



Non-invasive investigation of Roman Period rural settlements along the Middle course of the Tundzha river, Yambol district, Bulgaria

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ABSTRACT

Several Roman period surface scatters and a settlement located in the Yambol District, along the Tundzha River, have been investigated within the last few years. Surface surveys and geophysical prospection were combined with a thorough material evaluation, to allow a description of the possible dimensions and character of several sites, all likely located in the territory of ancient Kabyle. The investigation focused on several single features located in the Tundzha Municipality, such as the extensive settlement near Kozarevo village and a smaller installation, perhaps a *villa*, near the Roman settlement at Kabyle. Several scatters, already detected by the Tundzha Regional Archaeological Project, were re-surveyed in Elhovo Municipality, between the Dereorman and Gerenska rivers. The territory along the two rivers seems to have been densely populated during the 2nd–4th c. AD, with about 11 scatters dated to the Roman period, likely representing small rural settlements, distributed in regular intervals along the two rivers. One of the settlements on the Dereorman River, Yurta-Stroyno, surveyed and excavated in 2014–2016, provided a comparative base for the rest of the area.

Evaluating the gathered data, the territory of Kabyle seems to have been quite self-sufficient during the Roman period. The rural settlements provide evidence of raw material processing, production of everyday items, as well as a preference for the locally available products, such as household pottery, limiting the number of pottery imports to a minimum.

KEYWORDS

Thrace, Bulgaria, Roman period, province, rural settlement, surface survey, geophysical prospection

Introduction

In the years 2019–2021, several archaeological investigations were carried out along the middle stream of the Tundzha River in cooperation between the Regional Historical Museum in Yambol and the Institute of Classical Archaeology at Charles University in Prague. All the activities took place in the Yambol District, in the Elhovo and Tundzha Municipalities, and were carried out as a follow-up to the Tundzha Regional Archaeological Project (TRAP) (Ross et al. 2018) and the Yurta–Stroyno Archaeological Project (SAP) (Tušlová et al. 2022; Tušlová 2023). The fieldwork included a re-survey of two surface scatters dated to the Roman period near the villages of Karavelovo and Robovo, together with the surface material postprocessing, and geomagnetic prospection of several other features dated to the Roman period located near the villages of Robovo, Kozarevo and Kabile¹ (figs 1–2).

The investigation focused on the assessment of the position, dimension, and character of individual sites/scatters based on the combination of the geomagnetic prospection, surface material evaluation and spatial distribution. The main objective was the evaluation of the Thracian countryside in the studied area during the Roman period (2nd–4th c. AD), the density of the built-up areas, the function of individual settlements and their interactions in the context of the territory of Roman Kabyle.

Surface survey

In 2009, an area of about 28.5 sq. km was intensively surveyed in Elhovo Municipality by the TRAP team. The surveyed area was located between the Dereorman and Gerenska rivers, both left tributaries of the River Tundzha (Iliev et al. 2012; Sobotkova et al. 2018). Along the river streams, nine surface scatters dated to the Roman period were identified (fig. 2). Many of them were multi-period scatters, pointing to their longer use or occupation. Representation of the Roman period material within the scatters was either dominant, or fractional. Using the TRAP data and numbering system, scatters under nos 7019, 7020, 8005, 8011, 8012 and 8020 featured a smaller representation of Roman period material compared to the other periods, while scatter nos 6018 (Yurta–Stroyno), 6021 and 7023 were dominated by the Roman period material attesting to its main period of habitation (Iliev et al. 2012).

In 2019, an extension of the surveyed area north of the Gerenska River revealed several other Roman period scatters (Valchev, Marchovski 2020; Valchev 2023, 177, fig. 24), one of them located 3.3 km south-west of Karavelovo, on the right bank of the Gerenska River (fig. 2. 2019_01). The character of the scatter is similar to the others with predominant Roman period material, although it has not yet been systematically surveyed. Consequently, the scatter size in tab. 1 is only approximated.

In addition to the list of the Roman period surface scatters in the area, we may add a probable Roman *villa* at St. Iliya, located just south of the Stroyno village, about 1 km south-east of the Dereorman River. The site is currently being investigated and excavated, with several published preliminary reports (Agre et al. 2015, 208–211; 2021; here fig. 2.).

All the scatters and the probable *villa* are placed on a gentle slope close to or directly along the modern flow of one of the rivers, placed at a low elevation on average 120–180 m.a.s.l. The highest peak between the two rivers reaches up to 235 m.a.s.l. The surrounding landscape is slightly undulating, currently giving space to wide and seemingly infinite fields used for large scale agriculture. We

¹ “Kabile” refers to the modern village, while “Kabyle” refers to the Roman period camp/settlement located near the modern village.

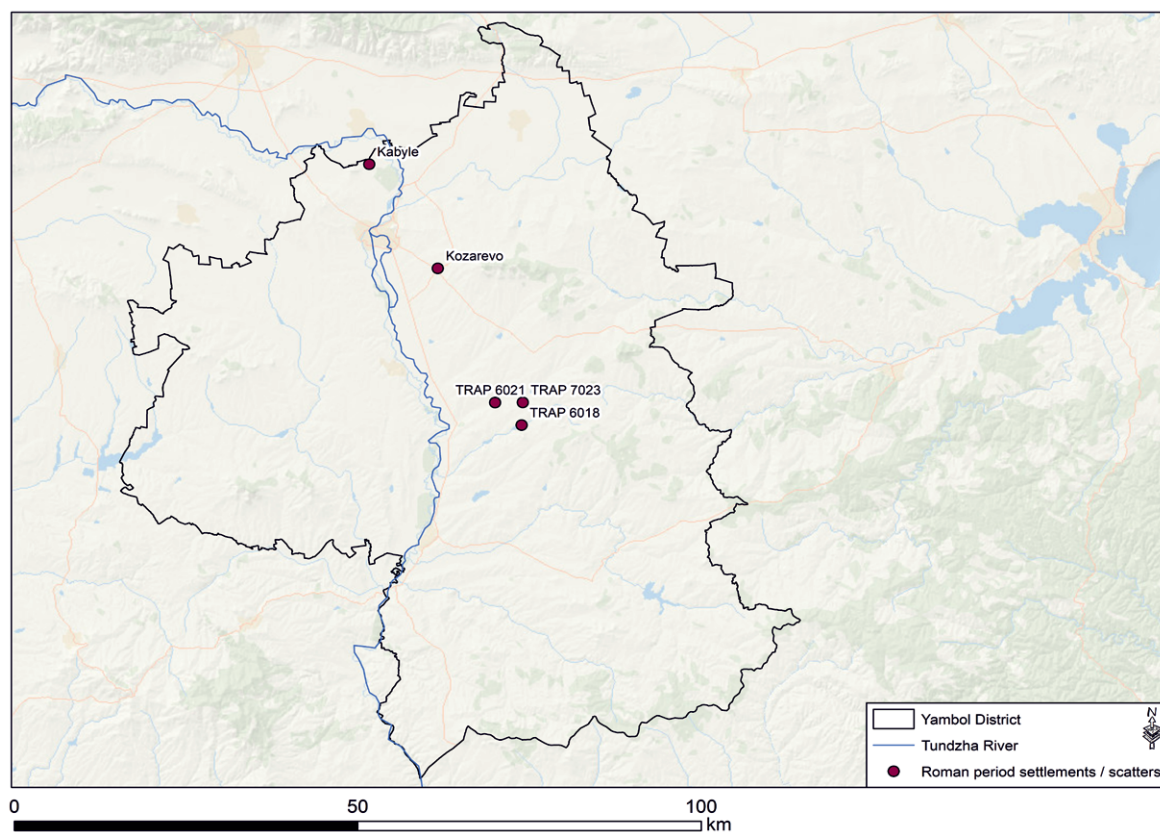


Fig. 1. Spatial distribution of the main settlements and surface scatters dated to the Roman period located along the middle stream of the River Tundzha in the Yambol District which are addressed within the article (map by P. Tušlová)

Обр. 1. Разпространение на основните селища и струпвания на артефакти от периода на Римската империя, разположени по средното течение на река Тунджа в област Ямбол, които са разгледани в статията (автор P. Tušlová)

may expect that the Roman settlements, as well as the modern villages still scattered along the two rivers, were interconnected by regional roads, leading along the river valleys towards the Tundzha River, which was navigable in antiquity. Along the Tundzha River a supra-regional road was built during the administrative reforms of Trajan at the beginning of the 2nd c. AD (Madzharov 2009, 237), together with the river, creating fast and direct connection with the Aegean Sea and the coast.

In total, there are at least 11 features dated to the Roman period located along the Gerenska and Dereorman rivers (fig. 2). Apart from Yurta–Stroyno, the features are dated on the basis of the surface material allowing their classification into the broader chronological period of the 2nd–4th c. AD. On average, their distance from each other ranges from 1900 to 2000 m and 3300 to 3500 m along the Gerenska River, and 2500 to 3900 m along the Dereorman River. A similar distance, from 2000 to 3500 m on average, with one exception of 5000 m over a hill, is also kept in between the settlements along the two rivers in north-south directions (Table 1). There is an oddity, which seems to be the 500 and 800 m distance between two scatters located along the Gerenska River on two occasions, TRAP nos 8005 and 7020; and 8012 and 7023. If we do not include TRAP nos 7020 and 7023 into the measurements, the distance between the other scatters along the Gerenska River extends the interval from 2500 to 3500 m, featuring a very similar distance to the scatters along the Dereorman River and the areas in between the two rivers. The exclusion of both scatters is based on their smaller dimensions in comparison to others, which might relate to their specific function, perhaps being supplementary to a bigger settlement nearby. TRAP no. 7023, of barely two hectares, is the smallest scatter of all,

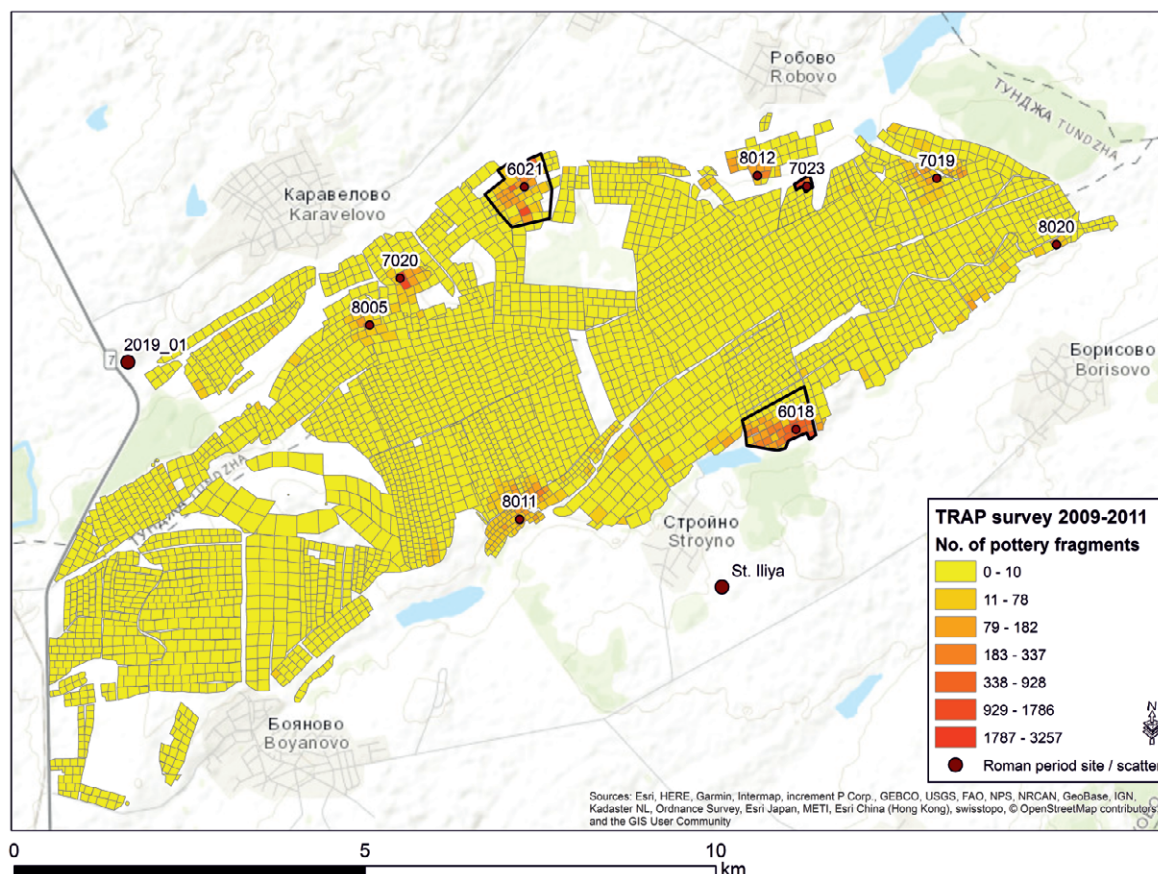


Fig. 2. The area between the Gerenska and Dereorman rivers surveyed by TRAP in 2009 showing surface scatters dated to the Roman period with highlighted scatters TRAP nos. 6021 and 7023, which were re-surveyed, and TRAP no. 6018, marking the site of Yurta-Stroyno. Added to the map are the scatter found in 2019 near Karavelovo (2019_01) and the site of St. Iliya (the map is based on Ross et al. 2018, fig. 13, adapted by P. Tušlová in 2024)

Обр. 2. Районът между реките Геренска и Дерорман, изследван от TRAP през 2009 г., показващ струпвания на артефакти, датирани в периода на Римската империя с маркирани струпвания TRAP № 6021 и 7023, които са препроучени; и TRAP № 6018, маркиращ мястото на Юрта-Стройно. Към картата са добавени струпвания на артефакти, открити през 2019 г. край Каравелово (2019_01) и обектът Св. Илия (картата е базирана на Ross et al. 2018, fig.13, адаптирана от P. Tušlová през 2024 г.)

with surface material solely dated to the Roman period. Its single period occupation might also be indicative of its dedicated function taking place during some restricted period. TRAP no. 7020 is a multiperiod dense scatter (3rd c. BC–4th c. AD) of a small size composed of highly fragmented material with very few diagnostic sherds although with a well-defined core of almost three hectares. The multiperiod character of the scatter already makes it different from TRAP no. 7023. However, in this case, we might be inclined to connect the scatter TRAP nos 8005 and 7020 together under one settlement as the surface material attributed to individual sites is located just about 170 m apart. As in the case of TRAP no. 6021 (see below) these could be individual homesteads of one bigger settlement.

