

Late Hellenistic Pottery and Lamps from Pantikapaion: Recent Finds

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Introduction

This paper is based on finds of late Hellenistic table ware and lamps found during the last excavations of the Bosporan archaeological expedition of the Pushkin Museum of Fine Arts in Pantikapaion on the ancient acropolis, the Mithridates hill.¹ This pottery has not been published until now, with the exception of isolated contexts from cisterns² as well as some lamps.³ The collection is being prepared for publication,⁴ but here we examine briefly only the most important groups of late Hellenistic pottery from Pantikapaion.

Imported mouldmade bowls

Mouldmade bowls comprise one of the main groups of Hellenistic table ware at Bosporan sites. One can hardly say that scholars from the former USSR, Russia and Ukraine did not pay any attention to mouldmade pottery from this region. However, most of these publications were written in the 1950s – 1970s.⁵ The only later study of mouldmade pottery of the North Black Sea area, was the PhD dissertation prepared by S. Kovalenko in 1989. Unfortunately, this has never been published and exists only as a manuscript.⁶

The study of mouldmade pottery of the North Pontic area has been neglected greatly in recent years; in the past 12 years only five articles in Russian devoted to this topic have been published. However, a Corpus of Megarian Bowls is going to be published in Ukraine very soon.⁷ It will include a huge amount of mouldmade pottery from the collection of the Archaeological Museum in Kerč.

In general, the products of Ionian workshops dating from the second to third quarters of the 2nd century BC dominate the imported mouldmade pottery at Pantikapaion. The amount of Attic imports was considerably smaller in that period.⁸

We can distinguish a large group of Ephesian vessels with a great variety of shapes (Figs. 1.1-4; 2.1-2; 3.2,3,5). This group of mouldmade pottery absolutely prevails over all the others. Products of the ΠΑΡ-Monogram workshop were the most numerous.⁹ Interestingly, some complete mouldmade vessels

were found in contexts dated as late as the first quarter of the 1st century BC, i.e. much later than they were produced. This must mean that these imported vessels were used over a long period and were considered rather valuable

There are also many fragments of mouldmade vessels produced in an, as yet, unknown workshop (Figs. 1.5; 3.1).

There are many mouldmade bowls produced in the workshop of Kirbeis. The bases of these bowls are decorated with a female bust, which can, without any doubt, be identified as Kybele wearing a tall mural crown (Figs. 2.5; 4.1). The geographical identification of this workshop is still a complicated mat-



Fig. 1. Relief ware: 1-4, 7 – from Ephesos; 5 – from unknown centre; 6 – from Pergamon.
Photo by Vladimir Tolstikov.



Fig. 2. Relief ware: 1 – from Ephesos; 2-3 – Bosporean relief ware; 4 – Zenodotos workshop (?); 5 – Kirbeis workshop (Kyme). Photo by Vladimir Tolstikov.

ter of debate. On the one hand, scholars from Black Sea countries suggest a Mediterranean provenance for this group. For example, Kovalenko proposed that the Kirbeis workshop may be located in Smyrna.¹⁰ On the other hand, Western scholars since Courby¹¹ have proposed a Pontic origin of the workshop. At the Sandbjerg conference, P. Guldager Bilde persuasively argued for an Olbian provenance. But a recently discovered fragment from the settlement

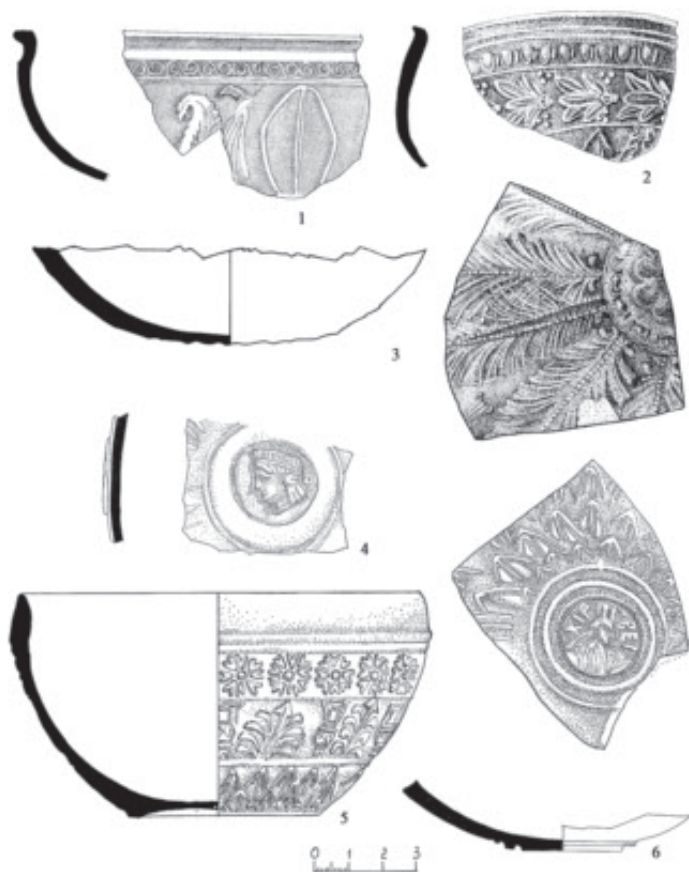


Fig. 3. Relief ware:
1 – from unknown
centre; 2, 3, 5 –
from Ephesos; 4 –
Zenodotos workshop
(?); 6 – Kirbeis
workshop (Kyme).
Drawings by the
Bosporan archaeo-
logical expedition.

Golubitskaya 2 was investigated using NAA by H. Mommsen in Bonn, and according to his archaeometric studies bowls from Kirbeis workshop were produced in Kyme.¹²

Following the ideas of Guldager Bilde concerning several people working in this workshop, we would like to mention a base fragment with a depiction of a female head turned to the left (Figs. 2.4; 3.4).¹³ Probably, this mark belongs to the production of Zenodotos. The chronology of the pottery from this workshop, which existed for a very short period, is still not clear; but it could be placed around the middle of the 2nd century BC.

Kovalenko's list contains no more than 15 stamped bowls with the name of Kirbeis from the Northern Pontic area. However, many of these stamps are kept in different museums all over the world where they await publication. For example, there are several bowls with the Kirbeis potters' mark now in the State Historical museum in Moscow from the former collection of P.O. Buračkov (Figs. 4.2-3, 5).

Some fragments of mouldmade vessels can be considered of Pergamene

Fig. 4. Relief ware from Kirbeis workshop (Kyme): 1- Pantikapaion. Drawing by the Bosphoran archaeological expedition. 2-3 – former Buračkov collection. The State Historical Museum. Drawing by Irina Rukavišnikova.



Fig. 5. Relief ware from Kirbeis workshop (Kyme): former Buračkov collection. The State Historical Museum. Photo by Denis Žuravlev.

origin. They are quite rare in the strata of Pantikapaion. A fragment of the lower part of a bowl ornamented with ivy leaves, however, was discovered in Pantikapaion in 2007 (Fig. 1.6).



Fig. 6. Moulds:
1 – Pantikapaion.
Drawing by the
Bosporan archaeo-
logical expedition.
2 – Phanagoria
(from: Kovalenko
1989). 3 – Relief
bowl of Demetrios
workshop,
Pantikapaion.
Drawing by the
Bosporan archaeo-
logical expedition.

Bosporan mouldmade bowls

In the late 3rd and much of the 2nd centuries BC only imported mouldmade vessels circulated in the Bosporan kingdom. The situation changed in the late 2nd – early 1st century BC when a local production of mouldmade pottery appeared. These vessels were made of dark grey clay with inclusions of lime. Vessels made of red clay are known as well.

A typology of Bosporan mouldmade bowls was first published by Šurgaja in 1962,¹⁴ and later revised by Kovalenko.¹⁵ Two main types of bowls can be distinguished, both close in shape to the Ionian products: deep vessels with slightly concave or vertical rim and relatively flat bowls with visibly concave rim. The average diameter is about 10-13 cm.

Some fragments of moulds were found in Pantikapaion (Fig. 6.1). Moreover, production of this pottery existed not only here, but also in Myrmekion¹⁶ and Phanagoria (Fig. 6.2).

Production of the workshop of Demetrios (with the stamp ΔΗΜΗΤΡΙΟΥ) predominated in the Bosporan market (Fig. 6.3). According to Kovalenko's calculation, it amounted to c. 85 % of the local mouldmade pottery. The main decoration on these vessels are floral ornaments, consisting of long petals,



Fig. 7. Mould for Bosporean relief bowl. Pushkin State museum of Fine Arts. Photo by Denis Žuravlev.

leaves of acanthus and palms. Sometimes only long petals, alternating with rows of raised dots, were used on the vessels from this workshop (Šurgaja Type 1). These long petals might appear in groups of two, three or four, or may alternate with palm and acanthus leaves, accompanied by floral springs, rosettes and birds (Šurgaja Types 2 and 3).¹⁷ Kovalenko also distinguished another combination of motifs (long petals and relief dots with triangular leaves, relief sticks, cones, stylized springs and the so-called 'Macedonian shield ornament'). Bowls of Šurgaja Type 5 decorated with small, overlapping, triangular leaves were produced in small quantities.¹⁸ The rims of all these bowls are usually decorated with ovules. A characteristic feature of this workshop is a very high percentage of stamped vessels (c. 60 %).

A second and smaller scale workshop belonged to Damokles (with the stamp ΔΑΜΟΚΛΕΙΟC). Only 4 % of the Bosporean relief mouldmade vessels were made there.

There are also a few odd stamps that could have belonged to other workshops, for example, ΑΔ or ΔΑ.¹⁹

A recent find of a mould on the acropolis of Pantikapaion gives us an example of another type of decoration (Fig. 7): plain base; wall decorated with long concave petals separated by rows of relief drops, alternating with imbricate small ferns; a band of ovules on the rim.

