Greeks and Natives in the Cimmerian Bosporus

7th – 1st Centuries BC

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Acknowledgements

The Taman conference *Greeks and Natives in the Cimmerian Bosporus* was held in October, 2000, though the idea of its organisation was still conceived in autumn of 1998. Everyone was convinced that a place of its realisation should become the coast of Cimmerian Bosporus, most probably in the vicinities of Hermonassa and Phanagoria, those of ancient cities, which were the largest ones on the Asiatic side of the Bosporan state.

Till now in this region there is the only place appropriate to realise the international conference. It is the resort *Fakel* that belongs to the Vuktyl branch of SEVERGAZPROM, that of the large gas company of Russia. Negotiations with owners of this remarkable resort on the coast of the Black Sea last within 1999. For this time the program of conference was developed and the circle of its participants was determined. It became determinative that we have got the financial support of the State Hermitage Museum and the London University. At the first stage of preparation of the conference huge work was done by the Department of Foreign Affairs of the Hermitage, which in time issued and has dispatched official invitations to all participants of the conference, which number by then already came nearer to hundred.

Unfortunately, not all wished to participate in the conference could arrive, and their reasons were different. Some scholars of Russia and the countries of CIS could not find sufficient funds for their travel; although their stay at the conference was provided by the Hermitage, which has taken on the basic part of expenses on the organisation and realisation of the conference. The financial and organisational help was also rendered by the *Phanagoria Project London University*, the Winery *Phanagoria* and the Taman Museum.

As the Taman conference has shown, the scholars of different countries in the world had the great interest to the problems of ancient history and archaeology of Cimmerian Bosporus. For the first time in Russia and furthermore on Taman Peninsula the conference have gathered the scholars so different on their origin and views on the ancient history and first of all on the history of ancient Greek colonies on Bosporus. All this has been reflected in the summaries of papers submitted on the eve of the conference and published in the third issue of *Taman Antiquity* (The State Hermitage Publishing House, 2000), and also in the present book representing the proceedings of the conference.

The organisation and successful work of the conference were certainly depend on many people, among which I am especially grateful to the managing team's members, which were G.R. Tsetskhladze, N.F. Solovyova, E.I. Arsenteva and S.V. Pokrovskii. All of us are obliged to Zudi Dzhelilov and Anatoly Kovalenko for duly and uninterrupted transport service during the conference. I am very grateful to the director of the resort *Fakel* I.V. Farenii, representatives of Temruk administrations M.S. Stepanenko and M.I. Lyut, the former mayor of Taman G.G. Maikov, the former president of Open Society *Phanagoria* I.N. Vasilevskii, the director of agricultural firm *Yuzhnyi* A.V. Peredistyi, and especially to the director of the Taman Museum A.I. Afanasieva for their help in realisation of the conference. The invaluable help during the conference was provided by Lyudmila and Juri Kritskii, O.V. Medvedyuk and V.S. Pukish. All of us are very grateful to the residents of villages Taman and Volna, in particular to families of Dzhelilov and Nosov, for their kindliness and hospitality.

I am also very thankful to Natalia Dyatlova for her translation of the articles of Russian participants into English.

S.L. Solovyov

Sinopean Amphorae, South-East and North-West

J. G. de Boer

One of the many classical items in the Allard Pierson Museum (the Archaeological Museum of the University of Amsterdam) is an unpublished amphora stamp from Sinope (Fig. 1). It was found sometime at the end of the 19th century in Olbia and entered a private collection in 1906. In 1934, the Allard Pierson Museum acquired this collection.[1] The stamp contains the title and the name of the *astynomos* Μητρόδωρος Ἀθηνίππου, the name of the potter and the symbol of a flower. Regarding the name of the astynomos and the device, this stamp belongs to group 5, according to the periodisation of B.N. Grakov (1929), or the more specific group 5b, according to Avram *et al*. 1990, 125, meaning that it probably was produced, depending on the latest chronology of Sinopean amphora stamps by N.F. Fedoseev (1999, 33, 42), between 250 and 240 BC.[2]

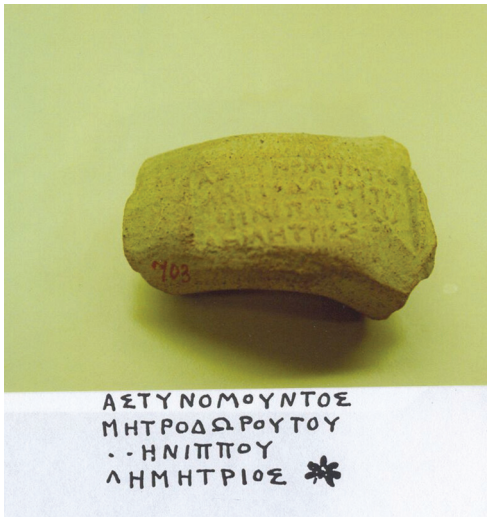


Fig. 1 Sinopean amphora-stamp from Olbia, Allard Pierson Museum Amsterdam, Inv. No. 703 (photo J.G. de Boer, drawing Allad Pierson Museum)

The North-Western Black Sea

In Olbia stamps from group 5 are rather rare, comprising only about 6 % of the Sinopean stamps found there (Brashinskii 1963, 139). Since B.N. Grakov's first identification in 1928 of the typically yellow coloured amphorae, found in Southern Russia as being Sinopean, an interesting pattern of finds in the north-western Pontic area has developed.

Sinopean amphorae are among those most commonly found in the West Pontic cities, forming almost one third of the total. In the cities in and near Dobrudja, Histria, Callatis, Bizone and Odessus some 40 % (2300 stamps) or more of the total amount of the discovered amphora stamps were from Sinope (Brashinskii 1963, 139; Avram *et al*. 1990, 126; Conovici 1998, 14–6).

From Histria (35 %) in the north, through Callatis (42 %) and Bizone (27 %) to Odessus (17,6 %) in the south, all those cities seem to have had special trade relations with Sinope (Lazarov 1986, 402; Kuzmanov and Salkin 1992, 29–31; French 1985, 88; Banev *et al*. 1985, 29–33; Buzoianu 1986, 411; Lungu 1978, 133–55; Coja 1986, 417–32; Avram *et al*. 1990, 126; Brashinskii 1963, 139; Conovici 1998, 15). For Callatis an inscription found in Sinope mentioning a trader from Callatis confirms this (French 1985, 87).

Outside the Greek cities in the hinterland, however, the number is considerably smaller and then only along the Danube and its tributaries (Avram *et al*. 1990, 112; Museteanu *et al*. 1978, 187; Conovici 1998, 15).

Fig. 2 shows the percentage of Sinopean stamps amongst all amphora stamps found in the north-western and western Pontic regions. This is very small in southern and central Thrace compared with the northern region (Lazarov 1980, 177; 1986, 405; Bozkova 1990, 37–40; 1994, 159–64; Balabanov and Drazheva 1985, 9–29; Getov 1995, 189), with the possible exception of Izperich, which is probably

Kabyle	2
Izperich	50
Sboryanovo	20
Seuthopolis	4
Apollonia Pontica	5
Sladkite Kladensi	0
Aqua Calidae	1
Mesambria	8
Odessos	18
Bizone	27
Callatis	42
Satu Nou	20
Histria	35
Isle of Leuke	20
Tyras	18
Olbia	23

Fig. 2 Sinopean amphorae stamps

[1] A photograph of this stamp was, with several others and without any comment, published in a museum catalogue in 1997.

[2] For a comparison of these chronologies, see Alabe 1986, 377 and Lazarov 1978a, 13.

related to the proximity to the Getic capital at Sboryanova, where Sinopean amphora stamps number 20 % of the total amount (Stoyanov 2002, 215).

Quite recently, about 20 Sinopean amphora stamps were uncovered at Apollonia Pontica, but this is still a small proportion.[3] A possible explanation for the low percentage of Sinopean stamps in Thrace is that much of the trade from the north Aegean coast may well have passed along the navigable rivers of Southern Thrace to the region of Apollonia and Messambria. Indeed, this trade route might already existed from the Middle Bronze Age (Bozkova 1994, 163; de Boer 1999, 139; Tsontchev 1962, 848–52).

The picture is completely different from that for the Black Sea as a whole (Fig. 3). The western coast received considerably fewer Sinopean amphorae than the north-western and definitely than the Northern Black Sea coast. In Tyras the total number of found Sinopean amphorae stamps is already 451 and this number only increases if we look at the northern Black Sea coast (15000 of which about 10 % from Panticapaeum), although the proportion of Sinopean stamps remains a relatively stable 20–25 % (Brashinskii 1963, 139; Samoilova 1988, 52–4; Conovici 1998, 14–6).

Kabyle	6
Izperich	14
Sboryanovo	45
Seuthopolis	3
Apollonia Pontica	22
Sladkite Kladensi	0
Aqua Calidae	1
Mesambria	5
Odessos	55
Bizone	370
Callatis	786
Satu Nou	189
Histria	649
Isle of Leuke	16
Tyras	451
Olbia	2000

Fig. 3 Sinopean amphorae stamps

Another interesting feature is to compare the periodisation of the Sinopean amphora stamps with their geographical position. In Olbia more than 50 % of the Sinopean stamps found are from groups 1 and 2, in Tyras almost 50 % is from groups 2 or 3, while in Histria and Callatis almost 75 % is from groups 3, 4 and 5. The few stamps found in Thrace are also mostly from groups 4 and 5 (Lazarov 1978a, 16; Kiachkina 1994, 188; Bozkova 1990, 37; Getov 1995, 72).

So, it seems that Sinopean trade expanded or shifted more in the direction of the south-western Black Sea coast at the end of the 4th or the 3rd century BC, depending on which periodisation one accepts, Grakov on the low side or Vassilenko on the high side (Alabe 1986, 377).

The Mediterranean

In the Mediterranean, Sinopean amphorae were rare until recently. Six at the Athenian Agora, one each at Thasos, Delos and Antipatos, three at Pergamon, one at Gordion and most to the west, one at Apollonia on the Lybian coast (Alabe 1986, 382–87; Jones 1986, 313; Börker and Burow 1998, 63, 127; Brashinskii 1963, 134). However in the last few years, excavations at Beirut (Lebanon) have yielded quantities of yellow amphora shreds and stamps with fragments of volcanic rock in 2nd century BC levels, these being characteristic for Sinopean amphora (Whitbread 1986, 96). One of these stamps (Fig. 4), carrying the name of astynomos Διονύσιος Ἀπολλοδώρου belonging to group 4 according to Grakov and Avram *et al.* (1990, 125).[4] According to the latest chronology by Fedoseev (1999, 32, 42) it was probably produced between 300 and 290 BC. It is very likely that the stamp found at Apollonia in Libya also reached this place through Beirut as Apollonia was on the trade route from the Phoenician coast to the West.

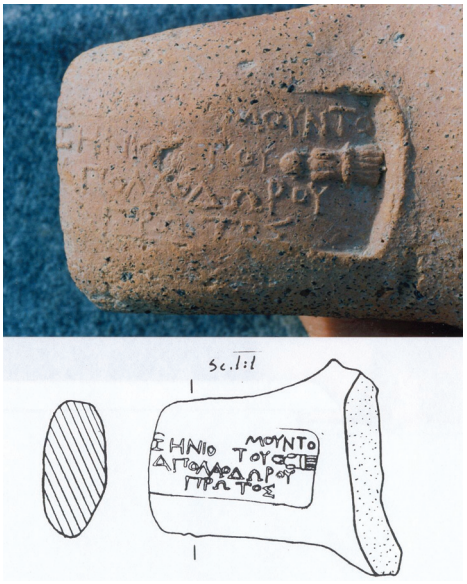


Fig. 4 Sinopean amphora-stamp from Beyreuth, No. 2619 (photograph and drawing H. Curvers and P. Ryan)

[3] Personal conversation with the excavator Dr K. Panayotova.

[4] I am most grateful to the excavators Dr Hans Curvers and Dr Paul Ryan for allowing me to publish this find.

Sinopean Trade

Although the identification of amphora stamps is extremely important for dating other archaeological material, even more is the question of what products were carried in these amphorae, in order to understand the full meaning of Sinopean trade routes and the Sinopean economy as a whole. If we look at two regions of Sinopean export, the northern and western Black Sea coasts and the eastern and northern Mediterranean (Fig. 5), the question arises: which products were exported and to what region. According to Bouzek, French and Lazarov, Sinope transported wine in its amphorae (Bouzek 1990, 100; French 1985, 88; Lazarov 1978b, 300). However Polybius [4. 6. 3] mentions a shipment of 10000 Rhodian jars of wine as import to Sinope. This could be an indication that Sinope had to import wine, although Whitbread is probably right in his remark that this was an exception (Whitbread 1996, 234), caused by the large continent of troops employed by Sinope in the war against Mithridates. But still the fact remains that there is very little proof of wine production at Sinope or in the surrounding territories, in contrast with the situation in the neighbouring Dorian colony Heraclea Pontica.[5]

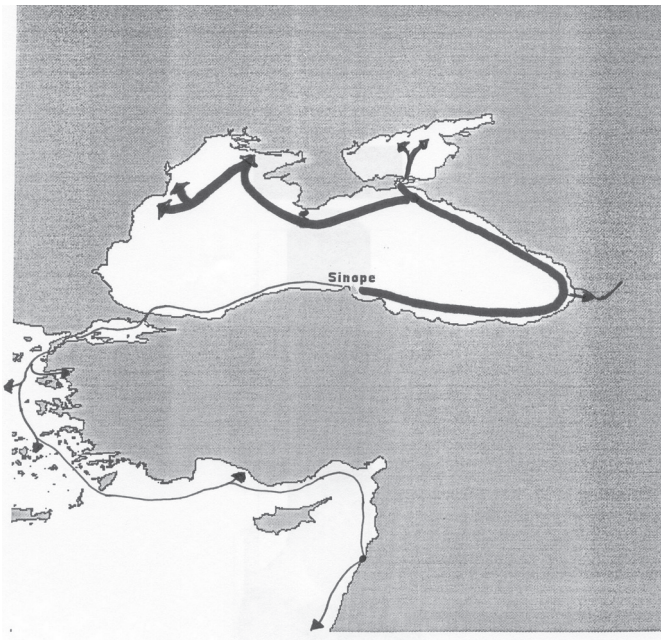


Fig. 5 Sinopean amphora trade-routes in the Black Sea and the Mediterranean

Two other products however are possible candidates as contents of most of the Sinopean amphorae, olive oil and fish. According to Strabo [12. 3. 12] there were many olive-trees in the vicinity, while in another passage [2. 1. 5] he states that this was in contrast with all other areas of the Black Sea coast. There are indications that amphora production at Zeytinlik in Hellenistic times was probably connected to the production of olive oil (Garlan, Tathcan, 1999, 21; Doonan 2002, 192–94). As olive trees could only be found near Sinope and as olive oil was essential for Greek cooking, it is reasonable to assume that olive oil was exported to some of the other Greek colonies along the Black Sea coast. In fact, Brashinskii suggested back in 1963 that olive oil was the major commodity transported in Sinopean amphorae. The fact that Thracians and Dacians had another diet could explain the lack of Sinopean amphorae in the *hinterland* of the northern and western Black Sea coasts.

Another indication of the use of Sinopean amphorae to transport olive oil is the fact that in Thrace almost all Sinopean amphorae were found in a religious context (Kabyle, Izperich, *etc*.), while in Thracian graves, till this moment, only amphorae from Heraclea Pontica were found. In graves, mostly wine vessels were placed, as can also be observed in the North Pontic area.[6]

It is extremely unlikely that Sinopean fish was exported to the Northern and Western Black Sea, as the excellent fishing grounds there were probably one of the main reasons for colonisation.

In the Mediterranean, there were plenty of olive trees but fish from Sinope was regarded as a high priced commodity [Diod. Sic. 37. 3. 5]. It seems that in the Hellenistic and Roman periods the fishing industry in and around Sinope expanded, especially for catching large tuna, mackerel and mullets (Doonan 2002, 187–89; Doonan, Smart 2002, 24–5).

Until around the 3rd century BC, fishing was probably supplemented by agriculture, but then it became profitable enough to allow concentration. The Sinope Regional Survey detected as early as the Hellenistic period, a distinct spread of settlements along the southern coast near Sinope. Several small valleys along the coast were settled for the first time in the Hellenistic and Roman periods, for example Gerna Dere.

The fishing industry around Sinope is mentioned by Strabo [7. 6. 2, 12. 2. 11] and Aelian [15. 3], while Pliny [*NH* 9. 18] states that the profits of fishing were considerable. Athenaeus [3. 118] considered pickled fish from Sinope to be noteworthy while Strabo [12. 3. 12] mentions the winning of salt for the preservation of fish.

Conclusion

The Sinopean trade with stamped amphorae started in the first quarter of the 4th century (*ca*. 378 BC). During the first centuries it was concentrated on the northern and western Black Sea coasts, and reached its height between 250 and 210/200 BC (Conovici 1998, 169–80). However earlier, already at the beginning of the 3rd century BC, Sinopean trade started to expand into the Eastern and Western Mediterranean (Saprykin 2002, 93–5). Sinopeam

[5] For a survey of the vicinity of Sinope, see Garlan, Tathcan 1999, 21–5, *Les ateliers amphoriques de Sinope (Turquie)* and Doonan 2002. For the vicinity of Heracleia Pontica, see Stronk 1995.

[6] For amphora in the Thracian graves, see Kitov and Krasteva 1992/1993, 59–76; Kitov and Dimitrova 1998/1999, 31–54. For the North Pontic area, see Brashinskii (1980, 42)..

amphora stamps were not used anymore after the capture of Sinope by Pharnaces I of Pontus in *ca*. 183 BC.

There are indications that the commodities carried in the inopean amphorae were olive-oil, which was exported to the north-western Black Sea colonies during a period between the 4th and 2nd centuries BC, and fish, which was mainly exported to the eastern and western Mediterranean from the beginning of the 3rd century onwards and continuing in the Hellenistic and Roman periods.

Attic Art of Fifth and Fourth Centuries BC and Art of the Cimmerian Bosporus*

Jan Bouzek

The relations between the Bosporan area and Athens were very close during both the first and second Athenian empire and they were practically never interrupted even while the Attic state had serious troubles after its defeat in the Peloponnesian war. The import of Bosporan wheat was vital for the existence of Athens and the art of Bosporus was strongly influenced by Attic art of the period. Attic ceramic production of the 4th century BC is called Kerch vases, as it is best represented from the finds in the area. The best Scythian toreutic works and jewellery of the 4th century BC were made by masters, who came from Athenian artistic tradition. The group of warriors on the Solokha comb resembles the Dexileos stele. The earrings from Bolshaya Bliznitsa reflect the head of Athena Parthenos, the relieves on sheets of Scythian goryta may have been made from originally Attic moulds, which are now well known from the Kerameikos and Agora excavations at Athens (Vierneisel-Schlörb 1997, 180–90, notably Nos. 631–632). The models of the gorytos relieves were apparently predecessors of the much later Tabulae Iliacae.

Fig. 1. Frieze from the Adygeion rhyton with Gigantomachy, after Leskov 1972

Already the engraved silver vases of later 5th century BC, studied extensively by the late Nona Grach (1985), derive from Attic tradition and were mainly Attic products or their close imitations. But silver was expensive, only partly made for the market, while gold was usually furnished by the client; the final product being ordered directly from the master by the client himself. The Adygeian rhyton is one of good examples of the style of the matrix of the Gigantomachy reflecting the early Classical art of the fifties or sixties of the 5th century BC (Fig. 1), but it was reused on much later vessels (*cf.* now in details Treister 2000). Several items of late 5th century BC, like the Sukhumi stele, reflect closely the art of the first Athenian confederation; the stele of Krito and Timarista from Rhodes is the close parallel to the Sukhumi stele (*cf.* for general surveys: Bouzek 1990 and Tsetskhladze 1999).

The marvellous Scythian jewellery of Attic tradition, but adapted to local market, was probably produced in the Bosporan area, where there was the main artistic North Pontic centre of the Classical period. Olbia, which was the most likely candidate for being the main centre of toreutics production during the Late Archaic period, was in the 4th century BC more probably responsible for the second, more traditional school of Scythian 4th century BC metalwork, much less affected by Attic art (*cf.* Bouzek 1990, 116–20, Savostina 2001).

A similar situation was in the monumental architecture. The 6th and early 5th century temples from Olbia and Histria derive from Ionian tradition (Bujskich 1999), later sanctuaries come closer to Attic style. It is especially true for the 4th century temples (esp. that of Apollo Delphinios in Olbia, Demeter temples in Nymphaeum and Phanagoria; *cf.* Kobylina 1984b; Pichikyan 1975; Bouzek 1990, 131). The magnificent acroterium from near Phanagoria belongs to the best items known from the 4th century BC in the Classical world.

The books and articles by the late M.M. Kobylina (esp. Kobylina 1972; 1984a) gave a good survey of Greek sculpture in the North Pontic area (*cf.* also Davydova 2002). With the shift from Attic to Ionian imports of pottery in mid 3rd century BC also the marble sculpture followed the Asia Minor path, but earlier Attic influence was dominating. Two names of Attic sculptors are known from the bases found in Olbia (Praxiteles, Stratonides) and one in Chersonesus (Polykrates). One statue of Dionysus from Panticapaeum is Lysippean in its style, one bearded head from Olbia is Scopaic, the dedication relief from

* I would like to thank Dr E.N. Savostina for all her support and permissions to reproduce her drawings here. I would also like to thank to Dr S.L. Solovyov and all other colleagues from the Hermitage and from the Taman museum for their splendid hospitality during the Taman conference. The first shorter version of this paper was published in *Studia Hercynia* 7 2003, 138–53. I would like to thank for the drawing of the reconstruction on Fig. 6–7 to Kristina Urbanová. Other drawings were kindly prepared for the publication by A. Waldhauserová.

Panticapaeum (Koshelenko *et al*. 1984, 311, tabl. 121: 1) can well be compared with similar dedications in Attica. (*cf.* Bouzek 1990, 129–30).

This is also the case of the sculpture found at Yubileynoe I on the Taman peninsula. Not only the relief with fighting scene, reflecting the Amazonomachy on the shield of Athena Parthenos, but also the grave stele from this site are fairly close to Attic artistic tradition.

The group has been published in 1987 by E.A. Savostina both in Russian (Savostina 1987a) and in French (Savostina 1987b). A later monograph edited by her is devoted to one of the relieves (Savostina and Simon 1999). The place lies in the north-eastern corner of the Taman peninsula, on a small hill of which there are several in the area, west of the Chrysaliskos tholos and the Hellenistic palace, which preceded there the Chrysaliskos building (Sokolskii 1976, Bouzek 1990). The first relief was found accidentally on the vineyard in 1982 (Savostina 1987a, fig. 1); excavations were conducted there by the Pushkin museum in Moscow, and lead by the late A.K. Korovina. The farm existed, according to the small objects revealed during the excavations, from the 1st century BC until the 1st century AD. Only its foundations were preserved, with several stones from the first course of walls of the building, which was only constructed once, without any larger repairs. For the levelling, however, soil was used containing small fragments of 4th century BC pottery, in one case a nearly complete Thasian amphora. The excavator was not certain whether this soil formed a cultural layer or had been brought here from somewhere else. The house measured 19.9 x 16.8 m, it was divided into three rooms. The function of the house was not clear, but it was interesting that its construction reused old architectural and sculptural fragments, probably from one earlier building. Especially interesting are two Ionic architrave fragments. One marble louterion could also be reconstructed from the fragments. Nine fragments of a limestone fronton, whose cornice had traces of red colour, have been found, and also fragments of a finely profiled syma. A fragment of a column drum, 0.41 m in diameter, probably belonged to this building and fragments of stone roof tiles, too. The provisional dating of the building, from which the fragments came suggested by the author, is the middle to late 4th century BC.

Besides three sculptural monuments reused for the construction of the farmhouse were found: two of marble, found in 1982 and 1985, and a third of limestone, found in 1983. The last consisted of three fragments, of which only the left side of the scene is preserved. The technique of execution speaks in favour of a local pupil of a more competent master. The relief was broken into fragments before its reuse for farm building, but it had been destroyed much earlier. The original frieze was *ca*. 2 m high. According to the suggestion of the author, it might have been applied to a hieron, of which architectural fragments were also found (Fig. 2). The right-hand person in the first plan is probably a rider; he is catching the hair of his opponent and trying to smash him with his sword.

Fig. 2. Scythomachy relief, Yubileynoe II

Behind is another rider who is falling from his horse after a successful attack from a foot soldier. On the left side, there is partly preserved third figure, again a rider. The author got the impression that five plans of relief representation are intended. She compared one of the figures with the Nereid monument of Xanthus. The figure on the right hand side should be male, the figure on the left hand perhaps was feminine; but the hair of both figures was long.

The scene might represent an amazonomachy, but the dresses of all figures were roughly the same and definitely non-Greek. The dress and the footwear reflected the Scythian 'kaphtan' and their soft boots, so another possible interpretation suggested was the fight between and old and a young Scythians, as represented as on the gorytus from Solokha [*cf.* also Hdt. 4. 3]; but none of our figures was bearded. Both goryta represented on our relief were of the Scythian type, while the sword was compared by the author correctly with the Sarmatian weapons. In the Sarmatian army there were also Amazons fighting [Hdt. 4. 110–11]; so the amazonomachy a la Scythian might be represented.

The cut-away heads at the base of the picture, hanging from horse's neck, represent a custom mentioned by Herodotus with the Scythians and the Taurians [4. 64, 103], but it is also known from the Iliad [17. 125, 18. 175ff.]. So far the author, but the general composition and the character of the representation can best be compared with its great model, the shield of Athena Parthenos, as known from the Strangford shield and other replicas, even on the Piraeus relieves. Our relief thus represents a local elaboration of the great model, similarly as the Solokha comb reflects the Dexileos stele. The fundamental publication of the third monument has been prepared by E.A. Savostina (2001) in collaboration

with other colleagues from the Pushkin museum (notably O.L. Tuguševa wrote here on Amazonomachy on Kerch pelikai, p. 230–63), with contributions by several other Russian scholars (M.Y. Treister, the Amazonomachy in toreutics; V.S. Olkhovskij on the ethnographic features of the relief); several other specialists contributed to the volume too, notably R. Stupperich and H. Bergemann. While the dating of J. Bergemann into Hellenistic age (p. 112) cannot be followed, E.A. Savostina (p. 304–26) and R. Stupperrich (p. 58–89, notably p. 68–70) bring a reasonable date into the late 4th century BC. While the Amazonomachy was certainly the model for the artist, the battle with the Scythians seemed to bring the most reasonable interpretation of the oeuvre. Most interesting is also the comparison by. E.A. Savostina (p. 307–8) of the relief with one of the main school of the Scythian toreutics produced by Greek masters in the Kerch area. One 'Scythian' school, that of the Solokha comb, Kul-Oba and Gajmanova Mogila vessels, clearly derives from Attic art, while the more 'archaic' school represented in the Perederieva Mogila on the cone found in the cachet of the Bratoljubskij barrow (*Gold der Steppe* 1991, 376–79) has more traditional Oriental and archaising features, and it shows links with the Anatolian art under Persian dominance. Some 'wild' traits of the relief can also be compared with the Gjölbaschi monument and with similar funeral relieves on monumental tombs (*heroa*) in this area.

The fragmentary marble relief found in 1982 is 1.48 m high. Its preserved width is 0.91 m and it is 0.17 m thick (Fig. 3). A young warrior marching to the right is represented. His cloak is fastened round his neck, and is falling down behind the figure. In his left hand he held a shield, of which a fragment has also been found. The sword, which was held in his right hand, was probably of bronze. The representation made probably that the figure was framed by an architectural aedicula; Savostina quoted several parallels from Conze 1900 and dated the relief into the third quarter of the 4th century BC. The marble is, according to her, Parian, but the style is Attic.

The second marble relief was found in 1985. It is 1.88 m high, above 0.85 m and below 0.94 m wide. The plate is 0.25 m thick, the relief protruding 0.12 m. Also the whole surface of the plate is worked – the shield of the older warrior is reaching to the very margin of the stone. Two soldiers are represented, gazing each other. The bearded soldier has all attributes of a hoplite; the younger is only holding a spear. Two soldiers, one young and one older, are rare in representations, and it is difficult to judge who is the dead and who – if any – the alive. A parallel is on a Louvre loutrophoros (Conze 1900, pl. 127: 1072). Savostina dates also this piece to the third quarter of the 4th century BC (Fig. 4).

Both relieves can be places easily in the Attic sequence. Perhaps there were too many sculptors in Athens already at that time of a crisis, notably at the time and after the Chaeronea battle. Some of them went where there were still enough rich clients, like in the Cimmerian Bosporus, and had there also competent pupils.

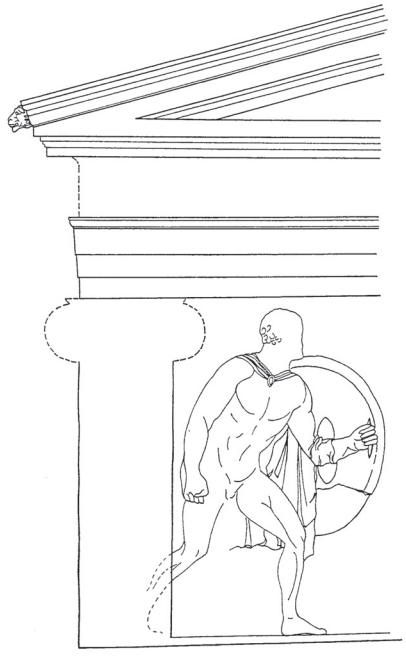


Fig. 3. Yubileynoe II: Stela with warrior and possible reconstruction in the aedicula, after Savostina 2001, completed

Fig. 4v. Stele from Yubileynoe II with two soldiers, after Savostina 2001

The most interesting problem, however, is a possible reconstruction of the monument. The architectural fragments revealed at Yubileynoe are of dimensions, which would fit for a monument with aedicula and several representations in relief. It seems that three relieves may have belonged to a large funerary monument of one of the highest-in-rank members of the Bosporan aristocracy, on a level comparable with the Hellenistic palace preceding the Chrysaliskos residence, situated only a few kilometres eastwards of Yubileynoe II. (Sokolskii 1976; Bouzek 1996). The area did not belong to any of Greek North Pontic cities and might well have been a domain of Bosporan kings, where both their second palace (eventually a heroon, as some suggested) and their funerary monument were built. The representations of the deceased would be in official Attic manner, the outer relieves made by local sculptors.