If we accept each of the medium to large scatters to represent a settlement, the distance from one to another divided by two might represent its territory with agricultural land and pastures. The settlement size and character may of course relate to their different use and overall purpose. However, up to the present, no material has been published from any of the settlements but Yurta–Stroyno (TRAP no. 6018), excavated in 2014–2016 (Tušlová et al. 2022; Tušlová 2023), as the excavations of St. Iliya have so far been published only by way of short excavation reports without material (Agre et

Scatter A	Nearby river	Scatter size	Predominant period	Scatter B	Nearby river	Scatter size	Predominant period	Distance scatter A to B (m)
2019_01	Gerenska	Medium	Roman	8005	Gerenska	Medium	Mix	3500
8005	Gerenska	Medium	Mix	7020	Gerenska	Small	Mix	800
7020	Gerenska	Small	Mix	6021	Gerenska	Large	Roman	2000
6021	Gerenska	Large	Roman	8012	Gerenska	Medium	Mix	3300
8012	Gerenska	Medium	Mix	7023	Gerenska	Small	Roman	500
7023	Gerenska	Small	Roman	7019	Gerenska	Large	Mix	1900
7019	Gerenska	Large	Mix	8020	Dereorman	Small	Mix	2000
8020	Dereorman	Small	Mix	6018	Dereorman	Large	Roman	3900
6018	Dereorman	Large	Roman	8011	Dereorman	Large	Mix	3200
8011	Dereorman	Large	Mix	St. Iliya	Dereorman	Large	Roman	2800
St. Iliya	Dereorman	Large	Roman	6018	Dereorman	Large	Roman	2500
8011	Dereorman	Large	Mix	8005	Gerenska	Medium	Mix	3500
6018	Dereorman	Large	Roman	8012	Gerenska	Medium	Mix	3500
6018	Dereorman	Large	Roman	6021	Gerenska	Large	Roman	5000

Table 1. Overview of distances between the closest scatters in a horizontal and vertical direction measured from core to core (i.e. the polygon(s) with the highest number of finds). The size category of the scatter and its chronological classification is taken from the results of the TRAP surface survey (Iliev et al. 2012)

Таблица 1. Разстояния между най-близките струпвания в хоризонтална и вертикална посока, измерени от център до център (т.е. полигона(ите) с най-голям брой находки). Размерът на струпването и неговата хронологична класификация са взети от резултатите от обходите на TRAP (Iliev et al. 2012)

al. 2015, 208–211; 2021). Consequently, despite knowing the location and the density of habitation in the area during the Roman period, it has not yet been possible to produce any correlation analysis based on extended data, which would allow a mutual comparison and evaluation of these features.

To change the situation and to provide comparative material for Yurta-Stroyno, two of the surface scatters were reinvestigated in 2019. These were the richest ones in Roman material and finds in general, TRAP nos 6021 and 7023, located along the Gerenska River. Both scatters were systematically re-surveyed at 5 m intervals, however not counting nor collecting sherds. If an interesting or outstanding object was found, a GPS point was taken, and the object documented². Based on the conditions at the time regarding vegetation and surface finds, several areas were then chosen for the total pickups. These were polygons of 20×20 m, from which all the surface material was gathered and further documented (for the methodology see Tušlová 2019, 38–39). The resulting finds were compared with the material retrieved from Yurta-Stroyno, especially the worked stones (Weissová et al. 2022), glass (Čiřáková, Zlámálová Cílová 2022), metals (Čiřáková, Kmošek 2022) and pottery (Tušlová 2023), for which the same classification was adopted.

The pottery of presumed regional production included both table and cooking vessels, already described in the contexts of Yurta-Stroyno. Due to the high fragmentation and wear of the pottery found on the surface, the Fine red-slipped ware and the Common red-slipped ware were put together during the survey and counted in bulk as a single group. The majority of the other pottery classes known from Yurta-Stroyno was identified and separated. Regarding the table ware, these were Grey ware and Mottled ware. The wheel made Coarse cooking ware was divided by form (pots, casseroles

² Most frequently worked stones (quern stones, flints); metals; glass; and pottery fragments of rare ware, shape, or a combination of both.

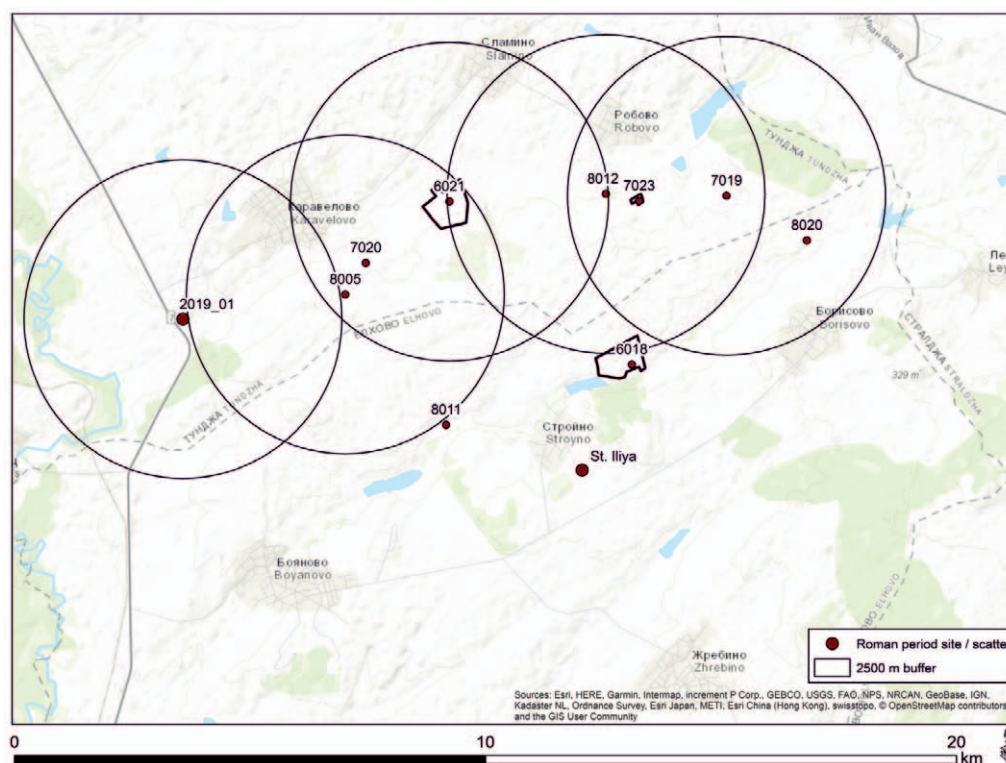


Fig. 3. Indication of 2500 m buffer zone around the larger rural settlements located along the Gerenska River (author P. Tušlová)

Обр. 3. Буферна зона от 2500 м около по-големите провинциални селища, разположени по поречието на река Геренска (автор P. Tušlová)

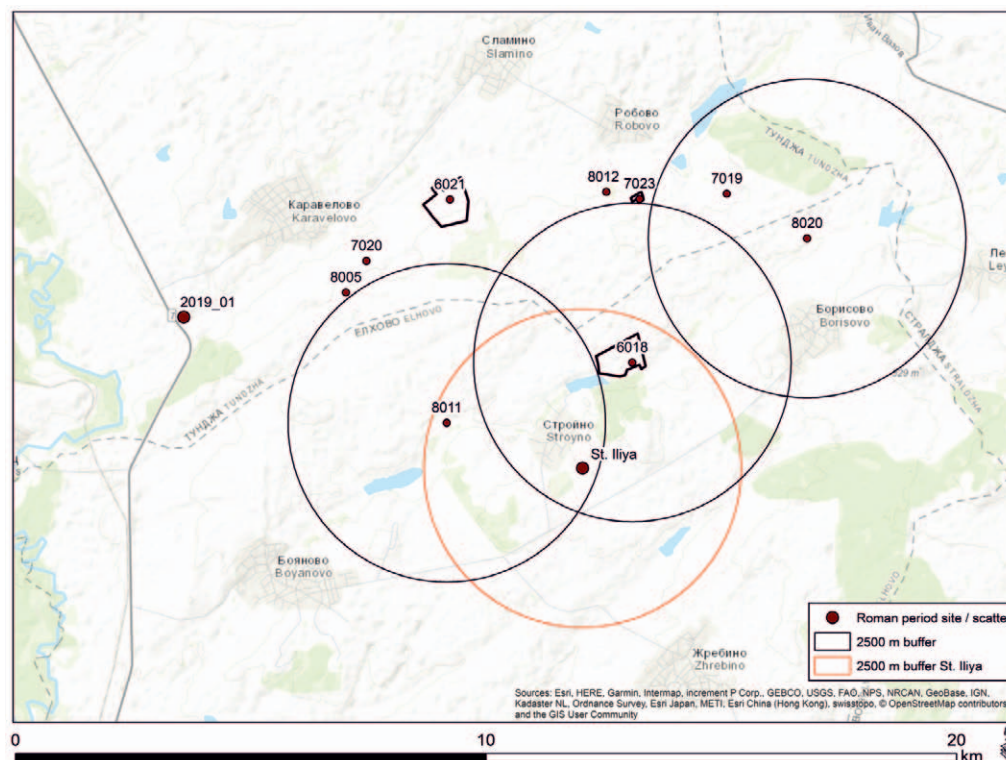


Fig. 4. Indication of 2500 m buffer zone around the larger rural settlements located along the Dereorman River (author P. Tušlová)

Обр. 4. Буферна зона от 2500 м около по-големите провинциални селища, разположени по поречието на река Дерееорман (автор P. Tušlová)

		Regional Red-slipped ware		Grey ware		Mottled ware		Çandarlı ware		African red-slipped ware		Coarse cooking ware		Transport amphorae	
Pickup #	dim.	frgs.	g.	frgs.	g.	frgs.	g.	frgs.	g.	frgs.	g.	frgs.	g.	frgs.	g.
6021_01	20×20	725	3845	13	91							93	444	9	212
6021_02	20×20	579	4695	8	48							82	470	1	14
6021_03	20×20	900	3085	7	23	8	3	2	4			62	335	2	52
6021 Total		2204	11625	28	162	8	3	2	4			237	1249	12	278
7023_01	20×20	150	960	6	65							34	190	11	350
7023_02	20×20	305	1647	4	12	2	6	1	10	1	7	36	150	6	85
7023 Total		455	2607	10	77	2	6	1	10	1	7	70	340	17	435

		Storage vessels		Dioritic HM pottery		Granitic HM pottery		Pottery Total			Architectural ceramics			Other finds
Pickup #	dim.	frgs.	g.	frgs.	g.	frgs.	g.	frgs.	g.	frg./g.	frgs.	g.	frg./g.	
6021_01	20×20			48	370	48	283	936	5245	5.60	241	13000	54	EIA handle, flint, whetstones
6021_02	20×20			27	274	49	360	746	5861	7.86	185	12000	65	
6021_03	20×20			41	333	135	672	1157	4507	3.90	271	11000	41	
6021 Total		0	0	116	977	232	1315	2839	15613	5.50	697	36000	52	
7023_01	20×20			22	238	21	220	244	2023	8.29	3535	163000	46	
7023_02	20×20	2	595	19	130	65	425	441	3067	6.95	1705	59034	35	Daub (5 pcs.), greek amphora
7023 Total		2	595	41	368	86	645	684	5083	7.43	5240	222034	42	

Table 2. Overview of the ceramics collected at the individual pickups of the TRAP nos. 6021 and 7023; dim. = pick up dimensions; frgs. = fragments collected; g. = weight in grams; frg./g. = average weight of one fragment (i.e. overall fragmentation); HM = handmade pottery; AC = architectural ceramics
 Таблица 2. Керамика от оборките на TRAP № 6021 и 7023; dim. = размери на обхвата на оборката; frgs. = събрани фрагменти; g. = тегло в грамове; frg./g. = средно тегло на един фрагмент (т.е. обща фрагментация); HM = ръчно изработена керамика; AC = архитектурна керамика

and frying pans); the handmade pottery was represented by both wares with distinctive Dioritic and Granitic fabrics.

Imported pottery was represented by a few fragments only. There were a few dozen transport amphorae fragments with very few diagnostic pieces. Even fewer fragments could be attributed to the fine ware import, either of recognizable origin, or distinctly different from the local production without further identification.

Architectural ceramics (AC) were most frequently made up of roof tile fragments including both *tegulae* and *imbrices*; all *tegulae* were of the Laconian type. There were only a few bricks and very rarely pieces of daub.

TRAP no. 6021

Year 2009

The surface scatter was spread over an extensive area of 16 ha on a slope of a hill descending towards the Gerenska River. During an intensive surface survey and two total pickups the TRAP team recovered material dated to the Early Iron Age, Hellenistic and Roman periods. The earlier

occupation seemed to be restricted to an area closer to the river, in the north-eastern corner of the scatter. The Roman period material was the most abundant one, featuring two main areas of material concentration. Besides the pottery and AC, quern stones, undiagnostic glass fragments and metal fragments, including an iron blade, were found (Iliev et al. 2012, 23–27).

Year 2019

In 2019, the whole area of the previously detected scatter was resurveyed. Bigger items and unusual objects were looked for, and the dimensions of the surface scatter were confirmed. The two main surface concentrations of Roman period material were still visible in the field, with one located on the most elevated southern part of the scatter, and the second one placed north of the first one halfway down the hill.

There were 11 small finds/worked stones found in the fields. These were eight quern stones, one whetstone, one body fragment of a glass vessel with faceted decoration and one iron nail (Table 3, fig. 5, figs 17.85–86, 18.87–91, 93, 96). The fields were newly harrowed, either with full visibility (100%) or with slightly lowered visibility ranging between 60–80% due to the straw cover. The fields were dry.

Three total pickups of 20×20 m were conducted, their placement was chosen based on TRAP data from 2009; the orientation followed harrowing. The first total pickup (6021_TPU01) was placed in TRAP polygon SUID 80965, in an area of the highest material concentration to the south; the second one (6021_TPU02) was placed in SUID 80958, to the south-west of the first one, in a field with much fewer finds; the third one (6021_TPU03) was placed north-west of these two, in SUID 61001, in the area of the second highest surface concentration during the TRAP survey, although the final spot was chosen based on the scatter density in 2019 (fig. 5).

Pickup 6021_TPU01 was placed in a polygon originally featuring most of the finds from the whole surface scatter – 1096 ancient pottery fragments. In 2019, there were 936 sherds in the single pickup. The majority of all the surface and small finds also came from this area, with three small finds found directly within the pickup. These are the two whetstones and one flint stone – likely production waste (see Table 3). The latter find very likely relates to an earlier period of occupation as a handle of an Early Iron Age (EIA) pot was also found there.

Pickup 6021_TPU02 was placed in the neighbouring polygon originally with (only) 41 ancient pottery fragments. In 2019, the TPU02 featured 746 fragments, about 200 fewer than TPU01, but the number of finds was still very high with the lowest fragmentation of all on this site – including both pottery and architectural ceramics (Table 2). Perhaps this part of the field was more deeply ploughed in the past ten years bringing pottery fragments up to the surface, thus increasing the amount of surface finds and lowering their fragmentation.

