

# Lighting Equipment of the Northern Pontic Area in the Roman and Late Roman Periods: Imports and Local Production

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Unfortunately, the publication of archaeological material found on the northern Black Sea coast (Fig. 1) is far from complete. Clay lamps, which have been found in great quantities at the excavations of all Greek and Roman sites, are among the materials, which were most frequently overlooked in the past.<sup>1</sup> In this article, therefore, I will analyze briefly the main groups of imported and local lamps and other lighting equipment from the 1st century BC to the 6th century AD found in the territory of the northern Black Sea Littoral.<sup>2</sup>

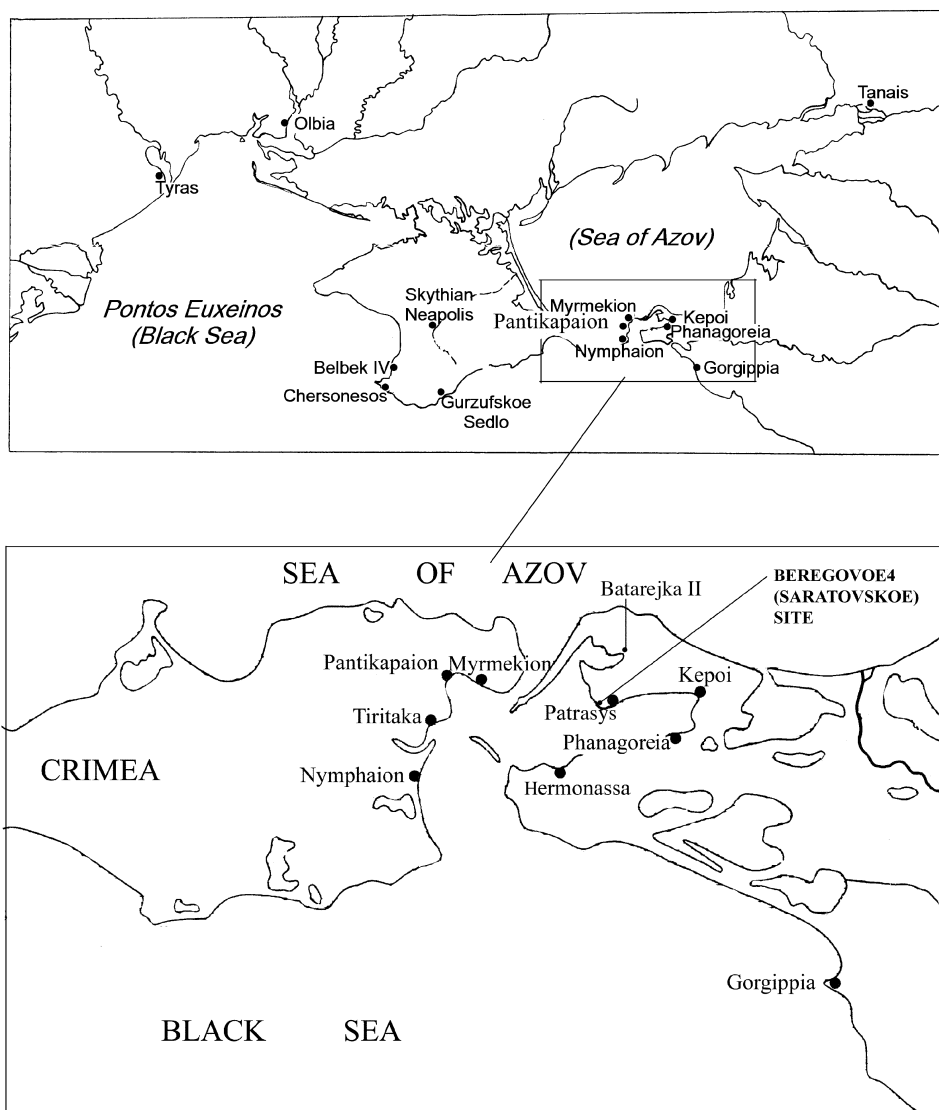
## *Late Hellenistic imported lamps*

The number of mould-made imported lamps in the northern Pontic area increased in the late Hellenistic period, most of them stemming from Ephesian, Rhodian or Knidian workshops.

Ephesian lamps from the 1st century BC–2nd century AD make up one of the most numerous groups of lighting equipment found in this area. Among these lamps are numerous volute lamps and lamps decorated with lugs on their sides. Most of them belong to Howland Type 49A dated between the last quarter of the 2nd and the first quarter of the 1st century BC.<sup>3</sup> Many such lamps were found in the necropolis of Olbia.

A number of lamps, which are similar to the Ephesian lamps, but made of a different type of clay, have also been found. These lamps were probably made to imitate the Ephesian lamps. One example in particular is similar to other Ephesian lamps<sup>4</sup> dated to the 1st century AD and also to a lamp in the British Museum, which belongs to a group of East Greek unattributed lamps.<sup>5</sup> This lamp may be dated sometime between the end of the 2nd century and the middle of the 1st century BC.

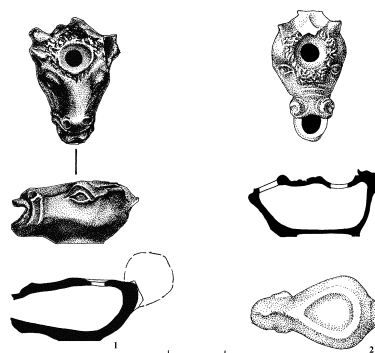
Evidence suggests that a local production of lamps, which in one way or the other imitated late Hellenistic originals from the eastern Mediterranean, took place in Olbia, where a clay model used in preparing a mould for a round lamp with a long nozzle rounded at its end and ornamented with cuts and ovoid pressings was found.<sup>6</sup>



1. The northern Pontic area.

There were many similar lamps throughout the Bosporan Kingdom. It is highly probable that all the trade connections of Bosporos went through Pantikapaion, an important transit centre for all of the Bosporan cities in the 2nd-1st centuries BC. All the Hellenistic layers of Pantikapaion are full of lamps and other imported objects while the finds of imported lamps in small cities and in the *chora* are much rarer. In these places, lamps of local production and, in particular, a great number of jug-shaped ones dominate (see below).

2. Bull-head lamps from Pantikapaion, 1st century BC to 1st century AD. 1): the State Historical Museum, Moscow; 2): Kerch Museum.

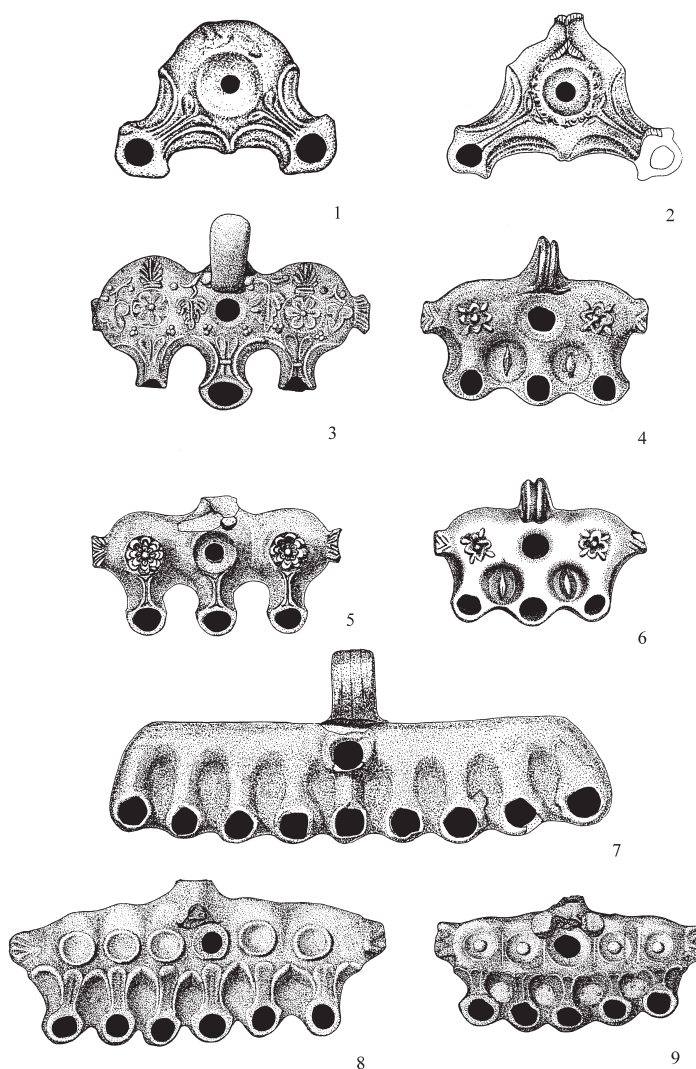


### *The late Hellenistic lamp industry of the Bosporan Kingdom*

Mass production of lamps began in Bosporos by the end of the 2nd century BC and culminated in the 1st century BC. Eighty percent of the lamps from this period are Bosporan, and these lamps take a great variety of shapes. Some of them imitate Ephesian lamps. These were made of grey clay and are of a high quality. There are some grey-clay bull-head lamps among them (Fig. 2).<sup>7</sup> They must be copies of imported originals and are dated between the 1st century BC and the 1st century AD. Since the middle of the 2nd century BC, the so-called Bosporan Sigillata was produced in Bosporos.<sup>8</sup> At first, Bosporan relief vessels (Megarian bowls) imitated imported models, but later on, new and original kinds of ornamentation were worked out.<sup>9</sup>

While discussing the causes of this mass production of tableware and lamps, we should not forget the fact that in the second quarter of the 1st century BC direct trade connections between the northern Pontic area and the eastern Mediterranean were impeded because Pompeius Magnus closed the straits and declared a sea blockade in 64 BC (Plut. *Pomp.* 34-36, 38-39; Dio Cass. 36.54-37.4), with the aim of preventing trade ships from reaching Bosporos. Of course, we can be sure that during some part of this period trade connections between Bosporos and Sinope as well as between Bosporos and other southern Pontic *poleis* existed, but we can hardly imagine that clay tableware was delivered from Antiochia to Sinope by land. Besides this, Amisos, Sinope and Herakleia Pontike, all of which had played a main role in Pontic trade, were no longer part of the state of Mitridates VI by the 70s BC. The issuing of coins was terminated in the cities that took the side of Romans, and this may have played a role in the temporary destruction of trade connections between various Pontic *poleis*. We should not exclude the possibility that these events, and as a result, the absence of imported pottery for a short period of time, could have stimulated an increased local production of tableware and lamps.