Most bowls from these workshops look very similar to one another; only some details in decoration are different. There is no doubt that these workshops were roughly contemporaneous. It is very probable that the activity of the Damokles workshop was later than that of Demetrios.²⁰

The Bosporean craftsmen did not bring anything new to the development of Hellenistic pottery production; well-known Mediterranean motifs monotonously repeat on Bosporean vessels. The influence of Ionia is evident both in

the shape of the vessels and in the decorative scheme of the whole vessel.²¹ The quality of the Bosporan vessels was usually poorer than that of the imported ones.

Pergamene sigillata and vessels with appliqué relief decoration

This category of pottery has been studied intensely by Russian and Ukrainian scholars;²² however, the criteria for distinguishing Pergamene ceramic production were not always consistently recognized or applied. As a result, the quantity of Pergamene imports into the North Pontic area was considered much more numerous than it really was.

From the mid 2nd century BC, Pergamene²³ vessels with appliqué relief decoration became very popular in the Bosporan region. Most are skyphoi of the Forms S3 and S8,²⁴ dating to the last quarter of the 2nd – first quarter of the 1st centuries BC. Ivy leaves are one of the ornaments most often found on Pergamene vessels (Figs. 8.3; 9.3).²⁵ This ornament is typical for the vessels found in the Bosporan region²⁶ as well as in Olbia.²⁷ Vessels with erotic scenes (Figs. 8.2, 4; 9.1-2) were also very popular,²⁸ as were Dionysiac scenes (Figs. 8.1, 5; 9.4-5). Among the finds from Pantikapaion we also distinguished fragments of relief decorated cups with S-shaped rim.

The production of local imitations of Pergamene appliqué vessels arose because of the popularity of this type of vessels.²⁹ One exceptional piece may be noted: the upper part of a jug with appliqué ornament representing a Dionysiac scene – Eros on a panther and two maenads – one of them holding a tympanos in her hand (Figs. 16-17).³⁰ There are no close parallels for this piece, although similar scenes were very popular in both Hellenistic and Roman art. The clay (reddish-brown with limestone inclusions) as well as the brown slip of average quality undoubtedly proves that it was produced in a Bosporan workshop. In general, the poorer quality of these Bosporan imitations compared with their Pergamene prototypes prevented them from being widespread even within the Bosporan kingdom.

Other groups of imported sigillata

Eastern sigillata A (ESA) also appears among the imported table ware at Bosporan sites. ESA was only recently identified in this area,³¹ and sometimes it can be very complicated to recognize it in the old publications where it was not described in detail.³² ESA is often found in layers dated to the first half of the 1st century BC and later. The most typical shapes are plates of *Atlante* Forms 1-3, bowls of Form 20 and 5, and cups of Form 22 (Fig. 10). Most pieces belong to the so-called 'second generation' of this ware. Due to the recent research it is now possible to include the territory of the Bosporan kingdom as well as parts of the northern and eastern Black sea littoral into the distribution area of ESA.³³

Some finds of Color-Coated Ware A are also known from Pantikapaion.³⁴

Fig. 8. Pergamene appliqué ware.

Photo by Vladimir Tolstikov & Denis Žuravlev.



This group of pottery, connected with Rhodes, was recently distinguished by K. Domžalski.³⁵

Furthermore, several other groups of pottery came from unknown production centers.

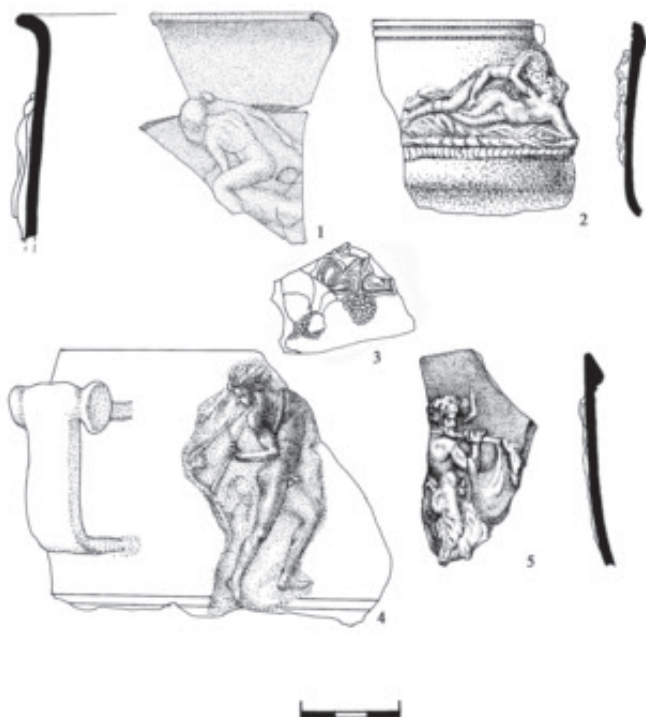


Fig. 9. Pergamene
appliqué ware.
Drawings by the
Bosporan archaeo-
logical expedition.

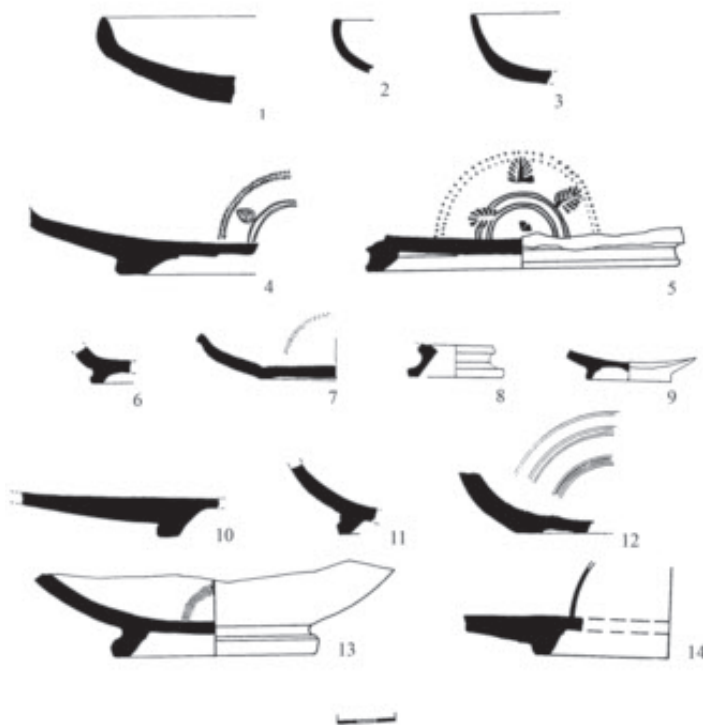


Fig. 10. Eastern
sigillata A.
Drawings by the
Bosporan archaeo-
logical expedition.

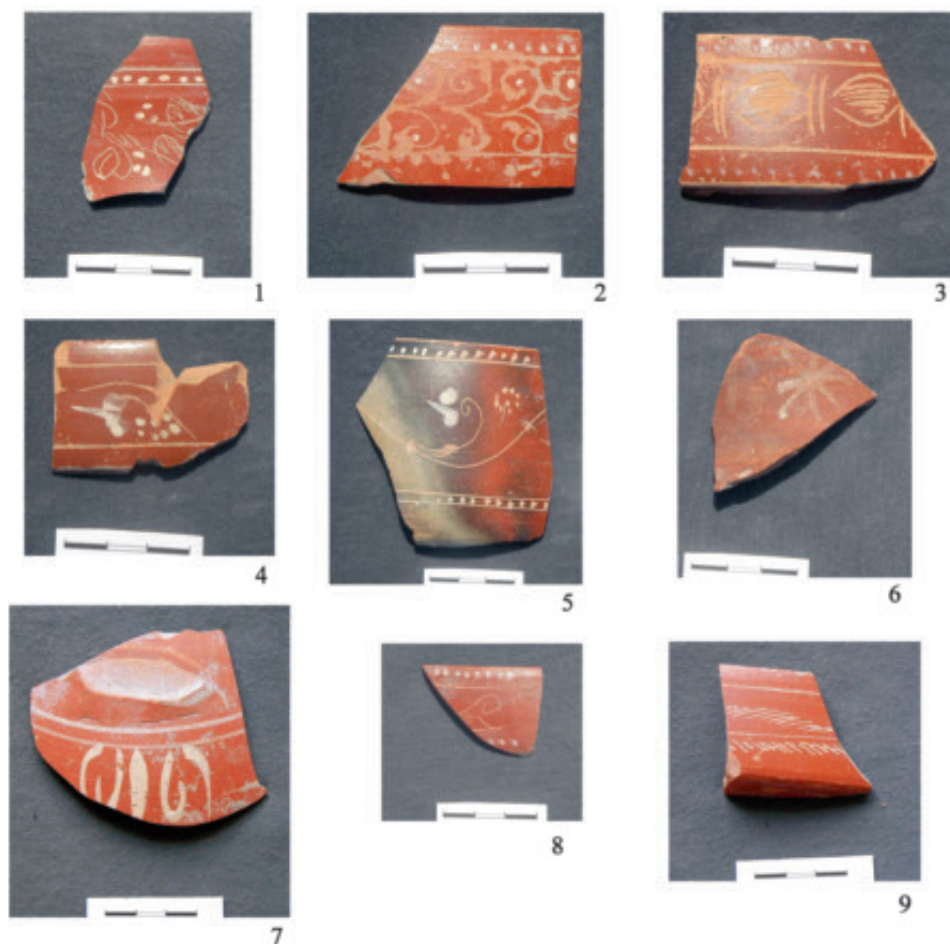


Fig. 11. Late West Slope ware ornamented with white paint. 1-5, 7-9 – Pergamon; 6 – Bosporan imitation. Photo by Denis Žuravlev.

Late West Slope Ware

Vessels ornamented in West Slope technique were very popular in Pantikapaion during the 1st century BC (Figs. 11-12). Very often they are of similar shape as the Pergamene vessels with appliqué decoration. The question about the production centers of these vessels is still open for discussion, but the similarity to Pergamene products is obvious.

