et al. 2020). More specifically, thanks to the search engine that allows the creation of smaller collections within the repository's material, our team can formulate complex queries using a combination of criteria (fig. 1) that enables grouping pottery with specific features, whereas the digital map provides an instant first glimpse on the distribution of such groups in our area of interest. Furthermore, the statistical analysis tool allows

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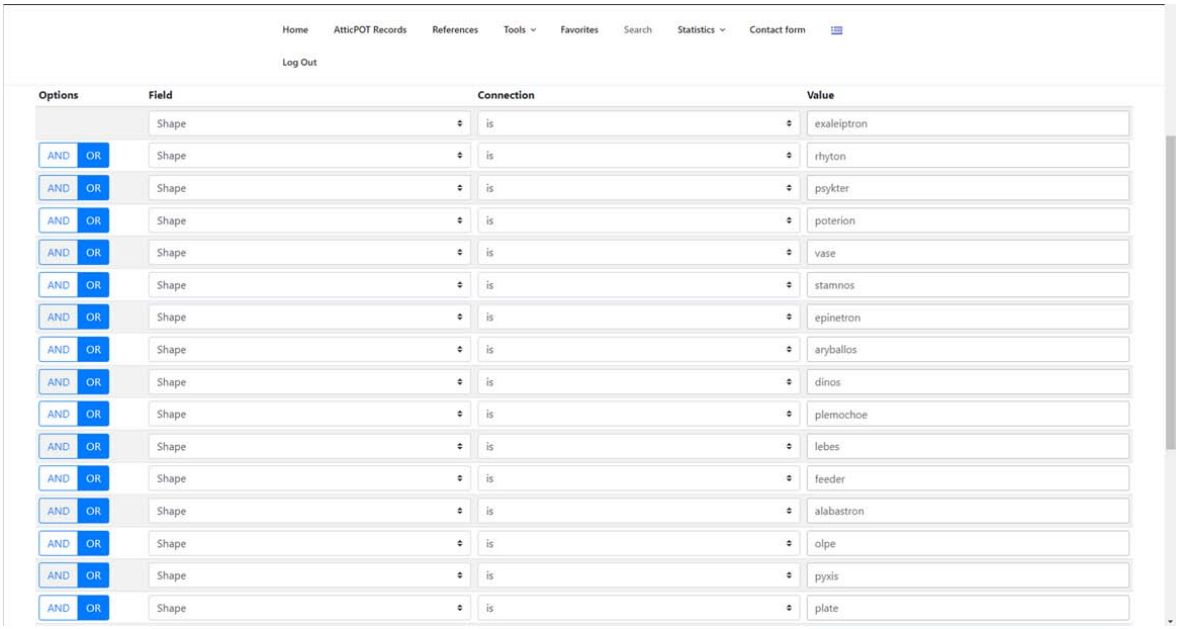


Fig. 1. Creation of a collection using advanced query in the search engine of AtticPOT
Обр. 1. Създаване на колекция чрез разширена заявка в търсачката на AtticPOT

to test one or two variables within the group in question or even the whole collection of AtticPOT repository (Michailidou et al. forthcoming).

Various aspects of the pottery recorded in AtticPOT have been studied in the last three years (Chioti et al. 2019; 2021; Tsiafaki, Avramidou 2021; Tsiafaki et al. forthcoming a; b). During this period, apart from the AtticPOT repository itself, the ARENA (Archaeological REsearch in the North Aegean) bibliographical repository has been proven as another very useful digital tool, especially on topics concerning the Aegean Thrace. Some of the early results of our study pointed to the limited number of shapes that reached in large numbers the sites of Ancient Thrace (fig. 2), whether coastal or inland. Therefore, part of AtticPOT's publications concerned topics around popular shapes, sites with large quantities of Attic pottery and their contexts. In order to define trends and preferences, however, it is equally important to investigate the less popular shapes or even their absence, although the latter is problematic as it can lead to arguments ex silentio. Thus, the discussion of selected rare shapes produced at the Athenian Kerameikos and brought to Ancient Thrace is the subject of this article. In particular, we will examine the presence of alabastra, aryballoi, askoi, kantharoi, oinochoae, olpae, various types of plastic vases, plates, pyxidae and rhyta. Here we do not deal with vases and shapes that appear to be special orders, like for example, the well-known mugs from Apollonia and Karnobat (Zimmermann 1981, 73–81; Lezzi-Hafter 1997, 353–369; Georgieva 2005, 32–40; 2009, 253–261; Oakley 2009, 66–74; Bozkova 2017, 49, 165 plt 8.4), which we have already discussed elsewhere (Tsiafaki 2021, 253–255) or the oversized vessels that appear sporadically in the region (Reho 2019; Vasileva 2019; Avramidou 2022, 197–198; Jiang 2022, 248–249; Tsiafaki 2022, 65).

2. Spatial and temporal distribution: some preliminary remarks

Before proceeding with analysis and interpretation, we ought to answer one simple question: what do we mean by "rare" when referring to shapes? Naturally, "rare" refers to those shapes that appear in small numbers within the geographic area of Thrace, but apart from that the choice for the rest of the sample is somewhat arbitrary: we chose shapes that seem to appear with less than 20

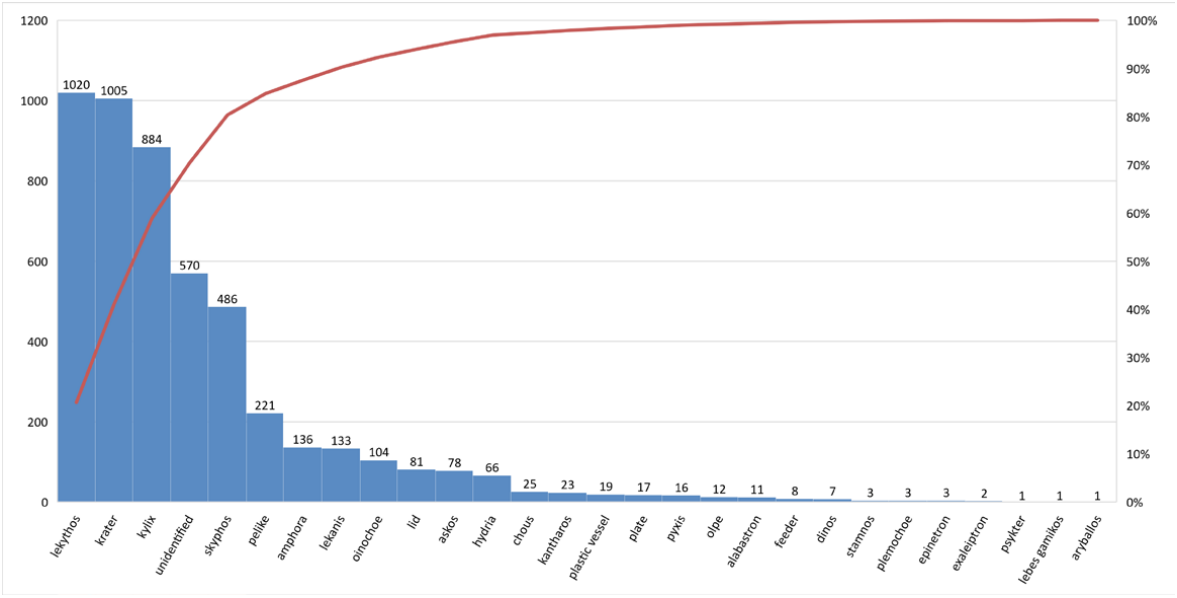


Fig. 2. Pareto chart of the allotment of shapes within the whole collection of AtticPOT (6th–4th c. BCE); data extracted 25/5/2022

Обр. 2. Диаграма на Парето за разпределението на формите в цялата колекция на AtticPOT (VI–IV в. пр.Хр.); данните са извлечени на 25/5/2022

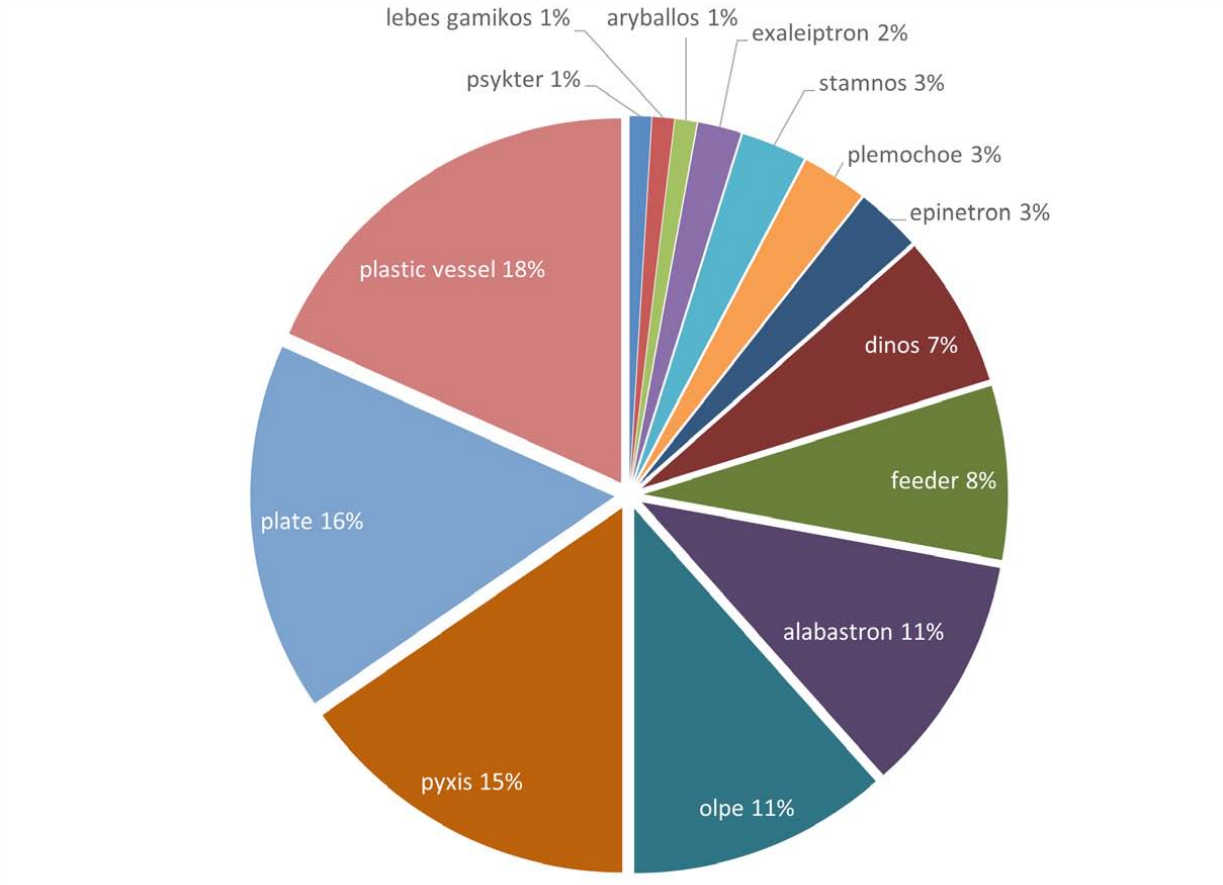


Fig. 3. Distribution of rare shapes recorded in AtticPOT repository (6th–4th c. BCE); data extracted 25/5/2022

Обр. 3. Разпространение на редки форми, записани в архива на AtticPOT (VI–IV в. пр.Хр.); данните са извлечени на 25/5/2022

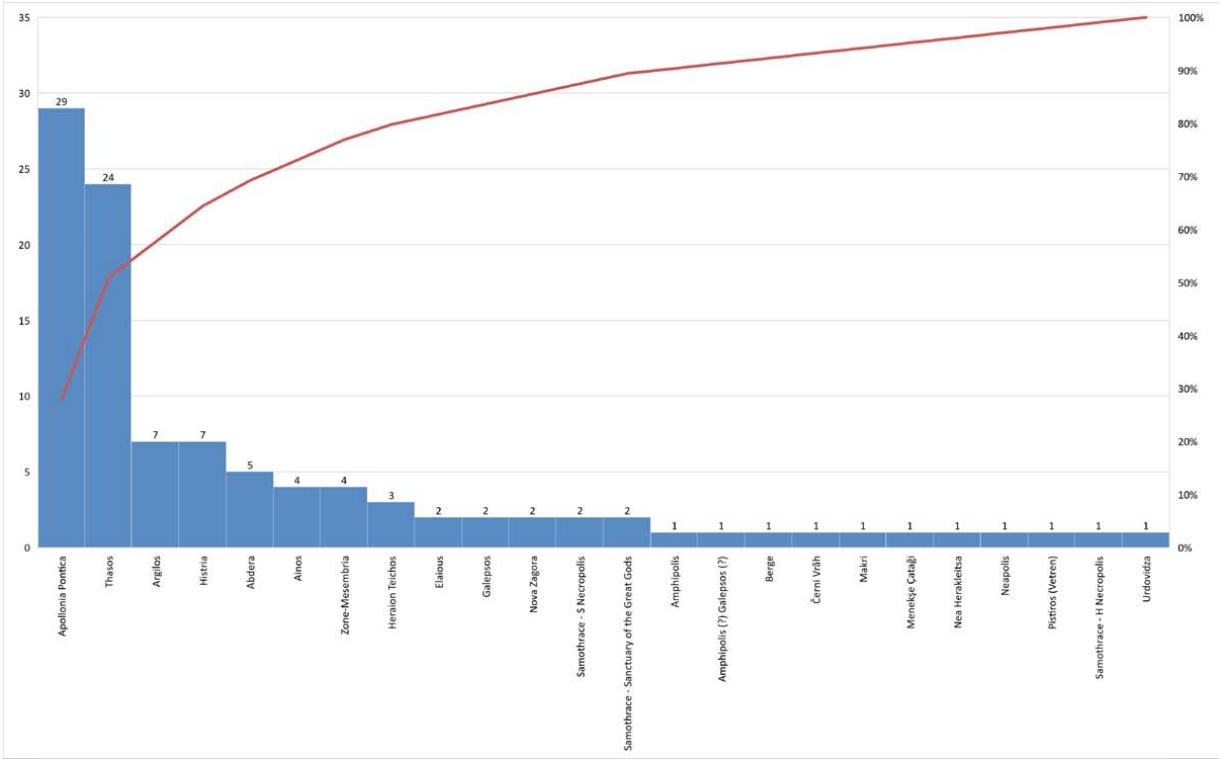


Fig. 4. Pareto chart of the distribution of the recorded rare shapes among sites of ancient Thrace (6th–4th c. BCE); data extracted 25/5/2022
Обр. 4. Диаграма на Парето за разпределението на регистрираните редки форми сред обекти от древна Тракия (VI–IV в. пр.Хр.); данните са извлечени на 25/5/2022

samples. If we take a closer look at the up-to-date collected data, it becomes obvious that our selection is not totally unsound, since there seems to be a borderline around the numbers 24 and 16 (fig. 2). Interestingly, the shapes that appear to be rare in our study, also appear in small numbers in the ancient world more generally. They feature scarcely, if at all, in many overviews (Bozkova, Vasileva 2022, 270–274; Damyanov 2022, 292–302; Palaiothodoros 2022). However, a comparison with the Beazley Archive Pottery Database (BAPD) shows that, although the shapes discussed below are also in small numbers there, there are a few vessel forms that could be assigned to the same category, but without known representatives from Thrace so far (basket, bobbin, mastos, oon, phormiskos, etc). Some of the shapes discussed below (exaleiptron, lebes, olpe, plastic rhyton, plemochoe, stamnos), dated to the 6th and 5th c., are also found in various sites around the Thermaic Gulf. Chalkidiki, as well as various other parts of Macedonia have their share of Attic plastic vases: olpae dated between the end of the 6th and early 5th c. BC, white ground alabastra (along with lekythoi) of the 5th c., plastic vases of the 5th and 4th c. etc. (Attika Angeia 2016; Manakidou 2022, 388–395).

It is noteworthy that it is immediately apparent that even within this small group assembled as described above, more than half of the material is represented by five out of seventeen different shapes in total (fig. 3). The pattern is the same when it comes to the sites: a handful of sites provide most of the pots in this group (fig. 4).

Looking at the contexts, things seem to be simpler. As regards the material with known provenance, they almost exclusively come from sanctuaries, cemeteries and domiciles, with a substantial portion of vessels with unknown (or unpublished) contexts (fig. 5). The prevalence of cemeteries and sanctuaries seems to be almost the rule for the Attic pottery found throughout ancient Thrace, Aegean, Eastern or Northern (Avramidou, Tsiafaki 2015, 112–132; Tsiafaki, Avramidou 2021, 107–108;

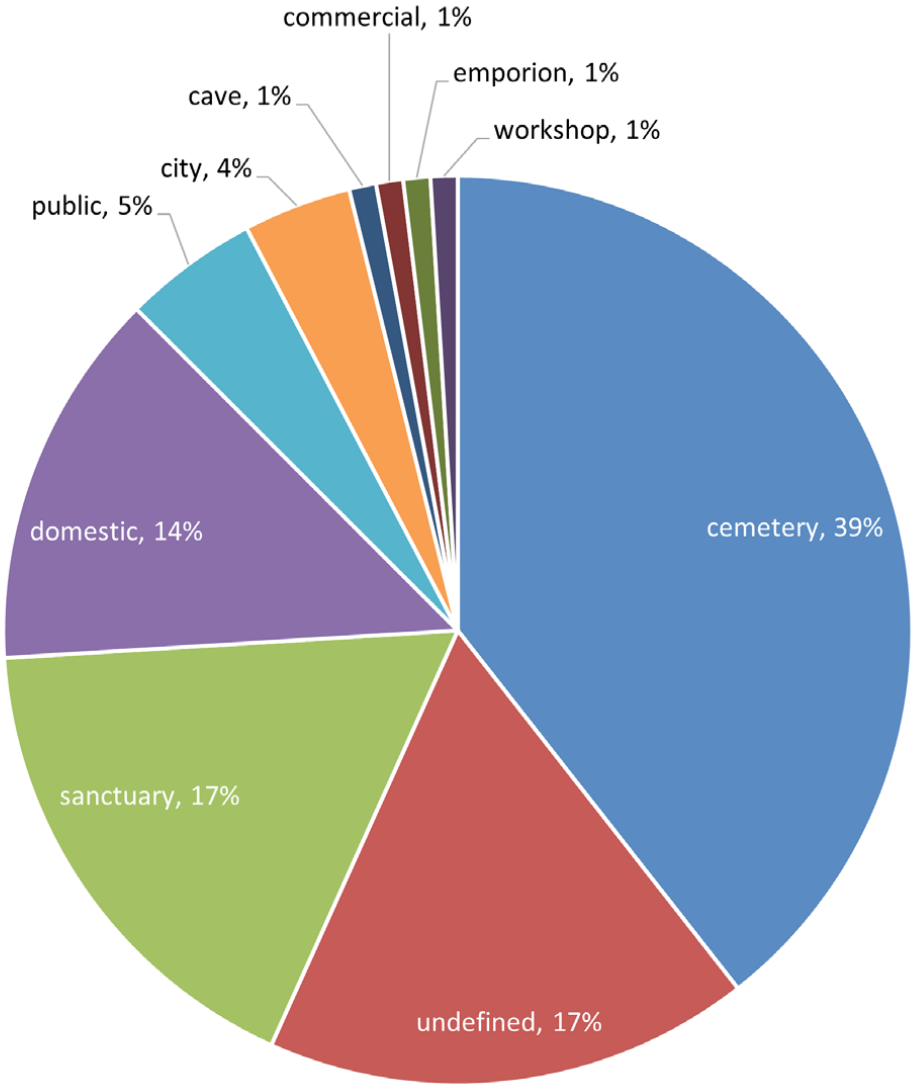


Fig. 5. Percentage distribution of contexts with rare shapes recorded in the AtticPOT repository (6th–4th c. BCE); data extracted 25/5/2022
Обр. 5. Процентно разпределение на контексти с редки форми, записани в архива AtticPOT (VI–IV в. пр.Хр.); данните са извлечени на 25/5/2022

Michailidou 2022, 47–48; Mourthos 2022, 83–96; Tsiafaki 2022, 62–65; Avramidou, Tsiafaki forthcoming; Tsiafaki, Avramidou forthcoming; Tsiafaki et al. forthcoming a; b).

As expected, the more intense the presence of Attic pottery is at a site, the more diverse shapes can be detected (fig. 6). Furthermore, the connection between shapes and contexts seems to be more a matter of function and less a matter of numbers (fig. 7). Those observations initiate discussions on the topic, while having in mind that any conclusions based on the known published data are subject to change if new publications and material come to light.

The combination of the intra-site distribution and contexts with the variable of time (6th–4th c. BC), results in rather complex connection of all the criteria (figs. 8–9). The same, quite complex, pattern appears when trying to map all this information (figs. 10–12). Thus, what follows is an attempt to disentangle this complexity by focusing on the different case-studies that emerged by our brief overview of the data.

In the following pages we will attempt to outline the current situation regarding the distribu-

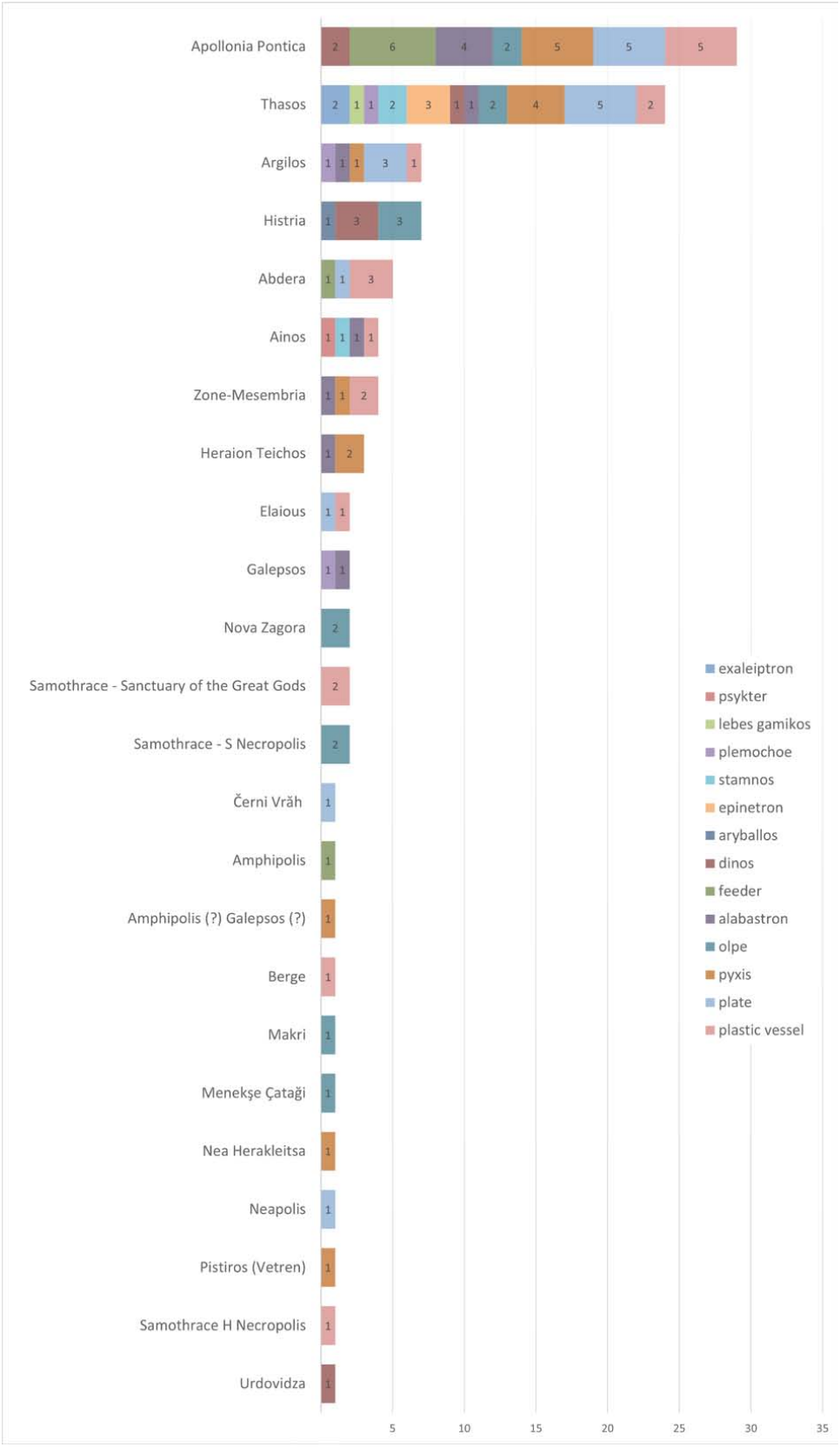


Fig. 6. Stacked bar chart presenting the relation between sites and the number of rare shapes recorded in AtticPOT repository (6th–4th c. BCE); data extracted 25/5/2022

Обр. 6. Обобщаваща диаграма, представяща връзката между обектите и броя на редките форми, записани в архива AtticPOT (VI–IV в. пр.Хр.); данните са извлечени на 25/5/2022

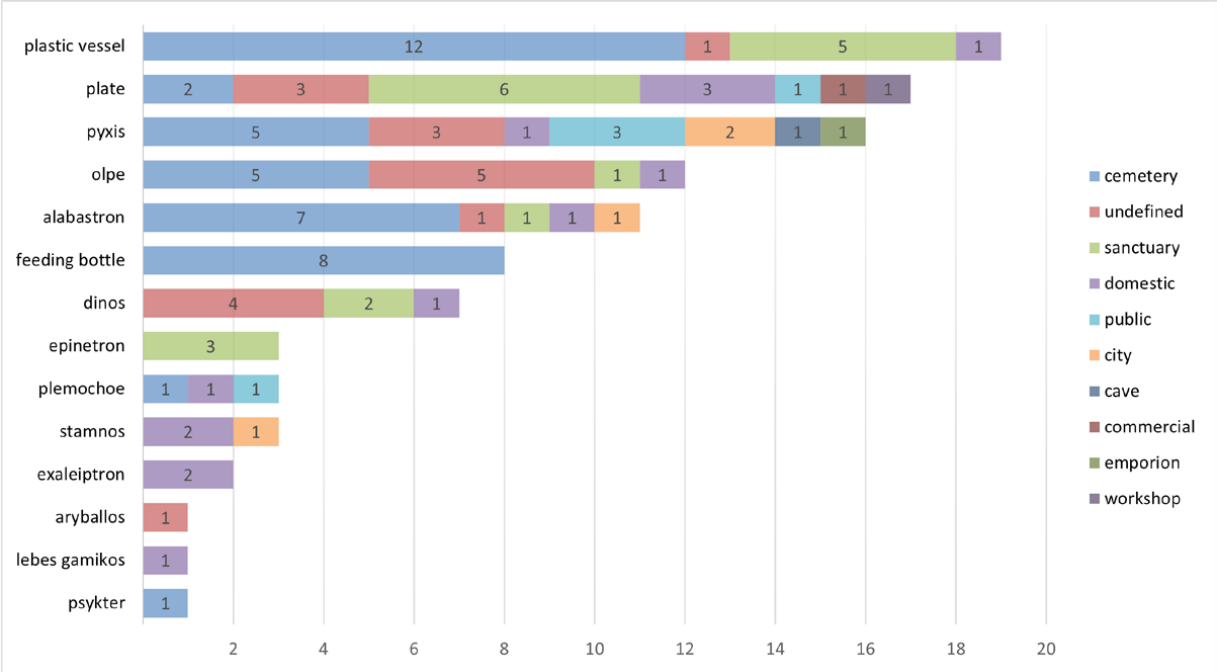


Fig. 7. Stacked bar chart presenting the relation between rare shapes recorded in AtticPOT repository (6th–4th c. BCE) and the different contexts they were found; data extracted 25/5/2022
Обр. 7. Обобщаваща лентова диаграма, представяща връзката между редки форми, записани в архива AtticPOT (VI–IV в. пр.Хр.) и различните контексти, в които те са открити; данните са извлечени на 25/5/2022

tion of those selected rare shapes in ancient Thrace. Their examination will be by shape and by finding place with an attempt to make preliminary observations on their context, where available.

3. Plastic vases (rhyta, aryballoi, oinochoae, kantharoi, askoi)

Plastic vases, a type of vessels with many variations that have been produced by Athenian potters since the last decades of the 6th c. BC (True 2006, 240–249), are among the shapes of Attic pottery that rarely found their way to Northern Aegean and usually not much further (fig. 10). Two vases dated to the transition between the 6th and the 5th c. BC and another one, probably a rhyton, dated to the middle of the 5th c. BC are known from a religious context, the Artemision on Thasos. One of them (BAPD 218399)[1] is attributed to Class G and London Class, the second (BAPD 2544) to London Class (Weill 1972), whereas the third one (BAPD 9016814), is considered to be from the Sotades workshop (Salviat 1967). Despite being "un lot non négligeable", the scarcity of these vases could be related, among other reasons, to their fine quality (Weill 1972, 141). The last vase, although very fragmentary, is the most interesting. It has the form of a crocodile eating an African youth and has a base in which is inscribed *ho krokodilos erasth(eis)* (= the crocodile in love). Plastic vases with "exotic" topics, a very Sotadean feature, have been found as far as the Near East and Italy (Lissarrague 1995, 7). The Sotadean mould that produced plastic rhyta depicting a crocodile devouring an African youth is also well known (Hoffmann 1997, 19–33; True 2006, 282–283 cat. no 86). Although they are regarded as representatives of the Otherness through the Greek eyes, in the case of Thasos,

1 Any reference to vases that is not followed by a BAPD vase number means that it was not found in the Beazley Archive Database.



Fig. 8. Sunburst chart presenting the relation among amount of pottery, sites, dating (in centuries), context and the five most numerous shapes of the pottery in question; data extracted 25/5/2022
Обр. 8. Слънчева диаграма, представяща връзката между количеството керамика, обектите, датировката (във векове), контекстите и петте най-многобройни форми на въпросната керамика; данните са извлечени на 25/5/2022

the graffito (in local script) allows a more insightful glimpse to the world of ancient humour and private jokes: the Thasian (?) who inscribed the comment probably paralleled the crocodile devouring the boy with a mythical scene such as the rape of Ganymedes (Salviat 1967, 99–101; Lissarrague 1995, 8). It appears, though, that this interpretation does not overrule a relation to the world of Dionysus, which seems to be implied by the iconography of the other known parallels and intended by Sotades and his workshop (Hoffmann 1997, 31–33).

Samothrace has its (small) share of plastic vessels. A sherd from a black-figure **rhyton** (Samothrace 51.870), dated to the second half of the 6th c. BC from the Hall of Votive Gifts can be added to this group (Lehmann 1962, 136, no 61, fig. 61), as well as an **almond shaped amphoriskos** (Samothrace 54.188) from the H Necropolis, dated around 400 BC (Dusenbery 1998, 445, no H7-3). The



Fig. 9. Sunburst chart presenting the relation among amount of pottery, sites, dating (in centuries), context and the rest of rare shapes; data extracted 25/5/2022

Обр. 9. Слънчева диаграма, представяща връзката между количеството керамика, обектите, датировката (във векове), контекстите и останалите редки форми; данните са извлечени на 25/5/2022

latter belonged to an inhumation burial (burial H7) in a large pithos and it was found together with an Attic squat lekythos, a few bronze ornaments (miniature double axe, ring, fibula, disc) and a glass bead (Dusenbery 1998, 444–446). Almond shaped amphoriskoi are considered to store perfumed (almond) oils, thus being quite luxurious votive offerings (True 2006, 288, cat. No 88), or, in this case, grave goods. Moreover, a fragmentary head that has been found beneath the floor of the Hall of Votive Gifts might also belong to a plastic **aryballos** (head-vase; Samothrace 52.797-799; BAPD 20026). The head dates around 520–510 BC and it has been related to the Kiss Painter and Eythymides (Lehmann 1953, 7–8; 1962, 169–172).

Few more plastic vases are recorded from the Aegean Thrace: from Argilos, Abdera and Zone-Mesembria. The sherd from Argilos (Argilos 1921; BAPD 9050031) dates to the end of 6th c. BC.

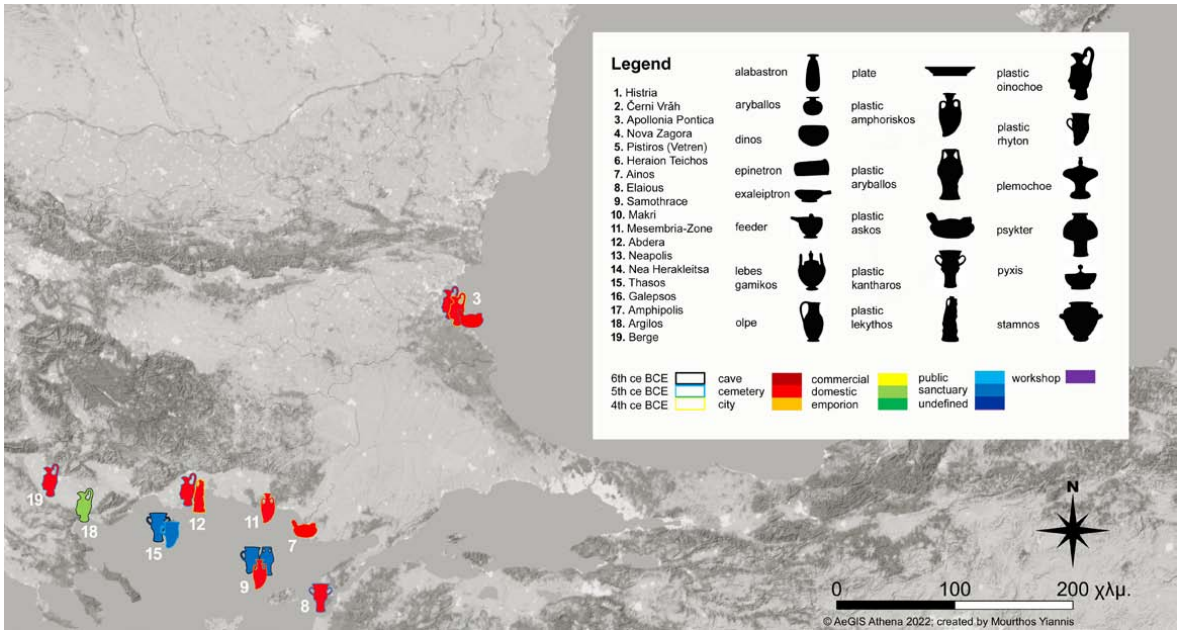


Fig. 10. Distribution among sites of various types of plastic vases, against the criteria of dating (in centuries) and context (©AeGIS ATHENA 2022; created by Y. Mourthos; background Stamen Terrain)
Обр. 10. Разпространение на различни видове пластични вази по обекти, спрямо два критерия – датировка (във векове) и контекст (©AeGIS ATHENA 2022; автор Y. Mourthos; фон Stamen Terrain)

It has only a small part of a woman's head crown with a wreath of leaves. Akamatis argues that it is probably a fragment of an oinochoe rather than an aryballos, mainly due to size and its attribution to class N workshop (Giroux 2006, 57, plt III.2; Akamatis 2020, 49, no 211, plt 39.211). It was found at the acropolis of Argilos, probably in domestic context (see comment bellow, plates). The context of the plastic vase from Abdera is better known. From the enagismos of a family tomb (tomb 79) comes a **plastic lekythos** (Abdera MA 6905) depicting Aphrodite and dated to the end of 5th c. BC, whereas a second plastic lekythos (Abdera MA 6953) in the figure of Eros, dated to the first quarter of the 4th c. BC, was found near a grave (Samartzidou 1998, 34–37, cat. no 103–104, 42–43, plt 59; Samartzidou, Bantinou 2014, 302). Finally, is the **almond-shape amphoriskos** (Komotini ΜΚ/ΑΓΚ 3494) from the cemetery of Zone-Mesembria, dated to the 4th c. BC. It was found within a pithos burial of a youth, together with five squat lekythoi, an amphoriskos, a black glaze pyxis, two terracotta joined dolls (*plagonae*), a terracotta figurine of a seated woman, silver and bronze jewellery and a bronze coin (Vavritsas 1981, 111–112, pl 78γ; Heliopoulou 2015, 79, fig. 117).

Six plastic **oinochoae** are recorded in the AtticPOT repository, one from Berge, one from Abdera and four from Apollonia Pontica. The oinochoe from Berge (Serres Δ1) is a stray find from a cemetery. It has the shape of a woman's head. It belongs to a group of oinochoae attributed to the potter Charinos, thus it is dated to the first half of the 5th c. BC (Vokotopoulou 1993, 192, no 220). The oinochoe from Abdera (MA 5425) also comes from a necropolis. It is threefold and formed in the shape of a woman's head. It was found in an *enagismos*, along with a black glaze plemochoe and a black-figure amphoriskos of the Light Make Class (Kallintzi, Kefalidou 2022, 218). Two oinochoe, also in the shape of a female head and of the same dating, come from the necropolis of Apollonia (Sozopol 6620, 7594; BAPD 218573, 340194) attributed to class N (Cook class) and class T (Basle class) respectively (Ivanov 1963, 152–153; Reho 1990, 102, no 188, 103, no 189; 1992, 45–46, no 60–61). A third similar oinochoe (Sozopol 3571) from the same necropolis is dated slightly later, to the middle of the 5th c. BC (Baralis et al. 2019, 152, no 132), while a fourth one (Sozopol 2502) with

an Eros and a rooster is dated much later, between 375 and 350 BC (Baralis et al. 2019, 115, no 102).

One plastic **kantharos** is known from Elaious, today in the Museum of Louvre (BAPD 218612; Louvre Eléonte 1129, Elé 595, S 4378). The vase is attributed to Class O (=Sabouroff Class), and it is dated to the 5th c. BC, probably its first half (Carpenter 1989, 387, no 1545.18). It consists of two moulded heads, one of Herakles and the other of a woman (Hebe?). According to the Louvre's inventory (https://collections.louvre.fr/ark:/53355/cl010269424) it derives from a sarcophagus (sarcophage 131), along with a stemless cup, a terracotta figurine of a standing woman, another plastic vessel in the shape of a foot and a decorated spindle whorl.

Finally, two **askoi** with plastic decoration could also be added to this group. The first one (BAPD 9033673; Sozopol 276), dated to the middle of the 5th c. BC, is a red-figure askos, decorated with felines, from the necropolis of Apollonia Pontica. Its spout, though, is rendered plastically, in the shape of a lion's head (Gyuzelev 2008, 261; Baralis et al. 2019, 229, cat. no 246). The second item is a sherd of a lion's head found at the cemetery of Ainos (E09NY20) and dated to the first half of 4th c. BC. The vase was found during the excavations of the cemetery's slope (Şahin 2013, 27–28, cat. No. ASK8).

4. Plates, pyxidae, olpae, alabastra (fig. 11)

Plate is the second most numerous shape in the chosen group, currently numbering 17 recorded vases or sherds. Worth of note is that they were all found in coastal or near coastal sites and the majority comes from the Aegean Thrace. Three of them are from unknown or unpublished contexts (see below).

Three sherds from Argilos belong to red-figure fishplates dated to the turn of the 5th and early 4th c. BC. The earliest (Argilos 6696; BAPD 9050013) was found at the acropolis and it is dated to 410–400 BC (Akamatis 2020, 47–48, cat. no 193, plt 36.193). The second fragment (Argilos 17932), dated to 400–380 BC, preserves the tail of a fish and it was found during the excavations at Koutloudis plot (Boutet 2018, 54–55, cat. No 4, plt 1.4). The third fragment (Argilos 4607; BAPD 9050014) dated around 390–370 BC, also preserves a fish tail and it was found during the excavations at the sector near the national road. Akamatis, is very careful to attribute the decoration to any painter, although he mentions affinities with the production of the Alcácer do Sal Painter (Akamatis 2020, 474, cat. No 194, plt 36.194). As far as the context of these vessels is concerned, various sectors are excavated at the acropolis, the hillside and near the national road. The ruins of an important building at the acropolis are interpreted as the residence of a Companion of the king of Macedon, below which earlier strata are dated up to the Archaic period. The constructions on the hillside belong to a residential quarter, whereas those near the national road, probably close to the ancient port, are interpreted as workshop facilities (Akamatis 2020, 7–10). Finally, the Koutloudis plot is recognized as a sector with commercial buildings and workshops (Boutet 2018, 10–11; Akamatis 2020, 8).

Thasos has its share with three black-figure fragmentary plates recorded from verified contexts. They are made between the second quarter and the second half of the 6th c. BC. The earliest (575–550 BC) is decorated with Sphinxes and Sirens, attributed to the Polos Painter (Maffre 1990, 411, no 5, fig. 5–6, 2009, 189, fig. 3–4) and comes from the Thasian Artemision (Thasos 59.17). A second plate with suspension holes comes from the same site (Thasos 2690π, BAPD 8556) and dates around the mid-6th c. BC. Its decoration comprises of a scene depicting a quadriga and it is attributed to Lydos or his circle (Callipolitis-Feytmans 1974, 125, 127–128, 324, plt 35,9; Maffre 2009, 195, note 42, fig. 17; 2014, 532, fig. 10). A third fragment of a plate (Thasos 1005π, H 414) – or lekanis? – has partial bodies of female figures and it is dated to the third quarter of the 6th c. BC (Ghali-Kahil 1960, 96, no 143, plt XLI.143). It should come from a domestic context since, based on the introduction of Ghali-

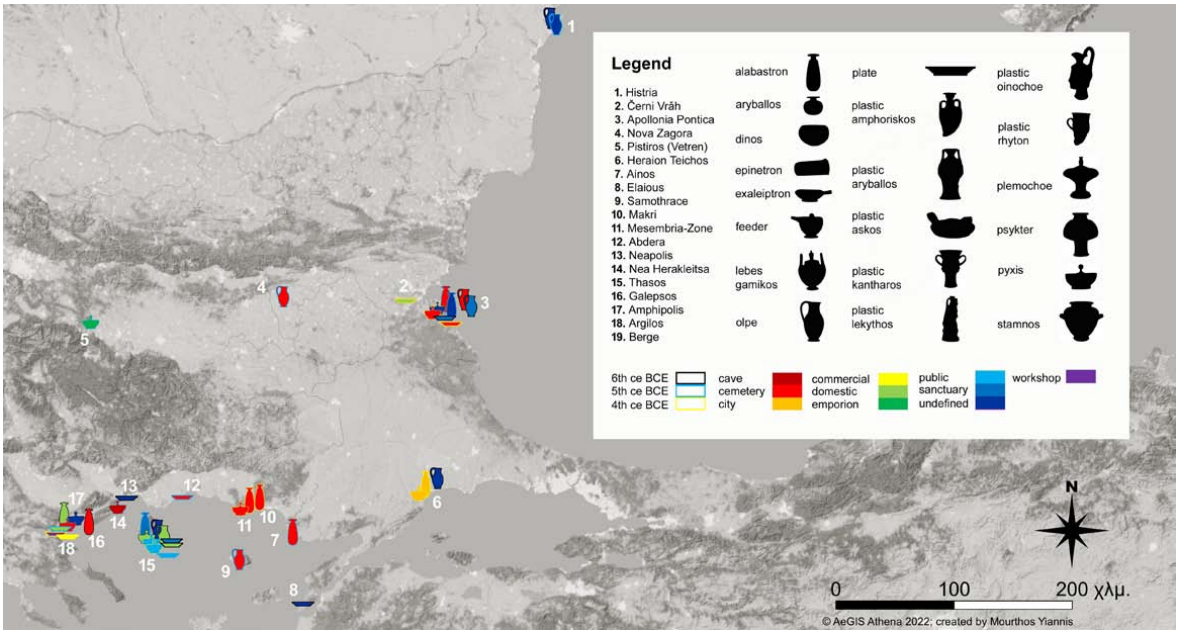


Fig. 11. Distribution among sites of pyxides, plates, olpae and alabastra, against the criteria of dating (in centuries) and context (©AeGIS ATHENA 2022; created by Y. Mourthos; background Stamen Terrain)
Обр. 11. Разпространение на пиксиди, блюда, олпета и алабастрони по обекти, спрямо два критерия – датировка (във векове) и контекст (©AeGIS ATHENA 2022; автор Y. Mourthos; фон Stamen Terrain)

Kahil (1960, 73), according to which, almost all the black-figure Attic pottery published in that volume come from the Dimitriades field, where there was a residential area. Findings from other places are specifically denoted in the catalogue entries. Finally, a red-figure sherd dated between 425 and 375 BC belongs to a collection of pottery found after the excavation of the yard of the French School on Thasos north of the Thasian agora, tentatively from a public area (Blondé 1985, 281, 283, 284, fig. 1).

One white ground plate from the second quarter of the 5th c. BC, is known from Abdera (MA 6051). A scene resembling the Great Eleusinian relief with Demeter teaching agriculture to Triptolemus decorates the interior of the vase. A female figure with sakkos and sceptre (Demeter) extends her arm towards a naked youth (Triptolemos), while holding grains. Behind him, a second female figure (Persephone) turns towards two other figures. The plate was a grave good from a burial of the Abderitan necropolis (Samartzidou 1998, 10–13, cat. No 1, plt 1.1; Kallintzi, Kefalidou 2022, 217, note 33).

Five plates are recorded from Apollonia Pontica. A fishplate decorated with fish and dated to the 4th c. BC comes from the necropolis (Baralis et al. 2019, 281, cat. No 333). A black-figure sherd from St. Kirik island (Paris CA 1768) has preserved decoration of a black-figure sphinx and a siren. It is dated to the first half of the 6th c. BC and it is attributed to the Polos Painter (Reho-Bumbalova 1985, 215–216; Reho 1990, 85, cat. No 98). The fragment comes from an old excavation conducted in 1904 by A. Degrand. The primary monument excavated on the island is the sanctuary of Apollo, where other non-religious contexts have been unearthed. According to Seure, the sherd in question comes from "Pointe S.-E., face à la mer (au point A; 20-22)", where a ritual pit was found (Seure 1924, 345–346; Baralis et al. 2019, 33–34). There are three more black-figure plates known attributed also to the Polos painter and preserved in sherds. They all come from religious contexts: the sanctuaries of Apollo on the island of St. Kirik and of Demeter at the Skamni Peninsula (Damyanov 2022, 291–293, fig. 1).

A 4th c. BC red-figure plate was found at Černi Vrăh (Burgas 2654) near the lake Mandrensko.

Although not much has survived from its decoration, there is information about its context. It was found together with other pots, Attic and local, terracotta figurines, clay metal and stone objects at a site with a fortified villa (*τύρσις*), built around the middle of the 4th c. BC and partially reconstructed during the second half of the 3rd c. BC. According to the excavators, there was an earlier settlement in the area, dated back even to 12th c. BC (Gyuzelev 2008, 197–199).

Sixteen **pyxides** are currently recorded in the AtticPOT repository. Fourteen of them have verified context. One black painted pyxis of type A is known from funerary context from Argilos. The vessel is decorated with zigzag and radial pattern, and dates around 480 BC (Grammenos, Tiverios 1990, 6, plt 1c). It served as a burial offering in a stone sarcophagus (sarcophagus I), which, apparently, was used for two, or maybe even three, burials in a timespan between 480 and 420 BC. The pyxis is probably related to a woman's burial. Other burial offerings from the same sarcophagus are a bronze ornament in the shape of a shield (5th c. BC), a white ground Attic lekythos (475–450 BC), a black glaze Attic kanastron (500–450 BC), black glaze Attic amphoriskos (430–420 BC), two Attic squat lekythoi (420 BC) and a Corinthian lekythos (460–450 BC) (Grammenos, Tiverios, 1990, 7–8).

A sherd of a red-figure pyxis (Nea Herakleitsa ΣBE2214), dated between 475 and 400 BC and decorated with a palmette, was found in the cave of Nymphs at Nea Herakleitsa (Georgiadis 2020, 242, cat. No 6.1, fig. 18). In the cave other sherds of black and red-figure Attic pottery were found, together with neolithic pottery, Thasian, Corinthian, Ionian, even Late Antique pottery, transport amphorae, votive inscriptions, part of a marble base of a statue, an inscribed stele of the 4th c. BC, stone bases of statuettes, terracotta statuettes of seated female figures, burned animal bones and seashells (Georgiadis 2020, 218–268). All this material proved that the cave had been a sanctuary of the Nymphs since the late 7th c. BC and the foundation of the Thasian colonies of the peraia (Georgiadis 2020, 269).

Thasos has provided four fragments of Attic pyxides dated between the 6th and 4th c. BC. A sherd (Thasos 1150π, H 239) depicting a centaur is dated around the middle of the 6th c. BC (Ghali-Kahil 1960, 98, no 158, plt XLII 158). As far as the context is concerned, it probably comes from the Dimitriadis plot (see above, plates). A second red-figure fragment (Thasos 905; BAPD 16975) is dated between 425 and 375 BC. It depicts a male figure with a lyre (Bélis 1985, 208, fig. 7; Blondé 1985, 287, no 33, 288 fig. 3.33). The fragment comes from the excavation at the yard of the French School, thus a public area in antiquity (Blondé 1985, 281). The rest (Thasos 84.235.34, BAPD 44613; Thasos 85.66.57, BAPD 44606) were found during the excavations of the NE environs of the Thasian agora (Blondé 1989, 482, figs 1.9–10).

A red-figure pyxis from Zone-Mesembria (BAPD 5428) comes from a pithos of a child burial. The lid is decorated with a simple wreath and it is dated to the 4th c. BC. The pyxis was one among many grave goods: a red-figure hydria, one black painted and two red-figure lekythoi, a black glaze skyphos, an askos, a terracotta statuette, silver and gold jewellery, a bronze mirror, a glass bead etc. (Vavritsas 1973, 121–122, plt 156b).

Two red-figure fragments of pyxides from Heraion Teichos (Tekirdağ) are dated to the second half of the 4th c. BC (Koçel Erdem 2007, 158, figs. 16.1, 16.3). They were found during the 2000 excavations at Tekirdağ/ Karaevlialtı site, revealing part of the wall that protected the acropolis. Although it is not stated explicitly, they probably belong to a group of imported pottery found while excavating the western tower (Koçel Erdem 2007, 155).

Three out of the five recorded pyxides from Apollonia Pontica were located in a burial context. The context of the rest is unknown (see below). The first one (Sofia 7191) is a red-figure pyxis dated to the second quarter of the 4th c. BC, with a depiction of an oinochoe and the word XEPI inscribed on it (Reho 1992, 59, cat. No 100). Another one (Sozopol 3172, 3173) is a red-figure, round pyxis with a lid from the Kalfata cemetery. It is dated around 360–340 BC. The item depicted on the lid is

interpreted as a pilos (Baralis et al. 2019, 166, cat. No. 158). A stamnoid red-figure pyxis decorated with a wreath and other motifs (Sozopol 3642) and dated around 375–340 BC completes the group (Baralis et al. 2019, 168, cat. No 162).

A last red-figure fragment of a pyxis is known from Pistiros-Vetren (Septemvri Museum 2022). It was found in the so-called "Southern House" with a lot of Attic painted pottery, all dated to the last quarter of the 5th c. BC and attributed to some well-known painters. Pyxides are not the only shape that appears rarely in this collection. Gutti, askoi and squat lekythoi, abundant in other sites, are also rare in Vetren. West slope and black glaze pottery are also represented. According to the excavators, this material proves that Attic fine pottery has been widely accessible since the first generation of merchants of this emporion (Bouzek 2010, 186–188, fig. 5.2.4, plt V (28) 6).

At present, seven **olpae** are known from identified context of coastal and inland Thrace: one from Thasos, two from Samothrace, two from Apollonia, two from Nova Zagora and three from Istria. One more olpe from Thasos, one from Menekşe Çatağı and three from Histria are published without context (see below).

To start with the vases from the Aegean shores, the olpe from Thasos (Thasos inv. No 79/303, BAPD 7305) was possibly found in domestic context: it appears in an excavation report on the Silenus district. It is a black-figure sherd, dated between 525–475 BC and it is decorated with a young naked ridder on his horse (Grandjean et al. 1980, 732, 734, fig. 20).

The Samothracian olpae come from funerary contexts (S necropolis). They are both black-figure and they are dated to the turn of the 6th to 5th c. BC. The first one (Samothrace 58.27) was used as an urn and its surface is damaged. It is attributed to the painter of Vatican G. 49 and it depicts an Amazon carrying two spears and accompanied by a dog (Dusenbery 1998, 129, 570 S60–1). The second black-figure olpe attributed to the painter of Louvre F 161, depicts Dionysus seated with kantharos, and grape vine and it is dated around 525–475 BC (Samothrace 57.591; BAPD 351439). The olpe was an "auxiliary vessel" of a secondary cremation, burial S84 and it was found in the same grave with a Nolan amphora, which was used as an urn, fixed in a purposefully broken storage amphora. The Nolan amphora is dated around 470–460 BC. The chronological discrepancy between the two vessels is explained by considering the olpe as part of an old pottery stock, sold long after its production (Dusenbery 1998, 145, 572 S84–3).

Two olpae from Apollonia come from two different contexts, religious and burial. A black-figure olpe decorated with a ribbon, comes from the sanctuary of Demeter at the Skamni promontory and it is dated to the second quarter of the 6th c. BC. This olpe, a sherd of an Attic plate, an Attic amphoriskos and a Chian "two-handled" pot are the earliest pottery found in the sanctuary, which was founded around 575–550 BC (Damyanov 2016, 121, 122, fig. 2). The second olpe comes from Harmanite (Sozopol 76) and it is a few decades later, dated around late 6th – early 5th c. BC. Its black-figure decoration, attributed to the Dot-Ivy group, presents a Dionysiac scene: a maenad on a bull, an altar and a second maenad standing (Reho 1990, 83, no 84; Lazarov 2003, 64, no 6; Oppermann 2004, 49, plt 13.3; Bozkova 2017, 44; Baralis et al. 2019, 92, cat. No 73).

In inland Thrace two almost identical red-figure olpae are recorded from Nova Zagora, which are dated to the third quarter of the 5th c. BC. Their decoration is plain, just a small frieze with tongue pattern; on one of them there is probably a human figure. They both come from a looted tomb at Pet mogili and they were used as burial offerings (Bozkova 2017, 44, plt 8.5).

Unlike olpae, there are currently eleven **alabastra** recorded in the AtticPOT repository coming from coastal sites, whether Aegean, Hellespont or Euxeinos Pontos. Six of them come from Aegean Thrace: one from the acropolis of Argilos, one from the Thasian Artemision, one from the area of the modern village of Mesembria near Makri, one from the necropolis of Zone-Mesembria and one from the necropolis of Ainos. The sherd from Argilos belongs to a red-figure alabastron, attributed to the

Group of Paidikos alabastra and dated to the end of the 6th c. BC. It has part of a woman's foot sat on a cube (Giroux 2006, 56, fig. III.1; Akamatis 2020, 48–49, cat. No 211, plt 39.212). Even though most alabastra come from cemeteries, the example from Argilos is from the acropolis (Akamatis 2020, 7). Around the same period (525–475 BC) is dated the alabastron from the cemetery of the Thasian colony at Galepsos (Kavala 1078, BAPD 352464). The vase is decorated with a scene of komos and it is attributed to the Berlin 2268 painter (Vokotopoulou 1993, 191, no 219; Akamatis 2020, 49). A red-figure alabaster (BAPD 9031995), preserved in fragments comes from the Artemision of Thasos. It is decorated with a scene from the Dionysiac circle (Dionysus with maenads) and it is slightly later than the above (500–450 BC). The vessel is considered a woman's offering (Maffre, Tichit 2011, 152, fig. 15; Maffre 2014, 531, fig. 6d).

The alabastron from modern Mesembria (Kavala 126π) comes from a grave located in the area between Mesembria and Dikella (modern Alexandroupolis area). It was found intact together with a small handless skyphos, two terracotta statuettes, a jointed doll (*plagona*), and gold and silver jewellery. It is red-figure decorated with simple geometric patterns and dated to the 4th c. BC (Lazaridis 1953, 417, no 6, fig. 7.1). From the necropolis of Zone-Mesembria comes an alabastron (Komotini ΜΚ/ΑΓΚ 6319) attributed to the Bulas group and dated to the end of 5th – early 4th c. BC (Heliopoulou 2015, 75, fig. 110). Finally, a red-figure alabastron from Ainos-Su Terasizi necropolis is dated to the first half of the 5th c. BC. It is decorated with a young man wearing a himation and resting on a stick, a scene created by yet unidentified painter (Başaran et al. 2010, 150, fig. 6).