A large number of late Hellenistic multi-nozzle lamps have been unearthed in Pantikapaion – the capital of the Bosporan Kingdom (Fig. 3). Two-nozzle



3. Different types of Bosphoran multi-nozzled lamps. Pantikapaion, 1st century BC. State Historical Museum, Moscow and State Puškin Museum, Moscow (from Zhuravlev & Zhuravleva 2002).

lamps (Fig. 3.1-2) were formed by the joining of two nozzles to the body of a standard Hellenistic Bosphoran mould-made lamp. Such lamps as a rule have volutes on each of their nozzles, a small loop-shaped handle and a reservoir for oil, the form of which is the same as that of the one-nozzle lamps. Three-nozzle lamps (Fig. 3.3,5), however, were formed by joining three one-nozzle lamps (type I). The nozzles of these lamps are separate from each other but a single hole for filling them with oil was made in the central part of the lamp. The nozzles are decorated with volutes. Lamps belonging to type II (Fig. 3.4-9)

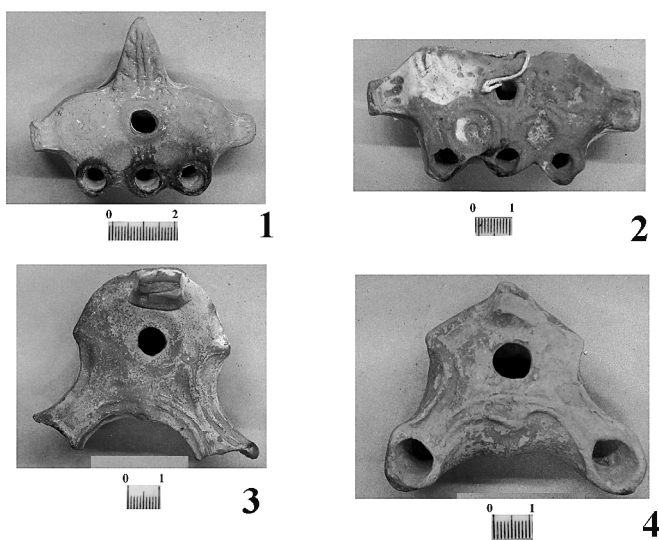


were moulded and then possibly finished by hand (a vertical handle may have been added or an ornament attached to the handles situated on the lamp's side). The number of nozzles on this type varies from 3 to 9 (see, for example, the variants II.1 to II.5).<sup>10</sup>

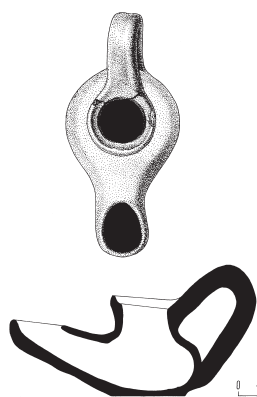
Nine-nozzle mould-made lamps (Fig. 3.7) with a rectangular shaped body (close to trapezoid shape) belong to type III. There is only one hole for filling the lamp with oil and places for other holes are not even marked. The surface of the lamps is flat with three shallow incisions on the sides. Side handles are absent, and a shallow channel marks each nozzle. This type differs morphologically from the lamps of Types I-II described above, although it has the same scheme of joined nozzles.<sup>11</sup>

Production of multi-nozzle lamps seems to have begun in Pantikapaion at the beginning of the 1st century BC and to have continued for a century or so.<sup>12</sup> It cannot be doubted that this type was produced locally, probably in Pantikapaion. An intriguing deposit consisting of dishes and many local lamps dated to the late 1st century BC was discovered recently inside the defence system (a tower?) of the city's acropolis. They probably belonged to a small sanctuary. Some multi-nozzle lamps have also been found in Phanagoria (now in the collection of the State Historical Museum), but they are made of red clay and should probably be regarded as copies of grey-clay Pantikapaion originals (Fig. 4). In 2003, a similar red slip multi-nozzled lamp was found in Pantikapaion as well.

One of the most widespread groups of lamps is the so-called "jug-shaped" one (Fig. 5). This type appeared about the middle of the 3rd century BC. It is interesting to note that it had a constant popularity during the Hellenistic and early Roman periods. For example, most lamps found in a fortress of the



4. Multi-nozzled red-clay lamps from Phanagoria, 1st century BC. State Historical Museum, Moscow. Photo by Denis Žuravlev.



5. *Jug-shaped lamp. House of Chrysaliskos, late 1st century BC. State Historical Museum, Moscow. Drawing by Anna Trifonova.*

1st century BC – the so-called residence of Chrysaliskos, a powerful Bosphoran official – are “jug-shaped” ones.<sup>13</sup>

Alongside wheel-made, jug-shaped lamps, handmade imitations were also in use in the Greek *poleis*<sup>14</sup> and among the late Scythians of the Crimea. House-sites of the latter contained several handmade examples that have parallels with lamps found in the course of recent excavations of Scythian Neapolis – the capital of the state of the Scythian King Skilouros.<sup>15</sup> This type of lamps was popular until the 1st century AD.

#### *Italian lamps and their imitations*

From the 1st century BC, the northern Pontic area was strongly influenced by the Romans.<sup>16</sup> During this period, the political, social and cultural life of the region underwent many changes, as it became part of a great international market, where the exchange of various types of goods took place. Among these were Italian amphorae, bronze objects, terra sigillata and lamps.

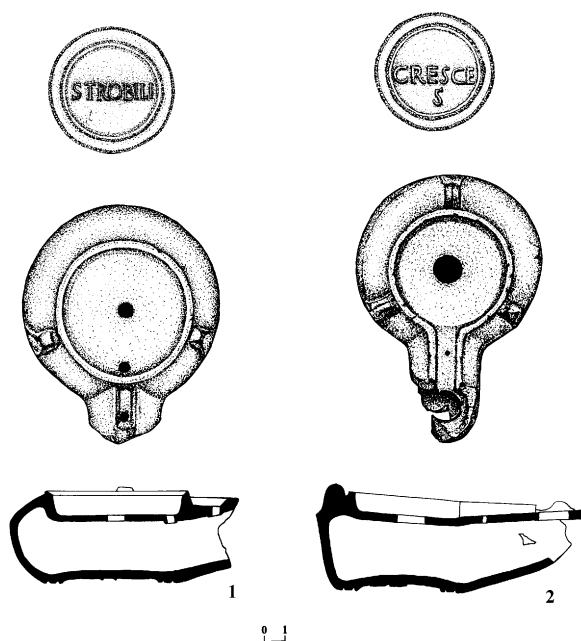
Italian sigillata appeared in the northern Pontic area in the late 1st century BC, but most of the known finds date to the second and third quarter of the 1st century AD.<sup>17</sup> The most numerous finds of Italian pottery come from big cities – Olbia, Chersonesos and Pantikapaion. Obviously there were no direct trade connections between Italy and the Black Sea littoral, despite the fact that more and more Italian products are being identified in the region from year to year. Each year, excavations yield new fragments of Italian pottery, all of which still remain unpublished. Numerous finds of glass, bronze vessels and amphorae of Italian origin also point to wide-scale contacts between the region and Italy. The rare occurrence of Italian fine ware suggests that it most probably arrived through transit centres or occasionally as a small part of a ship's cargo, but it certainly did not play any significant role in the trade of the region.

It should be noted that there is a similarity in the composition of lots of imported goods found in different cities in the Pontic area, especially those of

the Crimea. Some distinctions do, of course, exist, and certain types of lamps are entirely absent from Chersonesos and Pantikapaion. We find a similar picture, when we examine the distribution of imported terra sigillata. This gives the impression that the main centres of Crimea, Pantikapaion and Chersonesos had the same trade partners who supplied them with the same goods.

There are only a few imported Italian lamps – the most characteristic example of such imports being *Firmalampen* (Fig. 6). According to various scholars' opinions, the earliest production date of these varies from the early 1st century AD to the reign of Vespasian. At first, they were made only in northern Italy; later they were also produced in certain provincial centres and this production continued for many years. *Firmalampen* were not widespread in the northern Pontic area. They are only attested to in the areas most influenced by the Romans, such as for example Chersonesos (where fragments stamped APRIO/F, CRESCES, QGC, CASSI, STROBILI have been found)<sup>18</sup> and Tyras;<sup>19</sup> two such lamps in the Hermitage collection also come from "South Russia".<sup>20</sup> Another such lamp with a signature STROBILI came from Olbia,<sup>21</sup> and still another example, now in the Odessa Museum has no documentation.<sup>22</sup> As far as I know, no such lamps have yet been found in the territory of the Bosporan Kingdom.