Among them we can distinguish a cylindrical cup from the acropolis of Pantikapaion (Fig. 12.2)³⁶ dated to the 1st century BC. Despite the fact that we do not know any direct analogues from Pergamon, the clay is identical to that of Pergamene vessels. Another vessel with West Slope decoration (Fig. 12.1) was found in cistern N 176 on the Pantikapaion acropolis.³⁷ Fragments of

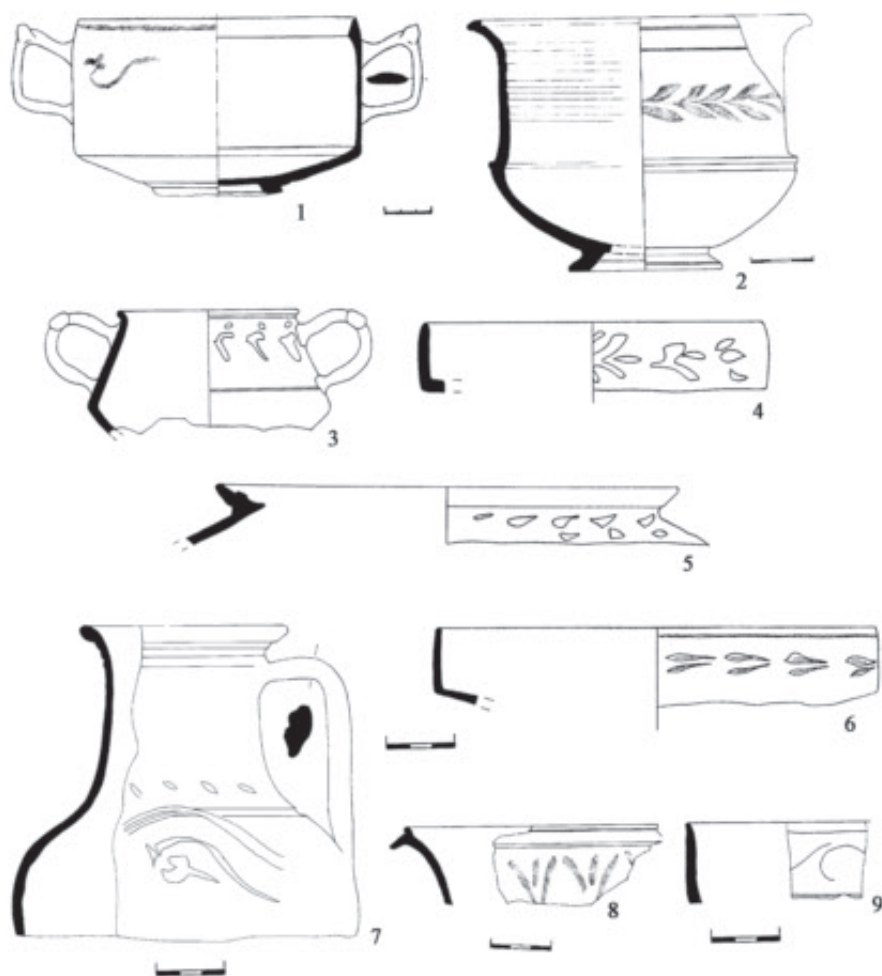


Fig. 12. Late West Slope ware ornamented with white paint. Drawings by the Bosporan archaeological expedition.

red-slip vessels decorated with garlands of leaves in white paint (Figs. 11.4; 12.3-4) are rather common finds in Pantikapaion.³⁸ Similar vessels are also known from other Bosporan sites (e.g., Myrmekion³⁹, Gorgippia)⁴⁰, the Čajka settlement in northwestern Crimea,⁴¹ and many other Pontic sites.⁴²

A cup ornamented with white paint from cistern no. 245 of the acropolis of Pantikapaion (Fig. 12.3)⁴³ as well as similar, but larger, vessels known from Zolotaja Balka⁴⁴ show handles that are similar Pergamene examples (i.e., skyphoi of the S8 type⁴⁵). Fragments of cups ornamented with white ivy leaves from Myrmekion can be also dated to the late Hellenistic period.⁴⁶ In general,

the dating of all these vessels belongs in the 1st century BC while the exact production centre is still unknown. We also know some Bosporan imitations of this style (Fig. 11.6).

Pelikai with mouldmade body decorated with long petals

Pelikai with mouldmade long petal decoration were widespread both in Pantikapaion and in other centers of the north Pontic area (Fig. 13.1).⁴⁷ The closest parallels for pelikai at Pantikapaion come from the settlement Čajka in northwestern Crimea⁴⁸ and from the Kruglji burial mound near Tanais.⁴⁹ Similar vessels are also known from Gorgippia⁵⁰ as well as some indigenous necropoleis.⁵¹

The chronology of these pelikai has already been studied in detail; they are dated within the second half of the 1st century BC – the beginning of the 1st century AD. Some examples, however, could have existed earlier.⁵² A similar type of ornament is known on vessels of other shapes and different production centers as well.⁵³

Bosporan sigillata

In the late Hellenistic period Bosporan sigillata was produced in one or several centers of the Bosporan kingdom (Figs. 13.2-6; 14).⁵⁴ Vessels of Bosporan sigillata are made from typical local clay – reddish-brown with plenty of lime. The glaze covering these vessels is usually brownish-red and the lower part of the vessel is not always glazed. Some Bosporan vessels were decorated with rouletting and palmettes (Fig. 13.2) on the floor of the vessel. Hellenistic Bosporan sigillata was identified by Domžalski on the basis of ceramic material from Nymphaion and Tanais.⁵⁵

The finds of Bosporan sigillata are very common throughout the Bosporan kingdom, and in strata of the late Hellenistic period it makes up 70-80 % of all the table ware.

Plates and dishes on a ring foot, with in-turned rim, are the most common shapes in Bosporan sigillata (Figs. 13.2; 14.1, 5). The diameters of these vessels range from 15-70 cm. Examples of such plates include those found in Pantikapaion,⁵⁶ Nymphaion,⁵⁷ Gorgippia,⁵⁸ Tanais,⁵⁹ the so-called House of Chrysaliskos,⁶⁰ the Kutlak fortress,⁶¹ and in the tower on the Uzunlar rampart.⁶²

Cups of conical shape with handles set on a vertical rim, covered with red slip or black glaze, were also widespread in the region (Figs. 13.5; 14.4).⁶³ Some similar examples were also found in the Southern palace of Scythian Neapolis in the destruction level dated to 137-135 BC, but they were probably not of Bosporan origin.⁶⁴ Derivates of this type are known from layers in Pantikapaion dating as late as the 1st century AD.⁶⁵

Different types of cups (Figs. 13.3; 14.2), plates (Fig. 13.4), globular dinoi

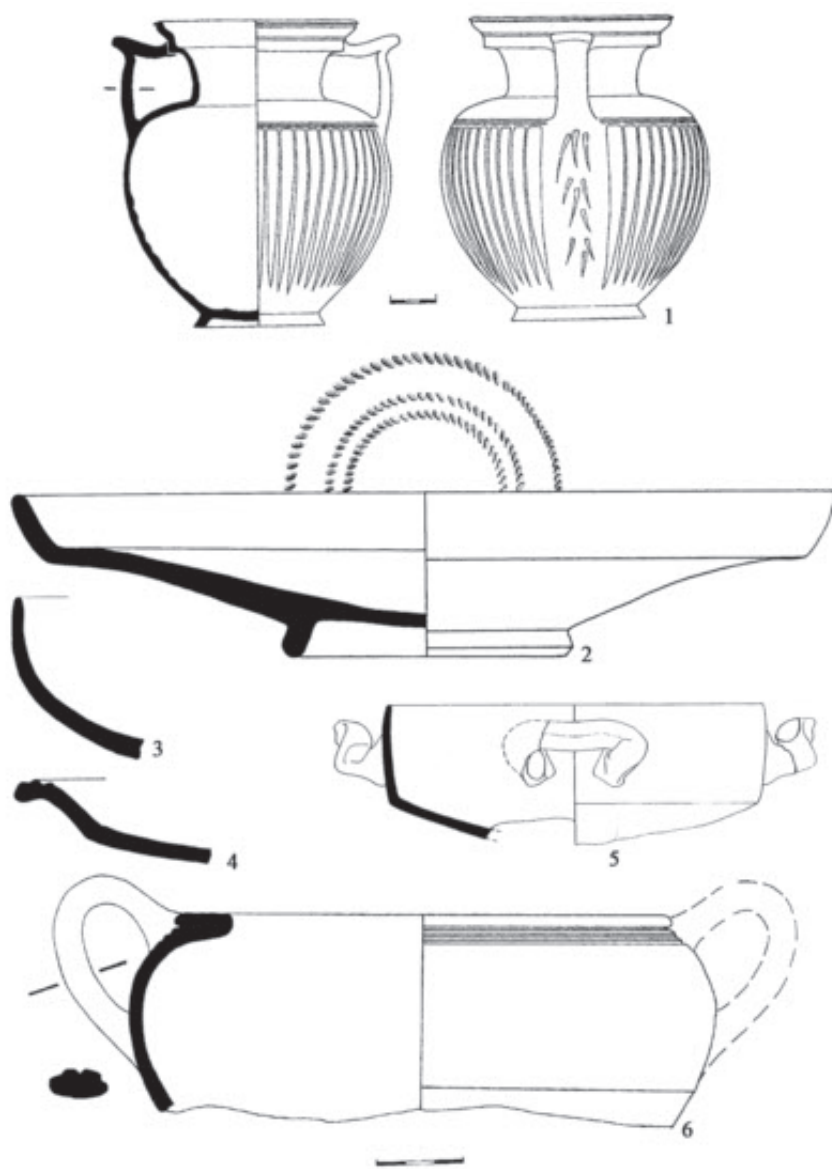


Fig. 13. Pelike (1) and Bosporan sigillata. Drawings by the Bosporan archaeological expedition.

(Figs. 13.6; 14.3), as well as unguentaria also belong to this group of Bosporan sigillata.⁶⁶

We can suppose that the production of Bosporan sigillata began no earlier than the second half of the 2nd century BC and continued until the end of the 1st century BC, perhaps even till the middle of the 1st century AD, when it was replaced by widely-produced Pontic sigillata.



Fig. 14. *Bosporean sigillata*. Photo by Denis Žuravlev.