The whole monument might have been similar to the Kallithea monument of Nikeratos Polyxenou, a metoikos who came to Athens from Pontic Histria (Tsirivakos 1971, 1998, fig. 24); the monument is dated by *ca*. 300 BC (Fig. 5).

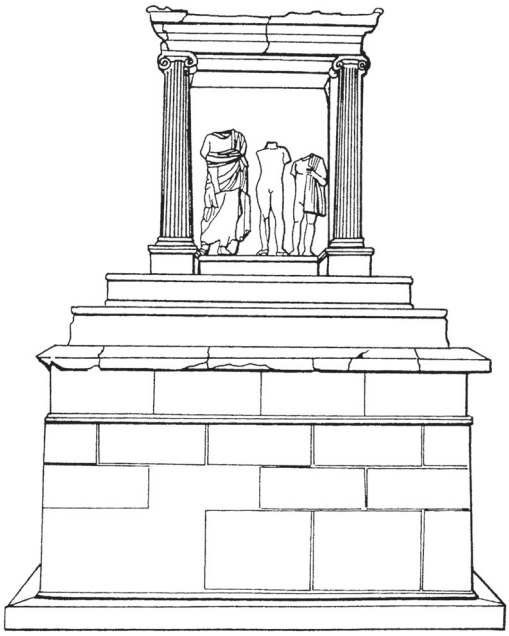


Fig. 5. Funeral monument of Nikeratos Polyxenou from Kallithea, museum of Pireus, drawing after the photograph in Σταϊνχαουερ 1998

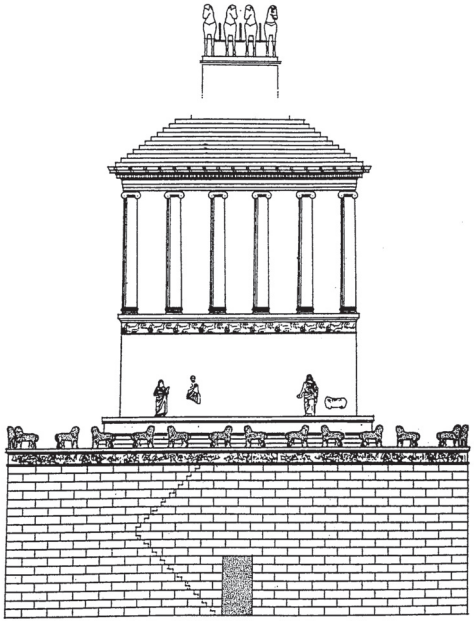


Fig. 6. The Mausoleum, reconstruction after Jeppesen 2002

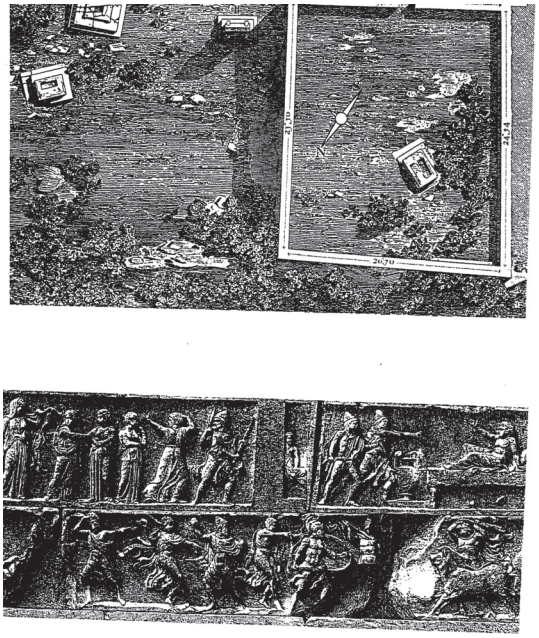


Fig. 7. The Heroon of Gjölbaschi – Trysa, after Benndorf, Niemann 1889

Other parallels are in the funerary monuments known from Southwest Asia Minor, especially the most famous of them are the Mausoleum (*ca*. 340 BC, Fig. 6.), the monuments of Gjölbaschi – Trysa (*cf.* Fig. 7) and Xanthus.

The tentative reconstruction of the monument using all preserved relieves and architectural fragments from Yubileynoe I tries to contribute to the discussion of an especially interesting set of monuments. The suggested reconstruction uses the structure of the Kallithea monument as the core. If the Scythomachy could best be placed on the pedestal of the monument and the high relief with the preserved attacking warrior originally in the aedicula (Fig. 3), then the relief with two soldiers – if not placed elsewhere in the same precinct – can best be put to one of the sides of the reconstructed monument, either plain (Fig. 8) or with embossed stones with drafted margins and fine Ionic capitals (Fig. 9). Another possibility, however, would be to put the Amazons frieze on the wall of a precinct, like at Gjölbaschi-Trysa (Fig. 7).

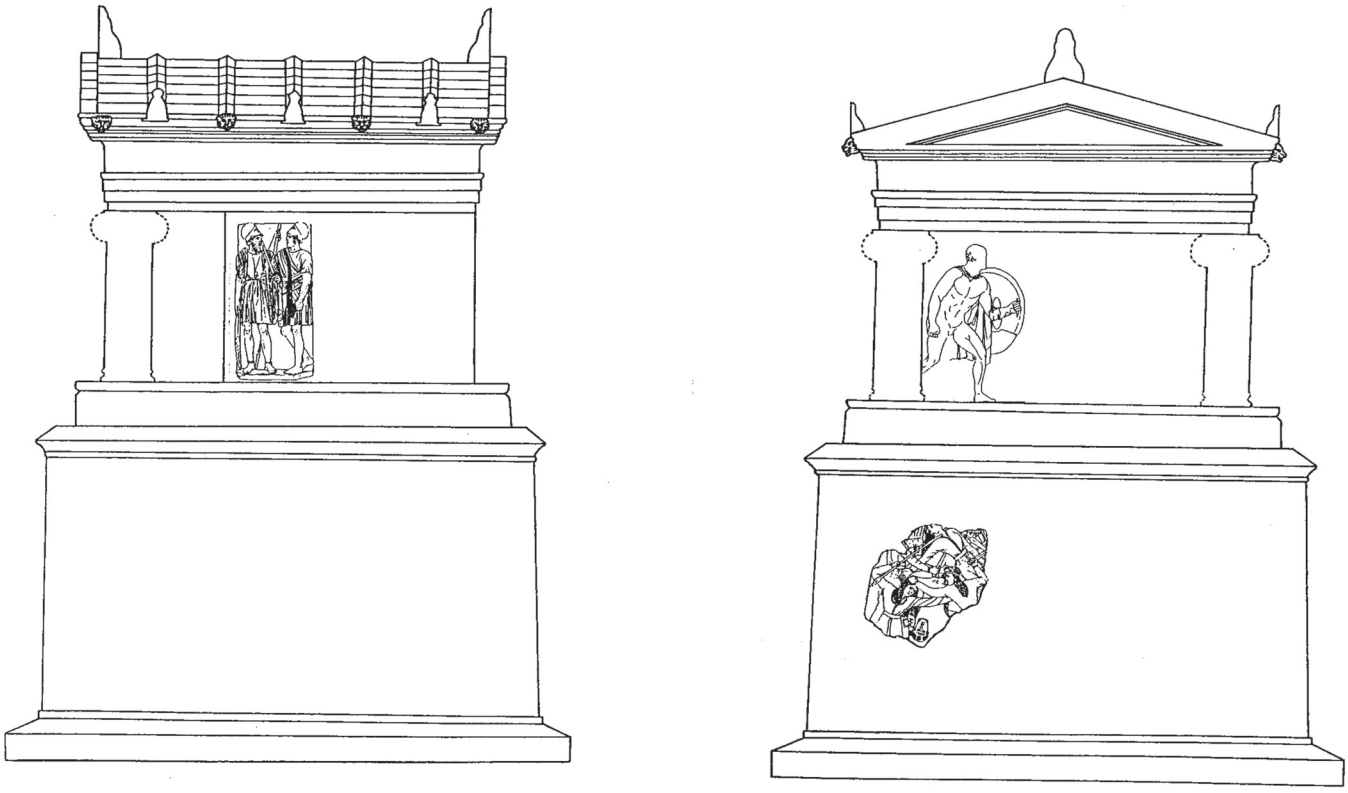


Fig. 8. Tentative reconstruction of the royal heroon at Yubileynoe II. Drawing by K. Urbanová

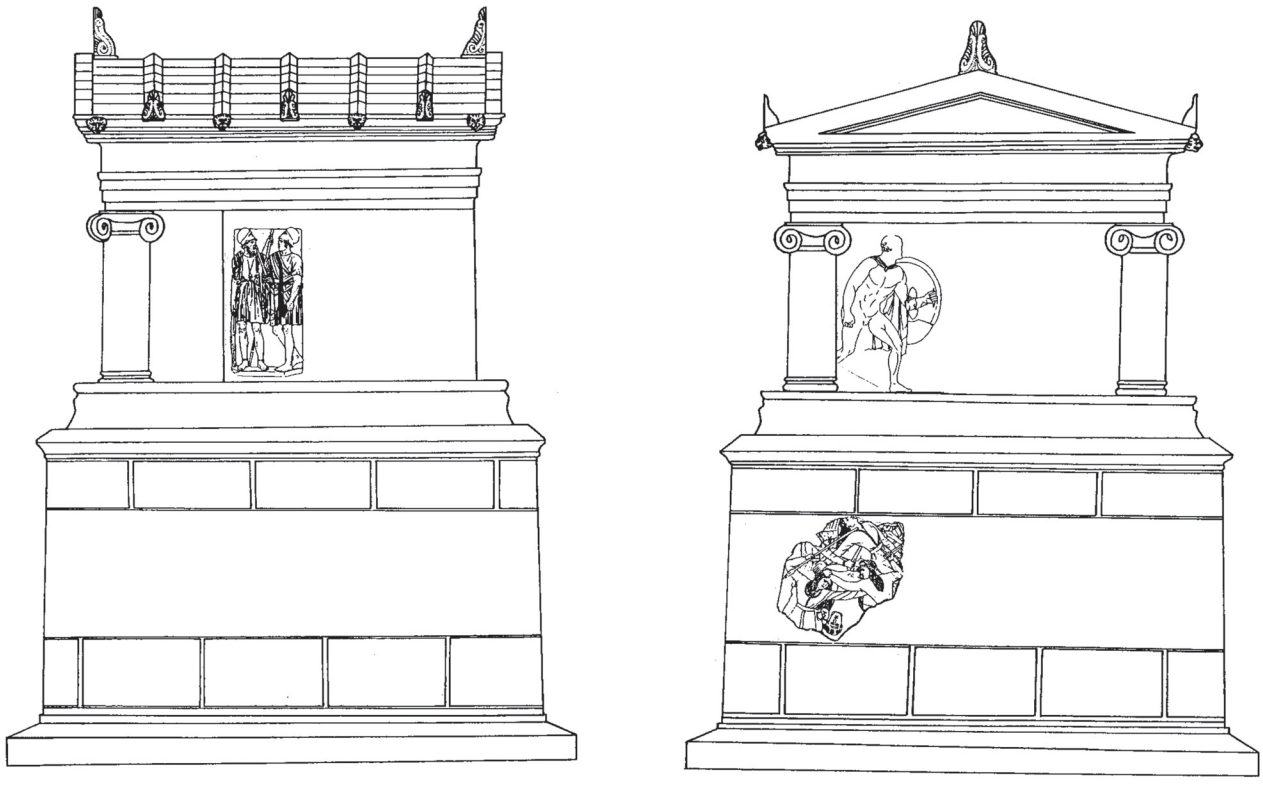


Fig. 9. Variety of the tentative reconstruction, the pedestal of embossed stones and the Ionic capitals reconstructed. Drawing by K. Urbanová

Anyway, we hope that Savostina would prepare with similar care the publication of other monuments from Yubileynoe I, as she did in the first and second volumes, which were my main inspiration for this contribution. It could be expected that the official royal monuments of the Bosporan kings were situated outside the *chora* of Greek cities, on the royal land. The nearby royal palace dating from the third century BC, the predecessor of the Chrysaliskos villa, formed a good neighbourhood for the funerary monument (Sokolskii 1976, 7–88; Bouzek 1996; Kuznecov 1999, 346–48).

This is not the only group of Atticising monuments from the Taman peninsula. The magnificent acroterium found in 1948 in a tumulus at Zlatozerno near Sennaya belongs to the best examples of its class in the whole Greek world (*cf.* Kobylina 1956, Sokolov 1973, 60–1). It had good parallels *e.g.* again from the northern cemetery of Piraeus (Piraeus Museum Inv. No. 5314). The Taman sarcophagus in the State Historical Museum, found near Hermonassa (Sokolov 1973, 72–3), is one of very few marble examples of 4th century BC. The famous relief with two men, who were awarded citizenship in the National Museum of Athens (Lippold 1950, 247, pl. 88: 4) is another document showing close ties between Athenian and Bosporan areas at the same period. Athens could not survive without Bosporan wheat, and relations with Athens were vital for the artistic production of the North Pontic area during the 4th century BC.

Other statues from Panticapaeum and Chersonesus, now in Odessa Museum (1983, 43, figs. 72–73), are already Hellenistic, though one of them still reminding one of 4th century art. The best Pontic art of the 4th century, as has already been mentioned, derives in most of its aspects from Attic tradition, and only the Ionian 'renaissance' of the 3rd century BC changed the orientation of local artists.

The Sindians of the Taman Peninsula *ca*. 400 BC: Polyaenus' Tirgitao, Numismatics and Demosthenes' Grandfather

David Braund

The Sindians (*Sindoi*) are one of the first peoples of the northern Black Sea region to be attested in extant Greek literature. For the sixth century BC we have a fragment of Hipponax, which happens to mention, with a coarseness typical of Hipponax's satirical choliambic verse, a 'Sindian vagina'.[1] The milieu for Hipponax's satire was the world of the eastern Aegean, perhaps including even the Black Sea itself: at least we are told of his entanglements at Ephesus and Clazomenae.[2] Presumably the term 'Sindian' had some meaning for his audience: whether as a distant and unfamiliar name or as a familiar ethnic, we cannot be sure. However, in view of his apparent milieu, there seems good reason to prefer the latter: a region, which had sent, and no doubt continued to send, so many settlers to the north coast of the Black Sea, might be expected to develop a degree of knowledge at least of its coastlands. Indicative perhaps is fine Clazomenian pottery of Hipponax's day, found by archaeologists in the territory of the Sindians.[3] By Strabo's day at least there was a place on the coast of the Sea of Azov, above the Sindians, called "Watchposts of the Clazomenians" [Str. 1. 2. 4., p. 494].

At archaic Miletus in particular we may be sure that the Black Sea region was quite well known, while other cities too were involved in colonising the Euxine: Teos requires particular mention as the mother-city claimed by Phanagoria on the Taman peninsula. Moreover, we should also consider in this colonising context Hipponax's metonymy, which is not the only crude reference to a female in his writings. For the colonial process involved both marriage with local women and, no doubt, the trade in a range of goods, which included female slaves. Hipponax evidently refers to a Sindian female who might be free or slave: his insulting language does nothing to suggest the one in preference to the other, but on balance it seems perhaps a little easier to imagine a place for a Sindian slave in his poetry (and in the life of the eastern Aegean) rather than a free Sindian. If that is right, she would be a chattel, like the Koraxian garment, to which he also makes reference, also from the north coast of the Black Sea, albeit a little to the east [fr. 2, West].

A century or so later, Herodotus, who completed his Histories *ca*. 426 BC, has something further to say of the Sindians, despite his general neglect of so much to the east of Olbia and the western Crimea. For him the Sindians are simply the inhabitants of the Taman, counterpoints to the Scythians of the eastern Crimea, who cross the frozen Straits of Kerch (the Cimmerian Bosporus) against them in a much-repeated image of warfare on ice, which was already perhaps familiar enough by Herodotus' day [Hdt. 4. 28]. No other inhabitants of the Taman seem to be envisaged by Herodotus, distinct from the Sindians: the people and the peninsula seem co-extensive, as far as he is concerned in the Histories at least. Moreover, when subsequently he mentions Sindike he gives no indication that he has in mind a particular city: rather, although there is no room for complete certainty here, a region seems to be meant, presumably the Taman peninsula itself, at least in its more southerly and westerly portions. Although a flurry of terminological difficulties, across a range of ancient texts, tend to cloud the picture, we may take Sindike usually to have this meaning in antiquity.[4] For Herodotus it seems that the Taman peninsula is more or less Sindike, the land of the Sindians. In that regard, it is a matter of no small interest that Herodotus thinks he knows the sailing-time across the Black Sea to Themiscyra and the Thermodon from Sindike. He states that this is the widest stretch across the sea, north to south, and requires a voyage of three days and two nights [4. 86].[5] While we may wonder about Herodotus' sources and may

[1] The argument that Hipponax refers in fact to a geographical feature may just be defensible in lexical terms, but hardly likely in view of the broad tenor of his work, pace Blavatskii (1985a), who sees a geographical shape and takes Hipponax to refer to a 'Sindian gulf'. It is surely conclusive that Hesychius and Stephanus of Byzantium both understand Hipponax to mean 'vagina'. Note also that the scholiast on Apollonius Rhodius 4. 321 is clear that Hipponax refers to the Black Sea Sindians. For all these passages, see Hipponax fr. 2a, West. In the process of revision, I now find these thoughts echoed in Tokhtasev (2002, 23–4). I have not seen a recent article by S.M. Burstein, which seems to bear on these matters.

[2] West 1989, 109–110 collects the ancient testimonia.

[3] Well illustrated in Alekseyeva (1997, figs. 14–17). More broadly, see Treister 1998, rightly suggesting an on-going process of settlement from several of the cities of the eastern Aegean, rather than a 'Big Bang'.

[4] Strabo, for example, is clear that Sindike is the region of Taman south of the Hypanis (modern Kuban): [Str. 11. 2. 10, p. 495; *cf.* 11. 2. 12, p. 495). Herodotus is much less clear [4. 86], but seems also to mean the region not a city. That occasionally the regional name can be applied to its main city, Gorgippia, need not distract us from its principal usage, pace Silberman 1995, 53, No 198, who collects passages, but seems to think the term refers only to the city. Arrian's use of the name is unclear, as also with Tamurake at Periplus 20. 1. These matters, especially the interpretation of Strabo's text and the meaning of terms beginning with the root Sind, will no doubt continue to generate complex argument and counter-argument: see now Tokhtasev (2002). It is to be hoped that in due course S. Radt's thorough new text will soon reach this part of Strabo and settle at least some of the textual hypotheses currently advanced.

[5] Of course, Sindike here is Wesseling's conjecture for MS Indike: the conjecture may be accepted with every confidence.

be sceptical about his measurements,[6] this is not the place to speculate in detail on the subject. It suffices to stress the potential for detailed information generated by Pericles' wide-ranging Pontic expedition in the 430s, which entailed Sinope and probably the eastern Crimea amongst other places, not to mention the subsequent Athenian settlement on the south coast of the Black Sea.[7] At the same time, the very fact that Herodotus can imagine a voyage from the north coast around Sindike to the south, especially when taken with Hipponax's oblique allusion to earlier trade in Koraxian garments and Sindian slave(?)-women, offers tantalising possibilities about Sindike as a focus of trade. Certainly the north-south route was demanding: this was a substantial passage across the open sea, indeed the notorious waters of the Euxine. But at least such a route had the merit not only of directness, but also of giving a wide berth on one side to the Taurians of the difficult coast of the southern Crimea across from Carambis and on the other to the famously-murderous Achaeans and other peoples of the ocky shore of the north east Black Sea above the lowland of Colchis.[8] It is also worth bearing in mind a key point that has been largely overlooked by much scholarship on Bosporan trade: the so-called Asiatic Bosporus seems to have been particularly fertile and productive in grain (Vinogradov 1996).

For historical developments among the Sindians themselves we have only one substantial text in the whole of extant ancient literature. It is unfortunate that this is one of the so-called 'stratagems' of Polyaenus, collected together with a host of other disparate tales of a broadly military nature, and presented to Marcus Aurelius and Lucius Verus in the middle of the second century AD. The historical value of his information on the Sindians is particularly elusive. For it shows a disturbing kinship with the fictional stories told about the peoples of the north coast of the Black Sea (including the Bosporan kingdom) in the Greek novels. The contemporary work of Lucian – especially his Toxaris – is particularly similar, but we should consider also the fragmentary novel known to us as Kalligone (Stephens and Winkler 1995). Like these fictions, Polyaenus' account centres upon issues of love, marriage and revenge, all clothed in the place-names and tribal names of the region. At the same time, however, for all that, Polyaenus' account also recalls 'exemplary literature', appropriate enough to the taste for variety in second century literature (*cf.* Aelian's Varia Historia). Perhaps best-known in that genre of exemplarity is the earlier work of Valerius Maximus in Latin, but more particularly to the point here is Plutarch's work On the Virtues of Women, with its similar theme (the latter part of Polyaenus' eighth book is filled with women who display virtues of a sort) and also written in Greek, only some fifty years before Polyaenus' work. Viewed in that Plutarchan light, we might perhaps have rather more confidence in the historicity of the events described by Polyaenus as having taken place among the Sindians. However, given that his account seems poised between novelistic fiction and exemplarity, it seems best to retain more scepticism than most modern scholars have done: perhaps the best we can hope is that the broadest outline of Polyaenus' story reflects the general situation in the region some five or six centuries earlier. To press the details, however, seems folly, even when (or especially when) we are so short of information.

Polyaenus' story centres upon the derring-do of a Maeotian woman named Tirgitao. It is at least discomfiting to note the similarity between her name and Targitaos, the name given by Herodotus for the first Scythian, according to (as he has it) the Scythians' own version of their origins [Hdt. 4. 5–7]. Polyaenus' Tirgitao looks like a female form derived from Herodotus' Scythian male: the change of first vowel need not detain us. However, we are in no position to know for sure whether it was Polyaenus or one of his sources, who came up with the female name. Even the fact that Polyaenus shows other links with Herodotus' Scythian account, not least with its beginnings [Polyaen. 7. 44. 2 owes much to Hdt. 4. 3–4], does not help us settle the matter. Since Polyaenus seems primarily to be a compiler, it is probably better to suppose that he is repeating something found in his sources, not inventing for himself on the basis of Herodotus. Yet we cannot be much encouraged by the probably bogus name of Tirgitao to believe in the details of Polyaenus' tale. Still worse perhaps, she is married to a certain Hecataeus, whom Polyaenus describes as king of the Sindians. Whence that name? We may see here good evidence of Sindian hellenisation, for Hecataeus is a familiar enough name among the Greeks. And yet we may also retain a measure of suspicion – perhaps even that the name of the great geographer Hecataeus (himself of course in Herodotus) has somehow been brought into the text of the story by Polyaenus' source.

Be that as it may, another detail of the story suggests at least confusion at some stage in the history of its transmission down to Polyaenus. For the geography of its first sentence is not simply wrong, but inverted. Polyaenus states: "Tirgitao, a Maeotian lady, had married Hecataeus king of the Sindians, who dwell a little above Bosporus" [Strat. 8. 55]. Yet, for all the multiple uncertainties of geography in which the region abounds across ancient texts, there is no doubt that the opposite not only was the case, but was known and repeatedly stated to be the case in antiquity: *viz*. it was the Maeotians who dwelt a little above Bosporus, on the shores (especially the eastern shores) of 'Lake Maeotis' (the Sea of Azov), not the Sindians.

[6] Yet mistaken measurements do not mean that he did not visit the area, as Pritchett in particular has demonstrated: Pritchett 1991.

[7] Plut. Per. 20 is the main evidence. The contemporary emergence of the Bosporan Kingdom in the eastern Crimea seems more than coincidence. I am not persuaded by those who seek to deny the reality of the expedition, pace Mattingly 1996 and after him Tsetskhladze 1997a. In particular, sceptics fail to explain the existence of Plutarch's evidence, as well as the Thucydidean and epigraphic support for it: see Braund 1994, 124–25 and 2003, 201 on the limited significance of epigraphy for dating Pericles' expedition.

[8] On the Achaeans, in particular, see Asheri 1998.

By contrast the Sindians, as we have seen, are located not to the north but to the east and even south of the Bosporus on the Taman peninsula, below Azov. Evidently a mistake has crept into the story. Two kinds of mistake are feasible: either the story had anomalous geography from the first or the relative clause has become transferred to the Sindians from the Maeotians, the people of Tirgitao. Given the scale of such an anomaly, in the face of the great weight of other texts, the latter seems more likely. We are left to ponder how else the story may have been mangled before it was picked up by Polyaenus.

Nor is the shadow of the Amazons far away from Polyaenus' tale, another mark of influence from the novel perhaps. After all, Sarmatia, often presented as their homeland, is immediately to the north and east of the region, beyond the Maeotians. And, novels apart, Herodotus had explained the macho manners of Sarmatian (or Sauromatian) females by reference to their Amazonian ancestry [Hdt. 4. 110–17].[9] It is at least an interesting coincidence that Polyaenus' tale has Tirgitao saved from an assassin's sword by her zoster, which took the blow, fended it off and allowed Tirgitao to gain her revenge. This is particularly the belt of a warrior, and thus an appropriate accoutrement for an Amazon [Pindar fr. 172]: Heracles had had the labour of bringing back such a belt from an Amazon queen. As with Heracles' labour, one does not need to subscribe wholeheartedly to Freudian psychology to see an authorial concern with sexuality and gender beneath the sword and resisting zoster of the narrative; again, probably the author was not Polyaenus the compiler, but his source.

Some further idea of the genesis and significance of the tale of Tirgitao may follow from a consideration of its broad structure, which shows peculiarities, which may be indicative. The essence of the tale is simple enough. Maeotian Tirgitao was married to Hecataeus, king of the Sindians. He lost his throne and regained it through Satyrus, king of the Bosporus. Satyrus gave him his daughter to marry and, importantly, required Hecataeus to kill Tirgitao. Instead, through love, he locked her away. She escaped to her homeland among the Ixomatae (a Maeotian people here), where she found that her father had died: suddenly we learn that she had been the local king's daughter. Now she lived with his successor: Polyaenus' language implies sexual union, but not marriage. As Satyrus and Hecataeus had feared, she moved the Maeotians and their neighbours to war against the Bosporans and Sindians, so successfully that they sued for peace and gave Satyrus' son as a hostage. Despite a treaty they sent assassins in the guise of fugitives. Tirgitao not only gave them refuge but refused Satyrus' (artful) demand for their return, "honouring the law of supplication", as Polyaenus has it. Having survived the assassination and had a confession forced from the would-be assassins, that they had been sent by Satyrus to kill her, Tirgitao killed his son, her hostage, and renewed her depredations with all ferocity. Satyrus died in his despair. His son, Gorgippus, succeeded to his throne, and by supplicating her himself and bestowing enormous gifts upon her, he put an end to the war.

That is the story as we have it. Nevertheless, key features of the narrative seem to be missing or less than clear of purpose. Why had Hecataeus lost his throne? We are not told who removed him from power. Why had Tirgitao's Maeotians not come to help? They are quick enough to fight for her later. Why did Satyrus specify that Hecataeus must kill Tirgitao? Even if we suppose polygamy unacceptable in this context, it might have been enough to divorce her. By killing her, they risked Maeotian revenge, albeit without her considerable presence to enact it. The details of the failed assassination serve to cast favourable light upon Tirgitao and bad light upon Satyrus, but their purpose in the narrative is not otherwise substantial. The killing of Satyrus' son serves more narrative purpose perhaps, attesting to the ferocity (albeit perhaps justifiable) of the Amazonian lady and contributing to Satyrus' despairing death. Another son, Gorgippus, brings closure to the conflict and the story, in particular by showing deference to Tirgitao, such as suited a woman used to ruling men. That is what Hecataeus had taken on when he married her, as he had done at the beginning of the story. By the end he is nowhere to be seen: indeed, he disappears from view in the middle of the story, after conspiring with Satyrus.

For Polyaenus this is the tale of Tirgitao, and understandably so. Accordingly it is also a story about female power, whether through Tirgitao's initial survival thanks to Hecataeus' love for her or through her many-sided resourcefulness in escaping, reaching home, winning over the local ruler (love, again, it seems) and carrying the fight against her enemies. By extension, it is thus a story about marriage and re-marriage. After all, the Greek world was especially interested in the region on account of its women, as we have seen, whether as slaves, as wives in the process of colonization or as dangerously alluring Amazons. Yet, for all that, Polyaenus' tale might also be considered a story about Satyrus, whose unjust demand for Tirgitao's death leads to the death of his son and then his own miserable death. At the same time, it may also be read, surely, as the birth of peace in the land of the Sindians, achieved by Gorgippus after years of conflict and bloodshed.