We cannot be sure that all of these lamps were produced in Italy, even if they are undoubtedly imported to the Pontic area – in many cases they were probably made in Moesia or Pannonia as copies of Italian products.<sup>23</sup> Tak-



6. *Firmalampen* from Chersonesos, 2nd century AD. State Historical Museum, Moscow (from Chrzanovski and Zhuravlev 1998).

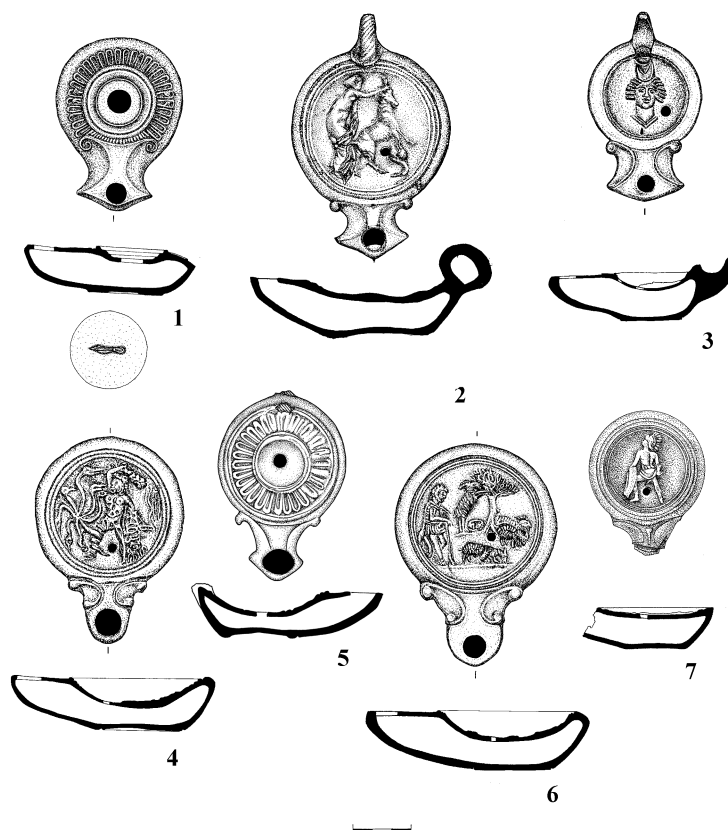
ing a quick glance at the western Pontic area, Dacia or Moesia for example, we notice hundreds finds of *Firmalampen* in Roman military camps, cities and necropoleis. One of the characteristic examples of this is Ulpia Traiana Sarmizegetusa in Dacia where *Firmalampen* are among the most widespread types of lighting equipment.<sup>24</sup> This suggests that finds of these lamps are directly connected with the extent of romanisation of an individual territory and also testify to the presence or absence of Roman military camps.

Only a few *Vogelkopflampen* have been found in Chersonesos.<sup>25</sup> This type was very popular in the Mediterranean, because it was easy to produce, export and use, and they were no doubt cheaper than many other lamps. However, they were not widespread in the Pontic region. Two examples from Chersonesos date from the mid 1st to the early 2nd century AD.

Some Italian *volute lamps* have also been found in the Black Sea littoral. This type was very popular in Italy and almost all the other Roman provinces during the 1st century AD; it was then progressively replaced by a lamp of a similar shape, also round, but with a short, rounded nozzle without volutes. With regard to the round lamps found in South Russia, it is particularly interesting as D.M. Bailey has already observed, that handles are almost always attached to the examples of this type of lamp found in the northern Pontic area, while similar lamps in other regions of the Roman Empire were sold without handles.<sup>26</sup> As one example, can be named a lamp with volutes and stamp HERMAT, which comes from Chersonesos and dates to the 1st century AD. Its discus is decorated with the image of Herakles with the apples of Hesperidai.<sup>27</sup> As well, many imitations produced somewhere in the Mediterranean were imported to the northern Pontic area (Fig. 7).

Some *Knidian lamps* have also been found in the region. Among them are lamps known to come from the workshops of Epagatos (Fig. 8.3)<sup>28</sup> and Romanesis.<sup>29</sup> There is also a lamp stamped AMMΩ/NIOY/O, which resembles a Knidian one.<sup>30</sup> It is interesting to note that lamps of this sort are widely distributed in Chersonesos, but not in Pantikapaion. In the 1st and early 2nd century AD, a noticeable import of Ephesian lamps must be acknowledged,<sup>31</sup> as well as the presence of some Pergamene lamps.<sup>32</sup> In the 2nd century AD, the quantity of lamps from Moesia and Thrace increased throughout the northern Pontic area.<sup>33</sup> Thus, for example, some lamps from a workshop in Euktimon (in the region of Constanza) have been discovered in Chersonesos.<sup>34</sup> The relations with Tomis and other cities of the western Pontic area were stabile and constant during the first centuries AD.

*Syro-Palestinian lamps.* There are many finds of Roman lamps with close parallels to lamps from Palestine and Syria. There are more than 10 lamps with a stamp ΘΕΟΔΩΡ/O/Y in 3 lines in Chersonesos (Fig. 9)<sup>35</sup>, which are very similar to ones from Antiochia. They may be dated to the late 2nd-early 3rd century AD. In any case, it is not possible to determine the place of production of a number of similar lamps, which have no stamps and a very simple decoration, without a series of archaeometric studies. Unfortunately, for the



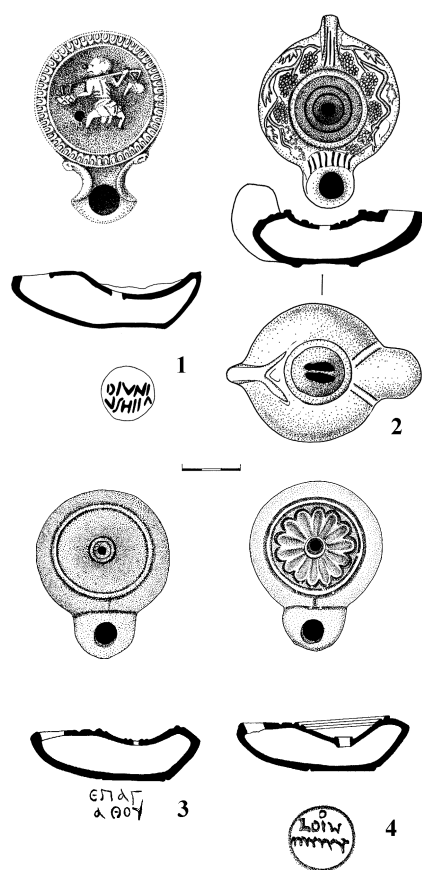
7. Volute lamps. 1) and 6): Kerch (Pantikapaion-?); 2): Kepoi; 3), 4) and 7): the northern Pontic area (?). State Historical Museum, Moscow; 4): Chersonesos. National Preserve "Chersonesos Taurica". Drawings by Anna Trifonova, Irina Rukavišnikova and Irina Gusakova.

Black Sea area such studies would be only the first step. This is why we cannot be sure that some of the lamps were imported from the Near East.

*Imported lamps from un-attributed centres.* Most of the imported lamps of the northern Pontic area were produced in unknown centres probably situated in Asia Minor, for example a unique two-nozzle lamp, decorated with volutes with bust of Sarapis, topped by a *kalathos* on its handle (Fig. 10), which comes from the necropolis of Pantikapaion. It was probably produced in Asia Minor in the mid 1st century AD. There are different stamps on some of these lamps – abbreviations, rosettes or *plantae pedis*. I may note briefly, that the popular stamps on lamps and terra sigillata in the form of *planta pedis* are connected with traces of Sarapis' foot.<sup>36</sup> This, however, is a theme for a separate investigation.

*Athenian lamps.* In the 3rd and 4th century AD the quantity of Athenian lamps increased at all Pontic sites. Athenian lamps make up the most widespread class of imported lamp for the 4th to 5th century (Fig. 11). Most of them





8. Imported lamps. 1) and 4): Northern Pontic area. State Historical Museum, Moscow. Drawings of Anna Trifonova, Irina Rukavišnikova; 2): Chersonesos. National preserve "Chersonesos Taurica", drawing by Irina Gusakova, and 3): Chersonesos. State Historical Museum, Moscow (from Chrzanovski & Zhuravlev 1998).

have been found in Chersonesos. Products from the workshops EYTYX/ΕΣ, ΠΙΠΕΙΜ/ΟΥ and ΠΙΠΕΙΘΟΥ can be distinguished among these Attic lamps.