Another black painted alabastron attributed to Bulas group and dated to the first half of the 4th c. BC, was found at the acropolis of Heraion Teichos at modern Tekirdağ (Atik, Işın 2006, 51, 58 fig. 15; Koçel Erdem 2007, 158, 167 fig. 17). The context is probably the same as that of the pyxides from the same site (see above).

Finally, four Attic alabastra from Apollonia are recorded at present in the AtticPOT repository: a red-figure dated to the 5th c. BC (Sozopol 253-257) from Harmanite cemetery (Oppermann 2004, 258); a black-figure from the same site (Sozopol 3712), dated around 470–450 BC and decorated with a scene of two men with their dogs returning from hunting rabbits (Baralis et al. 2019, 448–449, no 537); a red-figure from the necropolis of Apollonia (Sozopol 1230), dated to the second half of the 5th c. BC and depicting the departure of a hoplite warrior (Nedev, Panayotova 2003, 134, plt V.5; Baralis et al. 2019, 201, cat. No 208); and a black-figure alabastron dated to the 5th c. BC is practically of unpublished context, although it appeared in a photo next to an amphoriskos from Harmanite Archaic necropolis and it could have come from the same site (Bouzek 1990, 44, 154, pl. 10 8–9). It appears that alabastra, among other perfume containers (e.g. aryballoi, plastic vases), were quite a substantial group of pottery in Apollonia, either in sacred or in funerary contexts. Made either of alabaster or ionic bucchero, they appear in ritual pits on the island of St. Kirik (Baralis et al. 2019, 44–53, cat. Nos 24, 33–35). Made of alabaster or even glass, they are found at the necropoleis of Apollonia with or without Attic vases (Baralis et al. 2019, 162, cat. No 150, 352–355, cat. No 390, 393). Made of limestone or alabaster, they were used as grave goods in aristocratic tumuli (Baralis et al. 2019, 212, cat. No 228, 289, 304–308, cat. Nos 351, 357–358). Finally, Corinthian clay alabastra appear in Archaic graves of the first colonists (Baralis et al. 2019, 334–339, cat. Nos 371, 373, 364–369, cat. No 423).

5. Shapes with less than 10 items (fig. 12)

Currently, **feeders** (feeding bottles) are recorded in the AtticPOT repository from three necropoleis: Amphipolis at Strymon, Abdera, and Kalfata at Apollonia Pontica. The vase from the "Hellenistic" necropolis of Amphipolis (Kavala A.M. 487) is covered with a black glaze apart from

the shoulder, which is decorated with a black spiral on red background. It finds its parallels at Olynthos and it is dated to the middle of the 4th c. BC. Grave 8, where it was found, belonged to a woman buried with metal objects (gilded wreath, strigil), pottery (alabastra, askoi, feeder, squat lekythos, saltcellar), terracottae (child on a duck, duck, seated woman, woman's bust) and nails (Rhomiopoulou 1967, 97; 2013, 115–116). A similar vase found in the grave IΔ at the cemetery of Abdera is considered a grave good from a child's burial (Samartzidou 1998, 25). Similar are the feeders from Apollonia: they have simple decoration patterns, and they are all dated between the second and the third quarter of the 4th c. BC. However, two out of six were found outside the graves, while one was from the "area destinate al rito" (Ivanov 1948, 43, fig. 4e-f; 1963, 207. figs 80, 210, no 515, tab. 112, 211–212, nos 516–518, fig. 84, tab. 112; Reho 1990, 129, nos 340–345).

Currently, there are seven fragments of **dinoi** in the AtticPOT repository, with only three of somewhat known context. A black-figure sherd depicting a human foot, part of an animal (?) and a rosette (Thasos, D 805, 53-141), comes from Thasos and is dated to the second quarter of the 6th c. BC. It was possibly found during the excavation of the Dimitriadis plot (see above, plates), thus being from a domestic context (Ghali-Kahil 1960, 73, 87, no 87, plt XXXV, 87). Two more sherds attributed to the Polos painter come from the Sanctuary of St. Kirik in Apollonia (Damyanov 2022, 291–293, fig. 1).

Thus far **plemochoe** appears to be a shape found only in Aegean Thrace. Three samples have been recorded so far: from Thasos, Argilos and Galepsos. The Thasian vase is the earliest and it could come from a residential context (see above, plates). It is in fact a black-figure sherd (Thasos A 168) from a plemochoe type A, dated around the middle of 6th c. BC.

The miniature plemochoe from Argilos is also of type A. It is dated to the early 5th c. BC (500–480), and it was used as a grave good of a child burial. Worth of note is that it was found together with other miniature vessels close to a stone sarcophagus (sarcophagus IV) where at least two persons were buried, a man and a woman who probably died during the last stage of her pregnancy, and maybe an infant. The pottery in question, however, predates the sarcophagus burials by at least a decade, rendering the possibility of a child burial in the sarcophagus rather improbable. Thus, the scholars who have published the cemetery believe that the miniature vessels belong to a different burial and were transferred by the sarcophagus because of the relation between the buried child and the deceased man and woman (Grammenos, Tiverios 1990, 26–30, plt 10c). Finally, the plemochoe from Galepsos is black-figure dated to late 6th c. BC and comes from a micro-site named "Pithari". Excavations revealed the remains of a building with large court and a well, pottery of various types dated to Archaic and Classical periods as well as loom weights, lamps and seashells. According to the excavator, the size of the building and the findings favour identification of a public building, if not an annex of the sanctuary of Demeter (Malama 2012).

Exaleiptron is a shape similar to plemochoe with a small ring foot instead of a stem. At present, there are two examples recorded in the AtticPOT repository, coming from Thasos. The first is a black-figure sherd (Thasos D 867) attributed to ZC Painter and dated to the mid-6th c. BC. The second (Thasos 910π, H 160, BAPD 332138) is a miniature vessel attributed to the Swan Painter and dated to the second half of 6th c. BC (Ghali-Kahil 1960, 74–75, no 8, 98, 155). It is possible that both were found during the excavation of the Dimitriadis plot (see above, plates).

Epinetra is also very rare shape and for the moment the recorded examples come from the Artemision at Thasos. There is a reference to around 20 black-figure sherds, dated between the end of the 6th c and the beginning of the 5th BC, with only three cases adequately published so far. Their decoration varies: one fragment has a chariot, another a female figure, others simply depict decorative motifs (Maffre, Tichit 2011, 145–147; Maffre 2014, 530–531; BAPD 9031993, 9031994). They were found together with numerous loom weights dated in different periods. Sanctuaries of goddess-

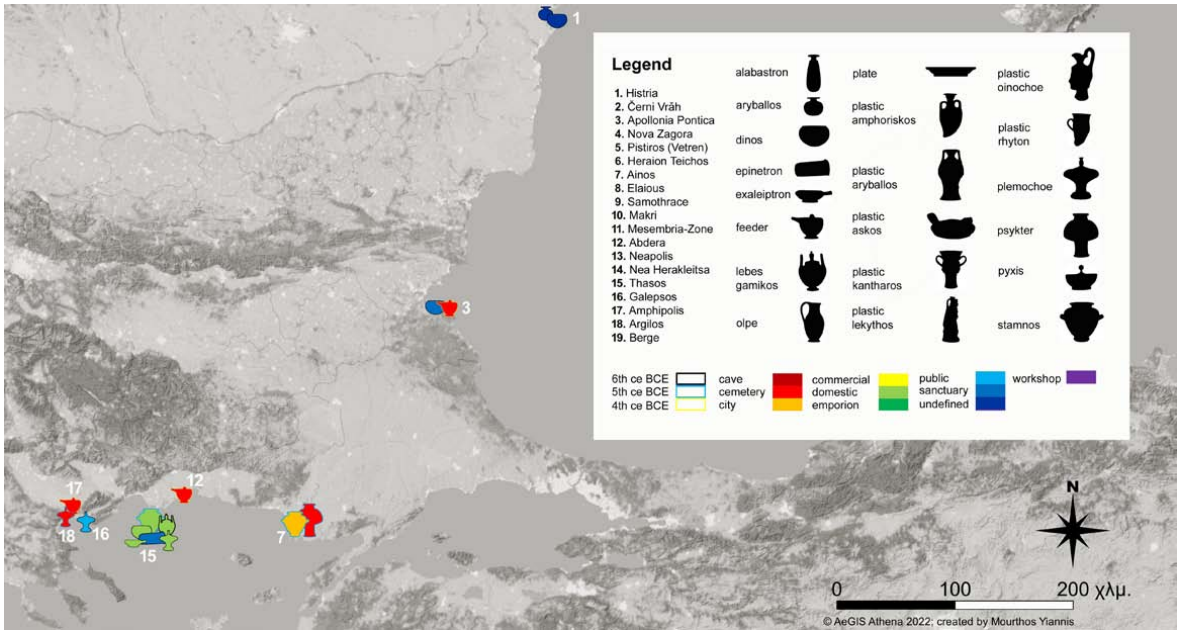


Fig. 12. Distribution among sites of rare shapes with less than 10 items recorded, against the criteria of dating (in centuries) and context (©AeGIS ATHENA 2022; created by Y. Mourthos; background Stamen Terrain)

Обр. 12. Разпространение на редки форми, с по-малко от 10 записани екземпляра, по обекти спрямо два критерия – датировка (във векове) и контекст (©AeGIS ATHENA 2022; автор Y. Mourthos; фон Stamen Terrain)

es is a common finding place for epinetra, therefore their presence in Artemision is not of surprise.

The **stamnoi** currently recorded in the AtticPOT repository are vases dated to the 5th c. BC and they were found at Aegean Thrace. The three recorded samples come from Thasos and Ainos, and they were found in civic contexts. The first example from Thasos (Thasos 875π, H 407) is a red-figure fragment that depicts a right hand holding a trumpet and it is dated to the first quarter of the 5th c. BC (Ghali-Kahil 1960, 118, no 80, plt L, 80). It is possible that it was found in the excavations of the Dimitriadis field (see above, plates). Two red-figure sherds decorated with horse riders (BAPD 3787) belong to a second stamnos (or less probably a krater) from a Thasian house (excavation Phocas), dated around the second and third quarter of the 5th c. BC (Picard et al. 1970, 830–831, figs 41, 42). Finally, sherds of a red-figure stamnos dated to the second quarter of the 5th c. BC were found during the excavations of the acropolis of Ainos (excavation inv. No: E07K4-10,11,12). The vase was decorated with a scene of komos, probably a work of a Manierist (Şahin 2013, 20, cat. No ST1). It appears that the fragments of the vase were found in an area with "cellars" carved in the limestone rock (Şahin 2013, 12–13).

Psykter is another shape that seems not to have crossed the borders of Aegean towards Thrace. In fact, so far only one is recorded in the AtticPOT repository, coming from Ainos and found in fragments (E08NY 110, 121, 133, 134, 142, 143). It is dated between 510 and 490 BC and is attributed to the Euthymides Painter (Başaran et al. 2009, 118–119, fig. 3.5; Şahin 2013, 20–21, cat. No PSK1; 2017, 105, no 17, fig. 9.17). It was decorated with a multi-figural scene from the circle of Dionysus, something common for this type of vase. The sherds were found at the slope of the Ainian necropolis, which is a very interesting site and reveals important information. Due to the suggestion that the 4th c. BC lekanis lids and askoi found exclusively in the fill-layers, probably had a specific use in burial practices (Şahin 2016, 332), one might wonder if something similar could be argued for the 6th c. psykter.

6. Vases of unknown context

Many examples of the shapes discussed above derive from totally unknown contexts, due to their belonging to private collections or coming from old excavations and publications that focused on typological and stylistic analysis, without contextualizing the material in question. Therefore, they are presented below in an alphabetical order by shape.

Apart from the plastic aryballoi presented above, there is an example of typical **aryballos** recorded in the AtticPOT repository that comes from Histria (Bucarest V 8461B; BAPD 4719). It is a black-figure sherd, decorated with a lion, dated to the second quarter of the 6th c. BC and attributed to the Polos Painter or his group (Alexandrescu 1978, 27–29, no 332, tab. 37). The context is problematic, mainly because the principal publication, Histria IV, has material from excavations conducted between 1914 and the 1970s (Alexandrescu 1978, 9), thus from various parts of Histria: acropolis, city wall, plateau (Angelescu 2019, plts 24, 38–41).

The **dinoi** from Thasos and Apollonia have already been mentioned in the previous section. Three more fragments of dinoi are recorded from Histria, also dated to the first half of 6th c. BC. Two of them (Bucarest no inv and V8426; BAPD 4747, 4748) were decorated with a frieze with felines and rosettes, dated between 600 and 580/575 BC; one of them is attributed to the Gorgo Painter (Alexandrescu 1978, 27–29, cat. Nos 299–300, plt 31). The third was decorated with hoplites in battle, it is dated around 575–550 BC and it is attributed to Lydos or a painter of his circle (Alexandrescu 1978, 27–29, cat. No 301, plt 32; BAPD 4746). Context is problematic (see above, aryballos). Finally, there is an interesting, black-figure sherd from Urdoviza Peninsula, 25 km south of Apollonia Pontica. Although its exact context is not yet published, its mere presence on this site renders it the earliest known Attic sherd outside the apoikia of Apollonia (Damyanov 2022, 292–293, fig. 1).

A fragment from a **lebes gamikos** is known from Thasos. It is a black-figure sherd, decorated with a frieze with animals, from which only a swan and a lion survive. The lebes dates to the second half of the 6th c. BC. Neither its Attic origin nor its context are clear (Ghali-Kahil 1960, 100, no 170, plt XLIII, 170).

Apart from the previously presented **olpe** from Thasos, there is a second black-figure sherd dated to the second quarter of the 6th c. BC from unknown context (Mainz, Johannes Gutenberg Universität 29; BAPD 12053). It has part of a male head and a frieze of rosettes and it is attributed to the Gorgo Painter (Hampe, Simon 1959, 48, plt 741/48.1; Ghali-Kahil 1960, 97, no 151, plt XLI 151). One more black-figure olpe from Menekşe Çatağı (Çanakkale 41/O 73), dated to mid-6th c. BC and three (Bucarest V 8342A, 8402b, 8429; BAPD 4726, 4727, 4728) from Histria dated between 580 and 490 BC are preserved in fragments or in just one sherd. None of them relates to a certain painter or workshop (Alexandrescu 1978, 27–29, cat. no 322–324, plt 35-36; Stoyanov 2014, 176, no 15, figs 2.5a-g; 2018, 267, no 12, fig. 2.5a-g), and their context is not published (for Histria contexts see above, aryballos).

A black-figure sherd of a **plate** from Neapolis (BAPD 350129), dated to the first half of the 6th c. BC is attributed to the Polos painter. Also, a black-figure plate from Elaious (Louvre 476; BAPD 8672) dated between 525 and 475 BC is decorated with a young man who is naked but for a pair of boots and a chlamys, while holding a staff, probably a komast (Callipolitis-Feytmans 1974, 235–236, 264, 381, 462, fig. 62, plt 76.21). A red-figure fragment from Thasos (Thasos 806π) depicts floral decorative motive and a human hand and is dated to the last quarter of the 5th c. BC (Ghali-Kahil 1960, 119, no 82, plt L.82). Its context is not clear, since the publication includes material from the Thasian Agora, Herakleion and Dimitriadis plot (Ghali-Kahil 1960, 105).

Three **pyxides** recorded in the repository come from unspecified context. One of them is also of unknown origin (Amphipolis or Galepsos). It is dated to the late 6th – early 5th c. BC and it is attrib-

uted to the Lysiades Painter (BAPD 351190). Two red-figure sherds, also with unclear context, come from Apollonia (Sozopol 7767, 7769) and dated around 375–350 BC. They are published together with a third one from the necropolis of Apollonia and they might also belong to the same context (Reho 1992, 58–59, nos 98–99).

7. Conclusions

To sum up, rare shapes appear mostly along the Thracian shores. Based on the up-to-date data, it seems that the (low) degree of infiltration in the hinterland is proportional to the popularity of the shape, although not entirely. For example, pyxis and olpe are found at sites of inland Thrace, yet the equally popular plates and alabastra are not. The lack of any pattern of proportional distribution, equal for each shape, could be related to the role each one might have had in certain spatiotemporal contexts or events we are unaware of.

These contexts cannot be considered without the element of ethnicity, a topic too complex to be addressed here extensively. Suffice to say that the clear distinction between coastal and inland Thrace is not the simple result of geography or aesthetics. Taking into consideration that most of the pottery discussed above come from coastal sites, one could easily conclude that the main consumers of Attic pottery production were Greek settlers, since they were accustomed to it and probably felt it fitted well to their cultural experiences. On the other hand, today we have a more complex understanding of Greek colonies, where different ethnicities could and would blend (Tsiafaki, Avramidou 2021, 108–109; Tsiafaki 2022, 69–71). Thus, the dualities coastal-inland, Greek-Thracians seem rather simplistic. What is more than obvious, however, is that certain hubs of Attic pottery do exist. In our case Thasos, Ainos, Apollonia, Pistiros-Vetren, and Histria seem to emerge (Tsiafaki 2022, 70–71).

As far as contexts are concerned, there seems to be not much diversity. In fact, most of the vessels come from cemeteries, while quite a large amount comes from sanctuaries or other cultic contexts. This is a conclusion our team has reached in other studies as well (Michailidou 2022, 42, 44, 48–50; Mourthos 2022, 86–94; Tsiafaki 2022, 62–65). Of course, each case, whether cemetery or sanctuary, has its own features, when seen in more detail. The striking exception seems to be plates, where the diversification of contexts is more intense, mainly due to the findings from residential and production areas of Thasos and Argilos.

Among others, one of the reasons for the scarcity of specific shapes of the Athenian Kerameikos in ancient Thrace could be the competition that Attic products had to face with the products of different workshops, shapes, even materials. For instance, that could be the case with the alabastra from Apollonia Pontica, parfum containers which, depending on the spatiotemporal context, they had to compete different workshops (Corinthian), different shapes (lekythoi) and different material (alabaster, limestone, glass).

A very interesting observation concerning the distribution of the Attic products in question is the existence of an axis (route) that connects the 5th c. pyxis from Pistiros-Vetren, via the 5th c. olpe from Nova Zagora, to Apollonia Pontica (two olpes of the 6th c. BC; one plate of the 6th c. BC, one plate of the 4th c. BC; two alabastra of the 5th c. BC; a feeding bottle of the 4th c. BC) and the Mandrensko lake (a plate dated to the 4th c. BC). The same axis (route) can be traced looking at the distribution of Attic lekythoi of the 4th c. BC. A second axis of distribution, also verified independently from lekythoi dated to the 4th c., appears along the lower Strymon valley (Tsiafaki et al. forthcoming b). On the other hand, the material under discussion, does not confirm any distribution up the river Evros (Maritsa).

Thasos seems to be the most important market for rare shapes of Attic pottery. Functioning as a hub, a great percentage of the material exported from Athens would arrive there providing the opportunity for extended selection. Compared with the rest of the sites, Thasos excels in both num-

ber of shapes and number of pots imported during these three centuries (6th–4th c. BC). At the same time, Thasos has provided the only 6th c. BC epinetra, as well as 5th c. BC plastic vessels, all of them coming from ritual contexts, while a 5th c. BC rhyton was found at the Sanctuary of the Great Gods on Samothrace. In general, the findings from these two islands introduces the question of the role Northern Aegean islands had in the distribution of Attic pottery. For the time being, the sea routes described in the literature revolve mainly around the shores of Thessaly, Macedon and Thrace. In the future, in-depth research on the contribution of these islands – especially Lemnos which was an Athenian cleruchy – to the distribution of Attic pottery seems quite promising.

Further publications and excavations will show to what extent those observations are accurate and will facilitate a more in-depth understanding of the presence and absence of specific shapes of the Athenian Kerameikos in ancient Thrace.

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За контекстите на редки форми от атинския Керамейкос в крайбрежна и вътрешна Тракия (VI–IV в. пр.Хр.): поглед през репозиториума на AtticPOT

Янис Муртос, Деспина Циафаки

(summary)

Проектът AtticPOT [Attic PO(ttery) in T(hrace)] (http://atticpot.athenarc.gr/) има за цел да проучи аспекти на атинското присъствие в Тракия в периода VI–IV в. пр. Хр. въз основа на разпространението на публикуваната до днес атическа рисувана керамика, описана в дигиталния репозиториум (https://atticpot.athenarc.gr/repo/el/). Както изглежда, от една страна малък брой форми се срещат често на ограничен брой обекти, а от друга – определени форми се появяват рядко, в много малки количества, но на различни обекти по черноморското крайбрежие и във вътрешността на Тракия. Статията разглежда такива редки форми, засвидетелствани в Тракия с по-малко от 20 съда или фрагменти, според съществуващите публикации.

Прегледът на данните позволява да се направят няколко предварителни наблюдения. Материалът е разделен на три групи: първата и най-многобройна група се отнася до фигурални вази от различни видове, втората съдържа вази с повече от 10 екземпляра, а третата – с по-малко от 10. Повечето от тях произхождат от погребални контексти (39%), следвани от светилища (17%) и жилища (14%). Отчитаме също така, че атически съдове или фрагменти от други контексти са много редки, но същевременно и твърде интересни (от публична среда 5%, градска среда 4%, пещери 1%, търговски помещения 1%, емпориони 1%, работилници 1%). Разбира се, колкото по-интензивно е присъствието на атическата керамика в даден обект, толкова по-голямо разнообразие на форми можем да проследим, особено ако към анализа на данните добавим и критериите „време“ и „география“. Всички тези предварителни наблюдения съвпадат с други заключения, направени от екипа на AtticPOT по време на проучването на различни въпроси.

Фигуралните вази са различни видове и се срещат в много крайбрежни обекти, почти винаги в погребални контексти. Фигурални амфориски, аскоси, арибали, лекити, ойнохоета, ритони и кантароси се откриват в широк ареал – Аргилос, Берге, Абдера, Месамбрия-Зоне, Тасос, Самотраки, Енос, Елеунт и Аполония Понтика. Тасос и Самотраки са предоставили материали и от светилища, а Аргилос от жилища.

Паници, пиксиди, олпета и алабастрони – това са най-често срещаните форми в рамките на втората група. Атически **паници** (17) са открити в светилища, жилища, некрополи, търговски помещения, работилници и публична среда, а три (3) са с неизяснен археологически контекст. Тези съдове произхождат от Аргилос, Неапол, Тасос, Абдера, Елеунт, Аполония и Черни връх (близо до Дългопол). От шестнадесет (16) описани в репозиторума **пиксиди**, датирани в периода VI–IV в., само три са с неизяснен контекст. Останалите са открити в некрополи, в публична и градска среда, в жилища в древните полиси, както и в емпориони, дори в един

случай и в пещера. Всички те имат широко разпространение и произхождат от Аргилос, Неа Ираклица, Тасос, Месамбрия-Зоне, Херайон Тейхос, Аполония и Пистирос (Ветрен). Описаните в репозиторума **олпета** (12) се отнасят само към VI–V в. и произхождат от некрополи, светилища и жилищни контексти (контекстът на три от олпетата не е изяснен). Открити са в Тасос, Самотраки (южен некропол), Менекше Чатагъ, Аполония, Нова Загора и Истрия. Атическите рисувани **алабастрони** (11), датирани в периода VI–IV в. – от Аргилос, Галепсос, Тасос, Месамбрия-Зоне, Макри, Енос, Херайон Тейхос и Аполония, също са открити в различни контексти: погребален, култов, жилищен или по-общо градски (един алабастрон е с неизяснен контекст).

Формите, представени с по-малко от десет находки, са биберони, диноси, стамноси, епинетрони, племохоета, псиктери, ритони, леканета, ексалейптрони и сватбени лебеси. Известни са седем (8) **биберона**. Един произхожда от Амфиполис, а останалите – от Аполония, като всички са от IV в. и са намерени в погребални комплекси. От седем (7) известни **диноси** от Истрия, Аполония и Тасос, датирани към VI в., само този от Тасос и два от светилището на о-в Св. Кирик в Аполония имат засвидетелстван (жилищен и култов) контекст. От Тасос и Енос има три (3) **стамноса** от V в., които произхождат съответно от жилищен и градски контекст. Трите (3) известни **епинетрона** са от о-в Тасос, като и трите се датират през VI в. и произлизат от един и същи култов контекст. От подобна среда са отбелязани и още няколко фрагмента, които обаче са публикувани без нужния археологически контекст. Три (3) **племохоета** са открити в Аргилос, Галепсос и Тасос и се свързват с погребални, жилищни и публични контексти. Един (1) **псиктер** от V в. е открит в некропола на Енос. Единствените два известни ексалейптрона (VI в.) са открити в Тасос. Със същата датировка, от същия контекст и от същия остров произхожда и един (1) лебес гамикос. Един (1) арибал от VI в. е намерен в Истрия, но е с неизяснен контекст.

От приведените данни става ясно, че разглежданите материали са засвидетелствани почти изключително по тракийските брегове. Основните контексти са погребални, култови и жилищни. Споменатите специфични форми от атическата рисувана керамика се срещат рядко в Тракия, вероятно поради конкуренцията, която атическата продукция среща от други ателиета, форми или материали. Могат да се проследят две оси на разпространение, свързващи крайбрежните и вътрешните райони на древна Тракия. Едната ос върви по трасето Аполония Понтика – Нова Загора – Пистирос (Ветрен), а другата – по долното течение на река Струма. Що се отнася до основните центрове на разпространение на атическата рисувана керамика, изглежда, че Тасос е мястото с най-голям внос, следван от Аполония.

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Spanish lustreware from the western Black Sea coast, 14th–15th centuries

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ABSTRACT

The paper presents for the first time the imports of Spanish lustreware in Bulgaria. For a long time such ware remained neglected probably because there have been very few finds usually representing an insignificant segment of the ceramic assemblages from medieval settlements. However, to assume a supply of western goods is more than reasonable given the wide trade contacts of the Tarnovo Tsardom and the Dobrudzha Despotate during the 14th c., and the dominant role of the Italian maritime republics in the Black Sea trading region. The targeted search for Spanish imports in several museum collections confirmed their presence in six settlements along the Black Sea coast: Sozopol, Varna, Kastritsi, Kaliakra, the fortresses of Rusokastro and Petrich near Varna. The pottery included in the paper illustrates the 14th to 15th c. imports of the following well known in the European studies subgroups of Valencian production: loza valenciana malagueña dorada y azul; loza valenciana dorada Pula; loza valenciana dorada clasicá. The presence of some 16th c. post-Valencian products, most probably originating from the workshops of Muel, Saragossa, is also suggested.

Most of the examined finds show that Iberian imports, even though just a few, reached Bulgaria between the 1330s and the late 15th c., most likely due to Italian merchants. Numerous written sources prove that the main reason for the active policy followed by Genoa and Venice was the export of cheap cereals and raw materials. There is no explicit information about the import of ceramics but given the connections of the two maritime republics with Spanish ports, especially the Genoese ones, it can be assumed that they supplied luxury lustreware to both Bulgarian lands and cities on the North Black Sea coast.

KEYWORDS

import, Spanish lustreware, Medieval, Black sea, pottery, trade

Introduction

Spanish pottery decorated with cobalt and lustre is indisputably the most brilliant manifestation of European ceramic art during the 14th and 15th c., until the emergence of Italian majolica. Directly inspired by Islamic artistic traditions, this type of pottery was developed by the Moors using Oriental decorative techniques and ornamentation complemented by elements compatible with Christian aesthetics. This was how Iberian pottery became a luxury goods in great demand across Europe and the Mediterranean world.

The earliest evidence of lustre decorative techniques dates back to the 8th c., when they were used on glass in Egypt, Syria and Iran. In the 9th c., Abbasid potters in Basra, present-day Iraq, began decorating pottery in a similar way, ushering in the development of lustre pottery in the Middle East and Spain (Watson 2004, 38). Spanish craftsmen used light colored clays to make lustre vessels that turned beige to light pink after firing. After the first firing, vessels were dipped in a molten glaze,

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consisting of lead, tin, salt and fine sand (Husband 1970, 13). In the course of drying, it formed a thick white coat that made a perfect background for drawing. Paints containing copper and silver were used to apply the overglaze decoration. Then followed another firing in a reductive atmosphere, during which ion exchange reactions occurred, resulting in copper and silver ions binding to the glaze. Depending on the chemical composition of the dyes used, the decoration acquired a metallic sheen after the last firing that resulted in different shades – from yellow, green and brown in paints with high silver content, to orange, red and purple in those with high copper content (Smith et al. 2006, 5353).

The earliest records of lustreware production in Spain include a text written by the Arab geographer Al-Idrisi in the mid-12th c. It mentions that the city of Calatayud in Aragon produced and exported gold-lustred pottery (Husband 1970, 12). In the early 13th c., the Andalusian poet, historian and geographer Ibn Sa`id al Maghribi wrote about the production of lustre-painted majolica in Malaga, Murcia and Almeria (Navarro-Palazón, Jimenez-Castillo 1995, 195). Malaga became the main production hub in the 13th and 14th c. The city was the most important port of the last Islamic dynasty of Spain, Nasrides, and exported wares to the western Mediterranean and northwards to central and northern Europe, all the way to Britain (Hurst 1977, 71; Hess 2004, 12 and references cited therein). Malaga products became widely known in Europe. In documents from the 14th to the 16th c., the terms "obra de málequa" and "de málicha" refer not only to Malaga-made pottery, but also to Spanish lustreware in general (Hess 2004, 12).

In the first half of the 14th c., the political situation changed and, under fierce competition from Christian countries, Malaga lost its leading position on the international markets. The subsequent migration of Arab potters to Christian territories in the north, mainly to the Valencia region, marked the beginning of new production centres in Paterna, Manises and Valencia itself (Hurst 1977, 71–72; Gutiérrez 2000, 24, 27; Hess 2004, 12; Coll Conesa 2017, 36–37). Written sources show that lustre vessels, adhering to Malaga's artistic traditions and today classified as Malagan-Valencian lustreware (*LVMD*: loza valenciana malagueña dorada), were being made and traded in Manises in 1325. Since around 1333, potters started to add cobalt or safra accents to the main lustre decorations. This new decorative style, known as blue and gold lustreware (LVMDA: loza valenciana malagueña dorada y azul), became widespread in the Iberian Peninsula, Western Europe and the Western Mediterranean (Coll Conesa 2012, 313–314; 2017, 39). Its development was curbed prematurely by the 1348–1350 catastrophic plague epidemic and the subsequent depopulation of the first production hubs around Valencia (Coll Conesa 2017, 39).

The heyday of Valencian lustre pottery spanned the period from the second quarter of the 14th c. to the beginning of the 15th c. and is associated with the so-called "Pula type" (*LVDP:* loza valenciana dorada Pula). This category received its name from a collection of ceramic vessels discovered by chance in 1896 during construction works to widen a road in Pula, a city on the island of Sardinia (Blake 1986, 366). The link of the Italian vessels to Valencian production was indisputably established by petrographic and neutron activation analyses comparing Spanish semi-finished products with Pula specimens that were published in 1992 (Blake et al. 1992, 202–225). Thanks to intense Italian trade in the 14th c., the range of lustre pottery significantly expanded to cover the entire European Mediterranean area. During that time, it reached the interior of the continent, the Netherlands, Russia and the Baltics, the Adriatic, Syria, Palestine, Egypt, North Africa and Asia Minor (Hurst et al. 1986, 40–42; François 1999, 83–84; Koval 2010, 103; Milošević, Topić 2012, 159–160; Coll Conesa 2017, 39). Around the mid-14th c., Pula-type lustre-decorated pottery also gained a foothold in the Black Sea region, with specimens currently known from port hubs on the Crimean peninsula (Teslenko 2004, 473 and references cited therein). A thorough analysis of the Pula collection conducted by Hugo Blake in 1986 substantiates the 1330–1420 chronology of this type recognised today, with its

highest prevalence between 1330 and 1380 (Blake 1986, 375).

The development of Valencian lustreware in the 15th c. was exemplified by two new distinctly luxurious styles that became very popular in the homes of European aristocrats – classic Valencian lustreware (LVDC: loza valenciana dorada clasicá) and silver lustreware (LVDCO: loza valenciana dorada orfebre). Particularly widespread was the classic Valencian lustreware, characterised by a variety of decorative patterns combining Islamic elements with Gothic motifs and nature-inspired floral ornaments (Coll Conesa 2017, 41).

In the late 15th c., the production of majolica emblematic of the Renaissance began to expand across northern and central Italy. With its rich colours and variety of decorative patterns and motifs, it was a direct competitor to Spanish lustreware, which had gradually begun to lose ground on the international markets. During the same period (the late 15th c.), groups of Valencian craftsmen moved north to establish new ateliers in Catalonia and Aragon (Hurst et al. 1986, 49). The major sources of lustre pottery in the period from the late 15th c. to the expulsion of the Moriscos from Spain in 1609 included Muel workshops in Saragossa, which developed under the direct influence of Valencian traditions (Gutiérrez 2000, 69–70).

The Bulgarian finds

The Hispano-Moresque pottery is still unfamiliar in Bulgarian archaeology probably because there have been very few finds usually representing an insignificant segment of the ceramic assemblages from medieval settlements. Therefore, researchers often ignore or dismiss them as insignificant, or at best treat them as an "exotic" addition to luxury imports. However, two Bulgaria publications illustrate fragments that can be indisputably associated with Spanish lustreware. A paper dedicated to the 1950s archaeological excavations of the Kavarna Fortress on Cape Chirakman, mentions four fragments, whose description completely matches the main features of the Spanish lustreware. Although not categorically, the authors link their origin to Eastern ceramics (Mirchev et al. 1962, 88, Table XIV: 3, 4, 6, 7). Three other fragments, identified as proto-majolica from southern Italy, are known from excavations of the medieval town of Trapezitsa hill – the second fortified core of Tarnovo, the capital of the Second Bulgarian Tsardom. According to the stratigraphic data, the chronology of the finds is set in the second half of 14th c. (Rabovyanov 2015, 289, Table 97: 1877b, 1878a, Plate 98A). Even just those two publications suggest that some imports from the Western Mediterranean reached Bulgaria in the second half of the 14th and the first half of the 15th c., albeit very few. This hypothesis is completely reasonable, given the wide trade contacts of the Tarnovo Tsardom and the Dobrudzha Despotate during the same period. We should take into account also the dominant role of the Italian maritime republics in the Black Sea trading area, which during that time were the main suppliers of western goods to the Eastern Mediterranean. Targeted search for Spanish imports in several museum collections confirmed their presence in six settlements along the Black sea coast: Sozopol, Varna, Kastritsi, Kaliakra, the fortresses of Rusokastro and Petrich (fig. 1). In order to confirm the Iberian origin of the group discussed below, some sherds from Varna and Kastritsi were subjected to an X-ray fluorescence analysis (McIlfatrick, Manolova-Voykova 2021, 247–270).

It is noteworthy in advance that the specimens presented in this paper definitely do not exhaust the topic of Iberian imports to Bulgaria in the 14th and 15th c. Such finds should be expected in all major trade hubs of the Second Bulgarian Tsardom, especially in the Black Sea area and the capital Tarnovo.

Most vessels illustrated here come from old excavations without detailed information about their archaeological context. For this reason, they could only be classified and, accordingly, dated on the basis of similarities with other finds from Western Europe, the Mediterranean and the Northern

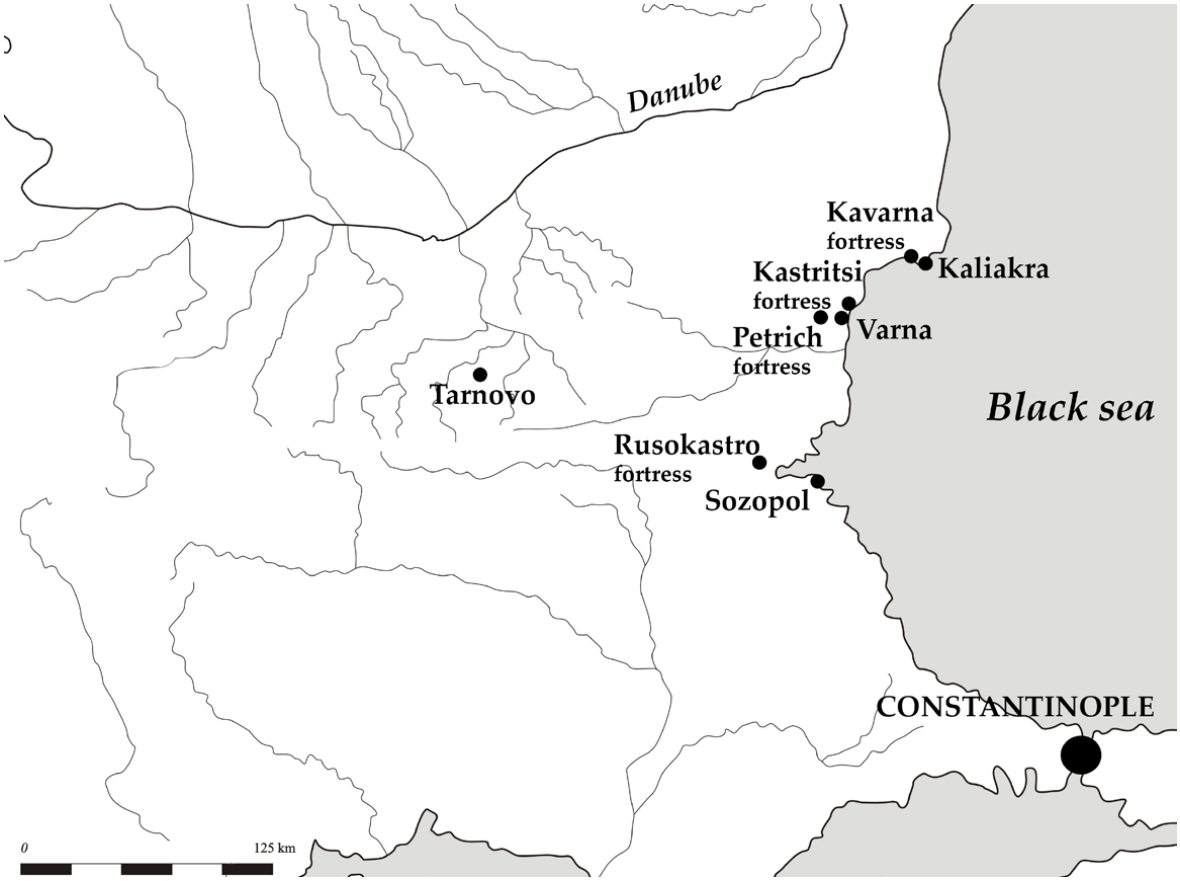


Fig. 1. Towns along the Bulgarian Black Sea coast with established import
Обр. 1. Селища от българското Черноморие с установен внос

Black Sea published in previous papers.

Identification and classification of Bulgarian finds

Based on the characteristic features of the clay, glazes and type of decoration, representatives of four sub-groups of the Valencian production from the 14th–15th c. can be distinguished. These are accompanied by a small group of post-Valencian shards, most likely made in the workshop of Muel, Saragossa during the 16th c. The names of the classification groups adhere to the Spanish terminology widely accepted in the European pottery studies.

1. Loza valenciana malagueña dorada y azul

Part of a dish discovered during the excavations of the Varna Roman Thermae might be linked to early Valencian wares of the loza valenciana malagueña dorada y azul (LVMDA) type (fig. 2.1). It is made of pure light clay that has turned pale pink after firing. The decoration includes lustre elements on the inside and outside and cobalt blue accents on the front surface. The outer surface of the base has a Catherine wheel motif drawn in thin lines of lustre paint as is characteristic of Valencian production. At the centre of the decorative composition stands an eight-leaf rosette comprising four intersecting elongated ellipses. Similar motifs are found both in early Paterna ceramics from the 13th c. (García 2005, 13, fig. 8) and in finds dating from the second half of the 14th to the last quarter of the 15th c. from Malaga and Pula (Blake 1986, 383, 399, pl. 4.20, pl. 14. 2), Britain (Hurst 1977, 85–86, fig. 28, no. 21), Alexandria and Crimea (Teslenko 2004, 489–490, fig. 3; Teslenko, Mayko 2019,

288–289, 306, fig. 1.5). The lustreware microelements surrounding the central motif play a decisive role in the classification of the fragment from Varna. They are floral ornaments inscribed inside spirally twisted sprays with an exquisite pattern, which suggest a link with early Valencian production by the Malagueño Primitivo group, dating from 1333 to 1348 (Coll Conesa 2012, 315, 316, 329, fig. 7.15). Two more fragments of small bowls from the Kastritsi Fortress near Varna can be attributed to early Valencian production under the influence of Malaga (fig. 2.2, 3). One of them (fig. 2.2) has a characteristic frieze of twisted wavy lines with close parallels to Paterna finds dated to the 13th c. (Amigues 2002, 62; Gutiérrez 2000, 35, fig. 2.17:3).

2. Loza valenciana dorada Pula

The vast majority of imported lustreware found on the Bulgarian Black Sea coast falls into the Pula type, also known in global classifications by its Spanish name loza valenciana dorada Pula (LVDP). The group is diverse and includes relatively small, shallow bowls comprising a hemispherical body sitting on a low ring-shaped base and jugs with a spheroidal body and a high conical base. The dishes are completely covered in opaque white or pale yellow glaze, with the decoration combining elements painted in purple-blue or light blue paint and lustreware motifs of different colours – dark yellow, yellow-brown, different shades of brown, including olive and more rarely reddish-brown. Blue dye is present only in the decoration of the bowls' inner surface. Some separate linear elements are applied in lustre on the outside (Blake 1986, 368).

Many of the vessels illustrated here share similarities with the decorative features of the Pula group, as described by Hugo Blake (Blake 1986, 365–407). For example, the composition's typical division into radial sectors by solid blue lines can be traced to finds from Varna and the Petrich Fortress (fig. 2.4–8). One of those fragments (fig. 2.4) fully resembles the dishes used as architectural decoration (bacini) on the facade of the St. Andrea church built in 1348, facing the St. Giovanni Hospital in Rome (Blake 1986, 373, 400, pl. 15, no 2). Another two finds have a radial composition split into sectors filled with leaf motifs (fig. 2.9, 10). Leaf images are among the most popular themes in Pula-type decoration and can be found both in lustre (fig. 2.5, 9, 10) and blue elements (fig. 2.11). In many cases, they are the main focus of the decoration and have a geometric or even asymmetrical silhouette. The characteristic detailed representation of leaf veins is evident both in the fragments from Varna (fig. 2. 9–11) and in already published specimens from Paterna (Amigues 2002, 62), Pula (Blake 1986, 378, pl. 1.1, 6, 380, pl. 2.7, 8, 10–12), Genoa (Blake 1972, 93, fig. 4.21), Milan and Varazze in Northern Italy (Blake 1986, 397, pl. 12.12, 18; 400, pl. 15.1517), Sicily (Blake 1986, 402, pl. 17.990, 991) and the northern Black Sea coast, specifically Caffa (Kravchenko 1991, 117, fig. 4.4) and Funa (Teslenko 2004, 480, 489, 490, fig. 3). Some of the finds (fig. 2.5, 7, 12; 3.1, 2) illustrate one of the most distinctive decorative patterns of Valencian Pula-type wares – small floral elements that "pierce" through the lustre's dark background and stand out with the whiteness of the base glaze (Blake 1986, 368). Two fragments from Varna (fig. 3.3, 4) have another distinct decoration – a lustre net that is duplicated in some cases by a larger one drawn with cobalt pigment.

Three partially preserved dishes from Varna, Sozopol and Rusokastro (fig. 3.5–7) feature a different, yet also typical of Pula decorative composition. The decoration is arranged in horizontal bands, centred around intersecting blue squares at the bottom. The best preserved specimen is the Varna one (fig. 3.5), which although lacking an exact analogue among the finds published by Italian researchers, has various decorative elements that are similar to the group's style, including white floral microelements that stand out through the lustre while at the same time serving as a background for the cobalt pattern, as well as intersecting blue squares in the centre (Blake 1986, 382, pl. 3.13–15). The exterior decoration of the vessel has an exact analogue in the Pula collection (Blake 1986, 386, pl. 6: 6, 10). The frieze under the rim is more distinct and is found in bowls from the last quarter of

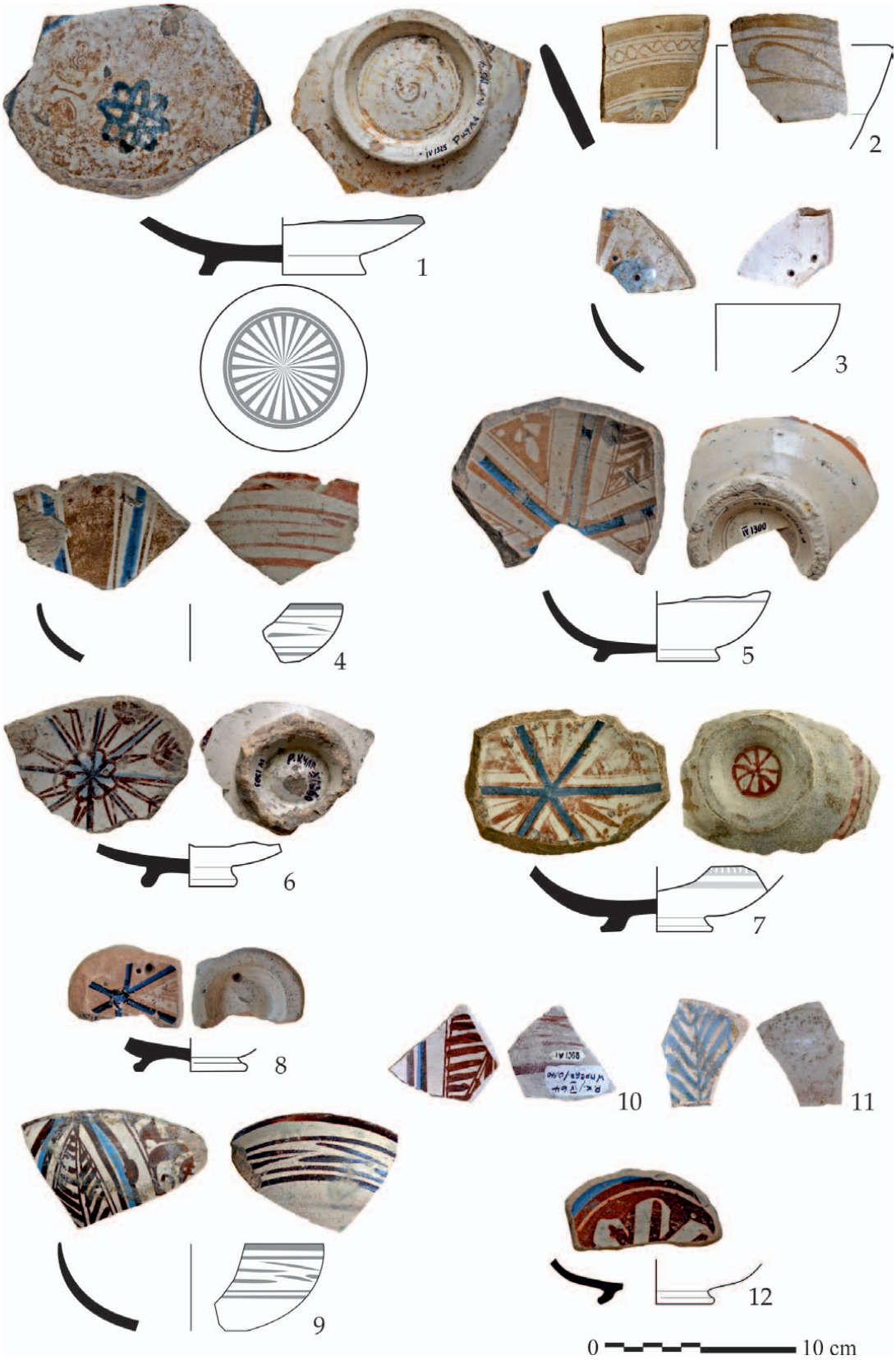


Fig. 2. Spanish lustreware type LVMDA: 1. Varna; 2, 3. Kastritsi; Spanish lustreware type LVDP: 4 –12. Varna (AM Varna, author's photos and drawings)

Обр. 2. Испанска люстрова керамика тип LVMDA: 1. Варна; 2, 3. Кастрици; испанска люстрова керамика тип LVDP: 4–12. Варна (АМ Варна, снимки и рисунки на автора)

the 14th and the first quarter of the 15th c. (Hurst et al. 1986, 40–41, fig. 17) to the second half of the 15th c. (Teslenko 2004, 480, fig. 3). The sample from the Rusokastro Fortress is in worse condition (fig. 3.6), but the similarity of the blue motifs with a Pula dish (Blake 1986, 382, pl. 3.15) suggests that the composition was centred around a square. Another characteristic feature of Pula-type decoration is the use of stylised Arabic letters, which are inverted in this case and represented as white microelements against a backdrop of brown lustre.

The most representative Pula-type finds come from excavations of the Kaliakra Fortress and the St. George Church in Varna (fig. 4.1, 2). The Kaliakra dish (fig. 4.1) was discovered in 2019 during excavations of the necropolis in the Inner town (Petrunova, Endarova 2020, 1154). Its decoration consists of floral and geometric elements applied with light brown lustre and white ones that stand out against the background of the lustre. The accompanying cobalt decoration is limited to one central quadrangular field and two symmetrically arranged leaf-shaped figures. The blue fields are filled with some of the most characteristic motifs of early Malagan and Valencian production – Arabic letters or imitating elements, as found in the finds from Pula (Blake 1986, 386). In this case, it is more of an imitation of an Arabic inscription than a real one.

Pavel Pavlovich made interesting observations on the cobalt decoration, some of which are referred to below. According to him, "the quadrangular field contains Arabic letters that are clearly written by a person who does not know Arabic. Hypothetically, the expression *bism* (بسم) – "in the name of", the particle *illā* (الا) – "except for", which is part of the phrase "there is no deity but Allah", and the word "deity" (*Ilāh* – اله) at the end can be read from right to left. This was probably an attempt to write the "only one" (*waḥdu-hu*: وحده) between "except" and "deity". It is possible that the spelling of the name Muḥammad (محمد) is imitated in one of the leaf-like sectors, while the opposite leaf-like motif is completely decorative.

The manner of imitating Arabic inscriptions rather than writing true ones completely matches the evolution of lustreware, which moved away from its Arab roots over time. Valencian vessels were intended for Christians who could not read Arabic symbols and perceived them as decorative elements. For this reason, it was natural that the letters gradually lost their true form until they became an exotic ornament that is only reminiscent of the original Andalusian prototypes.

The Kaliakra dish is one of those rare archaeological artefacts that tell their own story. It has two openings on the periphery suggesting it was imported as a luxury item and originally decorated someone's home. With the dish hung in the position indicated by the openings, the observer most likely perceived the decorative composition as an image of a cross. However, the cobalt motifs resembling an Arabic inscription would have remained odd and incomprehensible to the vessel's owner. This must be why it was subsequently embellished by scratching a cross in the centre and the popular Christogram IC XC NI KA in the frame of the cobalt "cross". In this form, the dish had become completely compatible with the Orthodox worldview, so it is not puzzling that it was later buried with its owner.

No less interesting is the bowl from Varna, which has a similar decoration to the previous find (fig. 4.2). Here, too, light brown lustre elements serve as a background for the cobalt decoration. The blue drawings, filled with fully stylised Arabic letters, are limited to one central quadrangular field and two elliptical ones (one of which is not preserved). The vessel was discovered in 1967, during the excavations of the medieval church of St. George located on top of the southwest part of the Roman Thermae. The find context of the dish is extremely important both for the history of the temple itself and for explaining how lustreware reached Bulgaria. Therefore a brief digression from the ceramics-specific analysis is beneficial to draw attention to key moments in the history of Varna in the mid-14th c. The notes of A. Kuzev, one of the excavation directors of the Roman Thermae in 1967, say that



Fig. 3. Spanish lustreware type LVDP: 1. Varna; 2. Kaliakra; 3–5. Varna; 6. Rusokastro; 7. Sozopol; 8. Varna; 9. Kavarna (AM Sozopol, Burgas, Varna and Kavarna, author's photos and drawings)

Обр. 3. Испанска люстрова керамика тип LVDP:1. Варна; 2. Калиакра; 3–5. Варна; 6. Русокастро; 7. Созопол; 8. Варна; 9. Каварна (АМ Созопол, Бургас, Варна и Каварна, снимки и рисунки на автора)

the lustre vessel was immured into the masonry of the church's western façade[1]. This is confirmed by the mortar preserved on the reverse side of the dish. A. Kuzev briefly mentions the rich decoration of the St. George Church in his review article dedicated to the history of medieval Varna, and suggests that the bowls from the façade originate from the Middle East (Kuzev 1981, 299, 300)[2]. It should be emphasised that the tableware immured into the walls of the Varna church is a precedent for the 12th–14th c. Bulgarian architecture and has no analogue amongst the artefacts we are aware of so far. It is logical to ask why this temple is decorated with glazed dishes, known in specialised literature by the Italian term "bacini". Using "bacini" to decorate church façades and, more rarely, public buildings was characteristic of Italian architecture mainly from the mid-11th to the late 15th c. (Blake 1980, 93). There are few examples outside the Apennine Peninsula, and those can usually be explained by the direct influence of Genoese or Venetian trading colonies (Philon 1985, 313–314; Yangaki 2017, 157–158). It is reasonable to assume the finds from Varna have a similar link. Under the charter given by Tsar Ivan Alexander (1331–1371) to Venetians in 1347, they received the right to "buy and build a church and a lodge [seat] wherever they liked" (Petrov, Gyuzelev 1978, 248–249). We know from written sources that Venice set up a lodge in Varna, with Marco Leonardo as consul in 1352 (Gyuzelev 1981, 177–178). There is no information about a church, but it makes sense that Venetian merchants would also take advantage of the opportunity to have their own church. Its architectural plan or decoration should have characteristic features that have parallels with 14th c. Western European architecture. The only Varna church known so far to deviate from standard Bulgarian medieval decorations is precisely that of St. George. In the light of this, it can be assumed that the Venetian colony acquired an already existing temple, whose architectural decoration was complemented by easy to implement but distinctive elements, such as the "bacini" unknown to the local culture.

Let's return to the finds from the Pula group and note the rarer "closed" shapes present among them. Small fragments of jugs were found during excavations of the towns of Kaliakra and Kastritsi (fig. 4.3, 4). Only one vessel from Varna is almost completely intact (fig. 4.5). Its decoration combines two of the most characteristic Pula-type elements – a lustre net decoration on the neck and radial belts of alternating lustre, white and blue lines on the body.

3. Loza valenciana dorada clasicá

The other artefacts found so far in Bulgaria Black Sea region are substantially different from the well-known features of the Pula group and can be linked to the 15th c., the classical period of Valencian pottery (Coll Conesa 2017, 41), classified as loza valenciana dorada clasicá (LVDC). A small bowl with highly faded lustre decoration on the inside and a blue circle in the middle part of the body (fig. 5.1) comes from the excavations of Kastritsi. It appears that lustre paint wear is common in some series of classical Valencian production, because such specimens have been reported in Crimea and the Adriatic (Teslenko 2004, 478, 484, fig. 1.5; Milošević, Topić 2012, 174–176, fig. 30, 30a). Two fragments from Sozopol and Varna (fig. 5.2, 3) show one of the most common 15th c. decorative compositions where Andalusian motifs and Gothic themes are intertwined. The vessels are known as escudella. These are small hemispherical bowls with concave bottoms and two protruding triangular horizontal handles. The walls are decorated with alternating floral and geometric lustre motifs and two or three cobalt gothic roses (fig. 5.2). The bottoms are occupied by a pentagonal shield characteristic of Gothic art (fig. 5.3), outlined in blue paint or another heraldic symbol. The

1 Prof. Aleksandar Kuzev's field diary of the 1967 excavations. Scientific Archive of the Varna Regional Museum of History, unprocessed archival unit "Diary of Roman Baths 1964–1967", p. 75 (back), p. 76, p. 80.

2 Together with the lustre dish, another faience vessel was immured into the facade of the St. George Church. It is on display today in the exhibition of the Varna Archaeological Museum, Inv. No. IV 3906.