There is something to be said for all these readings; none need be discarded in favour of the others. The last, however, has the particular attraction of connecting the story back to the Sindians, who, as we have seen, become ever more marginal as the narrative unfolds. For Gorgippus was to be the (re-)founder of the principal city among the Sindians proper (that is, excluding Phanagoria) on the site of the modern city of Anapa, located on the southern shore of the Taman peninsula, looking south across the Black Sea. It is tempting to follow those who believe that Gorgippus lived on in the city of his name through the reign of Satyrus' principal successor, Leucon I; among his

[9] See Blok 1994 on this complex of traditions.

properties there was a tile-works, which has given us tiles stamped 'Of Gorgippus'.[10] As to the city itself, problems of nomenclature are legion and have been debated to death, but the current majority-view seems to me also to be the right one (for all its abiding problems), namely that Gorgippia was the name given to a previous settlement known as the Harbour of the Sindians, perhaps the point in Sindike from which Herodotus envisaged the voyage south.[11]

In that regard it is at least an interesting coincidence that the other end of his voyage was Themiscyra, the homeland of the Amazons, at least until, in Herodotus' version, Greeks (he does not specify the canonical Heracles, Theseus or others) tried to sail off with them west across the Euxine, back to Greece proper. In particular, when the Amazons, having seized the ship, are carried at the mercy of the waves, they fetch up to the north, not among the Sindians, but somewhat to the west it seems, probably at Taganrog in north-east Azov, among the Scythians. Although the details of Herodotus' account do not match our inferences from Polyaenus, the broad circumstances do: that is, we are left with Amazons north and south, across a sea, which links the two coasts, whether or not Themiscyra and the Harbour of the Sindians, alias Gorgippia.

The central point, however, is not to be lost in the fog of close or distant allusions. That is that Polyaenus' tale, in addition to its other functions, offers an account of the development of Bosporan rule over the Sindians under Satyrus and his son Gorgippus. Moreover, the reign of Satyrus is a historical reality, which can be dated to *ca*. 433–389 BC. The Sindians seem first to have appeared in the titulature of the Bosporan rulers under Leucon I; their incorporation into the Bosporan state (however envisaged) is usually dated in the late 380s, though we might wish for a richer epigraphic record in these years.[12] The naming of Gorgippia is one important feature of that development.

On this view, Polyaenus' tale shows us, in a romance of exemplarity centred upon Tirgitao, something of the historical upheavals, which enabled the Bosporan kingdom to extend its influence among the Sindians. The Sindian ruler, beleaguered (by his subjects? or by Tirgitao herself?), had had recourse to the Bosporan king who took over the situation, including now (if not before) conflict with peoples to the immediate north, the Maeotians.

Of course, some may prefer to consider the whole story an exotic and ahistorical product of the Greek novelistic imagination. But that would be an excess of scepticism in my view, for we know the fact of Bosporan extension into the land of the Sindians at much this time. Moreover, although the archaeological record could be clearer, there is evidence of violent destruction around 400 BC, not least at what was to be called Gorgippia.[13] Further, we have a sudden and short-lived minting of coins among the Sindians in these years, at the very end of the fifth century BC, as it seems. Some sport the legend "Of (the) Sindians". These coins have often been discussed in terms of their iconography (which picks up features from a range of Greek coins, as might be expected) and the location of their mint, as well as their place against a broader (if faint) picture of Greek cultural influence among the Sindians (principally imported fine pottery and containers).[14] Less attention has been paid to the reasons for their being minted at all: economic needs have been supposed, though what these were and why they should suddenly come and go remains to be explained adequately. Moreover, the fact that they are found predominantly on the Taman peninsula does not encourage the idea that they were (suddenly) needed for trade. Rather, I suggest, we should look for an explanation in terms of warfare. The Sindians had a sudden need to mint coins, I suggest, to meet the demands of the warfare (especially to pay troops), which seems to have been a key feature of life among the Sindians for a short period in these years. The extension of Bosporan influence, restoring peace, removed the need for the Sindians to mint their own coins, even if they retained a significant measure of independence for some years after the solution, which Polyaenus attributes to Gorgippus.

The hypothesis finds further support in Aeschines' attempt to slander Demosthenes, by speaking of his grandfather Gylon's treacherous dealings with the Bosporan rulers around the end of the fifth century BC [Aeschin. 3. 172]. This is not the place to explore the matter in detail: elsewhere I have argued that we need not accept Aeschines' implication of treachery (Braund 2003, 198–202). Suffice it here to say that the Bosporan gift of Kepoi to Gylon, perhaps *ca*. 404 BC, looks interestingly different from Aeschines' caustic account of it, once it is brought together with our foregoing inferences from Polyaenus and numismatics. Since Aeschines seeks to present Gylon's receipt of Kepoi as the price of treachery to Athens, he gives no hint of what the gift meant. On the present argument, it meant a difficult role in the current extension of Bosporan power through the Taman peninsula, beset as it was by conflicts with the Maeotians and (as it seems) upheavals among the Sindians. If that is right, Gylon received something more challenging than the comfortable sinecure, which Aeschines' rhetoric implies. At the same time, we ow seem to have a motive for the Bosporan 'gift' quite different from Aeschines' suggestion (as some have seen it) that the gift was a reward for treachery at Nymphaeum. The Bosporan rulers needed a good commander at Kepoi, experienced in the Peloponnesian War and in its aftermath (I suggest) short of alternative courses of action.

[10] Alekseyeva (1997, 39–41). Cf. Gaidukevich (1971, 228–29) for valuable caution on his precise status and location vis-à-vis Leucon I.

[11] See now Tokhtasev (2002).

[12] *CIRB* 6, with commentary ad loc.; Shelov (1978a, 31) gives a little accessible discussion and bibliography. He rightly imagines a process of extending influence before Bosporan direct rule.

[13] Alekseyeva (1997, 32); Gaidukevich (1971, 238–39).

[14] Shelov (1978a) remains the best discussion. See also Zavoykin and Boldyrev (1994).

Whether or not such a hypothesis finds support, one final observation demands to be made. The simple fact that Polyaenus includes 'stratagems' located to the north of the Black Sea is of itself worth noticing. Not only do we have this tale of Tirgitao, but also another story concerning this Satyrus, as well as several stories about Leucon I of the Bosporus, plus one about Paerisades [7. 37] and more on Scythians and Sarmatians. This is not the place for a detailed exegesis of his principles of selection, but I would suggest that we have here, in his evident concern with stories relating to the region, the fruit of a congruence of at least three tendencies of the author and his world in the mid-second century AD. First, any search for 'stratagems' through previous Greek literature (including canonical texts like Herodotus' Histories) would throw up a range of stories concerning the Black Sea, Scythia and the like: it may (perhaps) have been marginal to classical Greece, but, by virtue of its appearance in canonical texts, the region had become a key part of the classical heritage for Greeks of the Roman imperial period. Second, Polyaenus' contemporaries, most obviously Lucian, show a particular taste for stories with a Bosporan or Scythian connection: the region was in vogue, as I shall argue in detail elsewhere. Third, Polyaenus addresses his work to Marcus Aurelius and Lucius Verus during their war in the east, which included Cappadocia and Armenia (AD 162–166), and after Marcus' success against the Getae on the Danubian frontier, a campaign to be renewed: in that context the world of the Black Sea was not simply an exotic periphery, part of the heritage and in vogue, but also a region, which demanded current imperial consideration, not least as a source of supplies for the army.

Archaic Myrmekion

A. M. Butyagin

Archaic levels of archaeological sites in Bosporus have lately become the focus of active investigations. The result is the whole bulk of evidence from the earliest Greek settlements in the region of the Strait of Kerch. Among others, one should mention the archaeological material from Panticapaeum (Tolstikov 1992), Nymphaeum (Butyagin 1998a), and Kepoi (Kuznetsov 1992). Of particular interest are the results obtained in Myrmekion. Excavation of this relatively small site has provided one with more accurate information on separate phases of the early history of not only Bosporus, but also the northern Black Sea littoral as a whole.

The first contribution was made by V.F. Gaidukevich. The investigation of the site carried out by him in 1934–1966 enabled him to establish the dates of the settlement and uncovered a series of construction remains from the Late Archaic period. In the western part of the site (plots A, B, V)[1], where excavation was very selective, pottery fragments were found to be dated from the middle to the second half of the 6th century BC (Gaidukevich *et al.* 1941, 127–34). However the main scope of investigations covered the central and western parts of the settlement (plots Z, I, M) (Gaidukevich 1952a, 194–97; 1958, 185–218; 1987). The earliest levels were explored by sampling cuts inside the structures of a later time, therefore the restoration of the Late Archaic history of the settlement was rather complicated. The exception was only one big house covered with ash-mound 1, which was cleared almost completely (Butyagin 2000a).

The investigation carried out in 1982–1994 in the western part of the site by the archaeological team of Y.A. Vinogradov was focused on the earliest levels of the settlement. It succeeded in clearing the matters related with the foundation and development of Myrmekion (Vinogradov 1992). At present, the team continues to concentrate its efforts on the study of the early levels (Butyagin *et al.* 2001).

The position of Myrmekion, as an ancient city, was extremely favourable. It was founded on a rocky cape, convenient for a small acropolis, near a bay and a river flowing into it and providing the source of fresh water. At present, both are buried under the earth. Fresh water was also available from multiple springs, some of which have survived to nowadays.

The foundation date of the settlement remained a mystery for a long time. In the western part of the site, V.F. Gaidukevich found a fragment of Wild Goat Style pottery, which allowed him to date the colony from the middle of the 6th century BC or even an earlier time (Gaidukevich *et al.* 1941, 130, fig. 31). The investigations over the eastern part of the settlement failed to discover such an early pottery material.

In 1992, on plot S, at the foot of the Karantinnii Cape rock, Y.A. Vinogradov discovered a number of early pits (Vinogradov 1999b, 284–86; Butyagin 2000b). All of them were only half-preserved, having been damaged by a large Late Archaic pit. The pottery found in them deserves special attention. These are numerous fragments of Ionic vases with rosettes and rays along their rims, *pinakes* with meander and lotus buds, shreds of Samian vessels, fragments of early amphorae.

Of particular interest is the fragment of the North Ionian Wild Goat Style amphora with the representation of an S-shaped goat and a plait on its neck. By analogy with other Mediterranean and Black Sea monuments, it can be assigned to 580–560 BC.

Another vessel, which deserves attention, is the fragmentary amphora with the representation of the woman *protoma*, of which only the fragments of the upper part have survived (Butyagin 1997a). The representation of this kind has no parallel in the vase painting of Ionia and the continental Greece, however some of its features permit us to assign it to the first third of the 6th century BC.

We therefore can conclude that the whole set of finds from the pits dates back to the first–second quarters of the 6th century BC. Our opinion is that this time may be regarded as the date of the foundation of the Greek settlement on the Karantinnii Cape. It is unclear yet whether it started as an independent colony or whether it was founded by the inhabitants of the nearby Panticapaeum (because of secondary colonisation). At present, no objective data are available to confirm that the above two colonies were founded at different time.

One should note that most of the fragments mentioned above were damaged during the fire that took place around the middle of the 6th century BC. Some shreds of amphorae even got sintered. A thin layer of ash left by the fire was traced over the whole area adjacent to the acropolis. It may be suggested that the fire destroyed the dwellings of the first settlers, which were located right on the rock, where from broken and burnt pottery was dumped into the pits.

[1] The plan of the plots and the general map of the Myrmekion settlement can be found on the figure 1 of the article by D.E. Chistov *Myrmekion in the second half of the 5th – beginning of the 3rd century BC: investigation results and problems* of the present volume.

The earliest dugouts[2] discovered in Myrmekion date from the end of the second quarter–middle of the 6th century BC (Vinogradov 1991a; 1994). One of them is round in plan, about 2 m in diameter. Its floor is thickly covered with clay, and it has a small step (Fig. 1: 1). Undoubtedly, it was used for household purposes. It ontained a considerable amount of hand-made pottery. The second dugout is located in the acropolis between rock exposures and is rectangular (Fig. 1: 2). It was in use for not less than 40 years, as evidenced by the clay cover of its floor. In the last quarter of the 6th century BC, its walls were reinforced by stone masonry.

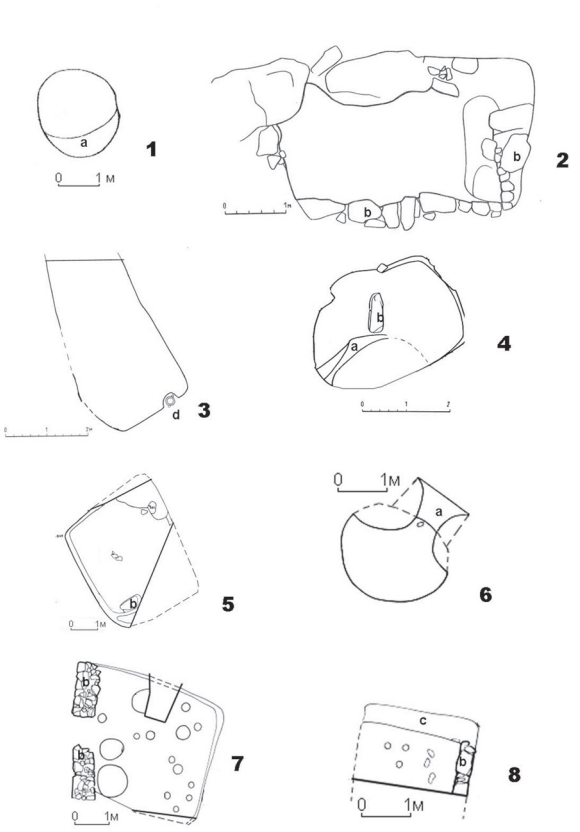


Fig. 1. Layouts of archaic dugouts in Myrmekion: 1, 2 – from the middle of the 6th century BC; 3–8 – from the second half of the 6th century BC; a – a step cut in virgin loam; b – masonry walls and stones; c – a ditch from a masonry wall; d – an amphora neck brazier.

Dugouts continued in use throughout the second half of the 5th century BC. The majority of nine dugouts from this time are rectangular (Butyagin 1997b, 95). The only one round dugout was probably used for household purposes, as its floor was not covered with clay (Fig. 1: 6). One of the dugouts was divided into the residential and household parts and contained a table cut in clay.

[2] In the present article, all structures hollowed out in earth will be called dugouts, since their subdivision into dugouts and semi-dugouts is very conventional and cannot always be possible due to the bad state of preservation.

From the last quarter of the 5th century BC, dugouts were built on the stone masonry foundation, which supported mud-brick walls. Besides the above dugout in the acropolis, stone masonry was found in three other dugouts (Figs. 1: 2, 7, 8). It is curious that none of the dwellings had a fireplace, although in places the walls bear traces of fire. It appears that the local population used portable braziers made of amphora necks and shoulders. Such braziers were found *in situ* in one of the dugouts and around it (Fig. 1: 3).

Another remarkable structure was discovered in 1991–1993. It was a fortification wall, the earliest defence structure found in this site. Its one face was composed of large, rough limestone blocks bound by clay mortar mixed with small pebbles (Vinogradov 1999b, 290). The wall filled the gaps between rock exposures in the acropolis. Its stretch 20 m long and up to 1.2 m high has survived to the present day. Its closest analogy is the masonry wall of the 7th century BC from Old Smyrna (Nicholls 1958–59, pl. 12: c).

The wall can definitely be assigned to the second half of the 6th century BC. Its foot is underlain by the ash-containing layer that resulted from the fire of the middle of the 6th century BC. The material from the pits under the wall is also dated around the middle of the 6th century BC, so is the pottery found in the earth between the wall and one of the rocks. Thus, one can identify the construction date of the wall as the third quarter of the 6th century BC.

This defensive stone wall seems to have been extremely vital for the inhabitants of the Archaic Myrmekion. They had to use all available resources to construct it, while living in dugouts. The only reason why this construction was ever started could be a serious danger to the city from outside, which probably was the cause of the fire in the middle of the 6th century BC. It is worth noting that the Taganrog settlement was destroyed by fire at this very time, too (Kopylov and Larenok 1994, 6).

In the first quarter of the 5th century BC, a house was attached to the wall from its outside. The wall thus had already lost its importance as a defensive structure by this time. The beginning of the 5th century BC is marked by the construction of the first ground buildings with mud-brick walls and stone foundations. Dugouts were filled up with earth.

Two shallow semi-dugouts (one of an area of about 16 m^2) found on plot P were obviously in use for a very short time (Vinogradov 1991b, 73). One should not reject the possibility that they were temporary dwellings, in which the citizens of Myrmekion lived during the construction of new ground buildings (Fig. 1: 7, 8).

The change from underground to ground construction is easy to date by the pit found under the foundation of one of Late Archaic buildings. Its filling contained amphorae from the beginning of the 5th century BC.

The house of that time had a big furnace, a porch, interior space, and a paved courtyard. The streets were paved and had stone sidewalks. A big house with a furnace and a courtyard was uncovered on plot S, near the western border of the city (Fig. 2: 1). Active construction was also carried out at the time in the eastern part of the Myrmekion. On plot I, the sampling cuts made in Hellenistic structures discovered multiple masonry and pavement examples from the Late Archaic period.

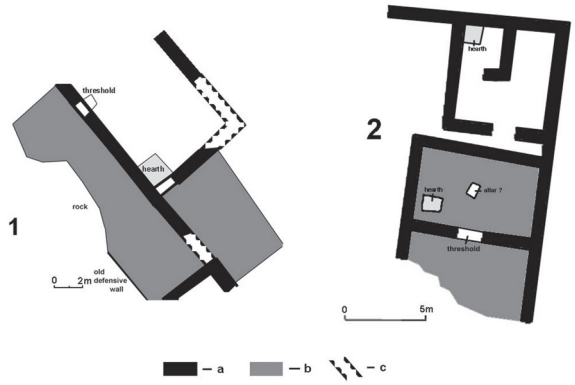


Fig. 2. Layouts of ground structures in Archaic Myrmekion: 1 – a house on plot S; 2 – a house on plot I; a – stone foundations of walls, b – stone pavements, c – unpreserved wall foundations.

Of great interest is the house revealed in the northern part of the site (Fig. 2: 2). Its area was not less that 500 m^2. It consisted of several rooms, one of which had an 'altar', a stone trough filled with clay. Later it was covered with an ash-mound, which became one of the sanctuaries of Myrmekion (Butyagin 2000a).

With the construction of stone buildings the area of the city increased by 1.5–2 times. One should associate it exclusively with the natural growth of the population, since the same tendency was typical for many other cities of the Black Sea region 50 to 70 years after their foundation (Vinogradov and Rogov 1997, 67).

At the end of the first third of the 5th century BC, all ground structures were destroyed by fire or abandoned. In their ruins Scythian arrowheads were found, one bearing marks from a blow against some obstacle.

The fortification wall built over the ruins in the western part of Myrmekion evidenced a considerable decrease in the size of the city (Vinogradov and Tokhtasev 1994). In our opinion, all these changes could be linked with nomads, whose raids on Bosporan cities became more frequent at the time (Vinogradov and Marchenko 1989, 541). These events conclude the history of Archaic Myrmekion.

It seems important to describe briefly the necropolis of Archaic Myrmekion, which, as a rule, is left out of the scope of investigations. The matter is that the necropolis of Myrmekion joined the huge necropolis of Panticapaeum and therefore was studied indivisibly with the latter. Nevertheless, some information is of avail.

In the 19th – beginning of the 20th century the necropolis of Myrmekion was investigated by A.E. Lutsenko, F.I. Gross, K.E. Dumberg, and V.V. Shkorpil. Unfortunately, their description of graves is rather incomplete. More or less detailed information is provided in a small hand-written report by A.A. Bobrinskii, who excavated four graves, two of which may be dated from the Archaic period. They were pits dug in the earth and covered with limestone slabs.

The archaeological material unearthed then from the necropolis of Myrmekion is housed in the State Hermitage Museum. The collection totalling 15 objects can be assigned to the Late Archaic period. It includes a few Attic black- and red-figure lekythoi, coloured glass amphoriskoi and alabastra, a Corinthian kothon (*exaleiptron*), a fragment of the bottom of an Attic red-figure cup with the representation of the Satyr, which probably belongs to Onesimus and dates to the 490s BC (Prushevskaya 1945). On the whole, all above objects fall within the first half of the 5th century BC.

On plot B, V.F. Gaidukevich found two graves containing amphorae and black-figure lekythoi (Gaidukevich 1952a, 142–44). The construction of the graves does not differ from that described by A.A. Bobrinskii, which permits us to date them to the first half of the 5th century BC.

We therefore can state that the necropolis of Archaic Myrmekion extended from the northern border of the early settlement to the small plateau 1.5 km to the north-east of it.

In conclusion, we would like to discuss briefly the population composition of the Archaic Myrmekion. The earliest levels of the settlement appear to present little evidence of hand-made pottery. However, its share increases steeply in the dugouts and pits of the middle of the 6th century BC and in places exceeds 50 % of all pottery finds (excluding amphorae). S-shaped pots were found together with many fragments of pottery that might have belonged to the inhabitants of the Asiatic Bosporus, the Maeotians and Sindians.

In the second half of the 6th century BC, the share of hand-made pottery drops to 16 % and then to 12 % of all pottery finds. In ground buildings, it varies from 6 to 15 %, averaging approximately 10 %. The typical fragments of Maeotian vessels almost disappear, giving way to S-shaped pots.

All above indicates that the barbarian component in the population composition of Myrmekion tended to decrease, and the barbarians living in the territory of the Greek colony were fast to hellenise (Butyagin 1998b).

Of interest are the results of analysis of seeds from the pit on plot S, dating to the turn of the 5th century BC. It contained in abundance seeds of soft wheat, few seeds of emmer wheat and, what is very important, a number of grape stones. One may suggest that Greek colonists had viniculture already during the earliest phase of the colony's history. On the other hand, these grape stones could have been brought here with imported wine.

The religious rites of the Archaic Myrmekion remain unclear. The structures that can be regarded as sanctuaries (the dugout in the acropolis and the house on plot I) are very few. The fact that the Myrmekion acropolis had a sanctuary at the end of the 6th – beginning of the 5th century BC is confirmed by a few graffiti on the fragments of vessels found at the foot of the acropolis rock. They are consecrated to Apollo the Healer and Nymphs (Vinogradov and Tokhtasev 1998, 24–37).

All said above characterises, more or less completely, the early history of the small Greek colony of the Cimmerian Bosporus that during 70–80 years of its existence, turned from a little village into a town. Its further development was delayed due to the aggravation of the Greek-barbarian relations.

Myrmekion in the Second Half of the 5th – Beginning of the 3rd Centuries BC: Investigation Results and Study Problems

D. E. Chistov

The systematic investigation of the settlement on the Karantinnii Cape started sixty years ago, in 1934. Its first phase, interrupted only for the years of the war, continued till 1965 and was linked with the name of the outstanding archaeologist V.F. Gaidukevich. Excavations were carried out by the Myrmekion team of the Bosporan Expedition over fourteen plots located in different parts of the ancient city: at the foot of the acropolis rock, on its eastern, northern, and north-western outskirts (today, it appears impossible to locate some of the plots). The main efforts of the team were concentrated on the eastern parts of Myrmekion, where excavations were conducted on three plots – B, M, and I. Works in other parts of the city were confined to a reconnaissance study.

All the material uncovered in the 30s–60s has been published and is widely-known (Gaidukevich 1941; 1952a; 1987; Gaidukevich *et al.* 1941). The excavations succeeded in revealing large built-up areas from the Hellenistic time, including big production complexes, such as wineries and fish salting cisterns. The investigation of building remains from earlier periods was restricted to small, irregular areas, as practically everywhere they were overlain by later Hellenistic complexes.

In 1982 excavation was resumed by the Myrmekion team of the Bosporan Expedition in conjunction with the Leningrad Branch of the Institute for Archaeology of the USSR Academy of Sciences under the direction of Y.A. Vinogradov and continued till 1994. Since 1999 the site has been excavated by the joint team of the State Hermitage Museum and the Research Institute for Material Culture of the Russian Academy of Sciences. During the last fifteen years, investigations have been focused on the western part of the city, namely, on the territory extending along the western slope of the Myrmekion hill and the area adjacent to the acropolis rock (plots P, R, S: Vinogradov 1992). No evidence of any regular construction from the Hellenistic and Roman periods, compared to the one revealed by V.F. Gaidukevich in the eastern part of Myrmekion, was found. Digging into earlier levels resulted in numerous Archaic complexes (Butyagin 2000b; 2000c).

It happened so that the construction complexes of the period between the 'Archaic Myrmekion' and the Hellenistic 'city of wine makers' could not be studied in a full measure. This is explained, on the one hand, by the specific character of the material distribution in different parts of the settlement and, on the other hand, by a certain insufficiency of the methods used in the 30s–60s. It should be noted that the poor state of preservation of building walls does not agree with the conception of the economic prosperity of Bosporus in the 4th century BC and creates the illusion of 'neglect'. It therefore seems useful to summarize information on all kinds of construction remains from the second half of the 5th – beginning of the 3rd centuries BC.

Fortifications

Early evidence includes the recently discovered remains of a Late Archaic bastion that used to protect the acropolis (Vinogradov 1999b, 290–92) and a section of fortification wall from the Classical period (Vinogradov and Tokhtasev 1994). The latter revealed on plot R is the earliest fortification wall of Myrmekion known to date. The Late Archaic bastion is, in essence, a small ruined fort, which must have consisted of just a few structures. In war time this 'castle' could hardly provide a temporary shelter for a great number of citizens or enough space for their property and food.

The wall, too, appears to have protected only a small territory (a quarter of the city) adjacent to the acropolis rock. Only a short stretch of the 5th-century BC wall has survived to the present day, therefore it is difficult to assess the actual area it protected. In any case, the walled area of Myrmekion could hardly exceed then 16000 m^2.

The fortification wall of the second quarter of the 5th century BC is overlain by the construction remains of the second half of the 4th – beginning of the 3rd centuries BC. Nevertheless, the wall must have ceased to be used for defence much earlier. In the third quarter of the 5th century BC, a rectangular semi-dugout was built at the outer face of the wall (Vinogradov and Tokhtasev 1994, 59).

At the turn of the 4th century BC, a new fortification wall was built around Myrmekion. This time it encircled the whole territory of the city. Cleared were two stretches of the wall and the foundations of two rectangular towers in its northern and eastern parts. In the western part, no fortifications were discovered. Moreover, the investigations of the last twenty years have failed to discover any evidence of the fortification wall on the west. Probably the wall approached the bay buried now under the earth and extended no further, leaving the city unprotected from the sea[1].

[1] In this connection one should mention "the reinforced embankment of Myrmekion" revealed by F. Gross in 1885. This stone structure preventing the shore from washouts could easily be a part of the fortification complex of Myrmekion, as it protected the city from the sea (Gaidukevich 1941, 107). According to K.E. Grinevich's suggestion (1927, 6), it belonged to a big building.

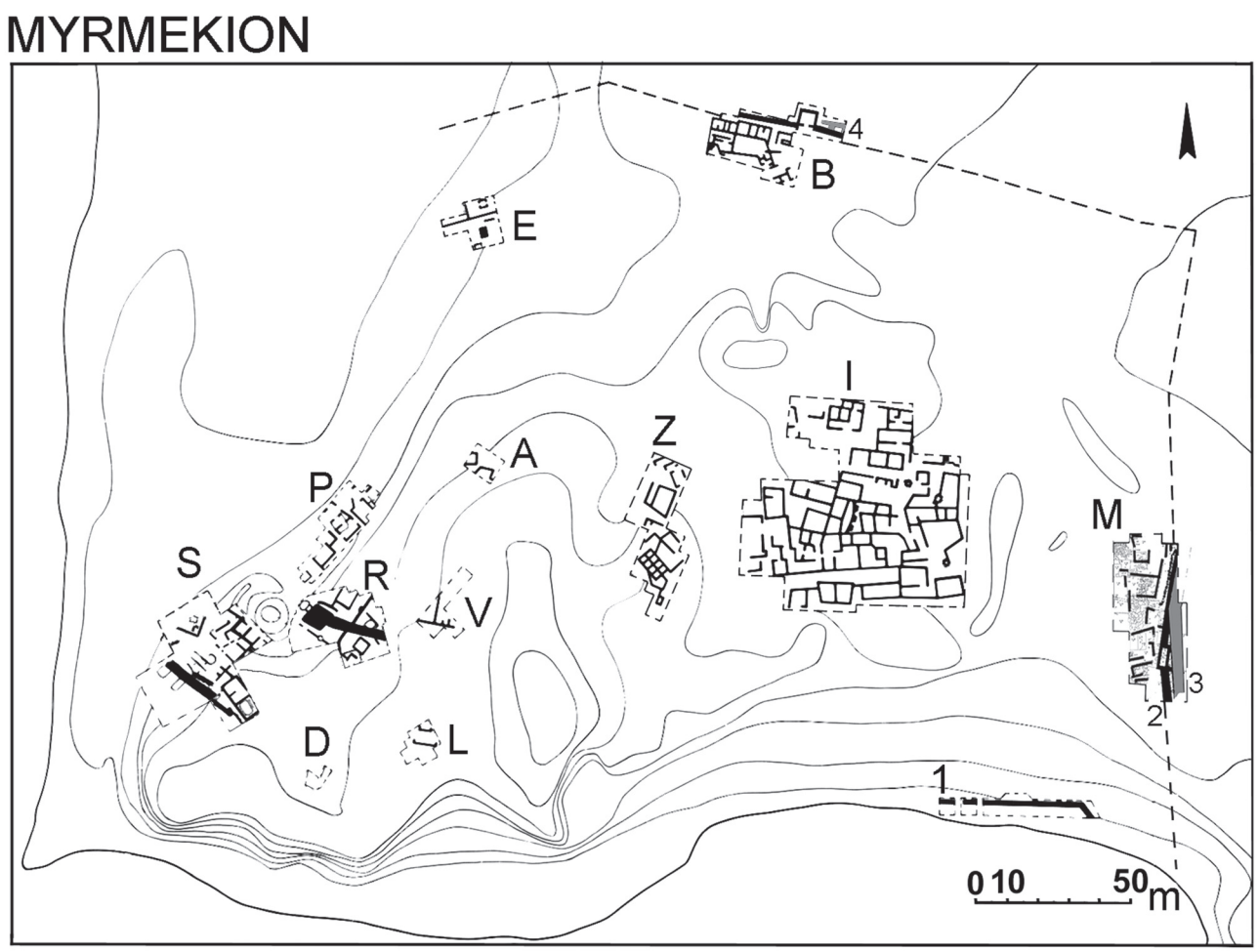


Fig. 1. Map of excavations in Myrmekion: 1 – excavation by F. Gross; 2 – eastern fortification wall B; 3 – eastern fortification wall A; 4 – northern fortification wall.