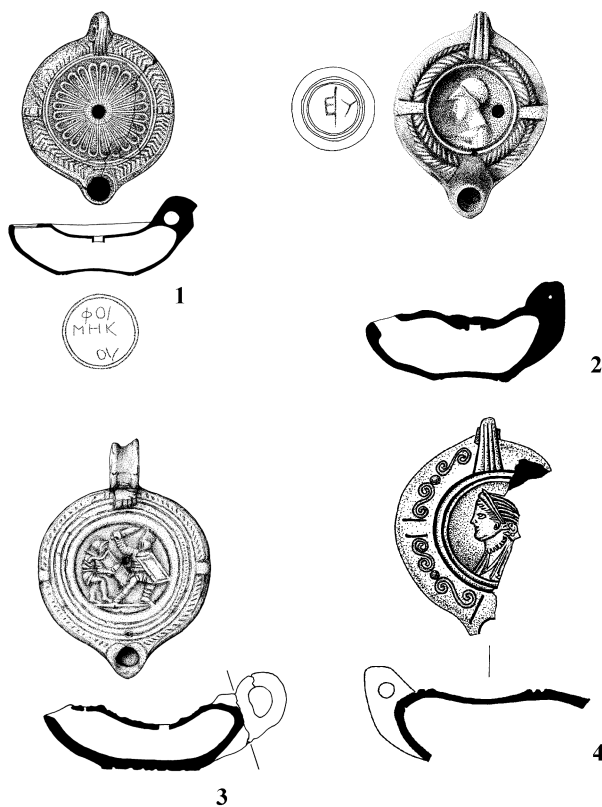
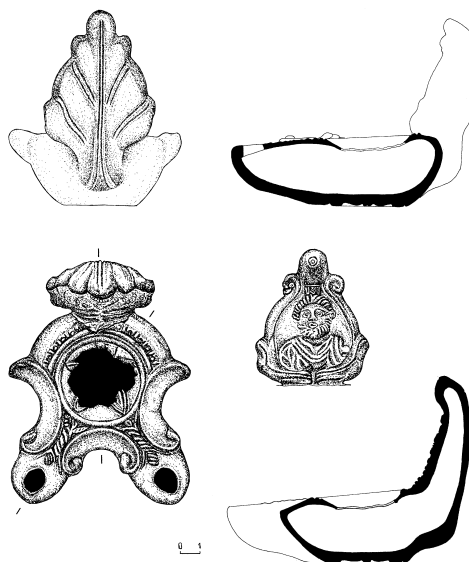
The signature ΠΙΠΕΙΘΟΥ was either in relief or incised; all of the incised signatures are dated to the post-Herulian period.<sup>37</sup> One such lamp was found in Kerch,<sup>38</sup> another, which has the signature misspelled as ΠΙΤΕΙΘΟΥ, was discovered in Chersonesos.<sup>39</sup> V.I Kadeev supposes that the mistake was made while a stamp was being cut.<sup>40</sup> Some lamps belonging to the workshop EYTYX/ΗΣ or EY were found in Chersonesos.<sup>41</sup> Besides these examples, lamps from the workshop of BPOMIOC (second half of the 3rd–early 4th century AD) are



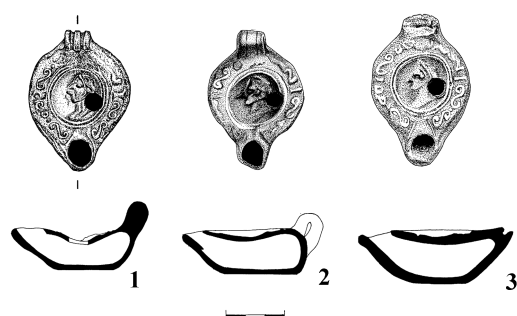
9. Lamp from the Syro-Palestinian region. Chersonesos, late 2nd – early 3rd century. National preserve "Chersonesos Taurica". Photo by Denis Žuravlev.



10. Two-nozzled volute-lamp, decorated with a bust of Sarapis. Pantikapaion. State Historical Museum, Moscow. Drawing by Anna Trifonova.



11. Athenian lamps. 1) and 4): Chersonesos; 2) and 3): from Kerch (probably necropolis of Pantikapaion?); 1) – 3) in the State Historical Museum, Moscow (3 – handle wrongly restored in 19th century); drawings by Anna Trifonova, Irina Rukavišnikova; 4) in the National preserve “Chersonesos Taurica”, drawing by Irina Gusakova.



12. Local Pontic imitation of Athenian lamps. Pantikapaion. 4th century AD. State Historical Museum, Moscow.

known,<sup>42</sup> as well as from the workshops of ΣΤΡ (ΣΤΡΑΤΑΛΛΑΟΣ),<sup>43</sup> ΠΙΡΕΙΜ/ΟΥΥ<sup>44</sup> ΡΟΥΦΟΥ,<sup>45</sup> ΕΛΠΙΔΗΦΟΡΟΣ,<sup>46</sup> ΛΕ (ΛΕΟΝΤΕΥΣ)<sup>47</sup> together with the leaf-relief lamps<sup>48</sup> and some others.<sup>49</sup> Other lamps stamped ΑΡΧΕ/ΠΟΛΙ/ΔΟC have also been found in Chersonesos,<sup>50</sup> as well as some lamps undoubtedly stemming from Attic workshops but without any signatures.<sup>51</sup> As noted by A. Karivieri, the Athenian export of lamps to the northern Black Sea coast continued until the second half of the 5th century AD.<sup>52</sup>

The wide popularity of Attic lamps in the northern Pontic area caused the appearance of local imitations. I would like to give only two examples – first, a lamp from Chersonesos with Eros playing the syrinx, dated from the middle of the 3rd to the middle of the 4th century AD. Judging by the clay it seems like a local imitation of an Elpidephoros lamp.<sup>53</sup> A great number of rough lamps with an image of a female bust turned to the left have been found in the territory of Pantikapaion (Fig. 12).<sup>54</sup> These are imitations of Athenian lamps with Aphrodite wearing a *stephane* and a necklace, dated to between the 3rd and 5th century AD.<sup>55</sup> In the Bosphoran Kingdom the largest part of such imitations came from the deposits of the 5th century AD.<sup>56</sup>

### *Lanterna*

Fragments of wheel-made vessels made of red or grey clay and with holes are often found in the excavations of Pantikapaion.<sup>57</sup> The diameter of the holes varies between 0.5 and 0.8 cm. The archaeological meaning and reconstruction of such fragments has attracted little scholarly interest. They are usually classified simply as “durchlass” or “incense-burners” and are described in field reports together with examples of kitchen or ritual ware. It is, however, a mistake to neglect a more detailed interpretation of these fragments, and I would like to propose another possible reconstruction for some of them.

In Greek and Roman times, *lanterna* were in widespread use as lighting devices. Several *lanterna* of a closed shape have been found in Egypt, Anatolia, at Cyprus.<sup>58</sup> Besides these finds, we may note a terracotta figurine of a slave sitting near a similar *lanterna* (*lanternarius*) from Kepoi (Fig. 13),<sup>59</sup> as well as many other similar images elsewhere in the Greek and Roman world. Thus,



13. Terracotta figurine of a slave sitting near lanterna (*lanternarius*) from Kepoi (from Nikolaeva 1974).

it seems likely that *lanternae* were known and used by people living in the northern Pontic area. They were more useful than the usual lamps and torches in windy weather and while moving. Despite the fact that I do not know of any complete *lanterna* from the territory of the northern Pontic area, it seems likely that some of the pottery fragments with holes could have belonged to such *lanternae*.

#### *Local Pontic lamps*

Hundreds of lamps, most of which are of Pontic origin, are found each year. A local lamp production clearly existed in the area from the Archaic period on.<sup>60</sup> In the 1st century AD and later all the cities of the region used very similar lamps. They were probably made in the same centres where the Pontic Sigillata was produced. Their iconography has many parallels with that of lamps from Italy and Asia Minor, and was probably based on imported originals. Only a few lamps have an original design.

Unfortunately, no traces of the workshops in which these lamps were manufactured have yet been found, so we can only guess at their production in the northern Pontic area. Some moulds for different types of lamp, however, have been found in Pantikapaion, Phanagoria, Chersonesos and other cities. The upper part of a mould with a depiction of a *quadriga* comes from Pantikapaion (Fig. 14.1).<sup>61</sup> Similar lamps are widely distributed throughout the Mediterranean and in the northern Pontic area, in particular in Chersonesos (Fig. 14.2).<sup>62</sup>

A lamp with a high base was found in Gorgippia in a Hellenistic ceramic workshop,<sup>63</sup> where such lamps were probably manufactured. Also a fragment of a mould was discovered in Tyras<sup>64</sup> and moulds for lamps of different types have been found in Phanagoria (Fig. 15) and Olbia.<sup>65</sup>



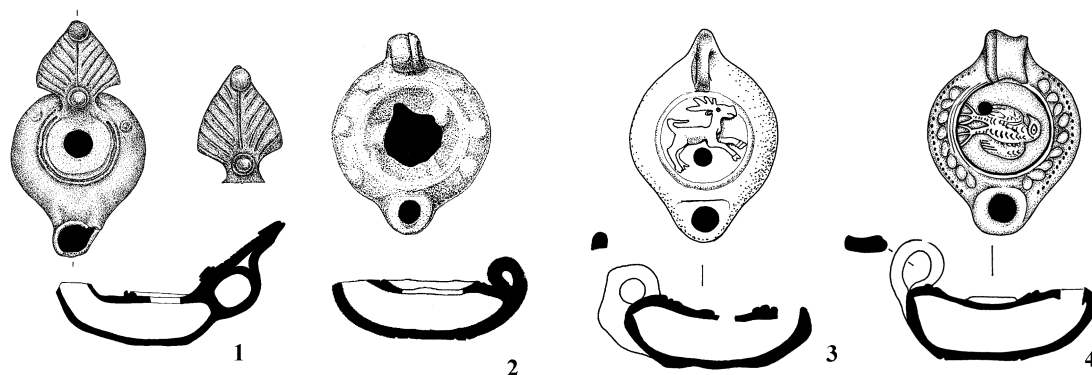
14. Lamp-making in the Bosphoran Kingdom. 1): clay mould and plaster print; 2): lamp with the same iconography from Chersonesos (from: Kunina 1983).

Circular lamps (mainly Loeschcke type VIII) dominated in the area since the mid 1st century AD (Fig. 16.2-4). We may distinguish finds of local lamps, which are always poorly made with indistinct contours and images on their discuses. Pontic craftsmen seem to have used a mould made from imported lamps without worrying too much about local iconography. In Russian scholarly works, such lamps are called “Roman lamps of the northern Pontic type”.

