

# Some Reflections on the Amphora Stamps with the Name of Amastris

Vladimir F. Stolba



As long ago as 1917, the amphora stamps bearing the legend AMAΣΤΡΙΟΣ became known after E.M. Pridik's publication of the Hermitage collection.<sup>1</sup> It took, however, almost three quarters of a century to bring together the isolated evidence about the old finds<sup>2</sup> and the newly discovered stamps, as well as to systematize them and supply them with corresponding historical comments. In this work particular merit is due to A.N. Ščeglov, who first considered the problem of their chronology based on highly diverse evidence, including an analysis of the archaeological contexts of the finds.

Since the appearance of Ščeglov's paper in the supplement to *Bulletin de Correspondance Hellénique*<sup>3</sup> and his later article written jointly with V.I. Kac and V.I. Pavlenkov,<sup>4</sup> no significant addition to these materials has been recorded. At present, we know of nineteen stamps from excavations in Kallatis,<sup>5</sup> Olbia, Pantikapaion, Gorgippia, the settlement of Elizavetovskoe in the delta of the Don River,<sup>6</sup> and from the territory of the Chersonesean *polis* in western Crimea. Surprisingly, to my knowledge, such stamps have not been reported from outside the limits of the northern and western littorals of the Black Sea.

Three almost completely preserved vessels from excavations in the *chora* of Chersonesos in north-western Crimea provide an idea of the shapes of the amphorae marked by these stamps, indicating not only the hands of different potters, but also their adherence to differing traditions of manufacture. The first of these jars was found in building U6 at the settlement of Panskoe I and presents an individual type (type 1), the shape of which, according to Kac, Pavlenkov and Ščeglov, resembles the amphorae of Sinope. The two others (types 2 and 3) undoubtedly imitate some vessels of Herakleia. Both of these varieties are characterised by a distinctive rounded rim with a two-stepped faceting underneath.

Besides varying palaeographical features, the legends of the stamps are not especially diverse. Despite I.B. Zeest's belief that AMAΣΤΡΙΟΣ must be understood as the name of a city founded by Amastris,<sup>7</sup> A.N. Ščeglov recognised it as the name of the queen herself.<sup>8</sup> Correspondingly, the only possible candidate for this amphora production seems to be the city of Amastris, founded by the widow of Dionysios of Herakleia by the synoecism of the four coastal settlements of Tieion, Sesamos, Kromna and Kytoros. To explain

the remarkable combination of technological and morphological features, Ščeglov supposed that Kytoros, which according to Strabon (12.3.10) had previously been an *emporion* of Sinope, could also have supplied (along with Herakleia) the newly created *polis* with skilled potters.<sup>9</sup>

In contrast to the proposed attribution, which seems to have won general acceptance, the question of the chronology of this group of amphorae became a matter of dispute. Presupposing that amphorae could be stamped with the name of Amastris only during her lifetime, these jars were dated to the period from 300 to 284 BC,<sup>10</sup> when the queen fell victim to her own sons.<sup>11</sup> This seemed to correspond to the archaeological contexts of the finds, in particular the presumed dating of the monumental building U6 at the Panskoe I settlement to 300 to the 270s BC.

However, as early as 1991, I.T. Kruglikova and S.Ju. Saprykin proposed a later date in their publication of a newly found stamp from the country house on land plot no. 57 near Chersonesos.<sup>12</sup> Based on the fact that Amastris' name appears exclusively with the title ΒΑΣΙΛΙΣΣΗ on the coins struck in the newly founded *polis* during her lifetime, these authors assign all the stamps to the period after her death. Taking into account the morphologically similar Herakleian amphorae of the same fabric, they would not have started later than 281 BC, when the city became independent of Herakleia for a short while. In the opinion of the authors, the Sinopean shapes of the amphorae in question must have been characteristic already of the next period of the city's history, their production having been continued until the city became a part of the Pontic Kingdom at the end of the 260s or beginning of the 250s. They found the time span of fifteen years proposed by Ščeglov to be too short to explain the aforementioned peculiarities of the morphology of the amphorae and the typology of the stamps, which will also be discussed at greater length below.

In this case the following question arises: How should the legend of the stamps be understood? This appears to be the most vulnerable point in the argumentation of Kruglikova and Saprykin, who are led to the conclusion that the image of Amastris must have been considered as some kind of symbol of the city. In their view, the legend reflected in the stamp was "the name of the city as a symbol of the deified ruler who, in the capacity of an honorary magistrate, certified by her power the high quality of the products and the public standard of the containers".<sup>13</sup>

The above-mentioned circumstances induce us to scrutinise once again the available evidence which may be decisive in establishing the chronology and attribution of this group of pottery.

### *Shape of the jars*

*Type 1* (Fig. 1.1, 4). Kac, Pavlenkov and Ščeglov consider the amphorae of Sinope as the most probable source of inspiration for the general shape, size

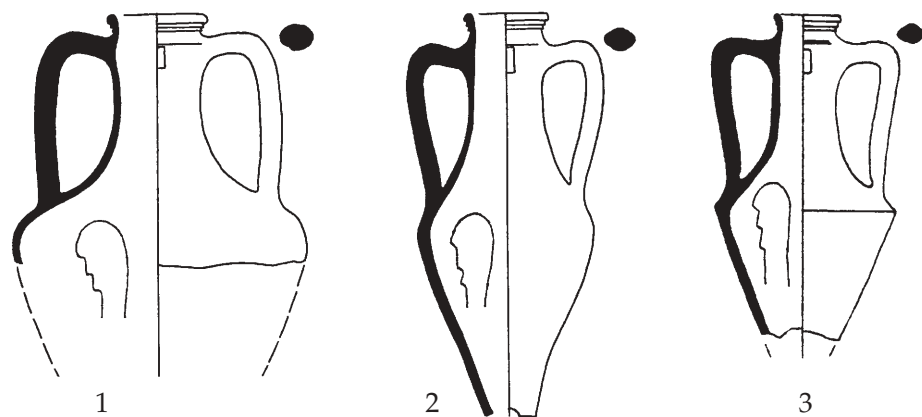


Fig. 1. Transport amphorae and corresponding stamps with the name of Amastris: 1 & 4) type 1; 2) type 2; 3) type 3; 5) stamp dies 1-3; 6-7) stamps of die 1 from the settlement of Panskoe I.

and proportions of their type 1, which is represented by a single specimen found at Panskoe I.<sup>14</sup> They suggest the containers from tumulus 76, grave 1, at the necropolis of Elizavetovskoe and the container from the Zelenskoj barrow on the Taman peninsula as the closest parallels. In this case, however, one may reliably judge only the upper bodies of this vessel. The shape of the foot of this type of amphorae, on which the reconstruction of the entire lower part is based, remains a topic of dispute.<sup>15</sup> The height of the upper body ( $H_1$ ) is 30.0 cm; the diameter of the body is ( $D$ ) – 38.0 cm. The volume of the amphorae, calculated on the basis of a graphical reconstruction, must thus amount to about 21-23 l.<sup>16</sup> However, the proportions of the upper part of a vessel in combination with a parameter such as capacity give no possibility of direct parallels. Resembling the Sinopean 'pithoid' amphorae of the first half of the 4th century BC (Monachov's type I A) as regards its body diameter and volume, to which also belong the aforementioned amphora from the necropolis of Elizavetovskoe, both types differ considerably from each other in the shape of their neck and handles, as well as in the index  $D/H_1$  (1.27 *versus* 1.39). In this respect, the Sinopean jar from the Zelenskoj barrow constituting Monachov's type I C and datable by the stamp of Posideios, the son of Hephaistodoros, does not match either.