Fig. 4. Spanish lustreware type LVDP: 1. Kaliakra (AM Kavarna, photo T. Dimitrov, drawing V. Kiryakova); 2. Varna (AM Varna, author's photo and drawing); 3. Kaliakra (AM Kavarna, author's photo and drawing); 4. Kastritsi (AM Varna, author's photo and drawing); 5. Varna (AM Varna, photo R. Kostadinova, author's drawing)
Обр. 4. Испанска люстрова керамика тип LVDP: 1. Калиакра (АМ Каварна, снимка Т. Димитров, рисунка В. Кирякова); 2. Варна (АМ Варна, снимка и рисунка на автора); 3. Калиакра (АМ Каварна, снимка и рисунка на автора); 4. Кастрици (АМ Варна, снимка и рисунка на автора); 5. Варна (АМ Варна, снимка Р. Костадинова, рисунка на автора)

outer surface is decorated with fine lustre elements, including arched lines and stars on the walls and a Catherine wheel on the bottom. In another two fragments from Varna, belonging to the classical group of Valencian production, only some parts of the sectors with floral motifs are preserved, drawn with high-quality golden lustre (fig. 5.4, 5).

4. Post-Valencian products

The last three Varna shards (fig. 5.6–8) cannot be linked to any of the Valencian groups examined so far. They are made of clay with a small admixture of sand that has become white to light beige after firing. More unusual is the lustre decoration which covers only the inner surface. It is applied thickly and is now a deep iridescent orange red. The decoration must have been applied with a thick brush and, as far as one can judge by the preserved drawings, it constituted large floral motifs. It is currently difficult to classify and date the fragments due to their small number and poor condition. However, those clay and lustre characteristics suggest they were made somewhere else, not in Valencia, despite following similar trends. As already mentioned, in the late 15th c. Valencian craftsmen moved to Catalonia and Aragon, where they set up new workshops. Those production hubs were mostly active in the 16th c. and stopped operating when the Moors were expelled from Spain in 1609. The distinctive features of 16th c. Aragonese products are white or beige clay with admixture of sand (Hurst et al. 1986, 49), as well as large floral motifs or rough images of birds painted only with lustre (Hurst et al. 1986, 49; Zamora 1999, 61–62). The Varna specimens have similar features, and in theory could be linked to the production of Muel workshop in the 16th c.

Pottery and trade

The finds examined so far show that Iberian imports, even though few, reached Bulgaria between the 1330s and the late 15th c. Lustreware made the long journey from Spain to the Black Sea through mediation of the maritime republics. Italy had traditionally maintained close contacts with the Western Mediterranean, and numerous artefacts found in Tuscany and Lombardy prove Spanish items had been imported as early as the 10th and 11th c. (Hess 2004, 14). Written sources show that Florence, Pisa and Venice traded with Valencian pottery in the 14th and 15th c. (Wilson 1996, 36). As for its spread to the Eastern Mediterranean, Genoa and Venice were probably the key players. The Republic of Genoa received privileges to trade in Castile and its own base in Seville as early as 1251 (Blake 1972, 85). A number of researchers believe that, by the end of the 15th c., Genoa was trading in luxury ceramics not only between Spain and Liguria, but gradually expanding its range to Northern Europe and the entire Mediterranean, including the Black Sea region (Blake 1972, 85; Hurst 1977, 76).

Venice gained a foothold in the Black Sea area after Latin Christians conquered Constantinople in 1204. When the Byzantine Empire was restored in 1261, the Genoese managed to keep the Venetians away from the Black Sea coast for a long time. Under the Treaty of Nymphaeum, Genoa received exclusive privileges to trade and sail in the Black sea and its adjacent areas (Bozhilov, Gyuzelev 2004, 218; Gyuzelev 2009, 52–53). Byzantine-Venetian relations were governed by the treaties of 1302 and 1303, which again gave Venice access to the Black Sea market. Against the background of constant friction between Venice, Genoa and Constantinople, the Bulgarian Tsardom pursued a balanced policy, guided mainly by its economic interests. This is evidenced by the treaty with Venice of 1347, resulting in the founding of the Venetian lodge in Varna. The mention of a Genoese consul in Nesebar in documents from 1352 indicates that relations with Genoa were probably formalised at the same time (Gyuzelev 2009, 68).

Numerous written sources show that the main reason for the active policy followed by the two

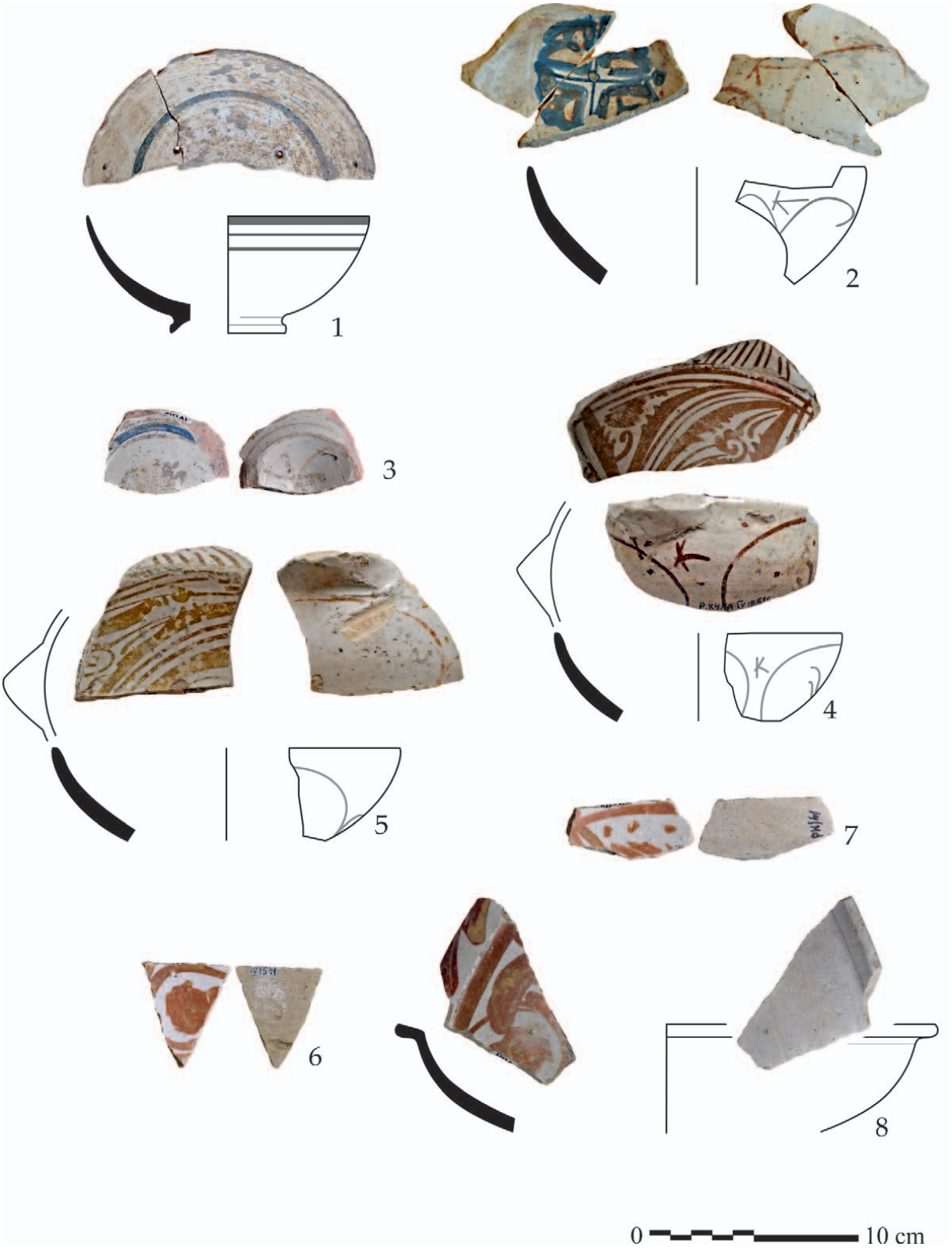


Fig. 5. Spanish lustreware type LVDC: 1. Kastritsi; 2. Sozopol; 3–5. Varna; Spanish lustreware of Muel, Saragossa (?): 6–8. Varna (AM Sozopol and Varna, photos and drawings of the author)
Обр. 5. Испанска люстрова керамика тип LVDC: 1. Кастрици; 2. Созопол; 3–5. Варна; Испанска люстрова керамика производство на Муел, Сарагоса (?): 6–8. Варна (АМ Созопол и Варна, снимки и рисунки на автора)

Italian republics in relation to Bulgaria was the export of cheap cereals and raw materials. However, it is still unclear what kind of goods they supplied to Black Sea cities. It is known that Venetian imports included fine fabrics, soap, jewellery, weapons, spices and fruits, whereas Genoa imported silk, game skins, wax, resins and paints (Gyuzelev 2009, 28, 46, 54). There is no explicit information about the import of ceramics. However, given the connections of the two maritime republics with Spanish ports, especially the Genoese ones, it can be assumed that they supplied luxury lustreware to both Bulgarian lands and cities on the North Black Sea coast.

It is worth mentioning one more, usually overlooked possibility for the influx of Iberian goods to the Black Sea region, namely through direct contact with Catalan merchants, who had their own consul in Constantinople since 1282. Around the same time, they sailed in the Black Sea Basin, reaching Caffa and Crimea (Ferrer 2012, 43). Between 1340 and 1372, Mallorcan merchants established contacts with the Tatars and Central Asia via the Black Sea route. Written records show that, in the second half of the 14th and the beginning of the 15th c., three or four Spanish ships docked at the port of Constantinople every year, and until 1420, Catalan merchants lived in the city itself (Ferrer 2012, 43).

The question of who carried Spanish imports to Bulgaria's Black Sea coast obviously cannot be definitively answered in this paper. It is much more important to emphasise that further evidence of the integration of Bulgarian territories in the interregional trade network of the 14th c. has been found. Thanks to this broad commercial system and the transport of goods, there was an active cultural exchange between remote parts of the Mediterranean, North Africa, The Levant and Europe.

Acknowledgements

This paper is the result of a targeted search for imported ceramics in the repositories of several museums along the Black Sea coast and systematic pursuing of ceramic materials discovered at recent excavations in the fortresses of Rusokastro and Petrich, and the port towns of Sozopol, Varna, Kastritsi and Kaliakra. I express my sincere gratitude to Prof. Pavel Pavlovich for his assistance. I express my deep gratitude to all colleagues who gave me the opportunity to work with the newly discovered materials and shared with me data from their field records: Assoc. Prof. Dr. Boni Petrunova – Kaliakra Excavation Director; Dr. Milen Nikolov, Rusokastro Excavation Director; Dimitar Nedev – long-time leader of excavations in Sozopol. And last but not least, I owe gratitude to the late Prof. Alexandar Kuzev. True to the meticulousness he was known for, he had left a box with the inscription "Lustreware and unidentified" in the medieval repository of the Varna Regional Museum of History. This box was what inspired me to start researching Spanish imports.

CATALOGUE

1. Dish, fr., overall white glaze. Interior: blue rosette, gold lustre ornaments. Exterior: pale lines, "Catherine wheel" on the bottom. Pale, pinkish fabric. Preserved h. 3 cm; foot d. 8.7 cm (fig. 2.1).
   Place found: Varna, Roman Thermae, 1954.
   Place now kept: Archaeological Museum of Varna, Medieval repository, inv. no. IV 1325.
   Type: LVMDA
   Date: 1333–1348.

2. Bowl, fr., overall white glaze. Interior: gold lustre ornaments, twisted rope border under the rim, blue stain at the lower part. Exterior: gold lustre arched lines. Pale, pinkish fabric. Preserved h. 5.3 cm; rim d. 19 cm (fig. 2.2).
   Place found: Kastritsi, 2005, trench no. 7, field inv. no. 33/2005.
   Place now kept: Archaeological Museum of Varna, Medieval repository.
   Type: LVMDA

Similar: Paterna (Amigues 2002, 62; Gutiérrez 2000, 35, fig. 2.17:3).
Date: 1333–1348.

3. Bowl, fr., overall white glaze. Interior: pale gold-brownish lustre ornaments, blue stain. Pale, pinkish fabric. Holes of vessel's amendment. Preserved h. 3.5 cm; rim d. 13 cm. (fig. 2.3).
Place found: Kastritsi, 2005, Sq. XXV/5, field inv. no. 45/2005.
Place now kept: Archaeological Museum of Varna, Medieval repository.
Type: LVMDA
Date: 1333–1348.

4. Bowl, fr., overall white glaze. Interior: radial alternating lines of brownish lustre, cobalt blue and white. Exterior: lines of dull orange lustre. Pale, pinkish fabric. Preserved h. 3 cm; rim d. 16 cm (fig. 2.4).
Place found: Varna, Roman Thermae, 1961.
Place now kept: Archaeological Museum of Varna, Medieval repository, inv. no. IV 1308.
Type: LVDP
Similar: Rome, bacina on the erected in 1348 façade of church S. Andrea at S. Giovanni hospital (Blake 1986, 373, 400, pl. 15, no 2); Britain (Hurst 1977, 86–87, fig. 28, no. 22).
Date: 1330–1420 / 1330–1380.

5. Bowl, fr., overall white glaze. Interior: radially arranged composition of plant golden lustre motifs, and pierced white ornaments. The composition divided by blue radial lines. Exterior: a line of dull gold lustre. Beige fabric. Preserved h. 3.7 cm; foot d. 6.6 cm (fig. 2.5).
Place found: Varna, Roman Thermae, 1961.
Place now kept: Archaeological Museum of Varna, inv. no. IV 1300.
Type: LVDP
Similar: Palermo, bacini of Palazzo Chiaramonte chapel (Blake 1986, 402, pl. 17:990, 991); Pisa (Berti, Tongiorgi 1986, 318, Tav. 2.7); Crimea, Caffa (Kravchenko 1991, 117, fig. 5.4)
Date: 1330–1420 / 1330–1380.

6. Dish, fr., overall white glaze. Interior: radially arranged composition of plant reddish-brown lustre motifs. The composition divided by blue radial lines. Exterior: a line of reddish-brown lustre. Beige fabric. Preserved h. 2.2 cm; foot d. 5 cm (fig. 2.6).
Place found: Varna, Roman Thermae, 1960.
Place now kept: Archaeological Museum of Varna, Medieval repository, inv. no. IV 1303.
Type: LVDP
Date: 1330–1420 / 1330–1380.

7. Dish, fr., overall white glaze. Interior: radially arranged composition of plant motifs of brown-reddish lustre and blue lines. Exterior: lines of reddish lustre, "Catherine wheel" on the bottom. Pinkish fabric. Preserved h. 3.4 cm; foot d. 5.9 cm (fig. 2.7).
Place found: "Petrich Kale" fortress, 2016, Sq. F7, surface layer.
Place now kept: Archaeological Museum of Varna, Medieval repository, field inv. no. 273/2016.
Type: LVDP
Similar: Pula (Blake 1986, 378, pl. 1.2); Pisa (Berti, Tongiorgi 1986, 318, Tav. 2.12); Moscow (Koval 2010, 103, fig. 38.6)
Date: 1330–1420 / 1330–1380.

8. Bowl, fr., overall white glaze. Interior: radially arranged composition of plant motifs of brown lustre and blue lines. Pinkish fabric. Preserved h. 1.7 cm; foot d. 5.8 cm (fig. 2.8).
Place found: Kastritsi, 2012, Sq. XXV/11.
Place now kept: Archaeological Museum of Varna, Medieval repository.
Type: LVDP
Similar: Pula (Blake 1986, 378, pl. 1.2); Pisa (Berti, Tongiorgi 1986, 318, Tav. 2.12); Moscow (Koval 2010, 103, fig. 38.6)
Date: 1330–1420 / 1330–1380.

9. Bowl, fr., overall white glaze. Interior: radially arranged composition of plant motifs of reddish-brown lustre and blue lines. Exterior: horizontal lines of reddish-brown lustre. Beige fabric. Preserved h. 4.6 cm; rim d. 14 cm (fig. 2.9).
Place found: Varna, Roman Thermae, 1964.
Place now kept: Archaeological Museum of Varna, Medieval repository, inv. no. IV 1318.
Type: LVDP
Date: 1330–1420 / 1330–1380.

10. Dish, fr., overall white glaze. Interior: plant motifs of reddish-brown lustre and blue lines. Exterior: horizontal lines of reddish-brown lustre. Beige fabric. Preserved h. 4.4 cm. (fig. 2.10).
Place found: Varna, Roman Thermae, 1964.
Place now kept: Archaeological Museum of Varna, Medieval repository, inv. no. IV 1368.
Type: LVDP
Date: 1330–1420 / 1330–1380.

11. Dish, fr., overall white glaze. Interior: blue plant motif. Pale pinkish fabric. Preserved h. 4.8 cm (fig. 2.11).
Place found: Varna, Roman Thermae, 1964.
Place now kept: Archaeological Museum of Varna, Medieval repository, inv. no. IV 1307.
Type: LVDP
Date: 1330–1420 / 1330–1380.

12. Dish, fr., overall white glaze. Interior: reddish-brown lustre, white rosette pierced through it in a medallion

surrounded by blue circles. Beige fabric. Preserved h. 2.3 cm, foot d. 6 cm (fig. 2.12).
Place found: Varna, Roman Thermae, 1964.
Place now kept: Archaeological Museum of Varna, Medieval repository, inv. no. IV 1306.
Type: LVDP
Similar: Pula (Blake 1986, 383, pl. 4.23); Varazze, S. Ambrogio Bell tower built in the middle of the 14th c. (Blake 1986, 397–398, pl. 12.17, pl. 13.30).
Date: 1330–1420 / 1330–1380.

13. Bowl, fr., overall white glaze. Interior: gold lustre, blue and white floral ornaments. Exterior: horizontal lines of reddish-brown lustre. Beige fabric. Preserved h. 3.9 cm, rim d. 16 cm (fig. 3.1).
Place found: Varna, "Morski zvutsi" str., 1964.
Place now kept: Archaeological Museum of Varna, Medieval repository, inv. no. IV 1313.
Type: LVDP
Similar: Pula (Blake 1986, 378, pl. 1.1); Santa Casa, Loreto (Blake 1986, 404, pl. 19.426).
Date: 1330–1420 / 1330–1380.

14. Dish, fr., overall white glaze. Interior: pale brownish lustre, pierced through it white floral ornaments, blue stains. Beige fabric. Preserved h. 2.9 cm, foot d. 6.4 cm (fig. 3.2).
Place found: Kaliakra, 2008, trench 8, fill of grave no. 8.
Place now kept: Historical Museum of Kavarna.
Type: LVDP
Date: 1330–1420 / 1330–1380.

15. Bowl, fr., overall white glaze. Interior: grid pattern of yellowish-brown lustre, blue line under the rim border. Exterior: horizontal lines of yellowish-brown lustre. Dull beige fabric. Preserved h. 2.5 cm, rim d. 15 cm (fig. 3.3).
Place found: Varna, Roman Thermae, 1961, premises no. 1.
Place now kept: Archaeological Museum of Varna, Medieval repository, inv. no. IV 1304.
Type: LVDP
Similar: Pula (Blake 1986, 382, pl. 3.18); Varazze, S. Ambrogio Bell tower built in the middle of the 14th c. (Blake 1986, 398, pl. 13.30); Rome, S. Maria Maggiore (Blake 1986, 401, pl. 16.14); the church S. Francesco, Sarnano, prov. Macerata (Blake 1986, 404, pl. 19.115); Murcia (Ballesteros 2015, 520, fig. 1); Dubrovnik (Milošević, Topić 2012, 160, fig. 4, 4a); Crimea, Caffa (Kravchenko 1991, 117, fig. 4.1, 3); Moscow (Koval 2010, fig. 39.1).
Date: 1330–1420 / 1330–1380.

16. Bowl, fr., overall white glaze. Interior: grid pattern of yellowish-brown lustre and blue. Exterior: horizontal and oblique lines of redish-brown lustre. Dull beige fabric. Preserved h. 2 cm (fig. 3.4).
Place found: Varna, Roman Thermae, 1953.
Place now kept: Archaeological Museum of Varna, Medieval repository, inv. no. IV 1305.
Type: LVDP
Similar: Pula (Blake 1986, 382, pl. 3.18); Varazze, S. Ambrogio Bell tower built in the middle of the 14th c. (Blake 1986, 398, pl. 13.30); Rome, S. Maria Maggiore (Blake 1986, 401, pl. 16.14); the church S. Francesco, Sarnano, prov. Macerata (Blake 1986, 404, pl. 19.115); Castle of Lorca, Murcia (Ballesteros 2015, 520, fig. 1); Pisa (Berti, Tongiorgi 1986, 321, Tav. 3.7, 9); Dubrovnik (Milošević, Topić 2012, 160, fig. 4, 4a); Crimea, Caffa (Kravchenko 1991, 117, fig. 4.1, 3); Moscow (Koval 2010, fig. 39.1).
Date: 1330–1420 / 1330–1380.

17. Bowl, overall white glaze. Interior: pierced white plant ornaments and palmettes through light orange lustre; intersecting blue squares in a framework of blue circle on the bottom, blue rinceau under the rim. Exterior: horizontal and oblique lines of yellowish-orange lustre, rosette on the bottom. Dull beige fabric. Height 6.3 cm, rim d. 15.1 cm, foot d. 5.8 cm (fig. 3.5).
Place found: Varna, Roman Thermae, 1964.
Place now kept: Archaeological Museum of Varna, Medieval repository, inv. no. IV 1538.
Type: LVDP
Similar: Crimea, Caffa (Kravchenko 1991, 117, fig. 4.1, 3).
Date: 1330–1420 / 1330–1380.

18. Bowl, fr., overall white glaze. Interior: pierced white palmettes and stylized arabesques through reddish-brown lustre, blue geometrical ornaments. Exterior: horizontal and oblique lines of brown lustre, partially preserved rosette on the bottom. Pale orange fabric. Height 6 cm, rim d. 15 cm, foot d. 5 cm (fig. 3.6).
Place found: Rusokastro fortress, 2021.
Place now kept: Archaeological Museum of Burgas, field inv. No 98/2021.
Type: LVDP
Date: 1330–1420 / 1330–1380.

19. Dish, fr., overall white glaze. Interior: pierced white plant ornaments pale brown lustre, blue lines. Exterior: horizontal lines of brown lustre, partially preserved rosette on the bottom. Pale pinkish. Preserved h. 3.4 cm, foot d. 4.5 cm (fig. 3.7).
Place found: Sozopol, 1995.
Place now kept: Archaeological Museum of Sozopol.
Type: LVDP
Date: 1330–1420 / 1330–1380.

20. Dish, fr., overall white glaze. Interior: radial lines of

brown lustre. Beige fabric. Preserved h. 2.1 cm, foot d. 6 cm (fig. 3.8).
Place found: Varna, Roman Thermae, 1959.
Place now kept: Archaeological Museum of Varna, Medieval repository, inv. no. IV 1315.
Type: LVDP
Similar: Pisa (Berti, Tongiorgi 1986, 321, Tav. 3.11-13); Castle of Lorca, Murcia (Ballesteros 2015, 520, fig. 1); Azov region, Tana (Kravchenko 2017, 546, fig. 5.5).
Date: 1330–1420 / 1330–1380.

21. Dish, fr., overall white glaze. Interior: ornaments with reddish-brown lustre and blue. Exterior: a line with reddish-brown lustre. Beige fabric. Preserved h. 3.4 cm (fig. 3.9).
Place found: Kavarna fortress, Chirakmana cape, 1955.
Place now kept: Archaeological Museum of Varna, Medieval repository.
Type: LVDP
Date: 1330–1420 / 1330–1380.

22. Dish, overall white glaze. Interior: plant motifs of pale brown lustre and white pierced ornaments, one rectangular and two leaf-like two symmetrically arranged blue sectors with imitations of Arabic inscriptions. Exterior: horizontal and oblique lines of pale brown lustre. A cross in the center and "IC XC NI KA" scratched later over the original decoration. Above the inscribed cross, at the end of the periphery of the dish, two hanging holes are drilled. Pale orange fabric. Height 4.3 cm, rim d. 14.6 cm, foot d. 4.9 cm (fig. 4.1).
Place found: Kaliakra, necropolis in the Inner town, 2019, sector 87, sq. A1. The dish discovered in a secondary grave no. V, over a human skull.
Place now kept: Historical Museum of Kavarna, field inv. no. 20/2019.
Type: LVDP
Similar: Pula (Blake 1986, 379, 380, pl. 2.7).
Date: 1330–1420 / 1330–1380.

23. Bowl, overall white glaze. Interior: plant motifs of pale brown lustre and white pierced ornaments, one rectangular and two oval (one preserved), symmetrically arranged blue sectors with imitations of Arabic inscriptions. Exterior: faded out decoration of lustre horizontal and oblique lines; traces of mortar. Pale orange fabric. Height 5.9 cm, rim d. 16.8 cm, foot d. 6 cm (fig. 4.2).
Place found: Varna, St. George church, 1967, immured in the western façade.
Place now kept: Archaeological Museum of Varna, Medieval repository, inv. no. IV 6635.
Type: LVDP
Similar: Pula (Blake 1986, 379, 380, pl. 2.7, 8).
Date: 1330–1420 / 1330–1380.

24. Jug, fr., overall white glaze. No decoration preserved. Pale pinkish fabric. Preserved h. 2 cm, foot d. 7 cm (fig. 4.3).
Place found: Kaliakra, Necropolis, 2018.
Place now kept: Historical Museum of Kavarna.
Type: LVDP
Date: 1330–1420 / 1330–1380.

25. Jug, fr., overall white glaze. Exterior: brown lustre, blue and white lines. Pinkish fabric. Preserved h. 4.3 cm, foot d. 8.5 cm (fig. 4.4).
Place found: Kastritsi, 2014.
Place now kept: Archaeological Museum of Varna, Medieval repository.
Type: LVDP
Date: 1330–1420 / 1330–1380.

26. Jug, overall white glaze. Exterior: grid pattern of brown lustre on the neck, alternating vertical lines and bigger sectors of brown lustre, blue and white on the body. Traces of lustre on the inner surface of the neck. Beige-pinkish fabric. Height 15.9 cm, neck h. 4.1 cm, foot h. 2 cm, rim d. 9.2 cm, maximal d. 9.2 cm, foot d. 9.4 cm (fig. 4.5).
Place found: Varna, Roman Thermae, 1964, medieval house no. 3.
Place now kept: Archaeological Museum of Varna, Medieval repository, inv. no. IV 6636.
Type: LVDP
Similar: Pula (Blake 1986, 385, 387, pl. 7.30, 31); Pisa (Berti, Tongiorgi 1986, 321, Tav. 3.4–6); Türkiye, Ayasuluk Castle (Yilmaz 2019, 203 fig. 10); Crimea, Soldaia (Teslenko, Mayko 2019, 287, 306, fig. 1.1); Crimea, Alushta (Teslenko 2004, 481, 483, fig. 4.1).
Date: 1330–1420 / 1330–1380.

27. Bowl, fr., overall white glaze. Interior: faded out decoration of gold lustre, a blue circle in the middle. Exterior horizontal lines of gold lustre. Pale orange fabric. Holes of vessel's amendment. Height 5.6 cm, rim d. 13.6 cm, foot d. 5.7 cm (fig. 5.1).
Place found: Kastritsi, 2014.
Place now kept: Archaeological Museum of Varna, Medieval repository, inv. no IV 1006.
Type: LVDC
Similar: Dubrovnik (Milošević, Topić 2012, 174–176, fig. 30, 30a); Crimea, Alushta (Teslenko 2004, 478, 484, fig. 1.5).
Date: 1400–1500.

28. Escudella, fr., overall white glaze. Interior: plant ornaments of reddish-brown lustre, blue, separated in four gothic rose. Exterior: arched lines and "stars" of reddish-brown lustre. Pale, yellowish fabric. Preserved h. 5.7 cm, rim d. 18.2 cm (fig. 5.2).
Place found: Sozopol, 1995.
Place now kept: Archaeological Museum of Sozopol.
Type: LVDC
Similar: Castle of Lorca, Murcia (Ballesteros 2015,

519, fig. 16); Barcelona (Ubero et al. 1994, 101, cat. No. 34); Paterna (Amigues 2002, 67, 74; García 2005, 15, fig. 15); Tuscany (Ward-Perkins et al. 1973, 98–100, fig. 31.219, 220; Francovich, Gelichi 1986, 302, Tav. VI.19); Pisa (Berti, Tongiorgi 1986, 330, Tav. 8.12, 13); Dubrovnik (Milošević, Topić 2012, 169–171, figs. 21, 21a, 22, 22a); Histria (Bradara 2003, 133, 140, 151, nos. 1, 13, 35).
Date: 1400–1500.

29. Escudella, fr., overall white glaze. Interior: faded out decoration of light brown lustre, partially preserved blue shield on the bottom. Exterior: Catherine wheel of light brown lustre. Bottom d. 6 cm (fig. 5.3).
Place found: Varna, Roman Thermae.
Place now kept: Archaeological Museum of Varna, Medieval repository, inv. no 1310.
Type: LVDC
Similar: Dubrovnik (Milošević, Topić 2012, 170, fig. 23, 23a).
Date: 1400–1500.

30. Escudella, fr., overall white glaze. Interior: plant motifs of gold-brownish lustre. Exterior: arched lines and "stars" of gold-brownish lustre. Beige fabric. Preserved h. 4.2 cm, rim d. 14 cm (fig. 5.4).
Place found: Varna, Roman Thermae, 1961.
Place now kept: Archaeological Museum of Varna, Medieval repository, inv. no 1317.
Type: LVDC
Similar: Paterna (García 2005, 15, figs. 14, 15); Barcelona (Ubero et al. 1994, 101, cat. Nos. 33, 34); Tuscany (Ward-Perkins et al. 1973, 98, 99, fig. 31.218, 224); Dubrovnik (Milošević, Topić 2012, 167, 168, figs. 18, 18a, p. 168); Crimea, Soldaia (Dzhanov 1998, 86, fig. 4.9; Teslenko, Mayko 2019, 289, 290, 307, fig. 2.1); Crimea, Funa (Teslenko 2004, 487, 488, fig. 1.2).
Date: 1400–1500.

31. Escudella, fr., overall white glaze. Interior: plant motifs of gold lustre. Exterior: arched lines of gold lustre. Beige fabric. Preserved h. 4.5 cm, rim d. 17 cm (fig. 5.5).
Place found: Varna, Roman Thermae, 1961.
Place now kept: Archaeological Museum of Varna, Medieval repository, inv. no 1365.
Type: LVDC
Similar: Paterna (García 2005, 15, figs. 14, 15); Barcelona (Ubero et al. 1994, 101, cat. Nos. 33, 34); Tuscany (Ward-Perkins et al. 1973, 98, 99, fig. 31.218, 224); Dubrovnik (Milošević, Topić 2012, 167, 168, figs. 18, 18a); Crimea, Soldaia (Dzhanov 1998, 86, fig. 4.9; Teslenko, Mayko 2019, 289, 290, 307, fig. 2.1); Crimea, Funa (Teslenko 2004, 487, 488, fig. 1.2).
Date: 1400–1500.

32. Dish, fr., overall white glaze. Interior: plant motifs of reddish-gold lustre. White, slightly sandy fabric. Preserved h. 3.5 cm (fig. 5.6).
Place found: Varna, Roman Thermae, 1961.
Place now kept: Archaeological Museum of Varna, Medieval repository, inv. no 1541.
Type: workshop of Muel Saragossa (?)
Date: 16th c.

33. Dish, fr., overall white glaze. Interior: plant motifs of reddish-gold lustre. White, slightly sandy fabric. Preserved h. 2.3 cm (fig. 5.7).
Place found: Varna, Roman Thermae, 1961.
Place now kept: Archaeological Museum of Varna, Medieval repository, inv. no 1320.
Type: workshop of Muel Saragossa (?)
Date: 16th c.

34. Dish, fr., overall white glaze. Interior: plant motifs of reddish-gold lustre. White, slightly sandy fabric. Preserved h. 5.1 cm, rim d. 26 (fig. 5.8).
Place found: Varna, Roman Thermae, 1964.
Place now kept: Archaeological Museum of Varna, Medieval repository, inv. no 1319.
Type: workshop of Muel Saragossa (?)
Date: 16th c.

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Испанска люстрова керамика от Западното черноморско крайбрежие XIV–XV в.

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(резюме)

Испано-мавританската керамика е все още непозната в българската археология, вероятно заради обстоятелството, че находките са малко и обикновено представляват незначителен сегмент от керамичните ансамбли на средновековните селища. Въпреки това, две публикации от България илюстрират фрагменти, които без съмнение би следвало да се отнесат към испанската люстрова керамика (Мирчев и др. 1962, 88, табл. XIV. 3, 4, 6, 7; Рабовянов 2015, 289, т. 97.1877б, 1878а, т. 98А). Те насочват към предположението, че през втората половина на XIV и първата половина на XV в. до българските земи е достигал, макар и оскъден внос от Западното Средиземноморие. В потвърждение са представените тук образци от седем селища в Черноморския район: градовете Созопол, Варна, Кастрици и Калиакра, крепостите Русокастро, „Петрич кале“ и Каварна (обр. 1).

Към ранното производство на Валенсия, развиващо се под прякото влияние на Малага в краткия хронологически отрязък от 1333 до 1348 г., се отнасят няколко находки от Варна и Кастрици (обр. 2.1–3). Украсата им включва фино нанесени орнаменти със златиста или златисто-кафява люстра и акценти със светла кобалтова боя.

Преобладаващата част от испанския внос (обр. 2.4–12, обр. 3.1–9, обр. 4.1–5) се вписва в типа Пула, чието производство обхваща периода от 1330 до 1420 г., с пик на разпространение от 1330 до 1380 г. Групата се отличава с разнообразни декоративни композиции, сред които доминират растителни мотиви, нанесени с люстра и кобалт. Сред най-отличителните за групата орнаменти са стилизираните арабски букви и надписи, които издават връзка с първообразите на андалуската керамика. Подобна украса се открива върху двете най-представителни находки

от българското Черноморие – от Калиакра и от църквата „Св. Георги“ във Варна.

Калиакренското блюдо (обр. 4.1) е открито при проучвания на некропола във Вътрешния град (Петрунова, Ендарова 2020, 1154). Украсата му се състои от растителни и геометрични орнаменти, нанесени със светлокафява люстра и бели такива, които изпъкват през фона на люстрата. Съпътстващата кобалтова декорация е ограничена в едно централно четириъгълно поле и две симетрично разположени листовидни фигури, запълнени с арабски букви или имитиращи ги орнаменти. Два отвора върху периферията подсказват, че съдът е внесен като предмет на лукса и първоначално е украсявал нечий дом. При окачване в позицията, която сочат отворите, декоративната композиция е била възприемана от наблюдателя най-вероятно като кръстно изображение. Въпреки това, кобалтовите мотиви, пресъздаващи арабски надпис, са останали неразбираеми за собственика на съда, поради което е последвало издраскване на кръст в центъра и популярната формула IC XC NI KA в междурамията на кобалтовия „кръст“.

Купата от Варна има близка с предходната находка украса (обр. 4.2). Открита е при разкопките на средновековната църква „Св. Георги“ вградена в зидарията на западната ѝ фасада. Подобно използване на трапезни съдове за фасадна декорация е характерно за италианската архитектура от средата на XI до края на XV в. Примерите извън Апенините са малко и обикновено се обясняват с прякото влияние на генуезки или венециански търговски колонии. Напълно възможно е такава връзка да се проследи и за варненския храм. Според грамотата, която цар Иван Александър дава на венецианците през 1347 г., те получават правото да „купуват и да си съграждат църква и ложа [седалище], гдето им хареса“ (Петров, Гюзелев 1978, 248–249). От писмените източници знаем, че Венеция основава ложа във Варна. За църква няма сведения, но е логично италианците да са се възползвали и от тази възможност. Техният храм би следвало да има характерни белези, които отправят към паралели със западноевропейската архитектура от XIV в. С оглед на специфичната архитектурна украса, макар и хипотетично може да се допусне, че именно „Св. Георги“ е бил венецианският храм на Варна.

Притокът на испански съдове към българските земи продължава и през XV в., когато се разпространява керамика от класическия период на валенсианското производство (обр. 5.1–5). Съдовете са малки полусферични купи с конкавно дъно и две изтеглени триъгълни хоризонтални дръжки, а в украса им се вплитат андалуски мотиви и готически теми.

Няколко находки от Варна се отличават с по-грубо обработена бяла глина и специфична украса от едри люстрови орнаменти, които сега имат наситен оранжево-червен иризиращ цвят (обр. 5.6–8). Особеностите на глината и люстрата насочват към предположение за производство различно от Валенсия, каквото би могло да е това на Муел, Сарагоса от XVI в.

Анализът на известните до момента находки показва, че от 30-те години на XIV в. до края на XV в. в българските земи навлиза, макар и оскъден внос на иберийски изделия. Той най-вероятно е осъществяван чрез търговското посредничество на италианските морски републики.

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Thracian silver jewellery from the 4th c. BC: investigations on objects from the collection of the Roman–Germanic Central Museum, Leibniz Research Institute for Archaeology

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ABSTRACT

In 2021, eight Thracian silver objects came to my attention during a research stay at the Roman-Germanic Central Museum, Leibniz Research Institute for Archaeology (RGCM) Mainz, Germany, which have been ignored by the scientific community so far. The presented silver convolute, which forms part of the collection of the RGCM, consist of two bracelets, three fibulae and three hemispherical fragments. As the archaeological context is missing, the objects had been analysed and placed in a chronological and geographical context with other objects of this kind. It was established that the three fibulae belong to the Bukyovtsi Type. The bracelets have strong similarities with pieces from several hoards in north-western and central Bulgaria, for example from Vladinya (Lovech region) or Granitovo (Belogradchik region). Due to the stylistic features of the objects, they can be dated to the second half of the 4th century BC.

KEYWORDS

Silver jewellery, Thracian, Bracelet, Fibulae, Bukyovtsi Type

Introduction

During research on Thracian gold- and silver art, a convolute was brought to light in the collection of the Department of Pre- and Protohistory at the Roman-Germanic Central Museum, Leibniz Research Institute for Archaeology (RGCM) Mainz, Germany. It was labelled with the following information: discovery site: Bulgaria, find context: unknown and date: late Iron Age 320–150 BC (Inventarbuch RGZM 33, 1–3)[1]. The convolute with inventory numbers O.42054/001-008 consists of two silver bracelets, three silver fibulae and three silver hemispherical fragments (fig. 1). It was acquired by the RGCM from a Munich art dealer in 1998. Up to now, it has only been briefly presented in the Jahrbuch des RGZM (Jahrb. RGZM 1999, 2, 529–531) and is hardly known in the scientific community. For this reason, the jewellery will be presented in detail and placed in context with other objects of this kind from Bulgaria and beyond (fig. 2).

1 Inventarbuch des Römisch-Germanischen Zentralmuseums vol. 33,1-3. https://www3.rgzm.de/invbuch/page.php?lang=de&page_id=8675

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Fig. 1. Presentation of the convolute in the Jahrbuch des RGZM (after Jahrb. RGZM 1999, 529, fig. 44)
Обр. 1. Представяне на находката в годишника на Римско-германския централен музей (по Jahrb. RGZM 1999, 529, фиг. 44)

Descriptions

Bracelets

The two bracelets from the Mainz convolute are made of silver and have open ends (figs. 3–4). They have a width of 3.09 cm and 3.00 cm, a length of about 27.3 cm and 27.7 cm and a weight of just under 100 g (98.3 g and 99.6 g). The inner diameter cannot be calculated die to the deformation of the objects. The bracelets consist of a wide silver strip that forms a triangular terminal. Both bracelets show three longitudinal ribs, which appear semi-circular in cross-section. The middle rib is longer than the two outer ribs and tapers towards its end to fit the conical ends of the bracelet (figs. 5–6).

The decoration of the three ribs consists of different kinds of geometric ornaments. The two outer ribs have oblique lines at their ends. The central rib is partly decorated with groups of transversal lines and arches next to the tapered ends. Parallel to the three ribs, a total of six ornamental lines run along the entire length of the main part: two along each side and one in each gap between the ribs (figs. 3–4). They give the impression of a beaded wire, although they are made with an ornamental punch.

The conical ends of bracelet number 1 (inv.no. O.42054_001) are decorated with a pattern of circular eyes, tangents and a line of punched elements running along the central rib and the sides. This line is double-barrelled in the conical end (fig. 5). The second bracelet (inv.no. O.42054_002) is very similar in design. Here, too, there are three horizontal ribs framed by six ornamental lines. The design of the tapered end is also similar, but here the punched line is not double-barrelled – it is only a single line (fig. 6).

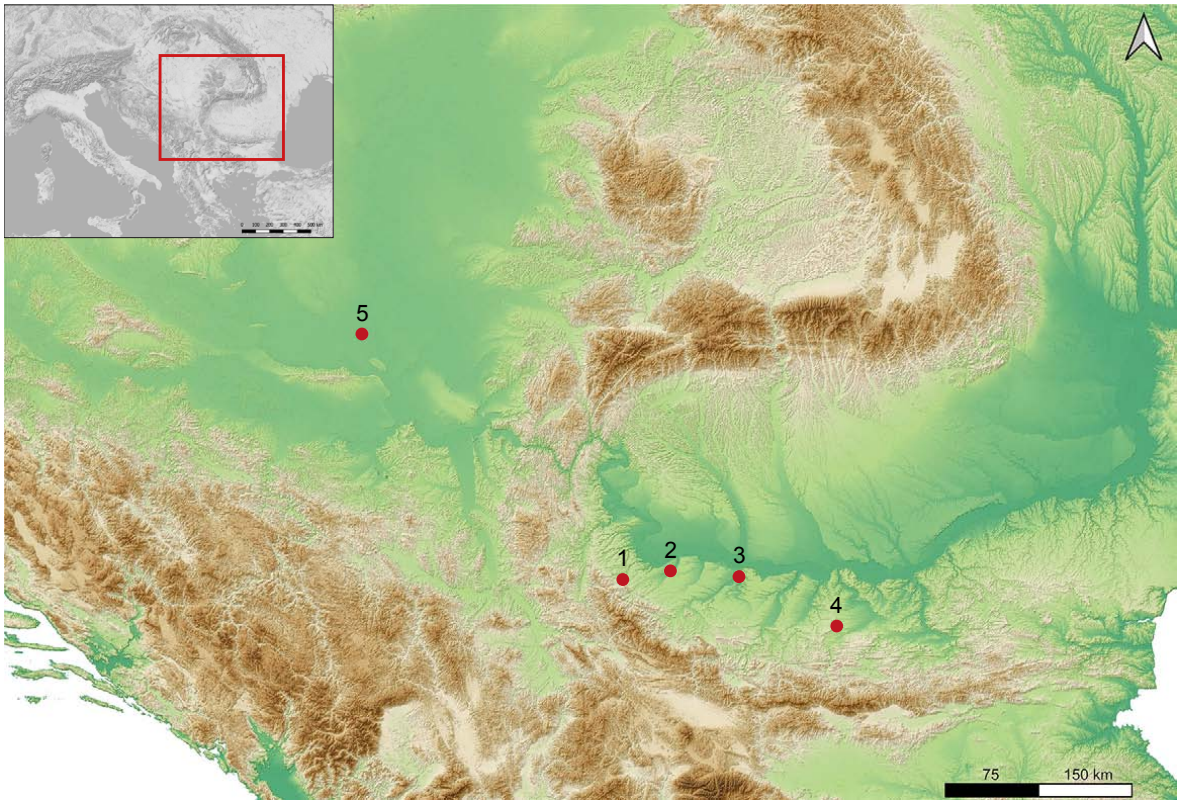


Fig. 2. Map of the findspots of bracelets and fibulae mentioned in the text. 1. Granitovo, Belogradchik municipality, 2. Staliyska mahala, Lom municipality, 3. Bukyovtsi, Vratza municipality, 4. Vladinia, Lovech district, 5. Čurug, Vojvodina region (figure S. Simon)
Обр. 2. Карта на находките от гривни и фибули, споменати в текста. 1. Гранитово, община Белоградчик, 2. Сталийска махала, община Лом, 3. Букьовци, община Враца, 4. Владиня, област Ловеч, 5. Чуруг, област Войводина (автор С. Симон)

Both bracelets show multiple damages. They are bent, cracked and scratched. On the back of bracelet number 1 (inv.no. O.42054_001) a soldered silver plate, has been attached, probably to repair a crack in the material (fig. 7). Whether this was made in antiquity cannot be clearly determined at present, as material analyses are still lacking. Bracelet number 2 (inv.no. O.42054_002) was broken and shows clear signs of repair. Here, synthetic resin and a silver lacquer were used[2], and next to it, a part of the bracelet is bent backwards.

Concerning the manufacturing technique, the bracelets were probably forged from a pre-cast silver ingot. A mold could have been used to create the horizontal ribs. This would be indicated by the tool marks on the back (fig. 8). A mold could also have been used for the conical ends. Another possibility could be that the bracelet was completely cast and the surface reworked for the fine details. The engraved lines and punched patterns were introduced with stitches and different punches after the base of the bracelet was finished. It is noteworthy here that the circular eyes were made with two different punches, because the eye is not always in the centre of the circle (figs. 5–6).

The arches on the central rib are also made with different punches, since some arches are pointed. A final step in the processing is to form a circular bracelet with overlapping terminals from the flat silver. So far, no evidence of two plates forged on top of each other has been found on these

2 Personal note from the restoration team of the RGCM.



Fig. 3. Bracelet inv. no. O.42054_001 from Roman-Germanic Central Museum (courtesy museum, photo R. Müller)
Обр.3. Гривна с инвентарен номер O.42054_001 от Римско-германския централен музей (с любезното съдействие на музея, снимка Р. Мюлер)



Fig. 4. Bracelet inv. no. O.42054_002 from Roman-Germanic Central Museum (courtesy museum, photo R. Müller)
Обр.4. Гривна с инвентарен номер O.42054_002 от Римско-германския централен музей (с любезното съдействие на музея, снимка Р. Мюлер)



Fig. 5. Ends of bracelet inv. no. O.42054_001 (courtesy museum, photo R. Müller)
Обр.5. Краят на гривна с инвентарен номер O.42054_001 (с любезното съдействие на музея, снимка Р. Мюлер)



Fig. 6. Ends of bracelet inv. no. O.42054_002 (courtesy museum, photo R. Müller)
Обр. 6. Краищата на гривна с инвентарен номер O.42054_002
(с любезното съдействие на музея, снимка Р. Мюлер)



Fig. 7. Back of bracelet inv. no. O.42054_001 with the soldered silver plate
(courtesy museum, photo R. Müller)
Обр. 7. Вътрешната страна на гривна с инвентарен номер O.42054_001 със запоена сребърна плоча
(с любезното съдействие на музея, снимка Р. Мюлер)



Fig. 8. Some of the toolmarks on the bracelet (courtesy museum, photo R. Müller)
Обр. 8. Следи от инструменти върху гривната (с любезното съдействие на музея, снимка Р. Мюлер)



Fig. 9. Front- and back view of the fibulae inv. nos. O.42054_004 and O.42054_005 from Roman-Germanic Central Museum (courtesy museum, photo R. Müller)
Обр. 9. Поглед отпред и отзад на фибулите с инвентарни номера O.42054_004 и O.42054_005 от Римско-германския централен музей (с любезното съдействие на музея, снимка Р. Мюлер)

bracelets, as it has been described by K. Chukalev and M. Tonkova for the bracelet from Vladinia, Lovech region (Chukalev, Tonkova 2017, 50, No. 34). Furthermore, a structure of several plates, as described by A. Dimitrova (Dimitrova 1966, 123) for a similar bracelet fragment, could not be confirmed. Here it would be necessary to clarify by X-ray and XRF analysis whether there are two plates, perhaps even with different compositions.

Fibulae

The three fibulae from the Mainz convolute are the so-called 'Hinged fibula' with star-shaped decorative elements on the bow (Vasić 1999, 109).

Two of the fibulae (inv.no. O.42054_004; inv.no. O.42054_005), are probably belonging to a pair, as they are a right and a left fibula with the same design (fig. 9).

These fibulae have a weight of 53.4 g and 51.6 g. They consist of a head-plate, a bow with star-shaped elements and a catch-plate. The palmette-shaped head-plates are decorated with curved punched lines and are enclosed by a surrounding line of silver beads (fig. 10 a–b), although some are missing on both fibulae. These silver beads are usually not spherical, but rather lenticular. The bows are decorated with five star-shaped and six cylindrical elements. At the transition from one element to another is a decorative rim. The catch-plates are decorated with open grooves running horizontally, with hemispheres on top and with a line, consisting of a series of dots. The lower parts of the catch-plates are also decorated with this element (fig. 10 c–d). The part where the pin fits in was bent from the decorated front to the back. On one of the fibulae, it is still preserved like this, on the other one it is strongly bent upwards.

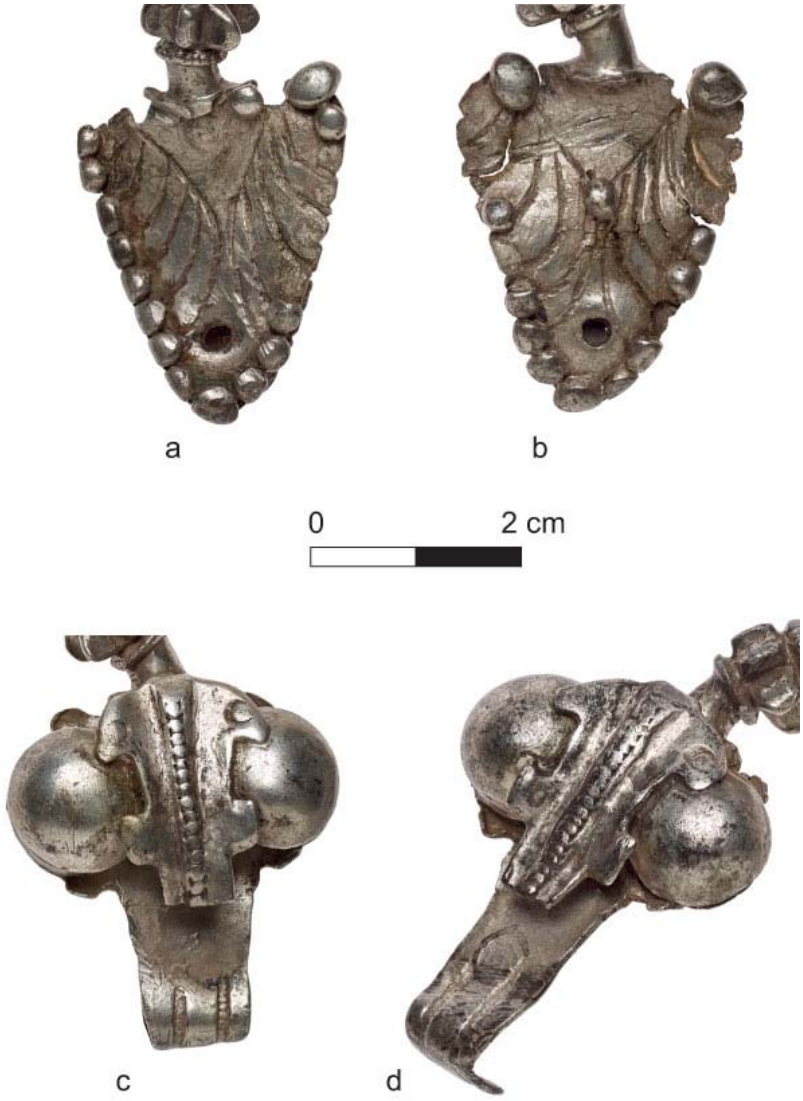


Fig. 10. Detail of the head- and catch-plates (courtesy museum, photo R. Müller)
Обр. 10. Детайл на челните плочки и иглодържателите
(с любезното съдействие на музея, снимка Р. Мюлер)

Both fibulae are damaged, the pins are missing, as well as elements of the design on the head-plates and the catch-plates, which can be seen in the solder residue on the surface. The star-shaped decorative elements and the decorative rims are heavily rubbed in places, which could be a trace of frequent wearing. The palmette-shaped head-plates are split in the area where the pin was fixed.

The third fibula (inv.no. O.42054_003) is similar in design but somewhat different in manufacture (fig. 11). It consists of a palmette-shaped head-plate, a bow with five star-shaped elements and a catch-plate.

Here, however, the palmette-shaped head-plate is decorated with straight engraved lines. This plate is framed by a surrounding line of individual beads. The bow is decorated with five star-shaped ornamental elements alternating with six cylindrical ones. Between the individual links there is a small decorative rim. The catch-plate is decorated with a line of punched dots, which run along right and left underneath the soldered elements.

As the other two fibulae, this fibula shows several damages such as scratches on the catch-plate, missing elements like some of the silver beads and the pin and the head-plate is split in the area where the pin was fixed. On one of the star-shaped elements on the fibula, a piece of the star-shaped



Fig. 11. Front- and back view of Fibula inv. no. O.42054_003 from Roman-Germanic Central Museum (courtesy museum, photo R. Müller)
Обр. 11. Поглед отпред и отзад на фибулата с инвентарен номер O.42054_003 от Римско-германския централен музей (с любезното съдействие на музея, снимка Р. Мюлер)

element has broken off. Most of the design elements of the catch-plate, are missing. Only an open frame, made of a circular sheet, and a silver bead next to it, are still attached.

Presumably, a design in the form of a bucranium (Chukalev, Tonkova 2017, 50) was applied to all catch-plates of these three fibulae. All three fibulae can be assigned to the Bukyovtsi type (Popov 1926).

It is possible that the pins were made of iron, as there are traces of iron on the head-plate of one fibula (inv.no O.42054_003)[3].

The fibulae were made by lost-wax-casting, in which the bow together with all the elements was modelled in wax and then cast. The head-plate and the catch-plate were then forged out of the overlaying material. The X-ray images confirm this, as a homogeneous structure is indicated here. Material analyses could provide further clues to the crafting, with regard to soldering and the fineness of the silver. These are still pending.

Hemispherical fragments

In addition to the bracelets and fibulae, there are three hemispherical fragments in the convolute from the collection of the RGCM. One of them (inv.no. O.42054_006) is a hemisphere made of silver sheet. It has a weight of 1.9 g and a height of 5.4 mm, a width of 10.5 mm and a length of 13.5 mm, it is slightly oval. This hemispherical fragment could have been an element of a fibula; for example, it could have been soldered to the catch-plate to be part of a bucranium, as on the three presented fibulae above. A reference to this would be the remains of soldering on the back (fig. 12a).

The other two hemispherical objects (inv.no. O.42054_007 and O.42054_008), are two massive lenticular objects made of silver (fig. 12b–c). They have a weight of 10.9 g and 10.7 g. They are slightly higher (6.8 mm and 6.3 mm) and larger (15.9 x 16.1 mm and 16.4 x 17.9 mm) than the single hemisphere. But they also have traces of soldering on the back (fig. 12b–c). It cannot be determined whether these were elements of other jewellery objects, but the traces of soldering indicate that these objects were attached to others.

3 Personal note from the conservators of the RGCM.



Fig. 12. Front- and back of the hemispherical fragments inv. nos. O.42054_006, O.42054_007, O.42054_008 from Roman-Germanic Central Museum (courtesy museum, photo R. Müller)
Обр.12. Предна и задна част на полусферичните фрагменти с инвентарни номера O.42054_006, O.42054_007, O.42054_008 от Римско-германския централен музей (с любезното съдействие на музея, снимка Р. Мюлер)

Comparisons with other objects

Bracelets

Bracelets of the type described above are known from other sites and all of them are hoard finds. The largest number of bracelets of this type is known from Bulgaria. In total, five bracelets and fragment of a bracelet are known from the sites of Granitovo, Belogradchik region (Dimitrova 1966, 119–120, figs. 8–9; Chukalev, Tonkova 2017, 51), Vladinia, Lovech region (Dimitrova 1966, 118–119, fig. 6–7; Chukalev, Tonkova 2017, 50), Staliyska mahala, Lom Region (Dimitrova 1966, 121–122, figs. 10–13) and an unknown site (Dimitrova 1966, 123). Another pair of bracelets comes from a hoard from Čurug, Vojvodina region, Serbia (Garašanin 1954, 40, tab. 28, figs. 5–6).

The shape of these bracelets is the same: they consist of a wide silver strip which tapers towards the ends and have horizontal ribs, of which the middle one is the longest and are decorated with different lines, engravings and punches elements.