The clay and slip of some Pontic lamps are very similar to those of Pontic Sigillata, which were probably produced in the Pontic region. Pontic Sigillata dominated in the region from the mid 1st century AD,<sup>66</sup> that is to say at the



15. Clay mould from Phanagoria. State Historical Museum, Moscow. Photo by Denis Žuravlev.



16. Pontic lamps. 1) – 2): Pantikapaion, State Historical Museum, Moscow. Drawings by Anna Trifonova; 3) – 4): Chersonesos, 2nd – 3rd century AD. National preserve “Chersonesos Taurica”. Drawings by Irina Gusakova.

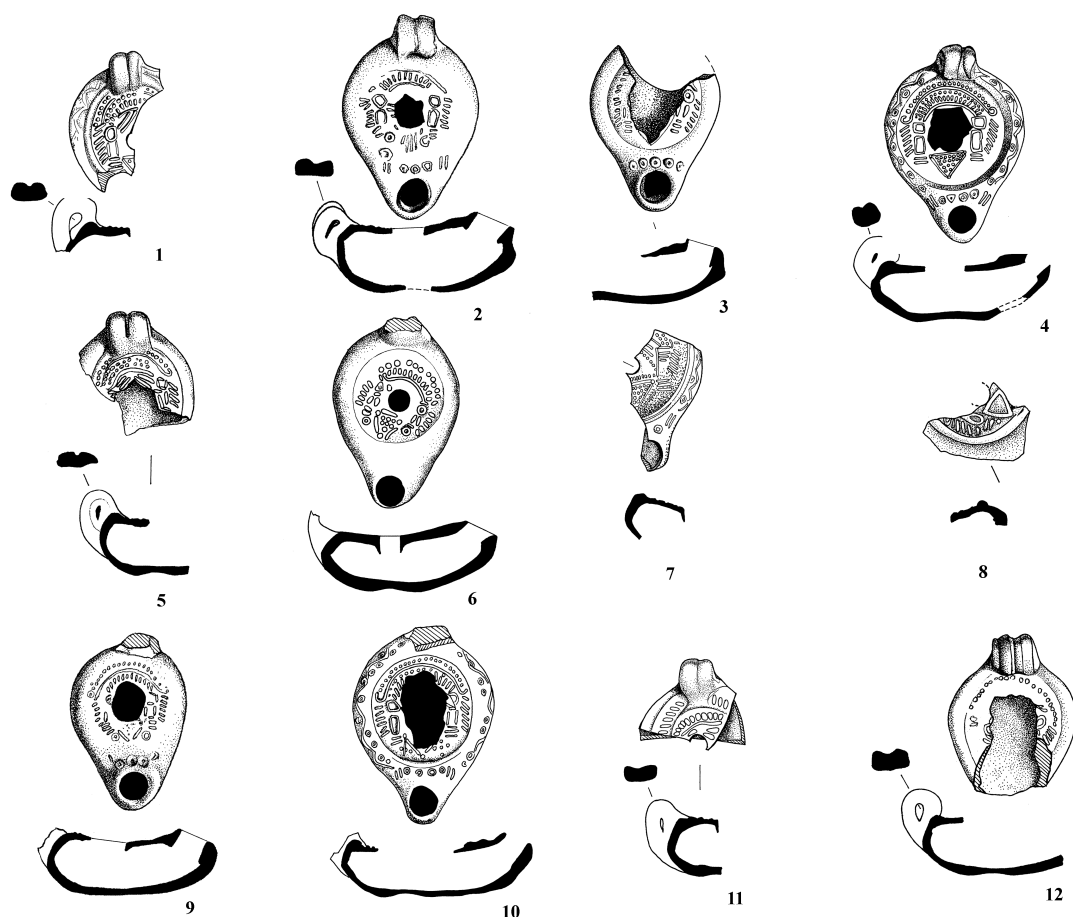
same time as the round lamps of Loeschcke, type VIII were most frequent, a fact which is of great importance in the reconstruction of the trade activity of the Pontic cities.<sup>67</sup> At the moment, however, we have no idea about where these lamps or the Pontic Sigillata were manufactured. There were also some local Pontic lamps, for example, the lamps with a leaf-shaped handle, which were produced in Pantikapaion in the 2nd and probably 3rd century AD (Fig. 16.1).

The discuses of Pontic lamps are variously decorated – with images of rosettes, different animals, gladiator fights and with mythological or erotic scenes. All of them have very close parallels among the lamps from the Mediterranean region. However the detailed analysis of their iconography is beyond the scope of this article.

I would like to point out just as an example that finds of lamps with Jewish symbols make it possible to localize approximately the buildings of ancient synagogues (even when building remains do not give exact evidence of the fact). Thus, John Lund basing his supposition on the finds of some lamps suggested the possible location of a synagogue from the 3rd–4th century AD in Carthage.<sup>68</sup>

Several years ago, when an ancient synagogue in Chersonesos was being excavated, a great number of lamps of the same type were found (Fig. 17).<sup>69</sup> According to D. Korobkov, an arch portrayed on these lamps should be seen not as the representation of an altar but of a special niche in the wall where revered relics were traditionally situated.<sup>70</sup> This supposition was affirmed by the image of a so-called “shelf” (an akroterion, multi-petaled rosette), which may be intended as a flat version of the semi-cupola *konha* situated over the niche aedicula.<sup>71</sup> Netting consisting of crossed lines under the niche (but inside the arch) is portrayed on some lamps of this type – the impression of closed





17. Lamps from synagogue in Chersonesos. National preserve "Chersonesos Taurica". Drawings by Irina Gusakova.

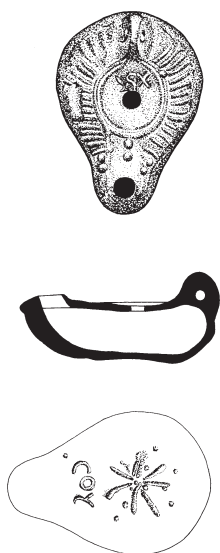
doors is often given in this way. According to Eric C. Lapp, the storage cabinet of the Torah scrolls is shown under the arch,<sup>72</sup> and the whole image may be interpreted as a symbolic rendering of a synagogue's most sacred location – the tabernacle of the Testament.<sup>73</sup> This is obviously just one of the possible interpretations of the iconography of these lamps, but the fact that they were found in the area of a synagogue does suggest that we should expect the use of Jewish symbolism. All these lamps are undoubtedly of Pontic production and can be dated to the 5th–6th centuries AD.

Finally, lamps with primitive images of "a palm branch" on their discos are known in Chersonesos,<sup>74</sup> and this image might be reminiscent of a menorah motif. It is possible to see them as a copy of some Palestinian lamps, which have a very similar shape and decoration.



*Sunburst lamps*

An original group of lamps from the northern Pontic area dates to the 3rd-4th centuries AD. These so-called “sunburst lamps” are quite small, with a round or oval body, an extended nozzle, rounded at the end, and generally loop-shaped handles.<sup>75</sup> A stylized rosette is often imprinted on the base. Their name comes from their peculiar shoulder-decoration, which consists of a row of alternating concentric rims and grooves, starting from the discus. It is important to note both that the sunburst shoulder-decoration is also seen on some Hellenistic lamps and that its significance has been the subject of numerous hypotheses: sunbeams, a laurel or a palm branch or a symbol of the light of the lamp have all been suggested as possibilities. Such lamps were widespread in the territory of the northern Pontic area in the 3rd-4th centuries AD, especially in Chersonesos, where they represent about 30 % of all Roman lamps found. In Pantikapaion, sunburst lamps come from layers dating from the second quarter to the mid 3rd century AD.<sup>76</sup> There is a specific group of such lamps with a stamp (?) in relief letters divided into two parts. The letters XPY are usually stamped on the discus, and COY on the bottom (Fig. 18).<sup>77</sup> They have been found so far only in Chersonesos, but their clay is not local. In addition, a highly unusual sunburst lamp with the stamp *planta pedis* on its bottom was found in Tanais.<sup>78</sup>



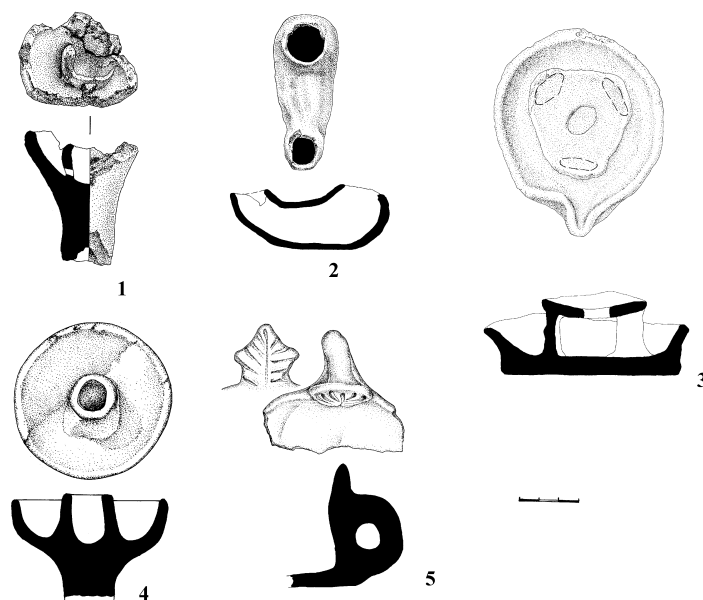
18. Sunburst lamp with a stamp XPYCOY, Chersonesos. State Historical Museum, Moscow. Drawing by Anna Trifonova.

### *Handmade lamps*

Another intriguing group of lamps were handmade. Their presence is a characteristic feature of the region, which may be due to the high proportion of barbarian inhabitants in the northern Black Sea littoral. The quantity of handmade lamps increased in the 1st century AD, when the Sarmatians reached the Black Sea coast bringing with them their own traditions and customs. The great popularity of open handmade lamps among these people rests no doubt on the fact that animal fat or dolphin blubber,<sup>79</sup> and not imported oil, was used with them.