Pickup 6021_TPU03 was placed down the hill, towards the north. Originally, 166 ancient pottery fragments were counted within the polygon. In 2019, TPU03 proved to be the richest one in terms of pottery, featuring 1157 fragments, and architectural ceramics, however, also with the highest material fragmentation. It was also the only pickup where Mottled ware was found, although only numbering eight small pieces weighing 2.6 grams each on average. Also, two rim fragments of the Çandarlı ware (Eastern sigillata C) were found there, otherwise undetected in the rest of the scatter.

Pottery

The major pottery classes known from Yurta–Stroyno were also represented in scatter TRAP no. 6021. We may confirm the presence of regionally made table wares – Fine red-slipped ware (fig. 13.1–18), Common red-slipped ware (figs 13.19–21; 14.22–27), Grey ware (fig. 14.28–29) and

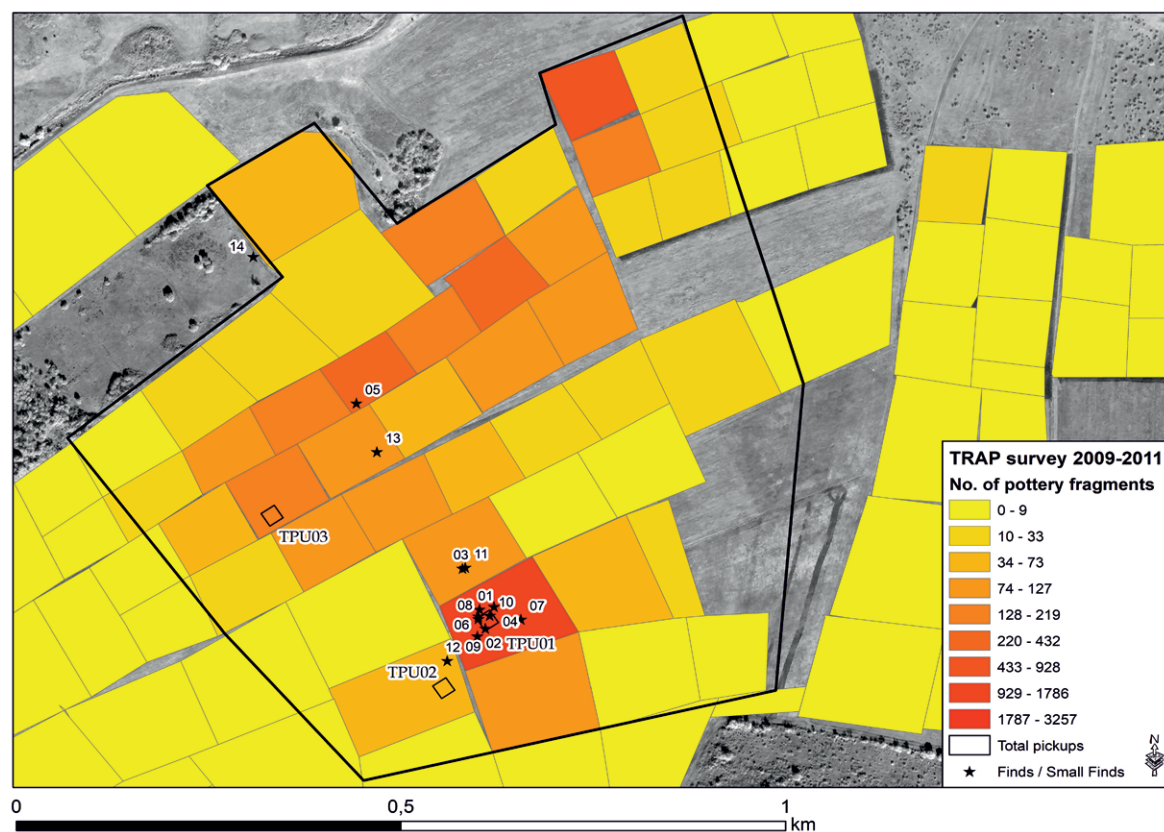


Fig. 5. Scatter TRAP no. 6021 with marked total pickups (TPU01–03) and small finds and worked stones (SF) 01–13 (map based on Ross et al. 2018, fig. 13 and Iliev et al. 2012, fig. 4, adapted by P. Tušlová in 2024)

Обр. 5. Струпване TRAP № 6021 с маркирани цялостни оборки (TPU01–03) и малки находки и обработени камъни (SF) 01–13 (карта, базирана на Ross et al. 2018, fig. 13 и Iliev et al. 2012, fig. 4, адаптирана от P. Tušlová през 2024 г.)

Mottled ware (fig. 14.30–31). The latter ware is rare and very fragmented, as was the case in Yurta–Stroyno. The high fragmentation of the ware could relate to its earlier production and longer post-depositional life as well as to the fragility of the ware. There were several other fragments of Mottled ware found in the fields, out of the pickup area, but still in a very small quantity. One of them is however a large fragment of a tray handle with incised decoration (fig. 14.32), a rare find not only for its state of preservation compared to other Mottled ware, but also for its shape, as trays are not a common vessel form in the Yambol District. Other attested Mottled ware forms are small vessels, cups, and bowls. Grey ware is not a frequent find, but it was represented to some degree in every pickup. These are mostly undiagnostic fragments, often body fragments or pieces of bases. There was one diagnostic fragment of a smaller krater with horizontal rim found in TPU02 (fig. 14.28) and fragment of a big vessel, possibly also a krater (fig. 14.29) found outside the pickup areas.

The most frequent finds are regionally produced red-slipped table vessels, compound of Fine red-slipped ware and Common red-slipped ware. The most represented shapes are plates with an out-turned arched rim (fig. 13.2) and similar shapes of plates (fig. 13.3–5); hemispherical bowls (fig. 13.8); and cups with an off-set rim and two band handles (fig. 13.14). We may also notice a higher number of table amphorae with out-turned rounded rims incised with one or two lines; from the 20 rim fragments which were found, three were brush slipped, the rest were slipped by dipping into the clay solution (see Tušlová 2023, 26, 42; fig. 11, pl. 2.182, 185). All the described shapes, as well as the other ones found in the scatter, are well known from the region, with parallels in Yurta–Stroyno.

The Common red-slipped ware includes vessels of Fine-red slipped ware fabric, but generally

of a thicker sherd which is commonly fired sandwich-like with a grey core and lower quality execution and/or slip. The material from the surface survey is in general of a worse quality due to the erosion and material degradation which makes it more difficult to distinguish between these two wares. Both wares seem to be, however, regionally produced, very likely contemporaneously from the 2nd till at least the 4th c. AD. The Common red-slipped ware vessels are generally in larger quantities. Among the well represented forms belong plates (fig. 13.19), big bowls (figs 13.20–21; 14.22–23, 27), jars (fig. 14.24), kraters (fig. 14.25) and dinos-like vessels (fig. 14.26). There were also two fragments of strainers made in this ware.

Regarding imported red-slipped table vessels, two fragments of Çandarlı ware were retrieved. Both are rim fragments of Hayes Form 4, commonly dated to the 3rd c. AD (Hayes 1972, 321–322, fig. 64). One fragment was found in the pickup TPU03 (fig. 14.33), another one, very small, in the northern field.

There are several other pottery fragments which, either by fabric or by shape, do not seem to be of regional production. The rim of a cup or bowl (fig. 14.34) has a reddish yellow fabric (Munsell 7.5YR 7/4) and red lustrous slip (2.5YR 5/6) which is however very worn, so is the sherd itself. By visual appearance it could be attributed to Pontic Sigillata A, however, there is no exact shape to relate it to. Closest is the Form 24.2 and 24.3 of Zhuravlev, a hemispherical cup with everted (ribbed) rim dated to the second half of the 1st c. AD (Zhuravlev 2010, 120, 222), however, Zhuravlev's form has a straight rim. Another rim sherd of a bowl (fig. 14.35) has a red fabric colour (2.5YR 4/8) and matt good quality slip of the same colour. The slip is continuous on both sides. A similar shape was found in Yurta–Stroyno, however, the ware differs – the fabric of the Yurta–Stroyno sherd has a reddish yellow colour (5YR 6/8), the slip is red (2.5YR 5/8), sparse inside. The shape is quite universal, with vessels of a similar shape being produced in different production centres mostly located in Eastern Aegean (cf. Tušlová 2023, sherd no. 337).

The last possibly imported table ware sherd is a rim of a bowl (fig. 14.36) of a reddish yellow fabric (5YR 6/6) with grey core and very worn red slip (2.5YR 5/8). The same shape of the same ware is known from Yurta–Stroyno (cf. Tušlová 2023, no. 338) however, with unknown place of origin.

The wheel made Coarse cooking ware (fig. 15.37–44) also seems to be of regional production, with shapes and fabric parallels in Yurta–Stroyno. From 49 rim fragments, the most represented are pots (41; here fig. 15.39–44), while the remaining eight fragments have everted rims either of casseroles or frying pans (fig. 15.37–38); there were four lids. The handmade cooking ware is substituted by the Granitic (fig. 15.45–48) and Dioritic (fig. 15.49–50) wares with the granitic one represented in a higher number. The Granitic fabric rich in quartz might be confused with the Coarse cooking ware fabric if the fragment is small, which might have helped to outnumber the Dioritic ware. Consequently, we should be careful when comparing them by number. The shapes are simple, all are pots with s-shaped rims. The only decoration is a relief band with cut lines or finger imprints.

There were no fragments of storage vessels and very few fragments of transport amphorae. One rim fragment of a Kapitän II amphora (fig. 15.51) and an amphora toe (fig. 15.52) of a pink sandy fabric (5YR 8/4), likely of southern Black Sea provenance, were found in TPU01. A rim of a southern Black Sea coast amphora of reddish yellow (5YR 7/8) fabric with predominant black shiny inclusions was found in TPU03 (fig. 15.53). Besides the Roman period pottery, about eight handmade pottery fragments scattered randomly over the site could be dated to the EIA; one amphora toe is very likely dated to LIA (fig. 15.54).

Worked stones, metals and glass fragments

Apart from pottery, the most common finds are fragments of quern stones and whetstones, glass, and metal objects. Often very damaged, quern stones number seven pieces (fig. 18, Table 3; nos 87–91). Five to six of them are parts of rotary quern stones; one is a saddle quern stone (fig. 18.89). Three of the better-preserved fragments (fig. 18.87, 90–91) might be identified as upper stones of rotary querns, the so-called *catilli* (cf. Weissová et al. 2022, 95–96, fig. 2). *Catillus* no. 90 preserves the hole for a wooden handle; based on its shape it might be identified as a Conical *catillus* without the rim (fig. 18.90). The two remaining fragments are Conical *catilli* with sloping rim (fig. 18.87, 91). Two more fragments of rotary querns were identified, they were however poorly preserved (6021_2019_SF03 and _SF05; Table 3 not drawn). The most abundant are rotary quern stones made of igneous rocks (4 pcs.), three are of volcanic rocks and one of a plutonic rock. Both rocks are locally available. Only one rotary quern stone was made of sedimentary rock, of medium to coarse grained sandstone (fig. 18.87). A similar composition of rotary quern stones – dominated by volcanic rocks – was also found in Yurta–Stroyno (Weissová et al. 2022, 95).

A quern stone made of vesicular basalt is most peculiar (fig. 18.88). The piece is however very fragmented, and it is difficult to reconstruct its original shape. A better preserved worked stone made of the same material was found in Yurta–Stroyno, where it was identified as a part of the segmented mill Type 1 according to Peacock (2013a, 97; 2013b, 154–155, fig. 1.c), rarely documented in the area (Weissová et al. 2022, 96–97). Basalt is a volcanic rock, which is abundant along the middle stream of the Tundzha River, especially in the northern and middle part of the Yambol District. Nevertheless, without further analyses it is impossible to determine its possible origin.

The last fragment could be identified as a lower stone of a saddle quern (fig. 18.89), a stone tool used across prehistory for grinding a wide range of products (Alonso, Frankel 2017, 2–3). It is made of fine to medium grained sandstone.

Less numerous are other stone objects including three whetstone fragments, two rectangular, rounded on the edges and oval in section (no. 93); and one of rounded form. Whetstones are typical finds from prehistoric and Roman period settlements (towns and rural settlements, as well as production sites). They are usually made with a fine-grained stone, typically sandstone, and used with water to sharpen different cutting tools (Gánovský 2013, 4–6; Thiébaux et al. 2016, 565). The whetstone no. 93 has a typical parallelepiped shape with irregular rectangular cross-sections as the original shape was degraded by long-term use (fig. 18.93). Rectangular whetstones belong to the most frequent group of whetstones manufactured throughout the Roman Empire (Thiébaux et al. 2016, 565–566).

Further, one pebble rock tool, half of a rounded pebble smoothed from one side (fig. 18.96), and one flint fragment with a cortex of no particular shape, likely production waste, were found. The chronology of these stone tools is questionable as they are not chronologically sensitive. Similarly, the chronological classification of the iron nail with strange blue-greyish corrosion (fig. 17.86) is not clear. Morphologically, it might be Roman (cf. Čist'áková, Kmošek 2022), but also younger, as such nails are known until the beginning of the 20th c. AD (cf. Krajíc 2003, 60–68; Jičínský 2017, 87).

Additionally, one glass body fragment no. 85 was found in the fields. It is decorated with two rows of elongated facets and two horizontal engraved lines (fig. 17, tab. 3). It is made of thicker high-quality glass with a minimum of impurities and bubbles. The technique of facet cutting is well known in the Roman Empire from the end of the 1st c. AD, and it was used the most during the 2nd and the 3rd c. AD. The combination of facet and linear wheel-cut is typical for the vessels dated to the 2nd–3rd c. AD (Czurda-Ruth 1989, 133)³. Based on the curvature of the sherd and faceted decoration

3 Faceted decoration was also used during the Late Antiquity (4th–5th c. AD), when, however, bigger round/oval facets were more popular (Whitehouse 1997, 221).

