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K. S. SAVELIEVA, O. K. SAVELIEV**LAMPS FROM THE ROMAN CITADEL OF TYRAS**

The present paper discusses 37 lamps discovered in the area where the Roman garrison of Tyras was stationed during the 2nd century and the first half of the 3rd century AD. Attention is focused on the distribution of lamps in the area under consideration and their typology. In total, three types of moulded lamps and one type of wheel-made lamps were identified.

Key words: Tyras, Roman period, Roman garrison, citadel, lamps.

Lamps found at Tyras have never been the subject of systematic and comprehensive research. Individual specimens have been mentioned in excavation reports and related publications, but the number of specialised studies devoted specifically to lamps remains extremely limited. Among them, two works provide a general overview of lighting equipment from the site: an article by E. O. Levina, focusing on material from the late 6th to the 1st century BC (Левина 1987), and an article by N. O. Son and S. B. Sorochan, covering the span from the Late Hellenistic to the Late Antique period (Сон, Сорочан 1988). Other publications focus on specific groups of lamps, including metal lamps (Сон, Шейко 2016), hand-made lamps (Сон, Шейко 2018), wheel-made lamps (Бруяко, Росохацкий 2000), and a figural lamp (Савельев 2021). Additionally, several moulds for lamp production have been published (Сон, Сорочан 1988, с. 126, рис. 5, 4; Смольянинова 2005, с. 90, рис. 5). The materials discussed in these studies include both lamps uncovered during excavations and objects with unknown find contexts. In

most cases, research has primarily focused on typological classification and chronological attribution, while the archaeological context has received comparatively little attention.

This paper focuses on lamps discovered in the area where the Roman garrison of Tyras was stationed during the 2nd century and the first half of the 3rd century AD. Finds from areas adjacent to the outer side of the citadel's defensive walls are also included. Systematic excavations were conducted within the territory of the Roman citadel by expeditions of the Odesa Archaeological Museum and the Institute of Archaeology of the National Academy of Sciences of Ukraine between 1963 and 1998.¹ The lamps discussed in this paper are housed in two institutions: the Odesa Archaeological Museum (OAM) and the Bilhorod-Dnistrovskyi Local Lore Museum (BDLM).

This study aims to identify the most common types of lamps and to assess the extent to which the military garrison utilized them for interior illumination. The mapping of finds (fig. 1) makes it possible to identify areas with the highest concentration of lamps within the citadel. However, it should be noted that in some cases this distribution may reflect the current state of research rather than the actual spatial pattern of lamp use. Large portions of the citadel remain unexcavated. The eastern section, in particular, is completely inaccessible for archaeological investigation, as it is obstructed by modern urban development. Only small fragments of the defensive wall have been uncovered in this area, allowing researchers to clarify the boundaries of the citadel — though its internal layout remains unknown. Moreover, because the area was reoccupied shortly after the garrison left and continued to be inhabited into the medieval period, many Roman-period contexts were disturbed — a factor that inevitably affected the distribution of lamps across the site. Despite these disturbances, analysing the archaeological context of the finds remains crucial for reconstructing both the everyday activities and religious practices of the Tyras garrison.

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¹ This study does not include finds from the excavations of the building with portico (no. 702) coordinated by T. L. Samoilova during 1999–2004.

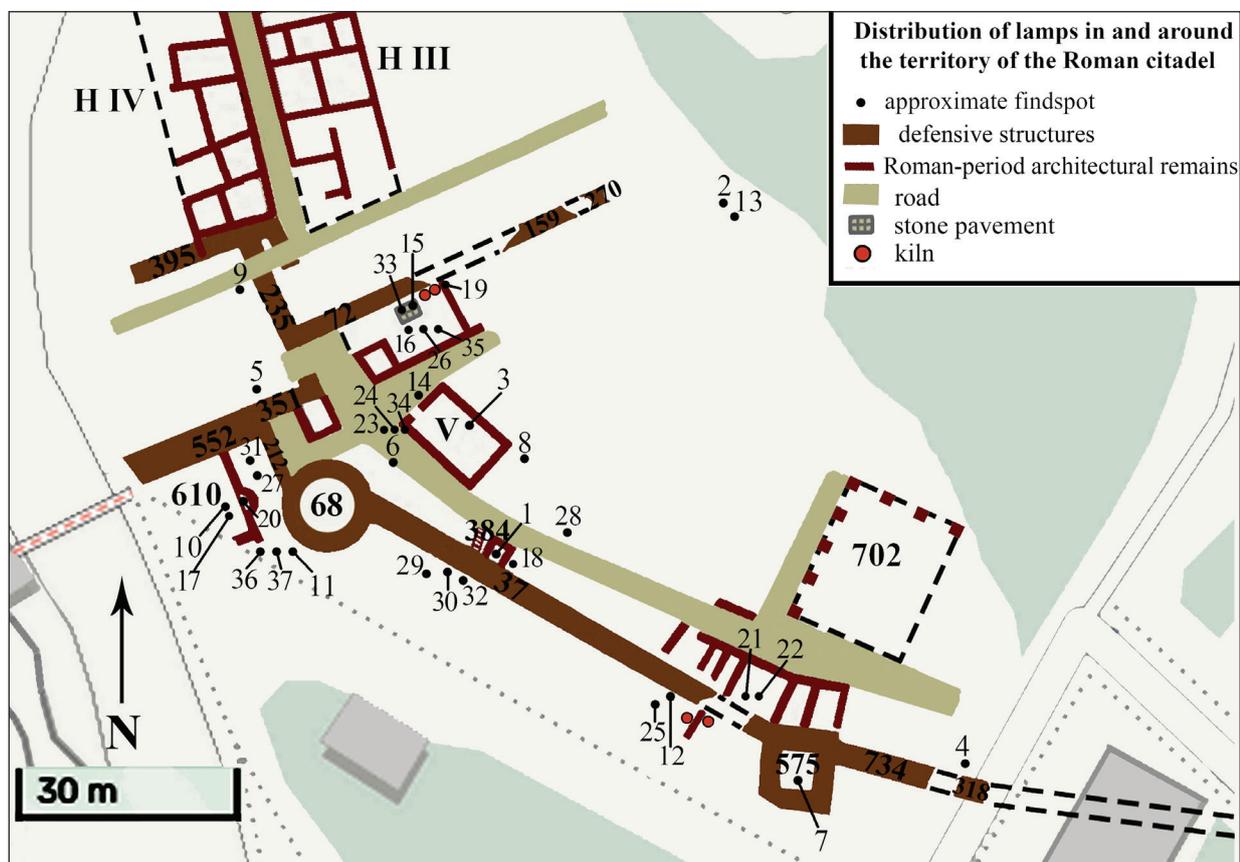


Fig. 1. Distribution map of the lamps in the area of the Roman citadel of Tyras

The catalogue (Appendix 1) includes two lamps previously published in the report on excavations conducted by P. Nicorescu in 1930 (Nicorescu 1933). The researcher excavated several trenches in various parts of the ancient city, one of which was located in the northern part of the citadel. One of the lamps discovered there is of the Ephesian type (cat. 2), which likely dates to an earlier period in the city's history and may not be directly related to the citadel itself. The second lamp belongs to the widespread Loeschke type VIII (cat. 13).

Archaeological context of the finds

Over the course of systematic research, several sections of the fortification lines of the Roman citadel have been excavated, including parts of the northern (sections nos. 72, 159, 270), western (no. 212), south-western (no. 37), and southern (nos. 734, 318) walls. One of the citadel's entrances, located in the north-western part, was also uncovered. In addition, two defensive towers were excavated: a round tower (no. 68) and a pentagonal tower (no. 575).

Several buildings within the citadel territory have been investigated. One of the largest is Building V, measuring about 70 m² (10.9 × 6.2 m) (Клейман

1971; Крижицкий, Клейман 1979, с. 40-45). The walls, constructed from large blocks, are 60 cm thick. The function of the building has not been definitively established. I. B. Kleiman referred to it as a "vexillation building" (Клейман 1971, с. 238), a term that has been adopted in subsequent scholarly literature on the history of Tyras. It has also been suggested that the structure may have served as an armoury (Крижицкий, Клейман 1979, с. 45). Most of its interior space was disturbed during the medieval period. Lamp cat. no. 3 was found in the fill of the building. Several additional lamps were recovered near the structure in layers dated to the 2nd–3rd centuries AD (cat. nos. 6, 8, 23, 24, 34). Lamp cat. no. 14 is an incidental find near the north-west wall of the building.

A few metres north of Building V, a large courtyard was uncovered, surrounded by a series of perimeter rooms and adjoining the northern defensive wall. Within the courtyard, a stone pavement composed of roughly dressed cobbles and flat-lying slabs was excavated (Сон и др. 1989, с. 25-26). During the clearing of this area, two lamps were found (cat. nos. 15 and 33).

Two pottery kilns were also discovered in the courtyard, though only their lower parts — the furnace chambers measuring 1.4 m and 1.6 m in di-

ameter — were preserved (Сон и др. 1990, с. 38-43). In the furnace pit of one kiln, pieces of raw clay used for making pottery were found, along with fragments of moulded but unfired vessels. The furnace chamber was filled with fragments of tiles and bricks, as well as tableware and kitchen pottery, showing no visible signs of use.

Several lamps were found in the layers associated with this site (cat. nos. 16, 19, 26, 35). While it may be tempting to assume that the lamps were produced in this workshop, there is insufficient evidence to support this hypothesis. It is therefore equally plausible that they were used in everyday activities here.

Along the south-western defensive line, the remains of several structures were discovered, which adjoined the wall from the inside. Their function has not been determined; they may have been residential or utilitarian in nature. Among them is Structure 384 (Клейман и др. 1979, с. 44). The room measures 6 m². Inside, a collapse of stones was excavated, containing material dated to the 2nd to mid-3rd centuries AD. Based on the dating of finds in the fill, the structure was likely built at the turn of the era and continued to function until the mid-3rd century AD, after which it was destroyed. An Ephesian lamp (cat. no. 1) was found in the fill of the room.

Further to the southeast, near the pentagonal Tower 575, the remains of several more structures adjoining the defensive wall were uncovered. In this area, fragments of lamps (cat. nos. 21 and 22) were found. A lamp (cat. no. 7) was discovered in the fill of Tower 575, within a medieval layer.

On the exterior side of the citadel's defensive walls, several features have been identified that can be interpreted as associated with its functioning. In particular, a structure was uncovered adjacent to the south-western defensive wall, near the pentagonal tower, and on its outer side. O. A. Rosokhatskyi tentatively interpreted it as the remains of a production complex related to bread baking for the garrison (Росохацкий и др. 1997, с. 37-39). This complex consisted of several rooms. Two ovens were found here, along with a stone millstone measuring one meter in diameter and fragments of a hand-operated grinding stone. A dark soil layer up to 0.5 meters thick, containing traces of burning, ash, and soot, indicates prolonged and intensive use of the ovens. Lamps cat. nos. 12 and 25 were discovered in the layer near the ovens.