Most of the handmade lamps were found in different places in the Bosporan Kingdom (Fig. 19). The presence of handmade lamps, which were probably used by the non-Greek population, from every period of Bosporan history is a characteristic peculiarity of the region.<sup>80</sup> Their number seems to have increased greatly after the 1st century BC, and most of those found date to the 4th–6th centuries AD. Some imitate wheel-made lamps (Fig. 19.2).<sup>81</sup> Others have a leaf-shaped or elongated body and are made from local clay. All such lamps are very similar everywhere – in Olbia and Chersonesos as well as in both parts of Bosporos.<sup>82</sup>

If we look at the materials from Tanais, a trade centre on the barbarian border, we notice that about 40 % of all lamps were handmade in the 1st centuries AD.<sup>83</sup> This probably reflects the ethnic composition of this small city.



19. Hand-made lamps, Asian part of the Bosporan Kingdom: Batarejka II and Kepoi, late 2nd – 6th century AD. State Historical Museum, Moscow. Drawing by Anna Trifonova.

Recently, lamps from Belinskoe (a site in the European part of Bosporos) were published. Of 46 lamps, 36 were handmade.<sup>84</sup>

As regards Pantikapaion, we may note an increase in the number of handmade lamps in the 3rd century AD and later. At the same time the greatest number of lamps found in the *chora* of the Bosporan cities are handmade. Likewise, many handmade lamps have come to light in sites in the Asiatic part of Bosporos. Many of them have odd shapes (Fig. 19.3)<sup>85</sup> and lack parallels outside the Bosporan Kingdom.

### *Metal candelabra*

Candelabra of various forms are known in the northern Pontic area from the 5th century BC on.<sup>86</sup> Most of them were imported. One series of candelabra comes from the necropolis of Pantikapaion. Some examples may be considered to be of Italian production,<sup>87</sup> while others were produced in the Roman provinces. A unique bronze candelabrum decorated with the figure of Syrene and topped with a lamp was found in the burial mound no. 29 near Stanica Ust'-Labinskaja. It can be dated to the Augustan period and may have been produced in an Italian workshop. Many candelabra from the excavations of Pantikapaion and Chersonesos are dated to the 4th century AD.<sup>88</sup> One example from Pantikapaion is topped with a lamp, the handle of which is cross-shaped.<sup>89</sup> Depictions of similar candelabra are preserved in the paintings of the famous so-called burial-vault of Ašik in the necropolis of Pantikapaion. At the moment, however, we do not possess any evidence to suggest the production of such candelabra in the northern Pontic area. There is also a relief image of such a candelabrum, placed between erotic scenes, on a Knidian *lagynos* from the necropolis Belbek IV (Fig. 20). It should be noted too that finds of bronze, iron and lead lamps are very rare in the northern Pontic area.<sup>90</sup> They



20. Relief image of candelabrum and a lamp on the shoulder of Knidian *lagynos*, Bel'bek IV necropolis, mid 2nd century AD. Photo by Vasilij Močugovskij.



21. Maiotian candelabrum from Krasnodar Museum.  
From *Cat. Moscow*, 2002.

have most probably not survived to modern times, because they were melted down in antiquity.

Barbarians also used bronze and iron candelabra, which were poor copies of Greek and Roman lighting equipment. Several examples of these come from the so-called “Golden Cemetery” of the 1st century AD in the Kuban region.<sup>91</sup> Finds have also been made in the Ust’-Al’ma late Scythian necropolis in the south-western Crimea.<sup>92</sup> It is interesting to note that three of them were found *in situ* with a lamp on the top. A hammered iron candelabrum of a simple shape was found in Tanais on a site destroyed approximately in the middle of the 3rd century AD.<sup>93</sup> One of the most interesting examples of candelabra of similar shape was unearthed in a Maiotian necropolis not far from Krasnodar (Fig. 21).<sup>94</sup> Its top ends in a triangular base for a lamp, while

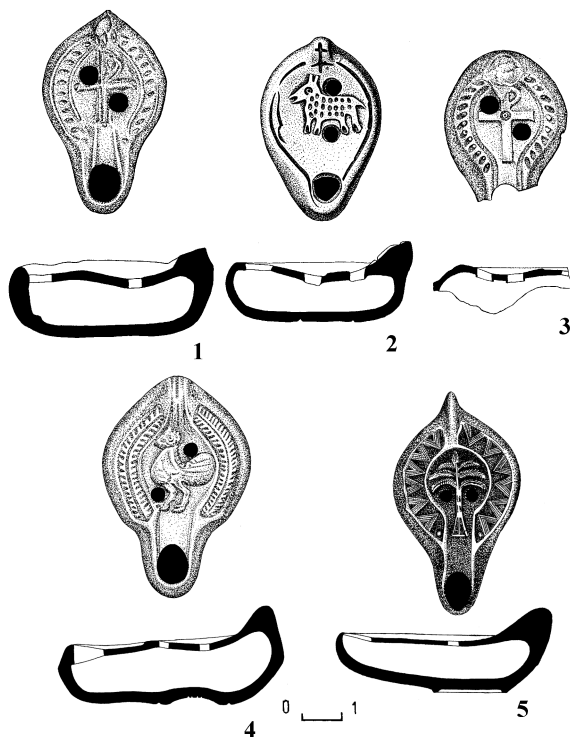
a bit lower down there is a round plate, which is decorated with bull-heads and meant to hold a lamp.

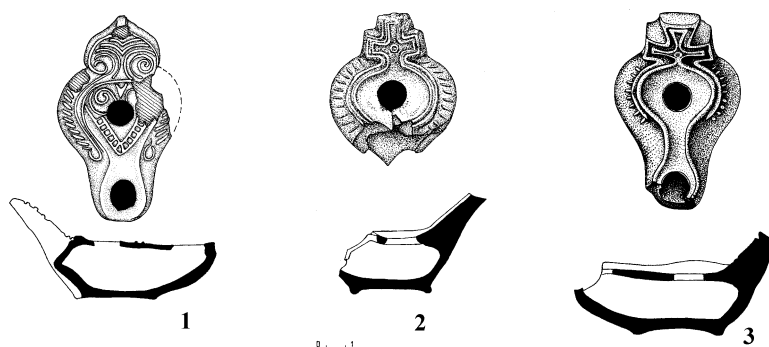
### *Lamps of the late Roman period*

In the late Roman period, handmade lamps and small lamps with decorated shoulders were in widespread use throughout the region. There are also many finds of biconical lamps, which were produced in Asia Minor in the late 2nd–4th century AD. The earliest date for these lamps may be established from the finds near the entrance of house no. 3 in Ilouraton, which belonged to the 2nd and early 3rd century AD. A great number of such lamps were found in Chersonesos as well as in other Pontic cities.<sup>95</sup>

A sizeable series of oval-shaped lamps was found in the cities of the northern Pontic area. Most of these are of local production. They are very carelessly made and are badly fired. In Chersonesos, these lamps were found in great quantities in tombs from the 3rd–early 5th centuries AD.<sup>96</sup> There are also many so-called *Warzenlampen* (mid 3rd–early 5th century AD).<sup>97</sup> In the 5th century AD, North African lamps and among them ones with Christian symbols reached Chersonesos (Fig. 22).<sup>98</sup> Cross-handled lamps from Moesia<sup>99</sup>

22. Late Roman lamps from Chersonesos (from Chrzanowski & Zhuravlev 1998).





23. Moesian lamps. Chersonesos. 1): National preserve "Chersonesos Taurica". Drawing by Irina Gusakova. 2) – 3): State Historical Museum, Moscow (from: Chrzanovski & Zhuravlev 1998).



24. Late Roman imported lamps from Pantikapaion. 1) – 2): African, 5th – 6th century AD; 3): Egyptian, 4th century AD. State Historical Museum, Moscow. Photo by Denis Žuravlev.

were also very popular there (Fig. 23.2-3). Moulds for their production were found in Bulgaria but they may have been produced in other places as well. It is intriguing that a fragment of a mould for a similar lamp was found in Chersonesos.<sup>100</sup> These lamps can all be dated to the 6th century AD. There are also a very few finds of imported lamps in the Bosporean Kingdom (Fig. 24). For example, in 2005 a fragment of a cross-handled lamp was found on the acropolis of Pantikapaion.