No.	TRAP #	SF#	Total pick-up #	Material	Object	Specification	Part	H. (mm)	W. (mm)	T. (mm)	W. (g.)	Physical description / Notes	Chronology
87	6021	1	x	Stone	Rotary quern stone	Sandstone	Rim	200	100	75	1500	Upper stone	Roman
88	6021	2	x	Stone	(Rotary?) quern stone	Volcanic rock (vesicular basalt)	Rim	230	120	80	1500	x	Roman
x	6021	3	x	Stone	Rotary quern stone	Volcanic rock (tuff)	Body	170	130	80	3000	One smoothed side	Roman
89	6021	4	x	Stone	Saddle quern stone	Sandstone	Body	210	80	85	2000	Lower stone; irregular sides	?
x	6021	5	x	Stone	Rotary quern stone	Plutonic rock (granite?)	Body	210	150	150	7000	Two smoothed sides	Roman
85	6021	6	x	Glass	Vessel	Bowl (?)	Body	28	26	3	x	Transparent; colourless; engraved and faceted decoration	2nd-3rd c. AD
86	6021	7	x	Iron	Nail	x	Whole nail	68	39	8	37	Square section of the shank; blue-greyish corrosion	Roman / Modern (?)
x	6021	8	1	Stone	Flint	Production waste	Chip	39	25	16	16	Fragment with cortex	EIA ?
x	6021	9	1	Stone	Whetstone	x	Rim+body	93	74	22	195	Rounded; rounded edges	?
x	6021	10	1	Stone	Whetstone	x	Rim+body	49	36	17	50	Rectangular; rounded edges	?
93	6021	11	x	Stone	Whetstone	x	Rim+body	55	31	19	69	Rectangular; rounded edges	Roman ?
96	6021	12	x	Stone	Pebble rock tool	x	Rim+body	91	43	59	231	Rounded shape; one smoothed side	?
90	6021	13	x	Stone	Rotary quern stone	Volcanic rock (tuff)	Rim	61	60	63	346	Upper stone; hole for handle	Roman
91	6021	14	x	Stone	Rotary quern stone	Volcanic rock (tuff)	Rim	63	55	90	715	Upper stone	Roman
82	7023	1	x	Glass	Vessel	Bottle	Rim	27	6	7	x	Transparent, blue-green	?
83	7023	2	x	Glass	Vessel	x	Body	27	14	2.5	x	Colourless, transparent; engraved and faceted decoration	2nd-3rd c. AD
84	7023	3	x	Glass	Vessel	Drinking vessel	Rim	16	18	1.5	x	Colourless; fire rounded rim	2nd-4th c. AD
94	7023	4	x	Stone	Whetstone	x	Rim+body	41	41	10	33	Rectangular; flat; smoothed from both sides; triangular edges	Roman / Modern (?)

No.	TRAP #	SF#	Total pick-up #	Material	Object	Specification	Part	H. (mm)	W. (mm)	T. (mm)	W. (g.)	Physical description / Notes	Chronology
92	7023	5	x	Stone	Rotary quern stone	Volcanic rock (tuff / basaltic andesite)	Rim	91	72	84	462	Upper stone	Roman
x	7023	6	x	Stone	Whet-stone	x	Rim+body	44	42	21	86	Rectangular; two smoothed sides	Roman / Modern (?)
95	7023	7	x	Stone	Whet-stone	x	Rim+body	85	63	27	252	Rectangular; triangular section	Roman / Modern (?)
x	7023	8	x	Stone	Quern stone	Sandstone	Body	66	48	36	128	Two smoothed sides	Roman

Table 3. List of the small finds including worked stones found in scatters TRAP nos. 6021 and 7023
 Таблица 3. Списък на дребните находки, включително обработени камъни, открити в струпвания TRAP № 6021 и 7023

it is possible to classify the body fragment no. 85 to a group of hemispherical bowls Isings 96 (Clairmont 1963, 65–70; Shepherd 1999, 359–360; Stawiarska 2014, 84–85). Similar glass fragments were found at Yurta–Stroyno (Čišťakova, Zlámalová Cílová 2022, 193–194) and *Nicopolis ad Istrum* (Shepherd 1999, 313–316). From the territory of Bulgaria, hemispherical glass bowls with faceted decoration are also well known from the Roman period graves, e.g. from Butovo (Veliko Tarnovo), Mlekarevo (Sliven) and Znepole near Tran (Pernik), all dated to the 2nd–3rd c. AD (Cholakova 2006, 222).

TRAP no. 7023

Year 2009

A dense, spatially limited surface scatter was found on the top of a small terrace located about 1 km south-east of Robovo village overlooking the Gerenska River Valley. The overall scatter area covered 1.5 ha and the majority was concentrated in two polygons, SUID 70953 and 70954. The scatter was rich in architectural ceramics, especially in bricks and roof tiles. There was very little other material, including pottery. The scatter was dated solely to the Roman period and interpreted as either a small, isolated structure, or necropolis (Iliev et al. 2012, 36).

Year 2019

The surface scatter was easily found, located on the small terrace, divided into overgrown pasture to the north and two separated fields to the south. Random pottery fragments and one glass rim dated to the Roman period were found in several molehills over the overgrown area, otherwise there was zero surface visibility. The cultivated fields to the south were walked systematically in the same manner as the previous surface scatter, no. 6021. The material was concentrated especially on the first line of the cultivated fields, in the red coloured polygon SUID 70953 (fig. 6). The scatter continued downhill to the east till the end of the field. The surface material was composed especially of architectural ceramics and middle to small sized stones as described previously by TRAP; however, the finds showed more variability in comparison to the 2009 survey. Besides the pottery, three glass fragments (nos 82–84), three whetstones (nos 94–95) and two milling stones (no. 92, see tab. 3, figs 17–18) were found in the fields. All the finds were concentrated around the same spot, the eastern

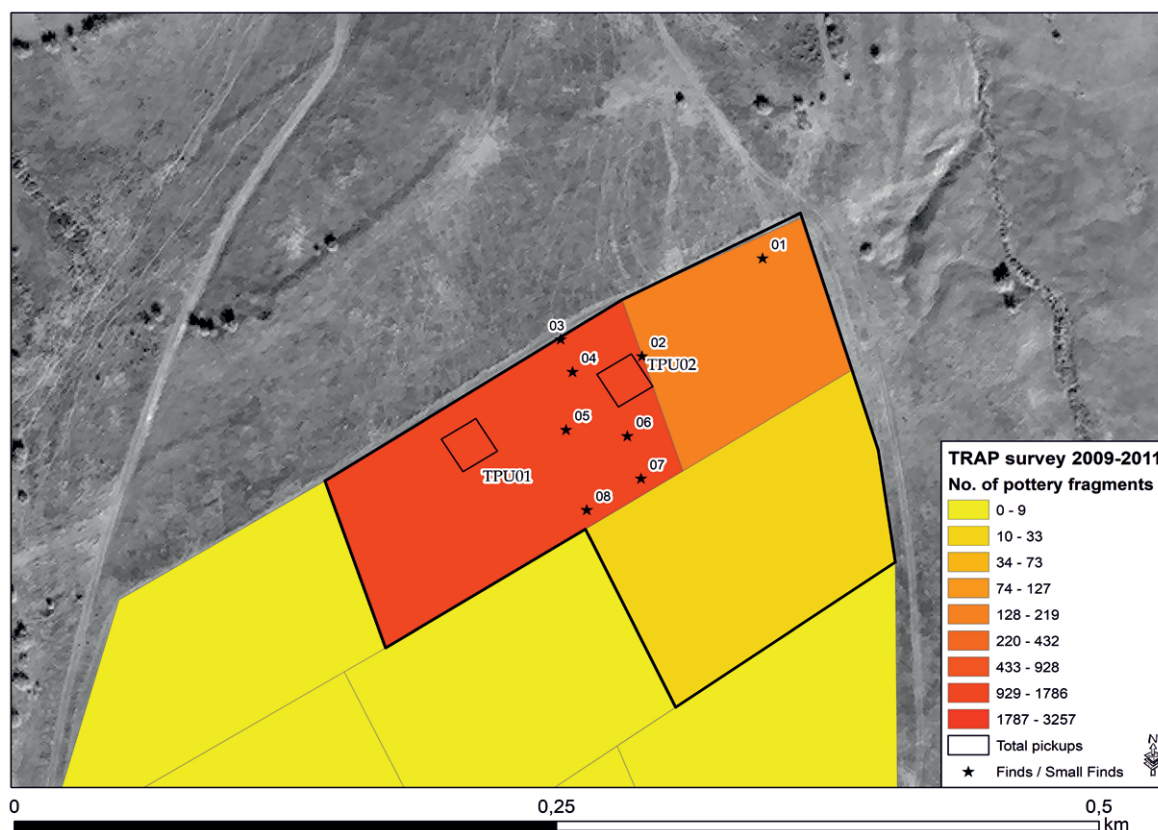


Fig. 6. Scatter TRAP no. 7023 with marked total pickups (TPU01–02) and small finds and worked stones (SF) 01–08 (map based on Ross et al. 2018, fig. 13 and Iliev et al. 2012, fig. 4, adapted by P. Tušlová in 2024)

Обр. 6. Струпване TRAP № 7023 с маркирани цялостни оборки (TPU01–02) и малки находки и обработени камъни (SF) 01–08 (карта, базирана на Ross et al. 2018, fig. 13 u Iliev et al. 2012, fig. 4, адаптирана от P. Tušlová през 2024 г.)

edge of the western field, as if they were brought there by machines during the field's cultivation; only one of the glass fragments was found further downhill (SF01 – no. 82).

Two 20×20 m pickups were conducted, both in TRAP polygon SUID 70953, originally numbering 1700 ancient pottery fragments. 7023_TPU01 was placed to the east of the polygon, in the area of the highest concentration of stones and architectural ceramics, in a harrowed field with 80–100% visibility. 7023_TPU02 was placed in an area of the highest concentration of variable surface material, in the same field as TPU01, which was, however, covered by surface vegetation composed of straw, limiting the visibility to 60–80%.

Both pickups yielded a very high number of architectural ceramics (tab. 2), which was composed predominantly of roof tiles (approximately 98% of all AC) with only a few bricks and several pieces of mudbricks. A predominant component of roof tiles in AC is also common at Yurta–Stroyno where the bricks seem to be used for dedicated purposes only (Weissová 2022, 74).

TPU01 featured half of the pottery finds and twice as many AC fragments of lower fragmentation than TPU02, also including seventeen fragments of overfired roof tiles and a brick. The higher number of roof tiles and less pottery might relate to the disturbance of the upper construction of a collapsed structure. We may expect that the top layer composed of roof tiles was hit by the ploughing machines and spread around. Nevertheless, the overfired ceramics are an unusual feature. We did not find any such fragments in TPU02, nor on the site 6021 and rarely at Yurta–Stroyno. The high temperatures needed for clay vitrification could relate to the destruction of the structure by fire, or the

overfired roof tiles and a brick could evidence activities related to high temperatures conducted at the place, such as the production of architectural ceramics.

Pottery

The overall amount of pottery finds at TRAP no. 7023 is much lower than in the case of TRAP no. 6021, numbering 684 vs. 2839 fragments (tab. 2). However, the composition of the regionally produced ware seems to be the same; most of the shapes also repeat. The table vessels are represented by Fine red-slipped ware (fig. 16.55–60), Common red-slipped ware (fig. 16.61–67), Grey ware (fig. 16.68) and a few fragments of Mottled ware (e.g. fig. 16.69).

There are many red-slipped ware fragments with a sandwich section, grey core and poor slip, making the representation of Common red-slipped ware almost equal to Fine red-slipped ware. Regarding individual shapes, some phenomena repeat – hemispherical bowls; cups with an off-set rim and two band handles; plates with an out-turned arched rim and the table amphorae with an out-turned rounded incised rim are common. The latter are represented by eight rim fragments, only one of which is brush slipped (no. 65). The three fragments of strainers are also made of the Common red-slipped ware (e.g. no. 67). What is, however, different from the first scatter, are the flanged bowls made in Fine red-slipped ware, very common for the regional production. They are completely missing at the scatter TRAP no. 6021, while here they are represented by several fragments (e.g. nos 58–59).

The Coarse cooking ware is composed of only four diagnostic rims, all of them are pots (fig. 17.73–74). Despite the small number, we may still suggest that this form might again prevail over the frying pans and casseroles. Handmade cooking ware is represented by the two wares – Granitic (fig. 17.75–77) and Dioritic (fig. 17.78–80), and as with the previous scatter, the Granitic ware is more abundant. All diagnostic handmade vessels made in both wares are pots with s-shaped rims. None of the fragments is decorated.

Regarding the imported pottery, a few fragments of fine-red slipped ware and transport amphorae were found. The table ware includes three rim fragments, all found in TPU01. The first is a rim of Çandarlı ware Hayes Form 4 (fig. 16.70), which is most commonly dated to the 3rd c. AD (Hayes 1972, 321–322, fig. 64); another one is a rim of African red-slipped ware (fig. 16.71); and the last one is a flanged bowl rim of an unidentified origin (fig. 16.72). The African red-slipped ware is represented by a fragment of a plate or large bowl (no. 71). It has a strong brown fabric (7.5YR 5/6) with yellowish red (5YR 5/6) matt thin slip, continuous on both sides. The fabric is very fine with rare tiny silver mica flakes on the surface. We may attribute this fragment to Hayes Form 67, dated from the mid-4th till the mid-5th c. AD (Hayes 1972, 112–116, fig. 19; 2008, fig. 34.1082). There are very few finds of African red-slipped ware known from the area so far. About ten years ago G. Kabakchieva put together African red-slipped ware finds from the Diocese of Thrace and Dacia in the territory of modern Bulgaria (Kabakchieva 2013). Her list of finds includes 52 sherds from twelve sites⁴, numbering 20 different types of African red-slipped ware. None of the documented finds were however found along the Tundzha River basin, nor have any new findings been published from the area up to date except one fragment of a base decorated with two imprinted palmette leaves possibly of African origin found at Yurta–Stroyno (see Tušlová 2023, no. 344).

The last sherd, a flanged bowl (no. 72), has a fine reddish yellow fabric (5YR 6/8) and a thin,

4 These are: a grave in Asenovgrad municipality; Deultum; Krakra fort in Pernik; Kyustendil; *Marcianopolis*; *Nicopolis ad Istrum*; Ropotamo River estuary (underwater find); Sandanski; Varna (underwater find); Villa Armira near Ivaylovgrad; Yakimovo near Montana; *Yatrus* (Kabakchieva 2013).

worn, badly preserved reddish brown slip (2.5YR 4/3); the core of the sherd is grey. Morphologically, it has a very pronounced lower rib, wider than the rim.

The fragments of transport amphorae are all undiagnostic, recognized only by the fabric. One fragment of a Kapitän II amphora and a toe possibly of LIA chronology (fig. 17.81) were retrieved from TPU02; another fragment of Kapitän II and a south-pontic amphora were found in the fields. The latter might also be dated to the LIA. Two dolia rim fragments were found in TPU02, both very worn. Despite their poor state of preservation, they are the only remains of storage vessels found at the site.

The two above-described amphorae are the only fragments possibly pre-dating the Roman occupation of the area. It is quite strange that the Greek-Hellenistic period would be represented by transport amphorae only, but none of the other wheel-made sherds could have even been considered to be pre-Roman. A similar phenomenon, i.e. Greek-Hellenistic occupation in the rural countryside of the region attested mainly by the presence of transport amphorae, was already noted in the material processed by TRAP (Iliev et al. 2012; Tušlová, Weissová 2018).