A concentration of lamps has been recorded near and within Building 610. This is a large structure, 11.9 m wide, with an apse on the eastern side that

adjoins defensive wall no. 552 from the outside. The function and date of construction of this building remain subjects of scholarly debate. A. O. Rosokhatskyi and T. L. Samoilova identified the structure as an early Christian basilica (Самойлова, Росохацкий 1997, с. 31-32; Самойлова, Кожокару, Богуславский 2002, с. 178-180). V. M. Zubar, however, argued that it dates to the Roman period and may have been part of a *thermae* complex or a *principia* (Зубар 2004, с. 143). R. Karasiewicz-Szczypiorski proposed that the building functioned as a sanctuary of the Roman garrison, possibly a *mithraeum* (Karasiewicz-Szczypiorski 2018, p. 193-194). Supporting this hypothesis, the structure displays several features characteristic of Roman sanctuaries. In particular, the apse — visible from the interior — formed a niche likely intended for reliefs or sculptures depicting deities. The lamp cat. no. 20, found on the floor of the apse, was likely one of the cultic attributes. Two lamps were also found in the fill of the room (cat. nos. 10 and 17), and several more were recovered in adjacent layers — next to the eastern wall (cat. nos. 31 and 27) and to the south of the building (cat. nos. 11, 36, and 37). The sacred function of the space is also indirectly confirmed by the nearby discovery of fragments of votive reliefs depicting the Thracian Horseman and Mithras. Its location just outside the citadel, along with artefacts found within the room, reinforces the association of this structure with the Roman military presence. It most likely served as a sanctuary dedicated to unofficial cults practiced by Roman soldiers (Savelieva 2023, p. 641).

The finds: classification and chronology

All of the lamps can be broadly divided into two groups based on production technique: mould-made lamps (33 items) and wheel-made lamps (4 items). Among the mould-made lamps, three main types are represented: Ephesian lamps (2 specimens), Loescheke type VIII (20 specimens), and Sunburst lamps (11 specimens). This group probably includes both imported and locally produced lamps. However, due to the lack of physical and chemical analyses of the clay, it is not possible to definitively attribute any of them to local production. The group of wheel-made lamps includes four open-type lamps, which were evidently manufactured locally.

Ephesian lamps (cat. nos. 2–3; fig. 2: 1–2)

Type: Broneer XIX, Howland 49 A-B. These lamps have a biconvex body and a circular reservoir. An elongated nozzle with a tip that

may be triangular or rounded, with a wide rim surrounding the wick hole. The discus is plain and bordered by a ridge. The ribbon handle has one or two grooves. The lamps are decorated. The shoulders of the lamps from Tyras feature a row of *ovolos*, two relief bands in the shoulder area near the nozzle, and a rosette on the top of the nozzle.

Lamps of this type were particularly widespread in the 2nd to 1st centuries BC (Broneer 1930, p. 66-70; Howland 1958, p. 166-170; Bruneau 1965, p. 51-78; Gürler 2002, S. 133-147; 2003, S. 123-131; Giuliani 2005, S. 140-141). Lamps from Ephesus were exported to various parts of Greece, Asia Minor, and the Black Sea region. Local copies have been identified in many centres. On the northern Black Sea coast, local imitations of the Howland 49 type were produced (Журавлев, Быковская, Желтикова 2010, с. 21-22; Zhuravlev, Zhuravleva 2014, p. 276-277; Шейко 2014, с. 116). Their production is also documented in Tyras, as evidenced by the discovery of the upper part of a lamp mould (found in a mixed layer; unpublished).

The dating of the finds from Tyras remains an open question, as one nearly intact lamp was discovered in a room containing Roman-period material. It may be assumed that the lamp had been in use for an extended period; however, this should likely be considered an exceptional case for an object made of such a fragile material as clay.

Loeschke type VIII (cat. nos. 3–22; fig. 2: 3–7; fig. 3–5)

These lamps feature a circular body and a short, rounded nozzle. They were widespread throughout the Roman Empire and were produced over a long period, from the 1st to the 4th century AD. Over such a lengthy timespan, numerous variations developed, making them difficult to classify (Bussière, Lindros Wohl 2017, p. 195).²

In Tyras, these lamps are found in layers and contexts dated to the 2nd century through the first half of the 3rd century AD; isolated examples also appear in later layers. This group is the most numerous among the lamps discussed, comprising 20 items. The group includes lamps with ivy leaf-shaped, U-shaped, or round nozzles; in some cases, the nozzle barely protrudes. Most examples have a ring handle; in one instance, there is a solid handle without a through-hole, and in some cases, no han-

dle is present at all. The shoulders are either plain or decorated with ornaments in the form of ovals or rows of globules. In many examples, the shoulders are separated from the discus by two thin circular ridges with a groove between them. The discus is slightly concave and is most often decorated with a relief image, such as a rosette, rooster, dove, bull's head, griffin, or a filled kantharos. The filling hole is located either in the centre of the discus or off-centre. The base is flat or slightly concave; in some examples, a slightly raised base-ring is present. On the base of lamp cat. no. 7, a stamp with the letters ΔΙ and a *planta pedis* is present.

N. O. Son and S. B. Soročan divide lamps of this type from Tyras into two groups based on their presumed place of production: West Pontic and North Pontic. As criteria for identifying lamps of North Pontic origin, they propose the indistinctness of the relief decoration on the discus and the presence of a handle with a groove (Сон, Сорочан 1988, с. 125). However, in our opinion, such criteria are insufficient for determining the place of manufacture. Lamps with indistinct images are likely the result of repeated copying and the use of worn-out moulds; such items could have been produced in any centre. These lamps were probably not attractive as trade goods between production centres, especially considering that they could have been relatively easily manufactured anywhere ceramic production existed. Such items are most likely to be regarded as local products, although laboratory analysis of the clay would be necessary to confirm their provenance.

One additional feature observed in some lamps from this group should be noted: the partial cutting away of the discus, likely intended to adapt the lamps for the use of solid fuel (animal fat or tallow) instead of the more expensive olive oil. In four cases (cat. nos. 5, 17, 18, 22), the discus was clearly modified intentionally, while in two other cases (cat. nos. 3 and 21), intentional modification is also likely.

Sunburst lamps (cat. nos. 23–33; fig. 6–7)

These lamps have a round or oval body, an elongated nozzle with a rounded tip, a circular discus separated by two annular ridges with a groove between them, and a wide ribbon handle. Radiating grooves or ridges extend outward from the discus, imitating the sunburst pattern that gives the type its name. The base of the lamp is decorated with a relief resembling a rosette with sun rays. The nozzle is frequently decorated as well, with one or more globules and a band of grooves arranged either across or diagonally.

² For the distribution of wheel-made open lamps and mould-made lamps with cut-out discuses designed for solid fuel use at military sites, see Eckardt 2000, p. 12; Petruț 2018, p. 115; Postoș 2022, p. 115.



Fig. 2. Lamps from Tyras: 1–2 — Ephesian lamps (cat. nos. 1–2); 2: after: Nicorescu 1933, p. 589, fig. 107; 3–7 — Loeschcke type VIII lamps (cat. nos. 3–7)

Several subtypes are distinguished based on various features. In particular, S. B. Sorochan identified two subtypes according to the shape of the body: pear-shaped and round-egg-shaped (Сорочан 1982, с. 44). G. Kuzmanov and A. Minchev proposed four subtypes based on nozzle design (Кузманов, Минчев 2018, с. 99-107).

Among the finds from Tyras, two specimens (cat. nos. 32–33) exhibit the same morphological characteristics but have smooth shoulders lack-

ing the typical radial pattern. Such unornamented lamps are considered imitations of Sunburst lamps (Журавлев, Турова 2012, с. 379), although the term “variation” may also be appropriate in this context.

These lamps were most popular during the 3rd–4th centuries AD, particularly along the western and northern Pontic coasts. Examples have been recorded in Tauric Chersonesos (Сорочан 1982, с. 43-50; Chrzanovski, Zhuravlev 1998, p. 133-

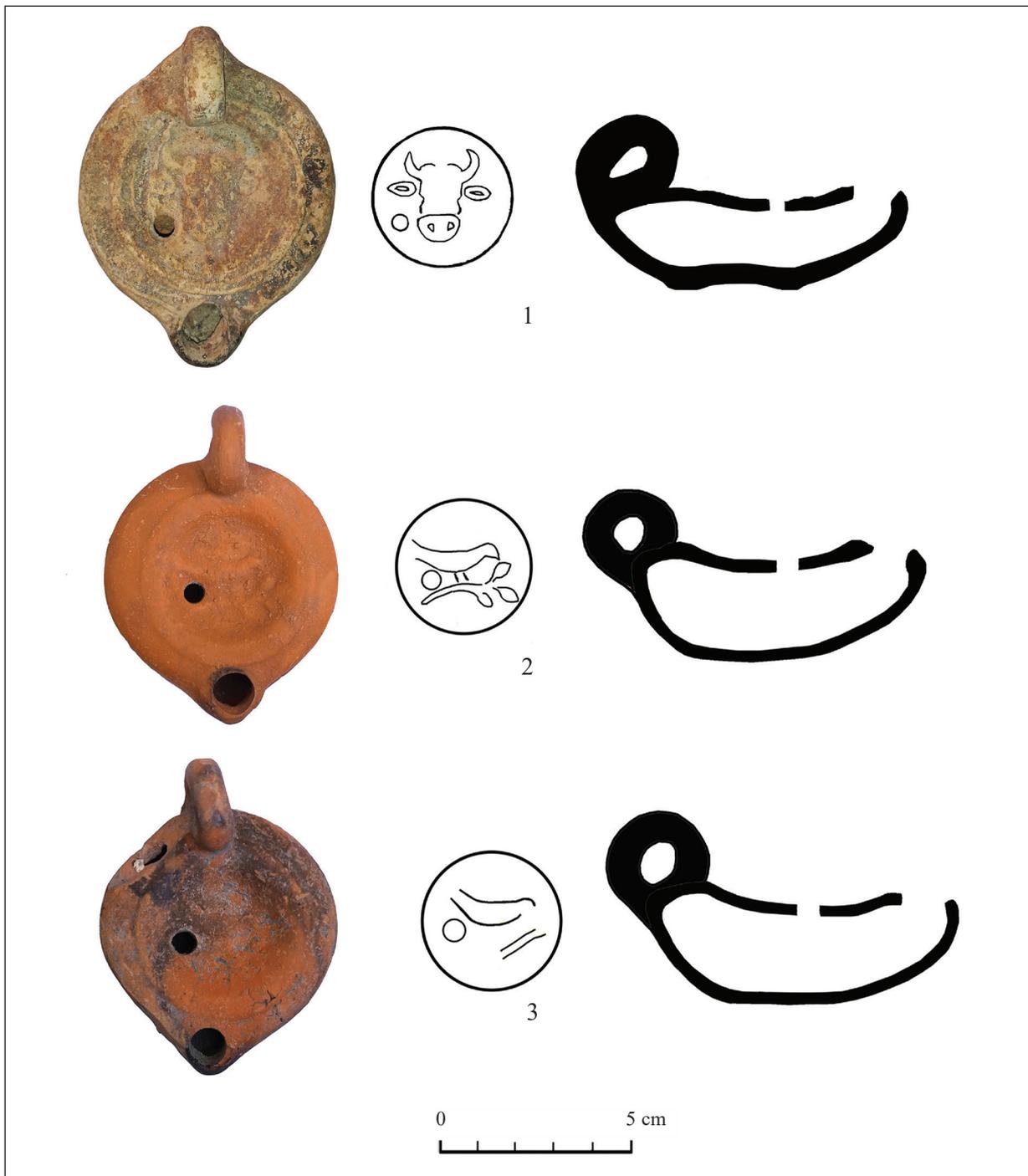


Fig. 3. Loeschcke type VIII lamps (cat. nos. 8–10)