However, there are differences in width, weight and design. The two bracelets from Granitovo (NAIM, inv.no. 4036а; 4036б), as well as the bracelet from Vladinia (NAIM, inv. no. 8151) have a width of 45 mm (Dimitrova 1966, 119, 121; Chukalev, Tonkova 2017, 50–51), the bracelets from Staliyska mahala (History Museum Lom, inv.no. 178) have a width of 35 mm (Dimitrova 1966, 121) and the two bracelets from Čurug have a width of 29 mm (Garašarin 1954, 40, Nos. 2023, 2031; Vasić 1995, figs.1,4). The bracelets from Mainz have a width of 30.9 mm and 30.0 mm.

The weight of the individual bracelets also varies significantly, with the two specimens from the hoard find from Čurug being the lightest with 40 g and 32 g, while the bracelet from Vladinia has a weight of 149.45 g (Chukalev, Tonkova 2017, 50). There are also differences in the design of the surface. The number of decorative bands between the horizontal ribs differs, as do the engravings. All these bracelets were found in hoards, some of them together with fibulae, like the ones from Vladinia.

Fibulae

This type of fibula is named after the site of Bukyovtsi, today Mizia, Vratza region (Popov 1926), where five fibulae of this type had been found. They were discovered in 1925 together with two silver vessels (a phiala and a jug) and were part of an elaborate chest ornament consisting of originally six fibulae, chains and pendants (Popov 1926; Dimitrova 1969, 309; Tonkova 2003, 217). The assemblage is now kept in the National Archaeological Institute with Museum in Sofia (inv. no. 2558, 2558 A-B.). The five fibulae, two left ones and three right ones (Dimitrova 1969, 309) have a palmette-shaped head-plate with straight decorative lines, which is surrounded by a line of silver beads. The bow shows five star-shaped and six cylindrical ornamental links in alternation, the cylin-



Fig. 13. Front- and back of the fibula from Saarbrücken (photo S. Simon)
Обр.13. Предна и задна част на фибулата от Саарбрюкен (снимка С. Симон)

drical ornamental links have a small ornamental ring at the ends. The catch-plates of the individual fibulae are designed as a so-called bucranium (Chukalev, Tonkova 2017, 50), which is formed from different design elements.

Two other fibulae of this type came from a hoard discovered in 1964 at Vladinia, Lovech region, together with a silver bracelet, which was described above (Dimitrova 1966, 116–117, fig. 2; 1969, 310–311, fig. 4). All objects from this hoard from Vladinia are in the collection of the National Archaeological Institute with Museum in Sofia (inv.no. 8148, 8149, 8151). The two fibulae have a palmette-shaped head-plate with curved decorative lines and are enclosed by spheres. The bow has six star-shaped and seven cylindrical alternating decorative elements. The cylindrical elements also have a small decorative ring on each side. Here, too, the catch-plate is designed as a bucranium (Chukalev, Tonkova 2017, 50). The fibulae are a pair, as there is a right and a left one. Both are damaged, their pins and some of the silver beads are missing.

Similar fibulae with star-shaped decorative elements are, for example, also known from other sites, such as Penkyovtsi, Tran Region (Chukalev, Tonkova 2017, 51), but here the catch- and the head-plate differs from those of the Bukyovtsi type. The palmette depicted here is more engraved and decorated with fewer beads.

Based on the bracelets and fibulae already known and mentioned here, the objects from the RGCM can most likely be assigned to an area in north-western Bulgaria, in the border region with Romania and Serbia (fig. 2). Since the finds form the collection of the RGCM are without a context, it is not possible to give an exact regional classification. The convolute can be dated to the same period as the hoards presented here, i.e., to the second half of the 4th c. BC (Chukalev, Tonkova 2017, 50–51).

It is possible that the presented fibulae are a local variant of the hinged fibula type, which has its origin probably in 6th–5th c. BC in Thessaly (Kilian 1975, 156, plate 59, fig. 1747) and Macedonia (Amandry 1963, 203, fig. 109; Vasić 1999, 102; Tonkova 2003, 218–219; 2017, 20–21). One fibula connected to this type, similar to the example mentioned by K. Kilian, belongs to the collection of the Department of Classical Archaeology from Saarland University (Germany). It is a small bronze fibula (in the catalogue described as an iron fibula) (Reinsberg 1998, 105, plate 53,7, Nr. 261) with five star-shaped elements on the bow (fig. 13). Like the fibulae from Mainz, the head-plate of the

fibula is split. One can see that the pin was attached probably inside the splitting, as there are some remains of bronze and a rivet pin.

Conclusion

The finds presented here provide further insight into Thracian craftsmanship and expand the spectrum of objects. The bracelets in particular show different methods of manufacture, although they are all similar in design, with horizontal ribs and geometric ornamentation, there is a clear difference in the weight of the bracelets. While the heaviest bracelet weighs 149.45 g and the lightest 32 g, the two from Mainz are in the upper range with almost 100 g each. The three fibulae are also special, since their design is most closely related to the fibulae from Bukyovtsi, as they are the only ones, apart from those from Bukyovtsi, to have five star-shaped decorative links. The fact that these finds have no find context, a gender-specific mode of wearing cannot be proven. The bracelet sizes give no indication of a gender-specific costume as well, as their circumference can vary. Further material analyses are necessary to clarify conclusive questions about the manufacturing technique.

Up to now, only a few bracelets with this type of design are known; thus the two pieces from Mainz expand our knowledge. Even if the discovery site is unknown, they probably originate from the distribution area of the previously known bracelets. A find context is usually not given for these finds, as they have so far always been found as hoards.

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Тракийски сребърни накити от IV в. пр.Хр. Изследвания на предмети от колекцията на Римско-германския централен музей към Изследователския институт по археология „Лайбниц“

Свеня Симон

(Summary)

През 2021 г. няколко тракийски сребърни предмети бяха идентифицирани в колекцията на Римско-германския централен музей към изследователския институт по археология „Лайбниц“ (RGCM) в Майнц, Германия. Артефактите са записани под общ инвентарен номер (инв. № O.42054/001-008). Те включват: две гривни, три фибули и три полусферични фрагмента и са закупени от музея през 1998 г. от мюнхенски търговец на произведения на изкуството с указания, че произхождат от България (обр. 1). До момента тези предмети са представени само в една илюстрация в Годишника на Римско-германския централен музей (Jahrb. RGZM 1999/2, 529–533).

Двете гривни са изработени от сребро и имат отворени краища (обр. 3–4). Те са с ширина 3,09 cm и 3 cm, дължина около 27,3 cm и 27,7 cm и тегло малко под 100 g. Имат три надлъжни ребра, които са украсени с различни геометрични орнаменти. Между тези ребра има шест орнаментални линии, които създават впечатление за нанизани на тел мъниста, но мотивът всъщност е щампован (обр. 5–6). И двете гривни показват множество повреди. На гърба на първата гривна е прикрепена сребърна пластина с цел поправка на пукнатина в мате-

риала (обр. 7). Не може да се установи точно дали тази поправка е извършена в античността, тъй като все още липсват анализи на материала, от който са изработени предметите. Втората гривна показва признаци на съвременна реставрационна намеса.

Що се отнася до производствените техники, гривните най-вероятно са изковани от предварително излят сребърен слитък с използване на матрица за изработването на хоризонталните ребра. Следите от инструменти на гърба подкрепят тази хипотеза (обр. 8). Досега не са открити доказателства за обработката на две изковани заедно пластини, оформящи съответно вътрешната и външната страна на гривните.

Трите фибули принадлежат към т. нар. шарнирни фибули със звездовидни елементи на лъка. Две от тях вероятно образуват двойка, тъй като има десен и ляв екземпляр с еднакво оформление (обр. 9). Челните плочки са във формата на палмети, заобиколени от линия от сребърни мъниста (обр. 10.a–b). Лъковете са украсени с пет звездовидни и шест цилиндрични елемента. Между отделните елементи има декоративен ръб. Иглодържателят е оформен като букраний, елементи от този естетико-технологичен подход все още личат на крачето (обр. 10.c–d).

Третата фибула е с подобно оформление (обр. 11), но линиите, които образуват палметата са гравирани, а не направени с насечки както при другите две. Всички фибули са с повреди и иглата им липсва. Възможно е иглите да са били железни, тъй като върху една от плочките има следи от желязо. Технически може да се каже, че фибулите са изработени чрез изливане по метода на изгубения восък. И трите фибули могат да бъдат отнесени към тип Букьовци.

Освен гривните и фибулите в находката има три полусферични фрагмента. Два от тях са масивни и сребърни и вероятно принадлежат на един артефакт (обр. 12.b–c). Третият е направен от лист сребро (обр. 12.a) и е оформен като полусфера. И трите фрагмента имат следи от спойка на гърба, което показва, че са били прикрепени към друг предмет.

Гривни от описания тип са част от състава на няколко съкровища в Северозападна България като Гранитово, Белоградчишко, Владиня, Ловешко, Сталийска махала, Ломско и един неизвестен обект, както и от съкровището от Чуруг в Сърбия. Представеният по-горе тип фибули е известен от Букьовци (днешна Мизия), Врачанско и от съкровището от Владиня, Ловешко. Подобни фибули със звездовидни декоративни елементи са открити и на други обекти като Пенкьовци, Трънско, но челната плочка и иглодържателят се различават от тези от типа Букьовци. Палметата, изобразена тук, е от врязани линии и украсена с по-малко мъниста.

Въз основа на вече познатите и споменати тук гривни и фибули, предметите от Римско-германския централен музей най-вероятно могат да бъдат отнесени към Северозападна България, в граничния район с Румъния и Сърбия, но без възможност за прецизна локализация (обр. 2). Гривните и фибулите от Майнц могат да бъдат датирани към същия период като споменатите съкровища, т.е. към втората половина на IV в. пр.Хр.

Представените тук артефакти допълват представата за тракийското майсторство и разширяват спектъра от находки. По-специално гривните показват различни методи на производство. Въпреки че всички те са сходни по вид, с хоризонтални ребра и геометрични орнаменти, има ясна разлика в теглото им. Фибулите от Майнц и тези от Букьовци са единствените с по пет звездовидни декоративни звена. Необходими са допълнителни анализи на материала, за да се изяснят окончателно въпросите относно производствената техника. Досега са известни само няколко гривни с това оформление като двата екземпляра от Майнц разширяват кръга на познанията ни. Дори и с неизвестно местонахождение, те вероятно произхождат от района на разпространение на известните досега гривни. Данни за местонамирането на подобни находки обикновено липсват, тъй като досега те винаги са намирани като част от съкровища или стават известни след постъпването им в музейни колекции.

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The Peraia of Samothrace project: report on the 2020–2021 fieldwork campaign

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ABSTRACT

The Peraia of Samothrace Project (HFRI-FM17-750) is a multi-disciplinary archaeological fieldwork project to investigate the diachronic settlement patterns from Prehistory to the Modern Era of the coastal and inland landscape opposite the island of Samothrace in the northern Aegean Sea. It uses integrated and non-invasive methods such as remote sensing, geophysical prospection, and intensive pedestrian field walking to explore the regional topography and the diversity of human occupation. One important aspect of the project addresses the question of Samothracian settlements mentioned in the written sources. This paper presents the results of the 2020–2021 fieldwork campaign, including the methodological framework of the survey, an overview of ancient literary sources and previous archaeological work in the region, and a preliminary report of the archaeological survey as well as a general discussion of the combined outcome of the results.

KEYWORDS

Peraia of Samothrace, Aegean Thrace, pedestrian survey, geophysics, remote sensing

Introduction

The Peraia of Samothrace Project (PSP) is a multi-disciplinary archaeological fieldwork project to investigate the diachronic patterns of human occupation within the coastal and inland land-

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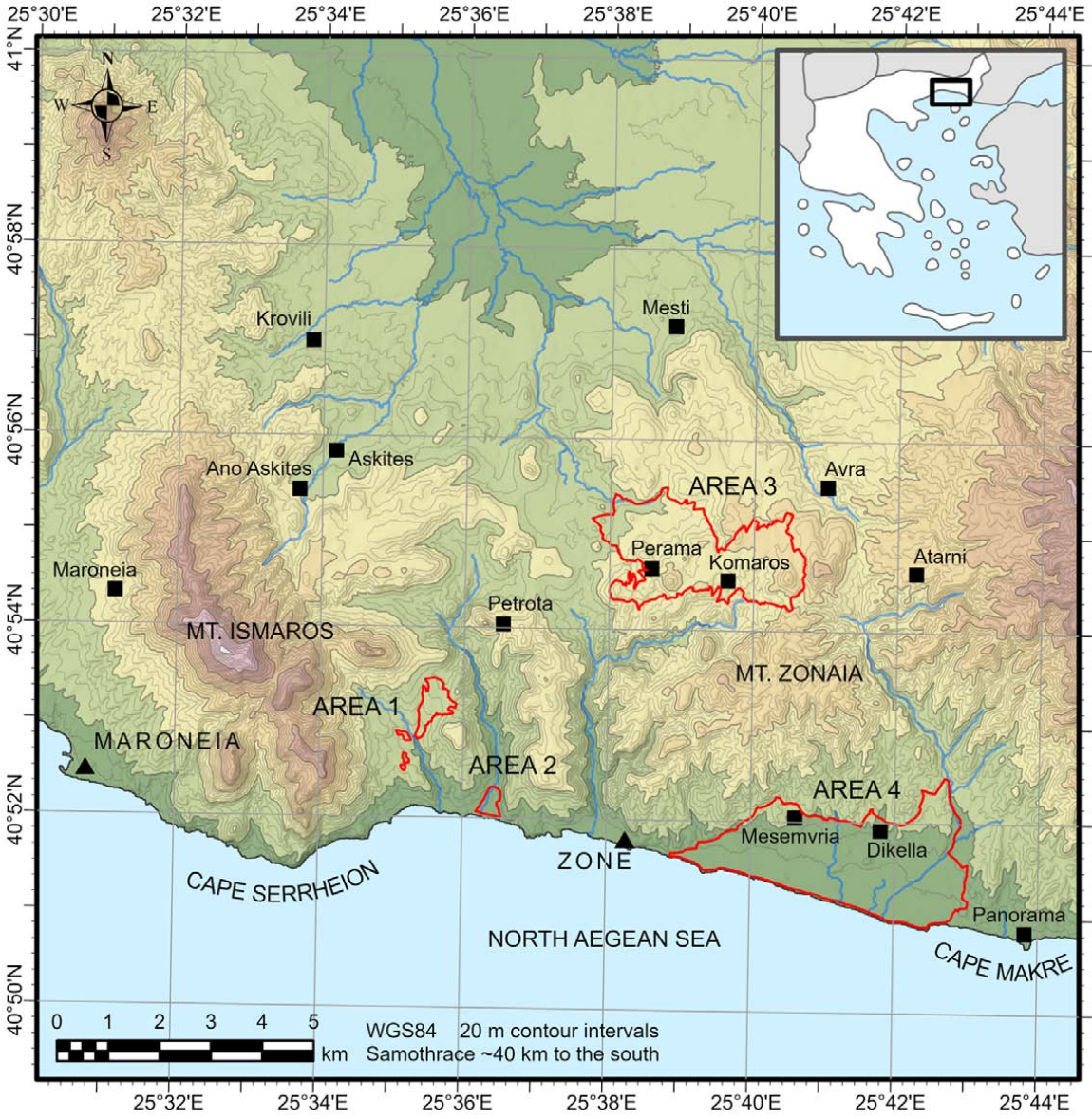


Fig. 1. Map of the coastline opposite the island of Samothrace in the northern Aegean Sea. PSP survey areas are indicated in red (figure by J.C. Donati)

Обр. 1. Карта на бреговата линия срещу остров Самотраки в северно Егейско море. Проучваните райони са посочени в червено (автор J.C. Donati)

scape opposite the island of Samothrace in the northern Aegean. In classical antiquity, this region was known in the literary sources as the Peraia of Samothrace because of the fortified settlements of Zone, Drys, Mesemvria, Sale, Tempyra, and Charakoma established there by the island beginning in the sixth century BC. Compared to other Greek colonies in the northern Aegean (e.g., Abdera, Ainos, and Maroneia), the settlements of the Peraia did not have large commercial harbours nor an extended *chora* for agricultural exploitation. On the other hand, they were located at strategic points leading into the Thracian hinterlands, controlling large stretches of wooded forestry, natural resources (e.g., stone quarries, minerals, and precious metals), water sources, and passageways to the sea including the eventual locale of the Roman Via Egnatia. Of the six settlements mentioned in the literary sources, only Zone has been securely identified based on excavations carried out at the fortified harbour town 20 km west of Alexandroupoli. The remainder of the settlement landscape in the Peraia remains poorly understood up through the Roman period (Lazaridis 1971; Meyer 1976; Markov 1980; Isaac

1986, 125–140; Loukopoulou 2004; Loukopoulou, Psoma 2008; Zahrnt 2008; Tsatsopoulou-Kaloudi et al. 2015; Vlachopoulos, Tsiafaki 2017, 474–547. On Aegean Thrace, e.g., Bakalakis 1959; 1961; Samsaris 1980; Triantafyllos 1991; Tiverios 2008; Tsiafaki 2020; Porozhanov 2021).

The purpose of PSP is to initiate an intensive archaeological survey that will help us gain a better understanding of the region's human presence, settlement patterns, and land use from Prehistory to the twentieth century (fig. 1). In the broader context of Thrace, the Peraia served as the crossroads between Europe and Asia and the Northern Aegean and the Black Sea. It became a melting pot of prehistoric populations, local Thracians, Greek colonists, Persian soldiers, Macedonian and Roman victors, and Christian and Muslim inhabitants. On a more targeted level, the project aims to provide insights into the Thracians and their habitation patterns in the Peraia, as well as their relationships with the Greek colonists. It is hoped that we can contribute to the long-standing issues concerning the identification of Samothracian settlements mentioned in the written sources and the confusing topography between Mt Ismaros and the Evros river (Tsatsopoulou-Kaloudi et al. 2015, 39–67; Garyfallopoulos 2022). Lastly, another goal is to develop an appreciation of the Byzantine and Ottoman landscape of the Peraia.

The fieldwork adopts an integrated approach in the use of various non-invasive methods of archaeological exploration. Our main approaches comprise satellite and aerial remote sensing, geophysical prospection, and intensive pedestrian field walking. In our inaugural year, the 2020 fieldwork campaign was severely curtailed by the COVID-19 pandemic. We managed to complete a brief preliminary survey of the area from 27 June to 2 July 2020, but the pedestrian campaigns planned in autumn 2020 were limited to a single day before the enactment of a general pandemic lockdown; geophysics had to be rescheduled altogether. The second half of the following year proved to be better. The 2021 pedestrian survey took place over three weeks spread into three campaigns: 27 June 2021 to 2 July 2021, 17–27 October 2021, and 19–26 November 2021. Geophysical prospection was carried out in one week from 21–28 October 2021. The project is a collaboration between the Democritus University of Thrace, the Ephorates of Antiquities of Rhodope and Evros, and the Laboratory of Geophysical – Satellite Remote Sensing & Archaeoenvironment of the Foundation of Research and Technology, Hellas (FORTH). During the first two years, the Peraia of Samothrace Project included almost 30 staff members, postdoctoral and doctoral researchers, and student participants mainly from Greek universities but also from the United States.

In the following sections, we provide a short description of the landscape and topography of the areas surveyed, along with an overview of previous archaeological work and relevant literary sources. The main part of this article presents the methodologies used and offers a preliminary report on the 2020–2021 fieldwork campaign along with a discussion of the current results.

The landscape and environmental context

The area under examination stretches approximately from the ancient city of Maroneia to the modern city of Alexandroupoli and from the Northern Aegean Sea to the southern extension of the Rhodope mountains. The natural environment is incredibly diverse and alternates between narrow coastal zones with small coves, highland streams that feed into river gorges, rugged hills covered with dense vegetation, and a limited number of upland plateaus (Astaras, Lambrinos 1988) (fig. 2). Before the middle of the twentieth century, much of the mountainous landscape framing the Peraia was covered with thick forests (Triantafyllos 1991, 292; Tsatsopoulou-Kaloudi et al. 2015, 17–18). Today, the landscape opposite Samothrace remains undeveloped compared to elsewhere in the Northern Aegean (itself an underdeveloped part of Greece) and the region is largely rural with a scattering of villages inland and pockets of tourist development along the coast. Arable fields are



Fig. 2. The rugged landscape around Area 1 looking north towards the outcrop of Ai-Giorgis Petrota (photo J.C. Donati)
Обр. 2. Пресеченият терен около зона 1, гледащ на север към оголената скала на Ai-Giorgis Petrota (снимка J.C. Donati)

interspersed within the hilly terrain and intermittingly along the shoreline, providing better opportunities for pasture rather than agriculture. Where available the arable land produces cotton, tobacco, and wheat, but also certain fruits and vegetables. Olive groves, vineyards, and orchards complete the agricultural landscape, but they are predominately limited to certain coastal areas.

The Zonaia mountains define the southern extension of the Rhodope range in the region, ending quite abruptly into the Northern Aegean Sea. The land is geologically rich and variable and stone quarries have been in use since antiquity notably for building material at ancient Zone, the most well-documented colony of Samothrace (Tsatsopoulou-Kaloudi et al. 2015, 18–27; Kokkorou-Alevra et al. 2014, nos. 280–282 [Zone]; nos. 278–279, 283 [Maroneia]; no. 277 [Makre]; no. 294 [Petrota]). A prehistoric flint quarry has been identified near the village of Petrota (Fotiadis et al. 2014; Fotiadis 2016. On the petrography of Petrota, see Astaras, Lambrinos 1988; Arikas et al. 2004). In more recent times, the Petrota quarry was exploited for the production of millstones in the early twentieth century and gold mines are currently marked for development near the village of Perama by the Eldorado Gold Corporation and Thracean Gold Mining S.A. Natural harbours along the seashore are scarce and Zone arguably has the most favourable setting. Although today largely underwater (Tsatsopoulou-Kaloudi et al. 2015, 26–27, 67–103), Zone's harbour contributed significantly to its commercial growth in the middle of the first millennium BC. Smaller bays can be found today at Petrota beach and further east at Dikella, but they are not hospitable for docking without artificial harbour installations.

Literary sources

The Samothracian Peraia is a rare topic in Greek and Roman literary sources, epigraphical testimonia, and ancient prosopography. In general, any topographical references appear coincidently woven into the description of important historical events. The sources consist of works dating to the Late Archaic and Classical periods, of accounts describing events of the Hellenistic period until the appearance of Rome, and of Late Antique sources, including Roman *itineraria*. The identification of settlements is a complex issue because of the varied dates of our sources, the rather contradictory topographical references, and the lack of securely recognized archaeological sites in the region.[1]

The oldest reference to the Peraia comes from Hekataios of Miletus (F160-161), quoted by the much later Stephanos of Byzantion. In the corresponding entries, the lexicographer describes Drys as a Thracian polis and Zone as a polis of the Thracian tribe of Kikones. That the coastline opposite Samothrace was populated by Greek settlements as early as the sixth century BC is made clear by Herodotus (7.59; 7.108), who narrates how Xerxes' army sidestepped the 'Samothracian forts' while marching through Northern Greece. It is generally accepted that the Greek term forts (*teichea*) by Herodotus indicates the defensive character of these settlements which presumably had circuit walls. The historian also mentions Sale and Zone as coastal settlements; Mesemvria as the westernmost foundation of Samothrace; and Drys as being near Cape Serrheion, identified today with the southern extension of Mt Ismaros (Triantafyllos 1987–1990; Mottas 1989, 88; Parissaki 2000–2003, 353–354). Following Herodotus, Skylax (69) reports that the island of Samothrace had trading posts (*emporia*) on the opposite coast and specifically mentions Drys and Zone. Of all these sites, only the fortified town of Zone has been identified with certainty through systematic excavations (see below). Furthermore, Mesemvria is mentioned only by Herodotus with no other topographical indication that would allow us to place the town either on the coast or further inland, leading some scholars to doubt its existence and attribute the reference as a mistake by the historian (Zahrnt 2008; cf. Tsatsopoulou 1996; Tsatsopoulou-Kaloudi et al. 2015, 59–61 for an overview of the debate and a new suggestion, away from the coast).

Another significant piece of evidence comes from the Athenian Tribute Lists of 421/20 BC (*IG* I^3 77 V 27–31). In the document, Drys and Zone, both allies of Athens in the fifth century BC, are positioned by [Cape] Serrheion and they are mentioned along with Sale. From the same period around the Peloponnesian War, an honorary decree found at Zone describes how a certain Polyaratos, son of Histiaios, was granted free docking and setting off (*eisploun* and *ekploun*) from Drys (Loukopoulou et al. 2005, 502–504, E400; Psoma 2008, 121–122). This information unambiguously places Drys, if not a harbour city, near the coast. Much later, Polyainos (*Strategemata* 2.22.3) describes a bold move by the Spartan general Ischolaos when he was under siege at Drys by the Athenian Chavrias in 375 BC. To urge his men to fight courageously and defy the Athenian battering rams, Ischolaos intentionally dismantled part of Drys' fortification walls. Based on the above sources, Drys was likely a fortified town near Cape Serrheion with direct access to a commercial harbour.

Besides Drys and Mesemvria, the identification of Sale and another city called Orthagoreia is equally challenging. Strabo (7.1.48) locates Sale somewhere between Maroneia and [Cape] Serrheion, but it is not mentioned in the account of Herodotus. In the past, scholars have identified Sale with the modern port city of Alexandroupoli, while nowadays an identification with Makre seems more plausible (Kazarow 1918; Muller 1975, 3; Pantos 1983, 173; Isaac 1986, 131; Avramea, Kara-

1 Thrakikos Elektronikos Thesauros is an indispensable tool that includes all sources and bibliographical references on Thracian sites; for discussions, see Loukopoulou 2004; Tsatsopoulou 2007; Loukopoulou, Psoma 2008; Tsatsopoulou-Kaloudi et al. 2015, 39–67; Tsatsopoulou-Kaloudi 2017, 543–544; Triantafyllos 2017, 531–533; Garyfallopoulos 2022). For a detailed list of publications, see the project's webpage: www.peraiasamothraceproject.gr.

nastassi 1993, 51; Mottas 1989; cf. Loukopoulou et al. 2005, 129–132; Psoma 2008, 125–126; Tsatsopoulou-Kaloudi et al. 2015, 46–48; Parissaki 2020, 193–194). The earliest evidence of Orthagoreia comes from its own silver and bronze coinage dating to the middle of the fourth century BC discovered at Zone, Abdera, and Maroneia (Gaebler 1935, 92–93; Head 1977, 203). Pliny (*NH* 4.11.43) identifies Orthagoreia with Maroneia, while later sources place it further east at Makre or even as far away as Stageira in Chalkidike (Hierokles *Synekdemus* App. 1.17; 3.114). Some scholars have suggested a location between Mt Ismaros and Zone, while others have argued that Orthagoreia was not part of the Peraia of Samothrace but an autonomous city (Lazaridis 1972, 45–47 [Vrysi Mousa]; Isaac 1986, 123; Samsaris 1980, 168 [*emporio* or *kome*]; Saba 2018).

The Samothracian Peraia continues to appear in Hellenistic and Roman literary and epigraphic records, but compared to earlier sources, the coastal towns are rarely referenced by name. For example, in a third-century BC decree from the Sanctuary of the Great Gods, the Samothracians honour king Lysimachos of Macedon for having restored to them lands on the coast, originally a gift by Philip II (or III) and his son, Alexander III (or IV) (McCredie 1968, 220–221, no. 65.843). Two more Samothracian honorary decrees mention a fort and a settlement (*ochyroma* and *chorion*) on the opposite coast. Land ownership of Samothrace on the Peraia is further attested by a Roman *horos* stone found at the harbour of Alexandroupoli, describing the territory as the 'sacred land of the gods' (Loukopoulou et al. 2005, 106–109, TE 63, TE 64).

The absence of named settlements in the Samothracian Peraia in the Hellenistic and Roman sources is quite noticeable and indicative of the changes that must have occurred over time. Selene Psoma (2008, 127–134) has convincingly argued that Zone and Drys were probably destroyed by Gallic incursions between 280–278/7 BC. Indeed, Strabo (7.48) associates Samothrace with two new settlements, Tempyra and Charakoma, calling them 'settlements of Samothrace' (*polichnia ton Samothrakon*). Charakoma is mentioned only by Strabo, who locates it between Tempyra and Doriskos (Loukopoulou et al. 2005, 136). On the other hand, Tempyra is encountered in the account of Titus Livius (38.41.1–12), a poem by Ovid (*Tristia* 1.10-19-21), as well as in Roman *itineraria*. It is also described as a station on the Via Egnatia approximately 8–9 miles west from Adrianopolis (*Itinerarium of* Antoninus 320-322, *Hierosolymitikon* 602-603), which is why scholars have identified it in the past at Alexandroupoli (Mottas 1989, 94; Zahrnt 2008, 98).

Overall, the literary and epigraphical evidence allows us to discern a shift in the lands controlled by Samothrace from the Classical through the Hellenistic periods. The island's influence no longer extended westward from Zone to Mt Ismaros; instead, it shifted eastwards to the territory beyond the Cape of Makre where scholars usually place ancient Sale. This shift probably took place by the second century BC, since Sale belonged by that time to the *chora* of Maroneia according to Titus Livius (31.16.1–7; 38.41.1–12). As argued by Gabriella Parissaki (2018), the area from Mt Ismaros to the Cape of Makre (Sale) was under the influence of Maroneia and not of Samothrace during the Late Hellenistic and Roman era. She further suggests that the passage at Mt Zonaia, between the modern villages of Meste and Dikella, should be identified with the Straits of the Korpilloi, a Thracian tribe mentioned several times in the Roman sources. Parissaki (2020) argues further that the Korpilike Strategia of the Thracian client state extended from Mt Zonaia to the Northern Aegean Sea and to the Evros River, reaching all the way up to Didymoteichon to the north, and did not include the Samothracian Peraia.

Medieval and Ottoman traveling accounts of Aegean Thrace are few and rarely contain information on the Peraia of Samothrace. The first such account dates to 1433 and includes sites visited by the Duke of Burgundy Bertrandon la Broquière. Among various settlements, he mentions Makre (Macry) and its destroyed Byzantine castle (La Broquière 1892, 167–203), a landmark also mentioned by Lorenzo Bernardo in 1591 (Cavazza 1886, 33–45) and Evliya Çelebi in his travel logs of

1667–1670 (Spatharis 1934; on the traveller, see Dankoff, Sooyong 2011). Makre (Macry) appears again in the 1665 account of Robert de Dreux (1925, 17–90), where the traveller notes an inscribed Roman sarcophagus and a cult stone also mentioned by Evliya Çelebi. In 1470, Giovan-Maria Angiolello visited Aegean Thrace and made a brief mention in his itinerary of Maroneia (Mercanovo), Komotini (Gumulgina), and the 'Mountain of God' or Monte Dedio (i.e., modern Mt Papikion, known colloquially then as Despotska Planina and Despot Dağı), where 'silver is mined in quantities' and two large villages inhabited by 'Macedonians' are located (Reinhard 1913, 37; Voyatzis 1996). Over a century later, the French geographer Nicolas de Nicolay documented the daily activities and customs of the people in the region, preserving valuable information on the rural life in the Ottoman era (Nicolay 1577, 262–264).

Of particular interest is the account of Evliya Çelebi, who contrary to western travellers does not choose the coastal route but moves parallel to the Via Egnatia in the hinterland, occupied in his day primarily by Muslim populations. Evliya Çelebi's eighth travel book is an invaluable source of information on seventeenth century Thrace as a whole, while, in reference to our project, it offers important insights for the village of Musa Çelebi in the hinterland of the Samothracian Peraia. The traveller reports that the village was named after the son of Bayezid I (1389–1402), who was killed by the locals to earn the favour of the new sultan, Mehmed I. Their behaviour had the exact opposite effect: the sultan was appalled by their actions and ordered the killing of the villagers. Musa Çelebi is identified today with the village of Komaros, known before as Musa Köy or Mousakion (*Pararτema tes Efemeridos* 1921, 11), and is included in our archaeological survey (see below Area 3).

Previous archaeological fieldwork

Archaeological fieldwork in and around the Samothracian Peraia has documented a diverse range of material culture representative of the important role the area served through the ages. Most prominent are the excavations at Makre, Maroneia, and Zone with finds ranging from Prehistoric to Roman and Byzantine. Occupation near the cave of Makre dates to the Neolithic period, followed by an Iron Age settlement tell, a Greek trading post and traces of Roman and Byzantine activity (Efstratiou, Kallintzi 1996; Efstratiou 2017; Matsas 2017, 527–528). Excavations at Maroneia, west of Cape Serrheion, have revealed numerous finds dating to the Hellenistic, Roman, and Byzantine eras (Bakirtzis, Chatzimichalis 1991; Psoma et al. 2008; Karadima 2017, 517–522; Matsas 2017, 512–515;), including a theatre, large houses, harbour facilities, and a basilica. In addition, several sites have been documented on the slopes and hilltops of Mt Ismaros, such as the Iron Age settlement at Kremasto (Assar-Tepe) on the northwest side of the mountain. Of importance is also the site of Agios Georgios with habitation from the Neolithic to the Byzantine era (Triantafyllos 1991, 284–289; Matsas 2017, 478–479, 506–511, 526–530; Marke 1989, 343–358 on Early Christian and Gothic burials; Soustal 1991 on the Church of Ai-Giorgis. For surveys north of Petrota, see Ammerman et al. 1994).

The most thoroughly studied site in the area is Zone, a Greek colony preserving houses, sanctuaries, burials, and impressive fortifications, confirming the importance of the site from the Archaic through the Hellenistic periods (Tsatsopoulou-Kaloudi et al. 2015). Of note is also the site of Vrysi Mousa, 1 km west of Zone, which produced pottery from at least the eighth century BC onwards, with the remains of a medieval tower still visible on the coast (Tsatsopoulou-Kaloudi et al. 2015, 51–52). Lastly, one should mention that the landscape of the Peraia of Samothrace, as most of the Northern Aegean region, was affected by the events of World War I and the Balkan Wars, including the opening of trenches, excavations by military personnel, and the removal of antiquities (Tsatsopoulou-Kaloudi et al. 2015, 67–68).

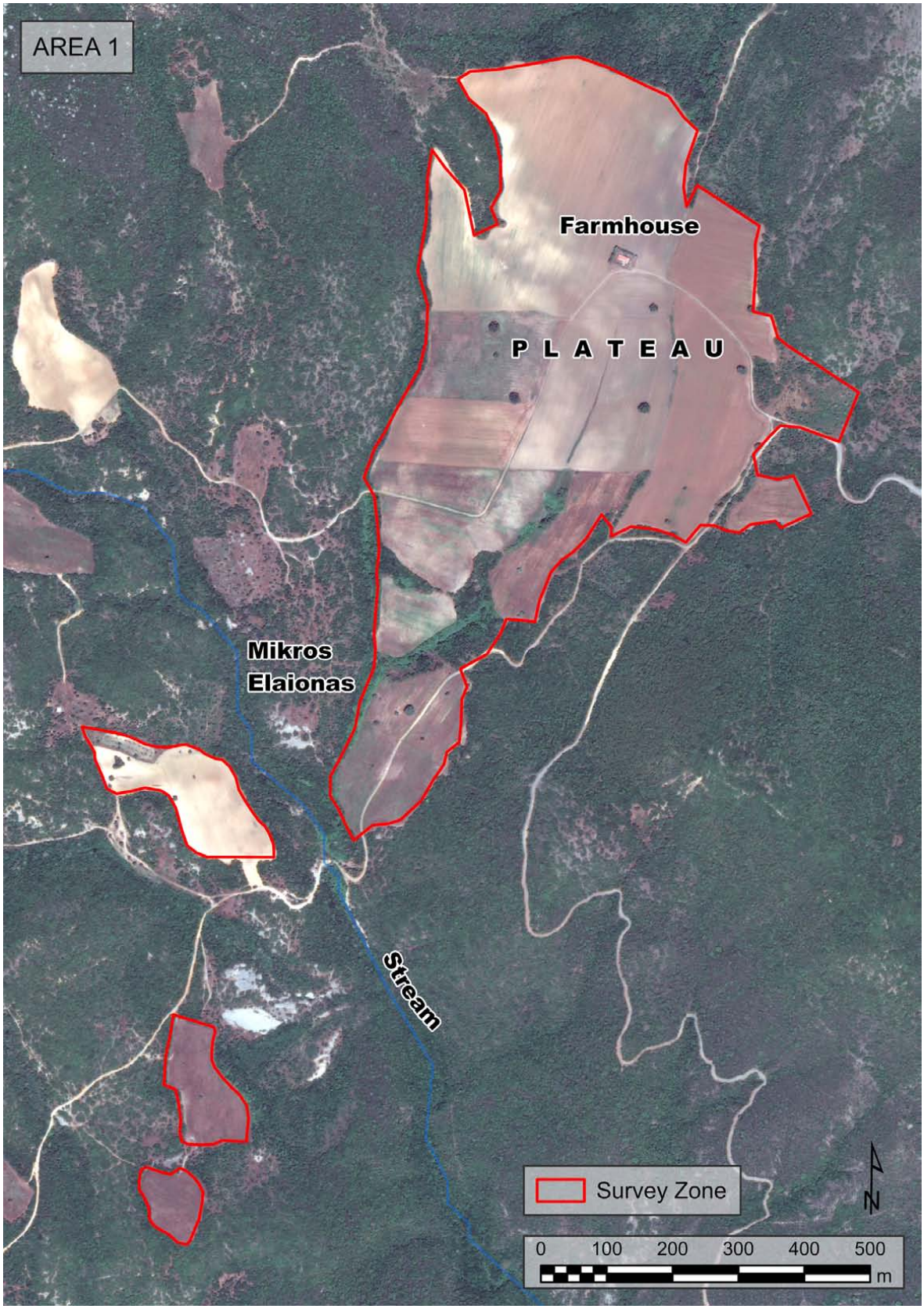


Fig. 3. PSP Area 1 (orthophoto J.C. Donati)
Обр. 3. Проучвана зона 1 (ортофото J.C. Donati)

Topography of areas surveyed

The project has marked four areas of interest of varied size and diverse topographical characteristics from which to carry out archaeological investigations. One issue in determining the most appropriate places to examine is the overall ruggedness of the region characterized by precipitous hills and oftentimes covered with dense vegetation. For practical reasons, such terrain would not have been appropriate for pedestrian field surveying and geophysical prospection. For this reason, we chose to target predominately agricultural zones. A brief description of each area follows below.

Area 1

The westernmost of the study areas, Area 1 is located 1.5 km southwest of Petrota village on an upland plateau (90–135 masl) which inclines gradually southward towards the sea (fig. 3). The local toponym of the plateau is sometimes referred to as Exochi or Elaionas. Though olive trees are rarely found here today, the latter toponym in Greek (Elaionas = olive orchard) implies the presence of olive cultivation in the past. The location is rather isolated and only accessible by 4×4 vehicle on a coarse dirt road. Area 1 is approximately 0.49 sq km in size and includes most arable fields in the vicinity. The plateau comprises one large open area subdivided into irregular plots (wheat and cotton) with a solitary farmhouse used today as a storage facility for farming equipment (see fig. 2). The clusters of cultivated (wheat and cotton) and fallow fields below the plateau (60–85 masl) are also included in Area 1. These are scattered among hills covered in shrubs and the convergence of seasonal streams. From the plateau, the sea is clearly visible – but not the shoreline – at around 2 km.

Along the eastern slopes of Mt Ismaros and the Chlomo and Odontoto hills, previous fieldwork around Area 1 has brought to light Thracian sites, collapsed fortification walls, and pottery (Triantafyllos 1973–1974, 814–815; 1987–1990, 303–304; 1991, 291–292; Skarlatidou 1980, 433). Investigations at the difficult-to-access acropolis of Ai-Giorgis Petrota have produced indications for cult activity and continuous occupation from Prehistory through the Ottoman period (Triantafyllos 1991, 293–294). On the eastern slopes of Mt Ismaros, at a site known as Mikros Elaionas, short excavation campaigns brought to light a cluster of Classical era structures, identified as a small settlement (Pentazos, Triantafyllos 1978, 308; Pantos 1983, 171 [suggesting Orthagoreia]; Tsatsopoulou-Kaloudi et al. 2015, 52–54), while about 1 km inland from Petrota beach, Roman buildings and burials have been noted (Triantafyllos 1973–1974; Pentazos, Triantafyllos 1978, 308). North of Area 1, the impressive rock formations of Petrota and the acropolis of Ai-Giorgis have produced significant finds related to prehistoric and Thracian activity, as well as Byzantine remains (Tsimpidis-Pentazos 1971; Triantafyllos 1973–1974; Triantafyllos 1987–1990, 304–306; Fotiadis et al. 2014 on the Petrota prehistoric pyrite quarry).

Area 2

At Petrota beach, Area 2 is the smallest of the four study areas (0.17 sq km) (fig. 4). It is located approximately 2 km southeast of Area 1 and around 2.5 km west of Zone. The area is isolated being accessible only from an unpaved (and rough) coastal road or a circuitous, yet much better inland pass through the Zonaia foothills via Petrota village. The locale is characterized as a narrow fertile plain no more than 600 m wide formed by the Yialou Rema river that runs south from the acropolis of Ai Giorgis Petrota into the Northern Aegean Sea. The terrain is mostly flat except for a small plateau (17–20 masl) 350 m from the seashore at the northeast which rises as much as 10–15 m above the plain. Small summer residences and agricultural fields (wheat, olive, some fallow) comprise the area today. Previous roadworks destroyed significant sections of the hillsides surrounding Petrota beach and much rock debris has since fallen at the eastern side.



Fig. 4. PSP Area 2 (figure by J.C. Donati)
Обр. 4. Проучвана зона 2 (автор J.C. Donati)



Fig. 5. Structure (perhaps a temple) atop the plateau of Area 2 (orthophoto J.C. Donati)
Обр. 5. Структура (вероятно храм) на върха на платото в зона 2 (ортофото J.C. Donati)

In 1976, Pantos Pantos discovered pottery and wall remains of a prehistoric installation on the cliff west of Petrota beach, while on the small plateau at Yialou Rema, he noted worked stones and assumed the existence of a building (Pantos 1976). This was further investigated two years later by Evangelos Pentazos, who revealed the western side of a rectangular two-roomed structure (width: 7.91 m; partial length: 9.32 m) with an east-west orientation and fragmentary walls of other buildings during rescue excavations in 1978. The small finds recovered included Hellenistic and Roman pottery and rooftiles, but few diagnostics were found to adequately date the buildings or determine their function(s). Because of its size and orientation, Pentazos (Pentazos, Triantafyllos 1978) tentatively suggested that the rectangular structure could be a temple. Today, the putative temple building is still visible as well as the scattered remains of other structures and architectural members both *in situ* and disturbed (fig. 5). Elsewhere in Area 2, a section of a wall was found near the shoreline during rescue excavations in the previous century, while various finds have been discovered by the locals in the sea, such as millstones and even a marble statue of Eros housed today at the Archaeological Museum in Komotini (АГК 3085).

Area 3

Area 3 is a much larger area (5.75 sq km) located 5 km inland from Zone within the Zonaia

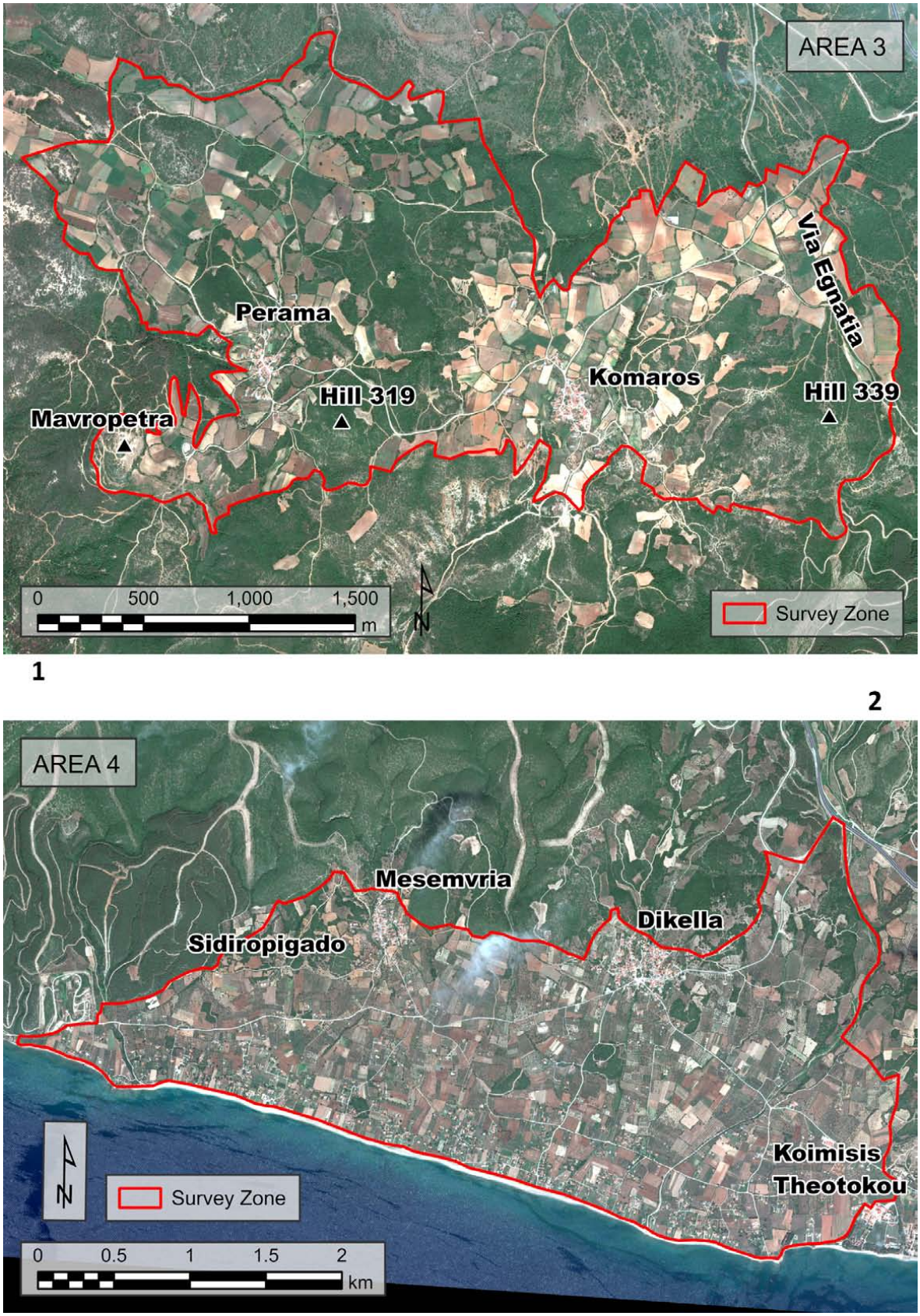


Fig. 6. 1. PSP Area 3; 2. PSP Area 4 (figures by J.C. Donati)
Обр. 6. 1. Проучвана зона 3; 2. Проучвана зона 4 (автор J.C. Donati)

mountains (fig. 6.1). Though hilly with a range of elevations (128–300 masl) and pocketed by stream beds and ravines, the terrain is nevertheless intensely cultivated for a variety of crops including cotton, wheat, and tobacco. Two farming villages, Perama and Komaros, attest to the agricultural exploitation of the land. The topography is dominated by three summits: (i.) Mavropetra hill (248 masl) southwest of Perama also known as Acropolis 4; (ii.) Hill 319 or Sykorachi (319 masl) between the two villages also known as Acropolis 5; and (iii.) Hill 339 (343 masl) directly east of Komaros also known as Acropolis 6. In previous reports these hills are sometimes labelled as acropoleis, a term which implies the existence of a settlement below; however, there is thus far no clear indication for such activity prior to our fieldwork project. Excavations on Mavropetra hill in anticipation of the expansion of gold mining in the area, produced mostly Thracian pottery and material related to the cult of the Thracian Horseman, but no recognizable architecture. On the other hand, *in situ* architecture and collapsed walls on the summit of Hill 319 are likely from structures and/or fortifications. This evidence along with the absence of Thracian pottery has led some scholars to see a possible connection with one of the Samothracian settlements mentioned in the sources or even a later Macedonian fort (Pantos 1974, 7–17; Triantafyllos 1973–1974, 825, figs. 612a–b). Recently, Tsatsopoulou-Kaloudi (Tsatsopoulou-Kaloudi et al. 2015, 55–61) suggested that the zone between the villages of Perama and Komaros, framed by the three hills, could be identified with the elusive, westernmost colony of Samothrace, Mesemvria (see above Literary Sources).

Elsewhere in Area 3 sections of the Via Egnatia, the Roman road that connected Dyrrachium on the Adriatic Sea to Byzantium have been exposed east of Komaros and north and southeast of Hill 339 (Tsatsopoulou 2004; 2005; Lolos 2008; Tsatsopoulou-Kaloudi et al. 2015, 44–59). Hill 339 itself has a commanding view of the terrain to the north and west but rather poor visibility towards the sea. Sections of walls and fallen stone debris are preserved on the hilltop, as well as fragments of Thracian and plain pottery.

Area 4

This area is an expansive and arable coastal plain (8.31 sq km) between Zone and the village of Makre (fig. 6.2). The hilly northern rim of the survey area (30–90 masl) is defined by the agricultural communities of Mesemvria and Dikella which command the coastal plain and shoreline approximately 1 km away. The remainder of the plain is rather flat as it gradually descends southward to Dikella beach; the only topographical anomalies here are a group of four rounded and oblong knolls which rise 5–10 m above the valley floor. The Monastery of the Dormition (Koimisis Theotokou) frames the eastern end of Dikella beach. In the middle of the twentieth century the coastline was virtually unspoiled being used almost exclusively for cultivation, but in recent years summer houses and tourism businesses have altered the landscape. Where arable land is available now, olive orchards predominate.

Along the coastal zone between Zone and Dikella, the Ephorate of Antiquities has documented some sites with Hellenistic, Roman, and Byzantine material, of which Sidiropigado stands out, as it has been tentatively identified with the Roman station *Melalico* (Tsatsopoulou 1987–1990, 329; 2004, 13; Loukopoulou et al. 2005, 502, no. 3; cf. Kazarow 1918, 33, 52–55; Avramea, Karanastassi 1993). Portable Roman antiquities have also been unearthed near Dikella, including a Hero-Rider relief (Kokkotaki 2005, 884, fig. 10).

Methodologies

From the beginning, the Peraia of Samothrace Project adopted a hybrid approach to studying the landscape of the Samothracian Peraia through non-destructive fieldwork. The aim was to

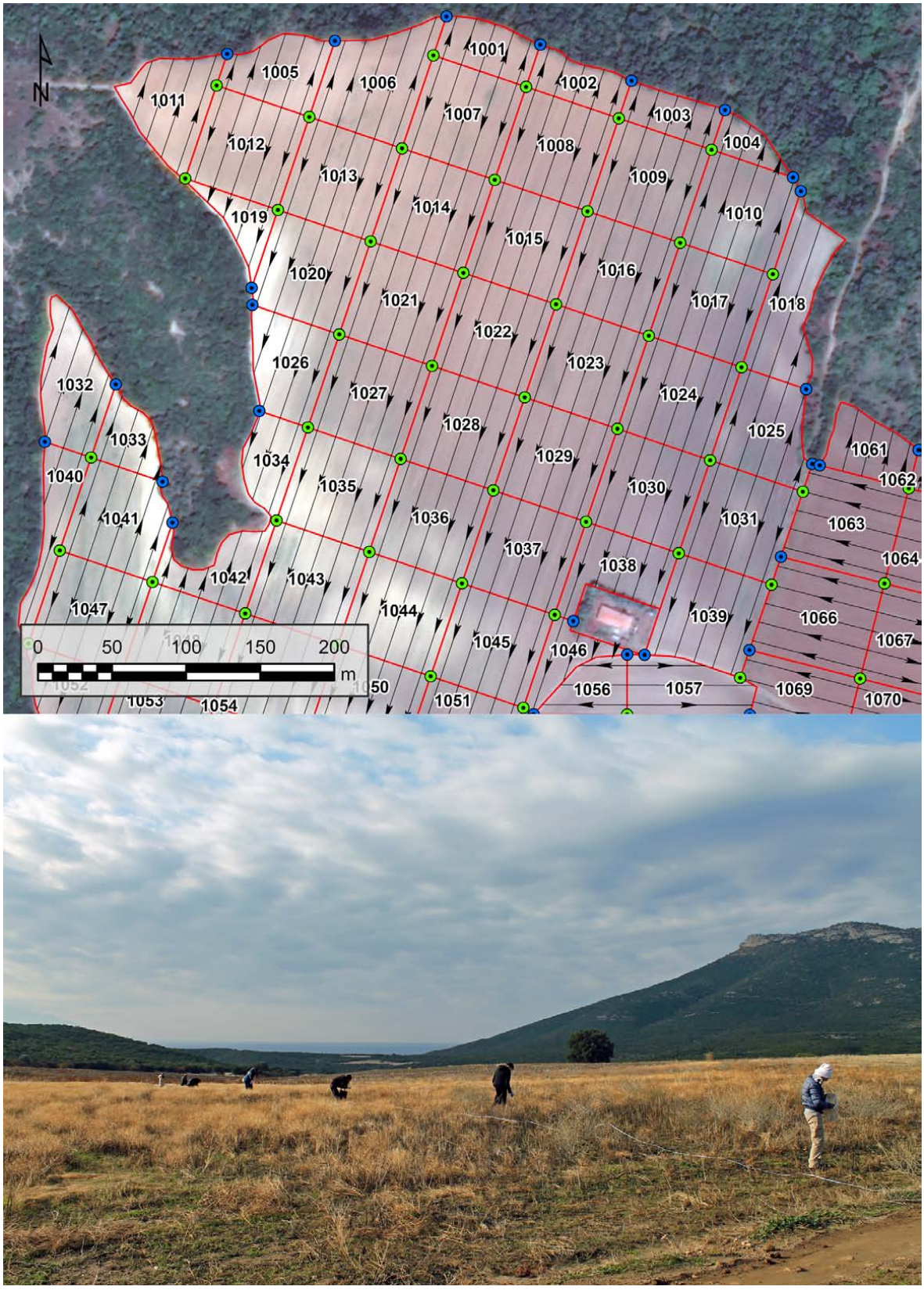


Fig. 7. Survey grids in the northern section of Area 1 (top) (figure by J.C. Donati); fieldwalkers in formation (bottom) (photo A. Avramidou)

Обр. 7. Квадратна мрежа на проучването в северната част на зона 1 (горе) (автор J.C. Donati); обхождане на терен (долу) (снимка A. Avramidou)

combine complimentary methods of research, carried out both onsite and remotely, while embracing and streamlining born-digital systems of data collection and artefact analysis within a finite budget. Large-scale and rapid methods of landscape analysis, such as remote sensing and geophysics, were combined with intensive pedestrian field walking. All survey data, whether collected in the field or analysed off-site, were combined in the project's geographic information system (GIS) database. A brief description of our methods is summarized below.

Geodatabase

Prior to onsite fieldwork, various datasets were consolidated in the project's geodatabase using ESRI ArcGIS Pro. These include the following: (i.) a high-resolution (0.5 m) multispectral WorldView-3 satellite image from 10 June 2020 covering over 100 sq km of the Peraia; (ii.) CORONA satellite imagery of the same area from 23 July 1970 at a resolution of 1.80 m; (iii.) historical aerial photographs from the archives of the Hellenic Military Geographical Service (GYS) and the British School at Athens (BSA): the earliest of these photographs are from 1938 and they are of particularly high quality, considering their age, at a scale of 1:20000; other datasets include (iv.) 1:5000 scale topographical maps from GYS; and (v.) a digital elevation model (DEM) from the TanDEM-X radar imaging satellite with a horizontal resolution of 12.5 m, and a second DEM from the Hellenic National Cadastre (Ktimatologio) with a horizontal resolution of 5 m. Many additional datasets were created in GIS based on the terrain models. These comprise hillshade and slope models, cost surface and aspect models, contour lines, and hydrological features by calculating parameters such as flow direction and flow accumulation.

In addition, several new vector datasets were added to the geodatabase. These include: (i.) the four areas of interest (i.e., Areas 1–4), the location of known prehistoric and historic settlements, as well as other features of archaeological interest, such as ancient quarries; (ii.) modern roadways, railways, and settlements in the region, and (iii.) polygons that indicate the current land division and land use. The latter is important for assessing recent anthropogenic land-use patterns like the classification of crops and vegetation. A digital format of field boundaries is also critical for the practical implementation of the pedestrian and geophysical surveys.