The Sinopean amphorae of Monachov's type II E demonstrate a similar body diameter and a slightly larger capacity, although their handles have a completely different shape and ratio  $D/H_1$  (1.27 *versus* 1.46 on the average for the Sinopean amphorae<sup>17</sup>). The fractional jars of the type I E prove to be much closer in terms of both their  $D/H_1$  (1.27 *versus* c. 1.2) and general appearance; their capacity, however, does not exceed 10 l. The broad neck with its inner rim of a diameter of 11 cm compared with the average of 7.5-8.5 cm for Sinopean amphorae of types I-III is the concluding point in the enumeration of the discrepancies in the main parameters. According to Monachov, type II E of the Sinopean amphorae is datable to the period from the third quarter to the beginning of the last quarter of the fourth century, while type I E covers a much wider period stretching from the second half of the fourth to the first third of the third century BC.<sup>18</sup>

Nevertheless, as we learn from the story of Athenaios (11.784), a new type of pottery may well have been encouraged by a number of models of various shapes and origins. Taking into account some degree of uncertainty as to the lower part of our jar, the Thasian amphora from the Hermitage collection<sup>19</sup> with its rounded rim and similarly shaped upper part ( $D$  35 cm;  $D/H_1$  - 1.23<sup>20</sup>) might equally be considered as a potential source of inspiration. The stamp of Dealkos preserved on one of its handles supply a date in the period of 325-310 BC according to M. Debidour,<sup>21</sup> or of about 300 BC as suggested by A. Avram.<sup>22</sup> The number of imitations evoked by Thasian amphorae (if indeed they were not manufactured by Thasian potters employed abroad) seems to be considerable, and both the Herakleian and Sinopean pottery industries certainly experienced their influence.<sup>23</sup>

*Type 2* (Fig. 1.2). This type is represented by a single amphora excavated in the necropolis of Zaozernoe to the west of the city of Eupatoria. The toe and bottom are missing. Its dimensions are  $H_1$  28.5 cm; D 23.2; d of rim 10 cm; d of mouth 8 cm. The capacity of the jar as estimated by Kac, Pavlenkov and Ščeglov is 5.6 l. As has already been noted by Ščeglov,<sup>24</sup> except for the slightly larger diameter of its rim, its biconical shape and main linear parameters match the so-called pseudo-Thasian type of the Herakleian amphorae (type III according to Brašinskij<sup>25</sup>).

The biconical Herakleian type (III), which apparently was first employed as early as the 370s and imitated the Thasian vessels of type I b, according to Bon,<sup>26</sup> continued to be employed for a long period of time, apparently ceasing, however, in the third century BC. Four such jars along with another five Herakleian amphorae of type II, as well as some from Sinope, have been found in tumulus 8 of the Five-Brothers' barrow group. According to the stamps of the Herakleian magistrates Andronikos, Lysitheos, Archippos and Peisistratos and stamp of the Sinopean official Chabrias, this deposit is dated to about 355-335 BC.<sup>27</sup> Two other deposits, pit 9 at the settlement near the village of Nikolaevka<sup>28</sup> and grave 2 in tumulus 9 near the village of Peski,<sup>29</sup> which are datable to the 330s<sup>30</sup> and 320-310 BC,<sup>31</sup> respectively, provide the chronological evidence for the late variety of the Herakleian type III amphorae.

*Type 3* (Fig. 1.3). Similarly to type 2, type 3 comprises a single specimen originating from the necropolis of Zaozernoe. Its main dimensions are  $H_1$  26.5 cm, D 23.5 cm, d of mouth 7.5 cm, and d of rim 9.7 cm. Being a one-fourth fraction of the same standard of capacity as type 1, it appears to be a very close replication of the Herakleian type IIA<sup>32</sup> according to Brašinskij's classification,<sup>33</sup> although the shape of its toe remains unknown. As may be judged from several narrowly dated deposits (complex II/1990 in the Beglickij necropolis,<sup>34</sup> grave 25 in the necropolis of Gorgippia,<sup>35</sup> dug-out 3/1969 in the settlement of Elizavetovskoe,<sup>36</sup> and grave 1 in tumulus 14 of the Five-Brothers barrow group<sup>37</sup>) the Herakleian type IIA was actively employed during the last quarter of the 4th century BC, but hardly continued into the following century.

The peculiar shape of the rounded rim with the two-stepped faceting below it, characteristic of all the three types, finds no parallels.

### *Stamps*

All the stamps recorded until now were made by only four different dies. Two of the dies (dies 2 and 4 according to Kac, Pavlenkov and Ščeglov) are found only once, whereas dies 1 and 3 each have been recorded in eight instances. Dies 1 and 2 are engraved, while dies 3 and 4 are in relief (Figs. 1.5-7, 2.1). Certain differences are also observed according to whether their position is on the upper part of the vessel's neck or on top of its handle; those



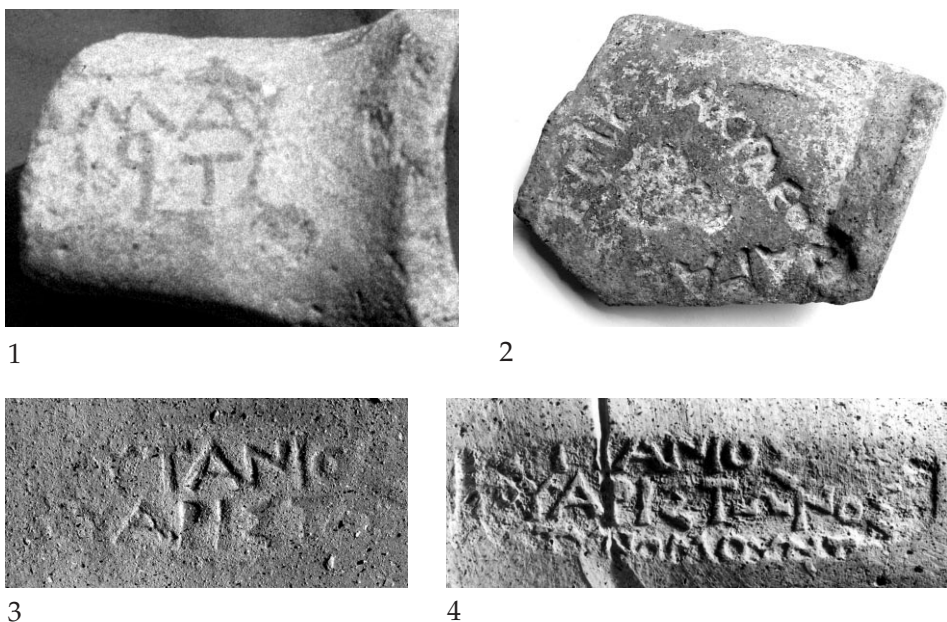


Fig. 2. Amphora stamps: 1) with the name of Amastris (die 3); 2) Herakleian stamp of the eponym Karakydes; 3-4) Chersonesean stamps of Prytanis, son of Ariston.

impressed on the necks, with the only exception of one instance in which the legend cannot be read reliably,<sup>38</sup> are executed exclusively in the engraved form. In all cases the inscriptions contain two lines each, those in the relief stamps also being retrograde. Compared with dies 2 and 3, the stamps of die 1 have slightly differing spacing: AMACT | PIOC, caused by an ivy-leaf device at the end of line two (Fig. 1.6-7). The presence of the name devoid of an eponymous preposition (ἐπί) or indication of the magistracy causes our stamps to resemble typologically the stamps of the workshop owners.

Of special note is the palaeography of the stamps, in particular the peculiar lunate sigma found on die 1. Kruglikova and Saprykin regarded this feature as one of the indications that the stamps were of a later date than that proposed by their predecessors.<sup>39</sup> Regrettably, Kac, Pavlenkov and Ščeglov do not debate this problem, although such a palaeographic trait undoubtedly to some extent could serve as a chronological indicator. M. Debidour, who studied the palaeography of the Thasian stamps of the later type, came to the conclusion that the lunate sigma had not appeared earlier than 300 BC, and that it had not replaced the barred sigma used synchronously.<sup>40</sup> This observation, which is generally true with regard to the main trend in the characters' development, cannot be applied as rigidly to the turn of the centuries, as evidenced by, for instance, the stamps of the magistrate Poulyades, dated by Debidour to 310-300 BC.<sup>41</sup> In this respect the amphora stamps of

Herakleia are helpful as well, proving a slightly earlier transitional date. Thus, a biconical jar of type III with the stamp of Etymos showing the sigma of the lunate shape has been reported in the above-mentioned grave 9, tumulus 9, in the necropolis near the village of Peski. Based on the accompanying find of a Chersonesean amphora of type IB Monachov suggests c. 310 BC as the most probable date of the complex.<sup>42</sup> This agrees with a number of other deposits containing the stamps of Etymos, such as Well 10 (1984) in Gorgippia, complex XII in the Beglickij necropolis, Alexandropol burial mound, and an ash pit in Myrmekion, most likely closed in the late 4th century BC.<sup>43</sup>