Worked stones and glass fragments

There were several stone tools and glass fragments retrieved from the scatter. Regarding the stone tools, two quern stones were found. One is a *catillus*, made of a volcanic rock (fig. 18.92); one is a sandstone rotary quern, too fragmented for further classification (SF08 in tab. 3). Further three whetstones were found, all rectangular in form, otherwise of different sizes and shapes. No. 94 has a rectangular shape, but it is relatively narrow with regularly cut edges, not typical for Roman period whetstones; no. 95 has an irregular shape tapering towards the edges which makes it rather characteristic for post-medieval whetstones. As with the previous case, the chronology of these objects is complicated. The scatter does not feature a multi-period occupation favouring their classification either into the Roman period or into the post-medieval modern era.

The glass finds are represented by three fragments. No. 82 is a badly preserved rim fragment of transparent blue-green glass, based on its size and shape, likely the rim of a bottle. No. 83 is a body fragment of transparent glass with elongated faceted and engraved linear decoration. It has a thicker sherd, and it is made of high-quality glass with a minimum of impurities and bubbles, however, the vessel shape cannot be approximated from the small fragment. No. 84 is a rim of a transparent glass fragment. According to its shape, it belongs to a wider group of drinking vessels. It has a diameter of 90 mm and a fire-rounded out-splayed rim which could place it into the group of glass bowls/beakers. These bowls/beakers were widely spread all over the Roman Empire and were in use from the 2nd to the 6th c. AD (Isings 1957, 101–103), with the peak production and distribution during the 2nd–4th c. AD (Rütti 1991, 49). A collection of similar vessels is known from *Nicopolis ad Istrum*, where these vessels were in use till the 4th–6th c. AD (Shepherd 1999, 346–347); further from Gradishteto near Dichin (Cholakova 2009, 304–305), Yatrus–Krivina (Gomolka 1979, 146–150), Yurta–Stroyno (Čiřáková, Zlámalová Cílová 2022, 186) and Kabyle⁵.

5 Unpublished finds from Kabyle.

Geomagnetic prospection

In summer (24–25.07) and autumn (26–27.11) of 2021, a geomagnetic prospection took place on three sites in the Yambol District. The prospection focused on already predicted Roman period settlements/sites in the area along the middle Stream of the Tundzha River. The first prospected area was the scatter TRAP no. 7023 near Robovo; another one was located just east of Kabyle; and the last one in the fields near the village of Kozarevo, south-east of Yambol (fig. 1).

The geomagnetic prospection was carried out by the Archaeogeophysics team from the Department of Archaeology and Museology at Masarik University in Brno, Czech Republic⁶. The survey itself was conducted with a fluxgate magnetometer used in ATV mode. RTK GNSS (Real Time Kinematic Global Navigation Satellite Systems) was used to record the position of the measurements.

TRAP no. 7023

Introduction

The TRAP scatter no. 7023 is one of the Roman period sites re-surveyed in 2019 (see fig. 6). It was chosen for geomagnetic prospection based on its small dimensions, easy access, and single period occupation. It was prospected in autumn (26.11.2021) when the fields were partly harrowed (the western field), partly deep ploughed (the eastern field) (Bakardzhiev et al. in press a). The northern scrubby area was still heavily overgrown allowing only a small part of it to be investigated. However, the core area with the highest surface finds concentration was fully prospected. The most challenging situation represented the deeply ploughed eastern field sloping downhill which, after some attempts, proved to be impossible to measure. Within a single day, an area of 1.7 ha was prospected (fig. 7).

Results

The area of TRAP polygon SUID 70953 with the highest amount of architectural ceramic and stones found during the intensive surface survey revealed strong bipolar anomalies, likely debris of fallen constructions. The debris continued further north, into the scrubby area. Altogether, three features of a rectangular shape (10 × 6 m, 30 × 12 m, 20 × 16 m) were identified. A similar concentration of bipolar anomalies was located to the north-east of the prospected area, however these features were not fully investigated due to the dense vegetation. All these features likely relate to a destruction layer of some construction (fig. 8).

Most of the other detected anomalies are magnetically positive features of an oval shape, numbering little over a hundred spots. These are sunken features, likely pits. They were concentrated especially in the eastern field; some were found also in the scrubby area in the north.

Besides magnetically positive anomalies, a number of linear features were also detected. They follow the ploughing of the fields and are very likely connected to a modern use of the fields and their cultivation.

The results of the geomagnetic prospection are not very clear. Nevertheless, putting the data together with the outcome of the surface survey we may conclude that the three areas of debris detected by the geomagnetic prospection relate to the dense roof tile scatter concentrated exactly at the same place. No thermoremanent magnetized features were detected to support one of the previously suggested ideas of a local production of architectural ceramics or the presence of high temperature related crafts. Perhaps these burned roof-tiles, which gave a basis for this assumption were still good to be used for construction purposes. Another roof tile layer might be located north-east of this one,

6 Peter Milo; Tomáš Tencer; Dávid Šálka.



Fig. 7. TRAP no. 7023 with the results of the geomagnetic prospection
(map by P. Milo, T. Tencer and D. Šálka)

Обр. 7. TRAP № 7023 с резултатите от геомагнитната снимка
(карта на P. Milo, T. Tencer и D. Šálka)



Fig. 8. TRAP no. 7023 with the results of the geomagnetic prospection and marked features
(map by P. Milo, T. Tencer and D. Šálka)

Обр. 8. TRAP № 7023 с резултатите от геомагнитната снимка и маркирани структури
(карта на P. Milo, T. Tencer и D. Šálka)

in the scrubby area with zero surface visibility which was not fully prospected, nor was it surveyed. The two features are about 44 m apart, and due to no visible connection, likely representing two different constructions/homesteads.

East of Kabyle

Introduction

In the year 2021, during the extension of the artificial irrigation channel of Azmak Dere, a Roman period structure near Kabyle was found. It is located about 300 m north-east of the centre of Kabyle, with most of the remains detected in the trenches nos 10–15 on the northern bank of the river (Marchovski, Bakardzhiev in press). Under the topsoil, a layer of roof tiles, a stone wall, and associated pottery dated to the Roman period were found. Otherwise, many pits were found, especially in the north-eastern part of the investigated area, all dated to the EIA. According to the excavators, the remains of the Roman period structure might belong to a *villa*.

Since the excavations of the area were supposed to continue in the following years, geomagnetic prospection was conducted on the relevant fields surrounding the artificial channel to reveal a possible continuation of the roofed structure. The prospection took place on 24.07.2021, covering 2.5 ha (Bakardzhiev et al. in press b). The relevant fields, located on the eastern edge of the investigated area, were freshly harrowed with easy passability.

Results

The investigated area is divided into two fields, northern and southern, separated by the irrigation channel running east to west. In total, 347 features possibly related to human activity were identified in both fields. Most of them are magnetically positive features of oval shape – pits.

The majority of the pits are located in the north-eastern part of the northern field, fewer of them in its western part and in the southern field. These belong to the EIA period, and many of them had been already excavated in 2021 *via* test trenches (Marchovski, Bakardzhiev in press). Some of the sunken features are of larger dimensions and of a specific shape, such as the rectangular feature cut in half on the northern edge of the northern field (fig. 9).

Still in the northern field, close to the trenches with the roof tile layer, a spatially significant concentration of bipolar anomalies was identified. It seems to be a rectangular structure of 16×16 m, creating a right angle on its western edge, marked by some sort of delimitation (the dashed red line on fig. 10). This feature might be interpreted as the debris of a collapsed structure. In its vicinity there are several other bipolar anomalies, likely thermoremanent magnetized features, which are remnants of burned material or pyro-technological features such as ovens or kilns. There are however no visible remains of the excavated roofed structure continuation further north, as it should be located just to the south of the main debris concentration along the channel.

The southern field has significantly fewer anomalies than the northern one, but the pits continue. There is also one more area with the debris of a collapsed structure near the artificial channel, measuring ca. 10×15 m. Near the debris there are two more thermoremanent magnetized features. Several lines and linear structures, often segmented, were further detected. These are very likely of modern origin, such as traces of field cultivation.

The two areas of debris, about 45 m apart separated by the artificial channel, likely relate to each other, as well as to the roof tile layer uncovered just in between of them. The debris might relate to the roof tile destruction fallen on the stone foundations as uncovered in the test trenches.

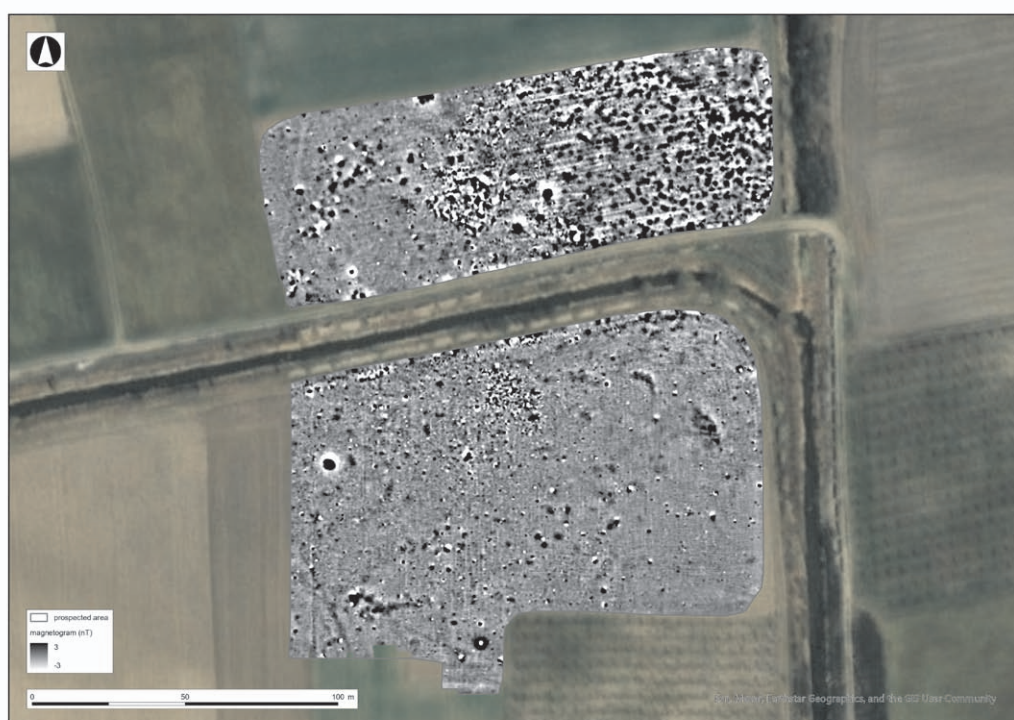


Fig. 9. Area east of Kabyle along the artificial irrigation channel of Azmak Dere with the results of the geomagnetic prospection (map by P. Milo, T. Tencer and D. Šálka)

Обр. 9. Районът източно от Кабиле покрай изкуствения напоителен канал на Азмак дере с резултатите от геомагнитната снимка (карта на P. Milo, T. Tencer и D. Šálka)

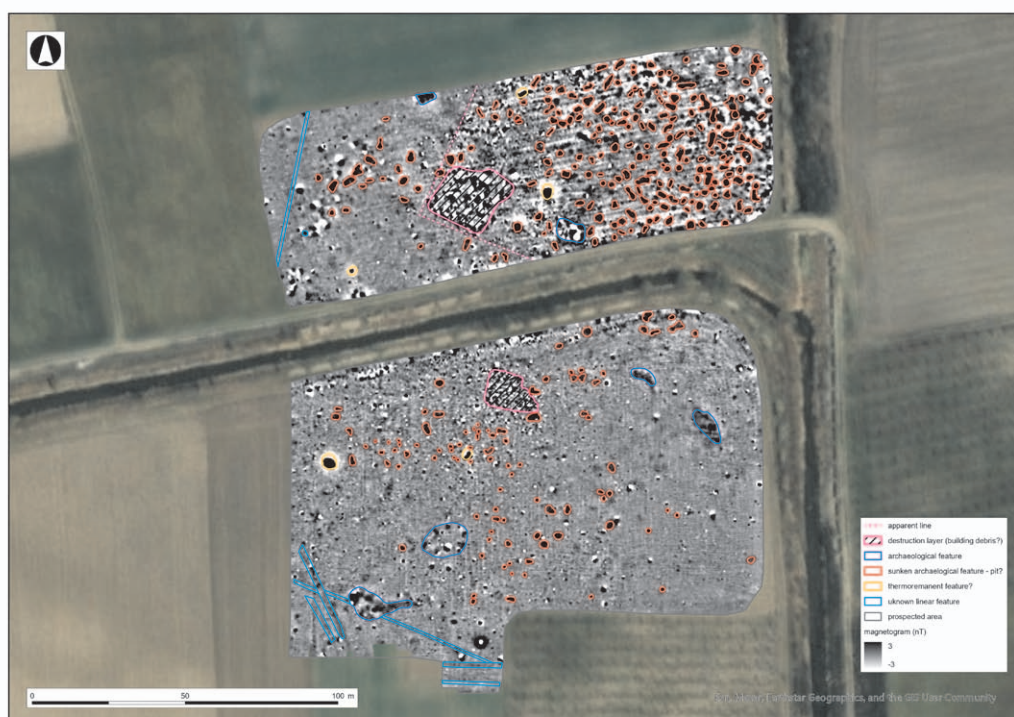


Fig. 10. Area east of Kabyle along the artificial irrigation channel of Azmak Dere with the geomagnetic prospection and marked features (map by P. Milo, T. Tencer and D. Šálka)

Обр. 10. Районът източно от Кабиле покрай изкуствения напоителен канал на Азмак дере с резултатите от геомагнитната снимка и маркирани структури (карта на P. Milo, T. Tencer и D. Šálka)

Kozarevo

Introduction

The village of Kozarevo is located about 8.5 km south-east of Yambol and 14 km south-east of ancient Kabyle. The modern village seems to be built over a Roman period settlement (*vicus*?) as many local inhabitants retrieved pottery and other material dated to the Roman period from their gardens. The cultivated fields to the south-west of the village along the Kozarevskoto Dere also yielded a large amount of pottery, AC, and worked stones. The raised surface concentration was noted during a preliminary field observation, but no surface survey has been conducted yet. Consequently, there is no systematically collected material to work with and to compare with the other scatters mentioned in the first part of the article. Nevertheless, it is worth noting that there is a high amount of metal slag concentrated on the surface.

The area with the largest amount of surface material was prospected using the geomagnetic method on 25.07 and 27.11 of 2021 (Bakardzhiev et al. in press c). In total 12.2 ha were investigated in the two different months to cover the whole desired area. In July, part of the fields was newly harvested, covered by a dense straw layer; in November, a fair time after the harvest, the fields were covered in short but dense grass cover. The fields in the north-east were deep ploughed, although it was possible to prospect them, the results were very poor.

Results

The magnetic field of the investigated area is very affected by the complicated hydrogeological processes and modern underground constructions (fig. 11). The strong signal from these structures masks the weaker responses from the archaeological features. Consequently, the interpretation of the archaeological features in this area is challenging and complicated. In some prospected parts, however, the pedological and geological conditions provided a sufficient contrast to detect magnetic anomalies. Altogether, more than 120 anomalies, possibly related to archaeological features, have been identified in the areas without strong magnetic disturbance (fig. 12). Around 100 of the identified anomalies are magnetically positive oval shape features, representing the pits. Due to the disturbed geology, it is however impossible to identify their possible concentrations.