In the 6th–7th centuries AD a great change occurred in the development of lighting equipment, because people began to use wax candles instead of oil lamps. Several candlesticks were found in Chersonesos<sup>101</sup> together with hanging candlesticks of bronze. Chersonesos' trade connections were highly developed, and the city was known during the Byzantine Empire as a great centre for wax export.<sup>102</sup>



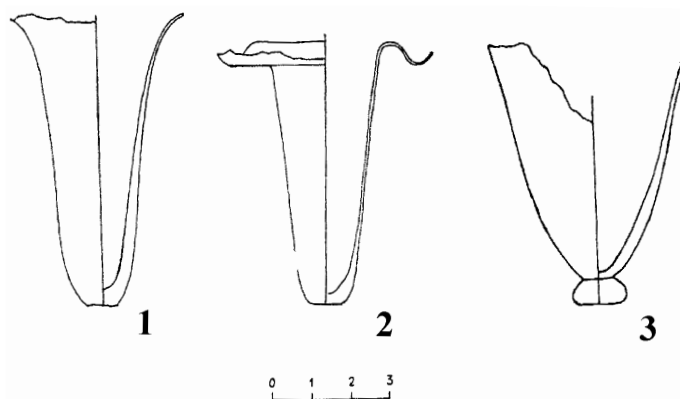
### Glass lamps

The use of glass lamps in the northern Pontic area began in the late 4th–5th century AD. L. Golofast has analyzed glass lamps found in Chersonesos, and has classified them into the following types, each of which is subdivided into some variants:<sup>103</sup>

1. Conical lamps (Fig. 25.3). The earliest example comes from the last quarter of the 5th century AD in Chersonesos. The other examples are all of a slightly later date, occurring in contexts from the 6th–7th centuries AD.<sup>104</sup> Similar lamps are known from Kerch, among them a lamp from the burial-vault 154/1904,<sup>105</sup> and also from the necropolis Sovchoz 10.<sup>106</sup> Some have a conical shape and are decorated with relief drops of dark blue glass. According to some specialists, they date to the 4th–5th centuries AD and were imported from Syria or Egypt.<sup>107</sup>

2. Lamps with a broad cylindrical or semi-spherical body with a narrow base that is designed to be placed into a hole of a *lampadophoros* (Fig. 25.1–2). This type has been found in all regions of the Byzantine Empire. They appeared in Chersonesos at the end of the 5th century AD but are most often found in layers from the 6th–7th centuries.<sup>108</sup> We cannot exclude the possibility that some lamps were not imported, but produced in Chersonesos, where a glass workshop, which produced glass for windows and small glasses, has been found in the course of excavations.<sup>109</sup> Production of similar lamps is also known in the Bosporan Kingdom, where, for example, a glass workshop has been found at the Il'ičevskoe site.<sup>110</sup>

3. Lamps with a semi-spherical or cylindrical body, with three small loop-shaped handles for hanging on a cross. Some vessels were found in Chersonesos<sup>111</sup> and other, complete, ones were found in the Bosporan Kingdom in the burial-vaults of Pantikapaion and in Tyritake. According to the contexts in which they were found, they were used in the late 4th–6th centuries AD.<sup>112</sup> One of the centres for the production of these lamps may have been Constantinople,<sup>113</sup> where they are found in great numbers in layers from the 6th–7th centuries AD.



25. Glass lamps from Chersonesos (from Golofast 2001).

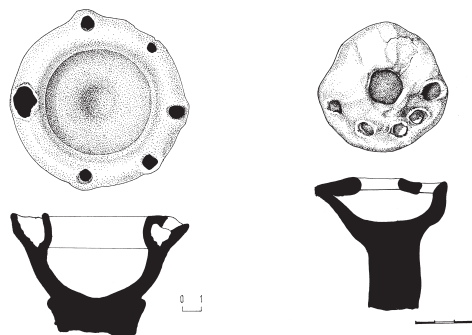
*Lamps and the sacred*

The most interesting lamp deposit of all was recently discovered in the sanctuary of Beregovoj, not far from ancient Patrasys in the Asian part of the Bosphoran Kingdom.<sup>114</sup> Most lamps found here have several tiers (between 2 to 6) and several nozzles. They were never used (the nozzles often do not even have holes connecting them to the oil reservoir). Small pieces are most frequent among the several hundred fragments of such lamps found at the sanctuary. The condition of their preservation suggests that they were broken on purpose during the ritual (most probably at the end of it). Almost complete lamps (broken into large pieces) were found in the upper part of the layer. Only two complete one-nozzle lamps were found at the sanctuary, and they both have traces from burning on their nozzles.

There are dozens of remarkable parallels from Sicily, Italy and Greece where broken multi-nozzle lamps often without any traces from burning, have been unearthed in the sanctuaries of Demeter and Persephone.<sup>115</sup> Such lamps might well have had some sacral function besides their use in everyday life. The rather small cubic capacity of their oil receptacle and the great number of nozzles would have required the frequent pouring of oil into lamps, but rooms would have been much better lighted with the help of several one-nozzle lamps.<sup>116</sup>

Various multi-nozzle lamps from different periods are known from the Asian part of Bosphoros (Fig. 26), for example, the lamps from Phanagoria, which were published in the catalogue of Oskar Waldhauer.<sup>117</sup> They also come from the Batarejka II settlement and Kepoi.<sup>118</sup> Very probably, some of them were used in domestic sanctuaries. Multi-nozzle lamps were very popular in Chersonesos as well.<sup>119</sup>

A limestone altar was discovered in 1989 at the acropolis of Pantikapaion. 16 lamps were found around it and 14 of them were covered with red slip. It should be noted that all of these lamps were complete and not in fragments. The whole deposit dates to the second–third quarter of the 1st century AD.<sup>120</sup> I have already noted above that some Bosphoran multi-nozzle lamps were re-



26. Multi-nozzled lamps from Kepoi. 5th – 6th century AD. State Historical Museum, Moscow. Drawings by Anna Trifonova.

cently discovered in the tower (?) of the acropolis, dated to the late 1st century BC; they were probably also a part of the equipment of a sanctuary.

An interesting collection from the settlement Belinskoe in the European part of the Bosporan Kingdom was published recently by V.G. Zubarev. Here, hand-made lamps without traces of fire were found with their discuses placed facedown *in situ* on altars in domestic sanctuaries probably connected with chthonic cults. These lamps are dated to the 5th century AD.<sup>121</sup> Both hand-made and moulded lamps were found at other rural Bosporan sanctuaries, and some of them were dedicated to Persephone and Demeter.<sup>122</sup>

### *Lamps and burial customs*

In the 1st–2nd centuries AD, lamps were very seldomly used in burials and most of those found come from settlements. Thus, while K. Škorpil in 1902 was excavating the necropolis of Pantikapaion at Gliniše he studied 545 graves but found lamps in only ten of them. Ten lamps have been found in 111 graves in the Olbian necropolis and 18 ones in the more than 300 graves of the necropolis of Chersonesos.<sup>123</sup> Bronze candelabra, however, were found in several burials and candelabra with burning lamps are painted on some Bosporan burial vaults.<sup>124</sup> The number of lamps, candelabra and torches found in 3rd and 4th centuries AD burials in Greek necropoleis increases sharply as compared with those found in graves from the 1st–2nd centuries AD. Lamps were found in 60 % burials of the necropolis of Chersonesos of the later period!<sup>125</sup>

The Greek custom of placing lamps in a tomb hardly influenced the barbarian population. The barbarians of the region traditionally used open lamps that burned animal fat. Because of this, the Greek tradition of lighting burial chambers was not, for example, widespread among the late Scythians or Sarmatians. Only a few graves that have lamps or candelabra among their grave goods have been found.<sup>126</sup>

Lighting equipment from the Pontic area in the Roman period has remained largely unknown to the public. Recently, however, we initiated a special international program, devoted to the study of lighting equipment from the northern Pontic area. Now several groups of curators from museums in Russia and the Ukraine are working in collaboration with myself to produce general catalogues of their collections. I hope these books will be published in the nearest future, so that we will soon have a better understanding of the distribution of lamps in the Pontic area.

### Notes

- 1 Opaiț 1998, 47 argues that the Marxist method of studying history is responsible for this lack, as specialists from eastern Europe preferred to study amphorae, kitchen utensils and other everyday handmade and coarse ware. I do not agree with him on this issue.

- 2 The paper is based on the collections of three major Russian museums – the State Historical Museum (Moscow), the State Puškin Museum of Fine Arts (Moscow) and the State Hermitage (St. Petersburg), as well as on the collections of the Archaeological museums of Kerch and Chersonesos (Ukraine).
- 3 Howland 1958, 166.
- 4 Bailey 1975, 106, no. Q183.
- 5 Bailey 1975, 202-203, no. Q474, see also his list of parallels.
- 6 Vetšejn 1975, 185, fig. 4.
- 7 Chrzanovski 2002, 23-24, nos. 49-54, 57 (type VII).
- 8 Domžalski & Zhuravlev 2003, 89-92; Zhuravlev 2005, 235-254.
- 9 Kovalenko 1996, 51-57.
- 10 Zhuravlev & Zhuravleva 2002, 2.
- 11 Zhuravlev & Zhuravleva 2002, 1-2.
- 12 Zhuravlev & Zhuravleva 2002, 3-4.
- 13 Sokol'skij 1976, fig. 54.2-4.
- 14 Arsen'eva 1988, pl. 28-29.
- 15 Zaytsev 2002, fig. 3.
- 16 Zubar' 1998.
- 17 See Zhuravlev 2003, 219-220.
- 18 Waldhauer 1914, 60, nos. 461-463; Chrzanovski & Zhuravlev 1998, 71-77.
- 19 Son & Soročan 1988, 123-124, fig. 3.3.
- 20 Waldhauer 1914, 69, nos. 555-556.
- 21 Levina 1992, 57, no. 108.
- 22 Levina 1992, 57, no. 109.
- 23 Chrzanovski & Zhuravlev 1998, 72.
- 24 Alicu 1994, fig. 13-19.
- 25 Kadeev & Soročan, 1989, 19, fig. 2; Chrzanovski & Zhuravlev 1998, 70, no. 27.
- 26 Chrzanovski & Zhuravlev 1998, 57.
- 27 Waldhauer 1914, 43, no. 252; Kadeev 1969, 162-163.
- 28 Chrzanovski & Zhuravlev 1998, 91-92, no. 42.
- 29 Kadeev 1969, 159.
- 30 Soročan 1978, 4.
- 31 Soročan 1978, 44; Chrzanovski & Zhuravlev 1998, 87-98, nos. 39-49 (these lamps were published as Pontic copies of Ephesian originals).
- 32 Chrzanovski & Zhuravlev 1998, 49-50, no. 14.
- 33 Soročan & Ševčenko 1983, 94-100.
- 34 Soročan & Ševčenko 1983, 95-96; Kadeev & Soročan 1989, 44; Chrzanovski & Zhuravlev 1998, 93. See Iconomu 1967, 20.
- 35 Kadeev & Soročan 1985, 95-100.
- 36 Žuravlev 2001, 90-99.
- 37 Perlzweig 1961, 47; Karivieri 1996, 123.
- 38 Waldhauer 1914, 61, no. 474.
- 39 Kadeev 1969, 165, fig. 2.6.
- 40 Kadeev 1969, 165.
- 41 Waldhauer 1914, 61 no. 472 and 62, nos. 477 and 486; Kadeev 1969, 166, fig. 2.7-8; Karivieri 1996, 271; Zubar' & Soročan 1986, 117, fig. 6.8.
- 42 Waldhauer 1914, 62, no. 484; Kadeev 1969, 166; Perlzweig 1961, 30; Karivieri 1996, 87.