The remains of the wall uncovered on the eastern plot (M) evidence two periods of construction. The earlier wall known as 'wall B' (Fig. 1) from the middle of the 3rd century BC was demolished and replaced by a new one, 'wall A' (Fig. 1) (Pruglo 1960, 268). The demolition of the northern wall must have taken place in the middle of the 3rd century BC (at the same time with the demolition of 'wall B'), as the latest pavement of level 116 (Gaidukevich 1941, 123; 1952a, 141) contemporary with the northern wall dates to the second half of the 4th – 3rd centuries BC and the later pavement overlies the wall remains. If this suggestion is true, one should admit that, contrary to V.F. Gaidukevich's opinion, the Late-Hellenistic northern wall of Myrmekion has not been discovered yet. Probably one should survey the area to the north.

In 1820 Paul Dubrux compiled the first description of Myrmekion. Jointly with I.A. Stempkovskii, he prepared the first topographic map of the settlement. The original of this map is lost. Two decades after Durux, I.P. Blaramberg published an "approximate plan of the ancient Myrmekion" compiled, as believed, on the basis of Dubrux's map (Fig. 2: 2). V.F. Gaidukevich published another map kept in the archive of the Research Institute for Material Culture (Gaidukevich 1941, 13) (Fig. 2: 1).

Above maps are similar in principle, while differing in some details. The fortifications encircle an area of about 10 hectares. Shown in the north-eastern part of the city are the remains of some structure, probably, a tower. On the north, a gateway is marked. According to Dubrux's description, the gateway was well-preserved (Dubrux 1858, 15). In addition, the maps show the traces of ditches, towers, *etc*. It remains unclear what exactly Dubrux meant by the 'ramparts' he marked in his map: were those the remains of earthworks unknown to us or was it just a swell of soil over the ruins of ancient walls?

No evidence of earthen ramparts was found in the 20th century. However, the suggestion that the 'ramparts' of Dubrux and Blaramberg and the fortifications revealed by V.F. Gaidukevich are the same thing is rather dubious.

Comparing the 19th-century maps and descriptions of the settlement with the contemporary plans is not an easy task. The 19th-century maps used rather primitive

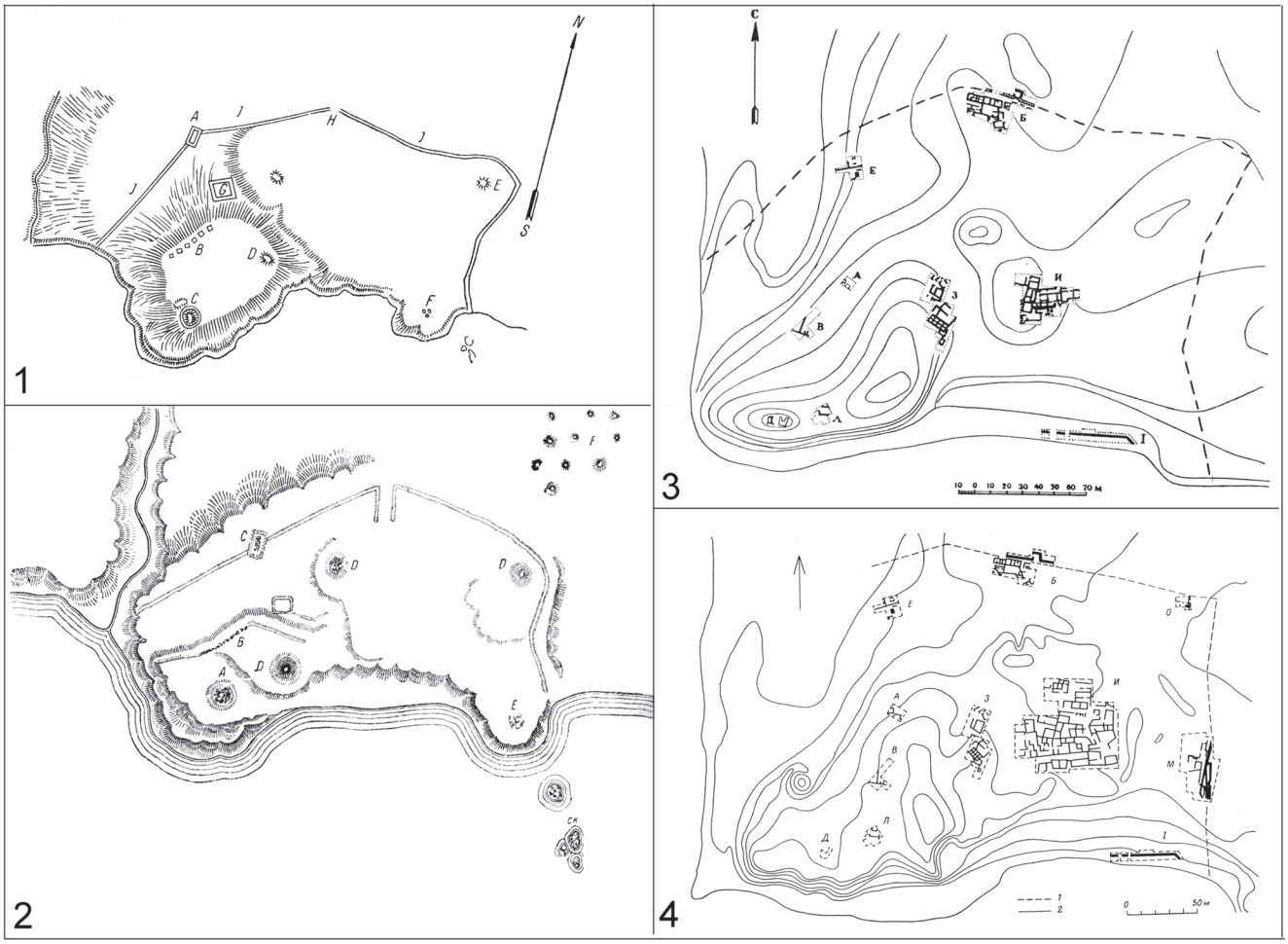


Fig. 2. Maps of Myrmekion: 1 – map from the archive of the Research Institute for Material Culture; 2 – Blamarberg's map; 3 – map of 1956; 4 – map of 1965.

techniques: they had no common scale and suffered from obvious distortions. Therefore, they cannot be just superimposed on new maps. The area of Myrmekion itself and the territories around were intensively developed during the last 150 years. The only landmark that can be used for reference is the coastline.

All maps of Myrmekion show two capes, the Karantinnii Cape formed by the acropolis rock and further, on the east, a small rocky cape, which, in the maps of Dubrux and Blaramberg, bears the letter F (for the ruins discovered there). Across this cape, in the sea, there are a number of picturesque rocks that probably gave the city the name of Myrmekion. Nowadays, there is a round summerhouse, a rotunda, on the cape. One can easily notice that Dubrux's and Blaramberg's 'rampart' reaches the shore a little to the *east* of this place, whereas the cleared stretch of the northern fortification wall (plot M) runs perpendicularly to the shore *west* of the rotunda cape. If to believe that there is no mistake in the 19th-century maps, the distance between the two suggested lines of fortifications can be estimated at about 50 m and the mysterious 'rampart' must be located under the modern hospital.

In one of his publications devoted to the results of the 1935–38 excavations, V.F. Gaidukevich returns to the question of the disappeared 'ramparts'. He concludes that P. Dubrux and I.P. Blaramberg could hardly trace the stone fortification wall from the surface, as its remains were covered with the thick layer of occupation from the 13th – 19th centuries (Gaidukevich 1952a, 147–48). The author does not reject the possibility that after the demolition of the wall, the city was encircled by an earthen rampart. In his further publications, he never doubts that the 'ramparts' and the fortification wall are the same thing.

The comparison of the maps made in 1934–1965 brings one to the following conclusions. The 1956 map (Fig. 2: 3) shows a dotted line that almost coincides with the 'rampart' in Blaramberg's map (Fig. 2: 2) and the section of the wall cleared in the northern part of the settlement (plot B). In 1958 another wall was discovered to extend along the eastern border of the city. That is why the dotted line of the 1965 map (Fig. 2: 4), while having the same direction, approaches the coast not to the east, but to the west of the rotunda cape. One should admit therefore that the location of the fortification remains shown in

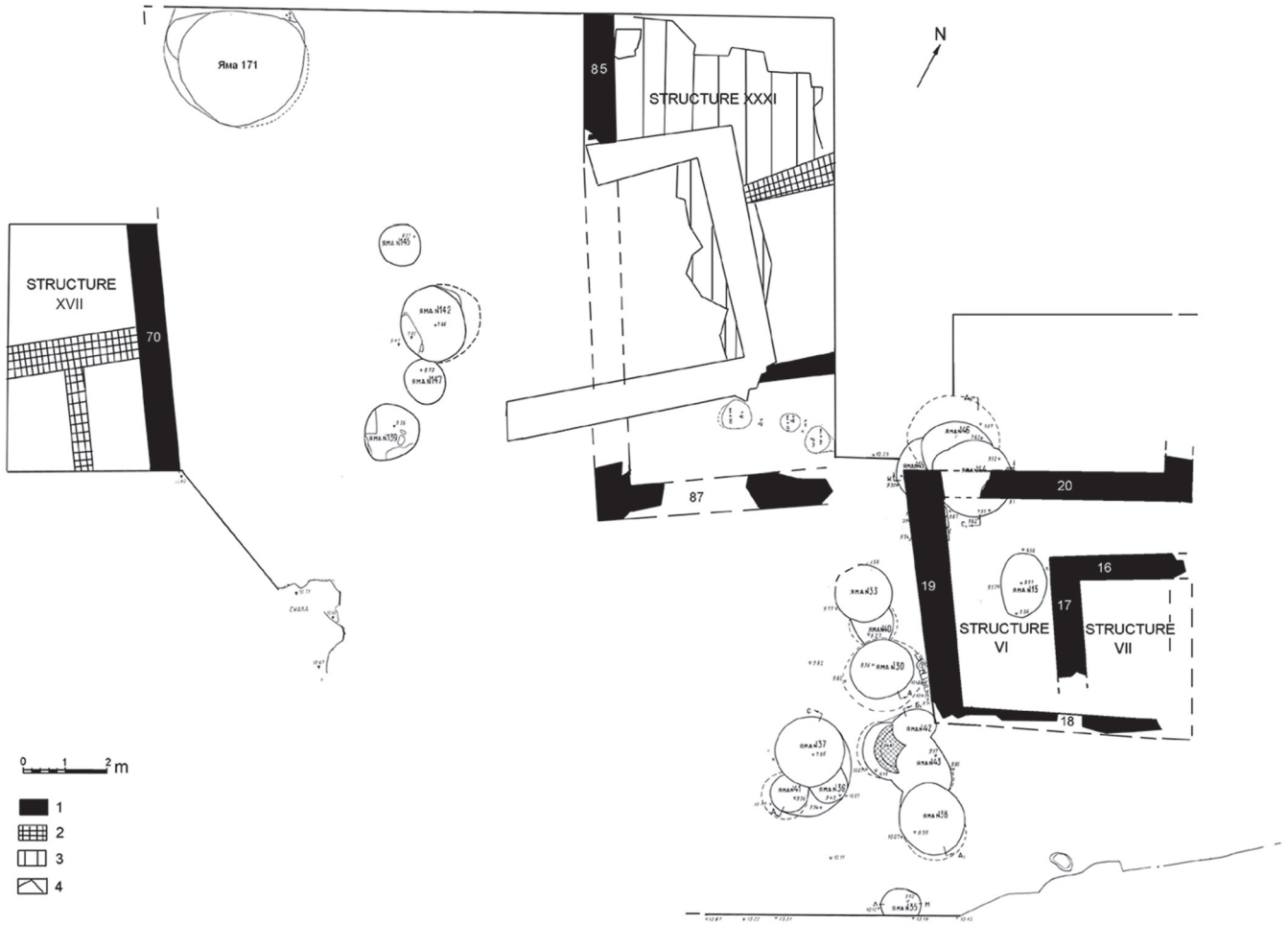


Fig. 3. Construction remains from the first half of the 4th century BC. Plot S. 1987–2001 excavations: 1 – stone masonry foundations of the 4th century BC; 2 – mud-brick masonry from the 4th century BC; 3 – 4th-century BC pavement; 4 – Roman masonry wall.

the 19th-century maps still presents a problem which has not been solved even by the discovery of the city wall of the 4th – 3rd centuries BC.[2]

Architectural complexes

If not to take into account fragments of separate walls and pavements, only two buildings in the eastern part of the settlement date to the 4th century BC. The first was built on the smoothened top of ash-mound I. It consisted of several rooms, one of which had a stone altar (Gaidukevich 1987, 40–51). This complex was ruined at the end of the 4th – beginning of the 3rd centuries BC and covered with another ash-mound (II). The second complex, a residential building from the 4th century BC (Gaidukevich 1987, 56–65) is located 30 m to the southeast of the first.

Complexes from the second half of the 5th – first half of the 4th centuries BC were discovered mainly in the western part of Myrmekion. However, they are much fewer than the earlier structures, ground houses and semi-dugouts, found in this part of the city. They are only nine, whereas the latter total 20. Five of them are semi-dugouts and four are ground structures.

Of particular interest are the remains of structures that survived the fire of the 4th century BC. Until quite recently only two complexes of this kind were known. They were discovered in 1986–1997 and 1994 on plot S. Both represented ground stone and mud-brick structures roofed with tiles (Fig. 3).

The first complex consists of two rooms (VI and VII) and a small corridor. Its floor is thickly covered with clay and its mud-brick walls stand on the stone foundation (Vinogradov 1992). The second house (XVII) is represented only by the stone foundation of the northern wall and the shapeless remains of interior stone and mud-brick walls (Vinogradov 1997, 59–61; Chistov 1999, 161–73).

[2] The solution to this problem may be found in the detailed map, which I.V. Tunkina discovered in the manuscripts of P. Dubrux (Tunkina 2002, fig. 47). In this map, the eastern fortification wall is shown to run straight to the rotunda cape, where earlier a fortification tower was probably located.

Another complex (XXXI) from the same time was found in 2000 (Butyagin *et al.* 2001). This complex was badly damaged during the Roman time. However its large courtyard paved with stone slabs and two walls of the adjacent house (85 and 87) have survived to the present day. In the western part of the courtyard, there is a rectangular pit. It was probably meant for water from the sewer at the foot of wall 85. There were layers of ash and shapeless, burnt mud brick remains found both inside the house and in the courtyard. The shapeless mud brick remains fringing the pavement on the northeast belonged probably to the wall that overlooked the courtyard. Wall 85 must have separated the courtyard from another space located to the west of it and destroyed by later levelling: found were only scarcely perceptible traces of adobe floor covered with an ash layer from the fire. The whole area of the complex, including the paved courtyard, is 60 m^2.

The pottery finds from this complex were not as numerous as those from structures VI–VII and XVII. Nevertheless, they suffice to date the complex reliably. Of particular interest are the fragments of Heraclean stamps, the fragment of a red-figure fish dish, the terracotta statuette of Nike(?), and the bottom of a cup with a ring-shaped foot from the second half of the 4th century BC, which bears the graffiti ΚΟ ΠΑΙ.

This complex could have been a part of the building that included structure VI or some other building located nearby and ruined at the same time. The arrangement and orientation of the structures from the second quarter of the 4th century BC, damaged as they were by reconstruction during the Roman time, evidence that the city development on the western slope of the hill was based on a regular plan (Fig. 3).

On the whole, the development of Myrmekion during the Classical and Hellenistic periods can be described as follows. Around the second half of the 5th century BC the fortification wall was built. Investigation of plot P brought Y.A. Vinogradov and S.R. Tokhtasev to the conclusion that the earlier developed territory had been abandoned and left outside the fortified area: in the second third of the 5th century BC, the area of the city decreased and the majority of its inhabitants moved under the protection of the wall (Vinogradov and Tokhtasev 1994). Probably the construction of the wall was caused by the aggravation of the political situation in Bosporus, being "one of the Spartocids' actions to unify against the Scythian advance" (Vinogradov and Tokhtasev 1994, 60), and the future development of the city did not interest the wall constructors. Such a small area could hardly provide room for more than five hundred people.

In the third quarter of the 5th century BC, the development of this territory resumed, but it was not regular. At the same time the fortification wall lost its importance as a defensive structure. The shortage of place made people move outside the fortified area and build their dwellings at the outer face of the wall. The example is the above semi-dugout built at the city wall in the third quarter of the 5th century BC. It evidences that the construction of that time failed to meet even the elementary standards of defence and the wall ceased to be used (repaired and renovated) for defensive purposes. The following growth of the city, however, called for new fortifications, but it must have taken several decades before their construction was started.

In the 4th century BC, Myrmekion, like many other cities of Bosporus, was involved in defensive construction[3]. At the beginning of the century, under the early Spartocids, a new fortification wall was built around Myrmekion to encircle, for the first time in its history, the whole (or almost the whole) city. One can say that the newly built wall determined the boundaries of the city for many centuries ahead. According to Shelov-Kovedyaev (1985, 117), the active defensive construction under the Spartocids is evidence not only of the growing wealth and power of Bosporus, but also of the highest concentration of human, financial and other resources of the state for its territorial expansion.

The second quarter of the 4th century BC was marked by a great fire. Its traces were found in the western and eastern parts of Myrmekion. On the whole, the western complexes from the second half of the 4th – first half of the 3rd century BC have no remarkable features and offer little pottery evidence. They are mainly represented by structures hollowed out in earth, dugouts or basements, and used for various purposes. It is possible that there was no regular construction at all in this part of the city at the time. The city centre tended to shift from the acropolis rock towards the east, whereas the territory extending along the western slope of the Myrmekion hill was used mainly for household purposes.

In the second half of the 3rd century BC, the city fortifications underwent cardinal rebuilding. The dilapidated defensive structures of the beginning of the 4th century BC were demolished and replaced by a new, more solid fortification wall. In the second half of the 3rd century BC, active defensive construction was typical not only for cities (Tiritake, Porthmeus, Nymphaeum), but also for the rural periphery of Bosporus (Maslennikov 1998, 197).

The above construction activity is conventionally associated (as it was by V.F. Gaidukevich) with the political situation in the region aggravated by the advance of the Sarmatians into the northern Black Sea and Kuban territories. However there exists an opinion that towards the middle of the 3rd century BC, the Sarmatians, who defeated Greater Scythia, switched from the active military

[3] The closest analogy to the fortifications of Myrmekion in Bosporus is the early defensive wall of the Semibratnee settlement (Anfimov 1951, 238–41; 1953, 103–5, 110–11; Tolstikov 1986, 171). N.F. Anfimov dates this wall to the 5th century BC, however an earlier date seems more probable. The fortifications of both settlements feature the same type of masonry, similar wall thickness, tower shape, design and size.

expansion to the peaceful development of the invaded lands (Vinogradov 1999a, 57). From the second half of the same century, the economy and culture of the cities of the northern Black Sea littoral experienced another revival (Marchenko 1996), evidenced, among other things, by the reconstruction of Bosporan forts, which obviously was a well-organized action of state significance. In summary, the archaeological material available allows one to trace, though incompletely, the general tendencies of the urban development of Myrmekion from the Archaic to Hellenistic periods.

‘Bosporan art’: the Problem of Definition

L. I. Davydova

Since over a century the unique phenomenon of Bosporan art has been a subject of investigations and search, being a key element in the understanding of the culture of the largest state in the northern Black Sea littoral. However one cannot still claim to have studied it in every detail. This problem continues to be as vital nowadays as it used to be in the time of M.I. Rostovtsev.

The ‘Greek-barbarian dualism’ of the Bosporan Kingdom resulted in the ambivalence, or syncretism, of its art. The attempts to explain this phenomenon have been reduced, as a rule, to works of descriptive nature (Sokolov 1999).

The best effect seems to be reached via publication of separate monuments or collections. Studying them in minutest detail, the authors have an opportunity to compare Bosporan art with the art dominants of various periods[1] and thus to develop the general picture of its evolution.

Bosporan art should be considered in the context of interethnic contacts, in which art plays an important part. This suggestion is first found in the article by Y.V. Andreev (1996, 3–17). However the limits of the article did not allow its author to go into details. Probably, he had an intention to develop his theses in further publications and illustrate them with appropriate archaeological material. Therefore, in our opinion, the scholar’s thesis that both barbarians and the Greeks failed to deeply and organically assimilate separate elements of each others’ culture needs further justification. “The assimilation process consisted either in *the mere borrowing of cultural innovations* (in technology, construction, economy, private life, warfare) or in *their imitation*, more skillful with the Greeks and more primitive and straightforward with barbarians, but in both cases *practically always rather superficial* (in the phere of art and handicrafts)” (underlined by me – *L.D.*). “Probably we could find some more complex and organic forms of the Greek-barbarian synthesis in cult and religious concepts. But our knowledge of this sphere is extremely poor”. The imitation, and especially the superficial imitation, proves, according to Y.V. Andreev (1996, 16–7), “the organic incompatibility of the two cultures, their hostility to each other”.

The cited fragment not only describes the basic feature of Bosporan art, but also refers, though indirectly, to the source of this phenomenon, which, doubtless, requires a more comprehensive study, the more especially as we are dealing with the synthesis of two cultures. The latter, *i.e.*, the synthesis of two cultures, is nowadays the subject of vivid discussions among philosophers, historians and art critics[2]. Therefore, we consider it vital and timely to raise the question of the interaction between Greek and barbarian artistic traditions and to try to explain the reasons for their fusion.

Dealing with such a phenomenon as Bosporan art, we should treat it as an integral entity with its own spatial and temporal boundaries and, therefore, requiring an adequate definition. On the other hand, one may doubt the righteousness of introducing the term ‘Bosporan art’, which, if introduced, could achieve an independent status, similar to the one of Etruscan, Italian or Thracian art. The present article will try to resolve this doubt.

Today Bosporan art can be approached as (1) a phenomenon representing an independent trend of ancient art, (2) a phenomenon that cannot be regarded as independent due to the imitative character of its monuments, (3) an integral part of Pontic art. The last issue appears important from the standpoint of the interrelations and diffusion of cultures within the Circum-Pontic region.

The very term ‘Bosporan art’ has been used widely in literature since long ago. However it has not achieved so far the status of definition nor has it been provided with any theoretical basis. Meanwhile, the available artifacts, if grouped properly, may turn out useful for the theoretical research of this kind, the importance of which has been stressed, and not once, in literature and discussions at conferences.

For example, E.A. Savostina (1999, 203), studying the sculptural décor of a number of finds from Scythian royal burials, names this original trend in the plastic art of the northern Black Sea littoral ‘Bosporan Style’.

Indeed, the term ‘Bosporan Style’ seems a more adequate definition for the phenomenon that arose from the fusion of two artistic trends, Greek and barbarian, or, to be more exact, non-Greek. Nevertheless one cannot deny that the concept of *style* covers the form-and-content aspect of a work of art, being at the same time *a part* of a much wider concept, the concept of *art*, which deals with the representation of the world through the artist’s

[1] See respective issues in the recently published articles and reports: Vakhtina 1999; Matkovskaya 2000; Rusyaeva 2000; Savostina 1999.

[2] In this connection one can mention the two volumes of *Khudozhestvennye modeli mirozdaniya* (Tolstoi 1998), the fundamental work of the scholars from the Institute for Art Theory and History of the Russian Academy of Art and the Institute for Art of the Russian Federation Ministry of Culture, or the collected articles *Kulturnyi sintez Rossii* (Shchuchenko 1998) dealing with the general and specific aspects of culture synthesis.

ideology and in which the aspect of style is as important as the aspect of ideology.

What qualities can the new term acquire, passing from the geographical and chronological notion (Bosporan, *i.e.*, the art of the Bosporan Kingdom) to the category of the *noumenon*?

Let us try to compare Bosporan, Etruscan and/or Thracian arts. Their definitions are associated with concrete ethnical groups. While the existence of the truscans or Thracians is beyond doubt, the people, called the Bosporans, is believed to have come from the mixing of different ethnical groups. Our analogy, therefore, appears to be incorrect.

The comparison with Italic art gives a different result. Italic art is the common term for the art of the Italic people – the Bruttii, Lucani, Sabini, Campanians and the Samnites, who inhabited the area of the Apennine Peninsula from southern Etruria to southern Italy. From this standpoint, the term 'Bosporan art' is quite correct.

Let us give an example. Grave steles comprise one of the multiple groups of Bosporan monuments. The definition 'Bosporan', used by analogy with 'Attic' or 'Thracian', not only refers to the style of these monuments, but also distinguishes them into a separate trend of ancient tomb sculpture, which combines both Hellenistic and barbarian artistic traditions and religious concepts.

Above approach is also applicable to Bosporan tomb paintings, bronze and silver-work, pottery and terracotta. We do admit that a lot of goods were imported. Nevertheless we have always approached the whole bulk of archaeological material from Bosporus as something indivisible. In our opinion, the term 'Bosporan art' is as integral a characteristic as 'Etruscan art', which is defined not only by its attribution to the concrete ethnic group, but also by the coexistence of proto-Etruscan, Greek and Roman traditions in Ertruria. The term 'Bosporan art' denotes the syncretism, the Graeco-barbarian nature of the art of Bosporus, which is divided into two periods, one related with the 'hellenisation' of Bosporan culture and the other with its 'barbarisation'.

The introduction of the term 'Bosporan art' would not only emphasize the significance of the art of Bosporus as a unique historical and cultural phenomenon, but also establish its place and role in ancient art as a whole.

What other features does Bosporan art possess apart from its Greek-barbarian origin? All scholars are unanimous in pointing out the original style of the monuments, *i.e.*, the Greek-barbarian style. According to M.V. Rusyaeva (1999, 97), many works of Bosporan art, stamps in particular, have "a deep psychological meaning" still to be divined. Indeed, the psychological aspects of some multi-figure scenes as well as the sacral nature of most representations, especially of women, and their association with Greek-Iranian mythology and rituals allow one to draw further parallels and make important conclusions not only in respect of gold- and silverwork.

To illustrate above speculations, we will give two examples of different representations of Artemis untypical for the Greeks, but, evidently, understandable to the Bosporans. The one studied by E.A. Savostina is the fragment of a statue to the goddess sitting on the acanthus with a bucranium in her lap (Savostina 1997). According to the author, the statue depicted Artemis *Bosbate*, whose epiclesis combines two roots – 'bull' and 'thorny bushes', belonging to one of the most ancient multi-functional goddesses, the patroness of animals and plants and of the chthonic world, as well (Savostina 1997, 176). The second monument published by E.N. Khozda is the half-figure terracotta of Artemis coming out of the acanthus in the Amazon's attire (Khodza 2000, 211). Representations of this kind, rare in Greek iconography and stylistically different from the habitual solutions in plastic arts, provide further evidence in favour of the synthetic character of Bosporan art.

The fusion of cultural traditions that occurred in Bosporus in the sphere of ideology and art may be considered either as a specific phenomenon or as an event general for all areas of interaction between the Greeks and natives. What exactly does allow us to speak of Bosporan art as of a phenomenon of general order?

First of all, it is the vast area of the interaction, which covered the large territories of the European and Asiatic Bosporus. The second is the high intensity of contacts and the comparatively high level of the social and cultural development of the involved ethnical groups. The artistic influence of separate ethnical groups, however strong it might be, did not affect the integrity of Bosporan artists' solutions. The process of interaction and synthesis can be traced throughout the whole history of the Bosporan Kingdom.

Hopefully, the discussion of Bosporan art and its uniqueness as well as the theoretical substantiation of the most frequently used definitions will once again draw our attention to the role and place of Bosporus and its art in the cultural development of the whole Pontic region.

Ionian Trade and Colonisation in the Iberian Peninsula: the Pottery Evidence

A. J. Domínguez

The Iberian peninsula was opened by the Phoenicians to the Mediterranean trading currents from the beginning of the 8th century BC. The foundation of the city of Gadir as well as the other settlements along the southern coast of the peninsula (Cerro del Villar, Morro de Mezquitilla, Toscanos, Sexi-Almuñécar, *etc*.) during the 8th century let the introduction of Iberia in the network of exchanges that the Phoenicians had developed across the Mediterranean. Within this process, some Greek pottery found its way within those Phoenician establishments (Docter and Niemeyer 1994, 101–15); usually, the oldest pottery appears as a luxury item within Phoenician tombs. It would be the case, for instance, of two Corinthian kotylai found in the Laurita necropolis at Almuñécar (Domínguez, Sánchez 2001, 34) and dated to later 8th century. Corinthian kotylai have also appeared in Morro de Mezquitilla (Domínguez and Sánchez 2001, 29), Toscanos (Domínguez and Sánchez 2001, 30) and Alarcón (Domínguez and Sánchez 2001, 33). We can also mention some of the vases, still of Geometric age, appeared in Castillo de Doña Blanca (Domínguez and Sánchez 2001, 18). This site has been recently considered as one of the areas, in which the oldest establishment, of which would become Gadir took place (Ruiz 1999, 279–317). We can mention, within this context, the recent finding of a Thapsos cup in the Phoenician settlement at La Fonteta (Guardamar del Segura) were Corinthian kotylai also appeared (Domínguez and Sánchez 2001, 43; García Martín 2001, 210–11). Lastly, the finding of other fragment still unpublished of Corinthian kotyle, or a Pithecusan imitation, is also mentioned in Alarcos, inland in Southern Meseta.

Besides those potteries, found in Phoenician centres, we can also mention findings coming from native centres. Among them, Huelva, ancient Onoba, is especially significant. There a fragment of Attic MG II pyxis was found, as well as a couple of Euboean bird-skyphoi and a Corinthian kotyle (Domínguez and Sánchez 2001, 9–12). We must look at the Phoenician trade to explain the origin of those products because the Phoenicians are already present at Huelva from the first half of the 8th century, although their presence will increase from the last third of that century (Fernández Jurado 1985, 49–60; Rufete 1989, 118–34; 1999, 215–40).