Remote Sensing

The identification of surface anomalies from satellite and aerial remote sensing is important for gaining a more complete picture of the wider historical landscape. Various image enhancement and processing techniques, such as the calculation of vegetation indices, were applied to the multispectral bands of the WorldView-3 satellite image to contribute to the detection of ground features. By visual analysis, dozens of surface anomalies were identified in the study area, generally consisting of (i.) paleochannels, (ii.) former field boundaries, (iii.) terracing walls, and (iv.) features of potential archaeological interest. In some cases, clusters of linear anomalies are perhaps the residues of buried structures or roadways, which need to be confirmed with geophysical prospection or another method of ground truthing. In general, the dense ground vegetation, steep topography, and limited areas of flat arable land, present challenges in satellite and aerial remote sensing in the Samothracian Peraia. In a future phase of the project, LiDAR or Aerial Laser Scanning (ALS) would likely be a good option in these conditions. For now, the high cost of LiDAR was the main determining factor in not implementing this method in the project's initial workflow.

Supplementing the satellite and aerial datasets, an Unmanned Aerial Vehicle (UAV) or drone was used onsite for recording the landscape regime at a high ground resolution and in the creation

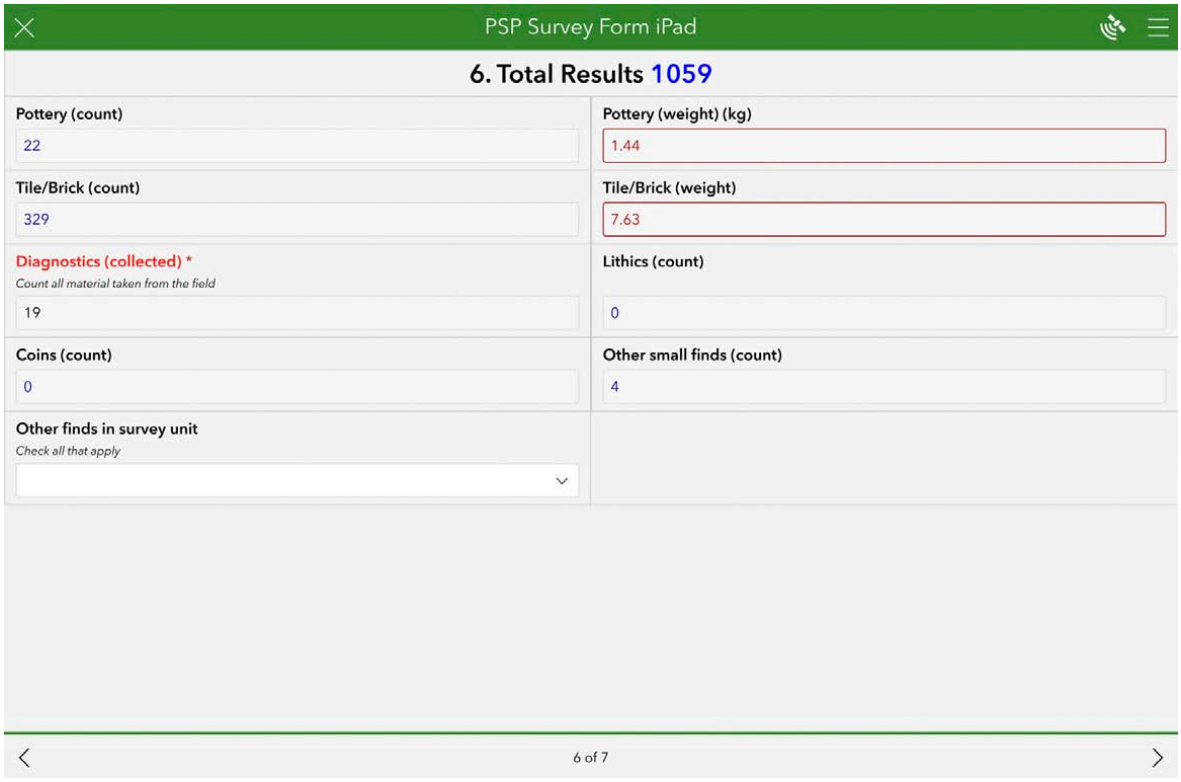


Fig. 8. PSP Survey123 form used for data collection in the field (figure by J.C. Donati)
Обр. 8. Формуляр 123, използван за събиране на данни на терен (автор J.C. Donati)

of orthophotos and DEMs of specific areas of interest. UAV surveying also proved quite useful for ground reconnaissance during the pedestrian field survey since it provided quick real-time imagery of the ground conditions and crops of nearby fields without having to mobilize the survey team to check beforehand. This saved precious time and allowed the survey team to maximize the number of survey units covered per day.

Pedestrian field survey

The practical aspects of the pedestrian field survey (survey units, walker lines, stakeout points) were prepared beforehand using the project geodatabase in consultation with satellite and aerial imagery and terrain models. The standard survey unit (SU) in Areas 1 and 2 is a grid of 50 m x 50 m (2,500 sq m) to accommodate five field walkers spaced 10 m apart (fig. 7). SUs on field edges might be modified but none is more than 3,000 sq m to maintain a consistent sampling resolution. The diversity of field systems in Area 3 and Area 4 requires SUs adapted to the morphology of fields for up to seven walkers spaced 10 m.[2] Here, units were subdivided into smaller SUs if the field was larger than 6,000 sq m. In Area 3, for example, the average SU is 3,397 sq m. Once finalized in the geodatabase, the survey data was then transferred to mobile devices for use in the field. Onsite, Emlid Reach RS2 GNSS receivers are employed for quickly laying out the survey grids as well as the precise positioning of fieldwalkers. The Reach units are linked to a CORS network, Metrica HxGN, which provides a Real Time Kinematic (RTK) survey with centimetre accuracy. The efficiency of the RTK GNSS setup makes it possible for the survey team to focus on fieldwalking and data recording

2 In tree orchards, the spacing of fieldwalkers was sometimes reduced to better accommodate their positioning between rows.

and not the time-consuming task of onsite planning and manual layout of SUs. The GNSS receivers also are used for recording features discovered during surveying (e.g., stone architecture, millstones, wells) as well as for extracting ground control points (GCPs) used in the processing of drone imagery.

Fieldwalkers collected all ceramics, tiles, small worked stones, and other material of potential interest within a two-metre-wide tract. After completing the SU, the material was then carefully examined, counted, and weighed by the field supervisor(s). Any diagnostic finds were collected and stored at the Archaeological Museum of Komotini for analysis while anything remaining is discarded in the field. For data recording, we created customized XLS survey forms using ESRI Survey123 (fig. 8). The forms document everything from field conditions, location and elevation of survey units, and ceramics and tile counted and collected by each walker. Any photographs taken on site were directly added to the relevant SU entry. The born-digital approach has the added advantage of being directly integrated into the geodatabase and our custom-built FileMaker Pro database. Therefore, spatial, and quantitative calculations of the data can be analysed the same day they are collected in the field.

Geophysics

To compliment the remote sensing and pedestrian field survey, magnetics and ground-penetrating radar (GPR) are employed to detect and map buried archaeological features in a non-destructive manner by measuring differences in the physical properties of the Earth's subsurface. For rapid and large area coverage, we use a multi-sensor magnetometer (SENSYS Magnetometer MX) with an array of eight fluxgate gradiometers spaced 50 cm apart that is towed by a quad bike. Attached to the frame of the magnetometer, a Javid GNSS receiver (rover) communicates with a stationary Javid GNSS receiver (base) linked to a CORS network for centimetre accuracy RTK surveying. For more targeted investigations, we use a single channel GPR (Sensors and Software NOGGIN Plus-Smart Cart) fitted with a 250 MHz antenna. The GPR is light weight, operated by a single person, and flexible in demanding topographical conditions. However, survey grids must be laid out with additional personnel which reduces the speed of data acquisition.

Fieldwork results

Area 1

Linear anomalies between 30–100 in length are visible in the WorldView-3 satellite image and the related products (fig. 9). They are predominately confined to the southern edge of the plateau (SU1145–1147, SU1152–1153, SU1155, SU1169, SU1172); elsewhere, a solitary anomaly nearly 75 m long is found in the west-central area (SU1142, SU1125).[3] The rectilinear nature of the features is suggestive of something anthropogenic beneath the ground, but a natural occurrence such as a paleochannel cannot be excluded. Based on historical aerial photographs from the middle of the twentieth century, the solitary anomaly at the centre is likely from an old field boundary. In a 1945 photograph one notes around six field subdivisions demarcated with stones and/or vegetation at the western side of the plateau, none of which are visible today on the surface. The group of anomalies at the southern end are less likely attributed to old field boundary systems because they do not correspond to field subdivisions in the historical aerial photographs. Most interesting are the shared alignments and spacing of three parallel anomalies: (i.) orientations are close to true north, and (ii.) spacing is regular at ca. 35 m intervals. Far from being conclusive, such anomalies could plausibly be the partial

3 For the location of SUs see the interactive WebGIS database from the project's main webpage: www.peraiasamothraceproject.gr.

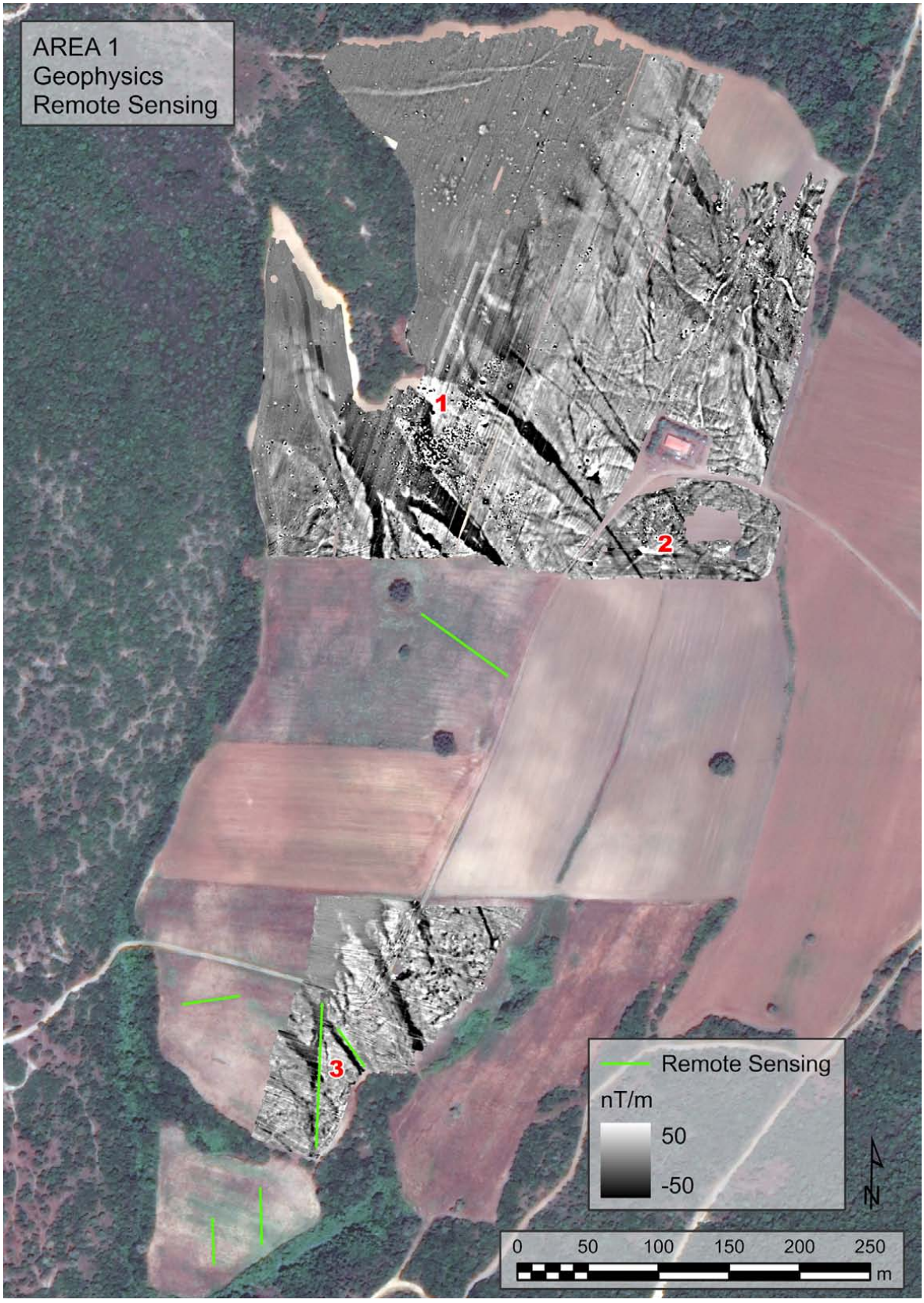


Fig. 9. Results of magnetics survey and satellite remote sensing from Area 1
(figure by J.C. Donati and N. Papadopoulos)
Обр. 9. Резултати от магнитно изследване и сателитно дистанционно наблюдение в зона 1
(автори J.C. Donati и N. Papadopoulos)

remains of a buried road system (although the geophysical results suggest otherwise; see below).

The magnetic survey in Area 1 covered more than 11 ha on the northern part of the site and a smaller section of about 1.5 ha at the southern end. The unharvested cotton fields between the northern and southern sections prohibited the complete coverage of Area 1 during the first phase of geophysical investigations in October 2021. The magnetics data were subjected to a systematic processing workflow by removing the extreme high and low magnetic gradients due to scattered metallic fragments, the overlapping points, and the equalization of the magnetic values of the adjacent grids. The magnetic map distinguishes areas of highly disturbed magnetic signals in relation to the relatively stable background which indicates minimum subsurface magnetic activity, as we move from the eastern side of the plateau towards the northwest along the northern section. Features related to long linear and curvilinear negative magnetic anomalies suggest an intense past superficial activity of streams. The water flow accumulates magnetic soil along preferential paths, which are attributed in the respective map as intense magnetic gradients. However, these discrete magnetic signatures seem to fade towards the northwest probably due to surface erosion episodes. Clusters of magnetic dipolar features to the central-west and central-east sections, occupying an area of ~5,000 sq m (see fig. 9, no. 1) and ~1,000 sq m (see fig. 9, no. 2) correspondingly, are indicative of the accumulation of magnetic rocky fragments that could suggest workshop activities. The southern section of the plateau shows a similar magnetic image consisting of several linear magnetic anomalies that fade out towards the northwest. Two of these anomalies are the same ones identified in the satellite imagery (see fig. 9, no. 3). Most form a parallel system along a southeast-northwest direction. Although the anomalies could represent the outline of roads owing to their strict linear character and shared orientations, the fact that they exhibit comparable magnetic signatures with the respective anomalies to the north hints that they are related to the flow of superficial streams.

On the pedestrian field survey in Area 1, we intensively studied 78 SUs covering an area of almost 16 ha. Ceramic finds and tiles were widely scattered throughout the survey area with chronological horizons stretching from the Iron Age through the Byzantine era. No *in situ* architectural features or built remains were noted, although a handful of cut blocks and grinding stones were identified as discarded material along the field edges. At the southernmost section of Area 1, between SU1213 and SU1215, we found traces of round cavities carved into the natural rock, a feature common at Thracian sites. Also of note was the high concentration of flints, blades, and stone-cores which likely attest to prehistoric activity in Area 1. We recorded a diverse assortment of stones and minerals, such as pyrites and quartz, especially in the southern end (SU1077, SU1085, SU1155, SU1199, SU1202, SU1208, SU1213–1216). The collected tools and processed stones are indicative of how people exploited the natural resources of the region, and such activity should be investigated in conjunction to the known flint quarry near Petrota village.

The overall density of ceramic surface finds (represented as sherds per square metre) indicates concentrations of material at the northcentre of the survey area, around the modern farmhouse, and at the southern periphery of the plateau, extending into the smaller fields, further south (fig. 10). The tile density map diverges somewhat from the ceramics data. There is still a high concentration of tiles at the northcentre of the site, but we documented noticeably less tiles towards the south (fig. 11). In terms of the kinds of material collected, Thracian pottery was present in the majority of SUs with concentrations especially south and west of the farmhouse and at the southern region of the survey area (e.g., SU1078–1979, SU1083–1085, SU1091, SU1120–1121, SU1150, SU1152–1155, SU1200–1205, SU1207–1208, SU1210, SU1213–1218). Quite significant was the discovery of fine, black-glaze pottery, such as fragments of classical cups and kraters, albeit much worn, at the southwestern part of the plateau (e.g., SU1139, SU1145, SU1151–1152, SU1155).

In general, nodes of classical and Hellenistic pottery were limited to the southern region of the

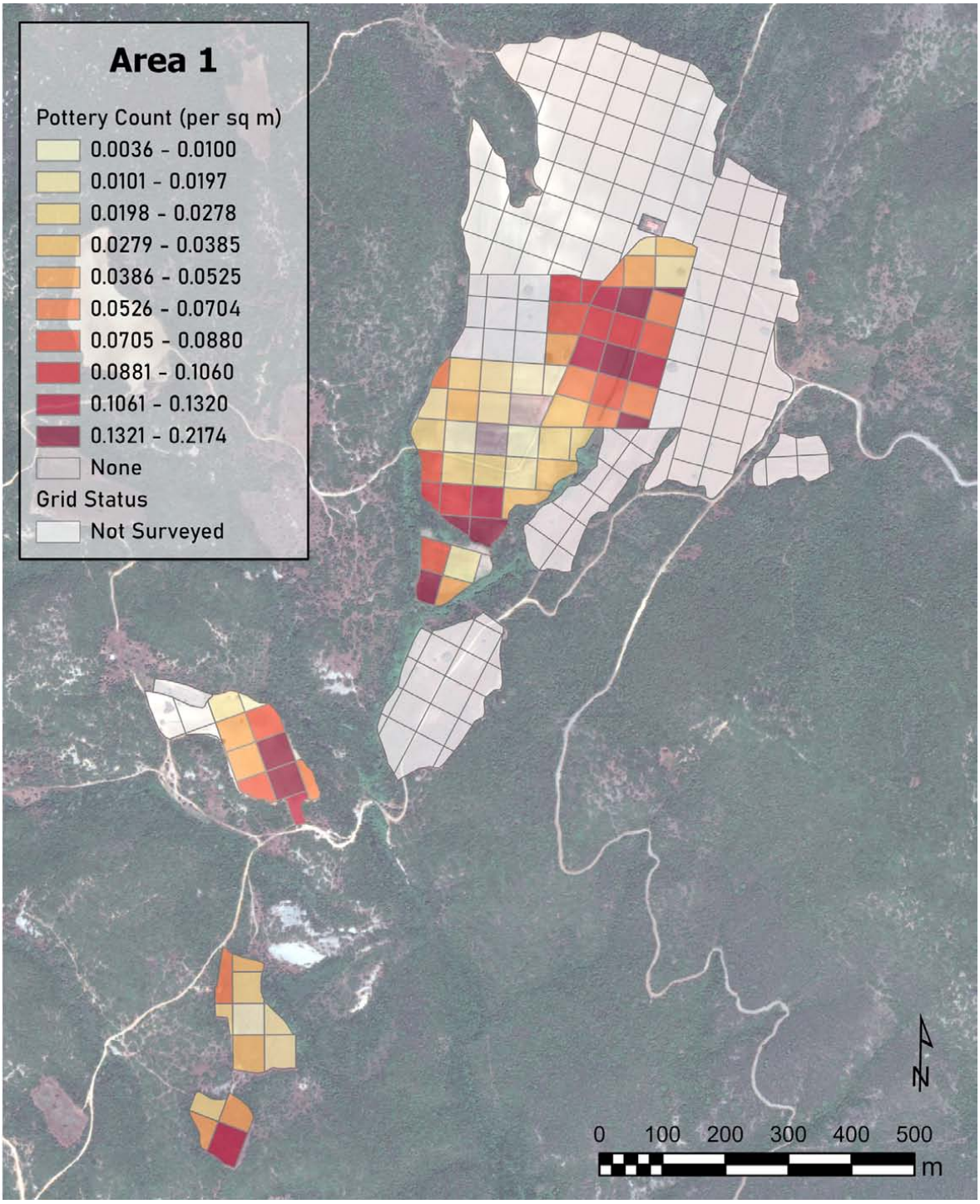


Fig. 10. Ceramics density map (sherds per square metre) from Area 1 (figure by J.C. Donati)
Обр. 10. Карта на концентрацията на керамика (фрагменти на квадратен метър) в зона 1 (автор J.C. Donati)

plateau, an area that overlaps with the linear anomalies identified by remote sensing and geophysics. A limited amount of classical and Hellenistic material was also observed within the smaller fields to the south. Note that these areas lie in proximity to Mikros Elaionas, where earlier investigations revealed possible structures and pottery dating to the Classical period. Early Roman pottery appears in larger numbers and is found approximately in the same SUs as the classical and Hellenistic material.

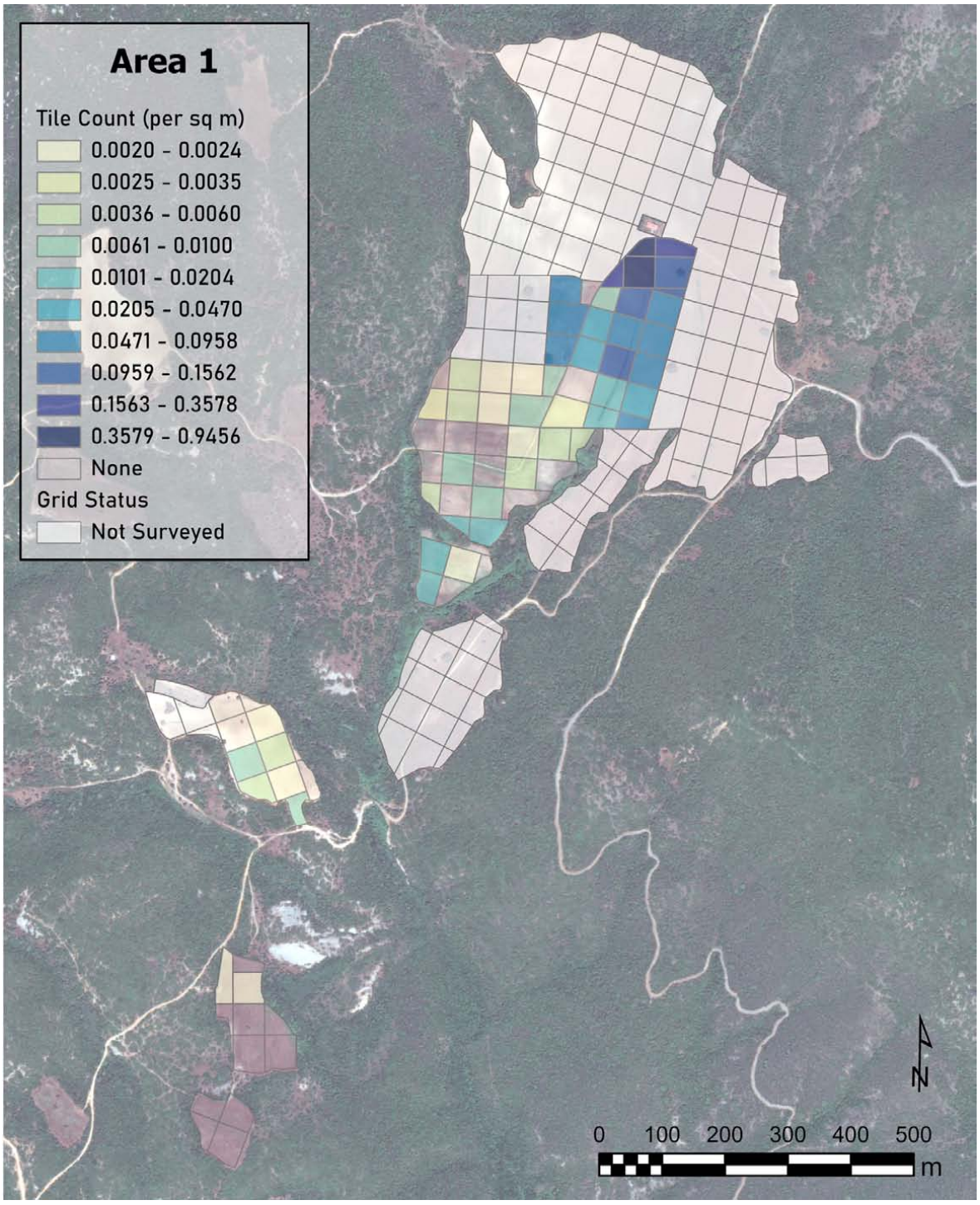


Fig.11. Tile density map (tiles per square metre) from Area 1 (figure by J.C. Donati)
Обр. 11. Карта на концентрацията на керемиди (на квадратен метър) в зона 1 (автор J.C. Donati)

Of interest is the shift that occurs with the Late Roman and Byzantine finds, as they clearly cluster at the north-centre of the plateau around the farmhouse. This is the same location where the highest density of tiles was observed.

Area 2

The area around Petrota beach was reserved in part for defensive military positions in the first

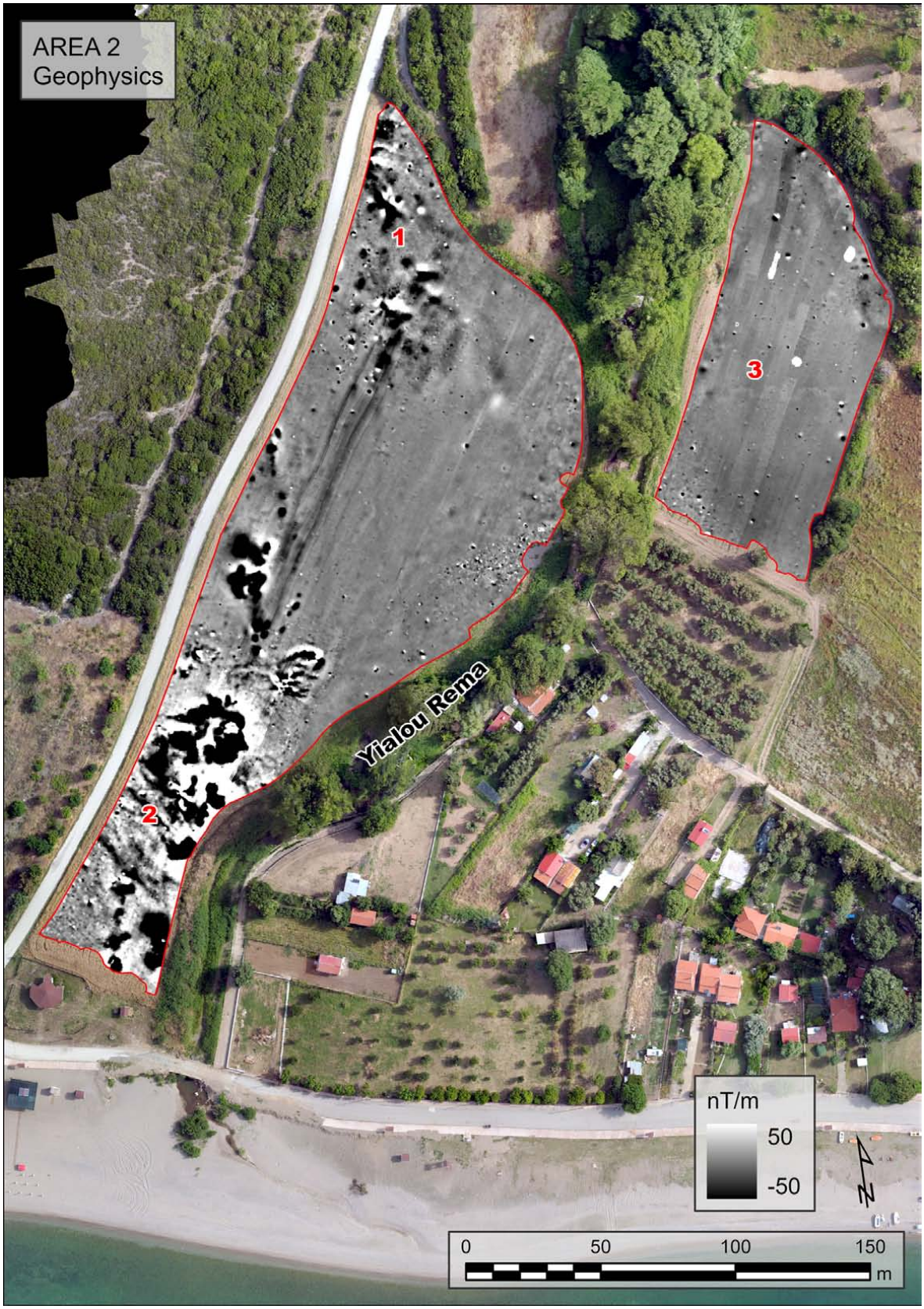


Fig. 12. Results of magnetics survey from Area 2 (figure by J.C. Donati and N. Papadopoulos)
Обр. 12. Резултати от магнитно изследване в зона 2 (автори J.C. Donati и N. Papadopoulos)

half of the twentieth century before the Second World War. Aerial photographs from 1938 show an extensive network of zig-zag trenches in the rugged terrain west of Petrota beach as well as within agricultural fields of the coastal plain (SU2025–2027, SU2042–2043). Although less clear in the photographs, there appears to be a related enclosure approximately 2,000 sq m in size on an outcrop (81 masl) some 500 m northwest of Petrota beach. These military constructions probably date from the First World War and today they are no longer visible. It is known, for example, that the Bulgarian Army carried out a project of digging up the Thracian coastline to repel an Allied sea-invasion during the War (Tsatsopoulou-Kaloudi et al. 2015, 67). Elsewhere, the satellite imagery shows undulating anomalies around the Yialou Rema river which are indications of previous paths of the river and/or past flooding episodes. One such anomaly is noticeable in fields more than 60 m to the west of the current course of the river. The evidence gives some indication of the greater impact the river once effected on the plain of Petrota beach than would appear today.

Geophysics in Area 2 was undertaken on the small plateau where the putative temple stands, as well as within fields along the western and eastern banks of the Yialou Rema. Magnetics covered more than 2 ha around the river, but it was not employed on the plateau because of the unevenness of the terrain. GPR grids were distributed in different parts of the site, including around the putative temple, to enhance the subsurface information context and retrieve extra insights on any anthropogenic properties. In general, the fields below the plateau produced no clear traces of buildings, despite the large concentration of ceramics and tiles discovered here during the pedestrian survey (fig. 12). The soil deposits covering the large field at the west of the river resulted in relatively quiet magnetic gradients with small variations of the local magnetic field ca. 80–100 m from the Yialou Rema. However, the southwest and northwest corners of the field exhibit intense magnetic values that are probably related to the igneous rocky outcrops (see fig. 12, nos. 1–2). The magnetic map east of the river is again relatively quiet except for a faint anomaly exhibiting a stepped-pattern following an east-west direction (see fig. 12, no. 3). This specific magnetic signature is an eastern continuation of the same military trench noted west of the river in the 1938 aerial photograph. The quiet magnetic background at both sides of the Yialou Rema may be indicative of colluvial deposits in the region due to past flooding episodes.

On the small plateau, GPR horizontal depth slices show structural elements and building foundations around 1 m below the surface (fig. 13). A large building or complex of adjoining buildings is located north and northeast of the putative temple. The northern complex at an east-west orientation is nearly 30 m in length and almost 9 m in width, being subdivided into three or more rooms of various sizes (see fig. 13, no. 1). It is joined to an eastern complex with a north-south orientation that is approximately 15 m in length and 7 m wide (see fig. 13, no. 2). Although less clear in the GPR slices, the eastern complex also seems to have internal subdivisions. It is notable that both the northern and eastern complexes share the same alignment of the putative temple, and they seemingly are meant to partly surround it. Further to the east, there appear to be other (faint) structural elements (see fig. 13, no. 3). Elsewhere, a rectangular reflector (ca. 6.5 m x 3.0 m) is noted approximately 20 m east-southeast from the putative temple (see fig. 13, no. 4), as well as another square anomaly (ca. 4.0 x 3.5 m) at the extreme northwest corner of the survey (see fig. 13, no. 5). The terrain immediately around the putative temple was difficult to completely survey; however, a reflector about 3.5 m in length may reasonably be interpreted as an eastern extension of the building's southern wall (see fig. 13, no. 6), providing an estimation of ca. 18 m for the complete length of the structure.

During the pedestrian survey, architectural blocks both roughly hewn and well-cut, and many *in situ* or collapsed, have been noted around the small plateau. Using the GNSS receivers, these architectural members were carefully mapped and documented to help visualize their spatial distribution (fig. 14). Although more blocks remain to be mapped, the initial results show that the small plateau



Fig. 13. Results of GPR survey (depth slice 0.80–0.90 m) on plateau of Area 2 (top); interpretation of the results showing possible buried architecture (bottom) (figure by J.C. Donati and N. Papadopoulos)
Обр. 13. Резултати от GPR проучване (дълбочина 0,80–0,90 m) на плато в зона 2 (горе); интерпретация на резултатите, показваща възможна затрупана архитектура (долу) (автори J.C. Donati и N. Papadopoulos)

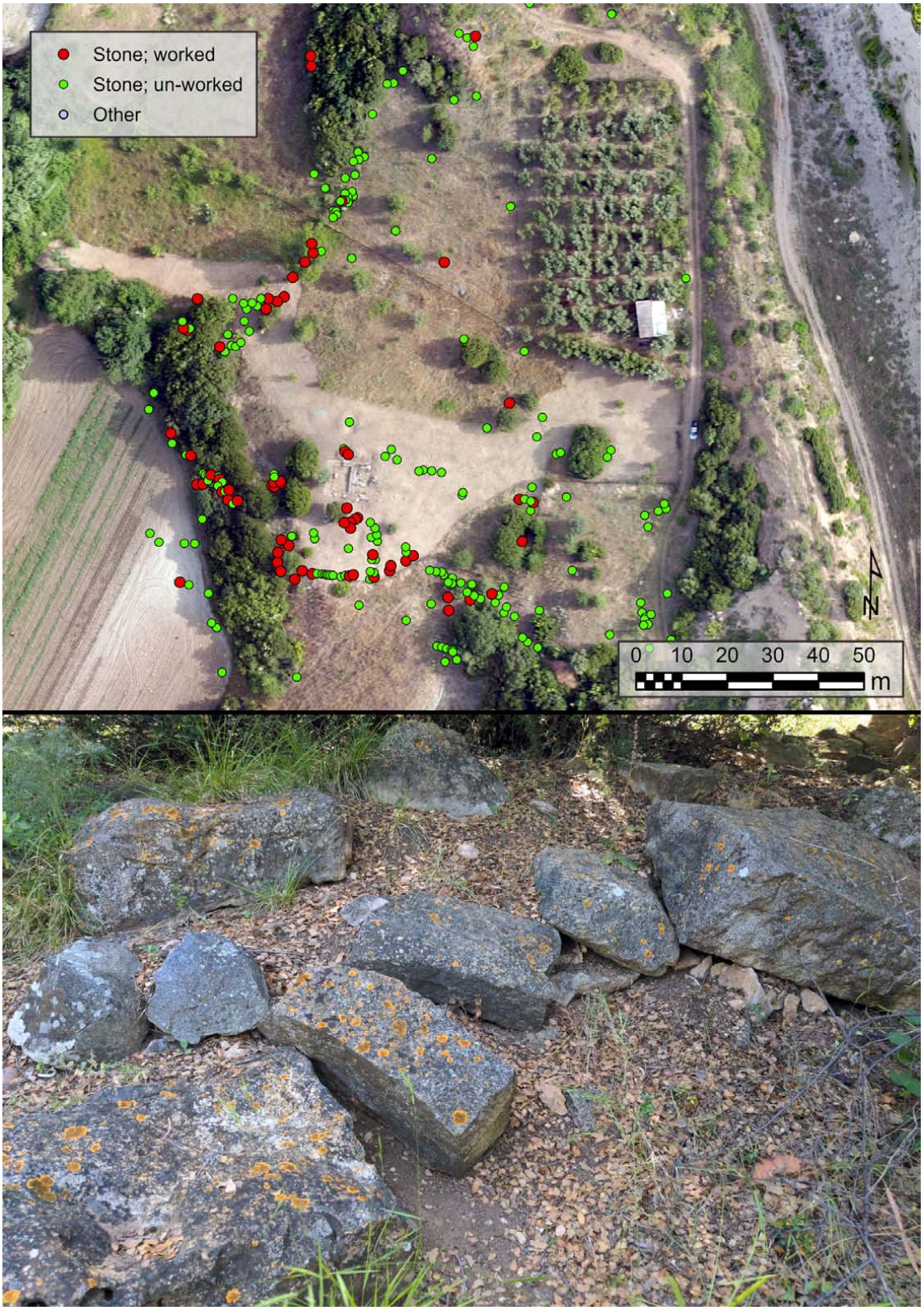


Fig. 14. Location of stone material, both worked and un-worked, around the plateau of Area 2 (top); group of stones possibly from a peribolos wall (bottom) (figure and photo J.C. Donati)

Обр. 14. Разположение на обработен и необработен каменен материал около платото в зона 2 (горе); група камъни, вероятно от периболос – оградна стена (долу) (илюстрация и снимка J.C. Donati)

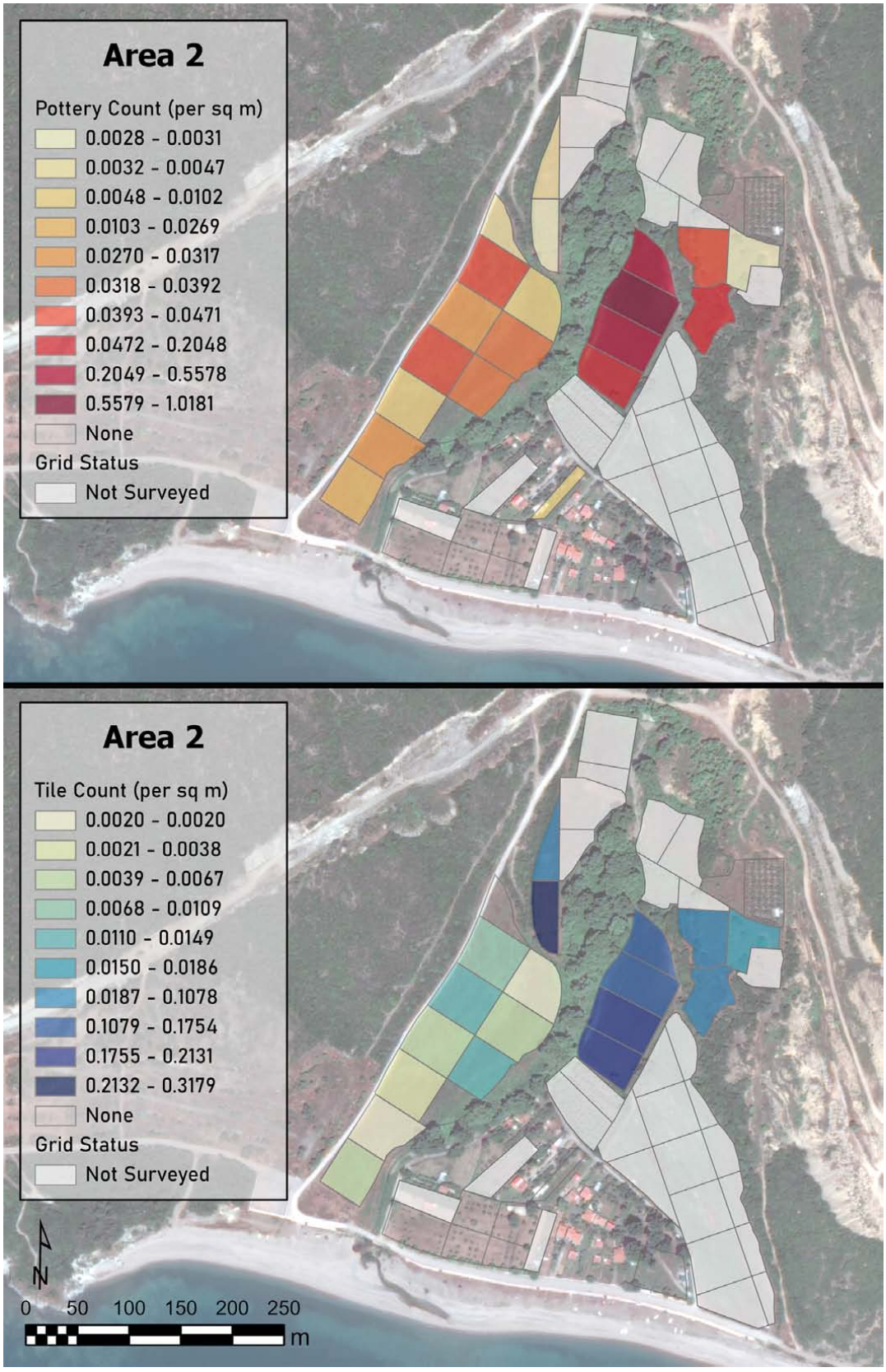


Fig. 15. Ceramics density map (sherds per square metre) from Area 2 (top); tile density map (tiles per square metre) from Area 2 (bottom) (figure by J.C. Donati)

Обр. 15. Карта на концентрацията на керамиката (на квадратен метър) в зона 2 (горе); карта на плътността на керемиди (на квадратен метър) в зона 2 (долу) (автор J.C. Donati)

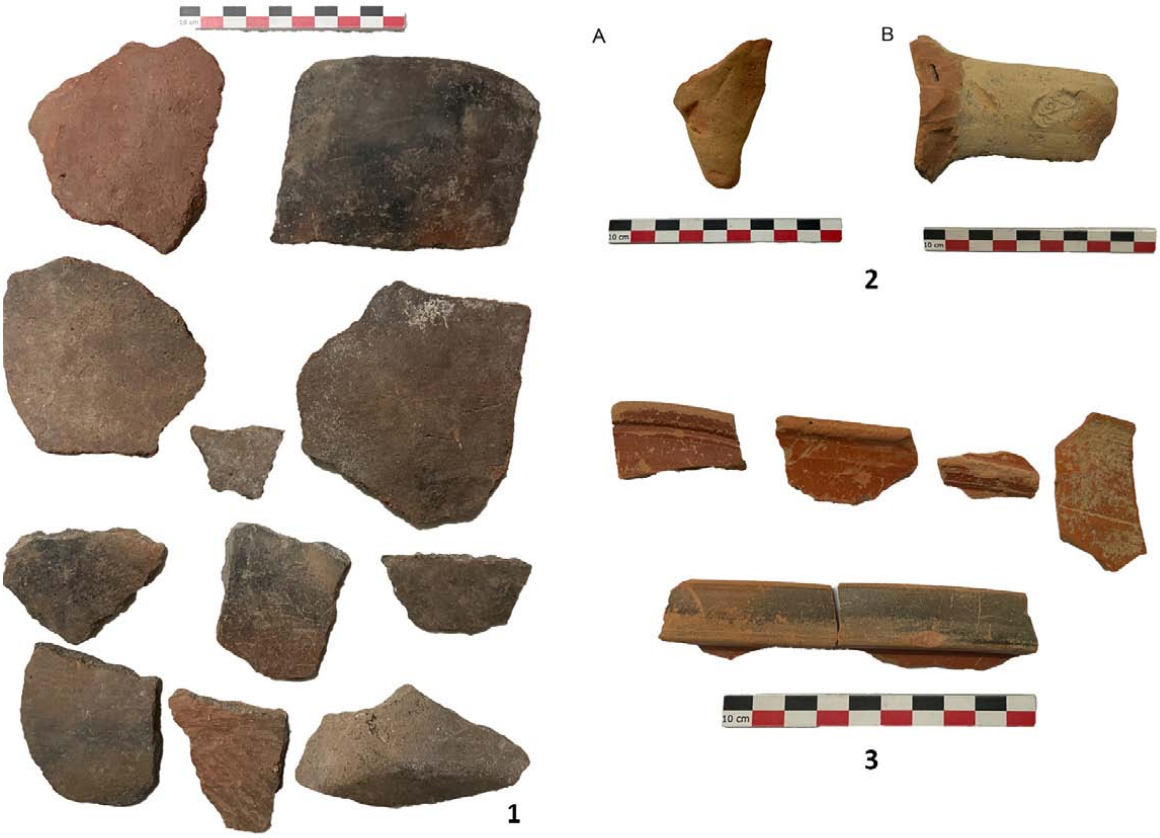


Fig. 16. (1) Neolithic ceramics from SU3187 in Area 3; (2) Pointed amphoriskos from SU2028 in Area 2 (A); stamped amphora handle from SU2018 in Area 2; (B); (3) Roman terra sigillata fineware from SU3279 in Area 3 (photos A. Avramidou)

Обр. 16. 1. Неолитна керамика от SU3187 в зона 3; 2. Остродънен амфориск от SU2028 в зона 2 (A); щампована дръжка от амфора от SU2018 в зона 2; (B); (3) Римски фина terra sigillata от SU3279 в зона 3 (снимки A. Avramidou)

at its north-western, western, and southern limits was surrounded by a peribolos or retaining wall; however, it cannot be dismissed that some blocks come from buildings. Judging from the location of the architectural members, we estimate the preserved perimeter of the wall to be approximately 180 m. Unfortunately, the northern and eastern sections of the small plateau are disturbed due to the construction of the roadway that was never completed. It is therefore not possible to know whether such a peribolos wall, if we are correct to interpret it as one, surrounded the plateau. The study of orthophotos, historical aerial photographs, and satellite images provides no secure indication on whether sections of this wall continued south towards the water.

The intensive survey completed 29 SUs in Area 2 covering some 5.8 ha. Most areas west of the Yialou Rema were surveyed, as well as a large field being cultivated for watermelons east of the river and below the plateau. In addition, the survey team was able to complete a few areas of the plateau itself around the putative temple and some residential plots along the waterfront. High vegetation from fallow fields prevented us from completing the remaining survey units during the 2021 campaign. The highest concentration of both ceramics and tiles was found in the watermelon field below the plateau (SU2017–2020), although material was still well-distributed in SUs west of the river (fig. 15).

One clear distinction between Area 2 and Area 1 is that here there is sparce evidence for Thracian pottery, limited to only three SUs (SU2004, SU2018, SU2032). Moreover, only one tool (SU2013) and no flints have been recovered here to date. Equally notable is the near absence of Byzantine and later

ceramics. Instead, the survey has found large amounts of Hellenistic and Roman pottery. Among the finds, noteworthy are the considerable numbers of transport amphoras, storage vessels (e.g., pithoi), and cooking, serving (e.g., oinochoai), drinking and dining wares (plates, bowls, cups). We have documented both plain and fine local and imported wares (e.g., black-glaze, West Slope, 'Megarian,' terra sigillata). The Hellenistic and Roman chronology of the diagnostic ceramics agrees with Pentazos' (Pentazos, Triantafyllos 1978) finds from the excavations on the plateau, namely what he referred to as 'Hellenistic and Arretine pottery.' Of interest is a stamped amphora handle (SU2018), while the discovery of a pointed amphoriskos (SU2028) and a (possible) stone relief fragment (SU2020) are indicative of the existence of the Hero-Rider cult during the Roman period (fig. 16.2A-B). Isolated earlier fragments do exist, such as a black-glaze handle (SU2016), but, compared to Area 1, there is little evidence so far of much activity at this location prior to the Hellenistic period.

Area 3

Remote sensing has identified only a limited number of potential features of interest to date. In fields (SU3044, SU3045) approximately 1 km north of Perama, the WorldView-3 satellite image identified a series of parallel linear anomalies with northwest-southeast orientations. Of these anomalies, one has a three-sided rectilinear outline. The features are unlikely from twentieth century field boundaries since aerial photographs do not show any changes in the field systems. In a future fieldwork campaign, these anomalies will be a target of geophysical prospection.

Intensive pedestrian surveying was conducted at 80 SUs dispersed around the village of Perama amounting to about 29 ha (fig. 17). In general, ceramics and tiles were noted in most fields surveyed, but there were several nodes of denser material at various locations: (i.) 600 m northwest of Perama (SU3169, SU3177, SU3187); (ii.) 400 m north of Hill 319 (SU3276–3279); and (iii.) a scattering of fields 700–1000 m north of Perama (SU3017, SU3030, SU3032, SU3250). Survey units produced ceramics largely of the Late Roman and Byzantine era, but also material extending into the Ottoman period. A concentration of Neolithic pottery was identified in a field northwest of Perama (SU3187) and it is the earliest ceramics material recovered by the survey (fig. 16.1). In SUs investigated near Hill 319 between the villages of Perama and Komaros, we documented significant quantities of pottery, flints, and tools (e.g., SU3030, SU3250, SU3279), and even a snail-fossil from SU3276. Considerable numbers of Thracian and Roman pottery were found around Hill 319 (e.g., SU3272–3281) and comprised primarily of cookware, storage, and terra sigillata, the latter dating between the second and sixth century CE (fig. 16.3). Unique so far, is the discovery from the same survey area of an inscribed pottery sherd (SU3279) and the graffito of a worn pithos fragment (SU3278).

Discussion

Based on our current fieldwork data, we can proceed to some preliminary observations regarding the archaeological landscape of the Peraia. Starting with Area 1, we find clear traces of Thracian material in most areas surveyed. Towards the southern end of the plateau and around Mikros Elaionas, Thracian finds overlap with a concentration of Greek and Early Roman material. This indicates that there was recurrent use of the southern region of Area 1 for much of the first millennium BC and into the first few centuries of the Common Era.[4] Besides the classical walls previously identified at Mikros Elaionas, there are no clear architectural remains from a settlement in areas surveyed beyond some blocks left aside at field edges; if such remains are to be found, then they are probably

4 A detailed study of the pottery and the stratigraphy of future test-trenches will help finetune the chronological span of the ceramics, especially the relation between Greek and Thracian.

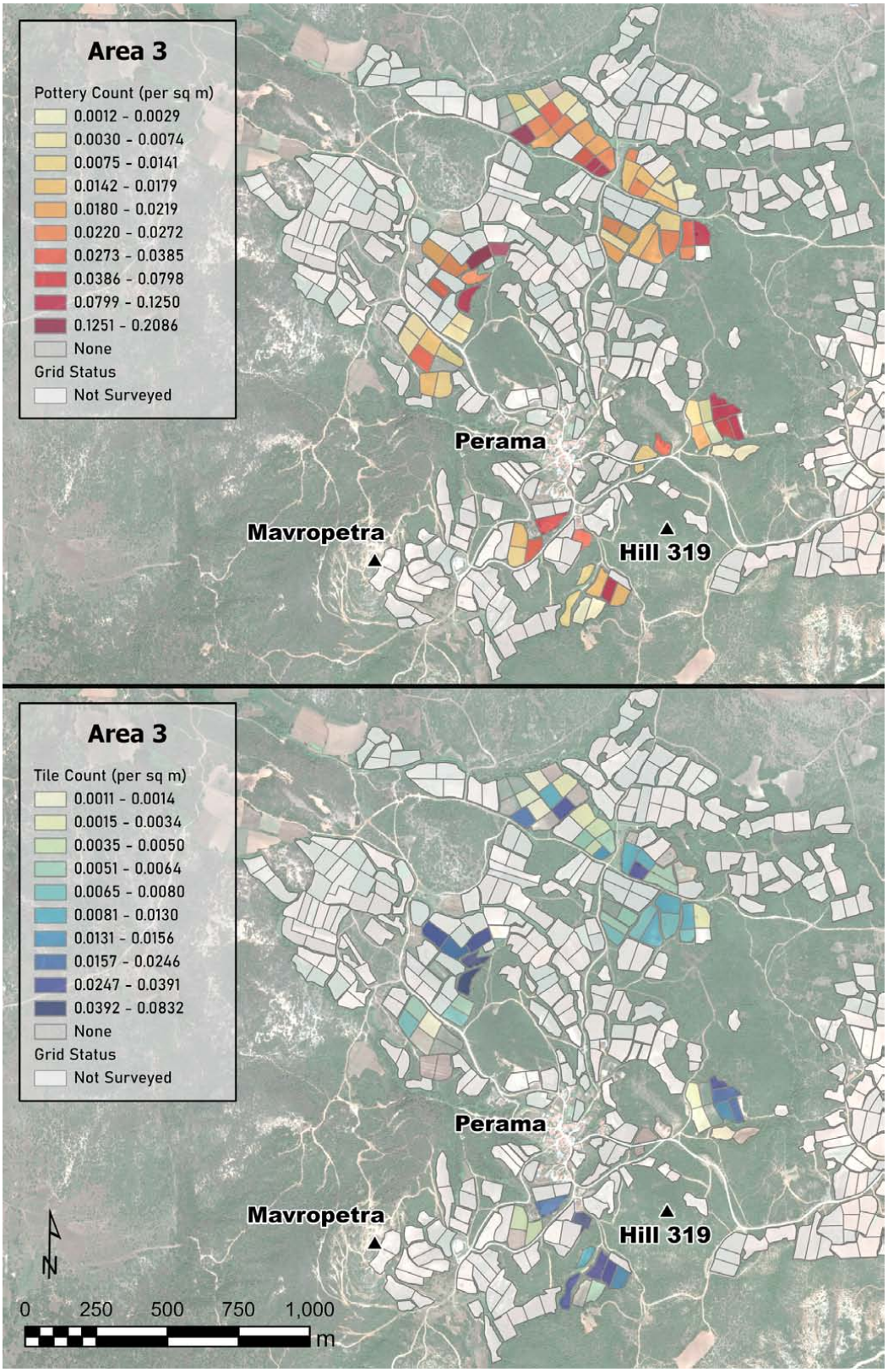


Fig. 17. Ceramics density map (sherds per square metre) from Area 3 (top); tile density map (tiles per square metre) from Area 3 (bottom) (figure by J.C. Donati)
Обр. 17. Карта на концентрацията на керамика (на квадратен метър) в Зона 3 (горе); карта на плътността на керемиди (на квадратен метър) в зона 3 (долу) (автор J.C. Donati)

within the surrounding hills and knolls covered by vegetation, including Mikros Elaionas. Moreover, geophysics has yet to survey much of the southern end of the plateau, and future results may provide clearer evidence of buried structures. During the Late Roman and Byzantine periods, the concentration of finds indicates that activity in Area 1 transferred some 300–400 m towards the north around the modern farmhouse. The distribution of this later material is still uncertain because other areas of the central and northern portions of the plateau remain to be surveyed, including the ~5,000 sq m cluster of magnetic dipolar features identified with geophysics.

In Area 2, the quantity and the type of pottery collected, along with large amounts of tiles, support the likelihood of a Hellenistic and Roman harbour settlement between the putative temple and the coastline. The fact that geophysics produced no traces of structures in fields below the plateau can be explained by a series of natural causes from flooding episodes, which have disturbed the archaeological layers. The large numbers of amphora fragments collected and the proximity of the site to the sea, enhance the site's commercial character. Between Cape Serrheion and Zone, Petrota beach is the only shoreline where a small harbour could be located thanks to the small fertile plain created by the Yialou Rema. In the twentieth century, Petrota beach was used as a harbour when millstones and large blocks were laden onto ships docked off the coast. Several of these millstones are displayed today in the gardens of waterfront houses. The geophysical survey on the small plateau reveal that the putative temple was not an isolated structure but accompanied by additional buildings. A large stoa-like complex seems to surround the possible temple along its northern and eastern sides. Even though the true nature of these buildings and their chronology and usage can only be confirmed with excavations, the preliminary evidence suggests that a sanctuary surrounded by a peribolos wall was located at the highest point of the settlement.

A combined overview of Area 1 and Area 2 indicates that the main Thracian settlement between Ai-Giorgis Petrota and Petrota beach was located at the upland plateau east of Mt Ismaros, where prehistoric activity has also been attested. A possible Greek settlement seems to have existed by the slopes of Mt Ismaros at Mikros Elaionas, on either side of the stream that runs along Area 1; activity lasts through the Hellenistic and Early Roman period. Elsewhere, a second Hellenistic and Roman settlement developed on the coast at Petrota beach, only a few kilometres west of Zone. Whether there was an earlier phase to the harbour settlement remains open as the collected finds are not enough to support a pre-Hellenistic phase. In the Late Roman and Byzantine periods, activity seems to shift exclusively to the central and northern regions of the plateau in Area 1.