The appearance of the lunate sigma earlier than the turn of the 4th and 3rd centuries BC is documented also by some stamps of Chersonesos. Of the sixteen known *astynomoi* of Kac's group 1B datable to 315-300 BC,<sup>44</sup> six (Apollonios,<sup>45</sup> Herakleios,<sup>46</sup> Herogeitos,<sup>47</sup> Heroxenos,<sup>48</sup> Xanthos<sup>49</sup> and Syriskos<sup>50</sup>) are represented by a series of stamps with the lunate sigma both in the middle of the word and in the final position. The stamps of Matris,<sup>51</sup> another *astynomos* of the same group, are recorded in combination with non-magistrate imprints ΠAC, also with a sigma of the lunate shape. This list may be extended by the parallels among the graffiti; the palaeography of these, which like that of the stamps was considerably less conservative as compared with various lapidary inscriptions, demonstrates some fairly early examples of the cursive forms. Quite a number of examples are found among the *tabellae defixionum* of the second half of the 4th century BC from Olbia.<sup>52</sup> But perhaps the earliest appearance of the lunate sigma in the northern Black Sea region is recorded in a lead letter of the first half or the middle of the 4th century from Pantikapaion.<sup>53</sup>

### *Fabric*

The fabric of the pottery in question is not uniform. Its visual characteristics, varying in colour from brown or light brown to reddish yellow, resemble to some extent (apart from the hue) the fabric of Sinopean jars or appear to be "visually identical with that of the Herakleian amphorae".<sup>54</sup> This similarity has been reinforced by studies of the samples in thin sections, which showed distinct similarities with the fabrics of Herakleia (petrographical groups I, II, III), Sinope (groups II, III, V) and Chersonesos (groups I, VI and VII).<sup>55</sup>

The petrographic analysis of the clay, as well as the typology of stamps and the amphora shapes, might suggest that they were produced in several *ergasteria* rather than in just one. Kac, Pavlenkov and Ščeglov arrived at the same conclusion, supposing two or three different workshops. This logical assumption clashes however with the fact that the vessels present three distinct petrographic groups (I, II, V), and that all of the three known types, as well as the different location of the stamps, prove to be united by stamps of one and the same die (die 1). These practical aspects seem to indicate that the

potters were not licensed to stamp the newly made and yet unfired vessels.<sup>56</sup> This must have been a prerogative of the *keramarchos* (*ergasteriarchos*) or some other official. Therefore, the premise that the main function of the stamps was to guarantee the standard capacity of the vessels finds additional confirmation.<sup>57</sup>

Hence, we have to acknowledge that the general traits of the fabric and artificial tempers do not always satisfy (especially when small samplings are analysed) the expectations of modern scholars such as when the identification of the manufacturing place is concerned. As different petrographic studies show, these characteristics may have varied significantly not only from one *ergasterion* to another, but also within a single workshop. On the other hand, the clay composition of the products of different centres, which, however, were situated within the limits of a single mineralogical province, may be fairly similar.

Thus, according to the results of Selivanova and Ščeglov, eight stamps of Herakleia studied in thin sections constitute four distinct petrographic groups. Moreover, of the three stamps bearing the name of Herakleides (a workshop owner of the end of the 4th century BC), two proved to belong to the petrographic groups showing the most considerable variance (groups II and III). We may surmise that fabric properties reflect rather individual choices,<sup>58</sup> i.e., the methods of selection and processing employed by a particular potter (who in many instances may have been a foreigner<sup>59</sup>), methods which he had learned from his father.<sup>60</sup> Indeed, as the example of the stamps of Herakleides shows, the variances in fabric prove to be caused not by the natural peculiarities of the clay, but rather by the nature and percentage of the temper added. A similar situation is observed in the amphora production of Chersonesos. The clay of the samples investigated also showed great petrographical variation and constituted four clearly distinguishable groups. In a number of cases, similarly to the stamps of Amastris and Herakleia, the vessels of different fabric types are linked by stamps of one and the same magistrate.<sup>61</sup> I.K. Whitbread gives similar examples from the Aegean. Thus, four samples studied of the Koan amphorae with the stamp Ζώπυρος belonged to three different fabric classes.<sup>62</sup>

### *Problem of attribution*

Before drawing final conclusions from the above, let us consider once more the legend of the stamps with the name of Amastris. Despite the efforts of Kruglikova and Saprykin, it can hardly be doubted that we are dealing not with a city's name but rather with the personal name of the wife of the Herakleian tyrant. No references to the well-known amphora stamp legends like ΠΑΠΙΟΝ, ΘΑΣΙΟΝ, ΚΝΙΔΙΟΝ *et sim.* are conclusive here. Unlike these derivative forms (as a rule, nominative neuter adjective or, in a few cases, nominative masculine adjective<sup>63</sup>) or the city-ethnic in genitive plural (e.g.,





Fig. 3. Tile stamps of Bosphoros.

ΘΑΣΙΩΝ, ΚΝΙΔΙΩΝ etc.) which agree completely with the numismatic evidence,<sup>64</sup> the city name in the form of a genitive singular appears neither on stamps nor on coins.

Actually, as stated above, the stamps with the name of Amastris are much more similar to the stamps of the workshop owners, in particular the series of the Bosphoran tile stamps in which we find a number of names of representatives of the ruling dynasty of the Spartokids. In fact, the range of such examples should be much wider, including a considerable amount of the fabricants' stamps from various centres. The Bosphoran tile production nonetheless enables us not only to identify the individuals whose names appear on the stamps, but also to judge their social status with a fair degree of certainty.

Considering that our stamps represent a personal name rather than a city-ethnic, the question arises whether it is justified to attribute them to the ceramic production of the city of Amastris, of which nothing is known either before or after Queen Amastris. Naturally, our ignorance to some extent is due to the insufficient archaeological knowledge of the city, and we can only hope for discoveries to be made in future. At the same time, assuming that they were produced in Amastris it would be natural to expect the legend ΒΑΣΙΛΙΣΣΗΣ ΑΜΑΣΤΡΙΟΣ or ΑΜΑΣΤΡΙΟΣ ΒΑΣΙΛΙΣΣΗΣ on the stamps, i.e.,

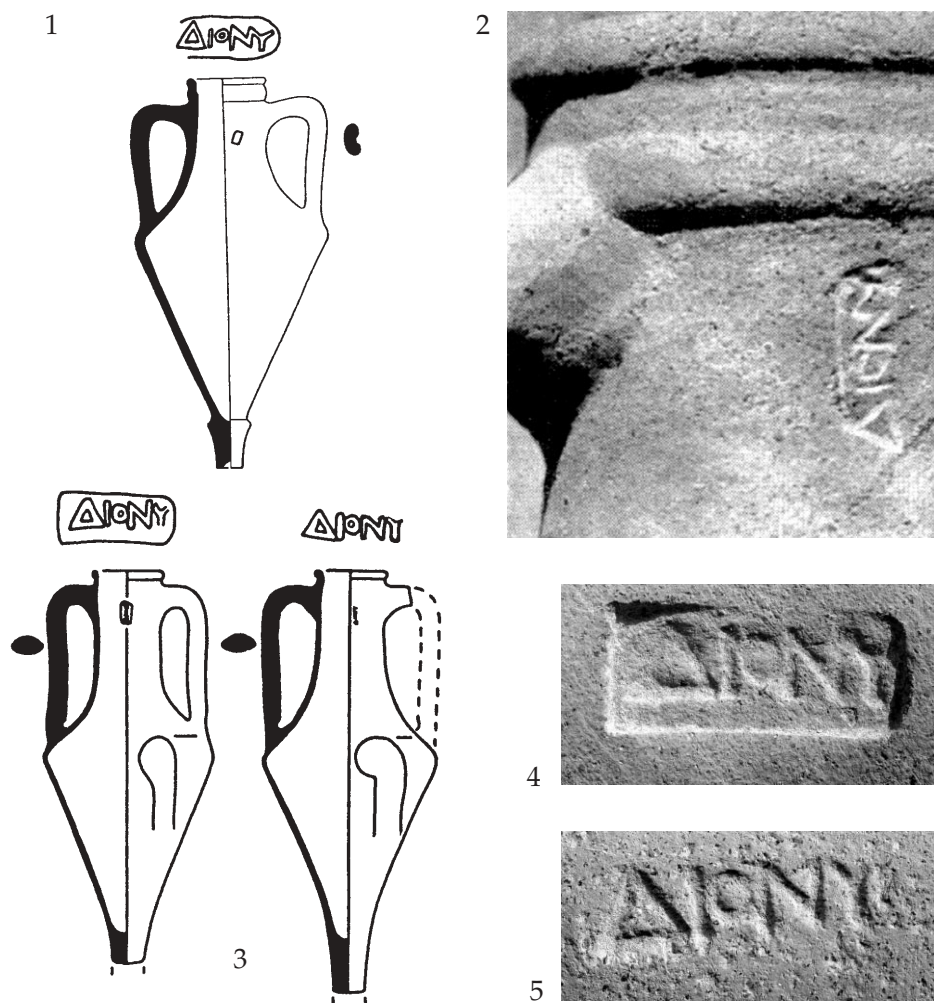


Fig. 4. Transport amphorae of Herakleia Pontike: 1-2) from Islam Geaferca, 3-5) from Panskoe I.