It is very important to note some contexts of the second quarter of the 1st century BC in Pantikapaion. They can probably be connected with the fire that devastated the capital in 63 BC as a result of Pompey's campaign against Mithridates. Fragments of Bosporean sigillata, mainly plates with in-turned rims, mouldmade pottery of Bosporean manufacture, and fragments of ESA are found in these assemblages. These contexts give us very important chronological evidence for the co-existence of these pottery types.⁶⁷

ESA may have influenced some types of Bosporean sigillata.⁶⁸ For example, Bosporean plates with in-turned rims (Fig. 13.2) could be imitations of the widespread ESA Atlante Form 2. Knidian fine ware could also provide prototypes of the Bosporean vessels (for example, Fig. 13.5).

Pantikapaion may have been one of the main production centers, but no workshops related to this type of pottery have been discovered yet. Only one fragment of a Bosporean sigillata plate with obvious trace of misfiring has been found there.⁶⁹ The firing of thick-walled Bosporean sigillata, however, in general was not of the highest quality, and decoration was rare. A few vessels were decorated with stamped palmettes. One fragment of a dinos, a typical Bosporean shape, decorated with a lion-head spout, was recently found in Pantikapaion (Fig. 15).⁷⁰ Another vessel that looks like a Bosporean product (?) decorated with an appliqué silenos head, was found in the so-called House of Chrysaliskos on the Taman peninsula.⁷¹

Finally, attention should be turned to an interesting detail: several graffiti

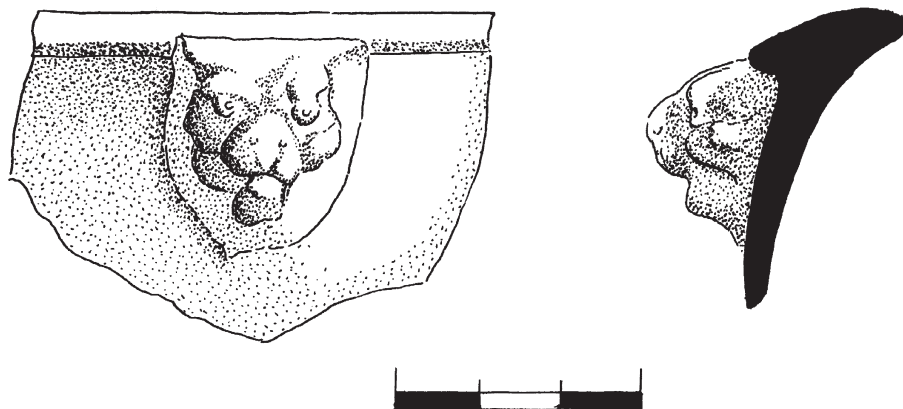


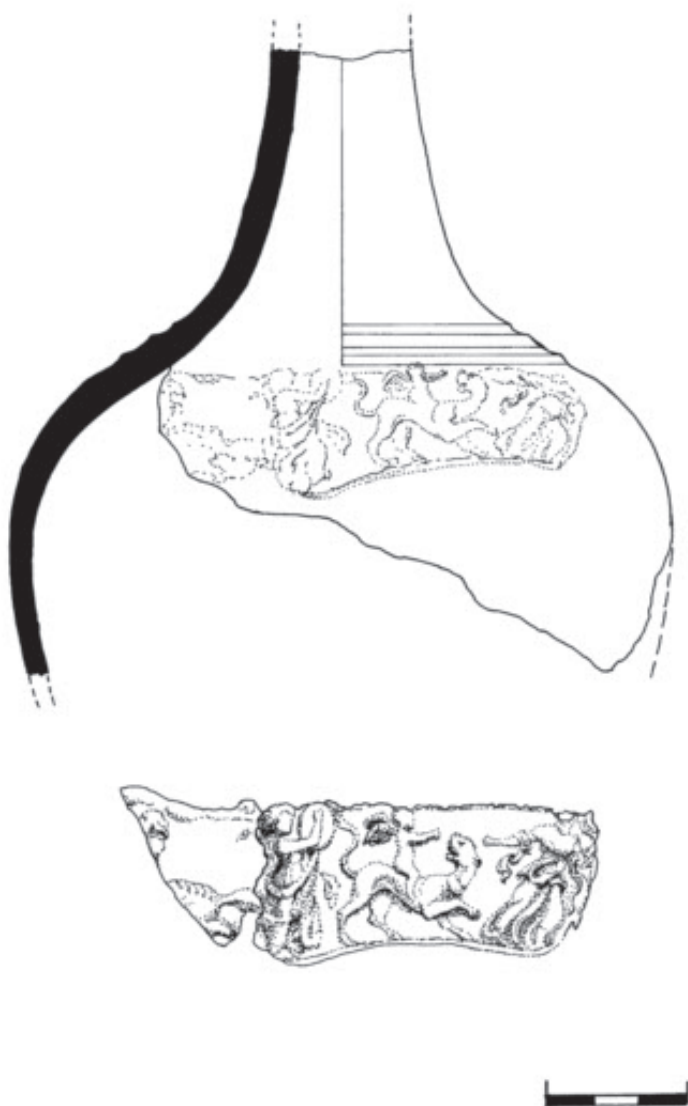
Fig. 15. Fragment of Bosphoran dinos ornamented with lion head. Drawing by the Bosphoran archaeological expedition.

in the shape of a five-pointed star (Fig. 18) which were found on the bases of typical Bosphoran plates. They were found at the acropolis of Pantikapaion and there were several hundreds of them. We are not yet ready to present a final



Fig. 16. Bosphoran jug with appliqué decoration. Photo by Vladimir Tolstikov.

Fig. 17. Bosporan jug with appliqué decoration. Drawing by the Bosporan archaeological expedition.



interpretation of these graffiti but they seem to be connected with the area of the acropolis where the Pontic garrison of Mithridates Eupator was located. What is more, a whole series of these plates were found in contexts related to the destruction of 63 BC when the acropolis was occupied by Roman troops. We cannot exclude the possibility that these graffiti could be connected to religious beliefs of the Mithridatic soldiers.⁷²

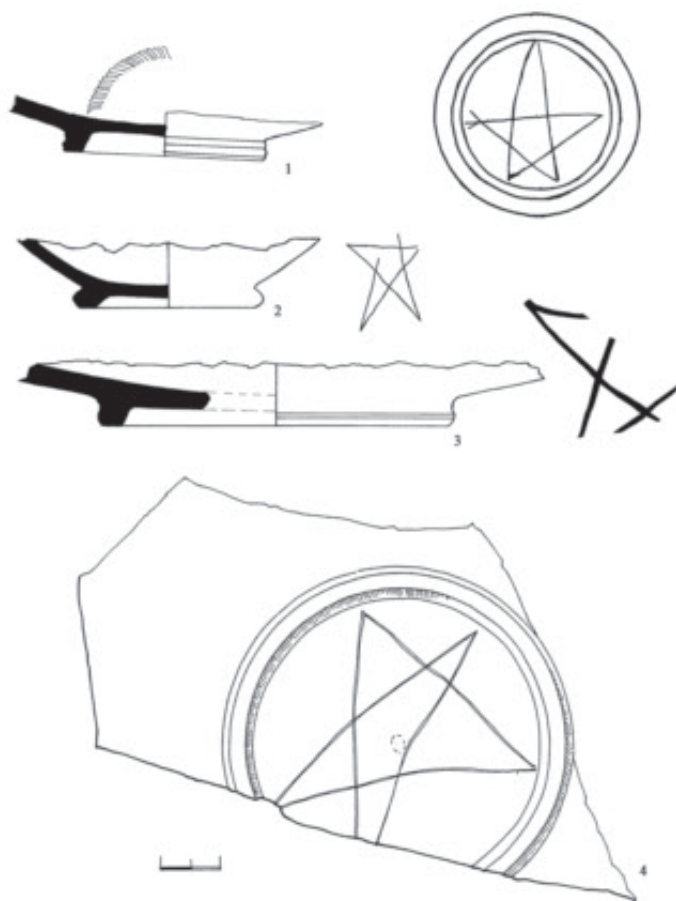
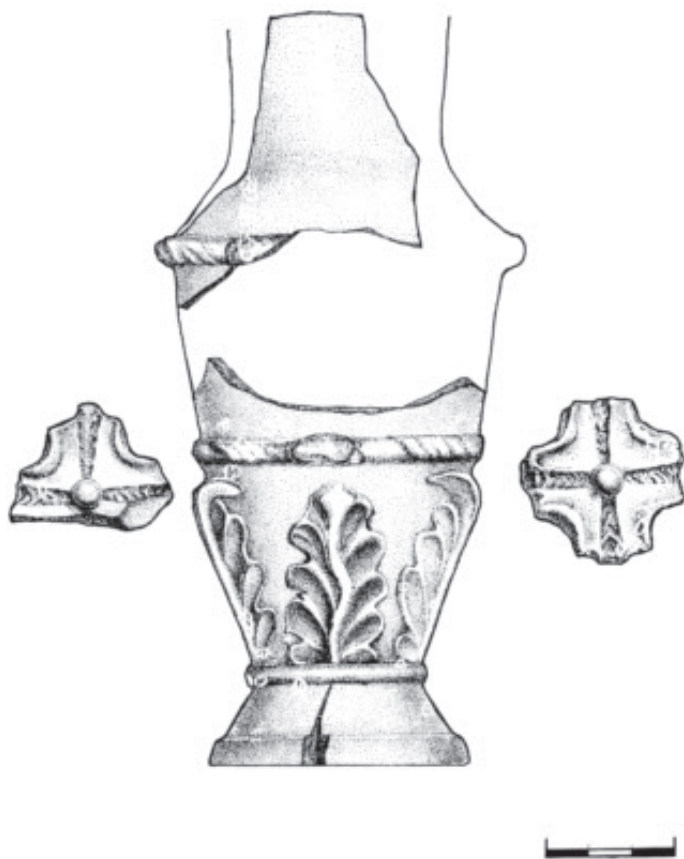


Fig. 18. Graffiti on the Bosphoran sigillata. Drawings by the Bosphoran archaeological expedition.