140, cat. 75–81), Tanais (Арсеньева 1988, с. 43–45, табл. IX–XXIII), Tyrag (Nicorescu 1933, p. 589, 595, fig. 1109–1113; Левина 1985, с. 67–70; Сон, Сорочан 1988, с. 127, fig. 5: 5–6), Olbia (Крапивина 1993, с. 122, fig. 71; Sheiko, Puklina 2019, p. 79, 82, fig. 5; fig. 7: 5–6; Sheiko 2024, p. 71, fig. 1), Tomis (Panaiteescu 1977, p. 342, fig. 6: 2), Odessos (Кузманов 1992, с. 38, cat. 277–280; Кузманов, Минчев 2018, с. 99–110, pl. XXIX–XXXIV, no. 482–484), Callatis

(Topoleanu 2012, p. 166–167, pl. XII: 100; Topoleanu, Croitoru 2015, p. 148–152), Noviodunum (Baumann 2009, p. 254, fig. 14: 122), Histria (Bocan, Dabîca 2023, p. 74–75), Novae (Čičikova 1987, p. 180, pl. VIII: 61), Bărboși (Sanie 1981, p. 163, pl. 41:1a–b, 2), and Deultum (Kostova, Dobrev 2008, p. 163–164, pl. 119:7–7a). Fragments of such lamps have also been found on the coast of Colchis, in the Roman fort of Apsaros (Jaworska 2024, p. 40, fig. 2). Lamps of this type



Fig. 4. Loeschcke type VIII lamps (cat. nos. 11–14); 3 — after: Nicorescu 1933, p. 589, fig. 105

were apparently produced in various North Pontic and West Pontic workshops.

Wheel-made open lamps with a pinched spout (cat. nos. 34–37; fig. 8)

These lamps, referred to as the “Tyrasian type” (Бруяко, Росохацкий 2000, с. 342–345), are small bowls whose sides are folded together to form a pinched spout for holding a wick. These morphological features were likely adopted to facilitate the use of solid and readily available fuels, such

as animal fat and tallow. Among the lamps from Tyras, two subtypes can be distinguished based on the shape of the reservoir: a rounded bowl with a slightly raised circular base-ring (cat. no. 34) and a low bowl with a wide, flat bottom (cat. nos. 35–37). All specimens have reservoirs with rims bent outward. A loop-shaped handle is preserved on one specimen from Tyras. The lamps are made of coarse clay with visible impurities; the surface is rough, and signs of use are often apparent on



Fig. 5. Loeschcke type VIII lamps (cat. nos. 15–22)

the interior. Their surface colour ranges from reddish-brown to dark grey.

These lamps are similar in construction to lamps of the Vessberg Type 1, which have been dated to a broad chronological range from the Archaic to the Hellenistic periods (Oziol 1977, p. 17-19; Hayes 1980, p. 4-5; Kassab Tezgör, Sezer 1995, p. 33-34; Bussièrè, Lindros Wohl 2017, p. 8). However, there are notable morphological differences between these and the lamps from Tyras discussed here. In Tyras, such lamps are most commonly found in layers dating from the 2nd century to the first half of the 3rd century AD. The closest parallels are the Loeschcke

type XII lamps from Vindonissa, dated to the 1st century AD (Loeschcke 1919, S. 302-304, Taf. XX: 1036). There are also some similarities with certain lamps from the medieval period (Ursachi 2001, pl. XVIII: 9, pl. XXVI: 1, pl. XXXI: 1, pl. XLV: 1–3; Artimon 2008, fig. 4: 1; Bussièrè, Rivel 2012, p. 314, cat. 371–372; p. 339, cat. 400–401).

Apparently, the simplicity of their manufacturing technique allowed this type of lamps to be reproduced in various regions over the centuries, although it was never widely distributed during the Roman period. In Tyras, they are significantly fewer in number than mould-made oil lamps, and this ap-



Fig. 6. Sunburst lamps (cat. nos. 23–26)

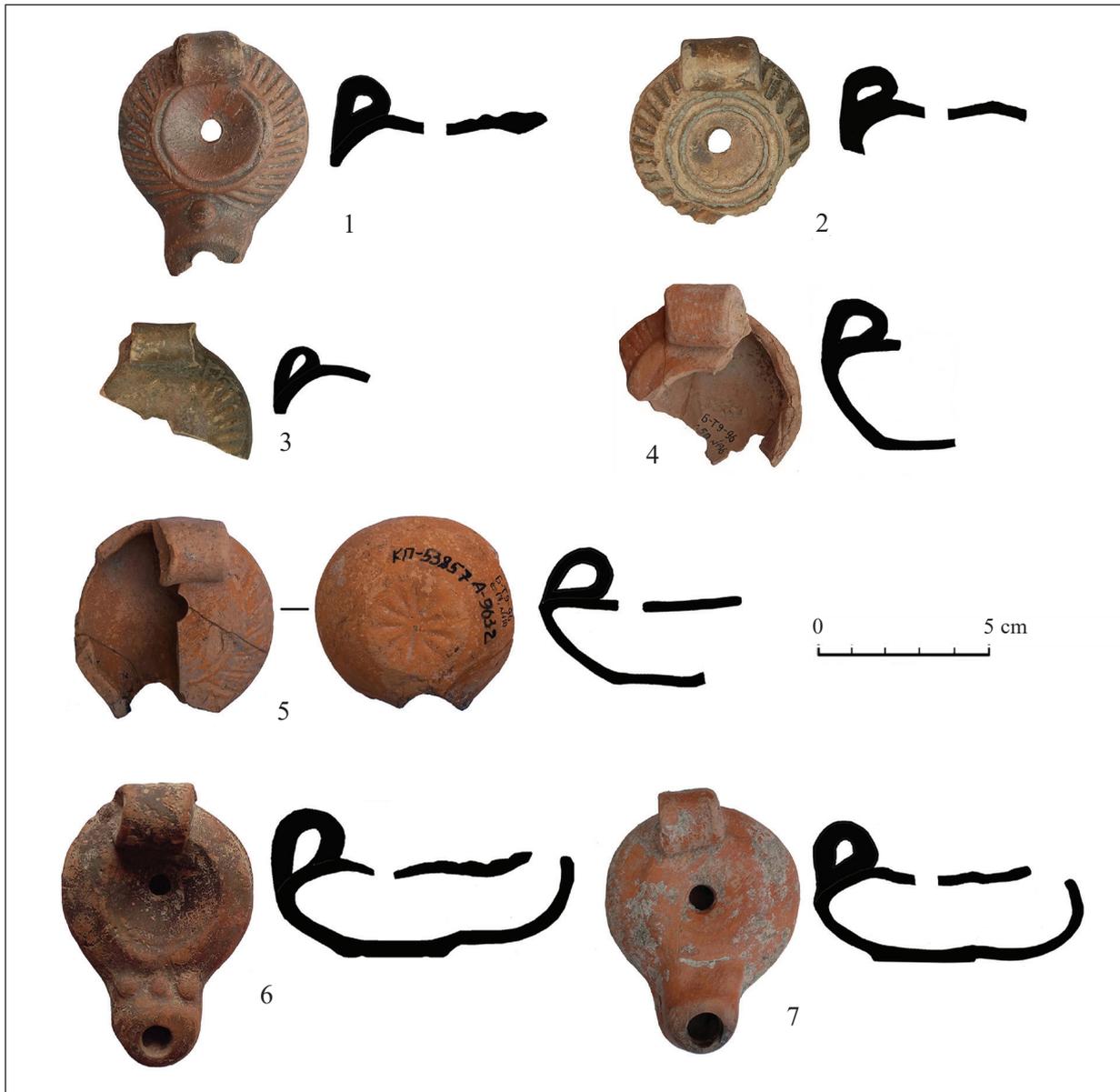


Fig. 7. Sunburst lamps (cat. nos. 27–33)

plies not only to finds from the citadel site but also to the Roman lamp collection as a whole.³ A comparable lamp form most likely reflects a change in fuel, as cheaper and more affordable animal fat began to replace vegetable oils — evidenced, for example, by the partially cut discus of some oil lamps.⁴

Their distribution appears to have been limited to Tyras and some neighbouring settlements, which is why I. V. Bruiaiko and O. A. Rosokhatskyi proposed referring to them as the “Tyrasian type”

³ It is also appropriate to mention the open lead lamp from Tyras (Сон, Шейко 2016, с. 83, рис. 1, 2).

⁴ For the distribution of wheel-made open lamps and mould-made lamps with cut-out discuses designed for solid fuel use at military sites, see Eckardt 2000, p. 12; Petruț 2018, p. 115; Postoș 2022, p. 115.

(Бруяко, Росохацкий 2000, с. 342-345). Due to their poor workmanship, they should probably be considered products of local tableware workshops rather than imported goods.

Conclusions

In conclusion, the number of lamps discovered during the excavations of the Roman citadel at Tyras is relatively modest. This limited quantity may be attributed to the fact that structures — such as barracks where lighting would have been used more intensively — have not yet been excavated. It is also plausible that alternative methods of lighting were preferred by the garrison. As a result, the available material does not allow for meaningful

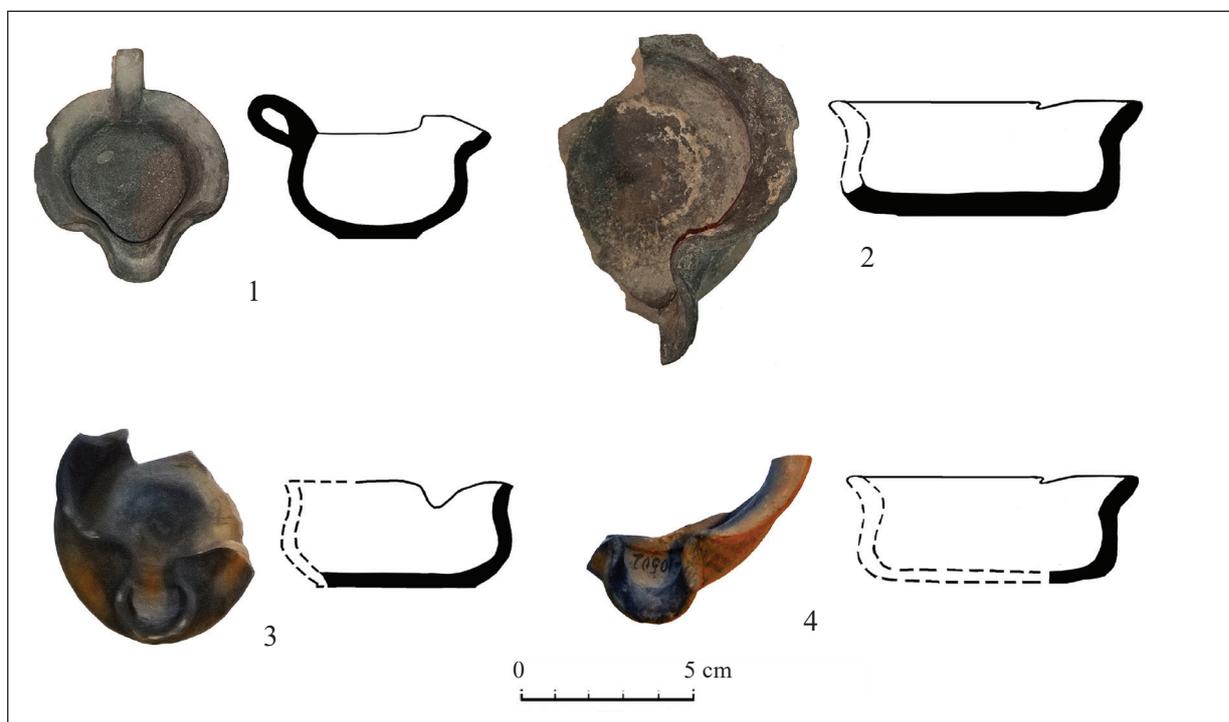


Fig. 8. Wheel-made lamps with a pinched spout (cat. nos. 34–37)

statistical analysis of lamp usage patterns. Despite this, the assemblage reveals a clear predominance of two types of oil lamps — Loeschcke type VIII and Sunburst lamps. Both types are widely distributed across the northern and western Black Sea region. Tallow lamps were also in use, and some oil lamps appear to have been deliberately modified for burning animal fat, which was a cheaper and more accessible fuel than olive oil.