the form we find invariably on the silver<sup>65</sup> and copper coins<sup>66</sup> struck in the newly founded city. As regards the amphorae, we are apparently dealing with a private *ergasterion*, which functioned during the period preceding the acceptance of the royal title by Amastris. It is unlikely that having become the queen she could simultaneously act as a private person in the city ruled by her. This also seems to be true for the Bosphoran tiles,<sup>67</sup> on which we find the names of representatives of the house of Spartokids either isolated (Σπαρτόκου, Παιρισάδου, Λεύκωνος, Γοργίππου), or accompanied by the title (βασιλέως Σπαρτόκου, ἄρχοντος Ὑγιαίνοντος, or simply βασιλική) (Fig. 3).<sup>68</sup>

Theoretically, the acknowledgement of this fact would mean the possibility of ascribing the workshop of Amastris to any polis within the zone of Herakleian influence such as Tieion, or Sesamos before the *synoecism*, or indeed Herakleia itself. Nor can Kromna be excluded from the number of pretenders, since we still know nothing about the ceramic production of this city. Of all the enumerated cities only the coins of Kromna have a representation of an amphora,<sup>69</sup> although the flat-bottomed jar on the reverse of these copper specimens has nothing in common with any of the types of south-Pontic transport amphorae known to us.

Nevertheless, said the above-mentioned details about the shape of the vessels and the peculiarities of the stamps and fabric gives reasonable grounds to suppose that the origin of the group of pottery under consideration is in fact Herakleian. The peculiar shape of the rim of our vessels, which does not evoke a direct association with any products of Herakleia, might seem to contradict this. However, taking into account the already known examples of the “non-orthodox” Herakleian amphora rims imitating different ware from Thasos and Sinope, one should not consider this feature as a decisive argument. It cannot be ruled out that the main intent in changing the shape of the vessels was to make them more easily recognisable among other Herakleian jars,<sup>70</sup> due to the large volumes of manufacture within the city and the competition with other enterprises.

On the basis of this criterion, we would have to consider eighteen jars found in 1955 in Islam Geaferca in northern Dobrudja as foreign.<sup>71</sup> Most of these, being fairly close in shape to Brašinskij’s type-II Herakleian amphorae, have a very distinctive broad cuff just below the rim, grooved handles and a peg toe which resembles that of the Knidian jars (Fig. 4.1). The characteristic fabric and well-known engraved stamps (ΔIONY, ΔΟΥΛΟΥ, ΔΙ, ΝΙ) on the necks of eight of them (Fig. 4.2), however, leave little room for doubt that these were produced in one of the Herakleian workshops.<sup>72</sup> Moreover, similar to our die 1 stamp, which links a peculiar shaped jar with vessels of the typically Herakleian outward appearance and fabric, four stamps of Diony(sios) from Islam Geaferca prove to be of the same die as those on two “standardly” shaped Herakleian amphorae found at Panskoe I/U7<sup>73</sup> (Fig. 4.3-5).

Surprisingly enough, exactly these peculiarities of the stamps of Amastris (the presence of both engraved and relief stamps, and markings on different parts of the vessels), which were previously believed to have been just a spin-off of the organisation of their production on a new site, actually speak in favour of rather than against this new attribution. As the example of Herakleia shows, certain centres with old manufacturing traditions were not devoid of such phenomena. The third, concluding period of local stamping characterized by the return to the practice of marking the vessels with the fabricant’s name yields examples of imprints applied both on the neck

and the handles of amphorae, including those made in relief.<sup>74</sup> Chersonesos, despite the traditional notion concerning the relative homogeneity of its stamps, also offers numerous examples of this kind. Notwithstanding the prevailing tendency of relief stamping on the handles of jars, here we often encounter amphorae stamped on the neck<sup>75</sup> and in a few cases even on the toe.<sup>76</sup> Some magistrates are represented by both relief and engraved stamps. Especially indicative in this respect are the stamps of the *astynomos* Prytanis, son of Ariston, of which are known all the varieties except stamping on the toe (Fig. 2.3-4).

The characteristic device in the form of an ivy leaf recorded on one of the dies of Amastris (die 1) may perhaps be considered as an additional argument in favour of their Herakleian origin. Along with a grape and a club, a leaf of ivy is one of the most common emblems on the engraved stamps of Herakleia. Contrary to B.N. Grakov,<sup>77</sup> who considered them as marks of the workshop owners, I.B. Brašinskij correctly noted their fairly small number as compared with the many names of workshop owners and believed them to be “the substitute signs of some officials indicating their magisterial dignity/ (ἐπί)”.<sup>78</sup> It seems, however, that neither of these interpretations can be regarded as satisfying. None of them explains the fact that we often find the officials’ names neither with an eponymous preposition (ἐπί) nor with a device, and they do not explain those cases where the name of one and the same workshop owner accompanied by the same emblem is found in combination with different magistrates. Taking into account, however, that different fabricants appear with identical devices, we might assume that the latter were the symbols of the workshops themselves rather than of their owners, who may have been replaced after the expiration of the term of lease. It is quite probable that the leasing of public *ergasteria*<sup>79</sup> for each new term was conducted by means of competitive bidding similar to the leasing of quarries, mines and land plots,<sup>80</sup> without the security of being able to preserve these enterprises after the termination of the contract.<sup>81</sup> Such a hypothesis could explain the appearance of the same names accompanied by differing emblems. To a certain extent, the numismatic parallel with the lifetime and the posthumous issues of Alexander and Lysimachos may be helpful. Notwithstanding their uniformity and long-term emission in various parts of the vast empire, the emblems on their reverses have not infrequently been used to indicate the place of minting.<sup>82</sup>

It should be mentioned, however, that the recorded combinations of the fabricants’ names with the names of magistrates and certain devices are not limited to the examples mentioned above. Quite a number of uniform imprints in the form of a grape and a legend running round the central emblem representing the same grape give us more than a dozen different names of fabricants in combination with the single name of Karakydes (Fig. 2.2). The invariable preposition ἐπί leaves no doubt as to the eponymous

office of the latter (group III of the magistrates according to Kac<sup>83</sup>) and the appearance of all these stamps during one single year. It might seem that this fact confuses the matter hopelessly and proves the absence of any regularities in the appearance of emblems. However, everything would fall into place if one assumes that all these fabricants were joint owners. A particularly enlightening parallel is an agreement (συνθήκαι) from the second half of the fourth century BC on the lease of an *ergasterion* at Peiraieus by a corporate body (μερίται) consisting of eight persons.<sup>84</sup> Judging by the enormous number of stamps found at various ancient sites in the northern and western Black Sea regions, in its best years the amphora production in Herakleia must have reached an enormous scale.<sup>6</sup> Under such conditions, along with the appearance of new workshops it would be natural to expect the enlargement of the old ones, the lease of which might require joint capital.<sup>86</sup> Coming back to the devices, it should be noted, however, that the tradition of including them on the stamp did not always exist here, nor does it seem to have been followed very strictly.

### Chronology

The possibility of attributing the stamps with the name of Amastris to a new source naturally raises the question of the rigid fixation of their upper date to 300 BC, which is the date of foundation of the city of Amastris. Their similarity to the Herakleian fabricants' stamps of the final period mentioned above allows us to consider the cessation of magisterial stamping in Herakleia and the transition to stamping with the fabricants' names as a kind of *terminus post quem*, also for the amphorae bearing the name of Amastris. This cessation, as supposed by Kac on the basis of a typology of the stamps and an analysis of closed deposits, occurred within the last quarter of the 4th century BC, most likely during its last decade.<sup>87</sup> A similar conclusion was drawn by P. Balabanov, who linked the abolition of the institution of eponyms with the division of power between Amastris and her sons, as well as with the internal conflicts which followed immediately upon the death of Dionysios in 305 BC.<sup>88</sup>

Although the interdependence of these events may not be ruled out, of greater significance seems to be the Dionysios's near contemporary acceptance of the title of king.<sup>89</sup> This took place not long before the death of the tyrant, in 306 or 305 BC, immediately after Antigonos Monophthalmos had done the same after his victory over Ptolemy's navy off Cyprus, thus claiming to be in possession of the empire of Alexander.<sup>90</sup> Apparently, this act of Dionysios, who thus put himself on a par with the Hellenistic monarchs, resulted in certain changes in the internal political system of Herakleia, particularly in the abolition of some of the former *polis* institutions.