Fieldwork in Area 3 is still in its initial stages; however, the types of ceramics indicate the existence of a Roman installation (perhaps a farmhouse) north of Hill 319, a hypothesis further supported by its location overlooking the valley to the west and in proximity to the Via Egnatia to the east. The finds suggest occupation at the same location during the Byzantine period as well. Apart from the discovery of Neolithic pottery northwest of Perama, fields around the periphery of the village produced exclusively later material (Late Roman and after). Finds were sparce in certain areas and more concentrated elsewhere, indicating the diachronic agricultural character of the area with occasional occupation during the Late Roman, Byzantine, and Ottoman periods. Preliminary visits to the three hilltops in Area 3 west of Perama and east of Komaros (Mavropetra Hill and Hill 339) were instructive of the interconnectedness of the hills and the differences within the local topography, i.e., mountain setting vis-à-vis coastal zone. Hill 319 has good visibility of the valley to the north and west, as well as to the east towards Hill 339. Both hills are oriented towards the interior, focusing on the protection and control of the valley and the passages to and from the sea. In this respect, the earlier interpretation of Hill 319 by Pantos and Triantafyllos as a Greek fortified outpost of a coastal settlement seems to be confirmed (Pantos 1974, 7–17; Triantafyllos 1973–1974), especially, if we consider its location right between the Thracian sites of Mavropetra and Hill 339.

Turning to the question of Samothracian settlements, based on our research and the local topography, there are two sites eligible for identification with Greek settlements between Cape Serrheion and Zone: (i.) the area around Mikros Elaionas in Area 1, and (ii.) the small coastal plain at Petrota beach in Area 2. Whether either of them could be identified with the mysterious Mesemvria of Herodotus, the better attested harbour settlement of Drys, or the elusive Orthagoreia is a question to be answered through future excavations. The settlement at Area 2 extends over a stretch of land parallel to the territory of Zone, bridging the Thracian hinterland with the Northern Aegean Sea, while shielding at the same time the larger harbour city of Zone from the west. This formation potentially creates a multi-layered fortification system that expands from core/large settlements to satellites/smaller ones. This co-dependence and interconnectivity of the coastal sites acts as a buffer-zone, formed through settlement arrangement and the integration of the local topography.

The study of the literary sources leads to similar observations: (i.) Samothracian foundations had to be built by necessity along the coast to maintain a desirable distance from the Thracian hilltop settlements to the north and to safeguard the connection to the sea; (ii.) the choice of words in Herodotus' passage (7.108) (*teichea*, i.e., forts) implies on the one hand that the Samothracian settlements were fortified but also that their close formation along the coast resembled a fortification wall. Such a tight web of settlements aimed to increase their defensiveness and capitalize on the local topography and its rather limited coastal space. Their setting recalls Herodotus' metaphor of *teicheon kithones* (7.139.3), i.e., layers of fortifications resembling the folds of a chiton. The metaphor describes the multiple walls of the Corinthian Isthmus and creates a powerful image that could also be applied to the Peraia and the 'Samothracian forts.'

Conclusion

Overall, the 2021–2022 fieldwork campaigns of the Peraia of Samothrace Project were successfully concluded, and our team managed to overcome the limitations imposed by the COVID-19 pandemic. The results of the pedestrian survey, geophysical prospection, and remote sensing produced significant data on the local topography, the archaeological record, and the diachronic land use of the region. In 2022, we plan to return to Area 1 with another round of intensive pedestrian and geophysical surveys, investigating the remaining survey units. Furthermore, our research will expand to additional sections of Area 3, while we will pursue a more targeted approach for Area 4. Upon completion of our project, we hope to have highlighted the diversity of the landscape and the rich history and archaeology of this unique region of Aegean Thrace.

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Проектът Самотракийската переа: отчет за теренната работа през 2020–2021 г.

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(резюме)

Проектът „Самотракийската переа“ е мултидисциплинарен археологически проект за изследване на диахронни селищни модели от праисторията до съвременната епоха по крайбрежието и хинтерланда срещу остров Самотраки в северно Егейско море (обр. 1). Той използва интегрирани и неинвазивни методи като дистанционно наблюдение, геофизично замерване и интензивно теренно обхождане, за да изследва регионалната топография и форми-

те на човешко обитаване. Важен аспект на проекта е въпросът за самотракийските селища, споменати в писмените източници. Тази статия представя резултатите от теренната кампания през 2020–2021 г. Тя включва методическата рамка на проучването, преглед на древните литературни източници и предишни археологически проучвания в региона, предварителен отчет на теренната работа, както и обща дискусия върху резултатите от проведените изследвания.

Разглежданият район се простира приблизително от древния град Маронея до съвременния град Александруполис и от северното крайбрежие на Егейско море до южното продължение на Родопите. Природната среда е изключително разнообразна и включва тесни крайбрежни зони с малки заливчета, високопланински потоци, които се вливат в речни клисури, скалисти хълмове, покрити с гъста растителност и ограничен брой планински плата (обр. 2).

Самотракийската переа е рядка тема в гръцките и римските литературни и епиграфски източници. Като цяло всички топографски препратки се появяват случайно и са вплетени в описанието на важни исторически събития. Източниците включват произведения, датиращи от късния архаичен и класически период, разкази, описващи събития от елинистическия период до появата на Рим и късноантични източници, включително римски пътеводители. Идентифицирането на селищата е сложен въпрос поради разнообразните дати на източниците, доста противоречивите топографски препратки и липсата на сигурно разпознати археологически обекти в региона.

Археологически теренни проучвания в и около Самотракийската переа са документирали богата и разнообразна материалната култура, свидетелстваща за важната роля на този район през вековете. Най-известни са разкопките в Макри, Маронея и Зоне с находки от праисторията до римския и византийски период.

Проектът идентифицира четири потенциални района с различни размери и топографски характеристики, в които биха могли да се извършват археологически проучвания (обр. 3–4, 6). От самото начало възприехме хибриден подход в изучаване на ландшафта на Самотракийската переа, който включва недеструктивно теренно проучване. Целта е да се съчетаят взаимно допълващи се методи на изследване, извършвани както на място, така и дистанционно, като същевременно се възприемат и рационализират създадени дигитални системи за събиране на данни и анализ на артефакти в рамките на ограничен бюджет. Мащабните и бързи методи за анализ на ландшафта, като дистанционно наблюдение и геофизика, бяха комбинирани с интензивно теренно обхождане. Всички данни от проучването, независимо дали са събрани на място или анализирани извън обекта, бяха комбинирани в базата данни на географската информационна система (ГИС) на проекта (обр. 5, 7–8).

Въз основа на текущите ни данни от теренната работа, можем да предложим някои предварителни наблюдения относно археологическия ландшафт на Перая. Започвайки от зона 1, където откриваме ясни следи от тракийски материал в повечето изследвани площи. Към южния край на платото и около Микрос Елеонас тракийските находки се припокриват с концентрация на гръцки и ранноримски материал. Това показва продължаващо използване на южния регион на зона 1 през голяма част от първото хилядолетие пр.н.е. и през първите няколко века от нашата ера. Освен античните стени, идентифицирани по-рано в Микрос Елеонас, няма ясни архитектурни останки от селища в изследваните площи. Все още няма геофизично проучване на голяма част от южния край на платото и бъдещите резултати могат да предоставят по-ясни доказателства за евентуални археологически структури (обр. 9). През късноримския и византийския период концентрацията на находки показва, че дейността в зона 1 се е прехвърлила на около 300–400 m на север около съвременна ферма (обр. 10–11).

В зона 2 количеството и видът на събраната керамика, заедно с големи количества керемиди, подкрепят вероятността за елинистическо и римско пристанищно селище между пред-

полагаемия храм и бреговата линия. Фактът, че геофизичните замервания не откриват следи от структури в подножието на платото може да се обясни с поредица от природни епизоди като наводнения, които са нарушили археологическите слоеве (обр. 12–14). Големият брой събрани фрагменти от амфори и близостта на обекта до морето показват търговския характер на обекта. Между нос Серейон и Зоне плажът Петрота е единствената брегова линия, където може да бъде разположено малко пристанище благодарение на малката плодородна равнина, създадена от Ялоу Рема (обр.15). Геофизичното проучване на малкото плато разкри, че предполагаемият храм не е изолирана структура, а е придружен от допълнителни сгради. Въпреки че естеството на тези сгради, тяхната хронология и употреба могат да бъдат потвърдени само с разкопки, предварителните сведения сочат, че на най-високата точка на селището се е намирало светилище, заобиколено от периболос (оградна стена).

Теренната работа в зона 3 все още е в начален етап, но керамиката показва съществуването на римска инсталация на север от възвишение 319. Тази хипотеза е допълнително подкрепена от местоположението ѝ с изглед към долината (на запад) и в близост до *Via Egnatia* (на изток). Находките предполагат обитаване на същото място и през византийския период. Освен откриването на неолитна керамика северозападно от Перама, в нивите около периферията на селото се открива и по-късен материал (късноримски и последващ) (обр. 16–17). Находките са оскъдни в определени райони и по-концентрирани другаде, което показва диахронен земеделски характер на района със случайни обитания през късноримския, византийския и османския период. Предварителните посещения на трите възвишения в зона 3, западно от Перама и източно от Комарос (респективно Мавропетра, възвишения 319 и 339), бяха показателни за взаимосвързаността между планинския ландшафт и крайбрежната зона. Те са ориентирани към вътрешността с фокус върху защитата и контрола на долината и проходите към и от морето.

Заключителни бележки по въпроса за самотракийските селища. Въз основа на нашите изследвания и местната топография има два обекта, които могат да бъдат интерпретирани като гръцки селища между нос Серейон и Зоне: а) районът около Микрос Елеонас в зона 1; б) малката крайбрежна равнина на плажа Петрота в зона 2. Дали някое от тези селища може да бъде идентифицирано като мистериозната Месемврия на Херодот, добре засвидетелстваното пристанищно селище Дрис или неуловимата Ортагорея е въпрос, чийто отговор зависи от бъдещите разкопки. Селището в зона 2 се простира върху терен, успореден на територията на Зоне, свързвайки тракийския хинтерланд със северно Егейско море, като в същото време защитава по-големия пристанищен град Зоне от запад. Тази формация потенциално създава многопластова укрепителна система, която се разширява от ядро/големи селища до сателити/по-малки селища. Крайбрежните селища (с регистрираната зависимост и взаимосвързаност между тях) действат като буферна зона, формирана чрез подреждане на селищата с адаптиране към местната топография.

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Проект „Никополис ад Иструм – геофизика *extra muros*“. Резултати от проучването през 2021 г.

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ABSTRACT

The general aim of the project is to enhance our knowledge of *Nicopolis ad Istrum* city plan outside of the fortification wall. At present the immediate surroundings of the Roman *civitas* are under meadows. Thus geophysical survey is one of the most extensive ways to investigate the extramural urban planning.

The total area covered by geomagnetic survey in 2021 is 9.09 ha (101 quadrants of the square grid), while the resistivity survey was conducted over 1.11 ha. The surveyed areas are on the two banks of the Nikyupsko dere Creek, to the northwest and to the north of the Roman city.

Not all of the registered anomalies are clear for interpretation due to the character of the building materials used in Antiquity, the search and extraction of *spolia*, and the depth of the structures.

Potential pottery kilns and workshops have been registered along the creek. Extramural continuations of streets, or *cardines* and *decumani* cut off by the fortification wall (built *circa* 175 AD) from the initial urban planning, are visible in the geophysics results. Building foundations have also been registered. In addition to the Western aqueduct, information from previous field surveys suggests two more northwestern aqueducts that supplied the city with water. Some of the registered anomalies could be identified with one of those structures.

KEYWORDS

Nicopolis ad Istrum, Roman provincial cities, urban planning, Geophysics

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Въведение

Геофизични проучвания в Никополис ад Иструм и непосредствената му околност

Геофизичните проучвания в Никополис ад Иструм и неговата административна територия имат продължителна история. Пионер в тази дейност е Ц. Вълков, геофизик в РИМ–Велико Търново. В очертанията на града той провежда през 1984 и 1985 г. електросъпротивително изследване на територията на перистила, югозападно от агората, локализира кръстовища на улици, изследва площи около северната порта и в района на палестрата (Вълков 1985, 65–68, обр. 1–3; 1986, 89) (обр. 1).

С началото на българо-британските разкопки в Никополис ад Иструм започват и съвместните геофизични проучвания, осъществявани първоначално от П. Стрейндж във връзка с изпълнението на проекта "The Roman and Late Roman Town *Nicopolis ad Istrum*" (1985–1992) (Slokoska 2002, 10–12; 2007, 193–196; Poulter 1995a, 1–4; 2002, 14–15; 2007a, 3–4; 2007b, 51–56, 79–82; 2007d, 370–372; 2019a, 2–3). Първите британски изследвания са проведени през 1985 и 1986 г. на цялата площ на ранновизантийския кастел, в югоизточния ъгъл на римския и късноримски град, непосредствено югоизточно от югоизточния ъгъл на римската и късноримска крепостна стена, западно от западната порта на кастела и около водоразпределителния резервоар (обр. 1 и 2). Прилаган е основно електросъпротивителният метод (Strange 1995, 259–267). В публикацията на П. Стрейндж не е приложена графичната част за резултатите от проучването около водната кула. Данните са налични в отчет, отпечатан като машинописен текст през 1987 г. През 1988 г. е извършено и геомагнитно изследване на малка площ в западната част на кастела – източно от западната порта (Area B) (обр. 2) (Strange 1995, 262–264). Целта е да бъде придобита представа за наситеността на структури в площта, представляваща интерес за конкретния проект и набелязване на потенциални места за провеждане на разкопки (Strange 1995, 259).

Следващите геофизични проучвания около Никополис ад Иструм са проведени през 1991 г. С магнитометър е изследван терен на десния бряг на рибарника, намиращ се северно от северната крепостна стена на града. Регистрирани са 21 аномалии, определени от Р. Фокнър и П. Стрейндж като пещи (Falkner 1999, 74, 92, note 12, 108, 110, 112, note 2, 5; Владкова 2021, 21).[1] С геомагнитното картиарне през тази година може да се каже, че приключват българо-британските геофизични изследвания в непосредствената близост на Никополис ад Иструм.

По време на проучването на агората са направени опити да бъде изследван чрез електросъпротивителния геофизически метод северният край на ареата (обр. 1). Първоначално това прави П. Стрейндж (1991 г.), а впоследствие и Н. Тонков (1996 г.). Поради дебелите напластявания, масивната архитектура и характера на структурите геофизиката не дава резултат (Слокоска и др. 1992, 68; Владкова 2021, 21, 23).

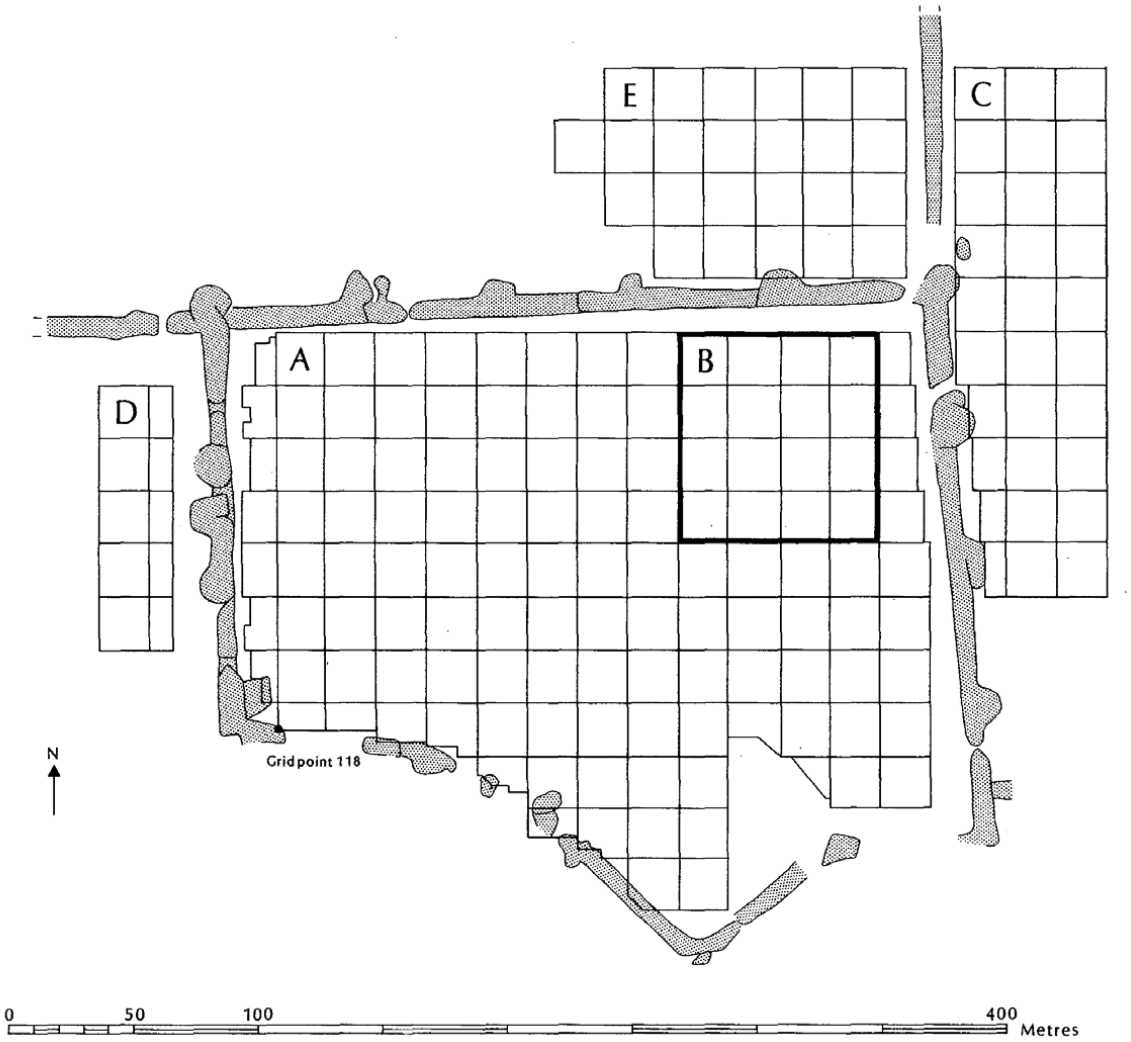
През 2012 г. е проведено целенасочено изследване на структура, намираща се на 90 m западно от западната крепостна стена на града. Н. Тонков извършва електросъпротивително изследване на видимо очертание с план на окръжност от 14 овални хлътвания на терена, разположени концентрично около централна вдлъбнатина. Приложена е двумерна и тримерна електросъпротивителна томография, като целта е изясняване на функцията на това очертание (Тонков 2013, 271–273).

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1 За съжаление резултатите от проучването не са обнародвани, освен като бележка под линия, въпреки че Р. Фокнър и П. Стрейндж заплануват проект и неизлязла публикация със заглавие „The Nicopolis Kiln Location Project" (Falkner 1999, 74, 92, note 12, 108, 110, 112, note 2, 5).



Обр. 1. План на Никополис ад Иструм (по Poulter 1995a, 3, fig. 3)
Fig. 1. Plan of Nicopolis ad Istrum (after Poulter 1995, 3, fig. 3)



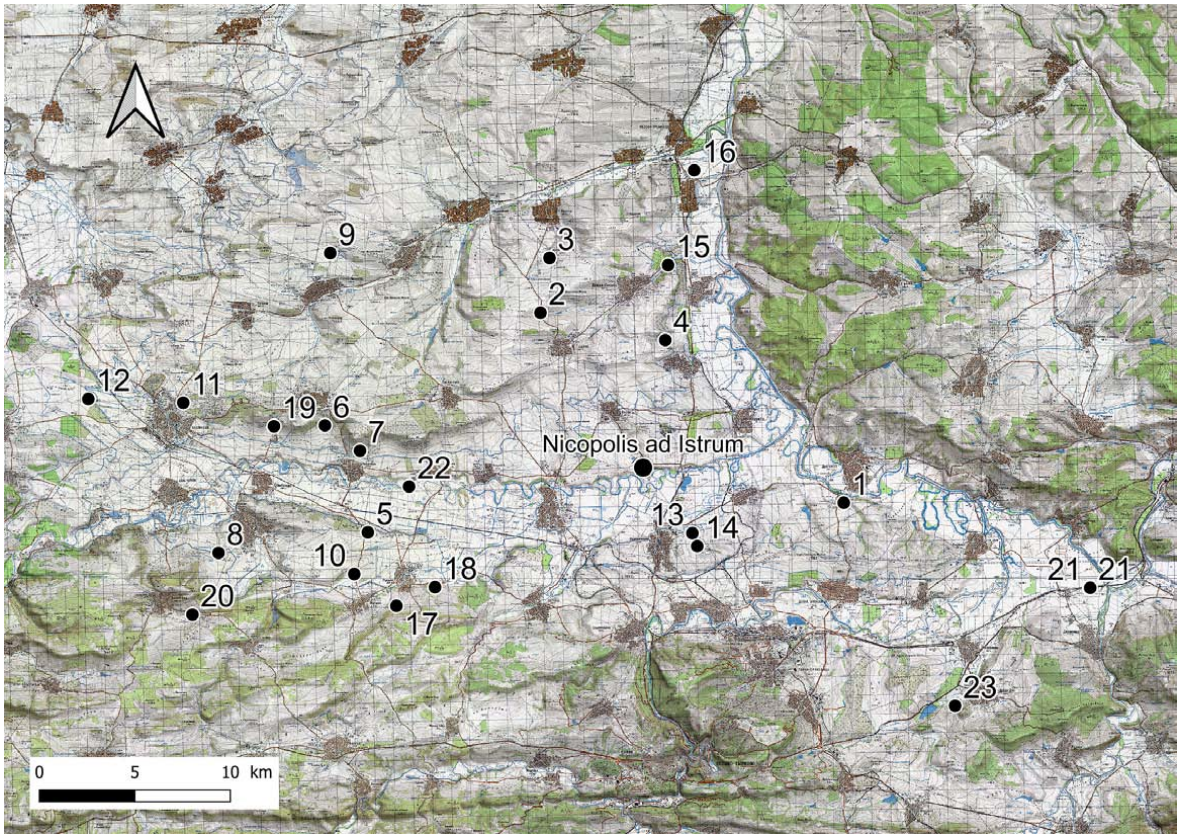
Обр. 2. Схема с разположението на покритите с геофизика площи около кастела (по Strange 1995a, 260, fig. 103)
Fig. 2. Plan of the areas surveyed by Geophysics around the castellum of Nicopolis ad Istrum (after Strange 1995a, 260, fig. 103)

Геофизика на обекти от административната територия на Никополис ад Иструм (обр. 3)

Отново пръв в тази дейност е Ц. Вълков. През 1984 г. той изследва две могили край с. Джулюница (Вълков 1985, 69–70, обр. 4–6), проучвани по-късно чрез разкопки от М. Цочев (Цочев 1985, 166).

Известно време след започването на българо-британския проект през 1985 г. е извършено и инцидентно геофизично (електросъпротивително) изследване около Лесичерския стълб (Лесичери 1) (обр. 3.5), проведено от П. Стрейндж през 1987 г. (Църов 1988, 103–104; 1996, 112, 115, бел. 13; Boyd 2007, 598–599; 2019, 797). То предшества началото на българо-британските геофизични изследвания на обекти от административната територия на града.

След приключването на първия българо-британски проект през 1992 г., акцентът вече е поставен на административната територия на града. Тя е изследвана по проект “The Transition to Late Antiquity. The City and the Village in Roman and Late Roman Empire: *Nicopolis ad Istrum* and Villages in its Territory” (1996–2002) (Poulter 2002, 17–29; 2007a, 3–4; 2007b, 51–56, 79–82; 2007d, 370–372; 2019a, 2–3). Идеята на проекта е да бъде придобита възможно най-голяма



Обр. 3. Карта с изследвани чрез геофизика обекти в административната територия на Никополис ад Иструм (автор К. Чакъров): 1. Драганово, м. Площта (Драганово 1); 2. Стефан Стамболово, м. Шарабунар (Градина); 3. Иванча, м. Плачковец; 4. Куцина, м. Баневец; 5. Лесичери, м. Марков камък (Лесичери 1); 6. Лесичери, м. Краище (Лесичери 2); 7. Лесичери, м. Вирането (Лесичери 3); 8. Михалци, м. Саръ яр; 9. Горна Липница, м. Мрамора; 10. Мусина, м. Бабина; 11. Павликени, м. Бели бряг; 12. Павликени, м. Върбовски ливади; 13. Поликраище, м. Гладния рът (Поликраище 1); 14. Първомайци, м. Големия поток (Поликраище 2); 15. Полски Сеновец, м. Дрента; 16. Раданово, м. Таш кюпрю; 17. Русаля, м. Пещерата (Русаля 1); 18. Русаля, м. Камен мост (Русаля 2); 19. Стамболово, м. Боаза (Стамболово 2); 20. Вишовград, м. Селище; 21. Джулюница, м. Могилките; 22. Дичин, м. Градище; 23. Добри дял, м. Михнева могила

Fig. 3. Map of sites surveyed by Geophysics in the administrative territory of Nicopolis ad Istrum (author K. Chakarov): 1. Draganovo, Ploshta locality (Draganovo 1); 2. Stefan Stambolovo, Sharabunar locality (Gradina); 3. Ivancha, Plachkovets locality; 4. Kutsina, Banevets locality; 5. Lesicheri, Markov kamak locality (Lesicheri 1); 6. Lesicheri, Kraiste locality (Lesicheri 2); 7. Lesicheri, Viraneto locality (Lesicheri 3); 8. Mihaltsi, Sara yar locality; 9. Gorna Lipnitsa, Mramora locality; 10. Musina, Babina locality; 11. Pavliekeni, Beli bryag locality; 12. Pavlikeni, Varbovski livadi locality; 13. Polikaraishte, Gladnia rat locality (Polikraishte 1); 14. Parvomaytsi, Golemiya potok locality (Polikraishte 2); 15. Polski Senovets, Drenta locality; 16. Radanovo, Tash kyupryu locality (Radanovo 1); 17. Rusalya, Pesterata locality (Rusalya 1); 18. Rusalya, Kamen most locality (Rusalya 2); 19. Stambolovo, Boaza locality (Stambolovo 2); 20. Vishovgrad, Selishte locality; 21. Dzhulyunitsa, Mogilkite locality; 22. Dichin, Gradishte locality; 23. Dobri dyal, Mihneva mogila locality

представа за градската територия, като е следвана предварително разработена за целта методология (Poulter 1999a, 207–210; 1999b, 148–149, 178–180; 2007a, 3–4; 2007b, 53–97; 2007c, 583–595; 2007d, 363–372; 2019a, 1–3; 2019d, 675–682). На регистрирани от специалисти от великотърновския музей археологически обекти са направени повторни, интензивни теренни издирвания (Poulter 1999a, 207; 1999b, 178–180, 184, note 65; 2002, 17–29; 2007c, 583–584; 2007d,

363–372; 2019e, 683–685; Tsarov 2007, 581–582). В резултат на изследванията са прецизирани границите на обектите и е извършена интерпретация на базата на придобитите данни (Poulter 2002, 17–19; 2007c, 583–595; 2019d, 677–682). Впоследствие на 20[2] от обходените 28[3] обекти са извършени геофизични проучвания (обр. 3). Основно е прилаган електросъпротивителният метод, а в отделни случаи, като Лесичери 1 и Раданово, и геомагнитният (Boyd 2007, 598–610; 2019, 779, 800–801, 820–821). Първоначално изследванията са извършвани от П. Стрейндж – обектите Лесичери 2, Раданово, Страхилово и Градина (сега Стефан Стамболово), а от 1999 г. до края на българо-британските проучвания – от М. Бойд,[4] като в отделни случаи (Драганово 1) електросъпротивителното картиране е осъществено от Г. Илиев и П. Друмева (Boyd 2007, 597; 2019, 787, 801, 836, note 1; Poulter 1999a, 226–227; 1999b, 148–149, 178–180, 184, note 65; 2019e, 775, note 37).

По време на този проект П. Стрейндж извършва целенасочено геофизично проучване, на още един обект освен Никополис ад Иструм, на който след това са проведени археологически разкопки. Това е крепостта Градище край с. Дичин (обр. 3) (Boyd 2007, 597; 2019, 787, 801, 836, note 1; Poulter 1999a, 207, 210–213, 164; 1999b, 148–149, 159–160, 178–180, 184, note 65; 2002, 18–27; 2007b, 82–97; 2007d, 370–383; 2019b, 23–24, fig. 8; 2019e, 775, note 37). Приложението на геофизиката в този случай е повторение на целта от проекта за Никополис ад Иструм (Strange 1995, 259), а именно придобиване на представа за разположението на потенциални за проучване структури и определяне на местата, на които ще се извършват разкопките (Poulter 1999b, 149), което отново се оказва успешно. Например църквата е регистрирана благодарение на геофизиката и поради тази причина не е разкопана впоследствие цялата, а е потвърдена само с един сондаж (Poulter 1999b, 159; 2019b, 23; 2019c, 143–149).

Отработеният подход е приведен в действие и преди разкопките на друг обект от градската територия на Никополис ад Иструм – крепостта Михнева могила край Добри дял, проучвана чрез геофизика от М. Бойд при осъществяването на следващия проект “The End of Antiquity on the Lower Danube” (2010–2011) (обр. 3) (Poulter 2013, 366–367, note 15, 368, 370, 374; Динчев 2013, 103, 111, бел. 12).

Сходен на приложения в Никополис ад Иструм, Дичин, Добри дял и административната територия на града подход е приложен и през 2014 и 2019 г. при обекта в м. Върбовски ливади край Павликени (обр. 3) (Чакъров, Александров 2016, 495; Чакъров 2020, 1071–1074). Проектите са дело на К. Чакъров, а геофизичното проучване е осъществено от Х. Цанков (през 2014 г. съвместно с А. Кисьов). През 2014 г. е изследвана с магнитометър площ от 10 декара, намираща се между условно обозначените западен и южен сектори, както и северно и източно от централния сектор. Терените се поддържат като ливади и това е единственият начин за придобиване на пълноценна и обемна информация за наличието или липсата на археологически структури на територията на въпросните места с цел обогатяване на плана на обекта и набелязване на потенциални участъци за нови археологически разкопки.

Проектът, осъществен през 2019 г. край Павликени, е продължение на предишния от

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2 М. Бойд посочва 19 обекта (Boyd 2019, 781, table 21.1). В по-ранни публикации А. Поултър отбелязва, че геофизика е правена и край с. Страхилово, където вероятно са засечени градени от камък гробове (Poulter 1999a, 227; 1999b, 149, 178; Слокоска и др. 2001a, 84; Poulter 2002, 19, 23). Тези данни са непубликувани, но по сведения на И. Църов мястото е в м. Бостан чукуру, намираща се североизточно от селото, в близост да малък рибарник, разположен край пътя и стопанския двор.

3 От които е публикувана информация за 22 (Poulter 2019e, 683–777). И. Църов и В. Динчев дават сведения за Михалци, Обединение, Хотница, Дъскот, Бутово, Гостилица (Слокоска и др. 2001a, 84; 2001б, 88–89; Църов 2002, 94).

4 Със съдействието на С. Ерскин Кръм (Boyd 2019, 836, note 1).

Никополис ад Иструм (обр. 1–2)			
Местоположение	Вид изследване	Площ (декари)	Източник за определяне на площите
Intra muros	Електросъпротивително	-	Вълков 1985, 65–68, обр. 1–3; 1986, 89; Слокоска и др. 1992, 68; Владкова 2021, 21.
A	Електросъпротивително	57	Strange 1995, 259–267.
B	Геомагнитно	6,4	Strange 1995, 259–267.
C	Електросъпротивително	12	Strange 1995, 259–267.
D	Електросъпротивително	2,8	Strange 1995, 259–267.
E	Електросъпротивително	9,6	Strange 1995, 259–267.
Castellum aquae	Електросъпротивително	4,8	Strange 1995, 259–267.
Северно от Никополис ад Иструм	Геомагнитно	-	Falkner 1999, 74, 92, note 12, 108, 110, 112, note 2, 5.
Очертание с план на окръжност западно от града	Електросъпротивителна томография	1,08	Тонков 2013, 271–273.
Общо (по публикувани данни): 92,6 декара, от които 86,2 декара електросъпротивително и 6,4 декара геомагнитно картирания.			

Таблица 1. Геофизика в и около Никополис ад Иструм
Table 1. Geophysics in and around Nicopolis ad Istrum

2014 г. и на проведените десетилетия преди това археологически разкопки. В двете ниви, разположени северно и южно от известните предели на обекта, е направено теренно издирване, с което са прецизирани границите в тези посоки. След това на площ от 10 декара е осъществено геомагнитно изследване върху земеделски обработваните периферии на две от надгробните могили (№ 1 и № 2), намиращи се в близост до обекта, на други две новорегистрирани при издирването структури, както и на мястото, където през 2016 г. са засечени при земеделска обработка, и впоследствие проучени, гроб и надгробна плоча (Чакъров 2018, 49–90).

Покрити с геофизика площи в и около Никополис ад Иструм и неговата градска територия (обр. 1–3)

Обобщените данни за покритата чрез геофизика площ в и непосредствено около Никополис ад Иструм,[5] както и на обекти в административната територия, са представени в таблици 1–2.

Сумираните площи от геофизични изследвания в и около Никополис ад Иструм с прибавени данните от административната територия възлизат на 313,085 декара по публикувани данни. Ако се прибавят непубликуваните картирания северно от града (1991 г.) и тези на Ц. Вълков *intra muros*, както и непубликуваните резултати за обекти като Страхилово, Джулюница и др., вероятно общата покрита с геофизика площ в Никополис ад Иструм и неговата територия преди началото на този проект е около 350 декара.

Всички гореизложени данни са изключително сериозна предпоставка за продължаване на геофизичните изследвания в Никополис ад Иструм, неговата непосредствена околност и административна територия. Поради тези причини през 2021 г. авторите на настоящата публикация разработват проект, с който кандидатстват пред Министерството на културата, и който впоследствие получава одобрение. Основната цел е обогатяване на плана на града извън кре-

5 Без площта от непубликуваното изследване от 1991 г. северно от града, както и без тази от картиранията на Ц. Вълков. Изчисленията са направени на базата на посочените метражи на изследваните площи. За сектор А е взета цялата площ на кастела от 57 декара (57,4 декара).

Административна територия * (обр. 3)			
Местоположение	Вид изследване	Площ (декари)	Източник за определяне на площите
Драганово 1	Електросъпротивително	5,4	Boyd 2019, 781.
Градина (Стефан Стамболово)	Електросъпротивително	31,658	Boyd 2019, 781.
Иванча	Електросъпротивително	1,8	Boyd 2019, 781.
Куцина	Електросъпротивително/ геомагнитно	13,683	Boyd 2019, 781.
Лесичери 1	Електросъпротивително/ геомагнитно	8	Boyd 2019, 781.
Лесичери 2	Електросъпротивително	6,766	Boyd 2019, 781.
Лесичери 3	Електросъпротивително	6,4	Boyd 2019, 781.
Михалци	Електросъпротивително	4	Boyd 2019, 781.
Горна Липница, м. Мрамора	Електросъпротивително	33,729	Boyd 2019, 781.
Мусина	Електросъпротивително	3,6	Boyd 2019, 781.
Павликени, м. Бели бряг	Електросъпротивително	9	Boyd 2019, 781.
Павликени, м. Върбовски ливади	Геомагнитно	20	Чакъров, Александров 2016, 495; Чакъров 2020, 1073–1074.
Поликраище 1	Електросъпротивително	4,495	Boyd 2019, 781.
Поликраище 2	Електросъпротивително	1,8	Boyd 2019, 781.
Полски Сеновец	Електросъпротивително	13,945	Boyd 2019, 781.
Раданово	Електросъпротивително/ Геомагнитно	3,59	Boyd 2019, 781.
Русаля 1	Електросъпротивително	5,4	Boyd 2019, 781.
Русаля 2	Електросъпротивително	9,9	Boyd 2019, 781.
Стамболово 2	Електросъпротивително	1,3	Boyd 2019, 781.
Вишовград	Електросъпротивително	17,519	Boyd 2019, 781.
Джулюница	Електросъпротивително	-	Вълков 1985, 69–70, обр. 4–6.
Дичин	Електросъпротивително	ок. 13	Poulter 1999a, 207, 210–213; 1999b, 159–160, 164; 2007d, 160; 2019b, 24, fig. 08.
Добри дял	Електросъпротивително	ок. 5,5	Poulter 2013, 374, fig. 5.
Общо (по публикувани данни): 220,485 декара, от които 200,485 декара електросъпротивително и 20 декара геомагнитно картирания.			

Таблица 2. Геофизика на обекти от административната територия на Никополис ад Иструм
Table 2. Geophysics of sites from the rural territory of Nicopolis ad Istrum

* За геофизиката на крепостите край Дичин и Добри дял няма публикувани отчети. Изчислените тук площи са на базата на публикуваните планове. Би трябвало квадратите от план-квадратната мрежа на Дичин да са с размер 20 m, но според приложения линеен мащаб излиза, че са 14,28 m. Изчислената тук площ се базира на 64 квадрата с площ по 204 m^2. Тя се вмества в защитеното от крепостни стени пространство от 18,75 декара (Poulter 2019b, 10). В таблицата не се поместени данни за геомагнитните изследвания на обектите Куцина, Лесичери 1 и Раданово, защото липсва информация за покритите площи в публикациите, с изключение на Раданово – 72 m^2 (Boyd 2019, 795, 798, fig. 28.33., 800–801, 820–821). Не са вписани и данните за други изследвани по време на българо-британските проучвания обекти (Страхилово, etc.), на които е правена геофизика, защото данните са непубликувани.

постните стени в площите, които се поддържат като ливади. Очакваните структури са производствени съоръжения за керамика, за каквито има по-ранни архивни и частично загатнати в публикации данни, водопроводи, некрополи, крайградски квартали и други неизвестни до момента структури.

Теоретична постановка

Полевите измервания през 2021 г са извършени с двойна конфигурация на флуксгейт градиометър GRAD 601 на фирмата Bartington. Заложена е апаратурна точност на уреда от 0.1 nT. Гъстотата на измерване е 4 точки на m^2 (профили през 1 m, измервателни точки през 0,25 m). Средноквадратичната грешка от измерванията е 0,3 nT. Резултатите от полевите измервания са обработени с програмата Archeo Surveyor на DW Consulting, Холандия.

За да се получат по-детайлни данни за регистрираните с магнитния метод смутители и най-вече, за да се очертаят свързани с тях останки от каменни стени, са извършени измервания по метода на електросъпротивителното картиране. Методът заема второто място по степен на приложение в археологията след магнитната градиометрия. Електросъпротивителното картиране е извършено с двуелектродна схема (известна в западната литература като twin-probe array) с разстояние между подвижните и фиксираните електроди по 0,5 m. Измервателните профили са през 1 m, а измервателните точки по тях – през 0,5 m. Измерванията са извършени с резистивиметър 4Point Light 100W на фирмата LGM-Lippmann, Германия.

Наситеността на засечени през 2021 г. с геофизика структури в близост до града е по-голяма, както покрай северната, така и покрай западната крепостни стени. Повечето от тях са безформени и дори в участъците, където е приложено и електросъпротивително картиране плановете на голяма част от структурите не се изясняват съществено. Според Н. Тонков могат да бъдат откроени няколко причини.

Една от тях е дълбочината, на която се намират структурите. Друга особеност е степента на запазеност и ограбване на строителен материал през по-късни епохи. Това може да се потвърди и от голямото количество дупки, видими и на снимката от 1943 г., с които е осеян проученият терен. Трета причина е свързана със строителните материали, използвани през Античността в и около Никополис ад Иструм. Зад и извън крепостните стени на града за зидария е използван пясъчник (Чакъров 2021, 268, бел. 1). За изработката на монолитни детайли е употребяван доломитизиран варовик и в редки случаи мрамор (Чакъров 2021, 268). Покривите обикновено са от керемиди и при разкопки се регистрират в повечето случаи като компактни разсипи от натрошени тегули и имбрекси. Тухли са използвани както при по-представителни сгради, така и в структури с по-семпла архитектура. От гореизложените факти може да се направи заключението, че строителната керамика е с най-големи перспективи като материал, който да бъде засечен с геофизика, поради високите си магнитни свойства. Четвърта причина е дълбочината, на която се намират структурите.

От по-ранните електросъпротивителни проучвания на очертанието от радиално разположени ями западно от града е установено, че има високоомен пласт с дебелина 1,5–2 m започващ непосредствено от повърхността. Под съвременния терен се проявява вкопаване с диаметър, отговарящ на диаметъра, различим на повърхността, и дълбочина до 3,5–4,0 m (Тонков 2013, 271–273). Сондажните проучвания, проведени впоследствие, сочат три стратиграфски различими периода: I – жилищна сграда от III в. с подово ниво; II – друга жилищна сграда от IV–V в. с подово ниво, разположено с 1 m по-високо от това на ранната сграда; III – некропол, пресичащ пласта от IV–V в. (Владкова 2013, 290). Все още остава загадка интерпретацията на въпросната окръжност от ями, различима на повърхността, но след проведените проучвания

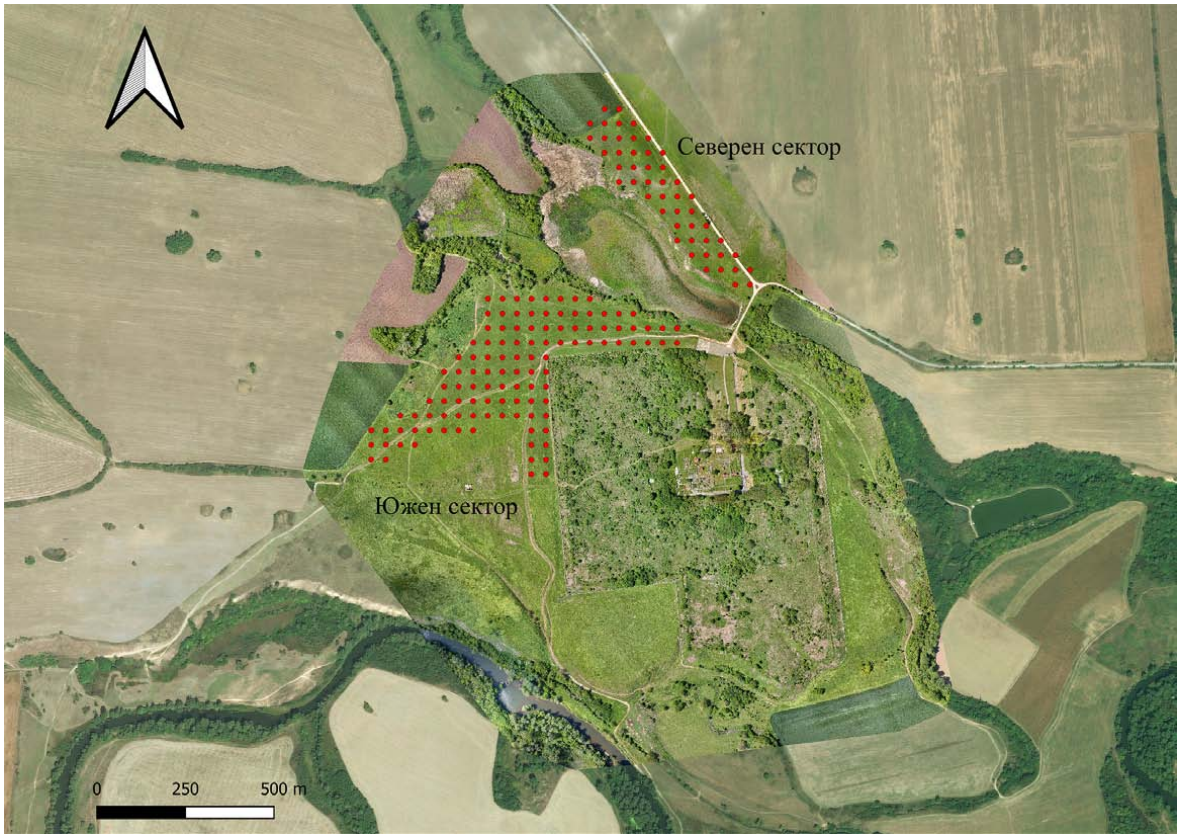


Обр. 4. Въздушна снимка на изследваните през 2021 г. терени – поглед от югоизток (снимка К. Чакъров)
Fig. 4. Aerial view of the area surveyed in 2021 – view from the southeast (photo K. Chakarov)

става ясно, че тя не е свързана с регистрираните на по-долно ниво антични структури. Тази стратиграфска ситуация е нагледен пример за това как ограбена структура, изградена от нискоомни материали и разположена на голяма дълбочина, не се проявява отчетливо при приложени геофизични изследвания.

Сходни фактори посочва и британският геофизик П. Стрейндж, извършил електросъпротивително изследване на територията на целия кастел, в неговата околност и около водоразпределителната кула западно от града (Strange 1995, 260–267). Според специалиста е предпочетен този метод пред геомагнитния, защото е по-подходящ за регистриране на зидани структури (Strange 1995, 259). Докато ранновизантийските градежи, като най-късни зидани структури се намират почти под съвременната повърхност, то тези от римската и късноримската епохи се регистрират на по-голяма дълбочина – до 2 m и повече (Strange 1995, 262). Така например сградата от римската епоха, засипана от бермата пред рова в сектор А, лежи на около 1,5–2,0 m под съвременното ниво (Poulter 1995c, 55, fig. 13). Кардо № 6а извън крепостните стени, засечено с електросъпротивителния метод, е проучено на малко по-малка дълбочина – 0,70–1,0 m (Poulter 1995d, 67).

По-различно е положението с ранновизантийските градежи. За сравнение, например три сгради, разположени северно и източно от водаразпределителния резервоар са достигнати при разкопки на около 0,50 m под съвременното ниво (Църов 2017а, 291–293; 2017б, 305, обр. 201). В сектор М, в който има многопластова ситуация, геофизиката отчита най-късното ниво със зидани структури, а именно ранновизантийската сграда (Poulter 1995h, 187–189). Голямата



Обр. 5. Ортофотоснимка на изследваните през 2021 г. терени (снимка Ив. Калчев; план-квадратна мрежа К. Чакъров)
Fig. 5. Orthophoto of the area surveyed in 2021 (photo I. Kalchev; square grid K. Chakarov)

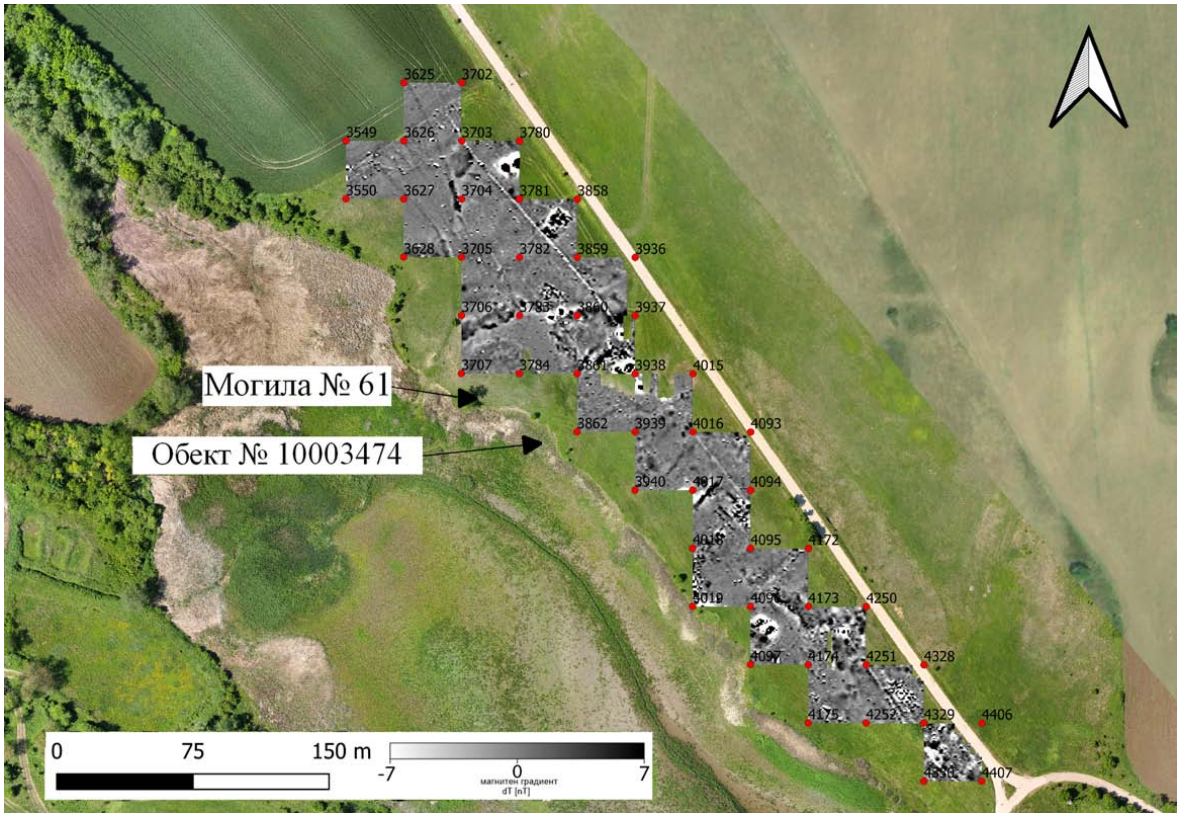
базилика в кастела е регистрирана непосредствено под хумуса (Poulter 1995g, 145).

Направеното сравнение между резултати от разкопки и геофизика е необходимо, защото би следвало да се очакват подобни ситуации и в изследваните през 2021 г. площи.

„Никополис ад Иструм – геофизика *extra muros*“, резултати от проучванията през 2021 г.

Геофизичното проучване е проведено за 13 работни дни през периода 10.09.2021 г. – 22.09.2021 г. Общата площ, покрита с геомагнитно картиране е 90,9 декара (101 квадрата от план-квадратната мрежа), а с електросъпротивително – 11,1 декара. При осъществяването на проекта са изследвани терени северно, северозападно и западно от града, всички от които ливади, попадащи в територията на резервата (обр. 4–5). Северната площ е на левия бряг на малката река Никюпско дере, която от 1957 г. насам се използва като рибарник в този участък (обр. 4–7). Теренът е ограничен от югозапад от брега на рибарника, от северозапад от нива и от североизток от съвременния асфалтов път, свързващ с. Никюп с Археологически резерват Никополис ад Иструм.

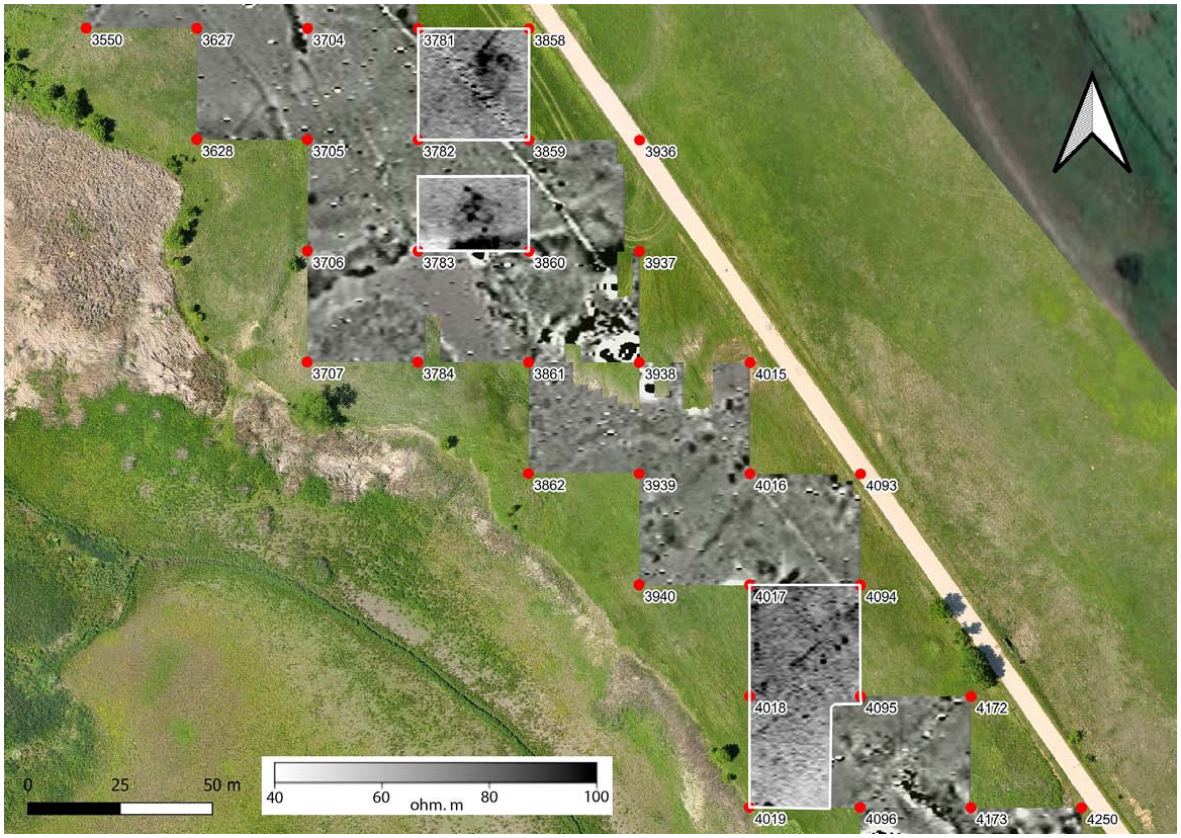
Следващият сектор е на десния бряг на Никюпското дере и обхваща терени северно, северозападно и западно от града (обр. 4–5, 8–9). Той покрива достъпната част, представляваща съвременна ливада и полски път, разположени в пространството между северната крепостна стена на града и южния край на рибарника, както и площи, намиращи се западно и северозападно от града. Част от северната ѝ периферия остава недостъпна за геофизика, защото има дървета и храстова растителност. В източна посока е ограничена от съвременния паркинг, а в



Обр. 6. Ортофотоснимка на северния сектор с резултати от геомагнитното картиране (снимка И. Калчев; геофизика Н. Тонков; план-квадратна мрежа К. Чакъров)
Fig. 6. Orthophoto of the northern area and results of the magnetic survey (photo I. Kalchev; Geophysics N. Tonkov; square grid K. Chakarov)

южна – частично от разположената северно от крепостните стени ограда от габиони. Тяхното наличие, както и съобразяването на план-квадратната мрежа с очертанията на крепостните стени и основните световни посоки, поражда невъзможност за покриване на непосредствено разположените северно от града площи. Южният сектор продължава и в западна посока, следвайки извивките на северната и западната крепостни стени, съответно на ограждащите ги габиони. Най-западните предели са ограничени в западна посока от неокосени терени. Причината те да не бъдат почистени е наличието на бетонови основи на стари овчарници, които възпрепятстват преминаването на косящата техника. Част от южния край на площта западно от града е също непочистена поради субективни причини. Предварително и в процеса на работа са окосени над 100 декара ливади, което, освен благоприятстващо геофизичното проучване, е и от значение и за поддръжката на намиращите се непосредствено около града територии, които са част от резервата.

След подготовката на терена е изготвена виртуална план-квадратна мрежа с големина на квадратите 30 x 30 m и ориентация север-юг (обр. 5). Номерата на квадратите са с арабски цифри и са обозначени на северозападния ъгъл. В процеса на работа са трасирани необходимите на терен квадрати. Извършено е и ортофотозаснемане на цялата покрита с геофизика площ, както и въздушни и наземни снимки. Закупени са архивни аерофотокадри от края на първата половина на XX в., които показват наличието на археологически структури около Никополис ад Иструм, които днес или не съществуват, или изглеждат по различен начин. Извършено е георефериране на една от ортофотоснимките, заснета по инициатива на И. Велков със самолет



Обр. 7. Ортофотоснимка на северния сектор с резултати от електросъпротивителното картиране (снимка И. Калчев; геофизика Н. Тонков; план-квадратна мрежа К. Чакъров)
Fig. 7. Orthophoto of the northern area and results of the resistivity survey (photo I. Kalchev; Geophysics N. Tonkov; square grid K. Chakarov)

на 22.09.1943 г. и публикувана за пръв път от Т. Иванов през 1967 г. (обр. 8–9) (Иванов 1967, 19–21; Иванов, Иванов 1994, 14).[6] Тя е използвана в настоящия проект за по-добро онагледяване на плана на римския град, а в някои случаи се оказва ключова за интерпретиране на новорегистрираните структури.