Unusual relief vessel (terracotta altar?)

Among the local relief decorated pottery from Pantikapaion there is one hand-made vessel that is of special interest. It was found in Pit 2 on the acropolis (Fig. 19). Its cylindrical body slightly widens upwards to an angular join with sloping shoulders.⁷³ The neck then widens upward but the upper part of the neck is not preserved. There are three raised horizontal band encircling the body – one marking the juncture between the body and the conical base, one near the midpoint of the body, and the last marking the junction of the body and shoulder. Upward pointing leaves decorate the lower part of the vessel. Two flat, appliqué, terracotta plaques were probably fixed on to the vessel with clay at the sides near the raised border (there are traces on the vessel where the terracotta plaques might have been placed).⁷⁴ The base is a high ring foot. The diameter of the ring foot is 5.9 cm, the height of the vessel is at least 18 cm. The clay is reddish-brown with small inclusions of lime. There

Fig. 19. Terracotta altar (?) of Bosporan manufacture.
Drawing by Anna Trifonova.



are traces of blue and pink paint, which were probably decorating the vessel on the exterior surface of the body and the terracotta plaques.

There are no obvious parallels for this vessel. Similar terracotta plaques were previously found in Pantikapaion, but they were considered to be parts of terracotta figurines.⁷⁵ There is a certain similarity between this vessel and a small altar from the mausoleum of Scythian Neapolis⁷⁶ as well as with other similar altars. It is possible that the vessel from Pantikapaion could also have been an altar.⁷⁷ In any case, there is no doubt about the local origin of the piece. Despite the many known vessels with relief decoration from the Bosporan region in the late Hellenistic period,⁷⁸ this find is possibly the first almost complete vessel of its type (at least among published pieces).

Bosporan wheel-made lamps

The jug-shaped lamps are the most common type of lighting device in this region from the 3rd century BC till the late Hellenistic period (Fig. 20). These lamps are wheel-made; nozzles and handles were made by hand and then

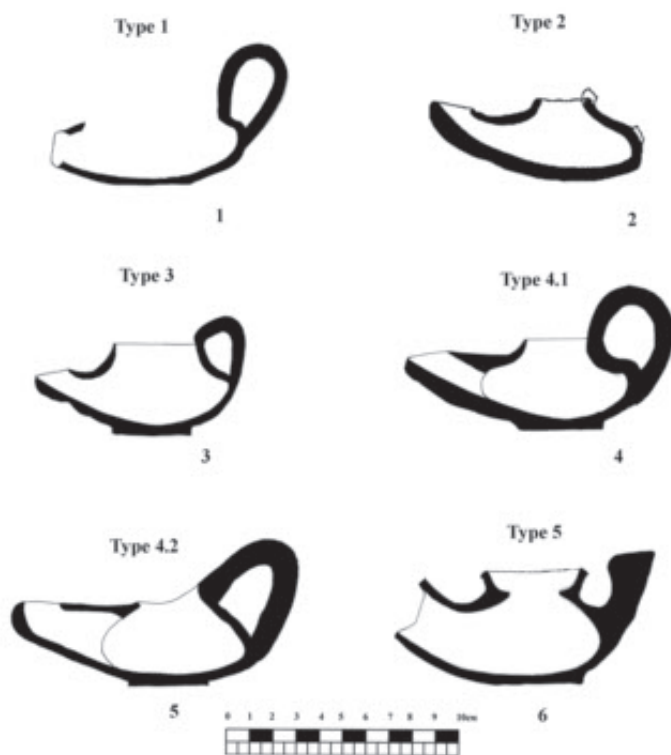


Fig. 20. Jug-shape Bosphoran lamps. Drawings by Rosa Sinenko.

attached to the body. Undoubtedly, it is a local type produced in Pantikapaion and perhaps in other centers of the Bosphoran kingdom. This type of lamp was first identified by O. Waldhauer, and has subsequently been studied more briefly by I. T. Kruglikova, I. B. Zeest, V. S. Zabelina and D. V. Žuravlev.⁷⁹

Those lamps that, in their shape, are transitional from ordinary Bosphoran open lamps to classical 'jug-shaped' types belong to Type 1 (Fig. 20.1). This was first noted by Zabelina while analyzing lamps from Pantikapaion. She dated them to the late 4th – early 3rd century BC. These lamps obviously continue the series of the Bosphoran open lamps. Moreover, we can notice some similar features of jug-shaped lamps and Attic lamps of Howland Type 36B.⁸⁰

Several lamps belong to Type 2 and have the following characteristics: round bodies, vertical rim around the wick hole, and sometimes a side projection (Fig. 20.2). These lamps are typical for Pantikapaion.⁸¹ At least, Pantikapaion is the only locality where this type of lamp has been found so far.

Most jug-shaped lamps belong to Type 3 (Fig. 20.3). The bodies of this type show much variation. The most characteristic ones have been assigned to separate variants, although this division is rather conditional as many other forms can also be distinguished. A clear tendency can be traced among the Type 3 lamps in the development of the filling hole, which gets narrower

over time. Many such lamps come from Pantikapaion from layers of the late 3rd – the first half of the 2nd century BC. Earlier examples, of the first half of the 3rd century BC, come from Ash-pit II in Myrmekion.⁸² Thus, the general dating of this lamp type is the 3rd – the first half of the 2nd century BC.

Lamps similar in shape to the Type 3 lamps, but with much longer nozzles, belong to Type 4 (Fig. 20.4). They are a further development of the jug-shaped lamps. Similar lamps come, for example, from a burial in the Zolotoe necropolis,⁸³ the robbed tomb VII of Artyuchovskij burial mound⁸⁴ and from the house of Chrysaliskos.⁸⁵ One lamp of this type comes from Grave 80 in the necropolis of Tyramba dating to the early 1st century BC.⁸⁶ Exactly when these lamps appeared is uncertain, but early examples may have co-existed with later lamps of Type 3. The main period for the use of Type 4 lamps is from the 2nd to 1st century BC till, perhaps, the early 1st century AD.

The last type, Type 5, of the jug-shaped lamps is rarer than the previous types (Fig. 20.5). Lamps of this type are characterized by a flaring rim projecting from the shoulders and a vertical conical handle.⁸⁷

Imported relief lamps

Knidian lamps were both wheelmade (Howland type 40A-B) and mouldmade (Howland type 50A-B). They were closely connected morphologically and elements of their decoration were rather similar as well.⁸⁸ Most Knidian lamps are known from southwestern Asia Minor and from the nearby regions of the Aegean.⁸⁹ There are a few finds of Knidian lamps in the Bosporan kingdom, mainly in Pantikapaion (Fig. 21.1), and most of them are wheelmade.⁹⁰

A series of imitations of Knidian lamps is known in the 1st century BC in Pantikapaion.⁹¹ Zabelina noted that this type of Bosporan lamps imitated Knidian mouldmade types.⁹² Most probably, a local craftsman made a mould from an imported Knidian lamp.⁹³

Many Ephesian lamps are known both in Ephesos itself and far from the city as well.⁹⁴ In the late 2nd – early 1st centuries BC they comprise one of the most popular types of imported lighting devices in Pantikapaion (Figs. 21.2-5; 22.3 and 6) and other cities of the Bosporan kingdom, Chersonesos, Olbia and other sites in the northern Pontic area.⁹⁵ Ephesian lamps are usually made from grey clay with small inclusions of lime. Sometimes the clay is red or orange-reddish. The slip is usually grey or black. Earlier lamps have a triangular ending to their nozzles much like their metal prototypes. Later, the endings became more rounded.⁹⁶ They were mostly popular in the second half of the 2nd – the first half of the 1st century BC. Lamps of the Ephesian type appear at Bosporan sites until the last quarter of the 1st century BC.⁹⁷

One of the lamps is of special interest (Fig. 21.8). This mould made lamp has a crescent-shaped nozzle characteristic of Knidian lamps. The nozzle is decorated with a Silenos mask practically identical to relief masks of wheel-made lamps of Knidian manufacture. However, a red slip was not typical for



Fig. 21. Imported lamps. Photo by Rosa Sinenko.

Knidian lamps, and the decoration of the shoulders is unparalleled among Knidian products. Similar decoration,⁹⁸ as well as a Silenos mask situated near the nozzle, is known on some Ephesian lamps.⁹⁹ The red colour of the clay and slip can, depending on firing conditions, be sometimes found among Ephesian pieces.¹⁰⁰ Thus, this lamp may have been produced in Ephesos; however, it may have been manufactured in a related, though unidentified, centre. The dating of this lamp falls within the last quarter of the 2nd – the first quarter of the 1st century BC.

Ephesian lamps were so popular and widespread at Bosporan sites that

they inspired a whole series of local imitations. For example, a lamp found in Myrmekion with lengthened nozzle broadening at the end (Fig. 21.7) is decorated with stylized relief palmettes. A relief pattern of ovules is situated on its shoulders around the discus. There is a monogram ΙΔΛ (?) on the discus. The clay is grayish-brown, dense and dark with limestone inclusions.¹⁰¹ This lamp must have been a local imitation of the Ephesian type. The clay of the lamp obviously testifies to a local production while its shape, particularly the nozzle, and decoration of the discus prove its close connection with Ephesian lamps. Similar monograms on the discus of the lamp are not known to us.

A second example of local imitation, this time recalling Athenian prototypes, comes from the collection of the archaeological museum of Kerč (Fig. 21.9). Lamps with a closed shape are known from many production centers. Many similar lamps were found at the Athenian Agora, Howland type 52.¹⁰² Our lamp cannot be of Attic manufacture and is, most probably, an imitation produced in an unknown centre. There is a lamp of quite similar shape from Amis in the collection of the archaeological museum of Istanbul,¹⁰³ and the authors consider it to be of Pontic production. It is quite possible that a similar lamp from Antiocheia published by F.O. Waagé is also non-Attic, but a local Antiochene piece.¹⁰⁴ Our lamp is dated to the second to third quarter of the 1st century BC or a bit later.