It seems that we must date the transition of one of the largest *ergasteria* in the city into the ownership of Amastris precisely to this period just after the



death of Dionysios. The slightly earlier date for the beginning of the manufacture, compared with that proposed by Ščeglov, agrees completely with the archaeological context of the finds. One of the main complexes which he relied on was the monumental building U6 at the settlement of Panskoe I, dated formerly to the period from about 300 to 275 or 270 BC, which is in complete accordance with the dates proposed for the amphorae. However, the recent comprehensive publication of the excavation results at Panskoe I/U6, including detailed analysis of all the groups of finds, showed the necessity to shift the upper chronological limits of the U6 building back to 320-310 BC. The cessation of the import of black-glazed pottery<sup>91</sup> and commonware as well as a significant decrease in amphora imports by the beginning of the third century BC are among the most important peculiarities of its ceramic assemblage. This was apparently caused by the crisis that struck the economy of the Chersonesean *polis*.<sup>92</sup> In view of this fact, it is more likely that the Herakleian amphorae from Amastris' workshops were brought to the settlement already at the very end of the fourth or the turn of the fourth and third centuries BC, rather than in the following years, when the decreased population of Panskoe met with difficulties in purchasing even the barest necessities.<sup>93</sup>

Owing to Photios' epitome of Memnon's writings we have an idea of the main events of Herakleian history during the period under discussion. At the time of the return of Amastris from Sardis in 300 BC, after a year spent there with Lysimachos, the oldest of her sons, Klearchos, had already come of age and had begun to rule the city on his own.<sup>94</sup> She probably moved to the *polis* founded by her and bearing her name in this same year. Hence, if the *ergasterion* of Amastris, as we suppose, really was situated in Herakleia, then the period of its existence cannot have been long, most likely limited to the period from 305 to 300 BC. This dating corresponds much better with the amount of known stamps and dies<sup>95</sup> than the fifteen years proposed by Ščeglov or the period of twenty to thirty years allotted to it by Kruglikova and Saprykin.

### List of the stamps with the name of Amastris

*Die 1.* Engraved stamps on the amphora necks (apart from no. 6: amphora handle).

- a) Panskoe I/U6. 1972. Find list 3/25. St Petersburg, IHMC RAS. Publications: Ščeglov 1986, 367, fig. 1.7; Kac, Pavlenkov & Ščeglov 1989, 19, fig. 4.4, 24, no. 4 (inv. no. is mistaken); Monachov 1999a, 501, pl. 214.1; Kac, Monachov, Stolba & Ščeglov 2002, 124, no. Ae 115, pl. 60. (Fig. 1.6)
- b) Panskoe I/U6. 1972. Find list 3/73. St Petersburg, IHMC RAS. Publications: Ščeglov 1986, 367, fig. 1.7; Kac, Pavlenkov & Ščeglov 1989, 19, fig. 4.3, 24, no. 3 (inv. no. is mistaken); Kac, Monachov, Stolba & Ščeglov 2002, 124, no. Ae 116, pl. 60. (Fig. 1.7)

- c) Čajka. 1964. Find list Č-64/103. The Eupatoria Museum. Publication: Kac, Pavlenkov & Ščeglov 1989, 24, no. 10.
  - d) Zaozernoec/necropolis. 1973. Find list ČN-73/86. The Eupatoria Museum. Publications: Kac, Pavlenkov & Ščeglov 1989, 19, fig. 4.14, 25, no. 14; Kruglikova & Saprykin 1991, 90, fig. 1.2.
  - e) Zaozernoec/necropolis. 1978. Find list ČN-78/6. The Eupatoria Museum. Publication: Kac, Pavlenkov & Ščeglov 1989, 25, no. 15.
  - f) Pantikapaion. Inv. no. Pan 1486. St Petersburg, State Hermitage Museum. Publications: Pridik 1917, no. 170; Kac, Pavlenkov & Ščeglov 1989, 25 no. 17.
  - g) Elizavetovskoe. 1986. Find list EG-86/XX-23. Rostov-on-the-Don Regional Museum. Publications: Kac, Pavlenkov & Ščeglov 1989, 26, no. 22.
  - h) Elizavetovskoe. 2000. Find list EG-2000/XXXVI-60. Rostov-on-the-Don Regional Museum? Unpublished.
- \* The stamp of die 1 illustrated by Kruglikova & Saprykin 1991, 90, fig. 1.3 as originating from Panskoe I does not belong to the finds from this settlement.

*Die 2. Engraved stamp on an amphora handle.*

- a) Kara-Tobe. 1980. No inv. no. The Eupatoria Museum. Publication: Kac, Pavlenkov & Ščeglov 1989, 19, fig. 4.16, 25, no. 16; Kruglikova & Saprykin 1991, 90, fig. 1.4.

*Die 3. Relief stamps on amphora handles.*

- a) Olbia. 1951. Find list O-51/1048. Kiev, Institute of archaeology. Publication: Kac, Pavlenkov & Ščeglov 1989, 24, no. 1.
- b) Olbia. 1970. Find list O-70/3362. St Petersburg, IHMC RAS. Publication: Kac, Pavlenkov & Ščeglov 1989, 24, no. 2.
- c) Čajka. 1964. Find list Č-64/317. The Eupatoria Museum. Publication: Kac, Pavlenkov & Ščeglov 1989, 24-25, no. 11.
- d) Pantikapaion. Inv. no. B 5392. St Petersburg, The State Hermitage Museum. Publications: Pridik 1917, no. 169; Kac, Pavlenkov & Ščeglov 1989, 19, fig. 4.18, 25, no. 18.
- e) Pantikapaion. Year of the find and present location unknown. Publications: Kac, Pavlenkov & Ščeglov 1989, 25, no. 19.
- f) Gorgippia. Year? The Krasnodar Museum? Publications: Kac, Pavlenkov & Ščeglov 1989, 25-26, nos. 20-20a.
- g) Elizavetovskoe. 1927. Inv. no. TE 1927.45. St Petersburg, The State Hermitage Museum. Publications: Zeest 1951, 120; Brašinskij 1980, 201, no. 781, pl. 34; Kac, Pavlenkov & Ščeglov 1989, 19, fig. 4.21, 26, no. 21; Kruglikova & Saprykin 1991, 90, fig. 1.5.
- h) Herakleian Peninsula, farmhouse 57. 1988. The Chersonesos Museum? Publications: Kac, Pavlenkov & Ščeglov 1989, 26, no. 24; Kruglikova & Saprykin 1991, 90, fig. 1.1. (Fig. 2.1)

*Die 4? Relief stamp on an amphora neck.*

- a) Majak, farmhouse 1. 1976. Find list ČM-76/66. The Eupatoria Museum. Publications: Kolesnikov 1985, 78, 91, no. 163; Kac, Pavlenkov & Ščeglov 1989, 19, fig. 4.7, 24, no. 7; Kruglikova & Saprykin 1991, 90, fig. 1.6.

*Die unknown. Relief stamp on an amphora handle.*

- a) Kallatis. 1999. Unpublished.