Those oldest pieces are not, consequently, a witness of the Greek trade with the Iberian peninsula[1], although they imply the incorporation of this territory to a wide international trading network embracing Greece, the Greek colonies in central Mediterranean, the Phoenician establishments in the same region and in Northern Africa and, lastly, the Iberian peninsula (Cabrera 2001, 166–67). At the same time, the most part of the Greek wares corresponding to this age belongs to vases for drinking, which lets us to think that the Phoenicians began to use new procedures to drink wine and that they were the responsible to its introduction among the natives. A further hint in this direction is given by the invention by the Phoenicians of a type of vase that imitates the Euboean skyphos and implies the lacking of a Phoenician shape specifically designed to drink wine (Rouillard 1990, 178–85; Briese and Docter 1992, 25–69). Those Phoenician skyphoi have been found in Cerro del Villar (Domínguez and Sánchez 2001, 25), Toscanos (Domínguez and Sánchez 2001, 31), Cerro del Peñón (Domínguez and Sánchez 2001, 32), Alarcón (Domínguez and Sánchez 2001, 33) and La Fonteta (Domínguez and Sánchez 2001, 43; García Martín 2001, 210–11).[2]

The panorama during the 7th century is, basically, similar; the scarce Greek pottery of that century appears, mainly, in Phoenician centres and, sometimes, in some native centre, above all Huelva. Besides, there is nothing specifically Ionian in that pottery, which was acquired by Phoenician traders in colonial regions of central Mediterranean, and which must constitute only an insignificant part in the cargoes of Phoenician ships. On the other hand, the archaeological contexts, in which that pottery has been found, hardly informs us about the value that those wares could have had both in the Phoenician cities in the peninsula and in native centres. The only hint is provided by the two already mentioned Corinthian kotylai found in a tomb in the Phoenician necropolis of Almuñécar; they could have been particularly esteemed by their owner.

Therefore, the first evidence of Greek pottery found in the Iberian peninsular during the 8th and a good part of the 7th centuries BC, must be considered as a proof of the Phoenician trade, more interested in other goods and only indirectly interested in carrying Greek pottery.

The situation changes from the late 7th century BC, matching with the references given by written sources to the implication of Eastern Greeks in trade with the Mediterranean Far West. Samians and Phokaians, although not excluding Greeks of other origins, seem to

[1] Some scholars, however, think in a direct Greek intervention with respect to this Geometric vase from Huelva: Rouillard 1991, 87–9. On the issue of the relationships between Greek and Phoenician traders in the 8th century BC see lastly Dominguez (2003) with previous bibliography.

[2] It is possible, however, that new perspectives on the imitation or adaptation of Greek shapes can be opened by the recent posture adopted by Boardman (2002; 2004).

have been, in turn, who made the Iberian peninsula a new focus for their trading activities (Domínguez 1991b, 131–47). Herodotus, our main source, insists, writing about the arrival of Kolaios of Samos to Tartessus, in the virgin character of the Tartessian emporion: "now this was at that time an untapped emporion" (τὸ δὲ ἐμπόριον τοῦτο ἦν ἀκήρατον τοῦτον τὸν χρόνον) [Hdt. 4. 152. 3]. At the same time, when he refers to the Phokaian travels, Herodouts says that "they were who discovered the Adriatic Sea, and Tyrrhenia, and Iberia and Tartessus" (οὗτοί εἰσι οἱ καταδέξαντες) [Hdt. 1. 163. 1]. There is, clearly, an inconsistency in Herodotus because Samians and Phocaeans cannot be the discoverers of Tartessus; however, this inconsistence may be explained if we take into account that Herodotus' sources, both in Samos and Phocaea, would attribute, independently, to their own sailors, the first contact with that far emporion, beyond the Pillars of Heracles. In any case, the important fact is that, for the Greeks, and away from the mythical stories about Heracles' deeds, Samians and/or Phocaeans were the first Greeks, which established direct contacts with the Iberian peninsula. This would also confirm the lacking of a direct intervention of the Greeks in the trade with the peninsula, as previously stated, in spite of the presence of Greek pottery of the 8th and 7th centuries BC.

The story by Herodotus gives also a chronological frame for the beginning of the relationship of the Greeks with the Iberian peninsula. Kolaios' travel took place in the 630s BC, date usually accepted for the foundation of Cyrene, an event, which Herodotus related to that travel. According to Herodotus' story, the main interest of the Ionians would be in Tartessus, especially in its sea outlet, where perhaps would already exist a series of trading structures, which would serve the interests of the Phoenician trade. Those structures could be considered by the Greeks as an emporion, a neutral trading place with a sacred area, a sanctuary or similar places (Domínguez 2001a, 27–45; 2001b, 217–53).

Although recent scholarship continues doubting about the possible placing of Tartessus, as mentioned by Greek sources (Blázquez 1993, 11–30), I shall consider, for my present purposes, that the city of Onoba (today Huelva) was, undoubtedly, one of the points (perhaps the main one) touched by the Ionians from the late 7th century BC.[3] As a result, I shall define as the first of the areas I am going to analyse in this paper, the Tartessian region and its approaches (Fig. 1).

The city of Huelva has given the most quantity of information about Greek trade in the Tartessian area during a good part of the 6th century BC. In a series of prospecting and urgent excavations carried out in Huelva during the 1980s and 1990s, several thousands of fragments of Greek pottery have been found although they have not been, regrettably, fully published. It is difficult to know the topographical articulation of the different plots excavated by different teams during those years, but it is now possible to note several trends. Firstly, and although excavations have affected to a good part of the old core of the city of Huelva, the most part of the findings of Archaic Greek pottery come from a very concrete and delimited area, namely its south-western quarter, by the mouth of the river Odiel (Ortega 1999, 267–77); the harbour character of that zone, maintained until a few years ago, seems to have been also the same in ancient times.

During the first excavations the possible existence of a sacred area in that zone was observed on some elements (terracottas, lion claws, tortoise shells, etc.) (Garrido and Orta 1994, 344); in later excavations, in which also the highest quantity of Greek pottery was found, areas dedicated to the elaboration of metals were found. Although there is not specific references to findings related to cultic structures, a series of *obeloi*, usually related to sanctuaries, did appear.[4] Lastly, in still more recent campaigns, which have been very clearly interpreted, a sanctuary has been discovered (Osuna *et al*. 2001, 177–88).

As I had previously told, only Greek pottery found during the 1980 and 1981 campaigns (8–10 Puerto St.) has been fully published (Olmos 1994, 232–42; Cabrera 1994a, 243–53), as well as, that found during the campaigns 1982 (6 Puerto St.), 1983 (9 Puerto St. and 10–12 Botica St) and 1984 (4–6 Méndez Núñez St.) (Fernández Jurado 1988–9b 142–92; Cabrera 1987, 68–71; Cabrera 1988–9, 41–100); we may add some other tiny deposit (Domínguez, Sánchez 2001, 5–17), but it remains unpublished quite materials found in later excavations, including the numerous Greek materials found in the sacred area at 7–13 Méndez Núñez St. (Cabrera 2000, 78; Osuna *et al*. 2001, 180–81).

The most complete data so far known come thus from the first excavations, carried out between 1980 and 1983, which have been carefully studied and fully published. As it has been sometimes noted, the higher percentage of Greek pottery appeared in Huelva from the late 7th century to the third quarter of the 6th century BC, when Greek trade seems to decrease in the city, corresponds to East Greek pottery, which amounts to about 74 % of the total of the Greek imports (Domínguez and Sánchez 2001, figs. 16–17). As for the represented shapes, there is an absolute prevalence of drinking vases, very especially of the Ionian cups of diverse origins, which amount to 56 % of the total of the represented shapes. It was thought,

[3] Although we must completely discard that Onoba may have been a Greek foundation as suggested by some scholar (Garrido 1995, 71–83), it is not impossible that a relationship between Onoba and one of the places named Olbia mentioned by Stephanus Byzantius [s.v. Olbia] may have existed; in the best of the cases, a Greek enoikismos might have existed at Huelva (Domínguez 1994, 19–48).

[4] Fernández Jurado 1988–9a, 202–7; Fernández Jurado 1988–89b, 262, who, however, denies in this context such a relationship with sanctuaries. In spite of it, the fact that obeloi appeared in a plot (5 Méndez Núñez St.) contiguous to that, in which a cultic structure appeared in later excavations, lets to insist again about the possible cultic and economic character of those items.

Fig. 1. The map of the Iberian peninsula

during the first campaigns, that Greek pottery would come from harbour warehouses (Fernández Jurado 1984, 54; García Sanz 1988–9, 168–69); however, recent findings seem to suggest that all this area is, basically, the core of the Onoba emporion, where the existence of different religious structures is a necessary condition. Some structures related to trade and, even, to the production of trading goods would be erected by the religious buildings. The concept of the 'warehouse' is perhaps related to the multifunctional character of the buildings in the emporion.

The large quantity of Ionian cups lets also to solve a problem already put out from the beginning of the excavations, namely the function of that shape in the Onoba region. I had suggested, in a previous paper, that Ionian cup, especially in Huelva, seemed to have a more utilitarian than strictly commercial character; in turn, I could thus suggest that Ionian cup might be a good element to observe an actual Greek presence on account, precisely, of the utilitarian character of that item (Domínguez 1986, 604–5). Certainly, Greek pottery from Huelva is quite similar, both quantitatively and typologically, to pottery found in well known Greek sanctuaries, such as that of Hera at Samos, where, according to Kyrieleis (1993, 139), "are clearly to be identified as a kind of cult dining equipment... They must have been used for sacrificial meals and then left in the sanctuary according to the sacred regulation, commonly valid in Greek sanctuaries, forbidding removal of all objects once they had been brought inside the sanctuary".

That does not mean, however, that this vase may not have used, also, with one or another function by non-Greek people.

Recent studies have shown the great quantity of types and fabrics behind this label of 'Ionian cups', as well as the great quantity of workshops responsible for their manufacture and distribution to immediate surroundings (Schlotzhauer 2000, 407–16; Van Compernolle 2001, 89–100). They were manufactured in Western Phokaian area, as cases from Massalia (Bertucchi *et al*. 1995, 367–70; Gantès 2001, 111–23) and, even, Ampurias (Aquilué *et al*. 2001, 322–24) show. Although we cannot make oversimplifications, because this cup has been highly popular during the 6th century BC in many points in the Mediterranean, it seems as if one of its main uses may have been a ritual one, because it has been offered, sometimes in a very high quantity, in sanctuaries and other cult-places, usually associated to emporia. In a recent paper, in which I have made some reflections about this issue, I have observed how in Gravisca, for instance, Ionian cups amount to 72 % of the Ionian

pottery found there; besides, while the number of Ionian cups known in this Etruscan emporion sums at least 1228, not more than 400 Ionian cups are known in the rest of Etruria. At the same time, in the sanctuary of Demeter in Monte Papalucio (Oria), 2658 Ionian cups were found, which amounts to 97 % of the total of Ionian cups found in the Salentine peninsula (Domínguez 2001a, 35–7). Also at Naucratis Ionian cup seems to have seen one of the most abundant shapes found there (Petrie 1886, 20, pl. X) although, precisely by its "common" character, is not the most studied pottery class during the excavations of the late 19th and early 20th centuries (Venit 1988, 50–2; Möller 2000, 142–43).

The massive presence of this pottery shape in the Onoba emporion must be explained, perhaps, by the use given to it by the Greeks, whether as a utilitarian object or as a ritual item. We cannot forget that, as previously stated, a good part of the excavated structures at Huelva, and with Greek pottery, seem to be related to a series of cult-places that, undoubtedly, constituted the core of the emporion. Regrettably, Greek epigraphy is not very abundant at Huelva, and very few evidence is known: one graffito, undeciphered, was found in an Ionian cup, while the second one appeared in a (Milesian?) bowl and it is perhaps a dedication done to one such Νιετηο, and individual or, perhaps more probably, a divinity (Fernández Jurado 1984, 32–4; Fernández Jurado, Olmos 1985, 107–13; Almagro 2002, 37–70).

During the 1998 campaign, a true sanctuary was excavated in the plot placed in 7–13 Méndez Núñez Street. Although only some preliminary reports have been published, a great quantity of Ionian bowls was found, together with other shapes (cups, lamps, aryballoi), for the most part in several offering pits (Osuna *et al*. 2001, 180); the large quantity of this shape suggests a ritual use, although detailed statistics have not been published (Cabrera 2001, 172).

An interesting detail is that the great majority of those bowls have been manufactured in a type of clay already identified by Cabrera during the first studies on the Greek pottery from Huelva and which, according to this scholar, is characterized "by a very light greenish-yellowish clay, with many black points and with a very subtle black painting" (Cabrera 1988–89, 61). In this type of clay almost all the shapes of the Ionian repertory has been manufactured: B1 and B2 cups, dishes, jugs, olpai, oinochoai, amphorae, lamps and, now, bowls. We do not know vases with this type of clay in other places, whether in the Iberian peninsula or outside (Cabrera 2001, 169), and although a place of manufacture in Northern Ionia–Southern Aeolia, that is the region of Phokaia itself, had been suggested (Cabrera 1988–89, 61–2; 2001, 169), this is by no means sure. In fact, and although still fully unpublished, the findings at Phokaia itself, whose pottery was hardly known, seems to show a different type of clay, both in amphorae (yellowish or orangey-pink colour) and in other objects, such the olpe found in the area of the Archaic gate (buff-coloured clay) (Ozyigit 1994, 89–90; 1995, 53–4). However, the tradition of painting after firing seems to have been current in Northern Ionia, and the decorations of the class coming from Huelva show a repertory quite usual in Northern Ionian pottery (Cabrera 1988–89, 62). Besides, the celebration on May 1999 of an International conference in Ampurias, specifically devoted to Ionian pottery of Archaic age, in which participants had the occasion of seeing pottery of that class (Cabrera and Santos 2001, 8), did not produce significant advances in the attribution to a specific workshop of that pottery.

A possibility to solve the issue could be to consider those products as a local production of Ionian type, developed whether at the Onoba emporion itself or in other place, especially related to that region. Of course, while clay analyses are not available or while pottery kilns or reject dumps are not discovered, it will be difficult to fully accept that possibility. However, the manufacture of common (or even luxury) pottery in trading areas and sanctuaries, seems proved in some cases.

There is, for instance, an old debate on the possible production of Chian type pottery in Naucratis (*pro*: Möller 2000, 136–40; *contra*: Cook and Dupont 1998, 73), although in this case that pottery belongs to a series of a great decorative richness, such as the so-called Grand Style. This pottery has been made-up by using Chian clay, which would suggest that the clay would have been carried from Chios to Naucratis to manufacture there those vases. This would be, of course, an extreme case because, if it were true, it would imply the presence at Naucratis of potters trained in Chian workshops and, even, the possible transport of Chian clay to Egypt (Boardman 1999, 123, 180). In the case we are now analysing, all that would not be necessary because we are dealing with a common pottery, with a very plain decoration and made up using clay, which, as far as we know, has not direct matching with other clays used to make Greek pottery.

Other case, perhaps more akin, can be found in the Greek emporion at Gravisca. Within East Greek pottery, recently published, Boldrini (1994, 226–28) suggested the existence of a perhaps locally manufactured group, named L by that scholar, although it is difficult to corroborate it. The Ionian cups belonging to that group amount to 17 % of the total of Ionian cups found in the excavated area. It is perhaps more interesting to observe that almost all the B2 Ionian cups found at Gravisca (more or less 94 %), belong to this group L (Boldrini 1994, graphic 8; 2001, 108); besides, a wide repertory of shapes also belongs to this group (olpai, amphorae, oinochoai, jugs, lekythoi, lamps), which seems to cover all the demands of pottery for ritual uses in the sanctuary (Boldrini 2001, 102, 108). Although that scholar has changed his opinion afterwards, and she thinks that the fabrication of this group could have been done in a Greek city (she suggests Rhegium) (Boldrini 2001, 108–9), in my opinion the arguments put forward by her in the publication of Ionian pottery from Gravisca, suggesting a local production, seem more convincing.

Even the observation done by herself about the almost total lacking of pottery of this class in urban or funerary contexts in Tarquinia (Boldrini 1994, 228), could find a matching in the already mentioned case of Huelva, where the pottery class, whose local origin I have suggested, is not found outside Huelva. If, as it seems, pottery of the group L from Gravisca may have been also detected, presumably, at Massalia, Ampurias, Málaga or the Point Lequin 1A shipwreck (Boldrini 2001, 108), it would only suggest that this pottery could have been acquired either at Gravisca or in other place. Consequently, there are quite arguments, in my opinion, to justify a production of that pottery at Gravisca, as an answer to the needs of the sanctuary; there sailors and traders arriving to that emporion could acquire it being thus responsible for its distribution to other points in the Mediterranean. Meanwhile, its penetration to inland Etruria would be more limited, as its almost anecdotic presence in Tarquinia would show.

We can compare this panorama with the Heraion at Samos, where the most part of the pottery found there belongs to the group of the Ionian cups and other productions of common pottery, manufactured in local workshops (Isler 1978, 71–84), some of which were, even, within the sanctuary itself (Kyrieleis 1993, 140).

Certainly, the production of Greek pottery by Greeks established at any place in the Mediterranean is not something requiring extraordinary conditions; it would be necessary just a potter, a kiln and, especially, an adequate demand. If in luxury pottery those conditions may have been fulfilled, in common pottery, with few technical needs, the existence of a manufacturing centre within an emporion, especially devoted to produce pottery destined to the ritual use of Greeks presented there, does not seem an unusual fact at all. I will not deal here with the existence of local workshops in other places of the Mediterranean, but I should only mention the great number of workshops dedicated to the manufacture of Ionian cups was detected in Magna Graecia and Sicily, where Van Compernolle (2001, 89–100) identified at least 29. At the same time, and as recent analyses have shown, Massalia began the production of pottery, both of the monochrome grey type and light clay from the very beginning of its foundation around 600 BC. Among the latter ones, Ionian cups will be especially important (Gantès 2001, 111–23), with higher percentages than imported Ionian cups (Gantès 1999, 373).

Recent studies have also identified a pottery workshop at the Palaiapolis of Emporion, active from the first moments of the Greek establishment there (between 580 and 560/550 BC) and devoted to the production of both grey monochrome pottery and painted light clay pottery (Aquilué *et al*. 2001, 289–90; 318–29).

What all that shows is that the rise of workshops manufacturing Greek pottery in many places of the Mediterranean, where Greeks settled, temporarily or permanently, is not an extraordinary fact but, on the contrary, an usual fact. Consequently, and from the so far considered evidence, I think that we may accept that we must include within the model of the emporion the type of Greek presence attested at Huelva. Archaeological record shows the existence of a particular area in the city where cult-places and, perhaps, warehouses and workshops did exist. Greek pottery so far found is meaningful in relationship to this area, where also natives and Phoenicians lived. The most part of the Greek pottery there found are mainly common productions with a not very high artistic level, which is explained by their use by the Greeks resident there to fulfil their cultic activities in honour of the divinities worshiped there, who, although undoubtedly of Tartessian character, were assimilated by Greeks to theirs own.

It is quite possible that a distribution, always limited, of Greek products took place from the Onoba emporion to peripheral regions; thus, the finding of an Attic black-figure Little Master lip cup in Medellin, by the Guadiana river (Domínguez and Sánchez 2001, 79), would be a proof of this. It is usually attributed to Tartessians themselves the iffusion of those wares (Cabrera 2001, 172–73), although we cannot discard some punctual action by some Greek trader, who would seek after to increase the expansion of his trading enterprises.

This kind of Greek presence, not colonial but rather of a commercial character and, consequently, with a strong trading contents, seems to have also appeared, during the 6th century, in other points of the Spanish coast, especially in those, which already possessed a previous infrastructure such as the Phoenician cities and factories. Let us see some cases.

In the Phoenician settlement of Cerro del Villar, by the mouth of the river Guadalhorce, a not very abundant but, indeed, quite interesting set of Greek pottery has been found. The pottery so far published comes, for the most part, from Trench 5 and Sectors 3-4 (in total, 234 m^2 from a total extent of 10 ha), placed in the centre of the ancient island. We may count eight cups, two hydriai, five oinochoai, three olpai and one aryballos, as well as shreds of transport amphorae (Domínguez and Sánchez 2001, 22–5). This area is used, during the period, in which imports appear (that is between the late 7th century and the first quarter of the 6th century BC), as potter's workshop and as living area; Greek pottery found there seem to have been a clearly utilitarian character, without any ritual or similar implication (Aubet *et al*. 1999, 279–80). However, excavations in other sectors of Cerro del Villar seem to suggest that this city acted as a true commercial centre (Aubet 1997, 197–213), perhaps open to traders of many origins, including also Greeks. It has been even suggested that this site might be identified with Mainake, the most westerly 'Greek city', according to the information of several classical authors (Aubet 2000, 27–42; a different proposal in Jacob 1994, 169–94). In any case, the presence of those Greek vases, chronologically coincidental, or even older, with those found at Huelva (Cabrera 1994b, 97–121), shows that Cerro del Villar is one of the points frequented by Ionian trader in their way to Tartessus. The existence of an economic

centre, dedicated both to the production of manufactured items and the collection of agrarian products from the native inland, would be certainly interesting for the Greeks sailing along those coasts. The finding of Greek common pottery in workshop areas of the Phoenician centre suggests, precisely, the intensity and continuity of the contacts with the Greeks from the last years of the 7th century BC, when the oldest pottery appears (A2 Ionian cups), until the years around 580 BC, when the most recent items would be dated (some shreds of B2 Ionian cup). A graffito appeared on one of those vases does not give, however, helpful information (De Hoz 1994, 122–25).

It is today an accepted fact that activity in Cerro del Villar ceased abruptly to about 580 BC, and that the settlement was completely abandoned; this abandonment has been related to the rise of the nearby city of Malaka (today Málaga), which shows, in those years, a considerable growth (Aubet *et al*. 1999, 93, 279).

We may observe, at Málaga itself, although with more difficulties, the same process begun at Cerro del Villar. Certainly, both the excavations carried out there during the 1980s and the most recent ones let us to watch the evolution of Greek trade in that area. During the 1980s excavations took place at the feet of the Alcazaba hill (certainly the acropolis of the ancient city), where a series of levels formed by the fall of the terrain from the top of the hill were excavated; although well stratified, they gave very few information about the living quarters of the Phoenician city, although there were useful to know the rhythms of the trade with the Greeks. At the same time, excavations were also carried out in other part of the city, the old Saint Augustin convent, which seems to have been an important quarter of the lower city, controlling the harbour area of Malaka (Gran 1991, 160–62). During the first phase (the first half of the 6th century BC) imports from Eastern Greece are clearly predominant, although there are several differences between the Alcazaba and the Saint Augustin area, because in the former Ionian cups are much more abundant (Gran 1988, 212; 1991, fig. 96; Domínguez and Sánchez 2001, 25–9). In Saint Augustin, however, Greek pottery is associated to structures destined to dwelling and the elaboration of metals (Recio 1990, 52); in this area Greek pottery is not higher than 2,51 % of the total of pre-Roman pottery. The main represented shape is a cup, besides transport amphorae (Recio 1990, 65). Among this pottery the rim of a great dinos, perhaps manufactured in a workshop of Northern Ionia or Southern Aeolis (Larissa?) has appeared; it is a production of a higher level with respect to the rest of Greek imports. Olmos has interpreted it as an aristocratic gift (Olmos 1991, 140).

Lastly, recent excavations, still in course, in the area of the Palace of Buenavista (very near from the Saint Augustin convent), have shown the existence of a level formed in mid-5th century BC, with a very abundant presence of Greek pottery, of a very similar kind to the already known from the previously mentioned excavations. East Greek pottery is again predominant, among them Ionian cups (at least 15 vases), some fragment of hydria, jug and bowl. A shred of a vase of Fikellura style has been also found; among Attic imports, very scant, a Tyrrhenian amphora and two Little Masters band cups are worth mentioning; the shred of a possible Laconian krater also appeared as well as Massaliote pottery. A series of transport amphorae of diverse origins also appeared (Cisneros *et al*. 2001, 189–205).

As we had also observed at Cerro del Villar, the presence of Greek pottery, in which seem domestic contexts at Malaka, may be interpreted as the result of the arrival of Greeks and their interaction with Phoenicians in that harbour; common pottery, mainly Ionian cups, which constitute the bulk of Greek imports, may have been easily included by the Phoenicians into their tableware; we can observe important similarities between some of the Greek wares found at Cerro del Villar and Malaka (Aubet *et al*. 1999, 279). As for the Aeolina dinos, it could have been part of the tableware of a rich Phoenician, who could buy it at a trader, who carried it to Tartessus. In any case, the presence of Greek pottery at Cerro del Villar and Malaka between the late 7th century and mid-6th century BC shows its acquisition and use by Phoenician customers established there. Later, as also attested at Huelva, the number of Greek pottery and its quality decreased, which have been related to the collapse of the Phokaian trade with the Atlantic regions of the Iberian peninsula. Of course, we cannot discard that this Greek pottery may have been used by a group of Greeks established in the harbour quarter of Malaka or, even, given as offering in Phoenician sanctuaries, perhaps located in the upper part of the city or Alcazaba. Of course, all this is hypothetical.

We may observe, certainly, some differences between the behaviour of Greek imports in different environments, such as Huelva or Málaga, respectively, perhaps as a consequence of the different ethnic origin of both places or, also, of the different use given to Greek pottery in each place. Thus, at Huelva, the most part of Greek pottery seem come from an area of emporic sanctuaries, where Geeks would use it with ritual purposes; it is not clear the use given by the natives to that pottery, beyond any reference to the possible presence of any Ionian cup in some tomb (Garrido and Orta 1989, 36–7). Conversely, Greek pottery at Cerro del Villar and Malaka seems to have been part of the everyday tableware of the Phoenician population of both cities, although we cannot discard also an eventual ritual use. In any case, we cannot forget that, as previously stated, Phoenicians used from at least 8th century BC Greek pottery, imitating even some shape. From the last years of the 7th century and until mid-6th century BC, when Phokaians were intensively navigating towards Tartessus, the coasts of the Iberian peninsula, and began to receive a continuous, although not very abundant, supply of Greek products; while in the native places those products did not attain neither a great variety nor a great number. In other points, which, such as Málaga, had previously developed a strong political and commercial structure, Greek pottery

became a usual commodity, because of the assiduous frequentation of Greeks ships responsible for its transport. In Phoenician cities, like Malaka, Greek pottery appears in domestic contexts, and it does not seem that it would be an extremely appreciated item among Phoenician grave offerings, which shows a different use to that practised by the natives.

We can mention, lastly, other place, in which also recent excavations have revealed interesting sets of Greek pottery, perhaps credited to Ionian trade. I refer to the place variously known as La Fonteta or La Rábita de Guardamar del Segura. There, besides the already mentioned Greek imports of the 8th and 7th centuries BC, the great moment of Greek imports corresponds to its phase IV (600–560 BC), and presents, basically, in a wide stratum of stuffed materials, which covers up the dwellings of the previous phase and which marks a deep transformation of the site. The stratum is formed to about mid-6th century BC; although in this phase some evidence of metallurgical activities, presented during all the life of the site, is attested as well (González Prats 1999, 26–9). The material evidences show a quite similar image to that already observed in other Phoenician sites, such as Málaga or native such as Huelva: Ionian cups of diverse origins, bowls with handles, an aryballos, *etc*. The presence of Attic pottery is very scant; there are also transport amphorae of diverse origins (García Martín 2001, 213–16). The place, where the Greek pottery has appeared, apparently a deposit of debris placed by the inner face of the city wall, suggests that the pottery comes from dwelling or workshop areas of the Phoenician city, as we had observed in Malaka. This fact lets to support my previous suggestions about the use of Greek pottery in that Phoenician city.

It is also quite probable that through La Fonteta or other yet unknown centre placed in the mouth of the river Segura, some especial Greek vase could have arrived to more inland regions. This could be the case of the great closed vase with painted decoration found in La Luz (province Murcia), qualified, quite probably, as a diplomatic gift (Rouillard 2001, 228–29). This finding represents a similar case to the previously mentioned with reference to the cup from Medellín, also considered a kind of diplomatic gift. While in the case of Medellín it was open to discussion, who could have been the responsible of the transport of this vase to an inland site (Tartessians?, Greeks?), in the case of the vase of La Luz there is some difference. This difference resides in the lacking of Greek pottery in the native site of Peña Negra, evidently related to La Fonteta, although there are some shapes developed by the natives, but inspired in Greek prototypes (González Prats 1982, 93–113; García Martín 2001, 217). This may suggest, in my opinion, that Phoenicians do not seem to have been the responsible of the distribution inland of Greek products, but we must think rather in Greek traders making travels aimed to centres of their interest or, even, in the intervention of the trading networks of natives themselves (Domínguez 1993, 59–66). That vase is, so far, the only Greek item of the first half of the 6th century BC found in the area of the Segura river, with exception of an Ionian cup from Los Saladares (Domínguez and Sánchez 2001, 48), which shows the low intensity of the Greek commercial presence in the inland regions of this quarter of the Iberian peninsula.

In the panorama presented so far, mainly centred in the southern regions of the Iberian peninsula, I have tried to show, mainly through pottery evidence, the various devices put forth by Greeks (mainly Phokaians) in their relationship with that territory. Greek pottery serves (or may serve) to mark tendencies, because the uses given to it have been different according to the circumstances; at the same time, we must regard the different quality of archaeological evidence in each of the considered cases. It seems that at Huelva Greek pottery, both the imported and the eventually manufactured there (a hypothesis here considered), is used mainly by the Greeks, who frequent the trading quarter of that native centre; we find there a wide variety of shapes and places of manufacture. We do not know the use given to that pottery by the natives, both at Huelva itself and its surroundings, beyond some findings, which, like the Medellín cup, may be witnesses either for a Greek diplomatic activity or for interchanges between Tartessian aristocrats. The rest of the considered cases, Cerro del Villar, Malaka and La Fonteta, are Phoenician urban centres, in which Greek pottery seems to have been used in houses and/or workshops, with an utilitarian function. However, the context, in which Greek materials appeared in some points of Malaka or La Fonteta, does not provide too information, because they are areas of rubbish deposits. We cannot discard Greek presence in those Phoenician centres, whose economic capabilities will have been adequately evaluated by Greek traders. The finding of a great vase of a very probable Phokaian manufacture at La Luz, upstream the Segura river, could be a proof of an early Greek interest for that region of the South-West of the peninsula, an area, which would show a great attraction for the Greeks many years later (Shefton 1982, 355; Domínguez 1986, 601–11).