The relatively high number of bipolar anomalies likely refers to thermoremanent magnetized features, areas fired at high temperatures, likely ovens or kilns. They are to be found along both banks of the Kozarevskoto Dere. Their larger cluster however appears in the south-eastern field separated by the river, where seven such features have been found, one next to another. Others were spread over the prospected area, both along the river and deeper into the fields.

Near the river in the northern field, strong magnetic dipole anomalies were detected, very likely representing the remains of stone walls (50 × 15 m). A dominant wall running north-south is visible, so is a perpendicular wall attached to its southern end. Otherwise, there is no clear ground plan. In the north, a rectangular room might be running along the wall; perhaps another one is attached to the southern 'L' shaped perpendicular wall. Near the wall structure, several different features and thermoremanent anomalies were detected.

Two rounded magnetic dipole anomalies, 7 m in diameter, were further detected on the south-eastern field separated by the river. They feature similar characteristics to a stone structure, but their interpretation is not clear.

The amount of thermoremanent anomalies and lack of debris, otherwise present on the other two prospected sites, might point to a different character of this area. It seems there is no roof sheltered area, perhaps there was no permanent settlement. Together with the larger number of thermoremanent features, and the slag concentration on the surface, we may speculate that this is a production



Fig. 11. Western part of Kozarevo village with the results of the geomagnetic prospection (map by P. Milo, T. Tencer and D. Šálka)

Обр. 11. Западната част на с. Козарево с резултатите от геомагнитната снимка (карта на P. Milo, T. Tencer и D. Šálka)



Fig. 12. Western part of Kozarevo village with the results of the geomagnetic prospection and marked features (map by P. Milo, T. Tencer and D. Šálka)

Обр. 12. Западната част на с. Козарево с резултатите от геомагнитната снимка и маркирани структури (карта на P. Milo, T. Tencer и D. Šálka)

site located near a large Roman period settlement currently located under the Kozarevo village.

Discussion

The several Roman period scatters (TRAP nos 6021 and 7023) and the *vicus* of Yurta–Stroyno, all three located along the streams of the Gerenska and Dereorman rivers, seem to feature the same composition of material culture. The pottery assemblages include identical classes of regionally made fine table wares, as well as wheel made and handmade cooking wares; the forms and decoration of the glass vessels repeat; so do the quern stones made mostly of locally available materials. The three settlements as such seem to be contemporary, or at least at a certain period of time contemporarily used.

The regionally produced pottery of different functions and wares is predominant at each site, while the import is almost negligible. There is always at least one fragment of Çandarlı ware, most often the Hayes form 4 dated to the 3rd c. AD (nos 33, 70); and a few transport amphorae, from the recognizable types Kapitän II (no. 51) dated from the end of the 2nd till the beginning of the 5th c. AD (Opaiț, Ionescu 2016, 12) with the peak production and distribution period in the 3rd–4th c. AD (Dyczek 2001, 143–144; Bezeczky 2013, 149) and some undiagnostic south-pontic containers, likely of Sinopean and/or *Heraclea Pontica* origin (e.g. nos 52–53), some of which might be, however, of an earlier LIA date. There are some individual fragments of possible Pontic sigillata A (no. 34) and African red-slipped ware (no. 71). The former was also identified at Yurta–Stroyno (cf. Tušlová 2023, nos 308–314), although these were vessels of different shapes; the latter is rare in the area, although also one sherd of possibly North African origin had been found at Yurta–Stroyno (cf. Tušlová 2023, no. 344).

None of the surface finds is very chronologically sensitive, consequently, we may generically date the two sites to the range of the 2nd–4th c. AD. The chronology of the single find of African red-slipped ware from TRAP no. 7023 overlaps with the 4th c. AD, but it could also prolong the chronology till the mid-5th c. AD. Since it is only one sherd, we should not put much of a chronological weight on it, on the other hand, it represents a rare find related to otherwise uncommon North African import.

The lower number of collected materials from the surface survey cannot be equally compared to excavated material from Yurta–Stroyno, which numbers thousands of sherds, but it does give a representative sample of each site. An enlargement of the prospected area or test trenches would probably bring about a more variable pottery sample, although we may still expect a low number of imported vessels, as in the case of Yurta–Stroyno. Nevertheless, even the presence of a few sherds, especially if they re-occur from site to site, helps to reconstruct the contacts and economic ties of the Roman period settlements along the Tundzha River.

Besides the quern stones attested at all three sites suggesting at least their partial agricultural focus, we may also expect some kind of crafts being developed at each settlement, as in the case of Yurta–Stroyno where the remains of glass production (Čiřáková, Zlámalová Cílová 2022) and iron smelting and smithing (Čiřáková, Kmošek 2022) were found. Production related finds seem to come as well from the site of St. Iliya, located near Yurta–Stroyno, where a double-chambered kiln dated to the Roman period was excavated last year (Agre in press). Additionally, an ancient marble quarry near the village of Kamenetz (ca. 10 km north-east of Stroyno village) was identified, with some worked stone used for construction at Yurta–Stroyno being possibly extracted from there (Haubenthal 2022, 115). A Roman settlement focused on crafts and production might also be located next to the village of Kozarevo, where large amount of thermoremanent features was detected by geophysical prospection. For now, we are missing the surface material for a proper comparison with

the other sites, nevertheless, the amount of metal slags concentrated on the surface was noticeable already during the generic surface observation. Kozarevo is located closer to Kabyle and, in theory, its character could be different from the more southerly located settlements. Considering its presumed expansion under the modern village of Kozarevo, we may also expect its more extensive size, with a special area designated only for crafts located outside or on the edge of the settlement.

The density of the rural Roman period settlements located in the selected areas along the middle stream of the Tundzha River is quite high, placing them on average from 2500 to 3500 m from each other, creating a buffer zone of over a thousand metres around each of them. If we presume that these are rural settlements, the distance might reflect the assigned land for each settlement, available for grain cultivation and animal husbandry, which have been the most suitable activities for the region since the beginning of the Iron Age (Connor et al. 2018, 138–143). The animal husbandry taking place in the area is attested by animal bones found at the settlement of Yurta–Stroyno being mainly represented by cattle, pigs, and sheep/goat. The osteological analyses of the bones identified a small proportion of pathologies suggesting these animals were not used for hard work and might rather be kept for grazing, i.e. for milk and for meat (Nývtlová Fišáková 2022, tab. 2, 266).

Smaller homesteads might be located near some of the bigger settlements. Since our study is based on surface material with limited chronological potential, we need to, however, bear in mind that not all the sites might have been in use at the same time. Nevertheless, a similar situation might be noted to the west of Kabyle, in the hinterland of Kermen town and the villages of Skobelovo and Bozadzhi. More than 12 Roman period sites dated from the 2nd half of the 1st c. AD till the 360s/370s AD were identified there *via* field survey and geophysical prospection, some of them were also excavated. The sites were identified as rural settlements with separated farmsteads/households located in their vicinity (Katsarova et al. 2018, 360; Georgiev et al. 2020). One of the excavated sites near Skobelovo, known as Site 15 and identified as a Roman village, yielded a high number of iron tools related to agriculture and animal husbandry, as well as evidence of iron working and household and architectural ceramic production (Popov, Georgiev 2011, 368). These finds support the idea raised already by the finds from Yurta–Stroyno suggesting that the rural settlements in Roman Thrace were focused, besides on agriculture and animal husbandry, on crafts and production of various items, such as glass, metals, pottery, and architectural ceramics.

Conclusions

This article aimed to address the appearance and function of the countryside of the Roman province of Thrace on the basis of several areas in the Yambol District. The results show that the material culture from the two surveyed sites and from Yurta–Stroyno is of a similar nature. This is best demonstrated by the pottery, yielding an absolute dominance of the regionally made household pottery. We may, however, also note the preference for locally available stones, such as the quern stones and the marble used for construction elements as attested at Yurta–Stroyno. Also, glass production and metal smelting and smithing is attested, with the latter having possible parallels at the site of Kozarevo near Kabyle. Local pottery production taking place at some of the settlements might also be anticipated, such as at St. Iliya.

The larger rural settlements along the Gerenska and Dereorman rivers seem to be regularly spaced, keeping a distance between one another, as if they were systematically populated at the same period of (roughly) the 2nd–4th c. AD. Smaller/individual homesteads or dedicated areas seem to be located close to the bigger settlements.

The rural settlements along the middle stream of the Tundzha River seem to focus on crafts, agriculture, and animal husbandry, likely taking place in their dedicated hinterland, while using lo-

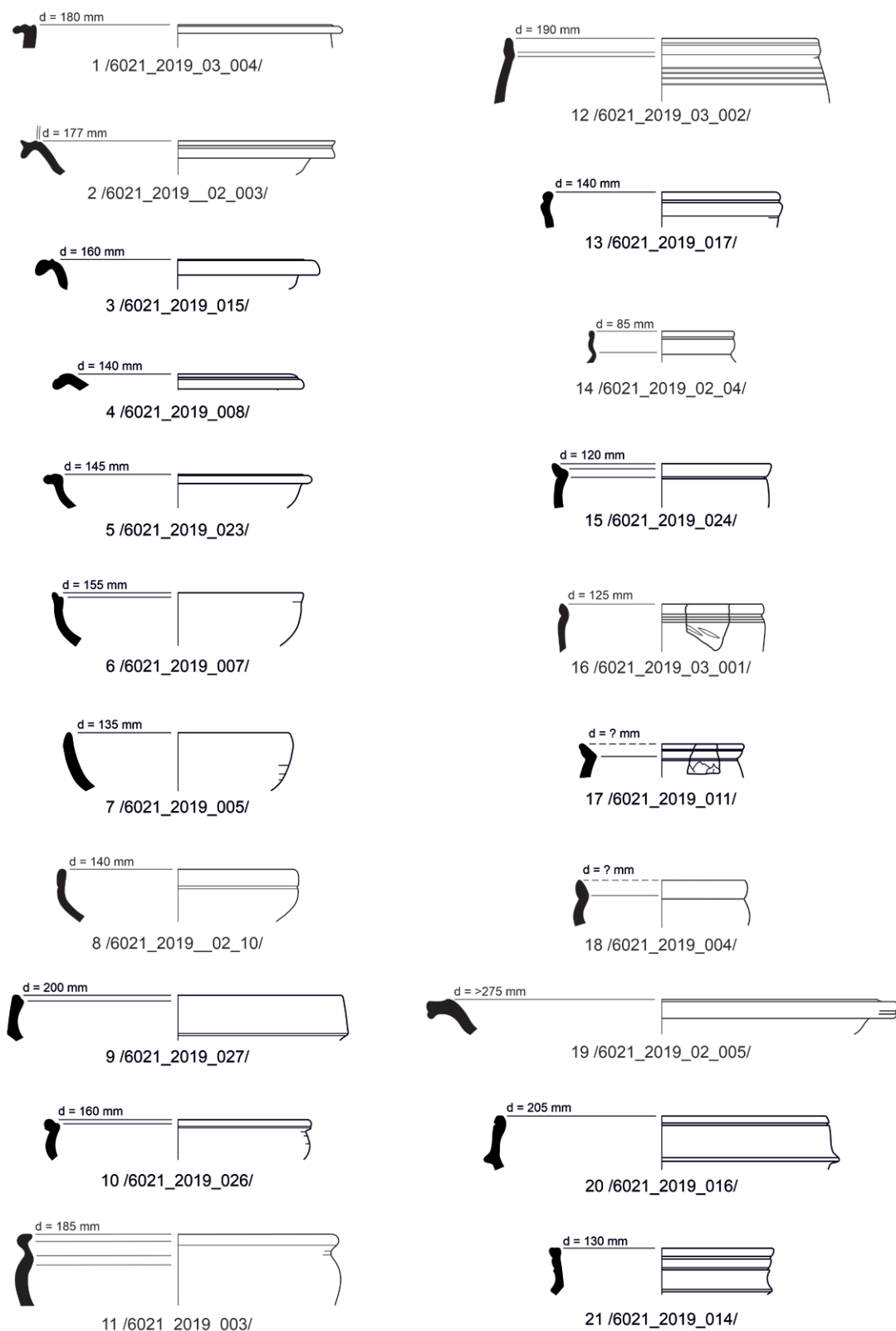


Fig. 13. Scatter TRAP no. 6021. Fine red-slipped ware (1–18); Common red-slipped ware (19–21) (drawn by the 2019 team, digitised by V. Fultnerová and P. Tušlová, Scale 1:4)

Обр. 13. TRAP № 6021. Фина червенолакова трапезна керамика (1–18); обикновена червенолакова трапезна керамика (19–21) (нарисувани от екипа през 2019 г., дигитализирани от V. Fultnerová и P. Tušlová, мащаб 1:4)