Layers of the 2nd-1st centuries BC also contain relief lamps of Pergamene manufacture (Fig. 21.6). Similar lamps were discovered in Pergamon¹⁰⁵ as well as in other places.¹⁰⁶ A similar lamp from the old excavations in Pantikapaion was published by Zabelina.¹⁰⁷

Local relief lamps

In the 2nd and 1st centuries BC a local production of various new types of lamps appeared. In the beginning local craftsmen imitated lamps of Knidian and Ephesian origin, but shortly after some local groups appeared.¹⁰⁸ Among Bosphoran lamps the most impressive and interesting type is the multi-nozzled lamp.

Bosphoran local single-nozzled lamps probably served as prototypes for this group. Two types were especially characteristic among these single-nozzle lamps. The first is moulded with a conical, round body, widening upwards (Fig. 22.2).¹⁰⁹ The long nozzle is rounded or trapezoidal in shape. The nozzle is surrounded by broad volutes. The base has two relief circles or is made as a low almond-shaped ring foot. The distinctive peculiarity of this lamp type is the flat, miniature handles situated on either side of the lamp. Similar projections were typical for lamps of different production centers but most for lamps from Pergamon.¹¹⁰ We can suppose that Pergamene pieces of the 1st century BC could have served as possible prototypes for Bosphoran lamps.¹¹¹ This type of lamp can be dated from the 1st century BC through the first half of the 1st century AD.

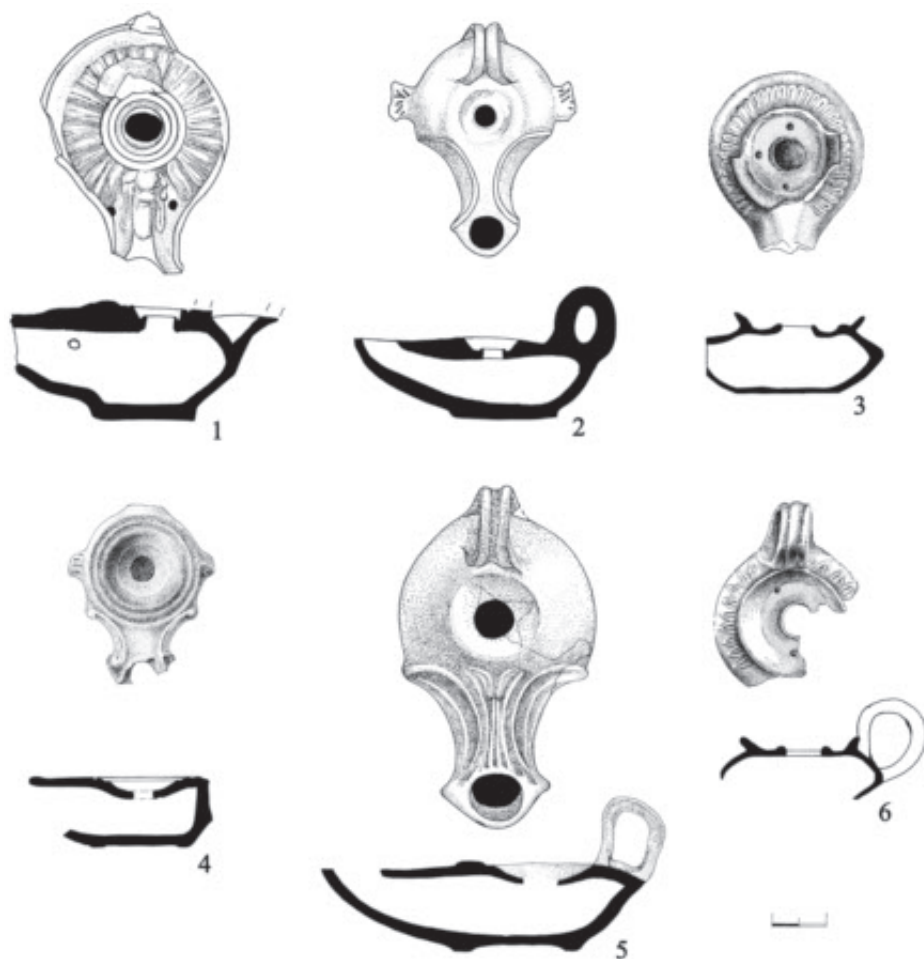


Fig. 22. Bosphoran lamps. Drawings by the Bosphoran archaeological expedition.

The other type of Bosphoran lamp is a round lamp with a short nozzle and biconical body. The discus is decorated with relief ornament of leaves and fruit. Such lamps are known from Pantikapaion and Gorgippia.¹¹²

Since many lamps have similar decorative schemes and similar shapes we can suppose that closely related workshop produced all the lamps and supplied both the capital and other sites. Some small differences can be explained both by the creation of new moulds, imitating old ones, and by the creative initiative of individual craftsmen. In any case, all lamps needed some correction by hand after moulding. The fact that the clay of these lamps is similar to the clay of the Bosphoran mouldmade bowls and the Bosphoran sigillata proves the hypothesis of a local production.¹¹³ The predominance of these

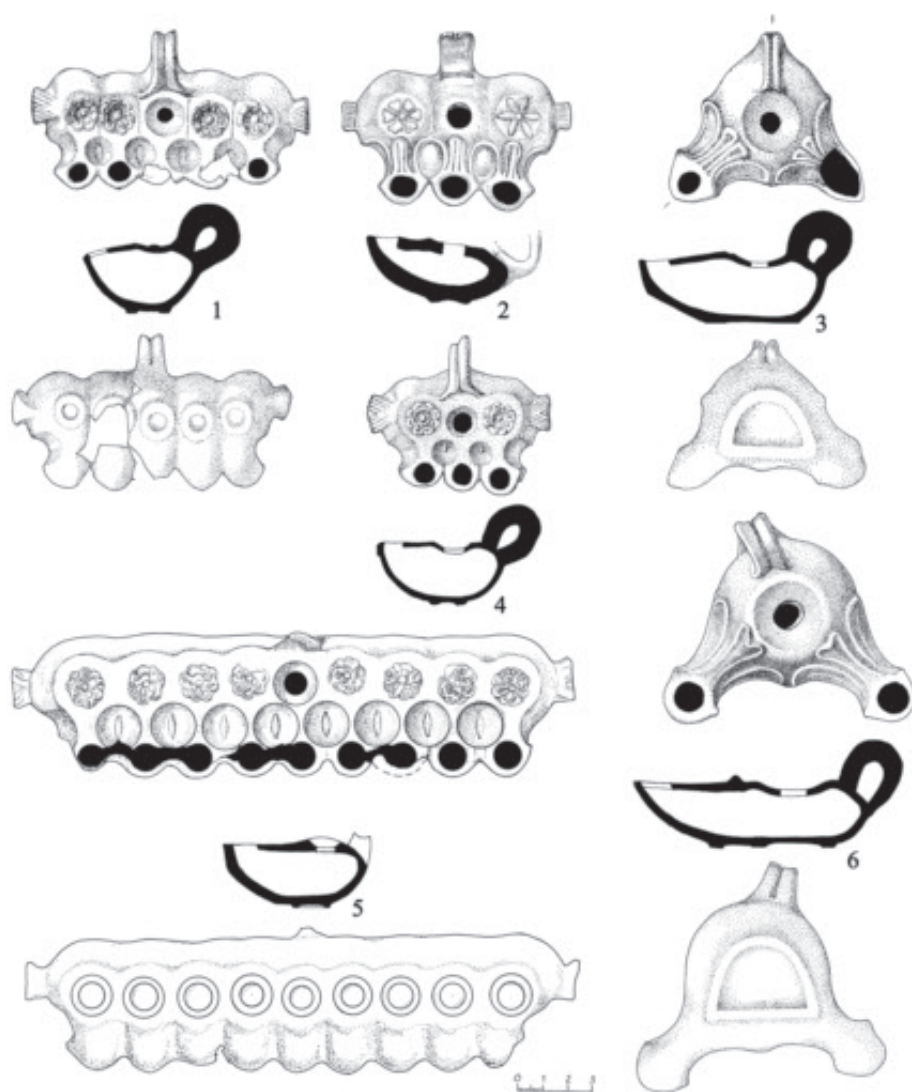


Fig. 23. Bosphoran multi-nozzled lamps. Drawings by the Bosphoran archaeological expedition.

lamps at Bosphoran sites during the late Hellenistic period also supports their local origin.

Multi-nozzled lamps are known only in the territory of the Bosphoran kingdom (there is no information about the finds of such lamps elsewhere).¹¹⁴ Most of the finds come from Pantikapaion (Fig. 23) as well as from the territory of the European Bosporos–Myrmekion, Ilouraton, and Zenon's Chersonesos.¹¹⁵ There are some multi-nozzled lamps from Phanagoria in the collection of the

State Historical Museum, but they were made from red clay and were probably copies of grey-clayed originals from Pantikapaion.¹¹⁶ A similar red-slipped, multi-nozzled lamp was recently found in Pantikapaion as well.

As we have already devoted a series of publications to Bosporan multi-nozzled lamps,¹¹⁷ only a brief survey of the main types will be presented here.

Two-nozzled lamps (Figs. 22.3 and 6) were formed by attaching two nozzles to the body of a typical Bosporan mouldmade lamp. These lamps have one oil reservoir, whose shape does not differ from the single-nozzled lamps, two nozzles with volutes and a small loop-shaped handle.

Three-nozzled lamps were formed by joining together the bodies of three one-nozzled lamps (Fig. 22.2). Only the central 'body' is provided with a filling hole. Where the other filling holes would be one finds instead rosette decoration. There are grape leaves and palmettes around these rosettes. The base is a bit concave. The nozzles are decorated with volutes in a similar manner to two-nozzled and one-nozzled lamps. Small stylised triangular handles, sometimes decorated with grooves, are placed on the sides. The vertical handle is decorated with appliqué ornaments at the point where it connects with the body of the lamp. Other multi-nozzled lamps feature five (Fig. 23.1), six, seven and even nine (Fig. 23.5) nozzles.