## Notes

1. Pridik 1917, 109, nos. 169-170.
2. For the single find of 1927 from Elizavetovskoe, see Zeest 1951, 120; Brašinskij 1980, 46, 201, no. 781.
3. Ščeglov 1986, 365-373.
4. Kac, Pavlenkov and Ščeglov 1989, 15-28.
5. An unpublished find of a stamp with the letters in relief from a salvage excavation in 1999 (conducted by A. Avram, M. Ionescu and N. Alexandru) in the area of the Roman wall of Kallatis. The stamp comes from a mixed layer that does not allow its dating on the basis of the context. This information is kindly provided (by letter) by Alexandru Avram.
6. In addition to the two stamps on handles published earlier by Kac, Pavlenkov and Ščeglov, the excavations in Elizavetovskoe in the year 2000 yielded one engraved stamp on the amphora neck (find list XXXVI/60). The stamp is of the same die as the specimens found in Panskoe I/U6. I am much indebted to V.I. Kac for information concerning this find.
7. Zeest 1951a, 120.
8. Ščeglov 1986, 372. However, E.M. Pridik (1917), who placed two stamps of the Hermitage collection among *incerti*, already regarded it as a personal name.
9. Ščeglov 1986, 371; Kac, Pavlenkov & Ščeglov 1989, 20.
10. Ščeglov 1986, 372; Kac, Pavlenkov & Ščeglov 1989, 21.
11. Memnon, *FGrH* 3B, 434F5.2.
12. Kruglikova & Saprykin 1991, 89-95. This stamp found in 1988 is also listed in the catalogue of Kac, Pavlenkov & Ščeglov (1989, 26, no. 24).
13. Kruglikova & Saprykin 1991, 93.
14. Kac, Pavlenkov & Ščeglov 1989, 16.
15. As demonstrated by the examination of the materials kept at the Institute of the History of Material Culture, Russian Academy of Sciences (IHMC RAS) in St Petersburg, the visual characteristics (colour, texture and discernible tempers) of the fabric of the base and upper body of the amphora (combined into one in the graphic reconstruction) actually proved to be non-identical, i.e., these parts may well belong to different vessels.
16. Ščeglov 1986, 366, 367, fig. 1.1; Kac, Pavlenkov & Ščeglov 1989, 16, fig. 1.3, 24, catalogue no. 3; Kac, Monachov, Stolba & Ščeglov 2002, 111, Ad 77, pls. 47, 53.
17. Calculated on the basis of S.Ju. Monachov's data (1992, 203, table 13).
18. Monachov 1992, 171, 176.
19. Zeest 1960, pl. 9.21b; Garland 1987, 80, fig. 3.c.
20. Calculated according to a drawing by Zeest 1960, pl. 9.
21. Debidour 1986, 331.
22. Avram 1996, 74.
23. Zeest 1951b, 108; Brašinskij 1961, 178; 1984, 83, 114; Monachov 1992, 181. The production place (or places) of amphorae of the so-called "Thasian circle" remains unidentified. See Monachov 1999b, 48-50.
24. Ščeglov 1986, 369; Kac, Pavlenkov & Ščeglov 1989, 17.
25. See Brašinskij 1961, 178-181, figs. 2.1, 3.1; Brašinskij 1980, 24, pls. 4.114, 10.114; Brašinskij 1984, 83, pls. 15.5, 16.4. Cf. Zeest 1960, 158, pl. 22.46. On the chronology of the pseudo-Thasian amphorae, see Brašinskij 1961, 184; 1980, 24; 1984, 139; Monachov 1999a, 358-362, 428-430.
26. Bon and Bon 1957, 17-18, figs. 3.3-5, 6.2-3.
27. Kac 1997, 216; Monachov 1999a, 358-362. Cf. Brašinskij 1961, 184-185; 1980, 206: "second half of the fourth century BC."

28. Meljukova 1975, 24-25, 204, fig. 7.1-6.
29. Grebennikov 1987, 156-158, fig. 6.1-3.
30. Monachov 1999a, 371.
31. Monachov 1999a, 428-430.
32. Cf. Kac, Pavlenkov & Ščeglov 1989, 17.
33. Brašinskij 1980, 25, 213, pl. 5.119; Brašinskij 1984, 83-85, 224, pl. 15.6.
34. Monachov 1999a, 438-440, pl. 190.
35. Monachov 1999a, 444-446, pl. 193.
36. Monachov 1999a, 448-452, pl. 195.
37. Monachov 1999a, 452-454, pl. 196.
38. Kac, Pavlenkov & Ščeglov 1989, 18 f., figs. 3-4.7, 24, no. 7.
39. Kruglikova & Saprykin 1991, 92. Cf. Zeest 1951, 120: "If the stamp from Elisavetovskoe and that no. 169 from Kerch (reference to Pridik's catalogue – V.S.) based on epigraphical data (the four barred sigma – V.S.) could be assigned to the 3rd century BC, then the stamp no. 170 with lunate sigma has to be dated to the period not earlier than late 3rd – beginning of the 2nd century BC".
40. Debidour 1979, 287, n. 61, 302-303; 1986, 315-316. Cf. Vinogradov 1972, 12; Garlan 1979, 247.
41. Debidour 1986, 331. Cf., however, Avram (1996, 60), who places this official in the 270s BC.
42. Monachov 1999a, 430.
43. Monachov 1999a, 435-438.
44. Kac 1994, 76.
45. Kac 1994, 89, pl. 10, dies 1-20, 9 to 12.
46. Kac 1994, 94 f., pls. 19-20, dies 1-47-48, 11 to 21.
47. Kac 1994, 96, pl. 21, dies 1-52, 4 and 1-52, 5.
48. Kac 1994, 98, pl. 26, dies 1-58, 4 to 7.
49. Kac 1994, 106, pl. 37, die 1-88, 8.
50. Kac 1994, 112, pl. 44, dies 1-109, 5 to 9.
51. Kac 1994, 103, 125, pl. 56, die 2A-33, 1.
52. Vinogradov 1994, 105, no. 1, fig. 1 (late 4th century BC) = SEG XLIV, 669 = Dubois 1996, 106; Tochtas'ev 2000, 296-299, no. 1, fig. 1.1 (second half of the 4th century BC), 308-311, no. 3, fig. 2.1, 311-315, no. 4, fig. 2.2 (both: the middle to the second half of the 4th century BC). Cf. Stolba 2002, 234, H 32: ΔAMOC, grafito on the large black-glazed plate datable to the period 325-300 BC. For a discussion of the date of the plate, see Hannestad, Stolba & Blinkenberg Hastrup 2002, 142, B 147.
53. Saprykin & Kulikov 1999, 202, fig. 1.
54. Kac, Pavlenkov & Ščeglov 1989, 17. Cf. Zeest (1951, 120) speaking about the stamp from Elizavetovskoe (die 3): "the fabric is highly reminiscent of that of the Herakleian amphorae".
55. Ščeglov & Selivanova 1992, 45, table 1.
56. The group of Sinopean stamps in which we find the proper names specified as  $\kappa\epsilon\sigma\sigma\mu\epsilon\upsilon\varsigma$  implies, however, that a different practice might also have existed. On the so-called potter's stamps, see, e.g. Škorpil 1914, 131-135; Achmerov 1951, 77-84; Cechmistrenko 1960, 59-77.
57. See Dumont 1872, 42-43; Grace 1949, 178; Achmerov 1951, 84; Brašinskij 1965, 17-18; Grace & Savvatianou-Petropoulakou 1970, 292-293; Cechmistrenko 1971, 16 with n. 6; Jefremow 1995, 12, 16. Cf., however, El'nickij 1969, 94-95; Debidour 1979, 305; Garlan 1988, 28.