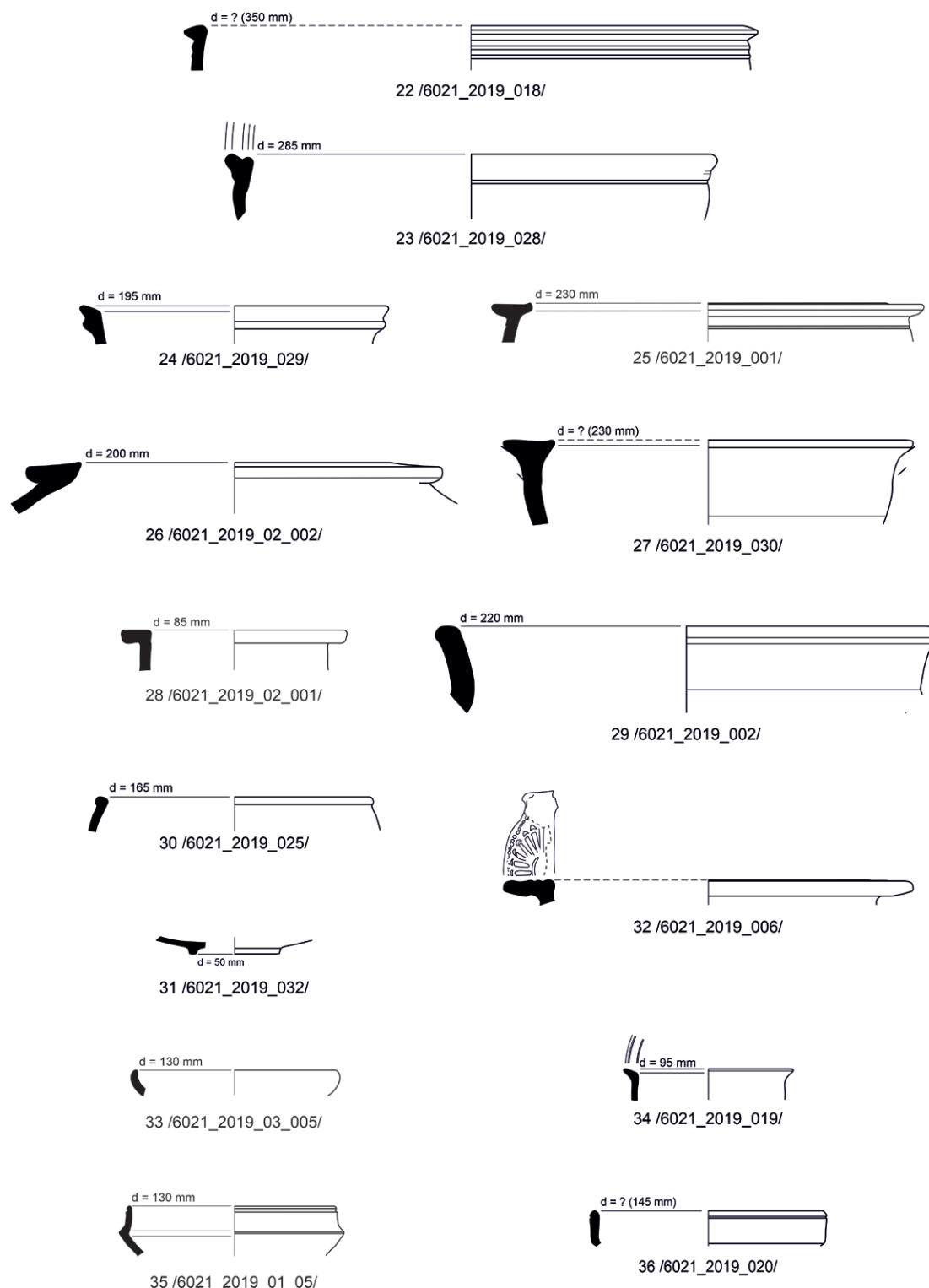


Fig. 14: Scatter TRAP no. 6021. Common red-slipped ware (22–27); Grey ware (28–29); Mottled ware (30–32); Çandarlı ware (33); Pontic Sigillata A? (34); Imported fine ware? (35–36) (drawn by the 2019 team, digitised by V. Fultnerová and P. Tušlová, Scale 1:4)

Обр. 14. TRAP № 6021. Обикновена червенолакова трапезна керамика (22–27); сива трапезна керамика (28–29); петниста трапезна керамика (30–32); източна сигилата С (33); понтийска сигилата А? (34); вносна червенолакова керамика? (35–36) (нарисувани от екипа през 2019 г., дигитализирани от V. Fultnerová и P. Tušlová, мащаб 1:4)

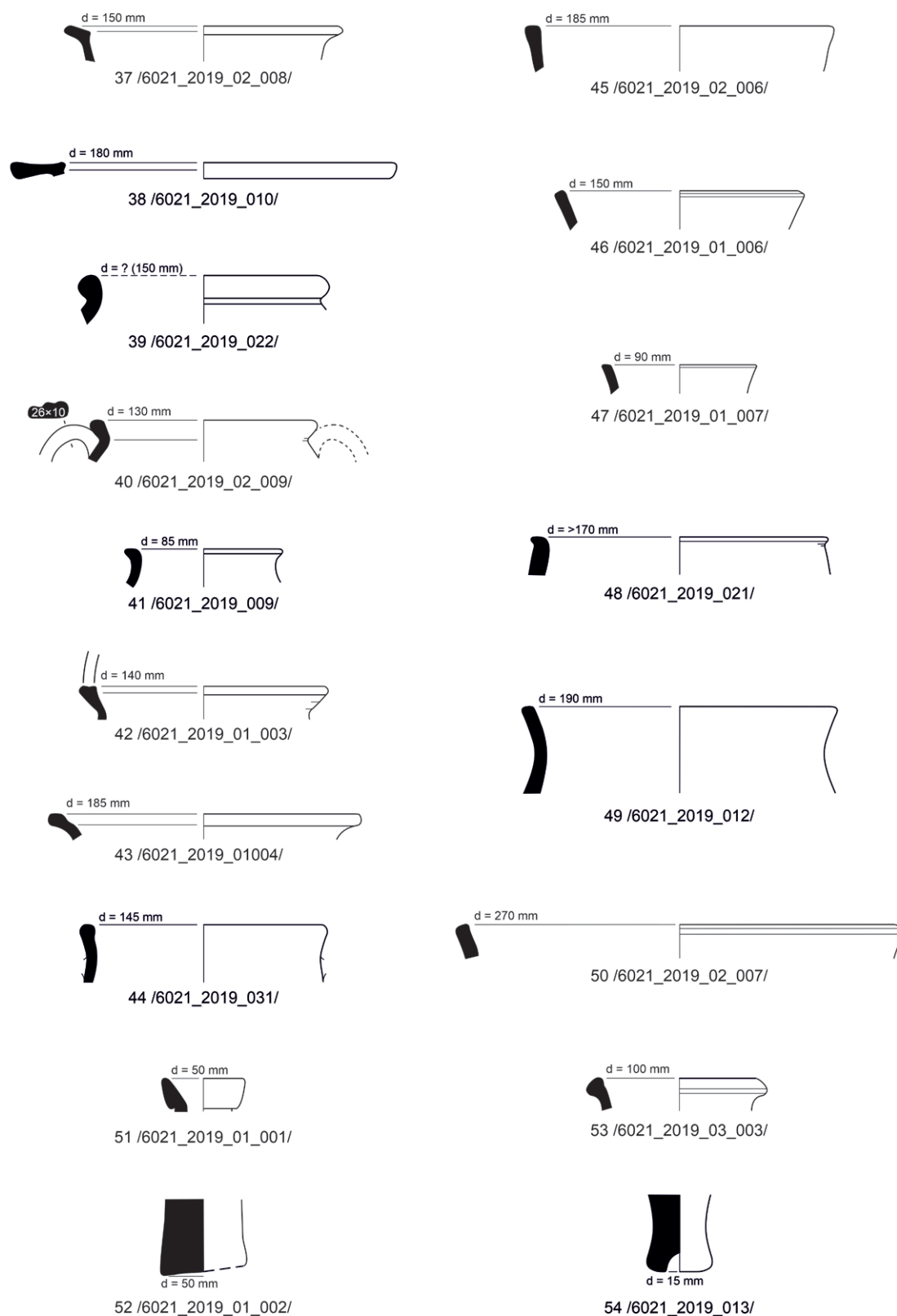


Fig. 15. Scatter TRAP no. 6021. Wheel made Coarse cooking ware (37–44); Handmade cooking ware (45–50) with Granitic (45–48) and Dioritic (49–50) fabric; Transport amphorae (51–54) (drawn by the 2019 team, digitised by V. Fultnerová and P. Tušlová. Scale 1:4)

Обр. 15. TRAP № 6021. Груба кухненска керамика изработена на бързо грънчарско колело (37–44); груба керамика изработена на ръка (45–50) от глина с примеси от гранит (45–48) и от диорит (49–50); транспортни амфори (51–54) (нарисувани от екипа през 2019 г., дигитализирани от V. Fultnerová и P. Tušlová, мащаб 1:4)

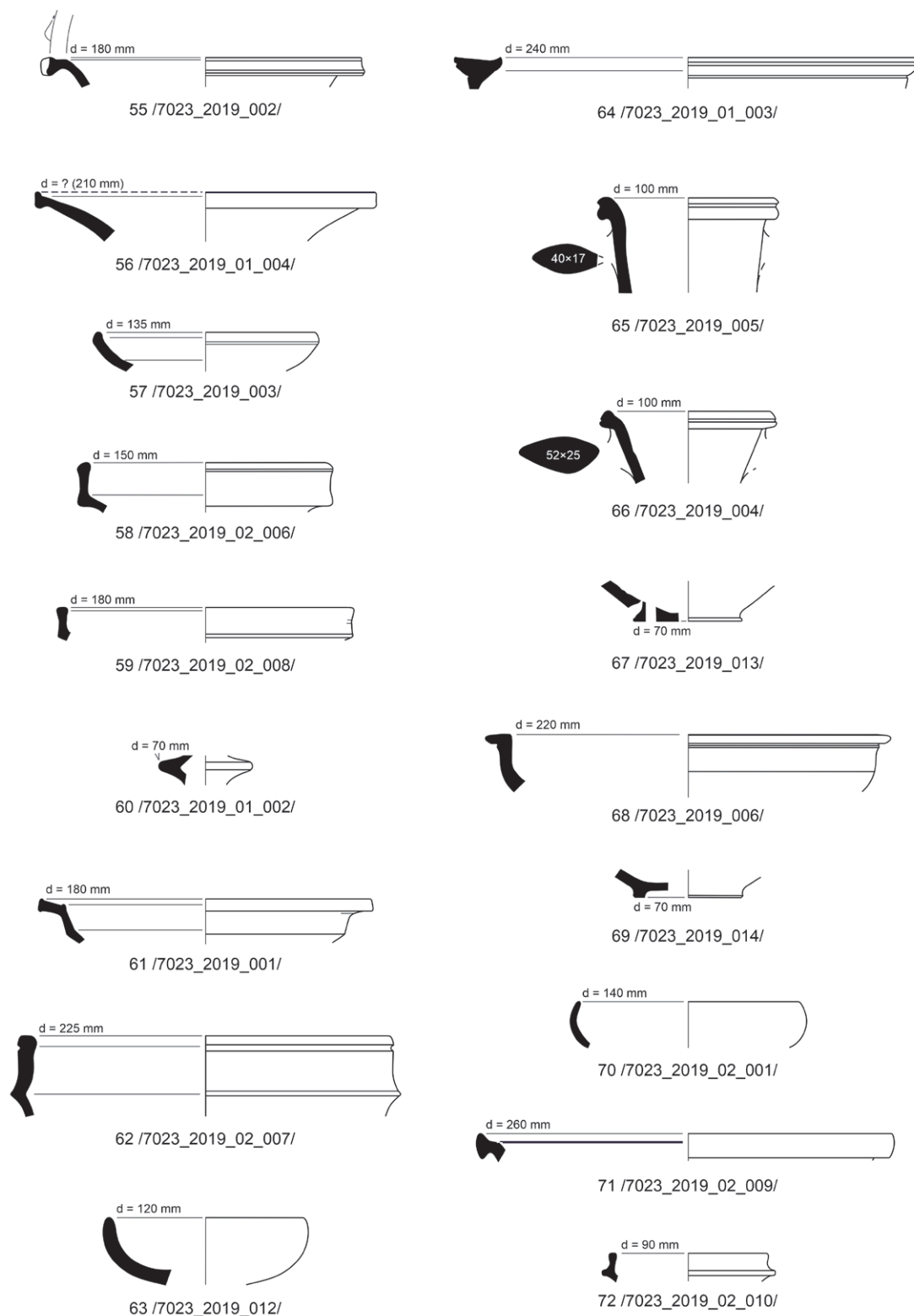


Fig. 16. Scatter TRAP no. 7023. Fine red-slipped ware (55–60); Common red-slipped ware (61–67); Grey ware (68); Mottled ware (69); Çandarlı ware (70); African red-slipped ware (71); Imported fine ware? (72) (drawn by the 2019 team, digitalized by V. Fultnerová and P. Tušlová, Scale 1:4)

Обр. 16. TRAP № 7023. Фина червенолакова трапезна керамика (55–60); обикновена червенолакова трапезна керамика (61–67); сива трапезна керамика (68); петниста трапезна керамика (69); източна сигилата С (70); африканска червенолакова керамика (71); вносна червенолакова керамика? (72) (нарисувани от екипа през 2019 г., дигитализирани от V. Fultnerová и P. Tušlová, мащаб 1:4)

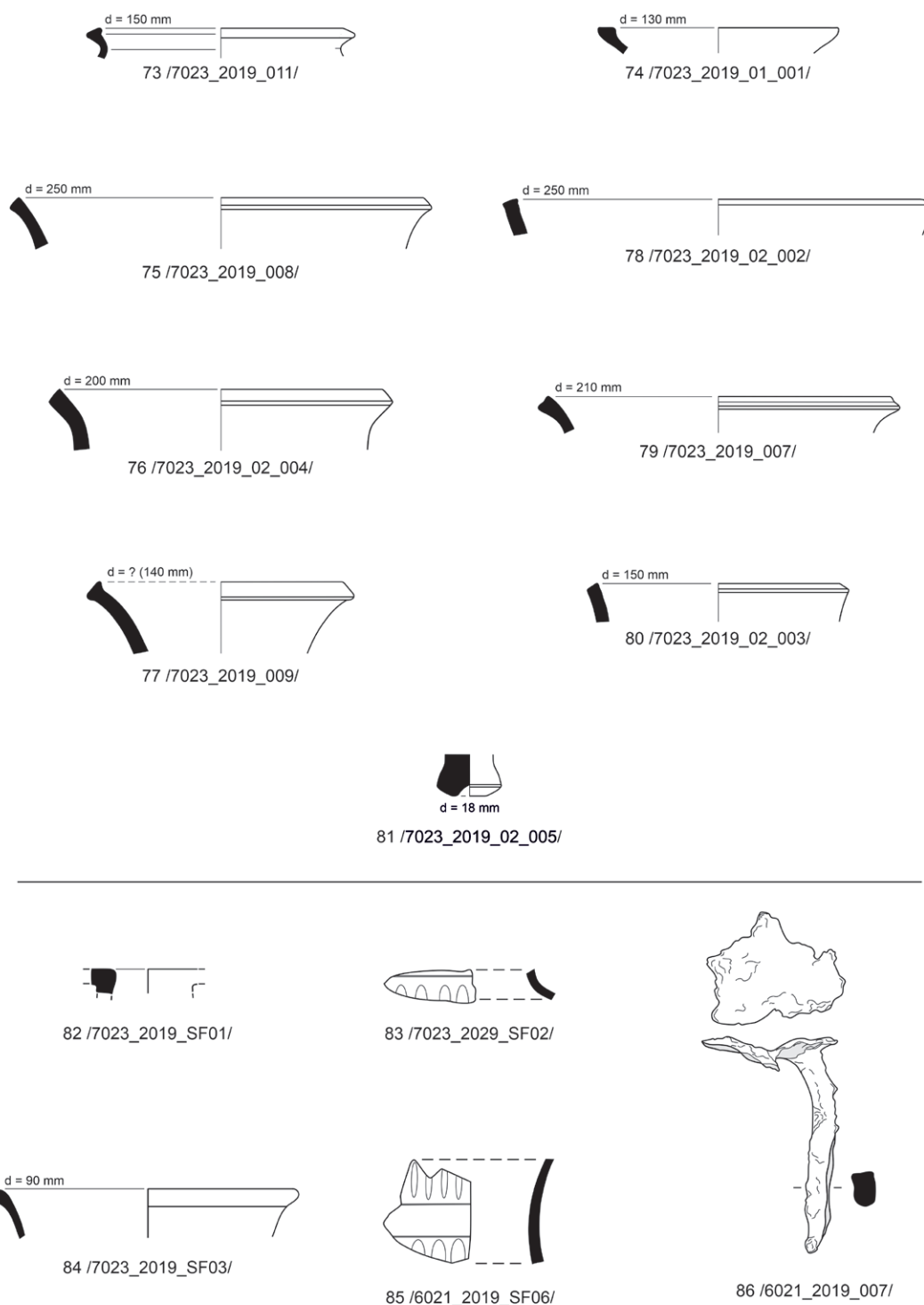


Fig. 17. Scatter TRAP no. 7023. Wheel made Coarse cooking ware (73–74); Handmade cooking ware (75–80) with Granitic (75–77) and Dioritic (78–80) fabric; Transport amphora (81), scale 1:4. Small finds from TRAP nos. 6021 and 7023, glass (82–85), iron nail (86), scale 1:2 (drawn by the 2019 team, digitised by V. Fultnerová and P. Tušlová)

Обр. 17. TRAP № 7023. Груба кухненска керамика изработена на бързо грънчарско колело (73–74); груба керамика изработена на ръка (75–80) от глина с примеси от гранит (75–77) и от диорит (78–80); транспортна амфора (81), мащаб 1:4. Други находки от TRAP №. 6021 и 7023, стъкло (82–85), железен пирон (86), мащаб 1:2 (нарисувани от екипа през 2019 г., дигитализирани от V. Fultnerová и P. Tušlová).