Many complete and fragmentary multi-nozzled lamps were recently discovered at a building, which probably belonged to the part of the Pantikapaion defences.¹¹⁸ They were found in the layers of the last phase of these fortifications (1st century BC).¹¹⁹

These groups of single- and multi-nozzle lamps existed simultaneously since we found different types of lamps in the same strata.

In the second half of the 1st century BC a class of lamp with volutes was the most numerous in the region (Fig. 22.5). This type of Bosporan lamp is based on a type of lamp widely spread in some Mediterranean centers.¹²⁰ A characteristic feature is the appearance of an almond-shaped ring foot.¹²¹ Their body has a biconical shape. The nozzle is elongated and the earliest examples are decorated a thin volute line on either side of the nozzle. In the second half of the 1st century BC volutes became wide-spread on the lamps of Roman types, and a channel running along the nozzle towards the filling hole can be distinguished. The discus of the lamp is rather small and concave usually without any decoration. It is often surrounded by one or several relief lines, which can also encircle the filling hole (more often this is a characteristic feature of lamps of the Roman period). The filling hole is round and placed in the centre of the discus. The shoulders are rarely ornamented. However, sometimes a band of ovules or relief lines are placed on the shoulders.¹²² Several lamps of this type have a stamp on the base. For example, the base of a lamp in the collection of the State Historical Museum has a monogram in low relief, while the lower part of its nozzle forms a curving letter S, also in low relief. However, this lamp has a plain base which differs from most lamps of this type. A lamp from Phanagoria also has a relief letter on its base – A.

Another lamp preserved in the State Historical Museum has a stamp consisting of cursive, but illegible, Greek letters in relief on the lower part of the body.¹²³

Some years ago Kovalenko supposed that these volute lamps were produced in the capital of the Asian Bosporos, and thus called them 'Phanagorian'.¹²⁴ This assumption was based on the find locations as well as on a find of a mould in Phanagoria. He noted that a larger series of these lamps made of grey clay is known and most of them come from Pantikapaion. Nowadays, based on more than 50 lamps of this type, we can say that there are equal amounts of finds of red and grey lamps in Pantikapaion and other Bosporan cities. The only difference is the color of clay, which obviously depended on the character of firing. Hence, there is no basis for this local 'Phanagorian' type of lamps, and rather it seems to be one common Bosporan type which was probably produced in both parts of the Asian and European Bosporos.¹²⁵

Conclusions

In this paper we have presented the most well-known groups of East Mediterranean late Hellenistic pottery found in Pantikapaion. Similar situations can be found in other Bosporan cities such as Phanagoria, Myrmekion, Tyritake, and Nymphaion. In the future we are planning a specific investigation into the chemical composition of the clay of various pottery groups. We hope that the wave of new publications planned to appear in the near future will give us much more knowledge about the distribution of imported East Mediterranean fine ware and lamps as well as local groups of pottery.

Notes

- 1 The expedition took place under the supervision of Dr. Vladimir Tolstikov. We would like to thank Dr. Tolstikov for his kind permission to publish this material. This article was finished in the frame of the project "Late Hellenistic and Roman Pottery in the Northern Black Sea Area", under the financial support of the Alexander von Humboldt Stiftung.
- 2 Tolstikov & Zhuravlev, 2004, figs. 93-102.
- 3 Zhuravlev & Zhuravleva 2002; Zhuravlev 2007, 211-213.
- 4 Žuravlev & Žuravleva 2009, figs. 1-3. All the pottery is now in the Kerč museum. See also recent publication: Žuravlev 2011.
- 5 Blavatskij 1959; Loseva 1962; Šurgaja 1962. Concerning the history of the studies of relief decorated pottery in Russia and Ukraine see Kovalenko 1998, 9-16.
- 6 Kovalenko 1989; see also some of his recent publications: Kovalenko 1996; Vnukov & Kovalenko 1998; Turova & Kovalenko 2005.
- 7 Gzegżulka 2009.
- 8 The same situation is evident for Attic lamps, which are rarely found in layers of the 2nd century BC.
- 9 Rogl 2001a.

- 10 Kovalenko 1987, 7-8.
- 11 Courby 1922, 411.
- 12 Žuravlev & Schlotzhauer 2011. We have to note, however, that Kovalenko already mentioned "similarity of production of Pergamene, Kyme and KIRBEI workshop" (Kovalenko 1989, 72).
- 13 Žuravlev & Žuravleva 2009, figs. 1, 2.
- 14 Šurgaja 1962.
- 15 Kovalenko 1989; 1996.
- 16 Gajdukevič 1959, 78, fig. 85.
- 17 Šurgaja 1962, 117; Kovalenko 1996, 53.
- 18 Kovalenko 1996, 53.
- 19 Šurgaja 1962, 118; Kovalenko 1996, 53-55.
- 20 Kovalenko 1996, 55.
- 21 Kovalenko 1996, 54.
- 22 Gorončarovskij 1983; Šurgaja 1963; Zhuravlev 1997; Zhuravlev 2000. Kovalenko (1996, 56), however, noted that the import of Pergamene relief bowls was rather small.
- 23 It is determined now that pottery of similar shapes with appliqué reliefs was produced in other cities as well – for example, in Ephesos (Zabehlicky-Scheffenecker & Schneider 2000).
- 24 Meyer-Schlichtmann 1988, pls. 7-8.
- 25 Hübner 1993, pls. 16-23.
- 26 Gajdukevič 1959, fig. 82, 88; Zhuravlev 2000, fig. 138, 3-6.
- 27 Zhuravlev 2002, fig. 35, 3.
- 28 Zhuravlev 1997; 2006, Cat. N 133, 152.
- 29 Šurgaja 1962.
- 30 Tolstikov 2004, 73; Žuravlev & Žuravleva 2009, 139, fig. 2; Žuravlev 2011, fig. 16. The preserved height of this vessel is 13.5 cm, and the maximum width of the shoulders is 14 cm.
- 31 Domžalski 1996, 99, nos. 17-19; 2007, 176-177, fig. 11; Zhuravlev 2002, 243, fig. 2; Žuravlev & Lomtadze 2005, fig. 3, 1-2; see also Matiasvili 2004.
- 32 In some old publications and field reports in Russia and Ukraine, ESA is called 'pottery of Augustan period'.
- 33 Lund 2005, especially maps, figs. 10.4 and 10.5.
- 34 Zabelina 1984a, 140, pl. 2, 1; Tolstikov & Zhuravlev 2004, pls. 94, 6; 99, 2-4; Domžalski 2007, fig. 5.
- 35 Domžalski 2007, 166-173.
- 36 Zhuravlev 2002, fig. 5, 3; Žuravlev & Lomtadze 2005, fig. 4, 5.
- 37 Tolstikov & Zhuravlev 2004, fig. 94, 1.
- 38 E.g., Zabelina 1992, fig. 3g; 4a; Sokolova 1984, pl. II, 10-11; Zhuravlev 2002.
- 39 Michałowski 1958, pls. V-VII; Gajdukevič 1959, fig. 95.
- 40 Alekseeva 1997, pl. 214, 1-2.
- 41 Yatsenko 1970, fig. 12, 1; Zhuravlev 2007, fig. 4-6.
- 42 Conical cups with appliqué handles close to Pantikapian examples and decorated with similar white paint ornament come from the burial mound near the Bratskoye cemetery situated at the north part of Sevastopol' (Guščina 1974, fig. II, 4) and from the Zolotoe necropolis dated to the 1st century BC (Korpusova 1983, 104-105, pl. XXX, 4). A similar cup was found in the course of excavations of the Bulganakskoye settlement (Škrob 1991, fig. 1, 1). Other cups of this type have

ornament of ivy leaves (Arsen'eva 1970, pl. 15, 10; Korpusova 1983, pl. XXXVI, 6) or small triangles and dots (Korpusova 1983, pl. XLIII, 10). We should be very careful while speaking about the centre of their manufacture although we should not exclude the possibility that they were produced in Pergamon.

There are many skyphoi of similar shape with engraved ornaments of ivy leaves, garlands and griffins (Behr 1988, fig. 9, 30-32; pl. 14, 6-7; fig. 10, 36; pl. 15, 1; Wintermeyer 2004, pl. 4, Type Be.1.17). Similar ornament is known on vessels of other shapes – for example, the shape S3 in Assos (Zelle 1997, 69, fig. 159a, pl. 3, 4) dated to the late 2nd – first half of the 1st century BC. Similar skyphoi came, for example, from Lesbos (Archontidou-Argyri 1990, pl. 65, 8063). According to parallels, vessels from Pantikapaion can date to the second half – the end of the 1st century BC (Behr 1988, 129).

- 43 Tolstikov et al. 2003, 293, pl. 9, 2; Lomtadze & Zhuravlev 2004, fig. 2, 2.
- 44 V'jazmitina 1962, 175, fig. 72, 1.
- 45 Meyer-Schlichtmann 1988.
- 46 Michałowski 1958, pl. XII.
- 47 Tolstikov et al. 2003, 291, fig. 7, 3, 5; Lomtadze & Zhuravlev 2004, fig. 3, 6; Tolstikov & Zhuravlev 2004, fig. 99, 10; Zabelina 1984a, pl. I, 1; II, 3.
- 48 Zhuravlev 2007, fig. 3.
- 49 Žuravlev et al. 1997, fig. 7, 1.
- 50 Alekseeva 1982, 103-104, fig. 59; 1986, 46, fig. 8.
- 51 See, for example, Sinicin 1960, fig. 5, 5; Moškova 1963, pl. 12, 21; Mordvintseva 1993, fig. 2, 1; Skripkin 1990, 160; Zubar' & Kubyšev 1987, 250, fig. 1, 2; Evdokimov & Kuprij 1992, fig. 6, 13.
- 52 Žuravlev et al. 1997, 418-420; Žuravlev 2007, 283.
- 53 For example, ESA cups produced at the territory of Syria or Eastern Cilicia (Slane 1997, pl. 21, type 27, FW223-227). Similar cups from Paphos are also well known (Hayes 1991, pl. VI, 1,3).
- 54 Domžalski & Žuravlev 2003; Lomtadze & Zhuravlev 2004; Tolstikov & Zhuravlev 2004, 274.
- 55 Domžalski 1996; Domžalski & Zin'ko 1999, 74-76, fig. 1, 1-2; Domžalski & Žuravlev 2003; Žuravlev 2005, fig. 4-7.
- 56 Zabelina 1984a, pl. I, 17.
- 57 Domžalski 1996, fig. 1, 1-9.
- 58 Alekseeva 1997, pl. 54, 38, 40, 41.
- 59 Arsen'eva & Naumenko 2001, 63-64, fig. 12-13.
- 60 Sokol'skij 1976, fig. 50, 1-4.
- 61 Lancov & Trufanov 1999, fig. 5, 15-20. We cannot be sure of the Bosporan origin of these vessels.
- 62 Maslennikov 1998, fig. 72, 10.
- 63 Sokol'skij 1976, fig. 53, 3-4; Zhuravlev 2002, fig. 6,4; Lancov & Trufanov 1999, 164; fig. 4,10-13; Maslennikov 1998, fig. 85,5-6; Grač 1999, pl. 102,10.
- 64 Zaytsev 2004b, 349,5,11.
- 65 E.g., Arsen'eva 1970, pl. 15.10-13.
- 66 Zhuravlev 2002, 248-249, fig. 6.
- 67 The publication of this material is in preparation. Preliminary publication: Tolstikov 2010, 233, fig. 3.
- 68 Zhuravlev 2002, 243; Domžalski 2007, 175-177.
- 69 Analyses of Bosporan sigillata revealed that the chemical composition of these