Most of the lamps seem to be of local origin, a conclusion drawn from visual analysis of the clay and the quality of craftsmanship. However, laboratory testing is required to confirm this assumption. Although a few moulds have been discovered at Tyras, there is currently no evidence of an organised production system comparable to those known in other regions of the Roman Empire.

Identifying distinct chronological phases in the use of lamps is particularly challenging. The Roman garrison was stationed at Tyras for approximately 150 years, and it is clear that the assemblage primarily reflects the final phase of the garrison's presence in the city. Earlier lamps had likely fallen out of use by that time and are thus absent from the archaeological record.

These findings, while limited in number, contribute to our understanding of everyday life within the Roman garrison. Further excavations — particularly of military and domestic areas — may provide a more comprehensive picture of lighting technologies and local ceramic production at Tyras.

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Appendix 1. Catalogue of lamps from the area of the Roman citadel of Tyras

Ephesian lamps

No. 1. Fig. 2: 1. Description: circular reservoir; shoulder with a row of ovolos; two relief stripes on the shoulder space near the nozzle; ridge separating shoulder from discus; concave discus with central filling-hole; elongated nozzle with a flat

top; rosette on nozzle top; raised circular base-ring. With traces of use. Material: red fine clay; brown slip. Condition: restored; handle missing, small part of nozzle tip chipped. Dimensions: L = 8.6 cm, W = 6.6 cm, H = 2.2 cm¹. Findspot and

¹ Here and below, the height is given without the handle. The following abbreviations are used: L - length, W - width, H - height, D - diameter.

context: 1979 year of excavations, South-Eastern section, structure 384. Storage location and inventory no.: OAM 88079 (БД-79/77). Bibliography: unpublished. Analogies: Oziol 1977, pl. 8: 134; Baumann 2009, p. 230, fig. 5: 30; Popescu 2011, pl. 1: 3–4.

No. 2. Fig. 2: 2. Description: similar to no. 1; ribbon handle with a groove. Material: red clay. Condition: complete. Dimensions: D = 5.7 cm, H = 2.3 cm. Findspot and context: 1930, point 23. Storage location and inventory no.: unknown. Bibliography: Nicorescu 1933, p. 589, fig. 107.

Loeschcke type VIII lamps

No. 3. Fig. 2: 3. Description: circular reservoir; concave discus, marked with two thin circular ridges with a groove between; ivy leaf-shaped nozzle; base marked off by one circular groove. Material: red fine clay; orange slip. Condition: large part of discus missing. Dimensions: D = 7.1 cm, H = 3 cm. Findspot and context: 1967, Building no. V, infill near the north-east wall. Storage location and inventory no.: OAM 80811 (БД-67, сп. 7). Bibliography: Клейман 1971, рис. 9. Analogies: Кузманов, Минчев 2018, табл. XII: 172.

No. 4. Fig. 2:4. Description: circular reservoir; ring handle; concave discus marked with two thin circular ridges with a groove between and decorated with a rosette of sixteen petals; central filling-hole; ivy leaf-shaped nozzle; concave base. Material: reddish brown clay; brown slip. Condition: restored; small part of discus missing. Dimensions: D = 6.2 cm, H = 3.7 cm. Findspot and context: 1976, Southern section, square 116 V-Д; grey clay layer. Storage location and inventory no.: OAM 86771 (БД-76/200). Bibliography: unpublished. Analogies: Кузманов, Минчев 2018, табл. XIII: 176, табл. XV: 218; табл. XVII: 240; Streinu, Pîrvulescu 2020, pl. II: 1–2.

No. 5. Fig. 2:5. Description: circular reservoir; ring handle; shoulder decorated with a row of ovolos; concave discus; ivy leaf-shaped nozzle; slightly raised base-ring. Material: red clay; dull red slip of poor quality. Condition: central part of discus and part of nozzle missing. Dimensions: D = 5.5 cm, H = 3.2 cm. Findspot and context: 1975, Western section, square 241/242 IV-Д, grey clay layer. Storage location and inventory no.: OAM 85821 (БД-75/129). Bibliography: unpublished. Analogies: Кузманов, Минчев 2018, табл. XII: 169; табл. XVIII: 250; Streinu, Pîrvulescu 2020, pl. III: 14.

No. 6. Fig. 2: 6. Description: circular reservoir with short nozzle, concave discus; filling-hole at left; slightly concave base. With traces of use. Material: red clay; yellowish brown slip of poor quality. Condition: complete. Dimensions: D = 5.8 cm, L = 6.8 cm, H = 2.2 cm. Findspot and context: 1986, Western section, square 284 IV-Д. Storage location and inventory no.: OAM 89874 (БД-86/9). Bibliography: unpublished.

No. 7. Fig. 2: 7. Description: circular reservoir; ring handle; shoulder decorated with three rows of globules; concave discus marked with two thin circular ridges; filling-hole off centre; short nozzle with U-shaped sides; flat base, marked by a groove; stamp on the base – *planta pedis* between Δ and I. Material: red clay; dark brown slip of poor quality; smudges on the underside. Condition: restored; part of the reservoir and discus missing. Dimensions: D = 6 cm, L = 7.8 cm, H = 2.1 cm. Findspot and context: 1997, Southern section, Tower no. 575, infill, medieval layer. Storage location and inventory no.: BDLM A-10670 (БТЕ-1997, сп. 72). Bibliography: unpublished. Analogies: Кузманов, Минчев 2018, табл. XIII: 180–181; Sheiko, Puklina 2019, fig. 6: 6; Streinu, Pîrvulescu 2020, pl. III: 15.

No. 8. Fig. 3:1. Description: circular reservoir; ring handle; slightly concave discus marked with two grooves and decorated with the head of a bull or a cow; short nozzle; slightly raised base-ring. With traces of use. Material: red clay; dull reddish-brown slip of poor quality. Condition: complete. Dimensions: D = 6.6 cm, H = 2.3 cm. Findspot and context: 1979, South-eastern section, square 307 IV-Д, layer of the 2nd–3rd centuries. Storage location and inventory no.: OAM 88081 (БД-79/294). Bibliography: unpublished.

No. 9. Fig. 3:2. Description: circular reservoir, ring handle; slightly concave discus marked with circular ridge and decorated with a pigeon standing on a branch; filling-hole at left; short nozzle; flat base. With traces of use. Material: red clay; orange slip of poor quality. Condition: complete. Dimensions: D = 6.1 cm, H = 2.5 cm. Findspot and context: 1998, Northern sector-2, squares 161/181 IV-Д, mixed layer. Storage location and inventory no.: BDLM A-10673 (БТЕ-1998/54). Bibliography: unpublished. Analogies: Кузманов, Салкин 1981, табл. V: 41–42; Sanie 1981, pl. 45: 2 a–b; Baumann 2009, pl. 2: 73; Topoleanu 2016, pl. III: 15; Кузманов, Минчев 2018, табл. XX: 274.

No. 10. Fig. 3:3. Description: similar to no. 9; decorated with a blurred pigeon standing on a branch to the right. With traces of use. Materi-

al: red clay; orange slip of poor quality. Condition: small part of reservoir missing. Dimensions: D = 6.1 cm, H = 2.5 cm. Findspot and context: 1998, Western sector, Building no. 610, layer of the 2nd–4th centuries. Storage location and inventory no.: BDLM A-9681 (BTE-98/260). Bibliography: unpublished.

No. 11. Fig. 4: 1. Description: circular reservoir; ring handle; slightly concave discus marked with two grooves and decorated with a rooster to the right; filling-hole at left; short nozzle; flat base. Material: red clay; orange slip of poor quality. Condition: restored; part of shoulder and most of nozzle missing. Dimensions: D = 4.7 cm, L = 7 cm, H = 2.5 cm. Findspot and context: 1996, Western sector, squares 322/321 IV-Д; grey clay layer. Storage location and inventory no.: BDLM A-10672 (BTE-96/102). Bibliography: unpublished. Analogies: Bârlădeanu 1977, pl. V: 7; Baumann 2009, fig. 7, 51; Rusu-Bolindeț 2010, pl. IV–V; Topoleanu 2012, p. 114-116; Ionomu 2013, pl. II, VII: 1; Topoleanu, Croitoru 2015, p. 130-132; Popescu, Rațiu 2016, pl. II: 11; Iliescu, Botiș 2018, fig. 9: 1–3; Croitoru, Diaconu 2019, fig. 1, 2; Bocan, Dabîca 2023, p. 63-64, cat. 1–2.

No. 12. Fig. 4: 2. Description: circular reservoir; ring handle; slightly concave discus marked with two grooves and decorated with the depiction of a filled kantharos; filling-hole at left; flat base with blurred base-ring. Material: red clay; orange slip of poor quality. Condition: restored; part of reservoir, part of discus and most of nozzle missing. Dimensions: D = 5.1 cm, L = 5.5 cm, H = 2.1 cm. Findspot and context: 1997, Southern sector, square 29 V-Д; grey clay layer. Storage location and inventory no.: BDLM A-10671 (BTE-97/71). Bibliography: unpublished. Analogies: Bârlădeanu 1977, pl. V: 3; СоH, Сорочан 1988, рис. 4, 6; Baumann 2009, pl. 1, 47; Rusu-Bolindeț 2010, pl. VII: 13–14; Topoleanu 2012, p. 117-122; Topoleanu, Croitoru 2015, p. 124-127; Popescu, Rațiu 2016, pl. II: 10; Topoleanu 2016, pl. III: 17; Streinu, Pîrvulescu 2020, pl. I: 1–2; Croitoru, Diaconu 2019, fig. 2, 3–4; Iliescu, Botiș 2018, fig. 9: 6; Ionomu 2013, pl. III: 1–2, IV: 4, V, VII: 2–3, IX: 2–4; Bocan, Dabîca 2023, p. 64-65, cat. 3–5.