- 43 Waldhauer 1914, 63, no. 490; Perlzweig 1961, 51; Karivieri 1996, 132-134. Usually these lamps are dated from the early 4th to mid 5th century.
- 44 Koscuško-Valjužinič & Skubetov 1911, 10, fig. 13; see Karivieri 1996, 125-126 for a discussion of the problem associated with the relationship between Corinthian and Athenian lamps with this signature; Perlzweig 1961, 48-49.
- 45 Levina 1992, 68, no. 159. See Perlzweig 1961, 50-51; Karivieri 1996, 129-130.
- 46 Levina 1992, 68-69, no. 160, fig. 8.66; Karivieri 1996, 90.
- 47 Kadeev 1969, 164, fig. 5.1. This workshop was in existence from the second half of the 3rd to at least early 4th century AD (there are some unglazed lamps dated to the second half of the 4th century AD). Perlzweig 1961, 43-45; Karivieri 1996, 115.
- 48 Waldhauer 1914, 63, no. 491. See also Kadeev 1969, 167, fig. 2.11; Levina 1992, 68.
- 49 On imported Athenian lamps in Chersonesos see Kadeev 1969, 163-168. See in general Karivieri 1996, 271.
- 50 Waldhauer 1914, 62, no. 482; Zubar' & Soročan 1986, 116.
- 51 See for example: Chrzanovski & Zhuravlev 1998, 121-123, no. 67.
- 52 Karivieri 1996, 271.
- 53 Chrzanovski & Zhuravlev 1998, 125-126, no. 68. See also Zhuravlev 2002a, 76 fig. 2.
- 54 Zabelina 1992, pl. 8.7; Zubarev & Krajneva 2004, fig. 6.2.
- 55 Karivieri 1996, 153-154, pl. 48. These lamps developed from earlier Attic archetypes of the late 3rd century AD, cf. Karivieri 1996, pl. 1.1. Such finds are also known from the northern Pontic area.
- 56 Zaseckaja 1993, 256, fig. 51.
- 57 See for example, Tolstikov, Žuravlev & Lomtdadze 2005, fig. 15.2.
- 58 Bailey 1988, 244 and 291, nos. Q2000 and Q2357; 1975, 225-227, nos. Q495-496.
- 59 Nikolaeva 1974, 14, pl. 8.
- 60 Zhuravlev & Zhuravleva 2005, 313-314.
- 61 Kunina 1983, 36, fig. 4.
- 62 Waldhauer 1914, 60-61, no. 464.
- 63 Kruglikova 1962, fig. 5.
- 64 Son & Soročan 1988, 126, fig. 5.4.
- 65 Vetštein 1975, 184, fig. 3.
- 66 Hayes 1985; Kenrick 1985, 271-282; Zhuravlev 2000b, 151-160; 2002b.
- 67 Pontic Sigillata were spread only in the region. They were taken to the eastern Mediterranean only from time to time and did not have any serious economic importance. It is possible that merchants while returning with cargo from Pontos (grain, wood etc.) carried them as tableware or used them as ballast on their ships.
- 68 Lund 1995, 258-259.
- 69 See Bailey 1988, 415, nos. Q3309-3310 for a list of parallels.
- 70 Korobkov 2001, 149-157.
- 71 See also Scorpan 1978, 159, pl. III.12; for another opinion, cf. Hayes 1992, 82.
- 72 Lapp 1991, 156-157.
- 73 Korobkov 2001, 152-153.
- 74 Chrzanovski & Zhuravlev 1998, 151, no. 91.
- 75 Soročan 1982, 43-49; Chrzanovski & Zhuravlev 1998, 133-135.
- 76 Tolstikov, Žuravlev & Lomtdadze 2005, fig. 16.1-3.

- 77 Ščeglov 1961, 45-51; Zaleskaja 1988, 233-237; Chrzanovski & Zhuravlev 1998, 135-136, no. 75-76.
- 78 Arsen'eva 1988, pl. 25.2.
- 79 Fossey 2003.
- 80 See for example Maljukevič & Prisyazhnyk 2000, 154-162.
- 81 Vlasov 2005, fig. 3.10-14 and 16-20.
- 82 Olbia: Krapivina 1993, fig. 73-74; Pantikapaion: Zabelina 1992, fig. 8.11-12; Myrmekion: Kastanajan 1981, fig. 11.1-2; Tyritake: Kastanajan 1981, fig. 17.1-4 and 7-10; Ilouraton: Kastanajan 1981, fig. 23.1-2 and 4-5; Tanais: Arsen'eva 1988, pl. 41-44.
- 83 Arsen'eva 1988, 82.
- 84 Zubarev & Krajneva 2004, 199-216.
- 85 Chrzanovski 2003, fig. 32-33.
- 86 Gertsiger 1984; Zhuravlev & Zhuravleva 2005, fig. 3.
- 87 Kropotkin 1970, no. 1159, fig. 52.4; Gertsiger 1984, 96-97, no. 20, pl. V.18; 97-99, no. 22, pl. V.20-20a.
- 88 Gertsiger 1984, 99, no. 24, pl. V.22.
- 89 Gertsiger 1984, 99, no. 23, pl. V.21.
- 90 Son & Soročan 1988, fig. 2.5-6; Arsen'eva 1988, pl. 49-51; Kostromičev 2004, fig. 4.6; see the article of Michail Treister 2005 for an overview.
- 91 Guščina & Zaseckaja 1994, pl. 2. 24; 4, 34; 29, 274; Zhuravlev 2002c, no. 522.
- 92 Zaytsev 2002, fig. 11, nos. 2.1-4.
- 93 Arsen'eva 1988, 133-134 fig. 7.
- 94 Zhuravlev 2002c, no. 639.
- 95 Chrzanovski & Zhuravlev 1998, 141-142 with a complete list of parallels.
- 96 Chrzanovski & Zhuravlev 1998, 149-151.
- 97 Chrzanovski & Zhuravlev 1998, 153-154.
- 98 Chrzanovski & Zhuravlev 1998, no. 93-98.
- 99 Soročan & Ševčenko 1983, 99, fig. 5-6; Visantijskij Kherson 1991, no. 36; Chrzanovski & Zhuravlev 1998, 171-174, nos. 108-110.
- 100 Pjatyševa 1974, fig. VI.5.
- 101 Soročan 2002, fig. 1.
- 102 Soročan 2002, 115.
- 103 Golofast 2001.
- 104 Golofast 2001, 136-137.
- 105 Zaseckaja 1993, 78 pl. 51.254.
- 106 Golofast 2001, 137.
- 107 Sorokina 1971, 90-91; Kunina 1997, 337, nos. 424-425.
- 108 Golofast 2001, 138-139.
- 109 Golofast 1998.
- 110 Nikolaeva 1991, 53.
- 111 Golofast 2001, 140-141.
- 112 Sazanov 1989, 56.
- 113 Hayes 1992, 400, figs. 150.15 and 27.
- 114 Zavoikin & Zhuravlev 2005, 309-312.
- 115 See Parisinou 2000, 136-150.
- 116 Most probably lamps from the Beregovoj sanctuary were used as votives. They must have been brought to the territory of the sanctuary and broken into small pieces on purpose. The people, who brought them, did not need to use these



lamps as is proved by the fact that traces of burning were absent on most of them. Some lamps as well as torches could have been used for lighting sanctuaries during mystery rites – it is well known that most such events took place during the night. In this case, the lamps could have been left at the territory of the sanctuary as gifts for goddesses after the ceremony had finished.

- 117 Waldhauer 1914, 66, nos. 526-527.
- 118 Dolgorukov 1967, fig. 47.5. It is highly important that multi-nozzle lamps of similar shapes are known from the sanctuary on the Majskaja mountain, cf. Marčenko 1962, pl. VI, 3, situated not far from Phanagoria – the largest *polis* of Asian Bosphoros – as well as in the sanctuary of Demeter in Nymphaion in the European part of the Bosporan Kingdom (Chudjak 1945, 162, pl. XX.1-2). I must note, anyway, that these parallels are earlier than the lamps from Beregovoj.
- 119 A large collection of multi-nozzle lamps from Chersonesos (the south-eastern part of the city) will be published soon.
- 120 Treister 1993, 61-66, fig. 4 (altar), 5-6 (lamps).
- 121 Zubarev 2003, 140-141.
- 122 Maslennikov 1997, 164-165; Zavoikin & Zhuravlev 2005, 309-312.
- 123 Zubar' & Soročan 1984, 149-150.
- 124 Rostovcev 1914, 350-351, 355, pl. LXXXVIII.1 and XC.1.
- 125 Zubar' & Soročan 1984, 150.
- 126 See Zaytsev 2002, 44; Zhuravlev 2002a, 75-80.