58. Cf. Whitbread 1995, 247.
59. There is no doubt that the skilled potters, shipwrights and metallurgists, to say nothing of sculptors, bronze-casters and architects, could find themselves employed outside their home cities. See MacDonald 1981, 159-168; Monachov 1989, 75-76; Whitbread 1995, 75-76, as well as Tochtas'ev 1997, 386-389, who points out the non-Doric form of several names on the amphora stamps of Herakleia. Cf. Ephesian citizenship decree for Athenian potters Kittos and Bakchios (Keil 1913, 232, I e; Preuner 1920, 69-72; *IEph* 1420): Κίττωι καὶ Βακχίωι παισὶ Βακχίω Ἀθηναίοις, ἐπειδὴ ἐπαγγέλονται τῇ πόλει τὸ γ κέραμ[ον] | τὸ μ μέλανα ἐργάσεσθαι καὶ τῇ θεῶι τὴν ὕδριαν, λαμβάνοντες τὸ τεταγμέν[ον] | ἐν τῷ νόμῳ, ἔδοξε τῇ βουλῇ καὶ τῷ δήμῳ, Πλάτων εἶπεν, εἶναι αὐτοὺς | πολίτας παραμένοντας ἐν τῇ πόλει καὶ ἐπιτελοῦντας ἃ ἐπαγγέλλοντα[ι] | τῇ βουλῇ· ἔλαχον φυλὴν Ἐφεσεῖς χιλιαστὸν Σαλαμίνιοι. | ταῦτα δὲ εἶναι καὶ ἐκγόνοις. It seems more likely that μέλας κέραμος is related to the black-glazed pottery rather than "Dachziegel für die städtische Bauten", as suggested by Preuner (1920, 70). On the movement of skilled labour in general, see Burford 1972, 66-67.
60. On the family traditions in the Greek pottery industry and in the development of the craft, see Burford 1972, 82-87.
61. In particular, the visually examined stamps of the *astynomos* Xanthos (group 1B according to Kac) from the excavation of building U6 at Panskoe I demonstrate variance in both the composition of the visually discernible temper and the texture and colour of the paste.
62. Whitbread 1995, 97-98.
63. E.g. ΘΑΣΙΟΣ (i.e. ἀμφορεύς, κάδος *et sim.*). Cf. discussion by Garlan 1999, 17-20.
64. Cf., e.g., ΘΑΣΙΟΝ (*SNG Lockett* 225-231)/ ΘΑΣΙΩΝ (*SNG Lockett* 232, 234-237), ΑΚΡΑΓΑΝΤΙΝΟΝ (*SNG Morcom* 520)/ ΑΚΡΑΓΑΝΤΙΝΩΝ (*SNG Morcom* 537), ΣΥΡΑΚΟΣΙΟΝ (*SNG Lockett* 870-912, 975)/ ΣΥΡΑΚΟΣΙΩΝ (*SNG Lockett* 971, 974, 976-980). An exceptional case is the nominative singular ΟΛΒΙΗ on the cast coins of Olbia (*SNG BM* 391-393).
65. *SNG BM* 1297-1299; *SNG Stancomb* 728.
66. *SNG BM* 1300-1301; *SNG Stancomb* 729-730.
67. Cf. Kruglikova & Saprykin 1991, 91.
68. Gajdukevič 1935; 1947; 1971, 158-160; Šelov 1954. For examples of the royal tile factories outside the Bosphoros, see Gajdukevič 1947, 27, n. 1.
69. *SNG BM* 1344-1349; *SNG Stancomb* 744-745.
70. Cf. Athen. 11.784 on the selection of a new shape for Mendeian wine jars.
71. Bujor 1961, 85-92; 1962, 475-487; Monachov 1999, 454-457.
72. Brašinskij 1965, 19-20; Monachov 1999, 454-457.
73. Monachov 1999, 455.
74. Štaerman 1951, 35-38; Brašinskij 1965, 15-16; Kac 1997, 215.
75. Achmerov 1949, 103; Kolesnikov 1985, 76, 79, table 1, 80, table 2; Michlin 1979, 142-143; Kac 1994, 82: Agasikles (300-285 BC), 85: Athanodoros, son of Nikeas (285-272 BC), 86: Alexandros (315-300 BC), 88: Apollonidas II (300-285 BC), 98: Herokrates, son of Neumenios (285-272 BC), 105: Neumenios, son of Philistios (285-272 BC), 109: Prytanis, son of Aristonos (285-272 BC), 114: Philippos (300-285 BC), 115: Phormion, son of Apollas (285-272 BC).
76. Michlin 1979, 143, fig. 1; Kac 1994, 86: Alexandros (315-300 BC).
77. Grakov 1926, 177.
78. Brašinskij 1965, 25. See also Kruglikova & Saprykin 1991, 91.



79. On the renting of workshops, see *IG II<sup>2</sup>*, 2496 (second half of the fourth century BC). The lease records of the Delian *hieropoioi* testify the renting of “a potter’s establishment” called Kerameion. See Kent 1948, 254, with n. 25; Reger 1994, 193.
80. Arist. *Ath.* 47.2,4; Behrend 1970, 109; Osborne 1988, 290. Cf. also Walbank 1983, 218 with n. 80; Reger 1994, 195-197. On the mine leases, see Crosby 1950, 189-312.
81. In this respect the significant fabric differences in the Herakleian stamps of the above-mentioned Herakleidas issued during the magistracy of Silanos and Pausanias (see Ščeglov & Selivanova 1992, 41) might indicate that he possessed two different workshops successively.
82. Mørkholm 1991, 31, 141, pls. 31.459-460 (Lampsakos), 464-465 (Sardis), 466-470 (Chios), 32.471-472 (Rhodos), 473 (Samos), 474 (Miletos), 478 (Korinthos). However, there is no doubt that various symbols were used by city magistrates and royal officials as well. Cf. discussion by Bellinger 1963, 24-26.
83. Kac 1997. See also his article in this volume.
84. *IG II<sup>2</sup>*, 2496; Behrend 1970, 90-91, no. 35; Osborne 1988, 284.
85. VI. Kac (in this volume) refers to more than 1200 dies analyzed in his study. The simultaneous employment of twenty to thirty pottery workshops as he suggests seems, though, to be an overestimation.
86. It is noteworthy that as long ago as 1926, B.N. Grakov (1926, 192-193) arrived at nearly the same conclusion when he considered the stamps with two names in the nominative singular as the marks of “double firms”. Unfortunately, this thought has not been further developed, and in the introduction to the manuscript of *IOSPE III*, Grakov renounced his previous point of view. Cf. also Brašinskij 1961, 183; 1965, 16-17; Vasilenko 1970, 217-220.
87. Kac 1997, 216. See also his contribution in this volume.
88. Balabanov 1985, 21.
89. Memnon, *FGrH* 3B, 434F4.6.
90. Diod. 20.53.1-4; Plut. *Demetr.* 18.1-2; Iust. 15.2.10-13; Burstein 1976, 77; Bittner 1998, 42.
91. Hannestad, Stolba & Blinkenberg Hastrup 2002, 128.
92. Stolba (forthcoming).
93. Taking into account the similar shape of type 2 of these vessels and those of Herakleia of type IIA, as well as the practically identical visual characteristics of the fabric, it is possible that amphora Ad 78 from building U6 (Kac, Monachov, Stolba & Ščeglov 2002, 111, pls. 47, 53), assigned to Herakleia in the publication, also came from the same workshop.
94. Memnon, *FGrH* 3B, 434F5.1; Burstein 1976, 83; Bittner 1998, 45.
95. So, according to Kac’s computations (1997, 216-217), the first fifteen years of pottery production in Herakleia (c. 415-400 BC) resulted in 123 various dies. That would give an average about eight dies per year. The same interval between 385 and 360 BC reveals 310 dies, i.e., about twenty-one dies per year, and, towards the end of the century this activity seemingly decreases to an average of about six dies per year for the remaining period. Taking into account the fluctuating intensity of production, which was highly dependent on the demand and crop yield, these figures seem to show that in our case we are dealing with a single, briefly used workshop rather than with production of the entire city.

**Bibliography**

- Achmerov, R.B. 1949. Ob astinomnykh klejmach ellinističeskogo Chersonesa, *VDI* 4, 99-123.
- Achmerov, R.B. 1951. O klejmach keramičeskich masterov ellinističeskogo Chersonesa, *VDI* 3, 77-84.
- Avram, A. 1996. *Histria*. Vol. 8. *Les timbres amphoriques*. 1. *Thasos*. Bucarest-Paris.
- Balabanov, P. 1985. Analiz i datirovanie amfornych pečatej Geraklei Pontiki, *Thracia Pontica* 2, 12-28.
- Behrend, D. 1970. *Attische Pachturkunden. Ein Beitrag zur Beschreibung der μισθώσεις nach den griechischen Inschriften* (Vestigia, 12). München.
- Bellinger, A.R. 1963. *Essays on the coinage of Alexander the Great* (ANS Numismatic Studies, 11). New York.
- Bittner, A. 1998. *Gesellschaft und Wirtschaft in Herakleia Pontike: eine Polis zwischen Tyrannis und Selbstverwaltung* (Asia Minor Studien, 30). Bonn.
- Bon, A.-M. & A. Bon 1957. *Les timbres amphoriques de Thasos* (Études Thasiennes, 4). Paris.
- Brašinskij, I.B. 1961. Amfory iz raskopok Elizavetovskogo mogil'nika v 1959 g., *SovA* 3, 178-186.
- Brašinskij, I.B. 1965. Keramičeskie klejma Geraklei Pontijskoj, *NumEpigr* 5, 10-27.
- Brašinskij, I.B. 1980. *Grečeskij keramičeskij import na Nižnem Donu v V – III vv. do n.e.* Leningrad.
- Brašinskij, I.B. 1984. *Metody issledovanija antičnoj trgovli (na primere Severnogo Pričernomor'ja)*. Leningrad.
- Bujor, E. 1961. Depozitul de amfore de la Islam Geaferca, *StCercIstorV* 12, 85-92.
- Bujor, E. 1962. The amphorae deposit of Islam Geaferca, *Dacia* 6, 475-487.
- Burford, A. 1972. *Craftsmen in Greek and Roman Society*. London.
- Burstein, S.M. 1976. *Outpost of Hellenism: The Emergence of Heraclea on the Black Sea* (University of California Publications: Classical Studies, 14). Berkeley-Los Angeles-London.
- Cechmistrenko, V.I. 1960. Sinopskie keramičeskie klejma s imenami gončarnych masterov, *SovA* 3, 59-77.
- Crosby, M. 1950. The Leases of the Laureion mines, *Hesperia* 19, 189-312.
- Debidour, M. 1979. Réflexions sur les timbres amphoriques thasiens, in: *Thasiaca* (BCH Suppl., 5). Athènes-Paris, 269-314.
- Debidour, M. 1986. En classant les timbres thasiens, in: Empereur & Garlan (eds.) 1986, 311-334.
- Dumont, A. *Inscriptions céramiques de la Grèce*. Paris.
- El'nickij, L.A. 1969. Iz istorii drevnegrečeskoj vinotorgovli i keramičeskogo proizvodstva, *VDI* 3, 88-105.
- Empereur, J.-Y. & Y. Garlan (eds.) 1986. *Recherches sur les amphores grecques* (BCH Suppl., 13). Paris.