No. 13. Fig. 4: 3. Description: same as no. 12; filling-hole at right; ivy leaf-shaped nozzle. Material: red clay. Condition: large part of shoulder and discus missing. Dimensions: D = 5.5 cm, H = 2.3 cm. Findspot and context: 1930, point 23.

Storage location and inventory no.: unknown. Bibliography: Nicorescu 1933, p. 589, fig. 105.

No. 14. Fig. 4: 4. Description: slightly concave discus marked with a groove and decorated with the depiction of a flying griffin to the left, with a purse-like object beneath; filling-hole off centre; short nozzle with U-shaped sides. Material: red clay; orange slip of poor quality. Condition: top part preserved, handle and part of nozzle missing. Dimensions: D = 5.8 cm. Findspot and context: 1968, accidental find near Building V during excavation. Storage location and inventory no.: OAM 83303. Bibliography: unpublished. Analogies: Кузманов 1992, с. 84, № 143.

No. 15. Fig. 5: 1. Description: circular reservoir; ring handle with two grooves on the upper part; concave discus marked with two grooves and decorated with a blurred rosette; central filling-hole; short nozzle; slightly concave base. Material: red clay; red slip of poor quality. Condition: restored; small part of reservoir missing. Dimensions: D = 6.5 cm, L = 8.5 cm, H = 3 cm. Findspot and context: 1989, North-Eastern section, squares 226/225 IV-Д, stone pavement 514. Storage location and inventory no.: OAM 90789 (БД-89/109). Bibliography: unpublished.

No. 16. Fig. 5: 2. Description: circular reservoir; concave discus marked with two grooves; short nozzle; slightly concave base. With traces of use. Material: red clay; red slip of poor quality. Condition: large part of the reservoir and most of the discus are missing. Dimensions: D = 5.6 cm, H = 2.6 cm. Findspot and context: 1975, Eastern section, square 225 IV-Д; yellow clay layer. Storage location and inventory no.: OAM 85871 (БД-75, сн. 121/7). Bibliography: unpublished.

No. 17. Fig. 5: 3. Description: circular reservoir; ring handle; concave discus; short nozzle; slightly concave base. Material: reddish brown clay. Condition: central part of discus and large part of nozzle missing. Dimensions: D = 5.7 cm, L = 7 cm, H = 2.8 cm. Findspot and context: 1996, squares 300/280 IV-Г; Building no. 610; mixed layer. 19.76–18.60. Storage location and inventory no.: BDLM № A-10667 (BTE-96/136). Bibliography: unpublished.

No. 18. Fig. 5: 4. Description: circular reservoir; ring handle; slightly concave discus with central filling-hole; short nozzle; slightly concave base. Material: orange clay; red slip. Condition: part of discus missing. Dimensions: D = 7.6 cm, H = 2.5 cm. Findspot and context: 1979, South-Eastern section, square 346 IV-Д, lay-

er of the 2nd–3rd centuries. Storage location and inventory no.: OAM 88080 (БД-79/90). Bibliography: unpublished.

No. 19. Fig. 5: 5. Description: circular reservoir; solid vertical handle; concave discus with central filling-hole; short nozzle; flat base. With traces of use. Material: reddish orange clay; orange slip. Condition: large part missing. Dimensions: L = 6 cm, H = 3.2 cm. Findspot and context: 1973, Northern section, square 206 IV-Д. Storage location and inventory no.: OAM, without number (БД-73/38). Bibliography: unpublished.

No. 20. Fig. 5: 6. Description: circular reservoir; ring handle; elongated nozzle, slightly concave discus decorated with a blurred rosette; central filling-hole; flat base. With traces of use. Material: reddish brown clay. Condition: complete. Dimensions: L = 6.7 cm, W = 5 cm, H = 2.3 cm. Findspot and context: 1996, Building no. 610, apse floor. Storage location and inventory no.: BDLM A-10669 (БТЕ-96/169). Bibliography: Самойлова, Кожокару, Богуславский 2002, с. 147, табл. LXI: 4; Savelieva 2023, p. 641, fig. 4: 1.

No. 21. Fig. 5: 7. Description: circular reservoir; ring handle; concave discus marked with two grooves. Material: red clay; brownish red slip. Condition: most of reservoir and discus missing. Dimensions: L = 5 cm, H = 1.8 cm. Findspot and context: 1975, Southern section, square 30 V-D; grey clay layer. Storage location and inventory no.: OAM without number (БД-75, l. 69/12). Bibliography: unpublished. Analogies: Topoleanu 2016, pl. III: 16; Кузманов, Минчев 2018, табл. XII: 169.

No. 22. Fig. 5: 8. Description: circular reservoir; concave discus marked with a groove. Material: reddish orange clay; dark orange slip of poor quality. Condition: part of reservoir and small part of handle preserved; central part of discus and nozzle missing. Dimensions: L = 7 cm, W = 5 cm, H = 2.2 cm. Findspot and context: 1969, Southern section, square 30 V-Д; grey clay layer. Storage location and inventory no.: OAM, without number (БД-75, l. 69/12). Bibliography: unpublished. Analogies: Topoleanu 2016, pl. III: 16; Кузманов, Минчев 2018, Табл. XII: 169.

Sunburst lamps

No. 23. Fig. 6: 1. Description: circular reservoir; ribbon handle; shoulder decorated with radiating grooves; concave discus surrounded by a ridge and a groove; central filling-hole; elon-

gated nozzle; ridge with transverse grooves and two globules separating nozzle from the shoulder; raised, rounded base-ring with two rows of radiating lines. Material: red clay; dark orange slip of poor quality. Condition: complete. Dimensions: L = 7.2 cm, W = 5 cm, H = 2.5 cm. Findspot and context: 1963, excavation site B, square 27²; mixed layer. Storage location and inventory no.: OAM 80217 (БД-63/28). Bibliography: unpublished.

No. 24. Fig. 6: 2. Description: circular reservoir; ribbon handle; shoulder decorated with radiating grooves; concave discus with central filling-hole; elongated nozzle decorated with two globules; base-ring with twelve radiating lines. With traces of use. Material: red clay; brown, metallic, shiny slip of poor quality. Condition: complete. Dimensions: L = 6.8 cm, W = 5 cm, H = 2.4 cm. Findspot and context: 1963, excavation site B, square 27; mixed layer. Storage location and inventory no.: OAM 80218 (БД-63/74). Bibliography: unpublished.

No. 25. Fig. 6: 3. Description: circular reservoir; wide ribbon handle; shoulder decorated with radiating grooves; concave discus surrounded by a ridge; central filling-hole; elongated nozzle decorated with a globule; raised, rounded base-ring with ten radiating lines. With traces of use. Material: red clay; red-brown matte slip. Condition: restored. Dimensions: L = 7.3 cm, W = 5.2 cm, H = 2.3 cm. Findspot and context: 1975, South section, square 29 V-Д; grey clay layer. Storage location and inventory no.: BDLM A-7586 (БД-75/154). Bibliography: unpublished.

No. 26. Fig. 6: 4. Description: circular reservoir; ribbon handle; shoulder decorated with radiating grooves; concave discus surrounded by three ridges; central filling-hole; elongated nozzle decorated with a globule; raised, rounded base-ring with two circular grooves. Material: red clay; reddish-brown, metallic, shiny slip. Condition: complete. Dimensions: L = 6.2 cm, W = 4.9 cm, H = 2 cm. Findspot and context: 1989, North-Eastern section, squares 226, 225 IV-Д; yellow clay layer. Storage location and inventory no.: OAM 90790 (БД-89/22). Bibliography: unpublished.

No. 27. Fig. 7: 1. Description: circular reservoir; ribbon handle; shoulder decorated with radiating grooves; concave discus surrounded by a groove; central filling-hole; elongated nozzle decorated

² Based on L. D. Dmitrov's system of squares that was used from 1945 to 1968.

with a globule. Material: red clay; reddish-brown, metallic, shiny slip. Condition: fragment; lower part of the lamp and the nozzle missing. Dimensions: L = 6.8 cm, W = 5.4 cm, H = 1 cm. Findspot and context: 1996, Western sector, area between Building 610 and Tower 68; grey clay layer. Storage location and inventory no.: BDLM A-9825 (БТЕ-96/154). Bibliography: unpublished.

No. 28. Fig. 7: 2. Description: circular reservoir; ribbon handle; shoulder decorated with radiating grooves; concave discus surrounded by two grooves; central filling-hole. Material: red clay; yellowish-brown, metallic, shiny slip of poor quality. Condition: fragment, lower part of reservoir and nozzle missing. Dimensions: L = 5.3 cm, W = 5.2 cm. Findspot and context: 1974, Eastern section, square 348 IV-Д; grey clay layer. Storage location and inventory no.: OAM without inventory number (БД-74/48). Bibliography: unpublished.

No. 29. Fig. 7: 3. Description: circular reservoir; ribbon handle; shoulder decorated with radiating grooves. Material: red clay; yellowish-brown, metallic, shiny slip of poor quality. Condition: fragment. Dimensions: L = 5 cm, W = 4 cm. Findspot and context: Western section, squares 324, 344, 345 IV-Д; mixed layer. Storage location and inventory no.: OAM, without number (БД-71, сп. 14). Bibliography: unpublished.

No. 30. Fig. 7: 4. Description: circular reservoir; ribbon handle; shoulder decorated with radiating grooves; concave discus surrounded by a ridge. Material: red clay; dark red slip of poor quality. Condition: fragment. Dimensions: L = 5.3 cm, W = 5 cm, H = 2.2 cm. Findspot and context: 1996, squares 345, 366, 367 IV-Д, during the excavation of the outer façade of the curtain defensive wall no. 37. Storage location and inventory no.: BDLM A-10889 (БТЕ-96/196). Bibliography: unpublished.

No. 31. Fig. 7: 5. Description: circular reservoir; ribbon handle; shoulder decorated with radiating grooves; flat discus surrounded by a groove; central filling-hole; slightly concave base with ten radiating lines. Material: red clay; dark red slip. Condition: fragment; part of the reservoir, discus and nozzle missing. Dimensions: L = 5.7 cm, H = 2 cm. Findspot and context: 1996, squares 261/281 IV-Д, area between Building 610 and Tower 68, beneath stone rubble no. 544. Storage location and inventory no.: BDLM A-9632 (БТЕ-96/110). Bibliography: unpublished.

No. 32. Fig. 7: 6. Description: circular reservoir; ribbon handle; concave discus surrounded by a ridge; central filling-hole; elongated nozzle dec-

orated with three globules; raised, rounded base-ring with a circular groove. Material: red clay; reddish-brown slip. Condition: complete. Dimensions: L = 7.9 cm, W = 5.5 cm, H = 2.1 cm. Findspot and context: 1971, squares 325/345 IV-Д; backfill at defensive wall no. 37. Storage location and inventory no.: OAM 84249 (БД-71/53). Bibliography: unpublished.

No. 33. Fig. 7: 7. Description: circular reservoir; ribbon handle; concave discus with central filling-hole; elongated nozzle; raised, rounded base-ring. With traces of use. Material: red clay. Condition: complete. Dimensions: L = 7 cm, W = 5.5 cm, H = 2.3 cm. Findspot and context: North-eastern section, squares 226/225 IV-Д, pavement 514. Storage location and inventory no.: BDLM BX-694 (БД-89/108). Bibliography: unpublished.