The great period of the Ionian trade with the Iberian peninsula had to be placed, as previously shown, between the last third of the 7th century and the middle – third quarter of the 6th century BC; this would not be odd because the great implication of Phokaia in this trade. The end of the existence of Phokaia as independent polis and the depopulation of the city, as well as troubles derived of the adaptation of its inhabitants to Western environment (battle of Alalia) (Domínguez 1991a, 239–73), provoked the rise of new centres, also of Ionian tradition (Massalia, Emporion), which replaced their mother city. This was not, however, the place to insist on them.

Amphores 'Samiennes' archaiques de Mer Noire (approche archeometrique)

Pierre Dupont

Dans l'étude que j'ai consacrée récemment à la typologie générale des amphores commerciales archaïques de la Grèce de l'Est (Cook and Dupont 1998, 164–86), j'ai été amené à procéder à une refonte de la nomenclature des productions regroupées par V. Grace sous le terme générique d'amphores 'samiennes' (Grace 1971, 52–95, pls. 12–15). Cette refonte a porté sur les points suivants: 1) réattribution des modèles à panse ovoïde et bord en corniche de la fin du VIe s. à des ateliers de l'Egée septentrionale; 2) réattribution de la variante à lèvre haute convexe à la région de Milet; 3) maintien de l'attribution à Samos pour les seules formes anciennes à panse piriforme et bord échinoïde de la fin du VIIe et de la première moitié du VIe s., mais sous réserve de vérifications complémentaires.

Afin de contrôler le bien-fondé de mon point de vue, j'ai fait analyser un échantillonnage d'une centaine de pièces caractéristiques de mer Noire au Laboratoire de Céramologie de Lyon. L'exploitation des données obtenues, si elle ne permet pas encore d'avancer des attributions individuelles d'origine, fournit déjà une partition apte à servir de base à une classification d'ensemble.

Méthode d'analyse

Les échantillons ont été analysés par spectrométrie de fluorescence X sur 20 constituants: 10 éléments principaux (CaO, Fe2O3, TiO2, K2O, SiO2, Al2O3, MgO, MnO, Na2O, P2O5), mesurés en pourcentages à l'état d'oxydes, et 10 éléments de trace (Rb, Sr, Ba, Ni, Zn, Cr, Zr, La, Ce, V) en pourcentages ou ppm selon le cas. Toutefois, seuls 17 éléments ont été pris en compte lors du traitement des données, Na, P et La ayant été écartés pour des raisons techniques: le phosphore et le sodium, trop sensibles à l'environnement (risque de pollution), et le lanthane, source d'imprécision de mesure (par suite du mode de préparation des échantillons).

Traitement des données d'analyse

Les données d'analyse ont fait l'objet d'un traitement sur ordinateur, destiné à regrouper les échantillons présentant des caractéristiques de composition voisines et à écarter ceux présentant des compositions marginales ou aberrantes. Pour obtenir une classification préliminaire, on a recours à la méthode dite de l''analyse de grappes' (cluster analysis), en affinité moyenne non pondérée, sur variables centrées réduites correspondant aux 17 éléments retenus.

L'analyse de grappes est une méthode de classification hiérarchique ascendante, dont les résultats sont exprimés sous la forme d'un diagramme arborescent ou dendrogramme, que l'on pourrait comparer à une sorte d'arbre généalogique à l'envers, présentant à la base autant de rameaux terminaux que d'échantillons engagés. Le processus de classification est le suivant: au départ, l'ensemble à classifier comprend autant de classes que d'échantillons; puis, par le jeu de fusions itératives, les échantillons sont regroupés en fonction de leurs affinités. Plus les ramifications sont situées bas, plus les échantillons présentent entre eux des ressemblances de composition; plus elles sont placées haut, moins ils se ressemblent.

L'exploitation de tels diagrammes s'avère souvent délicate, car la partition qu'ils traduisent ne correspond pas nécessairement à celle des différentes entités archéologiques sous-jacentes (centres de fabrication ou ateliers). Ainsi, lorsque la dispersion des teneurs de tel ou tel constituant est trop large, l'ordinateur aura tendance à séparer arbitrairement un même groupe en plusieurs sous-groupes: par exemple, si les teneurs en calcium sont trop dispersées, on risque de voir apparaître deux sous-groupes, dont l'un correspond aux échantillons à faible teneur en CaO et l'autre à ceux à forte teneur. De même, lorsqu'un centre ou atelier de fabrication est représenté par un nombre d'échantillons insuffisant, le regroupement de ceux-ci risque de s'en trouver perturbé et de déboucher sur des rejets aléatoires en position marginale, voire à des attributions arbitraires à d'autres groupes. Pour parer à de tels risques de confusion, la confrontation des données géochimiques et des données archéologiques (typologie, chronologie, lieu de trouvaille...) s'avère déterminante pour étayer – ou invalider – la communauté d'appartenance d'un ensemble d'échantillons à un même groupe.

La classification préliminaire des données d'analyse d'un ensemble de céramiques indifférenciées constitue donc le premier stade de toute détermination d'origine en permettant une évaluation approximative du nombre de groupes représentés dans l'échantillonnage. Les résultats obtenus sont surtout valables au niveau du groupe, les attributions individuelles demeurant encore perfectibles. Quant aux déterminations d'origine proprement dites, elles ne pourront s'effectuer qu'ultérieurement, par comparaison avec des groupes témoins d'origine assurée, constitués en réseau de références locales pour une aire géographique donnée. C'est le niveau de représentativité de ce réseau qui conditionnera en fin de compte la fiabilité des attributions d'origine.

Constitution de l'échantillonnage

L'échantillonnage soumis à l'analyse a été composé essentiellement à partir de matériel de mer Noire, en particulier d'Histria, et, plus accessoirement de Milet. On en trouvera l'inventaire succinct en annexe. Même si les principales catégories d'amphores dites 'samiennes' y sont représentées, leurs proportions respectives ne reflètent

pas vraiment la situation réelle en mer Noire, mais sont liées surtout aux opportunités de prélèvement. Dans la réalité, ce sont les types 'samien' et 'protothasien' de Zeest qui sont les mieux attestés dans le bassin pontique, distançant de loin la variante à lèvre haute de Grace (que nous avons réattribuée depuis lors à Milet) et les formes à bord échinoïde de la lignée ancienne de Grace.

Résultats de tri de l'échantillonnage 'samien'

Le dendrogramme de tri informatisé de notre échantillonnage 'samien' révèle, après éviction des individus marginaux ou inclassables, une partition en quatre groupes distincts (Fig. 1). Le premier rassemble la plupart des spécimens des types 'samien' et 'protothasien' de Zeest, ainsi que quelques modèles fuselés d'époque tardo-archaïque / protoclassique et un unique fragment d'amphore à bord échinoïde (profil 'en olive') de la lignée ancienne de Grace. Ce premier groupe est lui-même subdivisé en trois sous-groupes a, b et c, dont seul le second renferme quelques éléments autres que des amphores des types 'samien' et 'protothasien' de Zeest; le dernier sous-groupe semble surtout correspondre à des modèles 'protothasiens' à panse orange foncé et panse conico-piriforme. Vient ensuite un second grand groupe, scindé en deux sous-groupes a et b. Le sous-groupe principal a est constitué à peu près exclusivement de ces formes à lèvre haute, que Grace considérait comme une variante de son modèle principal tardo-archaïque à bord en corniche; on note aussi la présence d'un échantillon d'amphore fuselée tardo-archaïque/protoclassique. Quant au sous-groupe b, bien détaché du précédent, il ne rassemble que des échantillons de Milet correspondant à une variante des types 'samien' et 'protothasien' de Zeest, caractérisée par un bord échinoïde ou en corniche plus massif que sur les modèles 'canoniques'; on y trouve également un unique échantillon de forme fuselée tardo-archaïque à bord en bourrelet. Le troisième groupe comprend surtout des modèles à bord échinoïde (profil 'en olive') de la lignée ancienne de Grace, ainsi que trois formes fuselées plus tardives à panse fuselée et bord échinoïde ou en corniche. Un dernier groupe, enfin, concentre tous les échantillons d'une variante particulière du type 'protothasien' de Zeest, dotée d'un bord peu saillant et souvent ornée d'un petit cercle peint à la fois au col et au sommet de l'épaule.

Premières pistes pour les attributions d'origine

En vue de la constitution d'un réseau de références locales adapté à la problématique spécifique des amphores 'samiennes', nous avons effectué une série de tests préliminaires de confrontation de notre échantillonnage avec des références de la banque de données du laboratoire. Ces essais ont été menés à l'aide de notre réseau de références pour la Grèce de l'Est (au total, plusieurs centaines d'échantillons de Milet, Samos, Chios, Clazomènes...) et de quelques séries de résultats sur des sites du nord de l'Egée (Thasos, Abdère, Maronée, Samothrace, Amphipolis et Mesembria), mis obligeamment à notre disposition par notre collègue F. Blondé.

Bien qu'il soit encore tout à fait prématuré d'émettre autre chose que des hypothèses de travail sur les centres de production de nos différents groupes, ces tests ont déjà

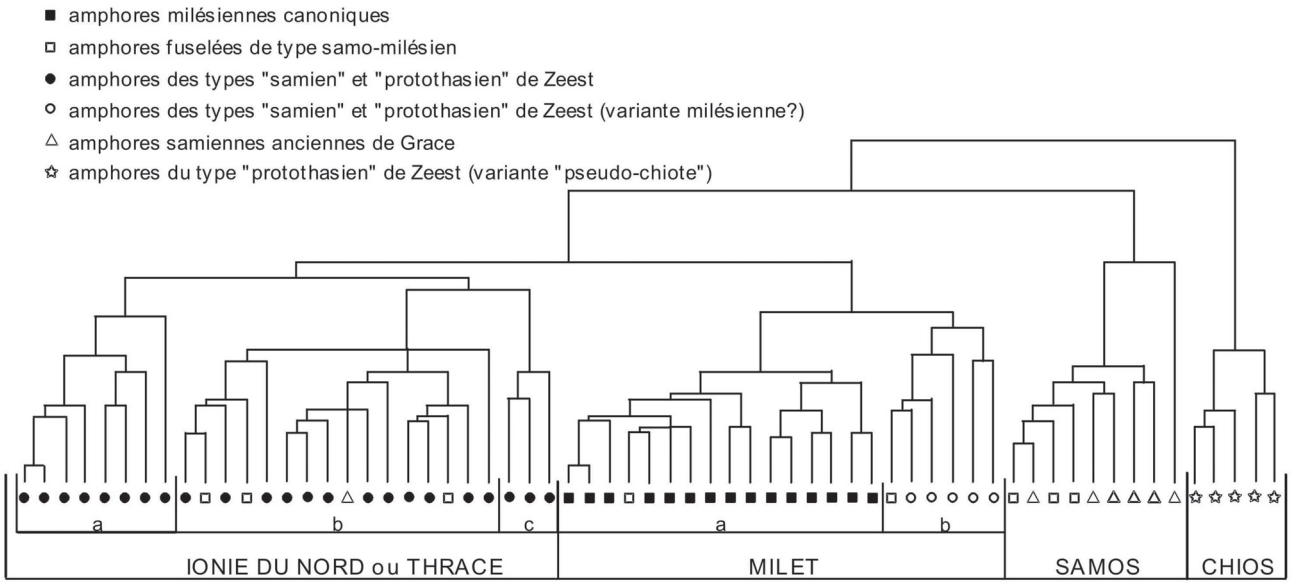


Fig. 1. Dendrogramme de tri des données d'analyse physico-chimique d'un échantillonnage représentatif d'amphores 'samiennes'

fourni un certain nombre d'indications précieuses pour la poursuite des recherches.

De prime abord, le premier des groupes de notre dendrogramme paraît assez proche de certaines de nos références de Thrace – d'Abdère pour les sous-groupes (a) et (b) et de Thasos pour le sous-groupe (c) – mais en même temps aussi de certaines d'Ionie du Nord, hors Clazomènes semble-t-il. Le second de nos groupes, lui, cadre fort bien avec notre référence de Milet, du moins le sous-groupe principal (a); en effet, le cas du sous-groupe (b) est loin d'être totalement éclairci, son origine milésienne demandant à être confirmée par des investigations complémentaires. Quant au troisième, il semble être le seul à présenter des affinités avec certains sous-groupes de notre référence de Samos. Enfin, notre dernier groupe a créé la surprise en révélant des compositions recoupant pleinement celles de notre référence chiote.

Bilan des résultats obtenus et perspectives

Les premiers acquis de notre série d'analyses sont donc loin d'être négligeables et peuvent être résumés comme suit:

1) Seule une petite partie de nos échantillons a présenté des compositions voisines de celles de certains sous-groupes de notre référence de Samos. Toutefois, l'origine samienne de ceux-ci mériterait un complément d'enquête. Les modèles composant ce groupe encore potentiellement samien se réduisent aux amphores piriformes de la lignée ancienne de Grace (Fig. 2a) et à des formes fuselées tardo-archaïques du type Qurneh 849.

2) Les compositions de la plupart des modèles 'samien' (Fig. 2d) et 'protothasien' (Fig. 2f–h) de Zeest, qui envahissent le marché pontique à partir du milieu du VIe s. diffèrent pour la plupart de celles de Samos, mais leur rattachement à une aire de fabrication à situer en Thrace égéenne n'apparaît plus du tout évident au vu des premiers résultats obtenus. En effet, si des affinités de composition chimique (encore à préciser) ont bien pu être mises en évidence avec certaines productions amphoriques d'Abdère et de Thasos pour les variantes à pâte orange (Fig. 2g–h), d'autres, plus étroites encore, sont apparues également avec certains de nos groupes de référence d'Ionie du Nord, une nouvelle piste de recherche à prendre très au sérieux.

Ainsi, de fortes présomptions en faveur d'une origine chiote sont apparues pour l'une des variantes du type 'protothasien' de Zeest (Fig. 2i) . A vrai dire il ne s'agit pas là d'une surprise totale, puisque certains des traits présentés par ces amphores les apparentaient déjà a priori aux emballages de Chios et que les fouilles menées ces dernières années dans la capitale de l'île ont effectivement livré des pieds tout à fait comparables.

Surtout, les compositions des principales séries de 'samiennes' et 'protothasiennes' de Zeest (Fig. 2d, f) semblent assez proches de celles d'un très important groupe nord-ionien mis en évidence au sein des importations grecques orientales archaïques d'Histria. Distinct de Clazomènes, le centre de de fabrication de ce groupe semble plutôt à situer en direction de Téos. Sa localisation plus précise va donc constituer un de nos objectifs prioritaires, débordant largement le cadre de nos recherches sur les amphores 'samiennes'.

3) La forme à lèvre haute que V. Grace interprétait comme une simple variante de ses amphores 'samiennes' présente bel et bien des compositions milésiennes (Fig. 2b). Ceci n'implique pas forcément que toutes les amphores de type milésien aient été produites à Milet même ou à proximité, mais seulement que la cité a été le siège des principaux ateliers exportateurs.

4) Le sous-groupe (b) de notre second groupe ne comprend que des trouvailles de Milet et pose un problème particulier. Les échantillons qui le composent correspondent à une variante à panse ogivale des 'samiennes-protothasiennes' de Zeest (Fig. 2e) et la question se pose donc de savoir si l'on a affaire également à des productions milésiennes ou bien si l'on se trouve en présence d'importations en provenance d'un centre distinct, non identifié. Celui-ci aurait entretenu des relations privilégiées avec Milet, mais n'aurait pas diffusé ses productions en mer Noire, une hypothèse peu plausible de prime abord, mais qui va nécessiter un complément d'enquête.

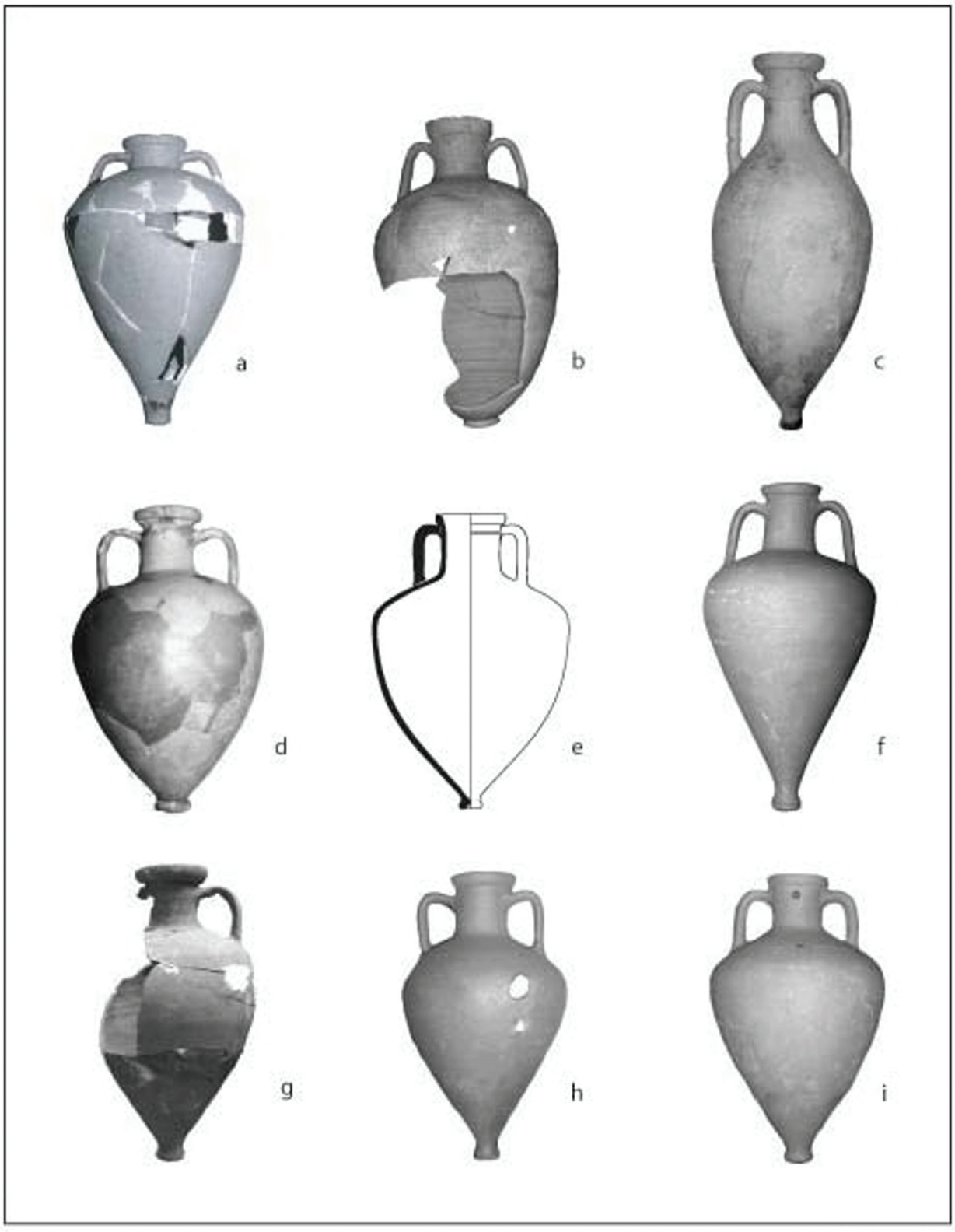


Fig. 2. a) Type piriforme de Grace (Hermitage Ol.18154 d'Olbia); b) Type à lèvre haute de Grace (Hermitage B.85.346 de Bérézan); c) Type fuselé classique de Grace(Sozopol ss. Inv.) ; d) Type 'samien' de Zeest (Hermitage NIF47.636 de Nymphaion); e) Type 'samien/protothasien' de Zeest, variante à panse ogivale (Mus. Pushkin M.65 607/3 N. 491 de Panticapée)); f) Type 'protothasien' de Zeest (Hermitage B.84.402 de Bérézan); g) Type 'protothasien' de Zeest. Variante à pâte orange vif (Type Beikush 68/26 de la chôra d'Olbia); h) Type 'protothasien' de Zeest . Variante à pâte orange foncé (Hermitage B.90. 211 de Bérézan); i) Type 'protothasien' de Zeest. Variante à cercles peints (Hermitage B.67.174 de Bérézan)

ANNEXE
Inventaire des échantillons d'amphores 'samiennes'

Histria

DUP 108 Amphore milésienne standard. Gouttière à la base du col. OO au col.
DUP 109 Amphore milésienne standard (?) Ressauts jusqu'en bas du col.
DUP 110 Amphore milésienne. Variante type Salamine 70/1689.
DUP 111 Amphore samienne à panse ovalaire. Type Qurneh 849 (?).
DUP 112 Amphore 'samienne'/'protothasienne' de Zeest. Pied multichanfreiné.
DUP 113 Amphore 'samienne'. Type ancien de Grace. Var. à col cylindrique trapu.
DUP 501 Amphore 'samienne'. Type ancien de Grace. Col étranglé en bas.
DUP 502 Amphore 'samienne'. Type ancien de Grace. Col étranglé. Décor 'W'.
DUP 503 Amphore 'samienne'. Type ancien de Grace. Col étranglé. Décor 'W'.
DUP 504 Amphore 'samienne' fuselée. Bord échinoïde.
DUP 505 Amphore 'samienne'/'protothasienne' de Zeest.
DUP 506 Amphore 'samienne'/'protothasienne' de Zeest.
DUP 507 Amphore 'samienne'/'protothasienne' de Zeest.
DUP 508 Amphore 'samienne'/'protothasienne' de Zeest.
DUP 509 Amphore 'samienne'/'protothasienne' de Zeest. Bord en corniche.
DUP 510 Amphore 'samienne'/'protothasienne' de Zeest.
DUP 511 Amphore 'samienne' de Zeest. Pied chanfreiné haut.
DUP 512 Amphore milésienne standard. Pied annulaire chanfreiné en biseau.
DUP 513 Amphore 'samienne' de Zeest. Pied annulaire chanfreiné.
DUP 514 Amphore 'samienne' de Zeest. Petit module. Pied chanfreiné.
DUP 515 Amphore milésienne standard.
DUP 516 Amphore milésienne standard.
DUP 517 Amphore milésienne standard.
DUP 518 Amphore milésienne standard. Gorge en bas du col (?).
DUP 519 Amphore milésienne standard.
DUP 520 Amphore milésienne standard.
DUP 523 Amphore milésienne standard. Gorge étroite en bas du col.
DUP 556 Amphore 'protothasienne' de Zeest. Type 'pseudo-Chios'.
DUP 560 Amphore 'protothasienne' de Zeest de Tariverde (chôra d'Histria).
HIS 521 Amphore milésienne standard.

Bérézan

BOR 008 Amphore milésienne standard. Gouttière à la base du col. Anses bifides.
BOR 009 Amphore milésienne standard. Anses ovalaire + bifide.
BOR 010 Amphore milésienne standard. Gorge / base du col. Anses ovalaire + bifide.
BOR 011 Amphore 'samienne'. Type piriforme de Grace. OO estampé au col.
BOR 012 Amphore 'protothasienne' de Zeest.
BOR 013 Amphore 'samienne' de Zeest.
BOR 014 Amphore 'protothasienne' de Zeest. Anse timbrée E.
BOR 015 Amphore 'samienne'. Type piriforme de Grace. Hermitage B.90-213.
BOR 016 Amphore 'samienne'. Type piriforme de Grace. Variante à lèvre basse. Hermitage B.63-313.
BOR 017 Amphore 'samienne'. Type piriforme de Grace. Mus. Arch. Odessa ss. inv.
BOR 018 Amphore 'samienne'. Type piriforme de Grace, pâte claire. Hermitage B.86-242.
BOR 019 Amphore 'samienne' de Zeest à panse ogivale. Hermitage B.83-242.
BOR 020 Amphore 'samienne' de Zeest. Timbre E. Hermitage B.84-398.
BOR 021 Amphore 'samienne' de Zeest AB. 94/48. Pâte chamois non micacée.
BOR 022 Amphore 'protothasienne' de Zeest piriforme. Hermitage B.90-211.
BOR 023 Amphore 'protothasienne' de Zeest. Mus. Arch. Odessa 75311.
BOR 024 Amphore milésienne (?). Variante. Hermitage B.75-312.

Olbia

DUP 521 Amphore 'samienne' de Zeest. Hermitage Ol.18151.
OLV 008 Amphore 'protothasienne' de Zeest. Anse timbrée E.
OLV 009 Amphore 'protothasienne' de Zeest.
OLV 010 Amphore 'protothasienne' de Zeest.
OLV 011 Amphore 'protothasienne' de Zeest. Type 'pseudo-Chios'.
OLV 012 Amphore 'protothasienne' de Zeest. Type 'pseudo-Chios'.
OLV 013 Amphore milésienne fuselée. Gouttière à la base du col. Bord échinoïde.
OLV 014 Amphore 'samienne' de Grace piriforme. Hermitage Ol.18154.
OLV 015 Amphore 'protothasienne' de Zeest à pâte claire (imitation pontique?).
OLV 016 Amphore 'protothasienne' de Zeest. Type 'pseudo-Chios'.
OLV 017 Amphore 'protothasienne' de Zeest. Type 'pseudo-Chios'.
OLV 018 Amphore 'samienne' de Zeest (ou samienne 3 Velia?).

Crimée

CRI 002 Amphore 'samienne' fuselée de Chersonèse Taurique.
CRI 003 Amphore 'samienne' fuselée de Chersonèse Taurique.
CRI 004 Amphore 'protothasienne' de Panticapée. Type Hermitage PAN 1612.
DUP 522 Amphore 'samienne' fuselée de Nymphaion. Pâte blanchâtre.

Taman
TAM 005 Amphore ‘samienne’ de Zeest de Kepoi. Bord échinoïde.
TAM 006 Amphore ‘samienne’/‘protothasienne’ de Zeest de Kepoi.
TAM 007 Amphore ‘samienne’ fuselée de Kepoi.
TAM 008 Amphore ‘samienne’ de Zeest de Kepoi. Bord échinoïde.
TAM 009 Amphore ‘samienne’ fuselée de Phanagoria.
TAM 010 Amphore ‘samienne’ fuselée de Phanagoria.
TAM 011 Amphore ‘samienne’ fuselée de Phanagoria.

Colchide
SIM 001 Amphore milésienne standard de Simagre. Gouttière à la base du col.
SIM 002 Amphore milésienne standard de Simagre. Anse trifide.
SIM 003 Amphore ‘samienne’ de Zeest de Simagre.

Milet
MIL 125 Amphore ‘samienne’ fuselée. Gouttière / base du col.
MIL 126 Amphore milésienne standard. Anses bifides.
MIL 127 Amphore milésienne standard. Anses bifides.
MIL 128 Amphore ‘samienne’ fuselée. Bord en bourrelet.
MIL 129 Amphore ‘samienne’/‘protothasienne’ de Zeest.
MIL 130 Amphore ‘samienne’/‘protothasienne’ de Zeest.
MIL 131 Amphore ‘samienne’/‘protothasienne’ de Zeest.
MIL 132 Amphore ‘samienne’/‘protothasienne’ de Zeest.
MIL 133 Amphore ‘samienne’/‘protothasienne’ de Zeest.
MIL 134 Amphore ‘samienne’/‘protothasienne’ de Zeest.
MIL 135 Amphore ‘samienne’/‘protothasienne’ de Zeest.
MIL 136 Amphore ‘samienne’/‘protothasienne’ de Zeest. Panse ogivale.

Provence-Côte d’Azur
MAR 501 Amphore ‘samienne’ fuselée 6149 de l’épave de la Pointe Lequin 1A.