vessels clay is very close to that of Hellenistic, local Pantikapaian production (for example, of Bosporan tiles).

- 70 Žuravlev 2005, fig. 6.
- 71 Sokol'skij 1976, fig. 51; Zhuravlev 2002, 288, fig. 31, now in the State Historical Museum, Moscow.
- 72 Žuravlev 2005, 242, note 47.
- 73 Žuravlev & Lomtadze 2005, figs. 1-2.
- 74 Composition and color of clay of the vessels is the same as that of appliqué terracotta plaques.
- 75 Il'ina & Muratova 2008, pl. VI, 6-8. All the finds including unpublished ones are preserved in the collections of the Pushkin Fine Arts Museum and of the State Historical museum, Moscow.
- 76 Zaitsev 1992, fig. 1.1; 2.
- 77 E.g., Zaitsev 2002, figs. 8-9.
- 78 Marčenko 1976.
- 79 Waldhauer 1914, 26; Kruglikova 1957, 134; Zeest 1957, 156-157; Zabelina 1992b, 306; Zhuravlev 2007, 213-214; Žuravlev 2010; Žuravlev et al. 2010, 46-117.
- 80 Howland 1958, 116-117, pl. 44, 488.
- 81 Tolstikov & Zhuravlev 2004, fig. 97, 1-5.
- 82 Gajdukevič 1987, fig. 99, 3-4.
- 83 Korpusova 1983, pl. XXIV, 6.
- 84 Maksimova 1979, 132-133, Art. 136-137.
- 85 Sokol'skij 1976, fig. 54, 2-4; Zhuravlev 2007, 214, fig. 5.
- 86 Korovina 2002, pl. 18, 12.
- 87 There are several parallels for these lamps, for example in Chersonesos (Chrzanowski & Zhuravlev 1998, 45, N 11).
- 88 The chronology of Knidian lamps has often been discussed. O. Broneer (1930) dated them to the late 3rd – first half of the 2nd century BC. Knidian lamps of the type 40A, however, are almost totally absent in Corinth destroyed by Roman troops in 146 BC, so the type 40A lamps should date either much earlier or they should have been only recently introduced. R. Howland (1958, 126) considered them to exist in the second half of the 2nd – first quarter of the 1st century BC. Barbotine ornament, which is found on these lamps and is widely used for late Hellenistic and early Roman red slip pottery, is more characteristic for the 1st century BC than for the earlier period. D. Bailey noted that lamps of Knidian production are known at least since the late 3rd century BC while they were most widespread in the second half of the 2nd century BC (Bailey 1975, 126-127).
- 89 Broneer 1930, 53; Howland 1958, 126; Waagé 1934, pls. VII-VIII.
- 90 Kovalenko 1989, 123-127, 406-407
- 91 Žuravlev et al. 2010, 119, N626. It is interesting to note that local imitations of wheel-made Knidian lamps were found also in Athens, Labraunda and elsewhere (Howland 1958, 171-172, pl. 50; Helström 1965, 49; pl. 22, 26-30).
- 92 Zabelina 1992, 317, pl. VI, 1. See, too, Žuravlev et al. 2010, 119.
- 93 Cf., for example, Bailey 1975, pl. 64.
- 94 E.g., Bailey 1975, pls. 30-39; Meriç 2002, pls. 72-75; Giuliani 2001, 45-49; 2005, 139-142; Schäfer 1968, pls. 68-72; Kassab Tezgör & Sezer 1995, N. 291-336, 339-348; Barr 1996, 191-193, fig. 27; Broneer 1930, 66-70; Howland 1958, pl. 49; Scheibler 1976, pls. 88-92; Drougou 1992, pls. 56-79.
- 95 E.g., Waldhauer 1914, pl. VIII, 92, 96; Arsen'eva 1988; Korpusova 1983, pl. XXV,

- 17; XXXIX, 12; Kovalenko 1989, 133-136; 407-409; Chrzanovski & Zhuravlev 1998, 47-48, N 12; Žuravlev & Lomtadze 2007, fig. 2, 1; Zaitsev 2002, 55-56, fig. 8-9, cat. N 1, 4, 9; Puzdrovskij 2007, fig. 177, 1-3.
- 96 Production of Ephesian lamps began about the middle of the 2nd century BC. At least they come from contexts dating to 140-130 BC. However they became the most popular in the second half of the 2nd – first quarter of the 1st century BC. For example, in Corinth they mainly come from layers dating to the period after the city had been restored. In Athens, their mass appearance began in the last quarter of the 2nd century BC. R. Howland connected this with the fact that in 133-129 BC Roman province Asia was founded, which favored the development of trade connections between East and West. Relief lamps of Ephesian type were being widely produced till the last quarter of the 1st century BC when they were replaced by round lamps of the provincial Roman type (Broneer 1930, 70; Howland 1958, 166; Giuliani 2005, 140). At the same time finds of Ephesian lamps are known in the contexts of the first half of the 1st century BC as well. At the Ust'-Alma necropolis in the Crimean territory, they come from the graves dating as late as the late 1st – early 2nd century AD (Puzdrovskij 2007, 84). For other finds in the contexts of the 1st century AD, see Giuliani 2005, 140-141.
- 97 Žuravlev et al. 2010, 20-21.
- 98 Giuliani 2005, fig. 1, 4.
- 99 Ladstätter 2003, pl. 24, L7; Giuliani 2001, pl. 26, 1; 2005, fig. 1, 5.
- 100 Bailey 1975, 93.
- 101 Žuravlev et al. 2010, 36, N 432.
- 102 Howland 1958, 180-181; pl. 51, N 700, 707, 736, etc. These lamps are known from the British Museum, see Bailey 1975, 63, pl. 20, Q104.
- 103 Kassab Tezgör & Sezer, 1995, 120, N 284.
- 104 Waagé 1941, 74, Fig. 75, 16:55.
- 105 Schäfer 1968, pl. 59, Q21.
- 106 Bernhard 1955, pl. XIX, Nr. 93; Kassab Tezgör & Sezer 1995, N 377-378.
- 107 Zabelina 1992b, 307, pl. V, 1.
- 108 Žuravlev et al. 2010, 121.
- 109 Tolstikov & Zhuravlev 2004, fig. 102; cf. Bernhard 1955, 296, pl. XLI, Nr. 211; Chrzanovski & Zhuravlev 1998, 48-49, N 13.
- 110 E.g., Schäfer 1968, 129-130, pl. 55, P1-P2; Kassab-Tezgör & Sezer 1995, 144; N 375-376; Bailey 1975, 203, Q474; Heimerl 2001, 97, fig. 3; pl. 1, 1-2; Hübingner 1993, 49, N 79, pl. 10; Lyon-Caen 1986, 54-55; N 122.
- 111 Cf. Schäfer 1968, 143, pl. 66, Q62.
- 112 Zabelina 1992b, pl. VI, 8; Tolstikov & Zhuravlev 2004, fig. 102; Alekseeva 1997, pl. 247, 7.
- 113 Zhuravlev & Zhuravleva, 2002, 2.
- 114 For early groups of multi-nozzled lamps of the Bosporos, see Zhuravlev & Zhuravleva 2005, 315-318; Žuravlev et al. 2007, 31-39, 148-166.
- 115 Zhuravlev & Zhuravleva 2002, 2-3.
- 116 Zhuravlev 2007, 213, fig. 4.
- 117 For Bosporan Hellenistic multi-nozzled lamps, see Zhuravlev & Zhuravleva 2002; Zavojkin & Žuravlev 2005; for their sacred role, Parisinou 2000.
- 118 Zhuravlev, 2007, 213; Žuravlev et al. 2010, nos. 673, 678, 679, 691-695, 697-700, 710-718.
- 119 Examples very close to Bosporan multi-nozzled lamps of the 1st century BC come

from the Petra sanctuary in Jordan (one of the authors have had an opportunity to see them himself). In the capital of the Nabatean state they were found in a rubbish layer mixed with animal bones. The layer was formed as a result of cleaning the premises where ritual feasts were being held. Without studying the causes of so close morphology of multi-nozzled lamps from two outlying centers of ancient world situated so far from each other, we would like to note that the sanctuary complex in Petra dates to same period as our lamps do – to the 1st century BC.

120 E.g., Broneer 1930, 64; Howland 1958, 141.

121 Cf. Howland 1958, 181.

122 Žuravlev et al. 2010

123 Sorokina 1963, 65, fig. 23, 9. For a similar example from Phanagoria, see Kovalenko 1989, 409, fig. 37, 4.

124 Kovalenko 1989, 139-144.

125 Žuravlev et al. 2010.