Wheel-made lamps with a pinched spout (Tyra-sian type)

No. 34. Fig. 8: 1. Description: shallow, rounded bowl with a pinch on one side forming a spout; looped handle; slightly raised circular base-ring. Material: light brown clay with visible impurities, grey on the surface. Condition: some chips on vessel rim. Dimensions: L = 6.1 cm, W = 5.5 cm, H = 3.7 cm. Findspot and context: 1963, excavation site B, square 27; mixed layer. Storage location and inventory no.: OAM 80216 (БД-63/6). Bibliography: unpublished.

No. 35. Fig. 8: 2. Description: shallow flat-bottomed bowl with a pinch on one side forming a spout. Material: light brown clay with visible impurities, grey on the surface. Condition: fragment; some chips on vessel rim. Dimensions: L = 9.2 cm, W = 7 cm, H = 3.2 cm. Findspot and context: 1989, North-Eastern section, squares 225, 226, 227, 245, 246, 247 IV-Д, during site clearance. Storage location and inventory no.: OAM 90788 (БД-89/17). Bibliography: unpublished.

No. 36. Fig. 8: 3. Description: shallow flat-bottomed bowl with a pinch on one side forming a spout. Material: reddish-brown clay with visible impurities. Condition: large part missing. Dimensions: L = 6.1 cm, W = 5.6 cm, H = 2.9 cm. Findspot and context: 1998, Western sector, square 321 IV-Д, pit no. 597 of 2nd-3rd century. Storage location and inventory no.: BDLM (БТЕ-98, l. 25). Bibliography: Бруяко, Росохацкий 2000, с. 343, fig. 1, 3.

No. 37. Fig. 8: 4. Description: shallow flat-bottomed bowl with a pinch on one side forming a spout. Material: reddish-brown clay with visi-

ble impurities. Condition: fragment. Dimensions: H = 3.2 cm. Findspot and context: 1998, Western sector, south of Building 610, 2nd–3rd century layer.

Арсеньева, Т. М. 1988. *Светильники Танаиса*. Москва: Наука.

Бруяко, И. В., Росохацкий, А. А. 2000. К собранию светильников римского времени из Тире. *Stratum plus*, 4, с. 342-345.

Журавлев, Д. В., Быковская, Н. В., Желтикова, А. Л. 2010. *Светильники второй половины III в. до н.э. – IV в. н.э.* Киев: Мистецтво.

Журавлев, Д. В., Турова, Н. П. 2012. Античные глиняные светильники Ялтинского историко-литературного музея. *Боспорские исследования*, XXVI, с. 335-400.

Зубар, В. М. 2004. З приводу інтерпретації однієї споруди, відкритої на території античної Тіри. *Археологія*, 2, с. 137-145.

Клейман, И. Б., Кравченко, А. А., Самойлова, Т. Л., Сон, Н. А. *Отчет о раскопках античной Тире и средневекового Белгорода Белгород-Тирской экспедицией ИА АН УССР в 1979 г.* Научный архив Института археологии НАН Украины, ф. 64, 1979/91.

Клейман, И. Б. 1971. Раскопки помещения вестигалии 1-го Итальянского легиона в Тире. *Материалы по археологии Северного Причерноморья*, 7, с. 229-238.

Крапивина, В. В. 1993. *Ольвия. Материальная культура I–IV вв. н.э.* Киев: Наукова думка.

Крыжицкий, С. Д., Клейман, И. Б. 1979. Раскопки Тире в 1963 и 1965–1976 гг. В: Карышковский, П. О. (отв. ред.). *Античная Тира и средневековый Белгород*. Киев: Наукова думка, с. 34-119.

Кузманов, Г. 1992. *Античные лампы. Коллекция на Национального археологического музея*. София: Българска академия на науките.

Кузманов, Г., Минчев, А. 2018. *Античные лампы. Коллекция на Регионален исторически музей Варна*. София: Булгед.

Кузманов, Г., Салкин, А. 1981. Коллекция от античных ламп в музее на Каварна. *Известия на Народния музей*, 17 (32), с. 50-63.

Левина, Э. А. 1985. Рубчатые светильники из коллекции Одесского археологического музея. В: Дзис-Райко, Г. А. (отв. ред.). *Памятники древней истории Северо-Западного Причерноморья*. Киев: Наукова думка, с. 67-70.

Левина, Э. А. 1987. Светильники из раскопок Тире (конец VI – I в. до н.э.). В: Самойлова, Т. Л. (отв. ред.). *Новые исследования по археологии Северного Причерноморья*. Киев: Наукова думка, с. 108-118.

Росохацкий, А., Батизат, Г., Кожокару, В., Оприш, И. К. 1997. *Отчет о работе Белгород-Тирской экспедиции Института археологии НАН Украины при участии Института Фракологии Румынии в 1997 г.* Научный архив Института археологии НАН Украины, ф. 64, 1997/71.

Савельев, О. К. 2021. Фрагмент римского фигурного светильника из Тире. *Стародавнє Причорномор'я*, XIII, с. 374-381.

Самойлова, Т. Л., Кожокару, В., Богуславский, Г. С. 2002. Античная Тира – средневековый Белгород (отчет о раскопках за 1996–1999 гг.). In: Roman, P., Kryzickij, S. (eds.). *Tyras – Cetatea Alba / Belhorod-Dniistrovs'kyi. I. Săpăturile 1996–1999*. București: Redacția publicațiilor pentru străinătate, p. 51-189.

Самойлова, Т. Л., Росохацкий, А. А. 1997. К вопросу о распространении христианства в Северо-Западном Причерноморье. В: Крючков, Ю. (ред.). *История. Этнография*.

Storage location and inventory no.: BDLM (БТЕ-98, сп. 19). Bibliography: Бруяко, Росохацкий 2000, с. 343, fig. 1, 4.

Культура. Нові дослідження: матеріали II Миколаївської обласної краєзнавчої конференції. Миколаїв: Миколаївський обласний краєзнавчий музей, с. 31-32.

Смолянникова, С. П. 2005. Ливарні форми з Тіри. *Археологія*, 1, с. 82-91.

Сон, Н. А., Кравченко, А. А., Клейман, И. Б., Чепак, В. Н., Отрешко, В. М., Русяева, М. В., Соболевская, И. А., Чаплыгина, Н. А. 1989. *Отчет о раскопках античной Тире и средневекового Белгорода Тирской экспедицией ИА АН УССР в 1989 г.* Научный архив Института археологии НАН Украины, ф. 64, 1989/7.

Сон, Н. А., Кравченко, А. А., Чепак, В. Н., Клейман, И. Б., Ивлев, С. М. 1990. *Отчет о раскопках Тире в 1990 г. Тирской экспедицией ИА АН УССР*. Научный архив Института археологии НАН Украины, ф. 64, 1990/19.

Сон, Н. А., Сорочан, С. Б. 1988. Античные светильники из Тире. В: Анохин, В. А. (отв. ред.). *Античные древности Северного Причерноморья*. Киев: Наукова думка, с. 115-133.

Сон, Н. О., Шейко, И. М. 2016. Металеві світильники з Ольвії та Тіри. *Археологія*, 4, с. 79-87.

Сон, Н. О., Шейко, И. М. 2018. Ліпні світильники з Тіри. *Археологія і давня історія України*, 3 (28), с. 140-146.

Сорочан, С. Б. 1982. Про так звані рубчасті світильники з Херсонесу. *Археологія*, 38, с. 43-50.

Шейко, И. Н. 2014. Пергамские и эфесские светильники из Ольвии (импорт и местные имитации). *Проблемы истории, филологии, культуры*, 2, с. 108-123.

Artimon, A. 2008. Precizări privind geneza și evoluția orașului Bacău în secolele XIV–XV. *Carpica*, XXXVII, p. 23-67.

Bârlădeanu, E. 1977. În legătură cu o necropolă din epoca romană timpurie la Callatis. *Pontica*, X, p. 127-152.

Baumann, V. 2009. Lucernele de la Noviodunum. *Peuce*, VII, p. 217-310.

Bocan, I., Dabica, M. 2023. Lămpile de la Histria I. Lămpi romane timpurii din Sectorul Sud al cetății Histria. *Materiale și cercetări arheologice*, XIX, p. 61-77.

Broneer, O. 1930. *Terracotta Lamps*. Corinth, IV. Cambridge: The American School of Classical Studies at Athens.

Brunenau, Ph. 1965. *Les lampes*. Délos, XXVI. Paris: De Boccard.

Bussière, J., Lindros Wohl, B. 2017. *Ancient Lamps in the J. Paul Getty Museum*. Los Angeles: J. Paul Getty Museum.

Bussière, J., Rivel, J.-C. 2012. *Lampes antiques de Méditerranée*. Oxford: British Archaeological Reports. DOI <https://doi.org/10.30861/9781407310275>

Chrzanowski, L., Zhuravlev, D. 1998. *Lamps from Chersonesos in the State Historical Museum*. Moscow; Roma: "L'erma" di Bretschneider.

Čičikova, M. 1987. Pottery Lamps from Novae (Lower Moesia) (1st–3rd Century). In: Ivanov, T., Čičikova, M., Dimitrova-Milčeva, A. (eds). *Recherches sur la culture en Mesie et en Thrace, Bulgarie, Ie–IVe siècle*. Sofia: Editions De L'Academie Bulgare des Sciences, p. 153-172.

Croitoru, C., Diaconu, V. 2019. Lămpi antice de tip "Euctemon" (re)descoperite într-o colecție locală. *Memoria Antiquitatis*, XXXV, p. 57-69.

Eckardt, H. 2000. Illuminating Roman Britain. *Theoretical Roman Archaeology Journal 1999*, p. 8-21. https://doi.org/10.16995/TRAC1999_8_21

Giuliani, A. 2005. Hellenistische Matrizenlampen aus Ephesos. In: Chrzanowski, L. (ed.). *Lychnological Acts, 1*. Montagnac: Nyon-Genève, p. 139-142.