- Gajdukevič, V.F. 1935. Stroitel'nye keramičeskie materialy Bospora. Bosporskie čerepicy, *IGAIMK* 104, 298-315.
- Gajdukevič, V.F. 1947. Nekotorye novye dannye o bosporskich čerepičnyh ergasterijach vremeni Spartokidov, *KSIA* 17, 22-27.
- Gajdukevič, V.F. 1971. *Das Bosporanische Reich*. Berlin 1971.
- Garlan, Y. 1979. Koukos: données nouvelles pour une nouvelle interprétation des timbres amphoriques thasiens, in: *Thasiaca* (BCH Suppl., 5). Athènes-Paris, 213-268.
- Garlan, Y. 1987. Prolégomènes à un nouveau corpus des timbres amphoriques thasiens, in: Lévêque & Morel (eds.) 1987, 73-86.
- Garlan, Y. 1988. *Vin et amphores de Thasos*. Paris.
- Grakov, B.N. 1926. Englifičeskie klejma na gorlach nekotorych ellinističeskich amfor, *TrudyGIM* 1, 165-206.
- Grebennikov, Ju.S. 1987. Kurgany skifskoj znati v Poingul'e, in: *Drevnejšie skotovody stepej Juga Ukrainy*. Kiev, 148-158.
- Hannestad, L., V.F. Stolba & H. Blinkenberg Hastrup 2002. Black-glazed, red-figure, and grey ware pottery, in: Hannestad, Stolba & Ščeglov (eds.) 2002, 127-149.
- Hannestad, L., V.F. Stolba & A.N. Ščeglov (eds.) 2002. *Panskoye I. Vol. 1. The Monumental Building U6*. Aarhus.
- Jefremow, N. 1995. *Die Amphorenstempel des hellenistischen Knidos*. München.
- Kac, V.I. 1997. Chronologija klejm Geraklei Pontijskoj (sostojanie i perspektivy izučenija), in: *Nikonij i antičnyj mir Severnogo Pričernomor'ja*. Odessa, 212-217.
- Kac, V.I., S.Yu. Monachov, V.F. Stolba & A.N. Ščeglov 2002. Tiles and Ceramic Containers, in: Hannestad, Stolba & Ščeglov (eds.) 2002, 101-126.
- Kac, V.I., V.I. Pavlenkov & A.N. Ščeglov 1989. The Amastrian stamped pottery, *ArcheologiaWarsz* 40, 15-28.
- Keil, J. 1913. Ephesische Bürgerrechts- und Proxeniedekrete aus dem vierten und dritten Jahrhundert v. Chr., *ÖJh* 16, 231-244.
- Kent, J.H. 1948. The Temple Estates of Delos, Rhenia, and Mykonos, *Hesperia* 17, 243-338.
- Kolesnikov, A.B. 1985. Keramičeskie klejma iz raskopok usadeb u Evpatorij-skogo majaka, *VDI* 2, 67-93.
- Kruglikova, I.T. & S.Ju. Saprykin 1991. Chersones i Amastrija po dannym amfornych klejm, *KSIA* 204, 89-95.
- Lévêque, P. & J.-P. Morel (eds.) 1987. *Céramiques hellénistiques et romaines II*. Paris.
- MacDonald, B.R. 1981. The Emigration of Potters from Athens in the Late Fifth Century BC and its Effect on the Attic Pottery Industry, *AJA* 85, 159-168.
- Michlin, B.Ju. 1979. K izučeniju chersonesskich keramičeskich klejm, *VDI* 2, 139-159.

- Monachov, S.Ju. 1992. Dinamika form i standartov sinopskich amfor, in: *Grečeskie amfory*. Saratov, 163-204.
- Monachov, S.Ju. 1999a. *Grečeskie amfory v Pričernomor'e. Kompleksy keramičeskoj tary VII – II vekov do n.e.* Saratov.
- Monachov, S.Ju. 1999b. *Torgovye svjazi v Severnom Pričernomor'e (po materialam grečeskoj keramičeskoj tary VII – II vv. do n.e.)*. Saratov.
- Mørkholm, O. 1991. *Early Hellenistic coinage: from the accession of Alexander to the Peace of Apamea (336-188 BC)*. Cambridge.
- Osborne, R. 1988. Social and Economic Implications of the Leasing of Land and Property in Classical and Hellenistic Greece, *Chiron* 18, 279-323.
- Preuner, E. 1920. Archäologisch-epigraphisches, *JdI* 35, 59-82.
- Pridik, E.M. 1917. *Inventarnyj katalog klejm na amfornych ručkach i gorlyškach i čerepicach Ermitažnogo sobranija*. Petrograd.
- Reger, G. 1994. *Regionalism and Change in the Economy of Independent Delos, 314-167 BC* (Hellenistic Culture and Society, 14). Berkeley.
- Saprykin, S.Ju. & A.V. Kulikov 1999. Novye epigrafičeskie nachodki v Pantikapee, *Drevnejšie gosudarstva Vostočnoj Evropy 1996-1997 gg.* Moskva, 201-208.
- Stolba, V.F. 2002. Graffiti and dipinti, in: Hannestad, Stolba & Ščeglov (eds.) 2002, 228-244.
- Stolba, V.F. (forthcoming). The Oath of Chersonesos (IOSPE F, 401) and Chersonesean Economy in the Early Hellenistic period, in: J.K. Davis, Z.G. Archibald & V. Gabrielsen (eds.) *Hellenistic Economies 2: Making, Moving, and Managing*. London.
- Ščeglov, A.N. 1986. Les amphores timbrées d'Amastris, in: Empereur & Garlan (eds.) 1986, 365-373.
- Šelov, D.B. 1954. K istorii keramičeskogo proizvodstva na Bospore, *SovA* 21, 119-130.
- Škorpil, V.V. 1914. Nazvanija gončarnych masterov v keramičeskich nadpisjach, *IAK* 51, 131-135.
- Štaerman, E.M. 1951. Keramičeskie klejma iz Tiry, *KSIIMK* 36, 31-49.
- Tochtas'ev, S.R. 1997. K izdaniju kataloga keramičeskich klejm Chersonesa Tavričeskogo. Rev.: V. I. Kac. Keramičeskie klejma Chersonesa Tavričeskogo. Saratov 1994, *Hyperboreus* 3.2, 362-404.
- Tochtas'ev, S.R. 2000. Novye tabellae defixionum iz Ol'vii, *Hyperboreus* 6.2, 296-316.
- Vasilenko, B.A. 1970. Zametki o geraklejskich klejmach, *SovA* 3, 217-224.
- Vinogradov, Ju.G. 1972. Keramičeskie klejma ostrova Fasos, *NumEpigr* 10, 3-63.
- Vinogradov, Ju.G. 1994. New inscriptions on lead from Olbia, *Ancient Civilizations from Scythia to Siberia* 1.1, 103-111.
- Walbank, M.B. 1983. Leases of Sacred Property in Attica, *Hesperia* 52, 100-135, 177-199, 200-206, 207-231.

Whitbread, I.K. *Greek Transport Amphorae. A Petrographical and Archaeological Study*. Exeter.

Zeest, I.B. 1951a. Keramičeskaja tara Elisavetovskogo gorodišča i ego kurgannogo nekropolja, *MatIsslA* 19, 119-124.

Zeest, I.B. 1951b. Novye dannye o trgovych svjazjach Bospora s Južnym Pričernomor'em, *VDI* 2, 106-116.

Zeest, I.B. 1960. *Keramičeskaja tara Bospora* (*MatIsslA*, 83). Moskva.

### **Abbreviations**

<i>IAK</i>	Izvestija imperatorskoj Archeologičeskoj Komissii.
<i>IGAIMK</i>	Izvestija Gosudarstvennoj Akademii istorii material'noj kul'tury.
<i>KSIIMK</i>	Kratkie soobščeniya instituta istorii material'noj kul'tury.
<i>TrudyGIM</i>	Trudy Gosudarstvennogo Istoričeskogo Muzeja.