Résultats d'analyse des échantillons d'amphores 'samienne'

Bérézan																													
	CaO	Fe2O3	TiO2	K2O	SiO2	Al2O3	MgO	MnO	Na2O3	P2O5	Zr	Sr	Rb	Zn	Cr	Ni	La	Ba	V	Ce	Y	Th	Pb	Cu					
Numéros																													
BOR 8	4,78	7,00	0,732	4,33	58,21	19,80	3,36	0,079	1,08	0,41	200	307	244	89	113	127	57	587	96	123	50	32	32	30					
BOR 9	4,73	7,04	0,738	4,39	58,09	19,82	3,39	0,079	1,08	0,44	195	312	248	88	122	128	56	600	94	129	48	40	40	32					
BOR 10	5,31	6,97	0,715	4,17	58,41	19,27	3,59	0,078	1,06	0,23	196	193	238	88	121	138	60	519	96	121	46	32	29	28					
BOR 11	4,35	9,14	0,995	3,32	56,71	19,75	4,00	0,156	1,10	0,27	211	158	145	120	345	306	44	407	186	93	34	13	28	68					
BOR 12	5,67	6,42	0,749	2,68	61,72	19,70	1,64	0,068	0,98	0,17	196	431	133	89	158	126	38	525	116	84	29	19	37	40					
BOR 13	10,77	6,34	0,691	2,28	57,70	18,81	1,81	0,066	1,06	0,29	178	426	103	87	137	97	41	474	115	82	29	11	38	38					
BOR 14	8,20	6,68	0,865	3,09	57,24	20,89	2,10	0,065	0,51	0,18	241	147	161	107	138	87	46	497	149	96	28	23	35	41					
BOR 15	11,33	6,54	0,830	2,58	58,51	17,52	1,79	0,088	0,47	0,16	242	234	122	148	138	90	47	433	147	93	31	22	25	40					
BOR 16	7,76	7,89	0,881	2,76	57,89	17,77	3,56	0,095	0,96	0,26	175	132	131	110	230	197	43	427	158	85	34	17	24	49					
BOR 17	6,95	9,87	0,902	3,33	52,89	21,07	3,62	0,137	0,63	0,37	184	233	154	138	391	361	50	454	185	81	33	17	29	70					
BOR 18	9,71	8,59	0,563	1,74	53,27	10,68	14,34	0,163	0,40	0,16	114	365	85	87	1526	1094	30	316	117	72	22	9	17	46					
BOR 19	10,91	6,32	0,699	2,27	57,80	18,65	1,86	0,068	0,98	0,26	183	437	104	89	129	97	39	441	116	84	29	20	35	36					
BOR 20	5,82	6,48	0,928	3,42	59,35	21,34	2,10	0,058	0,15	0,17	260	129	172	116	144	95	51	581	174	96	32	22	33	45					
BOR 21	11,75	6,29	0,799	2,80	57,48	18,10	1,87	0,079	0,35	0,32	248	166	140	92	130	75	45	480	140	90	30	21	25	33					
BOR 22	1,58	6,66	0,925	3,22	62,14	21,65	2,29	0,095	1,11	0,13	269	152	147	136	95	68	62	662	112	113	38	20	34	36					
BOR 23	11,21	6,59	0,790	2,73	57,45	18,16	2,05	0,117	0,42	0,32	247	190	147	100	123	77	45	425	116	91	30	23	25	42					
BOR 24	6,46	6,83	0,757	2,70	60,65	16,87	4,40	0,097	0,79	0,23	168	198	126	97	330	358	43	520	119	85	28	14	26	52					
Olbia																													
DUP521	3,91	6,38	0,770	2,38	65,33	16,17	2,20	0,115	1,89	0,63	180	350	102	84	166	120	24	558	118	88									
OLV 8	5,98	6,61	0,874	3,18	59,68	20,52	2,13	0,071	0,62	0,17	266	98	161	106	130	94	57	480	161	105	32	22	35	42					
OLV 9	1,61	6,76	0,910	2,96	62,25	21,54	2,48	0,100	1,09	0,12	255	116	146	107	98	68	52	529	110	111	37	16	44	29					
OLV 10	1,43	6,80	0,889	3,25	63,38	20,20	2,18	0,155	1,36	0,18	252	168	135	124	94	69	47	543	110	96	34	20	44	33					
OLV 11	10,73	6,57	0,667	1,74	60,05	13,10	5,13	0,134	1,50	0,18	139	296	77	69	397	308	29	367	115	67	26	10	14	41					
OLV 12	10,62	6,60	0,669	1,77	60,43	13,02	4,83	0,140	1,50	0,22	137	276	71	68	412	313	26	480	117	55	25	9	18	46					
OLV 13	11,73	6,22	0,827	3,00	56,46	18,78	1,94	0,068	0,48	0,33	234	236	132	97	144	77	38	465	135	93	29	23	27	48					
OLV 14	6,60	9,46	0,936	2,69	54,15	21,23	3,57	0,157	0,70	0,21	208	511	147	121	323	288	46	859	176	93	34	15	44	75					
OLV 15	15,68	7,13	0,888	2,13	51,78	16,74	4,21	0,121	0,93	0,22	168	280	106	136	108	76	47	476	143	95	30	14	40	42					

OLV 16	12,36	6,60	0,650	2,14	59,20	12,63	4,30	0,137	1,52	0,29	136	282	67	76	398	311	25	313	130	58	24	8	19	46
OLV 17	7,81	7,20	0,725	1,66	61,43	14,04	5,10	0,162	1,35	0,31	137	287	84	126	419	364	30	423	117	67	25	10	29	46
OLV 18	11,14	7,04	0,702	1,86	59,09	13,38	5,07	0,137	1,17	0,2	144	297	81	118	378	325	28	468	132	63	26	11	20	40
Milet																								
	CaO	Fe2O3	TiO2	K2O	SiO2	Al2O3	MgO	MnO	Na2O3	P2O5	Zr	Sr	Rb	Zn	Cr	Ni	La	Ba	V	Ce	Y	Th	Pb	Cu
Numéros																								
MIL125	9,74	7,75	0,731	3,4	55,25	17,43	4,65	0,095	0,45	0,29	195	225	169	102	275	290	50	458	111	117	38	26	37	64
MIL126	4,3	6,91	0,737	4,14	59,03	19,74	3,45	0,088	1,18	0,22	210	166	229	80	147	207	54	718	90	121	42	30	34	24
MIL127	5,03	7,14	0,753	4,32	58,07	19,84	3,32	0,080	1,01	0,24	192	174	249	85	126	130	58	708	90	120	47	28	32	45
MIL128	9,96	6,35	0,611	3,47	57,51	16,73	3,85	0,087	1,04	0,2	195	187	182	75	180	266	49	579	84	98	36	26	28	29
MIL129	7,69	7,51	0,7	3,64	57,76	18,36	3,05	0,087	0,65	0,35	176	162	183	102	218	207	43	670	134	85	36	18	29	73
MIL130	10,6	7,6	0,726	2,77	56,23	18,02	3,22	0,103	0,27	0,23	181	153	152	97	219	223	42	919	142	90	35	18	32	63
MIL131	7,75	6,6	0,663	3,88	57,59	18,01	3,87	0,093	1,16	0,19	180	178	201	76	171	244	45	622	89	112	38	25	31	31
MIL132	12,09	7,95	0,727	2,56	52,5	18,66	4,61	0,147	0,32	0,19	171	204	133	99	227	235	41	923	121	89	32	17	28	57
MIL133	6,52	7,37	0,748	3,5	56,72	19,74	3,88	0,095	0,94	0,24	227	181	180	86	190	273	62	817	101	118	43	30	32	29
MIL134	8,73	6,82	0,646	3,51	57,49	17,33	4,01	0,091	0,95	0,2	212	199	187	77	200	308	47	742	97	111	37	25	29	37
MIL135	3,74	9,11	0,869	2,96	57,31	21,65	2,85	0,095	0,91	0,26	215	145	148	115	167	134	60	1079	153	111	42	18	35	67
MIL136	2,57	6,96	0,764	4,06	60,27	20,84	2,86	0,068	1,14	0,22	199	150	244	90	116	167	55	1162	74	111	41	29	33	36
Provence - Cфte d'Azur																								
MAR501	8,16	8,31	0,997	3,09	51,78	20,23	6,11	0,073	0,83	0,2	238	175	141	120	343	271	46	414	204	103	34	20	33	68

Résultats d'analyse des échantillons d'amphores 'samienne'

Histria

	CaO	Fe2O3	TiO2	K2O	SiO2	Al2O3	MgO	MnO	Na2O3	P2O5	Zr	Sr	Rb	Zn	Cr	Ni	La	Ba	V	Ce	Y	Th	Pb	Cu
Numéros																								
DUP108	6,09	7,03	0,706	4,37	57,83	18,80	3,50	0,092	1,11	0,28	191	210	229	128	136	169	54	544	96	113	46	22	65	40
DUP109	8,97	8,13	0,840	2,80	53,88	18,90	4,75	0,113	1,26	0,18	150	284	125	97	233	258	34	303	160	72	26	10	23	55
DUP110	2,67	5,31	0,693	3,99	63,95	19,40	1,78	0,081	1,74	0,2	209	196	161	79	88	50	39	591	111	88	24	16	51	35
DUP111	7,82	8,78	0,972	3,33	54,22	19,41	3,95	0,148	0,91	0,25	223	206	157	130	290	255	40	455	164	89	35	18	30	72
DUP112	14,72	5,52	0,653	2,67	56,17	16,85	1,55	0,075	1,08	0,52	186	423	100	95	138	86	31	565	107	77	26	19	28	34
DUP113	8,43	8,98	0,964	3,33	52,77	19,96	4,09	0,144	0,88	0,23	222	211	157	129	299	251	44	498	179	91	33	16	39	70
DUP501	7,47	7,33	0,850	4,13	56,45	19,78	2,74	0,086	0,67	0,26	185	221	287	118	192	156	52	397	139	83				
DUP502	7,68	9,26	0,930	3,24	54,67	18,65	3,71	0,148	1,01	0,46	199	205	147	154	337	335	40	418	154	91				
DUP503	3,99	8,98	1,010	2,89	60,77	17,17	3,35	0,203	1,15	0,25	220	126	117	152	284	265	73	362	160	101				
DUP504	4,76	7,43	0,760	4,61	57,84	18,94	3,16	0,075	1,79	0,41	183	215	223	100	134	144	69	543	93	123				
DUP505	9,07	6,97	0,760	2,60	58,08	18,85	1,58	0,077	1,41	0,4	176	408	119	97	164	118	41	468	112	81				
DUP506	10,55	6,35	0,740	2,59	58,26	17,37	1,57	0,097	1,88	0,38	185	348	112	107	157	104	32	487	119	87				
DUP507	4,37	6,54	0,790	2,56	63,41	18,79	1,41	0,088	1,59	0,2	214	409	126	109	170	132	29	482	117	92				
DUP508	7,33	7,01	0,890	3,30	59,24	19,15	1,87	0,086	0,65	0,27	234	98	144	127	143	100	44	459	137	96				
DUP509	11,16	9,08	0,910	3,43	51,38	18,57	3,98	0,173	0,79	0,27	202	232	163	138	294	260	61	473	145	88				
DUP510	6,51	7,01	0,880	3,23	60,68	18,48	1,80	0,097	0,75	0,35	252	127	139	121	143	97	54	504	129	109				
DUP511	8,25	6,52	0,840	3,21	59,14	18,46	1,91	0,071	1,05	0,33	238	145	135	122	139	94	48	442	139	102				
DUP512	4,67	7,36	0,790	4,76	57,39	19,92	3,41	0,089	1,13	0,25	221	161	245	106	120	117	69	536	74	123				
DUP513	7,10	6,74	0,850	2,84	61,89	17,40	1,72	0,078	0,93	0,27	260	117	126	113	138	89	51	424	131	99				
DUP514	8,66	6,72	0,860	3,37	58,15	17,41	2,59	0,068	1,45	0,51	196	133	144	132	170	118	38	485	131	87				
DUP515	5,79	6,01	0,660	4,09	61,11	17,00	3,07	0,084	1,75	0,22	211	209	211	87	128	135	43	498	83	100				
DUP516	4,85	5,87	0,650	4,42	61,55	17,08	2,70	0,084	2,28	0,29	201	184	195	92	117	119	32	545	79	100				
DUP517	5,30	6,58	0,680	4,21	60,14	17,64	3,31	0,085	1,53	0,3	194	207	221	99	126	153	50	501	91	112				
DUP518	5,83	7,28	0,760	4,50	57,24	18,97	3,37	0,089	1,48	0,26	196	205	238	100	134	140	42	525	101	112				
DUP519	6,62	6,64	0,710	4,24	59,26	17,09	3,24	0,103	1,48	0,38	193	232	201	101	167	145	61	501	99	106				
DUP520	6,64	6,86	0,700	4,82	57,92	17,72	3,25	0,092	1,45	0,31	190	193	200	120	139	151	67	487	97	115				
DUP523	5,51	7,03	0,720	4,46	57,42	19,25	3,58	0,096	1,44	0,26	216	208	226	100	137	164	57	535	106	126				

DUP560	10,10	7,43	0,721	2,16	58,58	13,99	5,08	0,145	1,34	0,25	135	246	92	195	409	353	25	288	125	68	26	10	25	52
HIS521	5,38	6,29	0,760	4,30	60,90	18,57	3,70	0,082																
Crimée																								
	CaO	Fe2O3	TiO2	K2O	SiO2	Al2O3	MgO	MnO	Na2O3	P2O5	Zr	Sr	Rb	Zn	Cr	Ni	La	Ba	V	Ce	Y	Th	Pb	Cu
Numéros																								
CRI 2	6,56	9,24	0,985	3,42	53,66	20,1	4,2	0,166	1	0,45	228	195	160	117	299	266	47	541	180	93	34	17	34	76
CRI 3	6,91	6,56	0,904	3,45	58,29	20,85	1,91	0,091	0,61	0,24	239	84	148	104	136	87	48	511	182	101	31	21	35	53
CRI 4	13,89	6,63	0,799	3,17	55,3	17,33	1,8	0,124	0,59	0,17	230	350	131	230	120	87	42	469	144	87	30	22	22	41
DUP522	9,81	6,73	0,69	1,55	61,64	12,44	4,94	0,137	1,68	0,16	162	249	65	78	443	332	15	296	118	68	0	0	0	0
Taman																								
TAM 5	9,18	6,25	0,838	2,99	59,77	18,26	1,8	0,08	0,44	0,21	247	150	136	121	143	85	44	552	148	96	29	24	30	46
TAM 6	8,37	5,62	0,727	2,78	61,08	17,8	1,82	0,085	1,3	0,22	209	366	129	78	146	102	34	591	99	84	27	18	32	29
TAM 7	9,64	6,04	0,788	2,82	60,27	17,88	1,74	0,076	0,36	0,23	263	155	134	89	123	75	46	477	126	100	33	18	29	39
TAM 8	5,25	8,8	0,968	3,68	57	19,24	3,49	0,174	0,81	0,39	237	222	155	131	273	243	49	424	162	102	33	15	35	62
TAM 9	7,8	8,63	0,923	3,92	53,77	19,55	3,76	0,161	0,76	0,48	222	254	162	148	318	267	46	521	174	96	34	15	38	56
TAM 10	13,77	5,7	0,619	2,66	58,85	12,07	3,95	0,086	1,71	0,35	141	454	76	75	402	215	26	667	114	62	22	13	20	31
TAM 11	16,43	6,92	0,673	2,79	53,32	15,79	3,22	0,137	0,16	0,32	179	241	117	93	212	186	38	982	126	69	32	15	30	56
Colchide																								
SIM 1	3,45	9,15	0,814	4,05	52,45	21,12	3,16	0,156	0,85	4,47	188	425	229	99	149	167	66	1664	99	119	51	34	41	37
SIM 2	5,36	6,69	0,737	4,34	58,12	19,55	3,68	0,086	0,91	0,33	187	206	245	92	133	158	56	622	96	132	46	28	31	31
SIM 3	8,61	5,6	0,783	2,32	62,94	17,11	1,63	0,073	0,56	0,21	229	133	115	101	112	73	42	566	126	95	29	18	30	36

Archaeological Investigation of the Sanctuary in the Necropolis of the Tenginskoe II Site (Preliminary Publication)

V. R. Erlikh

The Tenginskoe II site is located on a high terrace above the River Laba, not far from its confluence with the Kuban, 2.5 km to the east of the village Tenginskaya, Ust-Labinskii district, Krasnodar region (Fig. 1).

The Caucasus Archaeological Expedition of the State Museum of the East carried out archaeological investigation of the site in 1994–1997. The ancient imports found here in the course of the work allow us to divide the history of the fort into two periods: from the end of the 6th to the middle of the 5th century BC (Late Archaic), and from then to the 4th century BC (Erlikh 1986, 165; Malyshev 1986, 110). The fort's rampart and ditch were also investigated and dated to the Late Archaic period. Therefore, we can state that the Tenginskoe site is the oldest Maeotian fortifications known to date (Beglova and Erlikh 1998, 86).

The necropolis was discovered in 2000 outside the rampart-and-ditch circle, where, on the north, it was interrupted by an entrance gap – a 'gateway' (Fig. 2). Aerial photography showed three intensively ploughed mounds; two other small barrows were identified by topography. The excavation of Mound 1 was accomplished in 2000, that of mound 2 is underway.

The objective of the present article is to acquaint the reader with the preliminary results of the investigation of mound 1. The mound was about half a metre high and 40 m across. The present diameter of the mound is double that of the past, which must be a result of annual agricultural activity.

In the central part of the mound, at a depth of 0.30 m, excavation uncovered patches of burnt earth covering an area of 12 x 12 m. The burnt layer offered a great number of finds: fragments of hand- and wheel-made pottery, bodies and handles of amphorae, shreds of black-glazed and red-figure Attic vessels. Also found in this layer were bronze and iron arrowheads, glass beads, golden plaques and filaments for clothes, iron knives and their fragments, armour scales, *etc.*

The ash layer revealed underneath, at a depth of 0.98–1.08 m from the top of the mound, contained the burnt remains of horse offerings lying in a circle (Fig. 3). The sacrifices were carried out on specially prepared platforms covered with river pebbles. The pebble platforms were arranged in a ring 12 m in diameter. Judging from the sets of bridles found, the horse offerings totalled 12. In three cases the whole body of a horse was sacrificed, as evidenced by the fragments of leg and other bones. The charred teeth and bridles found on seven other platforms of the ring allow one to speak of horse head sacrifices. In two cases the ash layer contained only fragments of bridles; the horse bones had burnt.

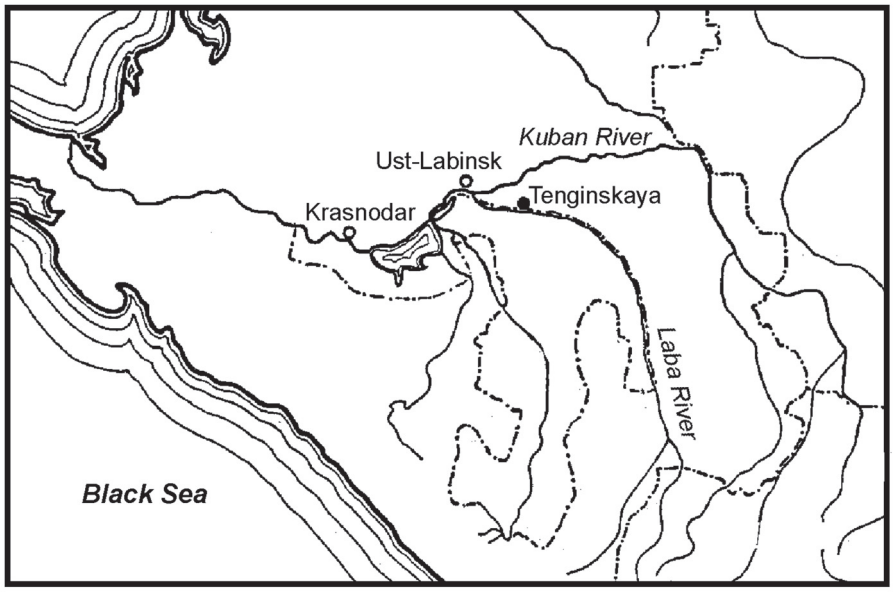


Fig. 1. Location of the village of Tenginskaya

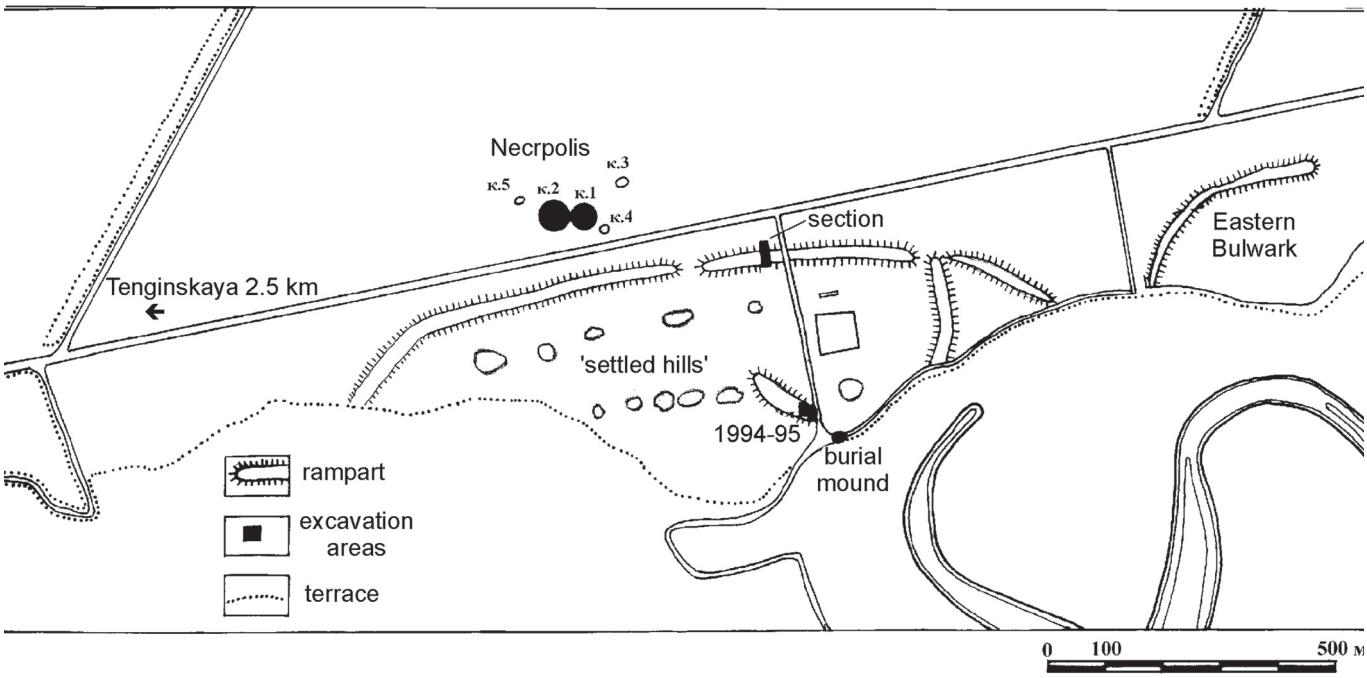


Fig. 2. Tenginskoye site: the plan of excavations

Outside the pebble ring, sacrifices were discovered of obviously later time, which had not been subject to fire: the remains of one horse and two headless horses, close to each other, to the southeast of the ring; and a dog sacrifice unearthed to the northwest.

On the old ground surface, in the north-eastern part of the ring, excavation revealed six deep round post-holes from a burnt-down post structure and multiple small shallow holes from a picket fence. The holes formed an arc coinciding with the outer boundary of the ring. Posts must have been fixed into holes about 0.50 m deep by means of pebbles. The earth around the holes was badly burnt to a depth of 0.08 to 0.10 m, which suggests a disastrous fire. The whole edifice, therefore, must have represented a wooden structure (probably with a tent or semi-tent roof) built on the old ground surface and burnt together with the horse offerings in it.

Among the remains of more than 1500 bones collected both inside the structure and in the overlying layer and studied by the zoologist Y. Spaskii, were those of horses, cattle, hares, sheep or goats, but no humans. Therefore, we do not regard this complex as a cemetery.

The burials themselves were discovered to the north of the pebble ring, outside the traced section of the mound. The earthen burials of two warriors were uncovered here, one with a spearhead and a hand-made vessel and the other with a Maeotian sword and an amphora.

At present we have as much information on mounds containing sanctuary or burial-feast complexes as on other monuments of Maeotian culture. The rituals of worship or burial feasts are known in the Trans-Kuban region from as early as the end of the Bronze Age and the beginning of the Early Iron Age. Among the proto-Maeotian monuments of the western, Primorsko-Abinskaya, group, there are mounds with cult or burial-feast complexes containing quite a number of objects, sometimes with traces of fire and ritual spoil, dating from the 8th century BC. Examples are Complex 2 of mound 2 in the Kholmskii I cemetery and complex 7 of mound I in the Yastrebovskii cemetery (Vasilinenko *et al.* 1993, 21–7; Gei 1984, 29–30). Ritual horse burials were found within the Pshish I cemetery (the Steppe group of proto-Maeotian monuments) that dates back to the 8th century BC. In addition, there is another cult complex from the 8th – 7th centuries BC discovered in the Leninokhabl area of the same region, but it has been submerged by the waters of the Krasnodar reservoir. It had a 3 x 2.5 m platform and contained a great many vessels and animal bones. Yet, it is difficult to say now whether it had a mound over it (Sazonov 1995a; 1995b).

A.M. Leskov believes that all the Ulyap mounds of the 4th century BC (Leskov 1990, 28–44) and a number of the Ulsk mounds of the 6th – 5th centuries BC were sanctuary mounds (Galanina and Leskov 1996, 14).

Based on finds from the 5th – 4th centuries BC, those from the Ulyap and Ulsk mounds being the most diverse and informative, one can identify the basic feature of all Maeotian cult complexes: pits were never a place of sacrifice, whereas the old ground surface or the tops of the Bronze Age mounds were. The second feature, which cannot be considered common for all Maeotian cult complexes for

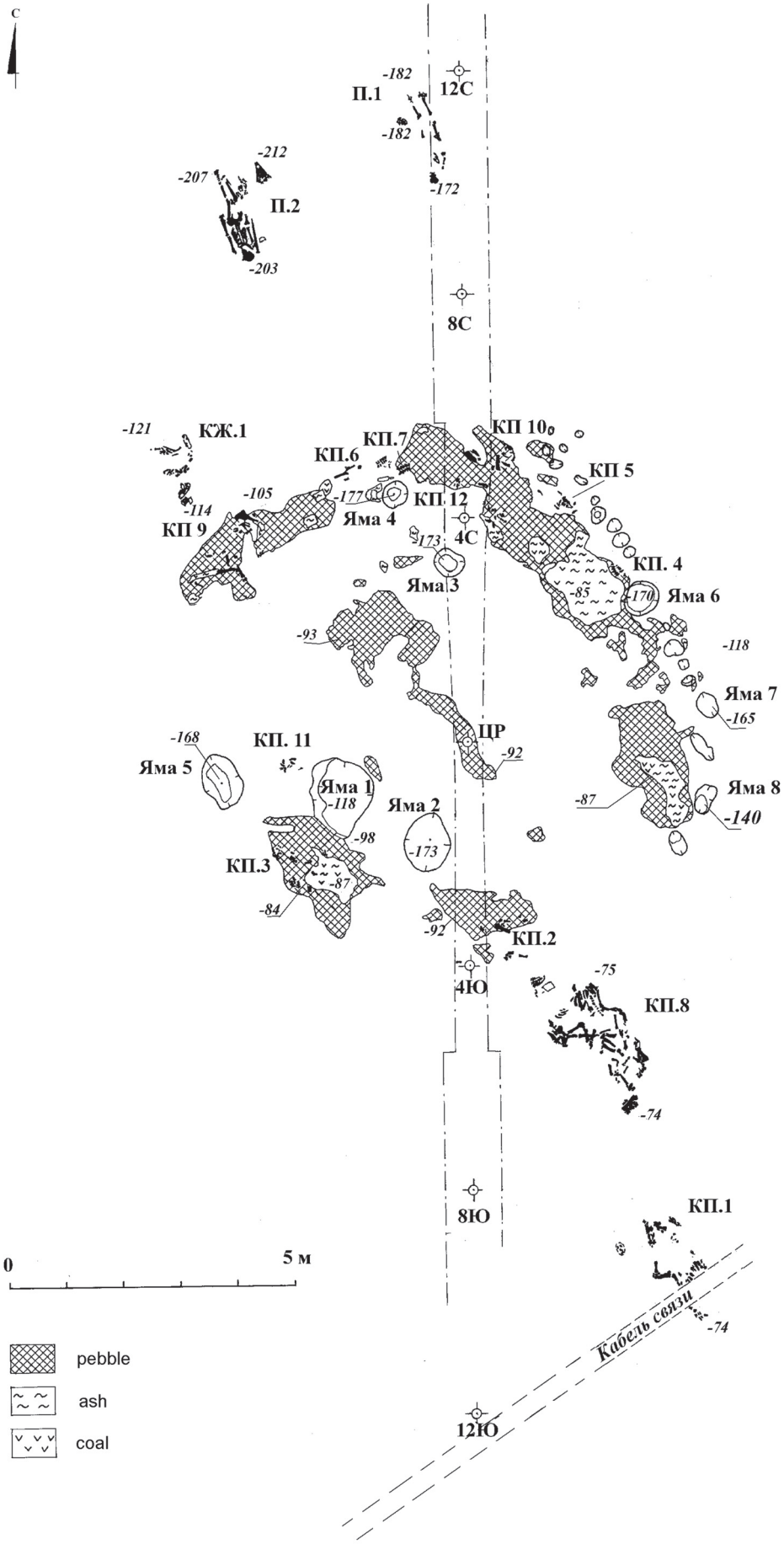


Fig. 3. General plan of the mound

want of sufficient information, is that sanctuary mounds, as a rule, were accompanied by earthen burials to be found in the immediate neighbourhood (Ulyap, Nacherzii, Tenginskii burial mounds, possibly Kelermes).

Maeotian sanctuaries can be divided into three groups:

1. Accumulation of sacrificial objects, animal and human bones under a low mound, with no trace of a wooden structure. The occurrence of objects is random (mound 4 of the Ulyap group).

2. Arrangement of objects obeying a particular principle: horse offerings in a circle or a semicircle (Ylyap mounds 8, 9, and 14; some of the mounds near the village of Voronezhskaya, the Goverdov mounds).

3. Wooden structures – semi-tents (mound 5 of the Ulyap group; mound 10 of the Ulsk group) (Leskov 1990, 25, 34). Judged from the post-holes found, wooden structures must have existed in Mound 2 of the Ulyap group and, possibly, in mound 30 of the Nachersii and mound 1 of the Ulsk groups.

The monument under discussion may be assigned to the third group in this classification.

However, our groups cannot be considered as types: the features of one may be found in another. For example, some sanctuaries, irrespective of group, offer evidence of ritual burning. Sanctuaries containing human sacrifices (skulls, dismembered skeletons) provide a wider choice of objects (mounds 1, 4, and 5 of the Ulyap group).

The mound in question resembles mound 2 of the Ulyap group, which was also found to contain the post-holes from a sanctuary constructed on the old ground surface as well as the remains of horse skulls and skeletons.

Horse offerings arranged in a circle around a central platform are typical of mounds of the Trans-Kuban region, assigned to the Early Scythian times (Kelermes, the Ulsk and Voronezh mounds) (Galanina 1997, 84–6; OAK 1903, 72; Leskov 1990, 24–7). The traces of the ritual, when only the horse's head and legs (and skin) were sacrificed, while the rest of its body became a ritual meal, occur frequently in Maeotian earthen burials starting from the proto-Maeotian period (Beglova 1989, 143; Leskov and Erlikh 1999, 34).