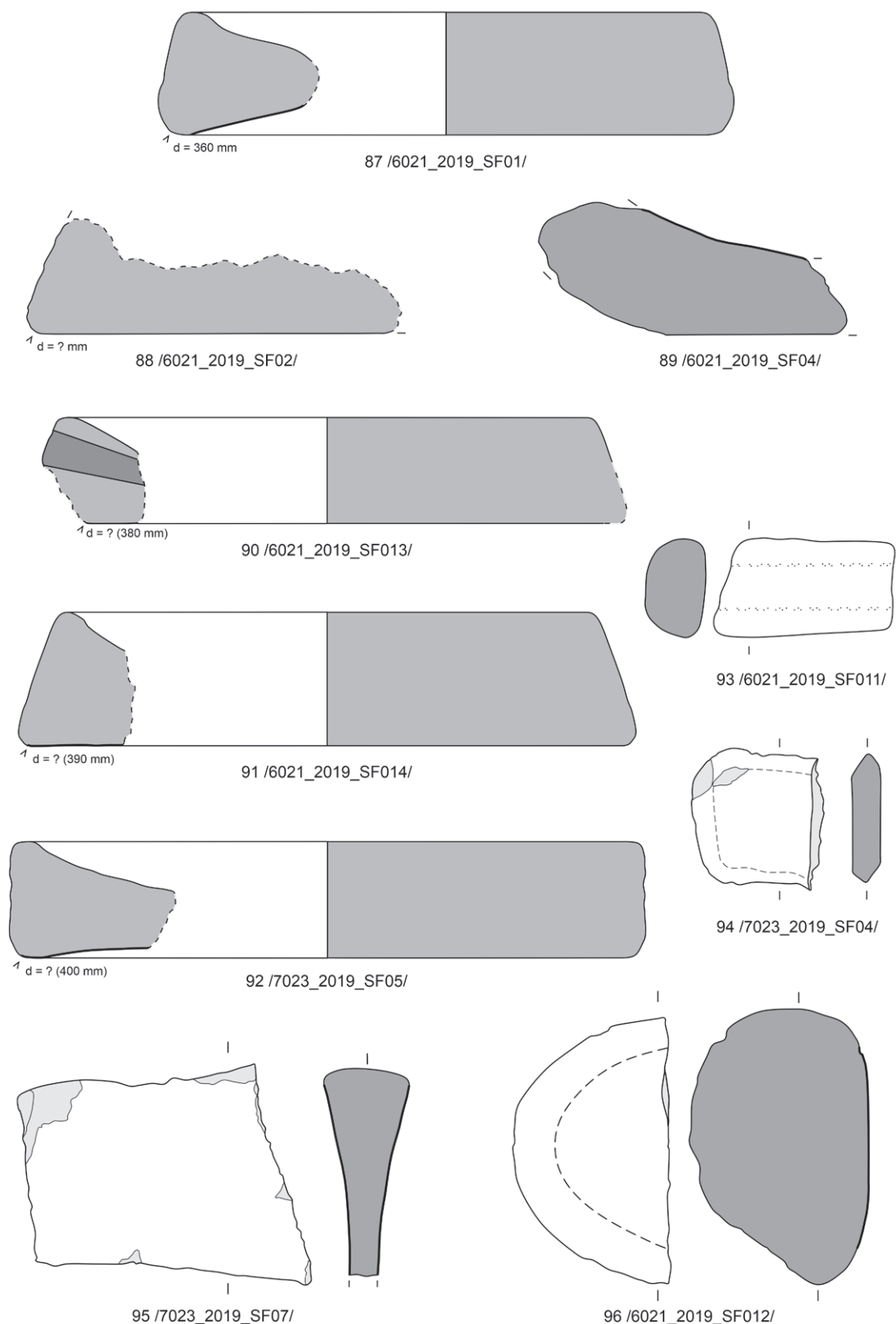


Fig. 18. Worked stones from TRAP nos. 6021 and 7023. Quern stones (87–92), scale 1:4; whetstones (93–95) and a pebble rock tool (96), scale 1:2 (drawn by the 2019 team, digitised by V. Doležálková and P. Tušlová)
 Обр. 18. Обработени камъни от TRAP № 6021 и 7023. Хромели (87–92), мащаб 1:4; брусове (93–95) и сечиво от чакъл (96), мащаб 1:2 (нарисувани от екипа през 2019 г., дигитализирани от V. Doležálková и P. Tušlová)

cally available sources of metals, stones, and clays for production and construction.

The pottery import attested at the settlements seems to be limited to a few transport amphorae and occasional table ware numbering single pieces at each investigated site/scatter. These might have been the article of the import itself, but equally they might have been brought as a side product together with the transport amphorae or as a personal belonging of the inhabitants.

Putting all this information together, the Thracian inland countryside seems to be quite self-sustainable and independent during the Roman period. There seems to be a low demand for imported items of everyday use from outside providers. The transport amphorae do attest to some kind of food-stuff import, but their small number points to its rather negligible character within the local economy. The metals, stone and clay seem to be, at least up to some amount, obtained from local sources and processed together with glass directly in the rural settlements providing them, and perhaps also wider area in their vicinity, with necessary tools and objects of everyday use.

Acknowledgements

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Недеструктивни проучвания на селища от римската епоха по средното течение на р. Тунджа, обл. Ямбол, България

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(резюме)

От 2019 г. до 2021 г. се извършиха различни недеструктивни проучвания на няколко археологически обекта от римската епоха, които се намират на територията на област Ямбол. Теренните издирвания и геофизични измервания се съчетаха с анализ на керамичния материал. Това позволи по-точното определяне на границите на обектите и допринесе за по-прецизната

им интерпретация. Изследвани са: голямото селище до с. Козарево, малко селище (най-вероятно вила), близо до античния град Кабиле, както и две малки селища, разположени между реките Дерееорман, Геренска и Тунджа (обр. 1). Последните са локализиран за първи път през 2009 г. по времето на Tundzha Regional Archaeological Project (TRAP), но през последните години териториите им бяха повторно обходени.

Настоящото изследване се фокусира върху разположението, размерите и вида на всеки един обект, съчетавайки геофизичните проучвания с анализа на керамичния материал. Основната му цел е да се установят връзките между природните фактори, гъстотата на селищната мрежа на територията на Кабиле, типа на отделните селища и тяхната взаимовръзка през римската епоха.

Теренните проучвания са продължение на тези от Tundzha Regional Archaeological Project (Iliev et al. 2012; Sobotkova et al. 2018) в зоната между реките Дерееорман и Геренска (обр. 2). От всички археологически обекти, регистрирани от TRAP, в № 6018 (Юрта–Стройно), № 6021 и № 7023 преобладава керамичният материал от римската епоха. Това е времето на техния най-голям разцвет. В останалите археологически обекти са открити единични фрагменти от римската епоха или този период липсва (обр. 2). Картата на селищния живот се допълва от регистрирания през 2019 г. значим археологически обект от римската епоха до с. Каравелово (Valchev, Marchovski 2020) и от започналите през 2014 г. проучвания на римската вила в м. Св. Илия до с. Стройно (Agre et al. 2015, 208–211; 2021). Теренните проучвания показват съществуването на 11 археологически обекта от римската епоха (II–IV в.) в зоната между реките Дерееорман и Геренска. Те са равномерно разпределени по бреговете на реките на интервали от 2,5 до 3,5 km. Ако приемем, че това са земеделски селища, дистанцията между тях може да определя границите на землищата им (обр. 3–4, табл. 1).

За да се изследва и сравни материалната култура на регистрираните обекти в района, два от тях (TRAP № 6021 и № 7023) бяха повторно проучени посредством тотални събирания на археологическия материал от зони с размери 20 x 20 m (относно методиката вж. Tušlová 2019) и тотални обхождания с цел регистрация на всички обработени камъни и случайно открити находки. Резултатите от обхожданията на двете селища са сравнени с тези от проучванията в м. Юрта до с. Стройно (Tušlová et al. 2022; Tušlová 2023).

TRAP № 6021 (АКБ № 2790006)

Археологическият обект е с площ от 160 декара, на които се откриват материали от ранната желязна, елинистическата и римската епоха. По време на проучванията са локализиран няколко концентрации на керамични фрагменти от римската епоха (табл. 2), които може да се определят като стопански постройки или жилища. По време на обхожданията и трите тотални събирания са открити осем части от хромелни камъни, част от бруст, фрагмент от тялото на стъклен съд с фасетна украса и железен пирон (табл. 3, обр. 5, 17.85–86, 18.87–91, 93, 96).

Сред керамичните фрагменти от римската епоха преобладават тези, които са от съдове местно производство на бързо гърнчарско колело като фина и обикновена червенолакова керамика (обр. 13.1–21, 14.22–27), сива трапезна керамика (обр. 14.28–29), петниста⁷ трапезна керамика (обр. 14.30–31) и груба кухненска керамика, изработена на бързо гърнчарско колело (обр. 15.37–44). Открити са и фрагменти от керамични съдове, изработени на ръка с два типа примеси – гранит (обр. 15.45–48) и диорит (обр. 15.49–50). Вносните керамични съдове са представени само от няколко фрагмента. Червенолаковата трапезна керамика включва две ус-

7 Повърхност на керамичните съдове се характеризира с наличието на петна, които имат от светло оранжев до тъмночервен цвят.

тия от Източна сигилата С (т. нар. „Çandarlı ware“) тип 4 по Хейс, от III в., както и един фрагмент от чаша или паница от Понтийска сигилата А (обр. 14.34). Открити са и един фрагмент от устието от транспортна амфора тип Kapitän II (обр. 15.51), разпространена от края на II в. до началото на V в. (Opař, Ionescu 2016, 12), както и едно дъно от транспортна амфора, което е с южно черноморски произход (обр. 15.52).

TRAP № 7023 (АКБ № 10007802)

Археологическият обект е с площ 15 декара и се датира в римската епоха (обр. 6). При първоначалната му регистрация е установена голяма концентрация от строителна керамика, основно покривни керемиди (табл. 2). По време на повторните обхождания са открити и три фрагмента от стъклени съдове (№ 82–84), три фрагмента от брусове (№ 94–95), както и два фрагмента от хромели (№ 92) (табл. 3, обр. 17–18).

Керамичният материал включва фрагменти от съдове изработени на бързо грънчарско колело като фина и обикновена червенолакова керамика (обр. 16.55–67), сива трапезна керамика (обр. 16.68), петниста трапезна керамика (обр. 16.69) и груба кухненска керамика изработена на бързо грънчарско колело (обр. 17.73–74). Открити са и фрагменти от керамични съдове изработени на ръка с два типа примеси – гранит (обр. 17.75–77) и диорит (обр. 17.78–80). Към вносните керамични съдове се отнасят няколко фрагмента от червенолакови съдове: устие от Източна сигилата С (т. нар. „Çandarlı ware“) тип 4 по Хейс (обр. 16.70) (Hayes 1972, 321–322, fig. 64), устие от Африканска червенолакова керамика тип 67 по Хейс (обр. 16.71), датиращ от средата на IV в. до средата на V в. (Hayes 1972, 112–116, fig. 19; 2008, fig. 34.1082). Открити са няколко фрагмента от транспортни амфори тип Kapitän II.

Три от регистрираните археологически обекта в района са изследвани посредством геомагнетика. Те са: селище TRAP № 7023 (обр. 7–8), селище, разположено източно от античния град Кабиле (обр. 9–10) и селище, разположено западно от с. Козарево (обр. 11–12). Въпреки че резултатите от геофизичните измервания не са много ясни, то съчетаването им с данните от теренните обхождания дава допълнителна информация за археологическите обекти.

При селище TRAP № 7023 на две места са установени масивни, съборени покривни конструкции, както и няколко ями. При селището източно от античния град Кабиле, което най-вероятно представлява вила, също са установени масивни, съборени покривни конструкции. Тук са регистрирани и няколко биполярни аномалии, както и множество ями, датирани според археологическите проучвания в ранната желязна епоха. Геофизичното проучване на античното селище до с. Козарево показва останки от каменна стена, както и множество биполярни аномалии, при които са открити фрагменти от шлама и фрагменти от вторично изпечени покривни керемиди и керамични съдове.

Статията цели да представи развитието на селищата във вътрешността на Тракия и на територията на Кабиле. Резултатите от проучването показват, че сред керамичния материал от Юрта–Стройно и от селищата TRAP № 6021 и № 7023 доминират съдовете местно производство, в които се забелязват и неорганични примеси от местни скали. В селището Юрта–Стройно е установено и производството на стъклени предмети, както и обработката на метални руди. Подобна металургична дейност може да се предполага и за селището до с. Козарево.

Изглежда че по-големите селища в зоната между реките Геренска, Дерееорман и Тунджа са равномерно разпръснати, разположени на почти еднакво разстояние едно от друго и обитавани по едно и също време (в периода II–IV в.). Населението в тях се е занимавало основно със земеделие, животновъдство и с различни занаяти.

Вносната керамика, открита на територията на селищата, се ограничава до единични фрагменти от транспортни амфори и трапезни съдове. Последните може да са донесени в

селищата заедно с амфорите или да представляват лични вещи, дошли тук заедно със собствените си.

Обобщавайки всичко това, според нас, вътрешността на провинция Тракия е била относително независима и суровинно самозадоволяваща се. Транспортните амфори показват внос на стоки, но малкият им брой предполага, че е бил незначителен.