Северен сектор (обр. 4–7)

Той обхваща 25 квадрата от план-квадратната мрежа: 3549, 3625–3627, 3703–3706, 3781–3783, 3859–3861, 3938–3939, 4016–4018, 4095–4096, 4173–4174, 4251, 4329. Общата покрита площ с геомагнитно картиране в него е 22,5 декара (25 квадрата), а с електросъпротивително – 3 декара. Последното е извършено на цялата площ на кв. 3781 и на 20 m от южния край на кв. 3782, както и на цялата площ на кв. 4017 и на 20 m от западната част на кв. 4018.

Съвременни аномалии

Освен антични структури на терена има и съвременни следи от човешка дейност: водопровод от етернитови тръби, прокаран от с. Никюп към Никополис ад Иструм; прокопавания на напречни на асфалтовия път водостоци, които продължават и през изследвания терен; стари полски пътища; насипвания на земни маси при изграждането на пътя през 80-те години на XX в.; както и съвременни железни отпадъци.

Съвременен водопровод

Преминава през квадрати: 3621, 3703, 3781, 3859, 3860, 3938, 4016, 4173, 4251.

6 Съхранявана в РИМ–Велико Търново, библиотека *“Nicopolis ad Istrum“,* инв. № 250А/НСФ.

Водостоци

Регистрирани са в югоизточния ъгъл на кв. 3705 и северозападен ъгъл на кв. 3706.

Други съвременни изкопи

Съвременен изкоп е регистриран в кв. 3549 и кв. 3627. Той продължава и през непроучените кв. 3628 и 3629. В североизточния ъгъл на кв. 3860 има съвременна бетонова шахта, разположена върху водопровода от с. Никюп към Никополис ад Иструм, а в южната периферия на квадрата има съвременно вкопаване. Почти целият кв. 3783 е нарушен от стар изкоп, в който са открити керемиди с жълтокафяв цвят и е достигнат стерилен пясъчников терен. В центъра на кв. 3861 има съвременно вкопаване и фрагменти от строителна керамика (керемиди и тухли). Подобно е регистрирано и в кв. 3938. В него се намира и втора бетонена съвременна шахта на водопровода. В изкопите се откриват фрагменти от антична керамика – строителна и обезличена червенолакова. Части от североизточните ъгли на кв. 3859 и 4016 не са изследвани, тъй като попадат върху високия бряг на терена до асфалтовия път. В югоизточния ъгъл на кв. 4251 има съвременно обрасло могилообразно издигане, получило се при ремонт на водопровода. Съвременно вкопаване е регистрирано и в южната половина на кв. 4173. В североизточния ъгъл на кв. 3860, в североизточния ъгъл на кв. 3861 и в северната половина на кв. 3938 също има съвременни вкопавания. Друго е регистрирано и при югозападния ъгъл на кв. 3783. Поредно вкопаване е регистрирано в кв. 4095. То има линейна форма и е разположено по диагонал от североизток към югозапад и продължава към неизследвания кв. 4019.

Съвременни замърсявания

Аномалиите в квадрати 4173, 4251, 4329 могат да бъдат окачествени като резултати от съвременни дейности, при които са изхвърлени железни предмети.

Пещи и грънчарски работилници

Около условно обозначената северна площ са регистрирани при по-ранни издирвания поне пет грънчарски пещи. Те се намират на левия бряг на Никюпското дере. Проявяват се като петна от отухлена пръст на дъното на рибарника или вертикални разрези в ската на водоема, където се забелязват стени и скари. Регистрираните пещи се намират югоизточно от могила № 61 от Северния некропол на Никополис ад Иструм (Църов, Владкова 1994, 225, 232, № 61). Те са въведени от К. Чакъров в АИС АКБ с № 10003474. Наличието на пещи в областта на рибарника установява още в средата на XX в. Б. Султов, когато през 1957 г. се изгражда водоемът (Sultov 1985, 18, 31, note 1).

Някои от регистрираните структури при геофизичното проучване през 2021 г. на терена, намиращ се североизточно от рибарника, могат да бъдат определени като пещи. Възможно е засечените в близост до тях линейни аномалии да бъдат интерпретирани като грънчарски работилници. Като пещи могат да бъдат тълкувани двете аномалии в западната част на кв. 3703, аномалиите на границата между квадрати 3782 и 3783, аномалиите в югоизточния ъгъл на кв. 3860, североизточния ъгъл на кв. 3861 и северозападния ъгъл на кв. 3938, както и две отчетливи структури в западния край на кв. 4096. Не е ясно как се развиват частично засегнатите аномалии в североизточния ъгъл на кв. 3940 и северозападния ъгъл на кв. 4017, както и тези в югозападния ъгъл на кв. 4018. Не е изключено и те да са резултати от наличието на пещи.

Прави впечатление, че аномалиите на предполагаемите пещи са обикновено по двойки. Регистрирани са поне 4 такива „двойки“. Непосредствено разполагане на пещи една до друга е регистрирано при разкопки на редица производствени центрове в района. Възможна е също и друга интерпретация – едната отчетлива аномалия да е същинската пещ, а другата, запълнена с керамика и други материали с високи магнитни стойности, предпещната ѝ яма. Примерите за подобни запълвания от района са също много.

На около 28 м югоизточно от предполагаемите пещи в кв. 3703 има аномалия с четири-

ъгълна форма и ориентация североизток-югозапад, попадаща в кв. 3781. Нейните размери са дължина 15 m, ширина 10 m. Сходна по ориентация и очертания аномалия е регистрирана на около 20 m южно от тази. Тя се намира в южния край на кв. 3782. Размерите ѝ са около 15 m дължина и около 10 m ширина. При югоизточния ѝ ъгъл има две потенциални пещи. На границата между квадрати 4016 и 4017 има линейни аномалии, ориентирани в посока северозапад-югоизток. За съжаление, нито резултатите от геомагнитното картиране, нито тези от електросъпротивителното внасят по-голяма яснота относно плана им. Все пак личат две съседни четириъгълни помещения, разположени по оста североизток-югозапад. Неясните очертания на сгради, регистрирани с геофизиката, вероятно се дължат на използвани за градеж предимно паянтови материали (кирпич, дърво, слама), като количеството на каменния материал и строителната керамика е по-малко.

Относително малкият брой регистрирани потенциални пещи и грънчарски работилници може да бъде приет като свидетелство за периферен характер на грънчарския квартал в този район.

Могили

В изследваната площ попада и една от известните могили от Северния некропол на града. Тя е въведена от И. Църов и П. Владкова като № 61 в каталога на могилите от некрополите на града. Регистрирана е с височина 3 m, диаметър 30 m и надморска височина 77,20 m (Църов, Владкова 1994, 225, 232, № 61). Южната ѝ част е прерязана при изграждането на рибарника. Резултатите от проведеното геомагнитно изследване, засягащо частично северната ѝ периферия, ясно показват очертанията на могилния насип, но без да са регистрирани гробни съоръжения. Той се проявява в южния край на кв. 3707 и частично в югозападния ъгъл на кв. 3783 и има диаметър 40 м. Могилата е регистрирана в АИС АКБ с № 10007947.

Водопроводи?

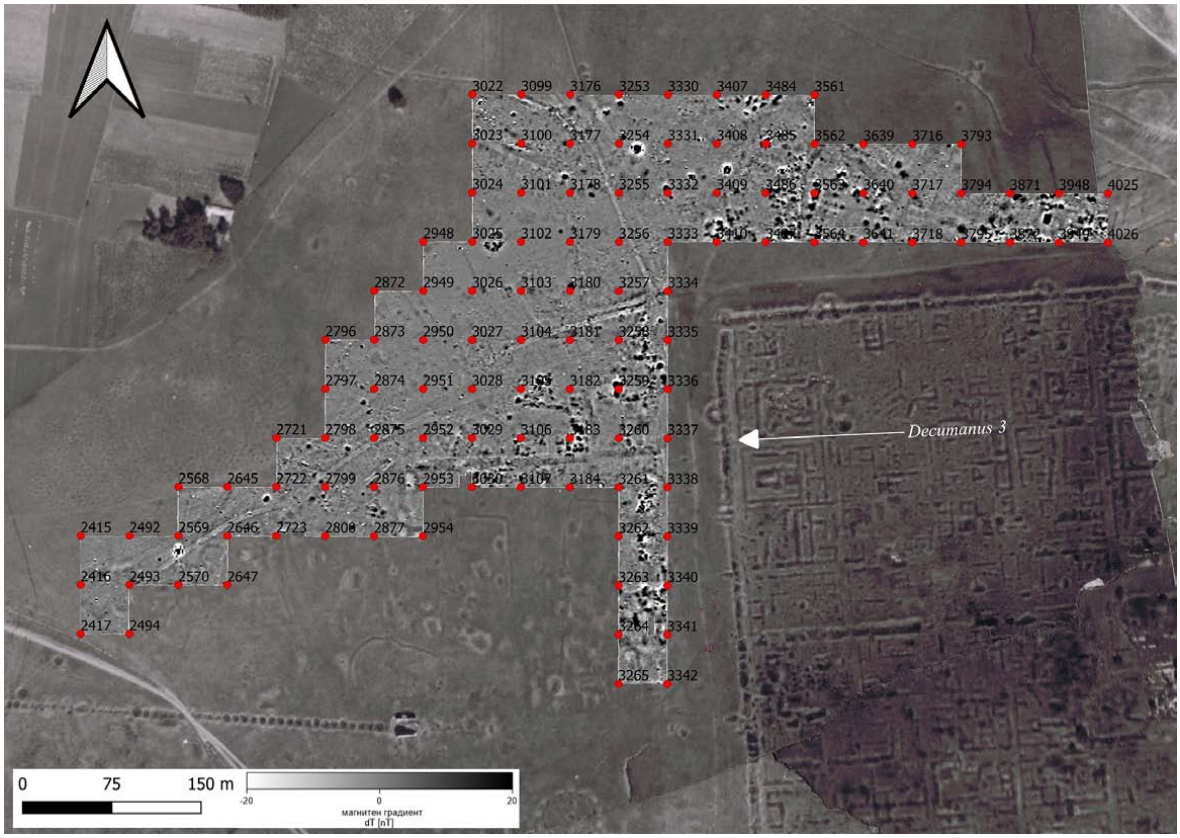
В квадрати 3625–3627 е засечена линейна дъговидна аномалия, която в южния си край е по-изразена. Не е ясно дали това очертание е следа от стар път или може да бъде интерпретирано като античен водопровод. Западно от него има друга подобна дъговидна аномалия (кв. 3549, 3627), видима и на сателитна снимка като продължаваща към непроучените квадрати 3628 и 3629 вдлъбнатина, завършваща в брега на рибарника. Нейният характер е почти сигурно съвременен. Основание за наличие на водопровод в района дава откритото в ската на брега парче от керамична водопроводна тръба с голям диаметър.

Южна площ (обр. 4–5, 8–9)

С геомагнитно картиране са покрити 68,4 декара в следните 76 квадрата: 2415–2416, 2492, 2568–2569, 2645, 2721–2722, 2796–2799, 2872–2876, 2948–2952, 3022–3029, 3099–3107, 3176–3184, 3253–3264, 3330–3332, 3407–3409, 3484–3486, 3562–3563, 3639–3640, 3716–3717, 3794, 3871, 3948. Електросъпротивително картиране е извършено на площ от 8,1 декара в квадратите: 10 m от източния край на кв. 3023; 20 m от западния край на кв. 3100; 10 m от южния край на кв. 3024; 10 m от северния край на кв. 3025; кв. 3105–3106; 3182–3183; 20 m от западния край на кв. 3259; кв. 3260; кв. 3485; 20 m от северния край на кв. 3486.

Стари вкопавания

На границата между югозападния ъгъл на кв. 3639 и северозападния ъгъл на кв. 3640 има старо вкопаване – вероятно иманярска дупка или резултат от изваждане на камъни от антична структура. В рамките на квадрати 3180, 3181, 3257 и 3258 има съвременни вкопавания – вероятно следи от стара иманярска дейност. Стара дупка има и на границата между квадрати 3263 и 3264. Сходни вдлъбнатини са регистрирани и в югозападната периферия на кв. 2722 и югоизточната на кв. 2952.



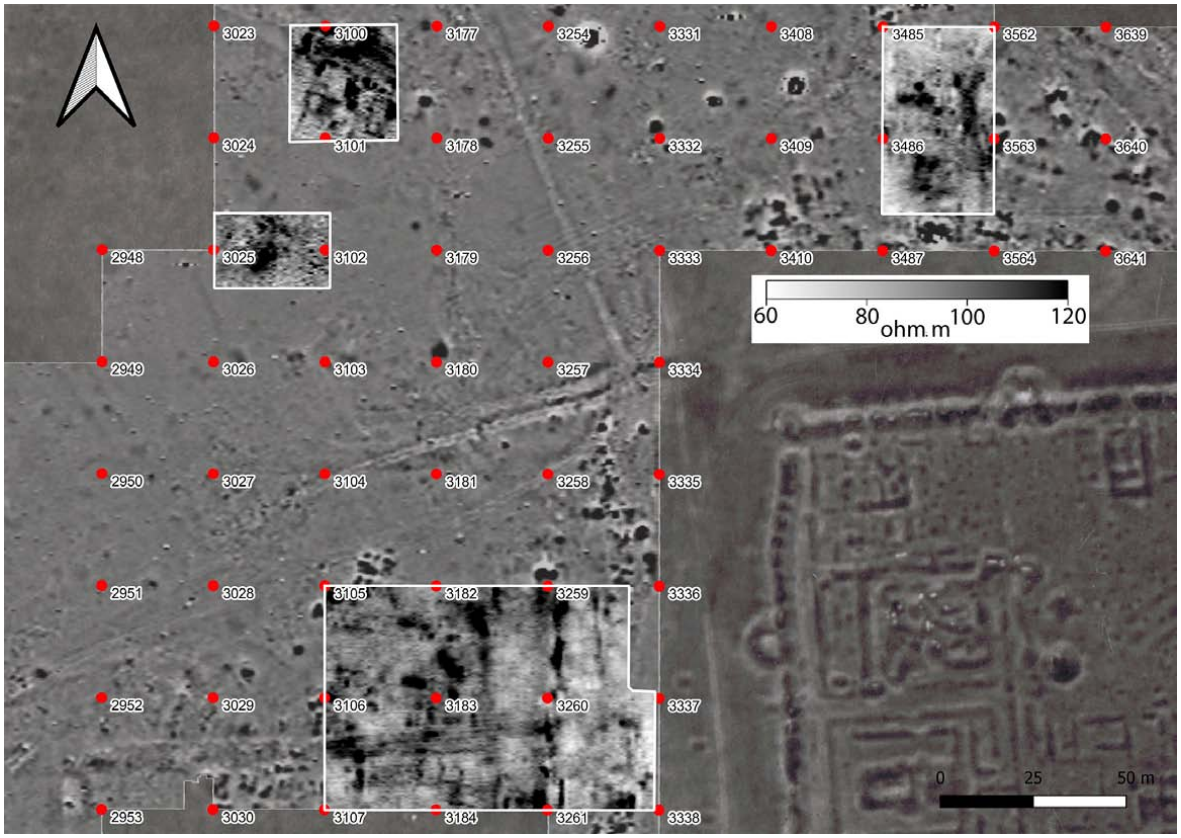
Обр. 8. Ортофотоснимка (1943 г.) на южния сектор с резултати от геомагнитното картиране (снимка Регионален исторически музей – Велико Търново; геофизика Н. Тонков; план-квадратна мрежа К. Чакъров)

Fig. 8. 1943 orthophoto of the southern area and results of the magnetic survey (photo Veliko Tarnovo Regional Museum of History; Geophysics N. Tonkov; square grid K. Chakarov)

Пещи?

Северно от северната крепостна стена на града личат многобройни силни, но безформени аномалии. Повечето от тях са самостоятелни очертания с план на неправилни окръжности. Възможно е голяма част от тях да представляват грънчарски пещи, каквито са регистрирани и по левия бряг на Никюпското дере. Ако интерпретацията е вярна, това би означавало, че има значителен грънчарски квартал. Липсата на отчетливи аномалии, които могат да бъдат тълкувани като работилници не изключва да съществуват такива, но изградени от нетрайни материали. Значително по-малко подобни по характер аномалии се забелязват и в западния и югозападен край на проучвания южен сектор. Анализът на планировката на предполагаемия грънчарски квартал показва, че концентрацията на потенциални пещи е по-голяма в близост до северната крепостна стена на града. По всяка вероятност не по-малко наситена е и площта, прокопана при изграждането на съвременния рибарник, но структурите са вероятно частично или напълно унищожени, а геофизично проучване не може да бъде извършено и характерът на производствения център в тази част остава в сферата на предположенията. Все пак не може да се изключи наличие на голям брой пещи и работилници, защото такива са регистрирани в североизточния бряг на рибарника и в проучваната чрез геофизика периферна площ на грънчарския квартал в североизточна посока.

На десния бряг на рибарника, северно от северната крепостна стена на Никополис ад Иструм, през 1991 г., са регистрирани чрез геомагнитно изследване 21 аномалии, определени



Обр. 9. Ортофотоснимка (1943 г.) на южния сектор с резултати от електросъпротивителното картиране (снимка Регионален исторически музей – Велико Търново; геофизика Н. Тонков; план-квадратна мрежа К. Чакъров)

Fig. 9. 1943 orthophoto of the southern area and results of the resistivity survey (photo Veliko Tarnovo Regional Museum of History; Geophysics N. Tonkov; square grid K. Chakarov)

от Р. Фокнър и П. Стрейндж като пещи (Falkner 1999, 74, 92, note 12, 108, 110, 112, note 2, 5). Не е ясно къде точно са извършени тези проучвания. Възможно е част от площите да са по-близо до крепостните стени, тъй като тогава все още не съществуват изградените през 2012 г. ограждащи града габиони, които днес възпрепятстват извършването на геофизични изследвания в тяхната близост. Не е изключено да са засегнати и места, изследвани и през 2021 г.

Според Р. Фокнър в грънчарския квартал на Никополис ад Иструм са произвеждани вероятно фини червенолакови съдове със светлокафяв до бледожълт цвят на глината, често с червен лак, който понякога може да бъде и тъмнокафяв или нюанс между двата цвята. При счупване ломът е остър, понякога цепещ се или назъбен. Глината е добре пречистена и смляна. Съдържа малко количество дребни черни и/или бели песъчинки и понякога бучици варовик. Дебелината на съдовете е от 4 до 8 mm (Falkner 1999, 74). Освен фини червенолакови паници Р. Фокнър предполага, че вероятно са произвеждани и кратери с профилирани навън устия, а по откритата в града бракувана продукция и купи със заоблен устиен ръб (Falkner 1999, 110, 112, note 2).

Във фонда на РИМ–Велико Търново се съхраняват и случайно открити в рибарника находки, като фрагменти от поднос, кратер с апликирана украса, лампи и горна част на калъп за изработване на трифитилни лампи, датирани в III в. (Sultov 1985, 18, 31, note 1; Иванов 2018, 56; 2021, 109–110, 162, кат. № 164, 212, кат. № 429).

Прави впечатление, че масово в градежи в Никополис ад Иструм е използвана строител-

на керамика със светлокафяв до бледожълт цвят. Близостта до града на разположените покрай Никюпското дере пещи и огромните нужди от строителен материал предполагат, че вероятно производственият център има важно място в снабдяването с керамични изделия най-близкия си консуматор. А. Поултър предполага, че след приключването на съществуването на производствените центрове в територията на Никополис ад Иструм през IV в. (Poulter 1995b, 29; 2019e, 774–775), грънчарството се пренасочва в крайградските работилници (Poulter 1995b, 29).

Пътища/улици

В квадрати 2875, 2952, 3029, 3106, 3183, 3260 е засечена линейна аномалия с посока североизток-югозапад. Тя е регистрирана с геомагнитното картиране западно от крепостните стени и е потвърдена с електросъпротивителното. Засечената ѝ дължина е приблизително 161 m, а ширината около 7 m. Тези особености подсказват, че аномалията вероятно представлява продължение на декуманус № 3, но извън крепостните стени. Последният е проследим *intra muros* на ортофотоснимката от 1943 г., като в най-западната част се намира между две инсули, разположени съответно северно и южно от него. Северната инсула е частично проучвана през периода 1985–1991 г. от И. Църов (Иванов и др. 1986, 87; Иванов и др. 1987, 123; Слокоска и др. 1988, 86; Слокоска и др. 1989, 69; Слокоска и др. 1990, 67; Слокоска и др. 1991, 103; 1992, 69; Tsarov 1995, 7, 12, note 1; Църов 1995, 67, 71, бел. 1). При проведените археологически разкопки не е регистрирано уличното платно, но на мястото на улицата е открит преизползван надпис, който по начало би трябвало да е издигнат в централната част на града (Tsarov 1995, 7–13; Църов 1995, 67–73).[7]

В северозападния ъгъл на кв. 3183 се забелязва нещо като пресичане на аномалията с друга подобна, но с посока север-юг, която може да бъде интерпретирана като кардо (?). Меридионалната аномалия продължава и в кв. 3182 и 3183. Възможно е тази ситуация да представлява кръстовище. В западния край на линейната аномалия с посока североизток-югозапад се забелязва чупка в южна посока, попадаща в кв. 2875 и 2876. Не е изключено това да е крайно западно кардо.

Възможни са поне две интерпретации на екстрамуралната ситуация с линейните аномалии. Първата линейната аномалия с посока североизток-югозапад може да бъде тълкувана като път, представляващ естествено продължение на декуманус № 3 извън крепостните стени. Втората възможност е свързана с наличието на квартал от първоначалната градоустройствена схема на Никополис ад Иструм, който след изграждането на крепостните стени остава *extra muros*. Отчетливите, но относително безформени аномалии, попадащи в квадрати 3029, 3104, 3105, 3106, 3182, 3183, 3257, 3258, 3259, могат да бъдат интерпретирани като следи от сгради. Разбира се това няма как да бъде установено със сигурност без провеждането на разкопки, защото резултатите от геомагнитното и електросъпротивителното картиране не са достатъчно ясни поради изтъкнатите по-горе дадености. Такава интерпретация обаче може да бъде предположена на базата на сходни примери, регистрирани в южната част на града.

Електросъпротивителното изследване на площта на ранновизантийския кастел на Никополис ад Иструм показва линейна аномалия с посока север-юг, която се проявява южно от южната римска крепостна стена (Poulter 1995d, 67; Strange 1995, 261, 263, table 1). След проведените разкопки на южната римска порта на града, която попада именно в този участък, се оказва, че аномалията представлява екстрамурално продължение на кардо № 6а (Poulter 1995d, 67). На терена в този участък има пет регистрирани стратиграфски периода (Poulter

7 Информацията за липса на улична настилка в проучвания сектор е споделена от ръководителя на разкопките И. Църов.

1995d, 67–76; 1995e, 77–112). Първият е свързан с наличието на по-ранни отпадъчни ями. При втория върху тях е изградено улично платно от каменни плочи, под което има зидан канал за отпадни води. През следващия период са построени крепостната стена и порта, като съществуващата улица е интегрирана в новата градоустройствена схема чрез повдигане на уличната настилка в областта на портата. Извън крепостните стени обаче улицата е пресечена от ров с вероятни отбранителни функции, а по-голямата част от настилката е ограбена. През четвъртия период ровът е запълнен и е направена чакълеста настилка. Докато четирите периода са свързани с римската, късноримската и ранновизантийската епохи, петият датира от Възраждането и се отнася до прокопаването на ров с неясно предназначение – вероятно със стопански характер (Poulter 1995d, 67–76). Сравнени с резултатите от геофизиката на това място, разкритите структури показват, че чрез електросъпротивителния метод са засечени както плочите от уличната настилка, така и зидания под тях канал и по-късната чакълеста настилка. Подобна ситуация може да се очаква и при новорегистрираните линейни аномалии, западно от крепостните стени.

Сходно продължение на улица извън крепостните стени е регистрирано и източно от южната порта. То се намира при кардо № 7. Съществена разлика в този случай е, че улицата и канала под нея, макар и да продължават първоначално в южна посока, са пресечни при изграждането на крепостната стена (Русева-Слокоска 1994, 172, 178, обр. 4, обр. 8, 179, обр. 3; Slokoska 2002, 10–13; 2007, 196–200)[8] и малко по на юг от ровове (Poulter 1995c, 52–59).

Екстрамурални сгради

Основание за предположение за застрояване около новорегистрираните линейни аномалии, интерпретирани като улици или пътища, дава отново сравнението между резултатите от геофизиката в рамките на кастела и проведените след това разкопки. В сектор М са проучени ями от римската епоха, върху които е изградена постройка с хипокаустна инсталация, върху която е построена перистилна сграда. Последната от своя страна, след като е разрушена, е разграбена и в очертанията ѝ са прокопани ями. Известно време след това е застъпена от основите на ранновизантийски градежи. След разрушаването на последните е изградена възрожденска землянка. При отделните периоди са регистрирани опожарени пластове, в които има отухлени глинобитни структури (Poulter 1995h, 187–205). Сградите от римската епоха са на около 20 m западно от линията на кардо № 6а (Poulter 1995h, 195).

При електросъпротивителното картиране в сектора се очертават две успоредни аномалии с посока запад-изток. Оказва се, че те принадлежат на най-късните масивни градежи – тези на ранновизантийската сграда (Poulter 1995h, 187). Това показва, че чрез геофизиката са засечени намиращите се на най-малка дълбочина от съвременния терен масивни структури.

Източно и западно от сградите в сектор М вероятно има и други постройки (Poulter 1995b, 27; 1995h, 197, note 25). Според А. Поултър едно относително разстояние от около 50 m южно от южната крепостна стена е своеобразен помериум, в който застрояването е ограничено и като цяло е с рехав характер (Poulter 1995b, 27, 32; 1995d, 70–71). В това пространство обаче са проучвани сгради като тази в сектор А (Poulter 1995c, 53–65). Тя се намира в голяма близост до крепостните стени. Изградена е върху по-ранни ями. Впоследствие е разрушена и върху нея е образувана бермата след крепостната стена, а южно е прокопан отбранителен ров. Известно време след това в южна посока е изградена върху каменна основа кирпичена стена, интерпретирана от А. Поултър като протейхизма, пред която е прокопан нов ров. След разрушаването на протейхизмата и запълването на втория ров са регистрирани следи от обитаване

8 В публикацията на Л. Русева-Слокоска от 1994 г. е допусната техническа грешка. Пресеченото кардо е № 7, а не № 5. За сравнение – Иванов 1988, 101; Poulter 1995a, 3, fig. 3, 6, fig. 6; Slokoska 2002, 10–13; 2007, 196–200.

от ранновизантийската епоха, изразяващи се в изграждането на огнище и чакълеста настилка. Тук отново има суперпозиции между отделни по характер структури: вкопани, зидани от камък и кирпич, с отухлявания, каменни струпвания. Приложеният електросъпротивителен метод обаче не показва очертания на отделни структури, а една линейна и еднородна аномалия, простираща се успоредно на крепостната стена (Strange 1995, 261). Причината е, че районът е много компрометиран от по-късните ограбвания на каменен материал (Strange 1995, 263, table 1–A01–N01). Сходна картина би следвало да се очаква и в непосредствената близост на останалите крепостни стени на града.

Чрез геофизика са засечени и някои аномалии, които са по-отдалечени от крепостните стени, но могат да бъдат интерпретирани като сгради. В квадрати 3023, 3100 и частично в северния край на 3101, има слаби очертания на аномалия с посока северозапад-югоизток, наподобяващи помещения на сграда с верижен план. Тук са приложени и двата метода. За съжаление картината не е много ясна поради обективни причини, свързани или със структури, изградени предимно от паянтови конструкции, или с ограбване на строителния материал в по-късно време. Все пак съпоставянето на резултатите от двата метода, като че ли показва четириъгълна триделна сграда, ориентирана в посока северозапад-югоизток, имаща дължина около 22 m и ширина около 12–15 m. В северна посока има по-наситени и безформени аномалии, които могат да бъдат интерпретирани като следи от рухнал керемиден покрив.

На границата между квадрати 3024 и 3025 има друга аномалия, която вероятно свидетелства за сграда с четириъгълен план, ориентирана североизток-югозапад. Дължината ѝ е около 15 m, а ширината около 9–10 m.

Голямото количество аномалии около предполагаемото продължение на декуманус № 3 вероятно също може да бъде интерпретирано в посока на наличието на сгради. На границата между квадрати 3106 и 3183, където са приложени и двата метода, личат слаби линейни очертания, които не могат да бъдат интерпретирани по-задълбочено.

Отново в района на предполагаемото продължение на споменатата улица, южно от нея, са регистрирани с магнитометър по-силни, но безформени аномалии. Те се намират в квадрати 3261–3263. Забелязват се редуващи се в посока север-юг пространства помежду им, в които липсват очертания. Тези участъци без очертания съвпадат с екстрамуралните проекции на декумани 4–6. Възможно е това да се дължи именно на продължения извън крепостните стени на въпросните три улици, а аномалиите покрай тях да представляват сгради. По-пълна картина може да се придобие едва след продължаването на геофизичното изследване в тази посока.

Северозападни водопроводи?

Информация за съоръженията се съдържа в студия на Д. Цончев, в която авторът обособява два зидани водопровода и един керамичен като северозападни, за да ги разграничи от Западния (Цончев 1935, 132, 146–147). И двата не са изследвани чрез разкопки.

По-масивният от тях представлява зидан канал, имащ сходство на размерите и структурата като на канала на Западния акведукт. Подобно на него вероятно е изграден от камъни и хоросан, може би и от тухли. Ширината му е 0,60 m, а височината вероятно 1,20 m. Съоръжението води началото си от местностите Чобан бунар и Ливадките (северозападно от с. Никюп), където и днес е вододайната зона на днешното село. Движи се в югоизточна посока, като в продължение на 150 m, преминава покрай десния бряг на Никюпското дере, югозападно от Никюп. На известно разстояние преди града променя трасето си в западна посока, като не е ясно дали се влива в общ водоразпределителен резервоар заедно със Западния, или има отделен (Цончев 1935, 146; Църов 2017б, 95–96, 165).

Според И. Църов съоръжението може да бъде свързано с проучения в северната част на града балнеум, където са регистрирани керамични тръби (Иванов 1952, 230; Църов 2017б, 96).

На този етап на проучване няма преки доказателства за това предположение.

На 0,5 km северозападно от Никополис ад Иструм е регистриран канал на трети зидан водопровод. Според Д. Цончев той отвежда каптираната вода на друг извор към канала на водопровода, започващ от м. Чобан бунар с цел улавяне на повече водоизточници. Общата дължина на северозападния водопровод Д. Цончев изчислява на 7–8 km (Цончев 1935, 146; Църов 2017б, 95–96, 165). И. Църов изказва хипотезата, че това може да е допълнително съоръжение към Северозападния или друг амортизиран и изоставен водопровод (Църов 2017б, 96).

От приложените описания на Д. Цончев се вижда, че двата северозападни зидани водопровода имат приблизително еднакво трасе. Една от аномалиите, регистрирана с геомагнитното изследване, може да бъде отъждествена с единия от двата водопровода. В квадрати 3022, 3099, 3176, 3177, 3178, 3255,3256 и в самия северен край на 3257 се забелязва една линейно извита аномалия. От кв. 3177 на юг не е ясно дали тя не съвпада с трасе на стар полски път, какъвто се вижда на снимката от 1943 г., въпреки че последният като че ли слабо се проявява на изток от аномалията като бледо очертание. Ключово за интерпретацията на тази извита аномалия се оказва съпоставянето ѝ с ортофотоснимката от 1943 г. На нея извивката личи добре като вдлъбнато на терена очертание. То е добре проследимо на въпросната снимка в площта, която е ливада, северозападно от северозападния ъгъл на крепостната стена на Никополис ад Иструм. На архивния кадър очертанието се вижда в квадрати: 2712, 2713, 2790, 2867, 2944, 3021, 3022, 3099, 3176. На границата между квадрати 2790 и 2867 изглежда, че линията се слива с още една, започваща от кв. 2712, преминаваща през кв. 2789.

Сравнителният анализ на данните от геофизиката и самолетната снимка, като че ли отговарят на описанието на Д. Цончев за разположението на първия северозападен акведукт, което заслужава да бъде предадено дословно: „Преди да стигне в града прави в западна посока една извивка, за да се избегне една малка низина. На ½ клм. от града днес е разкопан и унищожен, подобно на западния. На това място личи само ровът му.“ (Цончев 1935, 146). Малката низина е по всяка вероятност естественото понижение на терена, свързано с извор в местностите Блатци и Мерата, там където днес се намира най-западният рибарник. Сравнението с изолиниите на топографската карта показва, че трябва да бъде направена наистина чупка на запад, като след заобикалянето на долинката трасето вероятно отново се движи в югоизточна посока. Личащият ров може да бъде отъждествен с дъговидната линейна вдлъбнатина, видима на ортофотоснимката, засечена и чрез геофизиката.

Ако цялостната интерпретация е вярна, може да се предположи, че линията на аномалията от кв. 3176, през квадрати 3177, 3178, 3255, 3256 е продължение на предполагаемия водопровод в посока към града. При това положение интерпретацията може да бъде разширена и в посока идентифициране на втория северозападен водопровод. Д. Цончев споменава следното „Някои селяни ми съобщиха, че в гореказаните ниви при обработването им открили и трети зидан водопровод, който бил успореден на тоя. Види се, това трябва да бъде трети зидан водопровод, който е носил вода от други околни извори и се е съединявал с проучения, чиято вода е увеличавал.“ (Цончев 1935, 146). Възможно е допълнителната линейна аномалия, която се свързва с основната на границата между кв. 2790 и 2867, да е именно вторият зидан северозападен водопровод. От снимката личи, че въпросната линия, проследима в кв. 2712, 2789, 2790, 2867, започва от една малка горичка, намираща се между нивата и ливадата. Днес това място е също гора. Не е изключено във въпросната горичка или малко по на северозапад, да е хванат извор. Отново на самолетната снимка личи поредица от постройки и дървета, от където започва малкият поток, заради който вероятно местността се казва Блатци. По-късно именно този поток е превърнат в рибарник.

На около 2 km южно от с. Никюп Д. Цончев проследява в продължение на 1,5 km и водо-

провод от керамични тръби. Авторът свидетелства, че съоръжението има трасе, преминаващо по десния бряг на Никюпското дере, успоредно на Северозападния водопровод. Дължината на акведукта Д. Цончев изчислява на 2–3 km. Археологът изказва хипотеза, почиваща на общоисторически доводи, че съоръжението име вероятна датировка в Юстинианово време (Цончев 1935, 146–147). Т. Иванов предполага, основавайки се на трасето на акведукта и на стратиграфски наблюдения на проучен в града керамичен водопровод, водещ към северната крепостна стена на Никополис ад Иструм, че може да има връзка между двете съоръжения. Той се съгласява с датировката, предложена от Д. Цончев за керамичния северозападен водопровод (Иванов 1952, 231–232). А. Поултър предполага, че този керамичен водопровод захранва ранновизантийския кастел (Poulter 1995f, 142, note 25). В квадрати 3485, 3486, 3487, 3562, 3563 личи Х-образна аномалия/аномалии. Какво точно представлява тя не може да се определи със сигурност, но не е изключено да става дума за водопровод или път.

Заключение

От анализираните данни се вижда, че проучването чрез геофизика около Никополис ад Иструм има големи перспективи за изясняване на някои неясноти, свързани с градоустройството през различните периоди, както и с производствени квартали *extra muros*. Изпълнени са част от целите на проекта, а именно обогатяване на плана на града и уточняване на местата на известни или предполагаеми структури. Продължението на този проект ще бъде в южна посока от достигнатите през 2021 г. места. В този район се очаква голяма концентрация на структури. За това свидетелстват както резултатите от геофизиката, така и видими на повърхността структури като водоразпределителният резервоар. В този район би следвало да е осеяно с водопроводи, водещи към града, за каквито има данни от проведени разкопки. Освен това от западния край на декуманус № 7 (максимус) би следвало да започва път, преминаващ успоредно на Западния акведукт на Никополис ад Иструм.

С осъществяването на етапа от проекта през 2021 г. общата покрита с геофизика площ в и около Никополис ад Иструм и неговата административна територия възлиза на 415,085 декара.

Резултатите от геофизичните проучвания през 2021 г. вече създават предпоставки за бъдещи археологически разкопки, целящи проверката на някои изказани в настоящия анализ интерпретации.

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Project “*Nicopolis ad Istrum* – Geophysics *extra muros*“, Season 2021

Kalin Chakarov, Nikola Tonkov

(summary)

The pilot survey in 2021 season shows that Geophysics is the most efficient method for extensive investigation of the extramural surroundings of *Nicopolis ad Istrum*. The surveyed areas are on the two banks of the Nikyupsko dere Creek, to the northwest and to the north of the Roman city (figs. 1–3). They are divided into Northern area (north of the creek) and Southern area (south of the creek) (figs. 4–5).

Northern area

There is archival information about pottery kilns situated along the Nikyupsko dere Creek from previous field surveys, but mostly from the time of construction of the modern fishpond in 1957. The Geophysics in the Northern area confirmed this information (figs. 6–7). At least four pairs of potential kilns have been found on the left bank. Some structures around them could be interpreted as workshops made of wattle and daub and with tiled roofs. This situation probably shows a periphery of a ceramic quarter. Some ceramic sherds found at the site are from the 3rd c. AD. The enormous

amount of ceramic building materials with yellowish color, used in 4th c. AD buildings within the city, could serve as indirect evidence for the continuation of the production centre at this time as well.

The northern periphery of *tumulus* number 61 from the Northern cemetery of the city was also surveyed by the Geophysics fig. 6).

A curved line at the northwestern limits of the studied area could be interpreted as ceramic water-pipe (fig. 6). It could also be a modern anomaly. A piece of ceramic pipe was found at some distance from this anomaly along the bank of the fishpond.

The rest of the surveyed area is contaminated primarily with asbestos water-pipes, running northwest to southeast across the site and with modern metal items (fig. 6).

Southern area

Potential pottery kilns were registered also on the right bank of the creek (figs. 4, 8). There is information from earlier geophysical survey, made by P. Strange and R. Falkner, unfortunately not published. The Geophysics from 2021 showed high concentration of anomalies with possible kiln character situated north of the Roman city.

One of the most interesting results are the possible extramural continuations of streets, or *cardines* and *decumani* cut off by the fortification wall (built *c.* 175 AD) from the initial urban planning (figs. 8–9).

Building foundations have also been registered. Some of them are along the supposed extramural streets, others at a certain distance (figs. 8–9).

A curved linear anomaly could be identified with one of the two known from publications northwestern aqueducts (fig. 8).

The southern edge of the studied area suggests that in the following seasons other structures could be expected in this direction (fig. 8). The application of other geophysical methods and archaeological excavations could shed light on the proposed interpretation of the anomalies.

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Kozareva Mogila. The Eneolithic Necropolis (excavations 2005–2018)

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For several decades, an important difference between the Black Sea coast, the Lower Danube basin and Bulgarian Thrace in the Copper Age has been the abundance of cemeteries in the first two regions, with an absence in the latter. Now the first cemetery south of the Balkan Mountain range has been found, even if this is not exactly in Thrace. The report of the earlier rescue and later student training excavations presents the mortuary practices, including the grave goods, and the physical anthropology of the cemetery which contains, at present, only 37 graves – by no means a complete sample of the once existing burial ground. Although the authors make clear that further specialist reports (especially on the pottery and small finds) will be published later, the current report goes into appropriate detail on mortuary practices and grave goods, including the small assemblage of 12 lithic finds. The most impressive aspect of the report, however, concerns the physical anthropology, in which four major aspects are considered in detail: the age/sex of the skeletons, their stature and palaeopathology and the demography of this population. The whole volume is beautifully illustrated, has an excellent bibliography and extensive translated summaries in Bulgarian (fig. 1).

The cemetery lies within 300 m of the tell, which had been excavated for almost 20 years before the cemetery was discovered by chance, through deep ploughing. The blandly told story of the disgraceful delay in gaining an official excavation permit, which led to the destruction of many graves even when the significance of the site was not in question, conceals obfuscation, archaeopolitics and probably personal rivalries. What remained was a total of 51 graves – five dating to the Early Copper Age, 31 to the Late Copper Age, and the remaining 15 to the Transition Period between Copper and Bronze Ages, the Early Bronze Age and the Hellenistic period. There are two lengthy and detailed catalogues for each grave, referring to the archaeology and the physical anthropology. It would have helped the reader to have a unified catalogue with two parts for each grave.

All of the mortuary practices have been presented in meticulous detail, with the comparison

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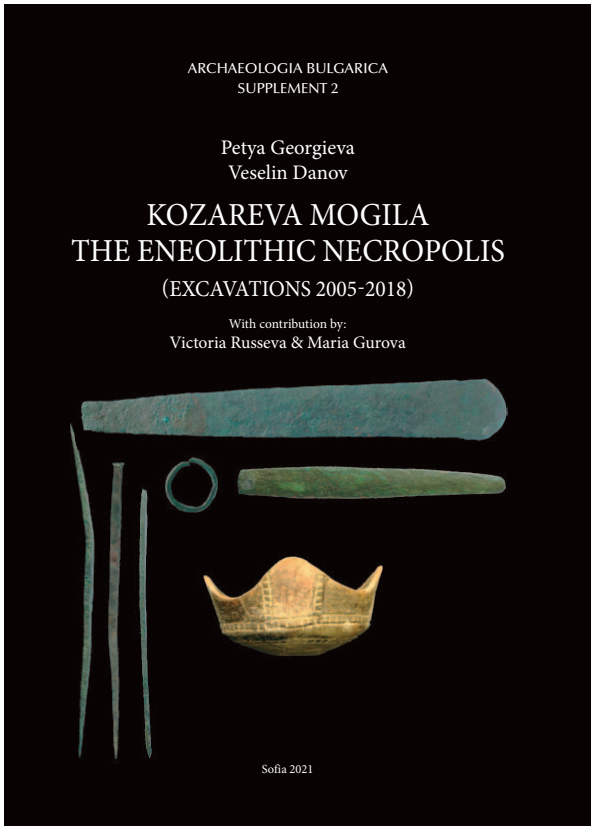


Fig. 1. Cover of the book
Обр.1. Корица на книгата

between the Early and Late Copper Age practices clearly directed at answering the question of cultural and population continuity between Early and Late phases and, if the latter, the origins of new persons buried next to the tell. There are intriguing hints at steppe populations, with burials including extended inhumations with flexed legs, textile mats and sprinkling of red ochre but Georgieva devotes even more attention to whether the Late Copper Age burials were more closely related to the Varna group than to the Kodzhadermen–Gumelniţa–Karanovo VI group. The argumentation here concerns body orientation, body position and sidedness and the presence/absence of ochre temper in the pottery, leading to the conclusion of a more probable KGKVI ancestry. But archaeological science has alternative ways of approaching this issue.

There is a modest suite of grave goods in the Late Copper Age burials, more akin to Vinitsa or Golyamo Delchevo than to Varna. A total of 31 vessels were deposited in 15 graves and a total of six flint blades (including two macro-blades), five copper objects, seven *Spondylus* beads and a single serpentinite axe-sceptre gives little sense of highly differentiated mortuary status. This conclusion chimes with the absence of clear correlations between grave good type or quantity and the age-sex categories so clearly demarcated by Russeva. All of the 'rich' graves (viz., those with copper or shell objects) contained red ochre but this material was also found with some of the 'poor' graves. Equally, the flint macro-blades were found in only the 'richest' graves, whether adult male or female. There is little comment on the political significance of the long-distance exotics, such as the copper and the Ludogorie flint, shown by Gurova to come from both the Ravno and the Kriva Reka sources.

One of the most intriguing findings concerns a large number of pits showing special deposition which have been excavated near the graves but no human remains. While two of the pits show the remains of funeral feasting through intensive deposition of cattle, pig and dog bones, the fill of most other pits contained small sherds, with fragments of fired clay sieves, spoons and figurines and occasionally daub fragments. Although the excavator identifies these deposits as settlement deposits and

therefore not deliberate, there is little accidental about such practices, which are paralleled at other Late Copper Age sites, such as in the 'platforms' at Vinitsa. The re-deposition of domestic deposits is also well known from Bulgarian Thrace on Karanovo IV pit-sites. Another form of pit is identified as 'storage pits', although massive pithoi may also have been used in preparation for feasting.

Another form of deliberate practice involves human body fragmentation, found in both settlement and mortuary contexts at Kozareva. Human body parts have been found on the tell, as skull roundels, skull fragments, isolated mandibles, other human body parts and even as tools made of human bones. Conversely, Russeva has identified two graves where human bones from different bodies have been added to otherwise complete inhumations – a form of deviant 'additional' burial found at other sites in the Balkan Copper Age (Chapman 2010). The interesting social implications of these practices have yet to be integrated into the cemetery research.

Russeva's report on the physical anthropology is one of the most detailed and informative to be published for East Balkan Copper Age cemeteries. Russeva found a higher than usual proportion of mature and senile adults, both female and male, than in most other cemeteries (cf. the high proportion of young males at Varna), with a life expectancy of up to 57 years for women who had survived to middle age. Russeva proposes that this gave an added significance for women both in social status and the transmission of cultural tradition. But what is most interesting is the high proportion, and great variety, of pathological conditions in the cemetery population, including periodontal disease, tooth crowding, enamel hypoplasia, degenerative bone disease with the possibility of tuberculosis, severe porotic hyperostosis and two cases of tumours from osteoma. There were also two cases of traumatic lesions, including a child probably killed with a blow to the head. Finally, the individual buried in grave 25 suffered from reduced mobility and possibly blindness. These pathological identifications have been detailed in the anthropological catalogue, despite the common fragmentation of the human bone and sub-optimal conditions of preservation. There is much to discuss in terms of the effects of these conditions and the kinds of mortuary treatment afforded to the high percentage of buried individuals who suffered from mild or serious illness.

The Kozareva mogila population forms a small group of 37 individuals whose cultural ancestry, health and social status forms an intriguing case-study in Copper Age bio-archaeology. There are clearly great possibilities for the modern Holy Trinity of archaeological scientific studies – aDNA, AMS dating and stable isotopic research, which this reviewer hopes will soon follow.

This fascinating volume on the Copper Age and later cemetery of Kozareva mogila introduces clear and distinctive voices on the burials, the grave goods and the physical anthropology without fully articulating these voices into a true conversation. The high quality of the separate parts is already a testament to the Kozareva mogila team that is rarely found in other East Balkan cemetery publications. I look forward to this conversation in future publications.

Reference

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News / Отзиви

Международна конференция „Нови хоризонти в праисторията. 50 години от откриването на Варненския некропол“, 2–4 ноември 2022, Варна, България

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International conference “New horizons in Prehistory. 50 years since the discovery of the Varna necropolis”, 2–4 November, Varna, Bulgaria

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На 3.11.2022 г. в заседателната зала на градската художествена галерия в град Варна се проведе международната конференция по повод 50 годишнината от откриването на първия халколитен некропол край Варна (обр. 1). Тя бе организирана от общината и РИМ–Варна. В нея взеха участие учени от България, Великобритания, Германия, Франция, Румъния и Гърция, като най-многобройна бе румънската група. Интересът към събитието е напълно закономерен, тъй като пет десетилетия след първите проучвания на некропола в Европа и Черноморския район са документирани още хиляди гробове от праисторическата епоха, но изобилието от гробни дарове от злато, мед и вносни предмети от обширния ареал от Беломорието до Карпатите остава без прецедент и напълно естествено заема подобаващото му се място във всички учебници по праистория и световна археология.

Изнесените доклади могат да се групират най-общо в четири категории:

- емпирични – представящи подновените изследвания на Варненският некропол, както и актуалното състояние на проучването на нови обекти по западното Черноморие, Североизточна България и Долния Дунав;

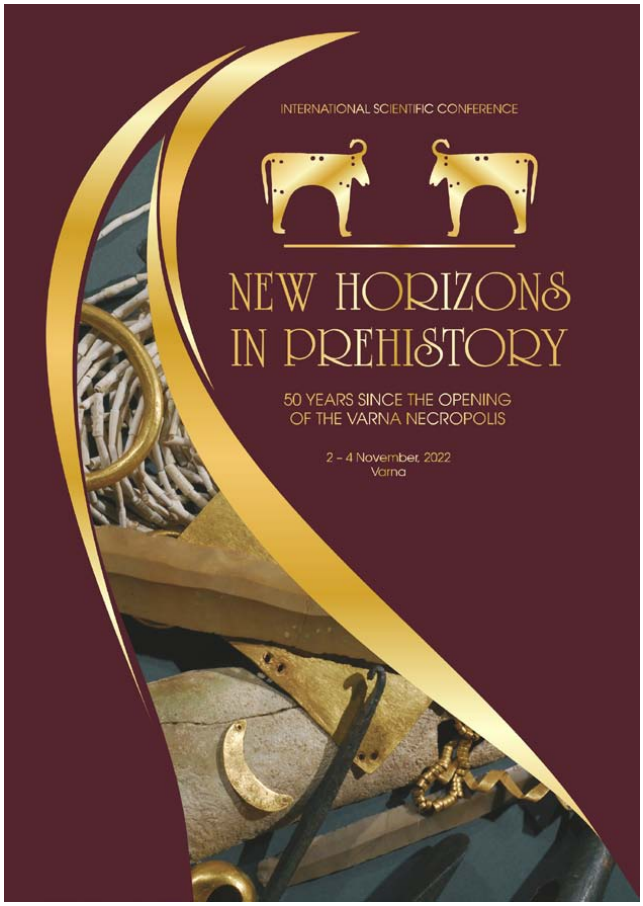
- аналитични с две подгрупи: (а) такива, които представят анализа на предмети, както от некропола, така и от халколитните общности в Югоизточна Европа и (б) други, които се занимават с анализ на човешките кости като източник на информация за реконструкцията на процесите в праисторическото общество;

- критични, които предложиха нови насоки за преосмисляне на някои традиционни схващания за хронологията на култура Хаманджия и значението на Варненския некропол в регионален и надрегионален мащаб.

Сред емпиричните доклади следва да изтъкнем представянето на:

- резултатите от подновените разкопки на Варненския некропол през 2021–2022 г. (Вл.

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Славчев);

- актуалното състояние на проучванията на праисторическите подводни селища във Варненското езеро (Н. Прахов, К. Димитров, Вл. Славчев);

- селищната могила край село Порой (М. Попова, С. Първанов) и

- некрополите край Градище, Шуменско (Р. Йорданова, П. Аспарухова), Гумелница (К. Лазар и др.) и Султана Малу–Рошу (Б. Маня и др.) в Румъния.

Група от три доклада представи интересни и взаимно допълващи се данни, получени чрез прилагането на модерни методи за изследване на човешките кости като исторически извор за реконструкцията на живота в праисторическите общества. Бисерка Гайдарска представи потенциала на стабилните изотопи на въглерода и азота за реконструкция на режима на хранене на част от погребаните индивиди във Варненския некропол, тъй като той има пряко отношение към реконструкцията на социални практики, свързани с достъпа, преработката и споделянето на определени храни между членовете на общността. В същото време установяването на физиологичната страна на обмена на веществата се превръща в необходимо и неизбежно условие, тъй като установяването на значим компонент от морска храна би поставил под въпрос и калибрацията на получените радиовъглеродни данни, които могат да бъдат изкривени в резултат на тъй наречения резервоарен ефект, свързан с различната скорост на циркулация на радиоактивния изотоп на въглерода във водните басейни спрямо атмосферата (Б. Гайдарска, Н. Беван). От името на голям международен колектив, Сандра Елен Пенске представи актуалното състояние на генетичните анализи на индивиди, погребани във Варненския некропол в контекста на популационната динамика на халколитните общества в Европа и Черноморския регион. Някои от представените изводи налагат преосмисляне, както на част от първите публикувани генетични данни от Варненския некропол, така и на родословието на

халколитните общества в Югоизточна Европа, характеризиращи се с различна степен на смесване на неолитно население, произхождащо от Западна Азия с наследниците на европейските мезолитни общества. Тези интересни резултати ще бъдат подробно представени в обзорна статия, предадена за печат в списание Nature. Накрая имахме възможност да се запознаем и с резултатите от изследването на здравния статус, патологичните изменения и украшенията под формата на медни пръстени върху зъбите на някои от погребаните в Третия варненски халколитен некропол (Н. Атанасова, В. Русева, Г. Томов).

Сред аналитичните доклади бяха включени анализ на данните от изследването на животински кости в известните селища на култура Хаманджия (А. Бълъшеску, В. Раду) и потенциала на създаването на прогнозни модели за откриване на некрополите спрямо известните халколитни селища въз основа на ГИС-базиран анализ (К. Ковътару, К. Лазар). Представени бяха и изследвания на специфични групи находки от тази епоха като кремъчните суперпластини от Варна и други обекти в България, интерпретирани в техния биографичен аспект (М. Гюрова), златните находки от територията на култура Коджадермен–Гумелница–Караново VI (Й. Милев), полираните каменни сечива от селищната могила край голямо Делчево (Р. Рачев) и емблематичните фигурки на Мислителя и Седящата жена от некропола край Черна вода в контекста на паралели в култури Боян и Гумелница (А. Бързу). Други знакови находки като златните накити и керамичните съдове, орнаментирани със златна паста бяха разгледани като основание за дефиниране на Егео-Балканското койне (общност), простиращо се между Варненския некропол и селищната могила Дикилиташ в Гърция като се постави въпросът доколко липсата на богати гробове по южната му граница е закономерна или функция на състоянието на изследванията (З. Цирцони и др.).

Три доклада предложиха нови гледни точки към някои от основните теми, свързани с проучването на Варненския некропол. Френско-румънският екип, който проучва праисторическите обекти в делтата на Дунав, представи серии от нови радиовъглеродни дати върху кости от стари и нови разкопки на обекти на култура Хаманджия на територията на Северна Добруджа и предложи преосмисляне на стадиалния модел за развитието на културата, дефинирана от Д. Берчу въз основа на развитието на керамичните технологии (Л. Кароца, К. Мику, Л. Манолакакис и др.). Бих искал да откроя и два провокативни и дискусионни доклада, имащи за цел да преразгледат някои от основните почти догматични постулати, свързани с популярни схващания за ролята на Варненския некропол в регионален и континентален план. Джон Чапман и Бисерка Гайдарска представиха критична преоценка на собствени и чужди тези по отношение на значението на Провадийското солно находище и разположената край него селищна могила за праисторията на Югоизточна Европа. Преди 20 години, Б. Гайдарска първа описва потенциала на този обект да функционира като център за производство и търговия със сол в праисторията (Gaydarska 2003). Привлекателността на тази хипотеза е възприета от В. Николов, който впоследствие (с екип сътрудници) се заема с проучването на селищната могила и нейната непосредствена околност, често изтъквайки производството на сол в Провадия като икономическа предпоставка за възникването на Варненския некропол. Критичният преглед на публикуваните данни от разкопките на обекта, обаче, дават основание на Чапман и Гайдарска да преразгледат тези две тези, изтъквайки, че от една страна публикуваните данни за производство на сол датират в късния неолит и така предхождат възникването на Варненския некропол със столетия, а от друга страна – изчисленията за произвежданите обеми сякаш не надвишават значително покриването на нуждите за консумация на сол от хората и животните, обитаващи самата селищна могила и непосредствената ѝ околност. Тяхната теза наскоро бе публикувана в новото издание *Thracia Balcanica* (Gaydarska, Chapman 2022) и конференцията във Варна изглеждаше като подходящ форум за научна дискусия с представители на проучва-

телите на Провадия, която за съжаление не се състоя поради тяхното отсъствие.

Другият дискусионен доклад бе изнесен от Свен Брумак, който представи някои от основните резултати от дисертационния му труд върху представите за социално неравенство в праисторическите общества от Долния Дунав и западното Черноморско крайбрежие. Той започна с разглеждане на икономически теории, които показват, че не акумулацията на престижни предмети води до социално неравенство, а евентуалната асиметричност на тяхното разпределение и как това може да се разкрие чрез количествени методи за анализ на археологически находки. След това авторът представи качествени критерии за относителната стойност на гробните дарове, възприети в по-ранни изследвания върху темата от Х. Тодорова и А. Виндлер (Todorova 2002; Windler 2017) и предложи оригинален ново-дефиниран алтернативен набор от критерии, основани върху количествени методи за оценка на присъщата стойност на находките в гробовете от 60 публикувани некропола от Югоизточна и Централна Европа, според тяхната честота на срещане и присъствие на екзотични импорти, разпределени по две оси – разнообразие и изключителност, както и по полово-възрастов признак. В резултат на комплексни статистически изчисления, Брумак създава кумулативни графики с кривата на Лоренц и коефициента на Джини показващи, че некрополите на култура Гумелница по Долния Дунав се характеризират със значително по-висока степен на асиметрично натрупване на гробни дарове, отколкото тези на култура Коджадермен в Североизточна България, а некрополите край Варна и Дуранкулак, макар и богати на ценни дарове, заемат междинна позиция по отношение на тяхното разпределение сред различните биологични групи и устойчивост във времето, която може да се обясни с ефективни социални институции.