- Gürler, B. 2002. Ephesos-Lampen aus Metropoli/Ionien. *Jahreshefte des Österreichischen Archäologischen Institutes in Wien*, S. 133-147.
- Gürler, B. 2003. Ephesos-Lampen im Museum von Tire. *Jahreshefte des Österreichischen Archäologischen Institutes in Wien*, S. 123-131.
- Hayes, J. W. 1980. *Ancient Lamps in the Royal Ontario Museum, I. Greek and Roman Clay Lamps*. Toronto: Royal Ontario Museum.
- Howland, R. H. 1958. *Greek Lamps and Their Survivals*. The Athenian Agora, IV. New Jersey: American School of Classical Studies at Athens.
- Iconomu, C. 2013. Euctemon – un producător de lucerne la Tomis (I). *Arheologia Moldovei*, XXXVI, p. 89-104. DOI: <https://doi.org/10.11588/amold.2013.0.29156>
- Iliescu, I., Botiș, F.-O. 2018. The Pottery Workshops from Histria. In: Rusu-Bolindeț, V. (ed.). *Atlas of Roman Pottery Workshops from the Provinces Dacia and Lower Moesia/Scythia Minor (1st – 7th centuries AD)*. Cluj-Napoca: Editura Mega, p. 193-210.
- Jaworska, M. 2024. The So-Called “Sunburst Lamps” Found in Apsaros. *Pontica et Caucasia*, IV, p. 39-47. DOI: <https://doi.org/10.31338/uw.9788366210363>
- Karasiewicz-Szczypiorski, R. 2018. Mithraea in Scythia and Taurica. *Novae*, VI, p. 189-199.
- Kassab Tezgör, D., Sezer, T. 1995: *Catalogue des lampes en terre cuite du Musée Archéologique d’Istanbul. I. Epoques protohistorique, archaïque, classique et hellénistique*. Istanbul: Institut Français d’Etudes Anatoliennes d’Istanbul.
- Kostova, K., Dobрева, D. 2008. Roman, Late Roman and Early Byzantine Lamps from National Archaeological Reserve “Deultum-Debelt”. In: Roman, C.-A., Gudea, N. (eds.). *Lychnological Acts, 2. Trade and Local Production of Lamps from the Prehistory until the Middle Age*. Cluj-Napoca: Editura Mega, p. 161-170.
- Loeschcke, S. 1919. *Lampen aus Vindonissa. Ein Beitrag zur Geschichte von Vindonissa und des antiken Beleuchtungswesens*. Zürich: Beer & Cie.
- Nicorescu, P. 1933. Fouilles de Tyras. *Dacia*, III-IV, p. 557-601.
- Oziol, T. 1977. *Les lampes du Musée de Chypre*. Salamine de Chypre, VII. Paris: De Boccard.
- Panaitescu, A. 1977. Mormânt de epocă romană de la Tomis. *Pontica*, X, p. 339-343.
- Petruț, D. 2018. *Pottery and Military Life. The Ceramic Assemblages from the Barracks of the Auxiliary Fort at Buciumi, Dacia Porolissensis*. Cluj-Napoca: Editura Mega.
- Popescu, M.-C. 2011. Lamps Discovered in Pre-Roman Dacia 2nd Century BC – 1st Century AD). Notes on the Adoption of an Innovation. *Caiete. Asociația Arhitectură. Restaurare. Arheologie*, 2, p. 5-21.
- Popescu, R., Rațiu, A. 2016. Lămpi romane și romano-bizantine din colecția Muzeului Municipiului București. *Revisita de Cercetări Arheologice și Numismatice*, 2, p. 144-165.
- Postoș, R.-G. 2022. Broken Discus Lamps from Roman Dacia. *Acta Musei Napocensis*, 59/I, p. 113-128. DOI: <https://doi.org/10.54145/ActaMN.I.59.07>
- Rusu-Bolindeț, V. 2010. The Lamps from the Early Roman Time from Histria. An Introduction on the Activity of the Lamp Producing Workshops in Roman Dobrogea. In: Angelescu, M. V. (ed.). *Antiquitas Istro-Pontica. Mélanges d’archéologie et d’histoire ancienne offerts à Alexandru Suceveanu*. Cluj-Napoca: Mega Éditions, p. 401-420.
- Sanie, S. 1981. *Civilizația Romană la est de Carpați și romanitatea pe teritoriul Moldovei (secolele II î.e.n. – III e.n.)*. Iași: Editura Junimea.
- Savelieva, K. 2023. Archaeological and Epigraphic Evidence about the Religious Life of the Roman Garrison in Tyras. *Cercetări arheologice*, 30/2, p. 639-650. DOI: <https://doi.org/10.46535/ca.30.2.13>
- Sheiko, I. 2024. Recent Finds of the Latest Lamps from Olbia. *Archaeologia Polonia*, 62, p. 69-88. DOI: <https://doi.org/10.23858/APa62.2024.3570>
- Sheiko, I. M., Puklina, O. O. 2019. Roman Lamps from the National Museum of History of Ukraine. *Археологія*, 2, с. 74-94. DOI: <https://doi.org/10.15407/archaeologyua2019.02.074>
- Streinu, A., Pîrvulescu, D. 2020. Shedding New Light on a Lot of Roman Lamps from Tomis from the Maria and Dr. George Severeanu Collection. *Pontica*, LIII, p. 253-277.
- Topoleanu, F. 2012. *Lămpile antice din colecțiile Muzeului Județean de Istorie și Arheologie Prahova*. Ploiești: Oscar Print.
- Topoleanu, F. 2016. Oil Lamps from Troesmis. In: Alexandrescu, C.-G. (ed.). *Troesmis – A Changing Landscape. Romans and the Others in the Lower Danube Region in the First Century BC – Third Century AD*. Cluj-Napoca: Editura Mega, p. 63-116.
- Topoleanu, F., Croitoru, C. 2015. *Lămpile antice din colecția Muzeului Brăilei „Carol I”*. Brăila: Editura Istros.
- Ursachi, V. 2001. Cercetările arheologice de la Tămășeni – “La Siliște”, jud. Neamț. *Memoria Antiquitatis*, XXII, p. 219-289.
- Zhuravlev, D., Zhuravleva, N. 2014. Late Hellenistic Pottery and Lamps from Pantikapaion: Recent Finds. In: Guldager Bilde, P., Lawall, M. L. (eds.). *Pottery, Peoples and Places. Study and Interpretation of Late Hellenistic Pottery*. *Black Sea Studies*, 16. Aarhus: Aarhus University Press, p. 255-286.

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СВІТИЛЬНИКИ З РИМСЬКОЇ ЦИТАДЕЛІ ТІРИ

У статті розглянуто світильники, які були знайдені в Тірі на території римської цитаделі та на прилеглих до неї ділянках в результаті шурфувань 1930 р. та систематичних розкопок 1963–1998 рр. Картографування знахідок дало можливість виявити ділянки з найбільшою концентрацією світильників. Одним із таких місць є будівля № V («будівля вексіяції»), всередині якої та поблизу виявлено 7 ламп. Кілька знахідок може бути пов'язано з комплексом із двома гончарними печами, розташованим біля північного оборонного муру цитаделі. Кілька світильників знайдено під час дослідження житлових або господарських споруд, розташованих вздовж південно-західного оборонного муру. Також із зовнішнього боку оборонних мурів цитаделі виявлено кілька комплексів, які попередньо можна інтерпретувати як такі, що пов'язані з її функціонуванням. Зокрема всередині та поблизу будівлі № 610, яка на нашу думку, є святилищем римського гарнізону, зафіксовано скупчення світильників. Знайдений на підлозі апсиди світильник, імовірно, був одним із культових атрибутів.

Усі знахідки розподіляються на дві групи за технологією виробництва: світильники, виготовлені у формах (33 одиниці), та на гончарному крузі (4 одиниці). Серед світильників виготовлених у формах, представлено три основні типи: Ефеські (2 екземпляри), тип Loeschke VIII (20 екземплярів) і т. зв. «рубчасті», або «Sunburst» світильники (11 екземплярів). Очевидно, до цієї групи належать як імпортовані, так і місцеві лампи, однак через відсутність фізико-хімічного аналізу глини не можна однозначно віднести жодну з них до локального виробництва. Група гончарних світильників складається з чотирьох відкритого типу, очевидно, місцевого виготовлення.

Загалом, кількість світильників, знайдених під час розкопок римської цитаделі в Тірі, є відносно незначною. Це можна пояснити тим, що такі споруди, як казарми, де освітлення використовувалося б більш інтенсивно, ще не були розкопані. Як наслідок, наявний матеріал не дозволяє провести повноцінний статистичний аналіз використання ламп.

К л ю ч о в і с л о в а: Тіра, римський час, римський гарнізон, цитадель, світильники.

References

- Arseneva, T. M. 1988. *Svetilniki Tanaisa*. Moscow: Nauka.
- Bruiaiko, I. V., Rosokhatskii, A. A. 2000. On Collection of Roman Tame Lamps from Tyra. *Stratum plus*, 4, p. 342-345.
- Zhuravlev, D. V., Bykovskaia, N. V., Zheltikova, A. L. 2010. *Svetilniki vtoroi poloviny III v. do n.e. – IV v. n.e.* Kyiv: Mystetstvo.
- Zhuravlev, D. V., Turova, N. P. 2012. Ancient Clay Lamps of the Yalta Historical-Literary Museum. *Bosporskie issledovaniia*, XXVI, p. 335-400.
- Zubar, V. M. 2004. Interpretation of a structure discovered at the territory of the ancient town of Tyras. *Arheologia*, 2, p. 137-145.
- Kleiman, I. B., Kravchenko, A. A., Samoilo, T. L., Son, N. A. *Otchet o raskopkakh antichnoi Tiry i srednevekovogo Belgoroda Belgorod-Tirskoi ekspeditsii Odesskogo arheologicheskogo muzeia i Tirskim otriadom IA AN USSR v 1979 g.* Scientific Archives of the Institute of Archaeology, the NAS of Ukraine, f. 64, 1979/91.
- Kleiman, I. B. 1971. Raskopki pomeshcheniia veksilliatii 1-go Italiiskogo legiona v Tire. *Materialy po arkhologii Severnogo Prichernomoria*, 7, p. 229-238.
- Krapivina, V. V. 1993. *Olviia. Materialnaia kultura I–IV vv. n.e.* Kyiv: Naukova dumka.
- Kryzhitskii, S. D., Kleiman, I. B. 1979. Raskopki Tiry v 1963 i 1965–1976 gg. In: Karyshkovskii, P. O. (ed.). *Antichnaia Tira i srednekovyi Belgorod*. Kyiv: Naukova dumka, p. 34-119.
- Kuzmanov, G. 1992. *Antike Lampen. Sammlung des Nationalen Archaologischen Museums*. Sofia: Balgarska akademija na naukite.
- Kuzmanov, G., Minchev, A. 2018. *Ancient Lamps. The Collection of Varna Regional Historical Museum*. Sofia: Bulged.
- Kuzmanov, G., Salkin, A. 1981. Die Sammlung Antiker Lampen im Museum der Stadt Kavarna. *Izvestia na Narodnia muzey*, 17 (32), p. 50-63.
- Levina, E. A. 1985. Rubchatye svetilniki iz kollektzii Odesskogo arheologicheskogo muzeia. In: Dzis-Raiko, G. A. (ed.). *Pamiatniki drevnei istorii Severo-Zapadnogo Prichernomoria*. Kyiv: Naukova dumka, p. 67-70.
- Levina, E. A. 1987. Svetilniki iz raskopok Tiry (konets VI – I v. do n.e.). In: Samoilo, T. L. (ed.). *Novye issledovaniia po arkhologii Severnogo Prichernomoria*. Kyiv: Naukova dumka, p. 108-118.
- Rosokhatskii, A., Batizat, G., Kozhokaru, V., Oprish, I. K. 1997. *Otchet o rabote Belgorod-Tirskoi ekspeditsii Instituta arkhologii NAN Ukrainy pri uchastii Instituta Frakologii Rumynii v 1997 g.* Scientific Archives of the Institute of Archaeology, the NAS of Ukraine, f. 64, 1997/71.
- Savelev, O. K. 2021. Fragment rimskogo figurного svetilnika iz Tiry. *Starodavnie Prychornomoria*, XIII, p. 374-381.
- Samoilo, T. L., Kozhokaru, V., Boguslavskii, G. S. 2002. Antichnaia Tira – srednekovyi Belgorod (otchet o raskopkakh za 1996–1999 gg.). In: Roman, P., Kryzhickij, S. (eds.). *Tyras – Cetatea Alba / Belhorod-Dnistrovs'kyi. I. Săpăturile 1996–1999*. București: Redacția publicațiilor pentru străinătate, p. 51-189.
- Samoilo, T. L., Rosokhatskii, A. A. 1997. K voprosu o rasprostraneniі khristianstva v Severo-Zapadnom Prichernomore. In: Kriuchkov, Yu. (ed.). *Istoriia. Etnohrafiia. Kultura. Novi doslidzhennia: materialy II Mykolaivskoi oblasnoi kraieznavchoi konferentsii*. Mykolaiv: Mykolaivskiy oblasnyi kraieznavchyi muzei, p. 31-32.
- Smolianinova, S. P. 2005. Casting moulds from Tyras. *Arheologia*, 1, p. 82-91.
- Son, N. A., Kravchenko, A. A., Kleiman, I. B., Chepak, V. N., Otreshko, V. M., Rusiaeva, M. V., Sobolevskaia, I. A., Chaplygina, N. A. 1989. *Otchet o raskopkakh antichnoi Tiry i srednekovogo Belgoroda Tirskoi ekspeditsiei IA AN USSR v 1989 g.* Scientific Archives of the Institute of Archaeology, the NAS of Ukraine, f. 64, 1989/7.
- Son, N. A., Kravchenko, A. A., Chepak, V. N., Kleiman, I. B., Ivlev, S. M. 1990. *Otchet o raskopkakh Tiry v 1990 g. Tirskoi ekspeditsiei IA AN USSR*. Scientific Archives of the Institute of Archaeology, the NAS of Ukraine, f. 64, 1990/19.
- Son, N. A., Sorochan, S. B. 1988. Antichnye svetilniki iz Tiry. In: Anokhin, V. A. (ed.). *Antichnye drevnosti Severnogo Prichernomoria*. Kyiv: Naukova dumka, p. 115-133.
- Son, N. O., Sheiko, I. M. 2016. Metal Lamps from Olbia and Tyras. *Arheologia*, 4, p. 79-87.
- Son, N. O., Sheiko, I. M. 2018. Handmade Lamps from Tyras. *Archaeology and Early History of Ukraine*, 3 (28), p. 140-146.
- Sorochan, S. B. 1982. Pro tak zvani rubchasti svitylynyky z Khersonesu. *Arheologia*, 38, p. 43-50.
- Sheiko I. N. 2014. Pergamum and Ephesus Type Lamps from Olbia (Import and Local Replicas). *Problemy istorii, filologii, kultury*, 2, p. 108-123.
- Artimon, A. 2008. Precizări privind geneza și evoluția orașului Bacău în secolele XIV–XV. *Carpica*, XXXVII, p. 23-67.
- Bărlădeanu, E. 1977. În legătură cu o necropolă din epoca romană timpurie la Callatis. *Pontica*, X, p. 127-152.
- Baumann, V. 2009. Lucernele de la Noviodunum. *Peuce*, VII, p. 217-310.