Дискусиите преминаха в конструктивен дух, а много от застъпените теми бяха изключително актуални и в голяма степен се различават от темите, представяни на предходните симпозиуми, посветени на проучването на Варненския некропол. Това ще остане като чудесна илюстрация как развитието на научните методи и теории позволяват на всяко ново поколение изследователи да преразгледат постигнатото от техните предшественици и да го надградят с нови перспективи, което е и смисълът на научната дейност.

На 4.11.2022 г. делегатите имаха възможност да се запознаят с постоянната и тематична временна изложба в РИМ–Варна, представящи находките, както от самия Варненски некропол, така и от редица нови обекти, проучени през последните години при инфраструктурни и редовни разкопки в района. Най-бляскавата витрина във временната експозиция е посветена на инвентара на т. нар. гроб (всъщност кенотаф) №1, който е нарушен при изкопни работи, но именно така привлича интереса към некропола и през всичките 50 години е участвал в пътуващи изложби и в експозицията на Националния исторически музей в София. Едва сега, по повод на тази конференция, той е върнат и ще заеме своето достойно място в постоянната експозиция на РИМ–Варна. Накрая бе организирана и екскурзия до мястото на първия халколитен некропол в самия град, където гостите имаха възможност да се запознаят на място с резултатите от подновените проучвания на обекта от самия ръководител на разкопките и организатор на конференцията д-р Владимир Славчев. По повод временната експозиция и представената конференция, РИМ–Варна издаде луксозен албум с цветни снимки на находки от некропола (Славчев 2022). Предвидено е докладите от конференцията да бъдат издадени в отделен научен сборник.

Цитирана литература

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News / Отзиви

PeBA 2022: Трета международна конференция „Перспективи на балканската археология“, 25–28 май 2022 г., Охрид, Република Северна Македония

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PeBA 2022: 3rd PeBA International Conference “Perspectives on Balkan Archaeology”, 25–28 May 2022, Ohrid, Republic of North Macedonia

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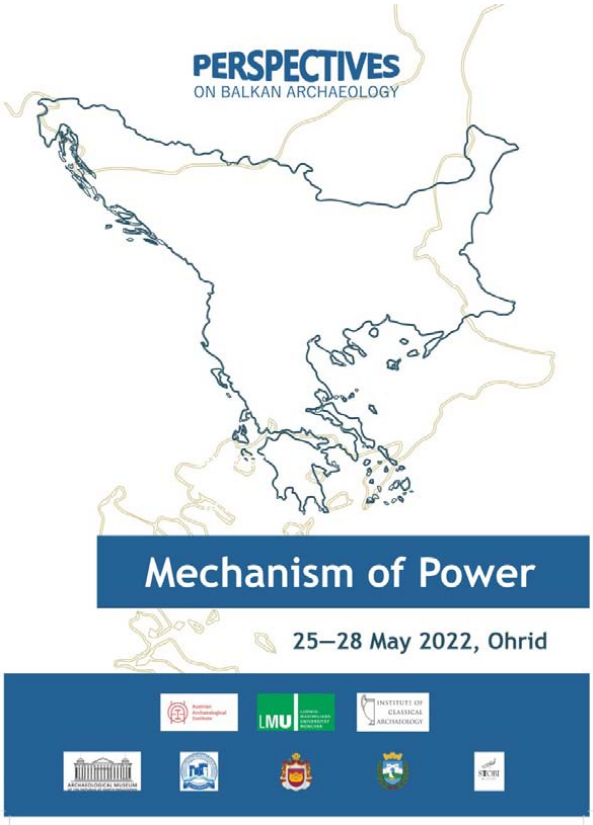
Инициативата „Перспективи на балканската археология“ (Perspectives on Balkan Archaeology – PeBA) е създадена през 2016 г. Основната ѝ цел е да създаде устойчива трансгранична мрежа от млади и утвърдени учени, които се занимават с праисторическа археология и имат изследователски интереси върху бронзовата и желязната епоха (XIII–V в. пр.Хр.) в Югоизточна Европа. Конференциите се организират в сътрудничество между Австрийския археологически институт при Австрийската академия на науките, Института за праисторическа и ранноисторическа археология и провинциална римска археология към Мюнхенския университет „Лудвиг и Максимилиан“, Германия и Института за класическа археология на Карловия университет в Прага, Чехия.

Първата конференция на инициативата се провежда през 2016 г. в Сараево и е посветена на методите и подходите в проучванията на ранната желязна епоха в Югоизточна Европа. Докладите от конференцията са издадени през 2018 г. под редакцията на проф. д-р Благое Говедарица (Govedarica 2018)[1]. Втората конференция се провежда през 2017 г. в Белград, Сърбия. Тя преминава под мотото „Сфери на взаимодействие. Контакти и взаимоотношения между Балканите и съседните региони през късната бронзова/желязна епоха (XIII/XII–VI/V в. пр.Хр.)“. Докладите от конференцията са издадени през 2020 г. в специално създадената поредица Perspectives on Balkan Archaeology (Gavranović et al. 2020)

Третата конференция бе планирана за 2020 г. и отложена поради пандемията от COVID-19

1 Онлайн версията е достъпна на адрес http://www.anubih.ba/godisnjak/god47/Godisnjak47-full.pdf.

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Обр. 1. Плакат на третата конференция „Перспективи на балканската археология“ в Охрид през 2022 г.
Fig. 1. Poster of the 3rd PeBA Conference in Ohrid 2022

(обр. 1). Проведе се от 25 до 28 май 2022 г. в аулата на Университета по информационни науки и технологии „Св. апостол Павел“, Охрид, Република Северна Македония (https://pebasite.wordpress.com/). Организатори бяха трите институции, които финансират и подкрепят инициативата в сътрудничество с Археологическия музей на Република Северна Македония. Организационният комитет на конференцията бе съставен от д-р Марио Гавранович (Австрийски археологически институт при Австрийската академия на науките), д-р Даниела Хейлман (Мюнхенски университет „Лудвиг и Максимилиан“), д-р Марек Верчик (Институт за класическа археология на Карловия университет в Прага), в сътрудничество с Перо Арджанлиев (Археологически музей на Република Северна Македония, Скопие).

В конференцията бяха заявени 37 доклада на 54 учени от 16 държави (Австрия, Албания, Белгия, България, Великобритания, Германия, Гърция, Италия, Република Северна Македония, Словения, Сърбия, Турция, Франция, Хърватия, Чехия и Швейцария), представляващи 36 институции – университети, научни институти, музеи и др.

Конференцията в Охрид бе посветена на темата „Механизмът на властта през бронзовата и желязната епоха в Югоизточна Европа“ и постави серия от важни въпроси, които ни позволят да разберем феномена на властта, както и да опишем нейния механизъм отвътре [2].

2 Процесите за формиране на статус, създаване на елити, трансформацията на власт, видовете власт, ранните форми на социално-политическа и икономическа организация (институциите на властта), т.нар. държавообразуване или създаването на ранни държавни форми, т.е. протодържави и т.н., са обект на дългогодишни изследвания. В България бе проведена конференция на тази тема – „Археология на властта“ през 2014 г. в чест на 20-тата годишнина на Департамент „Археология“ на Нов български университет. Интересният сборник с доклади от тези своеобразни интердисциплинарни диалози на учени от най-разнообразни области на познанието, които разглеждат властта през призмата на философията, социологията, политическите науки, медиите, теорията на информацията, литературознанието, историята и археологията, е издаден през 2020 г. (Атанасов и др. 2020).



Обр. 2. Доц. д-р Христо Попов представя встъпителната лекция в църквата „Света София“, Охрид (снимка Ф. Михайлов)
Fig. 2. Associate Professor Dr. Hristo Popov presents keynote lecture in St. Sophia Church, Ohrid (photo P. Mihaylov)

Официалното откриване се състоя в църквата „Св. София“, катедрална църква на историческата Охридска архиепископия, с приветствия от страна на организаторите. Началото на научната част на конференцията постави доц. д-р Христо Попов (НАИМ–БАН) с встъпителна лекция на тема „Между съкровищата и социалната хомогенност. Как да тълкуваме и осмисляме индикаторите на механизма на властта в късната бронзова и ранножелязната епоха в Източните Балкани“ (обр. 2). Авторът смята, че когато разглеждаме царската власт, елитите, вертикалната обществена структура през тези епохи на Балканите, има един основен въпрос, който нарича и парадокс, и който все още не е намерил ясен отговор – това е инцидентният характер на всички тези предполагаемите символи на власт, престиж и високо обществено положение. Подчерта, че не се потвърждава тази информация за обществената организация от проучването на местата на обитаване през разглежданите периоди. В заключение отбеляза, в източните части на Балканите са живели общности със сериозен демографски, икономически и социален потенциал, които не използват политическите и обществени модели, еволюирали при развити култури като тези в Анатолия, Егея, Източното Средиземноморие и Близкия Изток, но генерират сериозни икономически механизми, акумулират и големи количества природни ресурси, вкл. и крайни продукти, които по днешните стандарти оценяваме като богати. Явно не им е било нужно създаването и развитието на институции, централизация на властта и т.н.

Докладите на конференцията бяха представени в 5 тематични сесии, провеждани последователно. Всяка сесия се ръководеше от председател. След всеки доклад се задаваха кратки въпроси към представящия, а дискусиите бяха организирани в края на всяка сесия.

Първата сесия бе посветена на темата „Лов за престиж – мобилност, суровини и сим-

воли на власт“ и се ръководеше от проф. д-р Барбара Хореш (Австрийски археологически институт при Австрийската академия на науките). В нея имаше най-много участници и доклади. В първия доклад на Мая Гори (Национален съвет за научни изследвания на Италия) беше разгледана повишената мобилност на населението като следствие от увеличаване на размера на населението в края на III хил. пр.Хр.

Последваха няколко доклада, които представиха нови гледни точки. Филип Франкович (Институт за праистория и протоистория и близкоизточна археология на Хайделбергския университет) преразгледа доказателствата, че находката от средната бронзова епоха, открита в Ловас, Хърватия, е съкровище и смята, че е по-скоро част от погребални дарове. Докладът на Мария Люстина от Белградския университет разглеждаше находките от кехлибар в погребални контексти от бронзовата епоха в Западна Сърбия и доколко те са индикация за появата на местни елити с роля в търговските мрежи и обмена на стоки.

Лаура Буркхард (Университет „Мартин Лутер“ в Хале-Витенберг, Германия) представи доклад за социално-икономически механизми през късната бронзова епоха в контекста на златната мина Ада Тепе. Тя разглежда аспектите на достъпа до или дори контрола върху златната мина, социалната структура и организация на миньорското общество, специализацията на миньорите и социално-икономическите отношения, които осигуряват база за обсъждане на потенциални корелации между достъпа до ресурси и социалното неравенство. Изтъкна, че минните дейности на Ада тепе свидетелстват за голям добив на злато, но липсата на гробове със златни находки е индикатор за социални диференциации сред местните групи.

Следващият доклад, изнесен от Малеен Лепек (Институт за праисторическа и ранноисторическа археология и провинциална римска археология към Мюнхенския университет „Лудвиг и Максимилиан“) в съавторство с Филип Щокхамер (от същия институт), и Богдан Атанасов (Нов български университет), също бе посветен на резултатите от проучванията на археологически обект в България – селището от II–I хил. пр.Хр. в м. Бресто, с. Баня, общ. Разлог. Специфичното му и стратегическо разположение създава неговата естествена изолираност, но находките от обекта, както и неговата архитектура, показват, че той далеч не е бил изолиран, а вероятно добре интегриран в регионални и трансрегионални мрежи, в контекста на Егейския свят. Основен акцент бяха останките от масивна архитектура, вкл. и широката укрепителна стена на обекта. Беше разгледан въпросът до каква степен те могат да послужат като признак за променящите се структури на властта между по-ранните и по-късните фази в обекта и как потенциалната интеграция, в по-широка селищна мрежа, би могла да повлияе на това.

Интерес предизвикаха новите резултати от проучването на гробовете в некропола в Балей, датирани между втората половина на XIII и първата половина на XI в. пр.Хр., които с характеристиките си свидетелстват за най-голямата промяна в погребалния обред. Докладът бе представен от Таня Христова, в съавторство със Стефан Александров и Георги Иванов (НАИМ–БАН). Наред с приемствеността в погребалния обред – кремация извън некропола, и поставяне на останките в урни, в новооткритите гробове има нови елементи: поставяне на по-голям брой керамични съдове в гробовете; използване на големи купи като урни, както и поставяне на изгорени кости около съдовете. В тези късни погребения са намерени още и бронзови предмети (накити, аксесоари за облекло, инструменти и др.). Налице са значителни промени в керамичните форми и украсата, която вече е предимно с канелюри. Керамиката намира прилики в находки, които са значително по-отдалечени от предходната култура на инкрустираната керамика. Това позволява да се заключи, че културните контакти вероятно са установени на по-големи географски територии. Но дали това е последица от движение на населението или е доказателство за социална диференциация и възхода на елитите?

Петър Минков и Жени Василева (НАИМ–БАН) представиха изследване на антропоморфните керамични статуетки от ранната бронзова епоха в Тракия. Дискутираха доколко украсата им може да се счита като представяне на елементи на костюма, както и в цялост на облеклото, вкл. и представяне на различни накити. Поставиха и въпроса дали облеклото и бижутата от ранната бронзова епоха могат да бъдат разгледани в контекста на темата за символите на идентичност, статус и престиж. Всички известни антропоморфни керамични статуетки от тази епоха в Тракия бяха представени в контекста на подобни находки от Егея и Балканите. Бяха направени сравнения на украсата им с ювелирни находки от различни центрове, бяха представени и резултати от изследване на обичайните видове орнаменти с цел показване на традициите в декорирането на тези предмети, както и значението на орнаментите и тяхната роля в социалния, религиозния и културния живот. Изследването им дава различен поглед върху символиката на облеклото и накитите през III хил. пр.Хр.

Още няколко доклада разгледаха значението на некрополите и погребалните обреди от бронзовата епоха. Докладът на Александър Капуран (Археологически институт в Белград, Сърбия), в съавторство с Аца Джорджевич (Народен музей в Белград), представи некропола при Конопище, разположен по поречието на Среден Дунав, показващ приемственост в погребалния обред – кремация на покойниците от късната бронзова епоха (култура Жуто Бърдо), от ранната желязна епоха (култура Гава), както и от къснолатенските погребения. Вторият доклад на Филип Михайлов (РИМ–Перник) представи проучването на некрополите Дрен–Делян и Врабча от периода на трансформация в края на късната бронзова – началото на ранножелязната епоха. Разглеждайки механизмите на властта, начина по който е възприемано значението ѝ чрез останките, които могат да бъдат документирани археологически, докладът се опита да представи отговори на тези въпроси, разглеждайки „живота чрез смъртта", и защо за това общество смъртта е била по-важна от живота. Беше представена и хипотезата, че некрополите имат регионален характер, а не са само места, където се полагат тленните останки на починалите в рамките на едно селище.

„Жените във властта?" бе темата на следобедната сесия, ръководена от проф. д-р Карола Мецнер-Небелсик (Институт за праисторическа и ранноисторическа археология и провинциална римска археология към Мюнхенския университет „Лудвиг и Максимилиан"). Докладите в нея бяха посветени на жените през желязната епоха – епоха, белязана от въвеждането на нов метал, от промяна в социалната структура и появата на местни, мощни елити. Сесията разглеждаше позицията, влиянието и значението на жените в древните общества, в светлината на богатите с находки гробове с погребани жени от Далмация, Вардар, Средния Дунав и Карпатския басейн, както и на по-съществена им роля в миналото, отколкото традиционно се смята, че заемат. Във всички доклади бе изтъкнато, че откриването на богати дарове, не само на обичайния ансамбъл гробен инвентар (керамични съдове), но на други предмети, свързани с починалите жени (облекло, накити и нструменти), могат да се разглеждат не само като свидетелство за дейностите и уменията на жените в техните общности, а и като белег на висока социална позиция.

Богатите гробове с погребения на жени, открити във Вардарската долина, бяха акцент в доклада на Александра Папазовска (Археологически музей на Република Северна Македония, Скопие) и Даниела Хейлман. Проучените гробове показват, че трябва да се разглеждат като едно по-широко явление в периода VIII–VI в. пр.Хр. Досега се считаше, че принадлежат на социално изявени жени, а хипотезата се подкрепя от откритите предмети, за част от които се смята, че са с култово-религиозен характер. Преоценка на материалната култура и на гробния контекст позволява на изследователите да търсят нови интерпретации.

Третата сесия, посветена на темата „Поява на воинските елити", също бе председателст-



Обр. 3. Участниците в конференцията пред църквата на манастира „Свети Наум“ (снимка Ф. Михайлов)
Fig. 3. The participants of the conference in front of the church of St. Naum Monastery (photo P. Mihaylov)

вана от проф. К. Мецнер-Небелсик. В нея имаше само 3 доклада, обединени от разбирането, че гробните находки са отличен източник за изследване на праисторическите социални структури. Златко Видески (Археологически музей на Република Северна Македония, Скопие) представи резултатите от напълно проучения праисторически некропол от къснобронзовата епоха в м. Димов гроб при с. Уланци, а докладът на Ровена Курти (Академия за албански изследвания) разглеждаше преходния период от ранната към късна желязна епоха в Албания на базата на промяната в погребалните практики и появата на оръжия в значителни количества в гробовете. Сесията завърши с доклад на Сабине Пабст (Марбургски университет), която също разглеждаше гробните находки като източник на информация за изследване на социалните структури в обществото от желязната епоха във Вергина, Централна Македония.

През втория ден бе организирана обиколка из старата част на Охрид. В ролята на туристически гид влезе домакина Перо Арджанлиев. Участниците в конференцията разгледаха някои от по-важните обекти – античния театър, Самуилова крепост и др. Посетена бе и Робевата къща, в която се помещава археологическата експозиция на Института за защита на паметниците на културата и музей – Охрид. След разходка с кораб по Охридското езеро бяха посетени манастира „Св. Наум“ (обр. 3), както и разположения южно от Охрид, на източния бряг на Охридското езеро, в Залива на костите, Музей на водата и възстановката на къснобронзовото и ранножелязното наколно селище.

В последния ден бяха представени 15 доклада в 2 сесии. Първата, ръководена от доц. д-р Х. Попов, бе посветена на „Репрезентации на властта – Македонски елит?“ Внимание предизвика доклада на Паско Кузман, представен от Гоце Наумов, за проучвания на Горна порта, не само заради потвърждението, че богатия некропол в Требенище не е изключение в района

на Лихнида. Докладът на Анна Панти (Министерство на културата и спорта на Гърция) за селищата от ранножелязната епоха в Термейския (Солунски) залив и п-в Халкидики проследи социално-политическата идентичност и съществуването или не на механизми за лидерство и власт между общностите от разнородни селища. За разлика от другите, докладът бе изключение и акцентираше върху организацията на селищата, тяхната архитектура, инфраструктура и т.н., и в по-малка степен разглеждаше данните от некрополите, като източник на информация за социалния статус на населението от района. Виви Сарипаниди (Център за изследване на археологията и наследството, Брюкселски свободен университет) върна проблематиката върху погребалните практики като източник за наличието и разпределението на власт в Архаична Македония. На базата на проучените некрополи в Синдос, Архонтико и др., които са особено важни в контекста на Требенище, тези погребения, които често са наричани „княжески“, се разбират като симптоматични за появата, в рамките на местните общности, на политическа централизация, която от своя страна е свързана със засилени контакти с южния и източния гръцки свят. Следвайки разграничението на източниците на политическа власт, предложено от Тимоти Ърл в неговата книга от 1997 г. (Earle 1997), анализът на Сарипаниди се концентрира върху контрола на икономическите ресурси, бойната сила и идеологията, които бяха представени чрез интерпретация на гробните находки, въпреки че, както бе изтъкнато, „по-нюансирано разбиране на тези процеси може да се получи само чрез доказателства от проучени селища, които на този етап остават оскъдни“.

Докладът на Никола Стефановски (Институт за социална антропология „Макс Планк“, Хале и Университет „Мартин Лутер“ в Хале–Витенберг, Германия) представи и обобщи информацията за погребаните воини в некрополите от Охридско и Термейския залив, като източник на „репрезентация на елита“ или „репрезентация на господството“. В доклада на Христос Ямакис (Университет на Шефилд, Великобритания) пак бе обърнато внимание на информацията от некрополите (Еани, Синдос и Архонтико), като източник на създаване на идентичности и промяна на властовите отношения в прехода от желязната епоха към архаичния период в Македония, разглеждани във връзка с образуването на нова динамика на властта както на регионално, така и на междурегионално ниво. И докладът за символиката и функцията на „богатите гробни дарове” в древна Македония на Натали дел Сокоро (UMR 7041 Археология и науки за древността (ArScAn)) продължи темата за гробните дарове през призмата на анализа на символиката и функционалността им. Акцент в него бяха предметите от златно фолио, тъй като бе допуснато, че са били местно производство и изработвани за целите на погребалния ритуал.

На погребалните маски като символ на политическа, социална и религиозна власт в Архаична Македония бе посветен докладът на Джесика Клементи (Университет на Ферара, Италия). Темата за погребалните практики бе разгледана и от Димитрия Маламиду (Античен отдел на гр. Серес, Република Гърция) и Йоанис Халазонитис (Брюкселски свободен университет). Показан бе погребалният ритуал и общностната идентичност по долината на Долна Струма през архаичния период. Фокус на изследването бе гроб от VI в. пр.Хр., принадлежал на възрастен мъж от надгробна могилата Алепотрипа.

Финалната сесия разгледа темата „Ландшафти на властта“ и бе ръководена от проф. д-р Петер Павук (Карлов университет в Прага, Чехия). Заимстваният от политическата философия термин ‘landscapes of power’ означава изградената среда, която изпълнява политически функции. Затова бе интересен подходът на участниците в сесията към разбирането и интерпретацията му.

Първият доклад на Дамян Донев (Близкоизточен технически университет в Анкара, Турция) имаше различен подход, с който да се определи съществуването на социална йерархия и неравенство – размера на селищата по долината от Горен и Среден Вардар в средата на

I хил. пр.Хр., като опит да се изследва степента на централизация. Със следващия доклад на Марек Верчик, в сътрудничество с Перо Арджанлиев, бе направен опит да се дефинират моделите на обитаване и социокултурно развитие в Охридско. Невъзможността да се обвържат богатите некрополи, т.нар. „княжески гробове“ с известните досега селища в района, кара някои изследователи да считат, че те принадлежат на номадски общности, а други смятат, че принадлежат на елинистически крепости в района, които са контролирали пътищата (напр. *Via Egnatia*). Представени бяха резултати от теренна работа, показващи наличието на местни силно въздействащи геоморфологични и специфични палеоекологични фактори в селищната организация и стратегии за заселване през желязната епоха, както и икономически и социално-културни причини, довели до появата на богатите гробове.

Въпросът за йерархично структурираната селищна система през ранната и средната бронзова епоха около Ровин в Истрия, Хърватия, бе разгледан от Аня Хелмут Крамбергер (Люблянски университет), Себастиан Мюлер (Институт за средиземноморски изследвания, Университет за чуждестранни изследвания в Пусан, Република Корея) и Мая Чука (Пулски университет „Юрай Добрила“, Хърватия). От края на II хил. пр.Хр. с промяна в модела на обитаване започва изграждането на укрепени селища на малки възвишения. Този доклад бе един от малкото разглеждащи отбранителните съоръжения, вкл. и елементите на укрепени селища, като резултат от появата на йерархични структури с централни и т.нар. сателитни селища.

Докладът на Гоце Наумов (Център за праисторически изследвания, Скопие, Република Северна Македония) изследва селищните могили и наколните селища от бронзовата епоха в Пелагония и Охридско, и ги разглеждаше като центрове за разпределение на ресурси и носители на власт сред обществата от тази епоха.

Предварителни резултати от проучването на обекта Свиняричка чука (Лесковац) в Южна Морава, представиха Огнен Младенович (Археологически институт в Белград, Сърбия), Барбара Хореш (Австрийски археологически институт при Австрийската академия на науките) и Александър Булатович (Археологически институт в Белград, Сърбия). Обектът е важен с новите данни и хронологични рамки на изследване на ранния неолит, въпреки, че целта на проекта е изследване на човешките дейности и взаимодействието човек-околна среда от началото на седентизма до металните епохи. Акцент в доклада бяха структури от късната бронзова и ранната желязна епохи, представящи специфики по отношение на развитието на тези епохи в региона.

След последния доклад, организаторите на конференцията се опитаха да направят обобщение на докладите и обсъжданите теми на конференцията (обр. 4). Основният принос на конференцията бе, че показа до каква степен властовите отношения са археологически разпознаваеми на този етап от развитието на научния инструментариум, с който разполагаме. Дискутирането на въпросите за властта потвърди, че като основен изследователски подход за дефиниране на социалната йерархия, както и на неравенството в пра- и протоисторията най-често се използват различията в погребалните контексти, вариацията на откриваните предмети в некрополите, както и възможността на тази основа да бъдат реконструирани погребалните обреди. И в тази конференция преобладаващият брой доклади използваха този подход за детерминиранане на понятието за властта. Както отбеляза един от участниците в нея – Дамян Донев, за съжаление, колкото и основателен да е този подход, то това ниво на изследване по много начини е изкривило възприятието ни за сложните властови отношения в протоисторическите общества. Решаването на въпросите за възникването и формирането на властта през бронзовата и желязната епоха в Югоизточна Европа е все още нерешен въпрос и обект на множество, понякога взаимно изключващи се интерпретации. В повечето случаи твърденията остават само предположения.



Обр. 4. Организационният комитет на конференцията – Марио Гавранович, Марек Верчик, Даниела Хейлман и Перо Арджанлиев (вляво) и представителите на институциите организатори – Карола Мецнер-Небелсик, Петер Павук и Барбара Хореш (вдясно) (снимка Ф. Михайлов)
Fig. 4. The conference organising committee – Mario Gavranović, Marek Verčík, Daniela Heilmann and Pero Ardjanliev (left) and the representatives of the organising institutions – Carola Metzner-Nebelsick, Peter Pavúk and Barbara Horejs (right) (photo P. Mihaylov)

Проведеният научен форум показа, че инициативата „Перспективи на балканската археология“ вече се е установила като дългосрочна платформа. Тя бе успешна и ползотворна, защото даде по-широка перспектива за разглеждане на процесите и явленията през бронзовата и желязната епоха в Югоизточна Европа. Но тя бе най-полезна с насърчаването на научното сътрудничество между изследователите, занимаващи се с тази проблематика в Централна и Югоизточна Европа, вкл. и в търсенето на институционално такова.

В заключение трябва да бъде отбелязано, че освен бързото издаване на сборника с докладите, очакваме и следващата конференция, която трябва да се проведе през 2024 г. във Варна, в сътрудничество с НАИМ–БАН.

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News / Отзиви

E-conference: Ancient Greek, Roman and Byzantine Fibulae, 12–13 May 2022, Izmir, Türkiye

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International online conferences is the new black. Travel restrictions caused by the pandemic affected academic gatherings and imposed inevitable adjustments of research communication to online platforms. Since 2007, Ergün Lafli and the Archaeology Department of Dokuz Eylül Üniversitesi in Izmir have organized twelve Colloquia Anatolica and Aegaea. In the turbulent 2020, the regular spring meeting in the picturesque Turkish city moved to Zoom and Youtube. The international symposium “Cappadocia and Cappadocians in the Hellenistic, Roman and Early Byzantine Periods” was the first meeting of Congressus internationales Smyrnenses online, followed by 2021 e-conference on “Ancient Greek, Roman and Byzantine engraved gems in the eastern Mediterranean and Black Sea area”(fig. 1).

The e-conference “Ancient Greek, Roman and Byzantine Fibulae” took place online and lasted for two days (Thursday and Friday), the 12th and the 13th of May 2022. All the lectures and discussions were in English, recorded for later viewing on YouTube. As the organizers announced, “the purpose of the video conference was to create an analytical framework for understanding the fibulae in their social and material contexts”. The focus on the popular artefact for garments fastening aimed “to set out a comprehensive model for the study of fibulae, including their definition, typology, chronology, contexts, function, regional characteristics and distribution patterns in the whole Mediterranean and Black Sea geographies”.

The 12th Congressus Internationales Smyrnenses is dedicated to the 75th birthday of Maurizio Buora, the former director of the Civici Musei Castello di Udine in Italy, renowned for his contributions to the study of Roman and Late Antiquity fibulae.

Junior and senior scholars from 16 countries responded to the e-conference call at Izmir. Following thematic, chronological, and regional principles, 45 presentations were divided in ten sessions.

After the welcome address (on behalf of the organizers) by Ergün Lafli, the virtual host provided an overview of the archaeology of fibulae in the publications of Maurizio Buora. The Italian archaeologist was the chairman of the first session with the opening lecture by Sorin Cociș on Late Aucissa brooches. Considering Maurizio Buora’s contributions and expertise in the research on Roman fibulae, this was an appropriate beginning of the e-conference, touching upon key issues of artefact typologies, distribution area, chronology and fashion, discussed during the following sessions.

The second session focused on the Near Eastern and the Early Greek fibulae. Marissa Tsiao set

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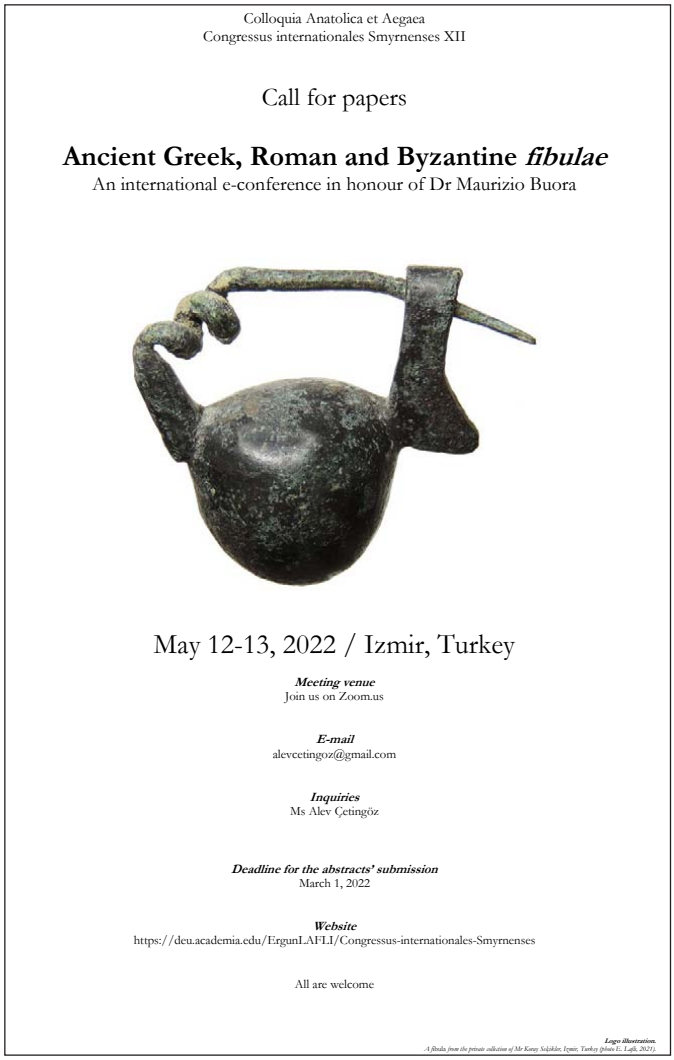


Fig. 1 Official poster of the e-conference
Обр. 1 Постер на онлайн конференцията

the stage exploring the earliest evidence on the spread of the new fashion with these dress accessories from the Aegean to the Levant and their adoption among different social groups in the Assyrian empire. Two case studies illustrated the practice of votive deposition of fibulae in Greek sanctuaries during the Archaic period. Kerstin Bauer discussed finds of a spectacle type with bone plate from Pheneos in Arcadia. Examining the data from the Apollo sanctuary on the Cycladic Despotico island, Manolis Petrakis provided further insight on the context and typological variety of the fibulae in cult sites. The presentation of Angeliki Liveri turned the attention to gold pins and to fibulae in mainland Greece, dated from the Archaic to the Early Hellenistic periods. Most of these luxury items are found in graves of individuals of high social status. The overview of the shining gold pieces with elaborate decoration outlined several changes in fashion among the elite. In a very informative and mind-stimulating presentation Emre Erdan discussed multiple questions concerning the production, symbolism and popularity on the so-called Phrygian type fibulae in western Anatolia and in the Aegean region. In the same vein, Petya Ilieva suggested local production of five items from Aegean Thrace, variations of the Phrygian type. Despite the lack of archaeologically identified centre of manufacture, these finds and their cultural context support the idea of a „Northern Aegean" group, dated to the 5th century BC.

The third session included presentations on Caucasian and Thracian fibulae. As an organizer Ergün Lafli read two papers submitted by Nino Sulava. The current reviewer failed to follow some of

the generic typological links of the Caucasian fibulae, but the contributions of the Georgian archaeologist provided a useful overview of the finds from the region. Georgi Nekhrizov and Ivet Kirilova turned the attention to a distinctive group of Early Iron Age double-looped fibulae with bronze inlay on the bow. The analysis of old and new finds in their archaeological context confirmed the wide geographical distribution of these items in the beginning of the 1st mill. BC Thrace. New data on the manufacture techniques raised multiple questions about the workshop(s) and the transfer of technologies in the eastern Balkan region.

The fourth session was on the Pre-Roman fibulae in Italy. Cesare Vita discussed the finds from the cemeteries of the indigenous communities in southern Italy (dated to the Archaic and the Classical period) as indicators of status and local identity. The case study of Josipa Mandić on the 4th and the 3rd century BC fibulae from San Brancato in ancient Lucania provided further insight on the topic of these items as status and gender markers. In the last presentation of the session Tayla Leigh Newland suggested a new typological study of Pre-Roman fibulae in ancient southeast Italy.

A Roman fibula is a Universe. Three sessions of the e-conference included discussions on these artifacts from many parts of the Roman world. Margherita Bolla and Nicoletta Martinelli presented some of the examples kept in the Archaeological Museum of the Roman Theatre in Verona. Having in mind that the collection consists of Pre-Roman (Early Iron Age and Late La Tène) and Roman (Jezerine and Aucissa) items, it was a smooth transition to the Roman theme of the fifth session. Gian Luca Gregori and his colleagues discussed inscribed fibulae of Roman soldiers in a Sienese private collection. Due to lack of reliable information of their provenience, the presentation illustrated the difficulties in the interpretation of these artefacts, based entirely on inscriptions or on general typological analogies. Maria Farmaki suddenly changed the focus to Roman hairpins (acus) arguing their symbolic function was more significant and perhaps more recognizable in the past than nowadays. Discussing a find of omega type brooch with pendant from ancient Hispania (dated to the Late Republican times), Romana Erice Lacabe managed to turn the attention back to the dress accessories. In the final part of the fifth session on Roman fibulae in Italy and the Roman Occident, Christof Flügel and Martina Meyr suggested that a small group of gilded silver fibulae with human head in a laurel wreath represented images of the emperor Caracalla, produced as symbols of loyalty for influential commanders. The closing remarks came from Thomas Schierl, who discussed the fibulae from Central Germany in the framework of the complex relations between the Romans and their barbarian neighbours.

The sixth and the seventh sessions of the e-conference focused on the Roman fibulae from eastern and southeastern Europe. Mojca Vomer Gojkovič provided an overview of the finds from Poetovio. Archaeological excavations near the Mithras temples revealed evidence of a workshop of Almgren type 68 fibulae. An example of animal fibula associated with the cult is discovered near the Mithraem in Spodnja Hajdina (Slovenia). Alca Starac presented the Roman fibulae in the collection of the Archaeological Museum of Istria in Pula (Croatia). Still focused on the Adriatic zone, Sabina Veseli discussed some military types of Roman and Late Roman fibulae from Albania as indicators of the Roman army presence and/or of integration of local population in military service. A case study, presented by Csilla Sáró, of fibulae from the municipium of Brigetio (Komárom-Szőny, Hungary) showed the typological variety of the 2nd and the 3rd c. AD examples in Pannonia, as well as evidence of local manufacture. Vlad-Andrei Lăzărescu examined the spatial distribution and the chronology of the crossbow brooches (Zwiebelknopffibel) in the Lower Danube regions focusing on the changing modes of interactions between the Romans and the barbarians in „buffer“ or „Vorlimes“ zones. Two case studies of Roman fibulae in the collection of the National Historical and Archaeological Museum of Constanța and the fibulae from Ulmetum turned the attention to Roman and the Late Roman period in the region along the Black Sea coast.

The seventh session of the e-conference started with a Bulgarian panel on the Roman fibulae from Thrace and Lower Moesia. Elena Bozhinova and Tsvetelina Slavkova presented the evidence for a brooch workshop excavated in Philippopolis. Located near the Eastern gate of the urban centre it stands out as the first discovery of its kind in the region. Archaeological data in high resolution provide valuable information about the production of fibulae during the second half of the 1st c. AD. In a presentation about the fibulae from the excavations on Sexaginta Prista, Varbin Varbanov and Svetlana Ivanova discussed the archaeological context and typological features of the items, dated in the wide chronological span from the Late Hellenistic to the Byzantine periods. In the third presentation of the panel on Thrace and Lower Moesia Kaloyan Pramatarov examined the Roman fibulae in the collection of the National Archaeological Institute with Museum in Sofia. The geographical scope of the seventh session included the Roman fibulae in Eastern Europe and the Near East. Natalia Novichenkova reviewed the finds from the sanctuary of Gurzufskoe Sedlo in Crimea and Benyamin Storchan interpreted an enameled shoe-shaped brooch from villa rustica near Jerusalem as evidence for Roman soldier or a veteran who settled in the region.

Following the chronological order, the eight session focused on the Byzantine fibulae. Paula Puppo examined the typological diversity of the fibulae from the Ceriolo necropolis in Piemonte. The analysis of the grave inventories suggests that the 7th–8th c. AD burial place was related to a large community comprised of individuals with Transalpine or Mediterranean origin. Giovanni Di Stefano and Salvo Micciché discussed examples of "Bologna" type fibulae in relation to depictions of Byzantine clothing in Eastern Sicily. Gold and silver artifacts with elaborate decoration from Sardinia illustrated the presentation of Marco Mureso on status symbol objects of the island's elite during the 7th and the 8th c. AD. The second contribution of Angeliki Liveri at the e-conference was on the representations of fibulae on mosaics from Ravenna and Thessaloniki. Her final remarks were on the reflections of these images in modern jewelry design. The last presentation in the session was by Alexander Minchev and Valeri Yotov. The archaeologists from Varna discussed the typological features and dating of the Late Antique/Early Byzantine fibulae from the ancient port town at Cape Sveti Atanas near Byala.

In contrast to the popular proverb "a swallow does not make a spring" the single presentation in the ninth session on "archaeometry of the fibulae" deserves special attention. Miglena Stamberova and Petia Penkova examined six gold items from the collection of the National Archaeological Institute with Museum in Sofia by nondestructive XRF analysis and microscopic traceological observation. Their aim was to explore the potential of metalwork (use)wear investigation to determine if and for how long these artifacts were used before their deposition. The life cycle of a pair of miniature bilateral Early Hellenistic fibulae from Seuthopolis appeared to be quite short as no signs of use were detected. Traces on four massive Roman crossbow fibulae associated with their use suggest a different story and much longer life cycle. In both cases the archaeometric analysis provided important observations about the artefacts with significant functional and chronological implications.

The last, tenth, session of the e-conference was entitled "Turkish contribution to the archaeology of fibulae". In essence it was a half an hour lecture by the Ergün Lafli on his research on fibulae from different parts of Anatolia. The virtual host arranged his presentations according to the chronological position and the geographical findspots of the discussed items.

Setting out a comprehensive model for the study of fibulae is probably too ambitious endeavor for e-conference. Beyond any doubt the video conference in Izmir was a useful resource for understanding the ancient fibulae in their specific social and material contexts.

From now on, the international archaeological meetings under the series of Colloquia Anatolica et Aegaea will be organized in electronic form regularly every third week of May.

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ERASMUS+ and experimental archaeology

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ERASMUS+, as part of the ERASMUS MUNDUS international programme, is a great opportunity for students and lecturers to enrich their professional experience in several important aspects: knowledge, contacts, establishing new collaborations, initiating scientific fora etc. A good example of successful collaboration is the ERASMUS+ contract between the Bulgarian Academy of Sciences and the Polytechnic Institute in Tomar, Portugal. The initiative came from the National Institute of Archaeology with Museum (NAIM), BAS and the Earth and Memory Institute in Mação, where the branch of the Tomar Polytechnic Institute is located within the Museum of Prehistory and Rock Art, which has a specialised educational programme on Quaternary geology, prehistory and experimental archaeology. The Institute's President is Prof. Luiz Oosterbeek, one of the leading world specialists on prehistoric rock art and sustainable management of cultural heritage. In this respect, Mação is an ideal venue for ERASMUS+ activity for specialists from a broad scientific background, but especially for those focused on experimentation, not least because there is a Master's programme on Prehistoric Archaeology and Rock art that includes the teaching and didactics of archaeological experimentation, combining theoretical aspects (lectures) and a large spectrum of practical/empirical activities. The first stage of the programme between the above-mentioned institutions took place in Mação and Sofia in 2012–2013 involving exchange lecturers – Prof. Diana Gergova and Dr Maria Gurova (Bulgarian side) and Dr Sara Cura (Portugal side). The results of this cooperation consisted of a Session on Technology and Experimentation, organised at the XVI World Congress of the International Union of Prehistoric and Protohistoric Sciences (UISPP) in Florianopolis, Brazil, and a paper devoted to the challenge of prehistoric drilling and bead fashioning (Cura et al. 2014; Gurova et al. 2014).

In 2021 the contact was renewed and thus a new opportunity for effective and successful cooperation was re-established. The main goals for this renewal were as follows: i) to expand the collaboration at the experimental level and exchange of innovative techniques and technological procedures in the context of archaeological experimentation; ii) to offer IPT students conceptual and case-study examples of the topical subjects of Balkan prehistoric archaeology; iii) to offer the BAS lecturer the opportunity to learn about the successful strategy for cultural heritage management

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Fig. 1. Experimental reconstruction of manufacture of a Thracian type bronze fibula from the copper smelting process to the obtaining of a semi-finished object (photos M. Stamberova)

Обр. 1. Експериментална реконструкция на производство на бронзова фибула тракийски тип от процеса на топене на медта до получаване на заготовка (снимки М. Стамберова)

in Portugal; and iv) to offer the Bulgarian archaeologists an opportunity to welcome lecturers from Portugal and to update the knowledge about the high level of archaeological research and heritage management there.

In 2022 two research visits were made by scholars from NIAM–BAS. Dr Miglena Stamberova (Exhibitions Department, NAIM–BAS) visited Mação for a week in June 2022 under the staff mobility scheme. During this period joint experimentation work was carried out in the courtyard of the Centre of Polytechnic Studies by Pedro Cura and supervised by Prof. Pierluigi Rosina. The aim of the experiment was to reconstruct the production of one of the most common bronze objects found in ancient Thrace in the Late Iron Age (5^{th}–1^{st} century BC) – the Thracian type fibula.

The experimental process comprised several main stages, and included the use of various pieces of equipment such as a kiln-type furnace, a bellows, a clay tuyère, a crucible, a sand mould, etc. The first stage included a simple two-step copper smelting process, starting with the preparation of the copper ore malachite by crushing it into small pieces (fig. 1.1). The stone furnace which was to be used was already dug into the soil and had a roughly cylindrical form of small dimensions. Its walls and bottom were covered with thick layers of clay (fig. 1.2). The manually-worked leather bellows was connected to the furnace body under the ground by means of a long pipe terminated by a clay tuyère. The kiln was filled with alternate layers of charcoal and malachite and the process of smelting was initiated (fig. 1.3–4). It continued for several hours. After cooling down, the smelted lumps of copper were collected by hand. It was clear that a significant part of the copper remained trapped in the slag (fig. 1.5). To achieve further separation of the metal, a second smelting was executed. The previously obtained copper prills were re-melted in a crucible and put in the kiln under oxidizing conditions (fig. 1.6). Afterwards, the smelted copper was removed from the furnace and cast into an ingot with rectangular shape (fig. 1.7). Meanwhile a wooden model of an unfolded Thracian type fibula and a two-component sand mould were produced (fig. 1.8). The wooden model was used for making negative impressions in the mould. The next phase of the experiment included the preparation of the bronze alloy by mixing the copper with tin and pouring the resulting bronze alloy into the mould containing the negative impression (fig. 1.9–10). The cast of the elongated fibula form was mechanically shaped and smoothed (fig. 1.11). The final step of the experiment would include employing various metalworking techniques such as forging out, bending the fibula into the required shape, and applying decoration.

The time available was not sufficient to complete all the aforementioned steps, and the experiment will be finished in 2023. Nevertheless, the experimentation that was conducted and its results were valuable, and increased our knowledge of the production of fibulae in Ancient Thrace. The experiment showed that the process was extremely cost-effective because by means of a single mould it is possible to make many fibulae, whose feet and bows are subsequently shaped according to the craftsmen`s skills and the users` preferences. The use of non-durable models and moulds also explains the absence of stone and ceramic moulds for such metal objects. A joint publication with all steps and results of the experimentation is currently in preparation.

The second research visit for teaching was carried out in October by Dr Maria Gurova (Prehistory Department, NAIM–BAS). Four lectures were prepared and presented in Sala Mundus of the Earth and Memory Institute, Mação. Three of them were integrated into a Workshop, combining lectures, archaeological experiments and a Museum visit (fig. 2). Invited as guest lecturers were Prof. Clive Bonsall (Edinburgh University) and Dr Davide Delfino (Molise State Museum, Italy). Master students from the Polytechnic Institute of Tomar and PhD students from the department of Cultural heritage of the Extremadura University (Spain) took part in this workshop.

Instituto Politécnico de Tomar – Centro de Estudos Politécnicos de Mação

PROGRAMA DE PÓS-GRADUAÇÃO / RESEARCH DEGREES PROGRAMME

Mestrado em Arqueologia Pré-Histórica e Arte Rupestre – Mestrado Erasmus+ em Quaternário e Pré-História IMQP
Mestrado em Técnicas de Arqueologia – Mestrado Erasmus+ em Gestão de Paisagens Culturais DYCLAM+
Doutoramento em Património, Tecnologia e Território (UAL-IPT)
Centro de Geociências (cluster de Quaternário e Adaptações Humanas)

CONFERÊNCIAS 2022-2023 CONFERENCES

Sala Mundus do Instituto Terra e Memória
18 a 20 de outubro de 2022

EXPERIMENTAL ARCHAEOLOGY WORKSHOP

MARIA GUROVA
Senior Research Fellow, Prehistory Department at National Institute of Archaeology and Museum, Bulgaria
CLIVE BONSALL
Professor Emeritus of Early Prehistory, University of Edinburgh, UK
PEDRO CURA
Museu de Arte Pré-Histórica de Mação, Portugal
DAVIDE DELFINO
Direzione Regionale Musei Molise. Italy









October 18, 9h30
- Maria Gurova: *Experimentation on prehistoric drilling and bead manufacturing*
- Clive Bonsall: *Early Neolithic bead production at Schela Cladovei in the Iron Gates*

October 18, 14h30
- Experimental archaeology activity

October 19, 9h30
- Maria Gurova: *Petrographic and geochemical analyses of flint raw materials from Bulgaria: a reliable combination for provenance studies of archaeological flint*
- *Experimental archaeology activity*

October 19, 14h30
- *Experimental archaeology activity*

October 20, 9h30
- Maria Gurova: *Chalcolithic superblades from Bulgaria: Raw material and functional connotation*
- *Experimental archaeology activity*

October 20, 14h30
- *Visit to the Museum of Abrantes*
- Davide Delfino: *Socialization of knowledge bridging experimental archaeology and experimentation, in the State Museums of Molise (Italy)*

Nota: Serão atribuídos certificados aos alunos dos cursos de Mestrado e Doutoramento do programa e aos candidatos à Pós-Graduação IPT-UAL de Arqueologia Experimental.
Note: Certificates will be given to Master and PhD students of the programme and candidates to the IPT-UAL post-grad in Experimental Archaeology

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–apoio financeiro da FCT/MCTES

Fig. 2. Announcement and programme of the workshop (courtesy L. Oosterbeek)
Обр. 2. Обява и програма на семинара (предоставена от L. Oosterbeek)

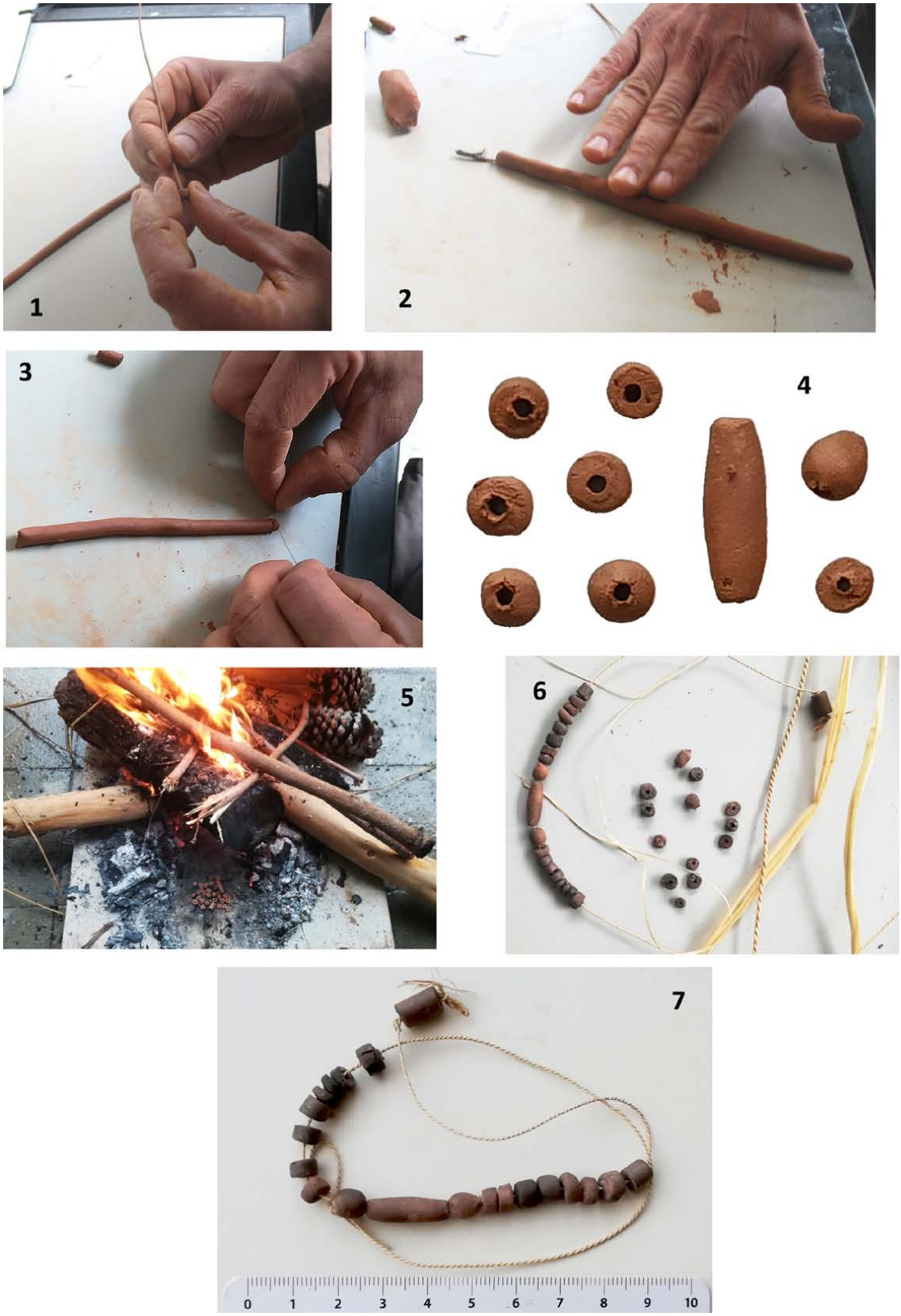


Fig. 3. Experiment of clay beads fashioning (photos M. Gurova)
Обр. 3. Експеримент по изготвяне на керамични мъниста (снимки М. Гюрова)



Fig. 4. 1–7. Experimental knapping and tool fashioning, mineral drilling and experiments in rock art; 8. Visit at the museum in Abrantes (photos M. Gurova)

Обр. 4. 1–7. Експериментална обработка на кремъчни сечива, пробиване на минерали и скално изкуство; 8. Посещение в Музея в Abrantes (снимки М. Гюрова)

The experiments logistically prepared and lead by Pedro Cura[1] were partially related to the lectures, thus shedding complementary light on the challenging problem of prehistoric bead manufacture and jewellery making. A complete *chaîne opératoire* of clay bead making and necklace fashioning was carried out. The clay, prepared in advance by P. Cura, was plastic and very suitable for use, including sculpting. The experiment aimed to test empirically two practical approaches to this category of beads, suggested in a paper about Neolithic clay beads from the site of Ilindentsi, Bulgaria (Grębska-Kulow et al. 2021). We aimed to test the efficiency of various methods of bead shaping – rolling a clay lump into a long thin cylinder and then cutting it into segments and perforating (fig. 3.1) *vs.* rolling with a pine needle inside and then cutting the clay cylinder into segments (beads) already 'perforated' (fig. 3.2–3). The first method of bead shaping proved to be more efficient. The following became clear: i) the cutting of a thin delicate (or whatever) bead is much easier and keeping the beads correctly shaped when the segmentation/cutting is performed using horse hair (fig. 3.3) rather than the fresh, sharp edge of thin obsidian flake; ii) cutting a clay cylinder already perforated by a pine needle produced deformed beads, because of the hole inside which makes the cylinder more fragile. When cut with horse hair and then perforated, the beads show a 'lip-like' deformation at the exit hole, a detail mentioned as a terminal on some of the archaeological beads from Ilindentsi, studied and published by the first author (Grębska-Kulow et al. 2021, 15). In this way, we proved that the model of production of Çatalhöyük clay beads by wrapping clay around a perforating material is not the best or only way of delicate clay bead fashioning (ibid., 15). After preparing a series of beads (mostly discoid, with single biconical/cylindrical and spheroidal examples), all beads were placed near a fire – on a fine charcoal layer – for firing (fig. 3.4–5). The beads withstood the heat treatment with only one which cracked. The last operation consisted of making a fine string using straw, and thus we made a nice necklace of variously coloured clay beads (fig. 3.6–7).

Apart from this extremely pleasant and instructive experiment, P. Cura made a demonstration of flint knapping and tool manufacturing, in the course of preparing small borers that were needed for the next experiment (fig. 4.1–2) .

Challenging experiments involved drilling various minerals using wooden pump-drills with flint tips (borers) fashioned by P. Cura. He succeeded in making a hole in a button-like piece of amazonite (6–6.5 on the Mohs scale) – a task that had been unsuccessful during our previous experiments in 2013. To create this small hole P. Cura needed almost 3 hours of intensive drilling, using and resharpening 5 small flint drills (fig. 4.3–4). Master and PhD students participated actively on this occasion, retouching flint blanks into borers in order to achieve drilling and fashioning of beads of marble (3 on the Mohs scale).

One of the most spectacular experiments concerned imitating prehistoric rock engraving and painting, using natural pigments prepared by P. Cura (fig. 4. 5–7).

An additional attraction was the visit to the Museum of Archaeology and Arts in Abrantes, which has small, but very rich and informative exhibition. On this journey into the past we were guided by Prof. L. Oosterbeek and Dr D. Delfino (fig. 4.8).

In conclusion: an ERASMUS+ mobility in Mação is a great opportunity for important scientific activity and represents a valuable format for successful international collaboration.

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1 His experimental repertoire and performances could be seen at **prehistoricskills** in Instagram.

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