- Bocan, I., Dabîca, M. 2023. Lămpile de la Histria I. Lămpi romane timpurii din Sectorul Sud al cetății Histria. *Materiale și cercetări arheologice*, XIX, p. 61-77.
- Broneer, O. 1930. *Terracotta Lamps*. Corinth, IV. Cambridge: The American School of Classical Studies at Athens.
- Bruneau, Ph. 1965. *Les lampes*. Délos, XXVI. Paris: De Boccard.
- Bussière, J., Lindros Wohl, B. 2017. *Ancient Lamps in the J. Paul Getty Museum*. Los Angeles: J. Paul Getty Museum.
- Bussière, J., Rivel, J.-C. 2012. *Lampes antiques de Méditerranée*. Oxford: British Archaeological Reports. DOI <https://doi.org/10.30861/9781407310275>
- Chrzanowski, L., Zhuravlev, D. 1998. *Lamps from Chersonesos in the State Historical Museum*. Moscow: Roma: “L’erma” di Bretschneider.
- Čičikova, M. 1987. Pottery Lamps from Novae (Lower Moesia) (1st–3rd Century). In: Ivanov, T., Čičikova, M., Dimitrova-Milčeva, A. (eds). *Recherches sur la culture en Mesie et en Thrace, Bulgarie, Ie–IVe siècle*. Sofia: Editions De L’Academie Bulgare des Sciences, p. 153-172.
- Croitoru, C., Diaconu, V. 2019. Lămpi antice de tip “Euctemon” (re)descoperite într-o colecție locală. *Memoria Antiquitatis*, XXXV, p. 57-69.
- Eckardt, H. 2000. Illuminating Roman Britain. *Theoretical Roman Archaeology Journal 1999*, p. 8-21. https://doi.org/10.16995/TRAC1999_8_21
- Giuliani, A. 2005. Hellenistische Matrizenlampen aus Ephesos. In: Chrzanowski, L. (ed.). *Lychnological Acts, 1*. Montagnac: Nyon-Genève, p. 139-142.
- Gürler, B. 2002. Ephesos-Lampen aus Metropoli/Ionien. *Jahreshefte des Österreichischen Archäologischen Institutes in Wien*, S. 133-147.
- Gürler, B. 2003. Ephesos-Lampen im Museum von Tire. *Jahreshefte des Österreichischen Archäologischen Institutes in Wien*, S. 123-131.
- Hayes, J. W. 1980. *Ancient Lamps in the Royal Ontario Museum, I. Greek and Roman Clay Lamps*. Toronto: Royal Ontario Museum.
- Howland, R. H. 1958. *Greek Lamps and Their Survivals*. The Athenian Agora, IV. New Jersey: American School of Classical Studies at Athens.
- Iconomu, C. 2013. Euctemon – un producător de lucerne la Tomis (I). *Arheologia Moldovei*, XXXVI, p. 89-104. DOI: <https://doi.org/10.11588/amold.2013.0.29156>
- Iliescu, I., Botiș, F.-O. 2018. The Pottery Workshops from Histria. In: Rusu-Bolindeț, V. (ed.). *Atlas of Roman Pottery Workshops from the Provinces Dacia and Lower Moesia/Scythia Minor (1st – 7th centuries AD)*. Cluj-Napoca: Editura Mega, p. 193-210.
- Jaworska, M. 2024. The So-Called “Sunburst Lamps” Found in Apsaros. *Pontica et Caucasia*, IV, p. 39-47. DOI: <https://doi.org/10.31338/uw.9788366210363>
- Karasiewicz-Szczypiorski, R. 2018. Mithraea in Scythia and Taurica. *Novae*, VI, p. 189-199.
- Kassab Tezgör, D., Sezer, T. 1995. *Catalogue des lampes en terre cuite du Musée Archéologique d’Istanbul, 1. Epoques protohistorique, archaïque, classique et hellénistique*. Istanbul: Institut Français d’Etudes Anatoliennes d’Istanbul.
- Kostova, K., Dobрева, D. 2008. Roman, Late Roman and Early Byzantine Lamps from National Archaeological Reserve “Deultum-Debel”. In: Roman, C.-A., Gudea, N. (eds.). *Lychnological Acts, 2. Trade and Local Production of Lamps from the Prehistory until the Middle Age*. Cluj-Napoca: Editura Mega, p. 161-170.
- Loeschke, S. 1919. *Lampen aus Vindonissa. Ein Beitrag zur Geschichte von Vindonissa und des antiken Beleuchtungswesens*. Zürich: Beer & Cie.
- Nicorescu, P. 1933. Fouilles de Tyras. *Dacia*, III–IV, p. 557-601.
- Oziol, T. 1977. *Les lampes du Musée de Chypre*. Salamine de Chypre, VII. Paris: De Boccard.
- Panaitescu, A. 1977. Mormânt de epocă romană de la Tomis. *Pontica*, X, p. 339-343.
- Petruț, D. 2018. *Pottery and Military Life. The Ceramic Assemblages from the Barracks of the Auxiliary Fort at Buciumi, Dacia Porolissensis*. Cluj-Napoca: Editura Mega.
- Popescu, M.-C. 2011. Lamps Discovered in Pre-Roman Dacia 2nd Century BC – 1st Century AD). Notes on the Adoption of an Innovation. *Caiete. Asociația Arhitectură. Restaurare. Arheologie*, 2, p. 5-21.
- Popescu, R., Rațiu, A. 2016. Lămpi romane și romano-bizantine din colecția Muzeului Municipiului București. *Revista de Cercetări Arheologice și Numismatice*, 2, p. 144-165.
- Postoș, R.-G. 2022. Broken Discus Lamps from Roman Dacia. *Acta Musei Napocensis*, 59/I, p. 113-128. DOI: <https://doi.org/10.54145/ActaMN.I.59.07>
- Rusu-Bolindeț, V. 2010. The Lamps from the Early Roman Time from Histria. An Introduction on the Activity of the Lamp Producing Workshops in Roman Dobrogea. In: Angelescu, M. V. (ed). *Antiquitas Istro-Pontica. Mélanges d’archéologie et d’histoire ancienne offerts à Alexandru Suceveanu*. Cluj-Napoca: Mega Éditions, p. 401-420.
- Sanie, S. 1981. *Civilizația Romană la est de Carpați și romanitatea pe teritoriul Moldovei (secolele II î.e.n. – III e.n.)*. Iași: Editura Junimea.
- Savelieva, K. 2023. Archaeological and Epigraphic Evidence about the Religious Life of the Roman Garrison in Tyras. *Cercetări arheologice*, 30/2, p. 639-650. DOI: <https://doi.org/10.46535/ca.30.2.13>
- Sheiko, I. 2024. Recent Finds of the Latest Lamps from Olbia. *Archaeologia Polona*, 62, p. 69-88. DOI: <https://doi.org/10.23858/APa62.2024.3570>
- Sheiko, I. M., Puklina, O. O. 2019. Roman Lamps from the National Museum of History of Ukraine. *Arheologia*, 2, c. 74-94. DOI: <https://doi.org/10.15407/archaeologyua2019.02.074>
- Streinu, A., Pîrvulescu, D. 2020. Shedding New Light on a Lot of Roman Lamps from Tomis from the Maria and Dr. George Severeanu Collection. *Pontica*, LIII, p. 253-277.

- Topoleanu, F. 2012. *Lămpile antice din colecțiile Muzeului Județean de Istorie și Arheologie Prahova*. Ploiești. Oscar Print.
- Topoleanu, F. 2016. Oil Lamps from Troesmis. In: Alexandrescu, C.-G. (ed.). *Troesmis – A Changing Landscape. Romans and the Others in the Lower Danube Region in the First Century BC – Third Century AD*. Cluj-Napoca: Editura Mega, p. 63-116.
- Topoleanu, F., Croitoru, C. 2015. *Lămpile antice din colecția Muzeului Brăilei „Carol I”*. Brăila: Editura Istros.
- Ursachi, V. 2001. Cercetările arheologice de la Tămășeni – “La Siliște”, jud. Neamț. *Memoria Antiquitatis*, XXII, p. 219-289.
- Zhuravlev, D., Zhuravleva, N. 2014. Late Hellenistic Pottery and Lamps from Pantikapaion: Recent Finds. In: Guldager Bilde, P., Lawall, M. L. (eds). *Pottery, Peoples and Places. Study and Interpretation of Late Hellenistic Pottery*. Black Sea Studies, 16. Aarhus: Aarhus University Press, p. 255-286.