Horse skulls without bodies were found by N.V. Veselovskii under mound 16 near the village Voronezhskaya (OAK 1903, 72). Mound 2 of the Ulyap group also contained only skulls of horses. However, we were the first to find evidence of the ritual burning of both the heads and entire carcasses of horses.

The finds from the sanctuary complex in question include a remarkable collection of horse furnishings. Unfortunately, the iron, of which they were made, has been subject to fire and the shape of these items can be surmised only from preserved fragments. They are loop-like bits with «severe» cruciform cheek-pieces, which were extremely popular at the time (Fig. 4: 1). Bits of this kind appeared in the Trans-Kuban region as early as the 7th century BC, and cruciform cheek-pieces were brought into use in the 5th century BC (the Ulsk mound).

All cheek-pieces from the horse sacrifices at the sanctuary are double-holed. Such pieces appeared in Scythia in the 6th century BC. The finds include double-holed iron straight and C-shaped cheek-pieces, and bronze S-shaped pieces with bosses on their tips (Fig. 4: 3, 4, 6). Their analogies were found in a 4th-century BC complex in the Trans-Kuban region (Erlikh 1992, 161–63). The later modifications of the S-shaped cheek-piece with bosses at the ends occur in the wooded-steppe zone (mound 1 at the village Volkovtsy, mound 4 at Pastyrskoye) and in Steppe Scythia (Illinskaya 1968, 114, fig. 30; Petrenko 1967, pl. 26: 7; Mantsevich 1987, 43, No. 24).

In addition, the mound contained bimetallic cheek-pieces (at least four pairs), with their middle parts (with holes) made of iron and tips made of bronze and cast using the lost-wax method.

Bimetallic cheek-pieces can be grouped as follows:

1. S-shaped, with bronze tips and bosses at either end (Fig. 4: 2, 8).

2. S-shaped, with bronze blades at the ends (Fig. 4: 7).

3. Curved, with bronze animal-form tips – possibly a panther's head on one end and a horse's hoof on the other (Fig. 4: 5).

The shapes of other bimetallic cheek-pieces cannot be identified.

The bimetallic finds distinguish this complex from others. Bimetallic cheek-pieces were not common in the Scythian-Sauromatian milieu. The earliest finds of iron cheek-pieces with bronze zoomorphic tips come from the Pyatimatra I cemetery, located in the territory of the Sauromatians, and are assigned to the 5th century BC (Smirnov 1964, 322, fig. 29: 4a).

Bimetallic S-shaped cheek-pieces were also discovered in mounds 6 and 7 of the yet unpublished Goverdov mounds at Maikop in the Kuban, which may also be regarded as sanctuaries with horse sacrifices (Nekhaev 1986, figs. 101, 123). Such cheek-pieces were obviously used on important occasions – polished bronze looks like gold.

The headstall plaques found together with bridle sets can also be divided into several groups. The majority of horse sacrifices contained round, convex and hemispherical plaques of various size (Fig. 4: 18, 19). Plaques of this kind were widely used in the Trans-Kuban region as early as the end of the 6th century BC (Erlikh 1992, 167).

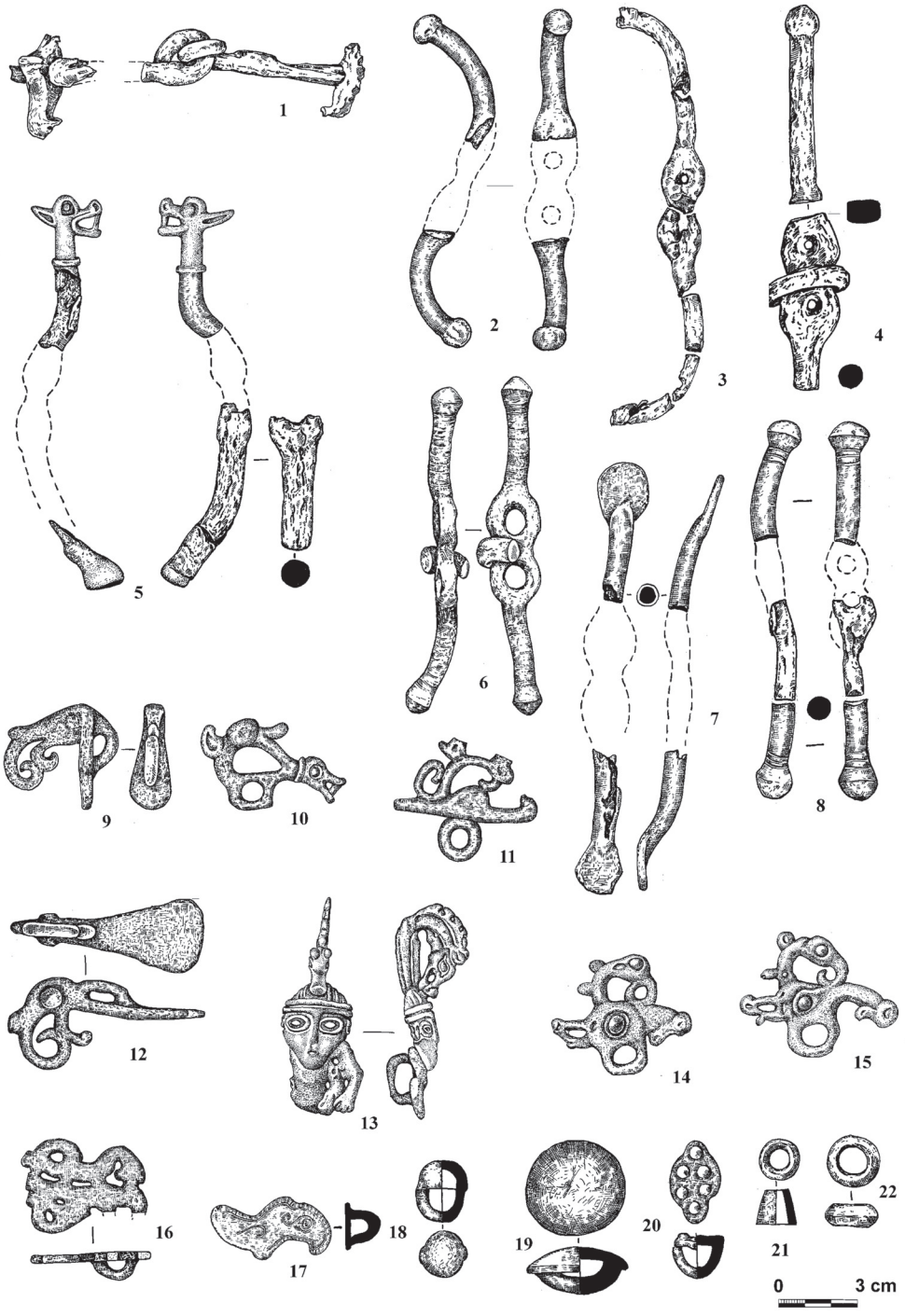


Fig. 4. Bridle details: 1, 3, 4 – iron; 2, 5, 7, 8 – bronze and iron; 6, 9–22 – bronze

They were also common for the Ukrainian wooded steppe and Sauromatian territory (Illinskaia 1968, 129; Smirnov 1961, 153–54, figs. 51, 52).

Horse sacrifice 9 contained rhomboid rosette-plaques with six bosses (Fig. 4: 20). Similarly shaped plaques were found in mound 8 of the Ulyap group dated from the 4th century BC (Leskov 1990, 190, No. 213). In the western Ukrainian forest-steppe zone, plaques of the above shapes were unearthed from under the mound at the village of Koshevatoe, assigned by V.G. Petrenko to the turn of the 4th century BC (Petrenko 1967, 94, 161, pl. 27: 8).

In addition, some horses had zoomorphic cheek plaques. Finds include engraved plaques shaped like twin bird heads (Fig. 4: 17) and one cheek plaque with a vague zoomorphic design (Fig. 4: 16).

Excavation unearthed a whole range of bronze caps for tassels and bridle rings (Fig. 4: 20, 21). The purpose of

these items is diverse. They were used to fasten straps, fix nose-plaques and knots.

Of particular interest are the Tenginskoe nose-plaques. Five of them are flat, shaped like animals. They have an eye, also flat, to be attached to the strap and are fixed upright by means of auxiliary devices – bronze rings and knots.

Flat nose-plaques were popular in the Kuban area in the 4th century BC, whereas Steppe Scythia was more famous for sculpted nose-plaques shaped like animal heads. Three nose-plaques fashioned into a deer or elk head with the antlers shaped like birds of prey (Fig. 4: 11, 14, 15) are very similar in composition and style to the nose-plaque from mound 8 of the Ulyap group and those from mound 19 at the village Voronezhskaya (Leskov 1990, fig. 81; OAK 1903, 74, figs. 140–142, 148).

Two other nose-plaques have the form of a griffin head with a hooked beak and are mounted on flat plates. There is no significant difference between them in shape and size (Fig. 4: 9, 12). A similar flat nose-plaque shaped like an eagle-headed griffin with a hooked beak occurred in mound 19 at the village Voronezhskaya, however it lacked the mounting plate (OAK 1903, 74, fig. 150). Another flat nose-plaque found in the same mound and shaped like the heads of an aquatic bird and a feline predator (OAK 1903, 74, fig. 146) is analogous to the Tenginskoe type (Fig. 4: 10).

Of greatest interest is the nose-plaque shaped like the head of a panther devouring a man's head (Fig. 4: 13). This piece was cast in bronze using the lost-wax method. The flat part of it represents a man's head in the grip of all the four of the beast's paws, one of that was broken off in antiquity. The man's face is broad; his eyes – two ovals with embossed rhombi for pupils – are open. The nose, widening slightly downwards, projects from beneath the embossed brow. The mouth is represented by a small oval hollow, and the beard by notches on both sides of the triangular chin. The hair is represented by embossed parallel lines. The line crossing the forehead looks like a ribbon or the brim of some headgear. Thus, the artist probably tried to depict a haircut or a helmet.

Placed perpendicular to the man's head is that of the panther. The beast's jaws are half-open, its neck is curved; its hair, ear and almond-shaped eye project from the plane surface. The jaws are touching the top of the man's head.

The flat surface of the plaque has an eye on its reverse, by which it was attached to the nose strap. The size of the plaque is 8.2 x 3.3 cm.

Compositionally, the Tenginskoe nose-plaque belongs with the group of sculpted nose-plaques and forehead-plaques from the northern Black Sea area, assigned to the 6th – 4th centuries BC. On the flat surface of some of these are additional representations of animals. An example is the nose-plaque from the Chmyreva Mogila mound, which is closely analogous to the Tenginskoe nose-plaque. The sculpture of a feline predator and the relief depicting a beast's head with its paws around it are arranged in different planes (Melyukova 1976, 113, fig. 3: 5). However, the author of the Tenginskoe nose-plaque enriched the already habitual scene with the representation of man.

One should mention that representations of men occur very rarely in Maeotian art of the time. One example is the engraved design on the cap from the Kurdzhipskii mound (Galanina 1980, 93, No. 51).

Turning to the main theme of the Tenginskoe plaque – a feline devouring a man's head – it is worth noting that Scythian art regarded feline predators as creatures of the underworld, whereas the hoofs and the man referred to the real world, that of living beings (Raevskii 1985, 112). According to D.C. Raevskii (1985, 152), in the Scythian view of the world, the hoofs (and the man, as well) symbolised "the world of people and mortal beings in general, and the predators – the chthonic world, the element of death". E.E. Kuzmina (1976, 70) refers the above scene to the images of cosmogony – the act of creation and rebirth via destruction. The scene with a feline predator devouring a man occurs twice in the 4th-century BC monuments of Steppe Scythia.

A golden plaque from the mound at the village Archangelskaya Sloboda, Kherson region, depicts a lion devouring a bearded man's head (Leskov 1972, fig. 39). A.M. Leskov (1974, 74) believes that plaques of this kind come from Thrace, but in Raevskii's opinion (1985, 226), they fit easily into the context of Scythian art. Apart from this plaque, a similar scene is depicted on one of the plates of a sword scabbard from Solokha: a panther, whose jaws are open, is devouring a man's hand (Mantsevich 1969, 107, fig. 11: 3; 1987, 69–71, No. 49). Therefore, one cannot reject the possibility that the scene of the panther devouring a man originates in Scythian or Maeotian mythology.

The Tenginskoe sanctuary offered a whole range of bronze and iron arrowheads. The iron ones were found either as isolated items or in groups. All are three-bladed, with triangular points (Fig. 5: 13, 14). Such arrowheads became popular in the Trans-Kuban area from the middle of the 6th century BC onwards, and predominated in the quivers of that time. Finds of bronze arrowheads were few. They can be divided into two types: three-bladed on a long 'neck' (according to A.I. Melyukova: Section II, Type 4, Variant 10a) (Fig. 5: 15, 16) and three-edged (Section III, Type 9, Variant 3) (Fig. 5: 17, 18). Both types belong to the fourth chronological group dated from the 4th to the beginning of the 3rd century BC (Melyukova 1964, 25–9, pl. IV, fig. 1).

The Tenginskoe golden plaques appear to have analogies, too. They are similar to plaques found in 4th-century

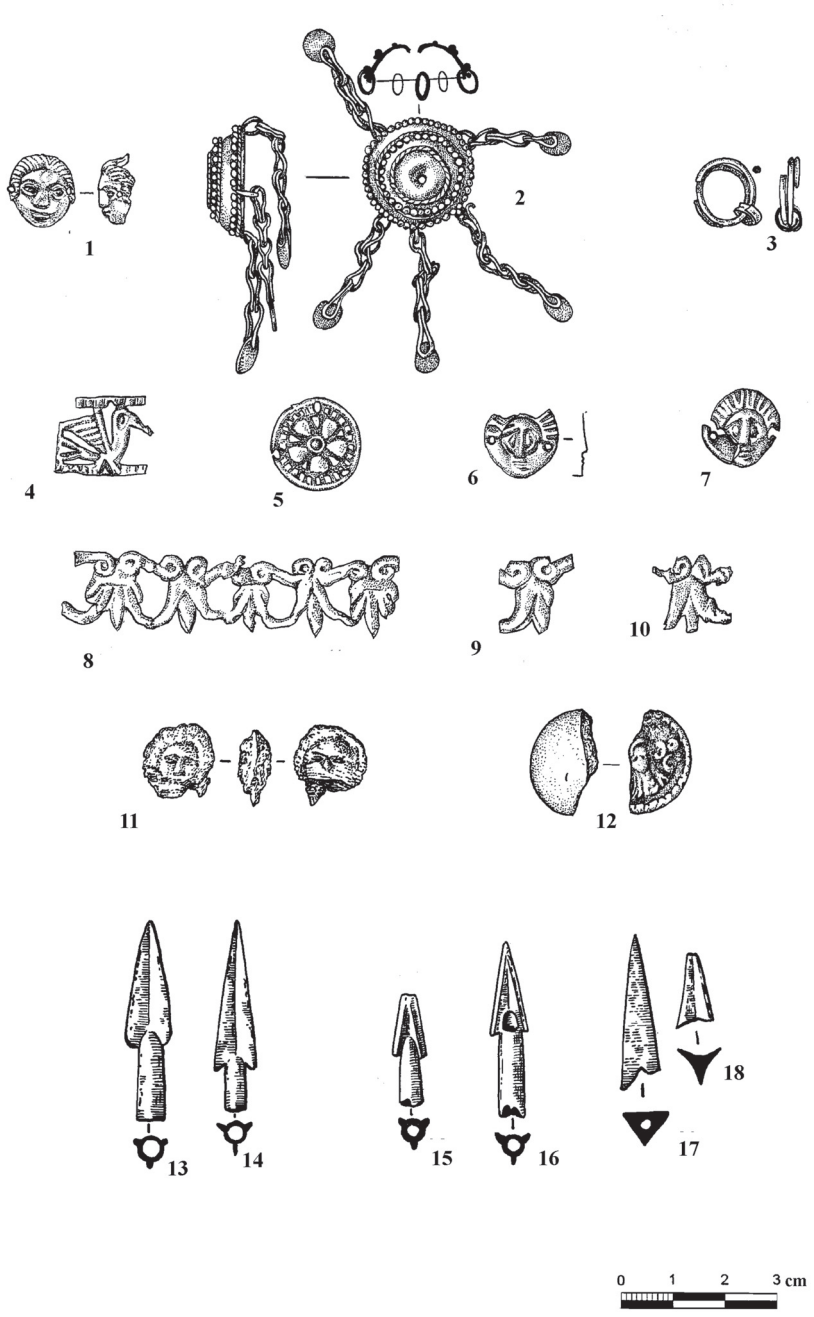


Fig. 5. Decorative objects, dress items, arrowheads: 1–10 – gold; 11 – glass; 12 – ceramics; 13, 14 – iron; 15–18 – bronze

BC mounds of the Black Sea littoral. The plaque shaped like a Negro's head (Fig. 5: 1) resembles ones from the Kul-Oba and Chertomlyk mounds (Kopeikina 1986, 62, No. 360; Alekseev 1986, 155, No. 36). Two other plaques are shaped like a mask of a man (Fig. 5: 6, 7) with a long nose, bulging eyes and short straight rays of hair. Their closest parallels are the plaques from the Solokha mound (Mantsevich 1987, 30, No. 2).

The rosette-plaque (Fig. 5: 5) is of the same style as plaques from the Chertomlyk mound (Alekseev 1986, 65, No. 3).

Also found in the Tenginskoe mound were separate fragments of a belt made of palmette-form plaques (fig. 5: 9–10). Such plaques occur frequently in Scythian mounds of the period, for example, one from the Kul-Oba mound (Kopeikina 1986 63, fig. 38).

There are no analogies known as yet to the open-work plaque shaped like a bird of pray and found in one of the post-holes of the sanctuary. However, one should note its resemblance to the plaques shaped like lying griffins from the women's burial of the Tolstaya Mogila (Mozolevskii 1979, 131, fig. 113: 2).

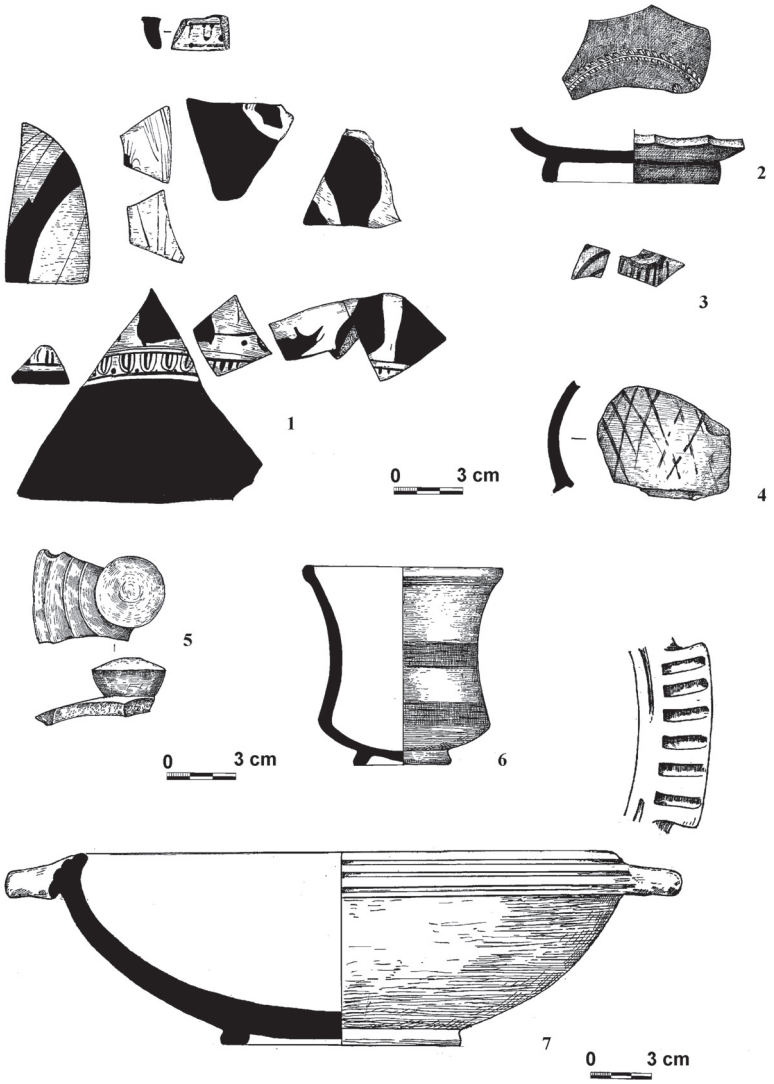


Fig. 6. Ancient pottery

Among Antique pottery from the Tenginskoe mound, of primary interest are fragments of the red-figure Kerch style pelike with a scene from the Dionysiac cycle painted between two lines of oves (Fig. 6: 1). The rim of the vase is also decorated with oves. Attic vases of this kind appeared in Bosporus at the end of the 5th – beginning of the 4th century BC and were in use throughout the 4th century BC (Kobylina 1951, 137). However, some features of the pelike allow us to link it to the red-figure vases of Late Classical period II and to date it to the second half of the 4th century BC (Boardman 1989b, 190–93, figs. 407–412).

The fragments of imported pottery are represented by: the lower part of a black-glazed bowl with a stamped decoration (Fig. 6: 2), probably from the middle or third quarter of the 4th century BC (Sparkes and Talcott 1970, 131–32, 295, pl. 33); a red-clay louterion (Fig. 6: 7); the fragment of a lekythos with a net decoration (Fig. 6: 4). A similar lekythos from the second half of the 4th century BC was discovered in tomb A-157 of the necropolis in Nymphaeum (Grach 1999, 44, No. 74).

Unearthed in the same level as the sanctuary was a glass two-sided blue pendant with a stamped representation of a man's bearded face (Fig. 5: 11). Similar pendants depicting male gods (Baal, Ammon or Zeus) are dated between the 4th and 3rd centuries BC (Alekseeva 1978, 62, 73, pl. 34: 15–17).

Based on what has been said above, one can date the Maeotian sanctuary in the necropolis of the Tenginskoe II site preliminarily to the middle–second half of the 4th century BC, *i.e.* the last period of the fort's history. Further investigation of this monument, as well as a more detailed study of the complexes would provide us with new information on the material culture and arts of the ancient Trans-Kuban area.

Boundaries and Plan of the Ancient Hermonassa: Archaeological Evidence

S. I. Finogenova

Founded originally by the Ionian Greeks from Teos, the Taman settlement changed its size, boundaries, name and partly ethnos many times during its long history. The number of levels revealed here is outstanding. In places, the overall thickness of the habitation material attains 13 m, which is extremely rare for an ancient city. Such a high thickness complicates the investigation of the ancient levels of the settlement overlain by six meters of medieval material. In addition, the considerable part of the settlement is located under the modern city and therefore is inaccessible for archaeologists. All above explains our poor knowledge of the ancient Hermonassa and makes it impossible to uncover the whole city and establish its general plan and boundaries.

Yet a number of attempts have been made to trace the development of the city, or at least of its separate quarters (Zeest 1977, 54–7). The long history of investigations included excavations in the western and eastern parts of the city, in its centre and along the coastline – its northern border, which has largely been ruined by the sea. The present investigation is based not only on the results of the excavation of the city itself, but also on the evidence from the nearby necropolis, since graves located outside the city can also give indication of its boundaries.

Important information on building density is provided by stratigraphy. It is well known that the historical centre of a city is rare to undergo any changes. Consequently, the building density here is higher and the respective layer is thicker. We have compiled layer-by-layer plans of main architectural monuments. These plans enable us to get an idea of the orientation of buildings and the direction of streets in separate parts of the city.

Hermonassa was located both on the lower and upper plateaus. Practically no investigations have been carried out in the lower town. Three sampling cuts date the earliest level to the middle of the 6th century BC, however the area covered by investigations is too small to be indicative of any construction remains. As for the upper plateau, the whole succession of levels was studied. Here, excavation was carried out on the South-Western (1952), Eastern (1955–1957) and Hill (1965–1987) plots. The works on the fourth, Northeastern plot started in 1986. At present trenching has reached the 1st-century BC level (Fig. 1).

Stratigraphical data enable us to make the following conclusions. To date, the earliest evidence has been found on the Eastern plot, in the filling of household pits from the beginning of the 6th century BC. The respective layer is rather thin, no more than 0.15 m. I.B. Zeest (1974, 86) assigns it to the time of the emporium that preceded the foundation of the city.

The layer from the end of the 6th – beginning of the 5th century BC was not traced on all the plots, but where it was, it had different thickness. The area of 500 m^2 investigated on the Northern plot, for example, showed no trace of development from this time; only dust-holes were found. This suggests that no construction was carried out within this area in the 6th – beginning of the 5th century BC, and it was either located outside the city or used for household purposes. No remains of fortifications were found there.

On the Southwestern plot, this layer occurs at a depth of 9.8 m, its thickness being about 0.84 m. The walls of the houses cleared here are not oriented to the four cardinal directions. On the Hill plot, located to the north, the thickness of the layer reaches 2 m. On the Eastern plot, the construction density was high, as evidenced by the remains of residential houses standing along a southeast-northwest line.

Thus the thickness of this layer increases towards the east and northeast, which suggests that the original Greek settlement was located farther to the east of the territory occupied by the city. According to stratigraphical data, the earliest layers are quite thick on all the plots, indicating the intensive development of the city at that time.

By the end of the 5th century BC, the city had developed further to the west. Assigned to this time is the building uncovered on the Northern plot. The mud-brick walls of the basement, the only part of the building, which has survived, are strictly oriented to the four cardinal directions. This fact does not coincide with I.B. Zeest's opinion that the streets of the city, in the early phase of its history, ran northeast-southwest towards the harbour that played an important part in the economy of the city during this period (Zeest 1977, 55–6). However one should mention that I.B. Zeest's conclusion was based on the material from the Eastern plot only; on the Northern plot, the 5th-century BC level had not been reached yet.

In the 4th – 3rd centuries BC we observe the further development of the city, with new monumental buildings appearing on previously neglected grounds. A big building was found on the Northern plot, near the above house with the basement. Its thick wall is composed of boulders. It has a courtyard paved with pottery shreds. The 1.20 m high remains of the impressive masonry used to be the main wall, along which new spaces were added over many

decades. The wall stands along an east-west line, which proves that the layout of this complex did not change during 100–150 years.

At the same time the earlier residential houses of the Hill plot were replaced by a large public building with porticos (*prostas*), numerous rooms and annexes, and a big paved courtyard. Its total area exceeded 500 m^2. As judged from the position of its walls, the whole construction was turned to the west by 20°.

Although the two architectural complexes described above are only 25 m from each other, their orientation is different, following probably the city plan of the previous period. The same was suggested by I.B. Zeest (1977, 56). The replacement of residential houses by a public building evidences the growth of the city centre. The discovery of monumental edifices with frescoes on the Eastern plot, as well, suggests that the historical core of the city maintained its original location.

Between the 3rd and the 1st centuries BC the boundaries of the city must have remained the same. However, two monumental stone vaults discovered not far from its southern border indicate that the necropolis moved much closer to the city or that the area of the city decreased. The architectural remains from this time evidence a much lower level of living. Stones from former buildings were frequently used for new construction. The orientation of the buildings on the Northern and Hill plots remains the same. On the other hand, the buildings on the Northeastern plot show some deviation from the cardinal directions, which, probably, is explained by the proximity of the harbour, the road to which passed through this part of the city.

It is worth noting that no fortifications have been revealed. Some sources mention a tower that was restored in the 2nd century AD during the rule of the king Tiberius Julius Rhoemetalcus and which must have been a part of the city fortifications [*CIRB* 1052].

In the 3rd – 4th centuries AD, a big edifice with two rooms and a paved court in front of it was built (the Hill plot) to the north of the Hellenistic public complex mentioned above. Its walls were oriented to the four cardinal directions. Meanwhile, the buildings and streets on the Northeastern plot preserved their former orientation.

In the Roman time, the public centre of the city appears to have moved to the east. Wineries from this period uncovered on the Northern and Hill plots are located in close proximity to monumental and rich edifices of the 4th – 3rd centuries BC. In Hermonassa, as in other cities of Bosporus (Gaidukevich 1952a, 136, fig. 1; 1952b, 16, fig. 1), wineries were never built in the centre of the city, not even during the periods of natural economy.

In summary, the stratigraphy and plans of architectural complexes in Hermonassa evidence that the city development lacked regularity. The streets and buildings of the eastern part of the city were arranged in relation to a southeast-northwest line, whereas those of the western part were strictly oriented to the four cardinal directions. The boundaries of Hermonassa changed throughout its whole history, depending mainly on the wealth of the city.

Aspurgians and the Military Policy of Bosporus at the Turn of the First Century AD

V. A. Goroncharovskii

From the end of the 1st century BC, the political situation in Bosporus was defined by the interaction of the kingdom with its three major neighbours: (1) the later Scythians populating the areas to the west, (2) the Sarmatians on the east and (3) the Romans who were highly interested in having a buffer-state on the north-east of their Empire. To a certain extent, the situation was influenced by the Aspurgians – the descendants of the nomadic Sarmatians[1] – who settled down in the Asian part of the Bosporan Kingdom between Phanagoria and Gorgippia. Most probably, this was during the rule of Asander (47–17 BC), who must have acted in line with the accepted practice, according to which the Hellenistic governors granted war settlers lands, exempting them from taxes and usual duties [*cf.* Fl. Jos. *AJ* 17. 2. 1]. The Aspurgians might have been granted the same privileges, as they provided the ruling dynasty with a powerful support in the Asiatic Bosporus and represented a military force, which could always be relied upon in the struggle against internal and external enemies. It is possible that, following the example of Mithridates Eupator, the established links were secured additionally by intermarriage.

After 22 BC, when Augustus was restructuring the vassal kingdoms of the East, Bosporus fell under the influence of Rome and the term 'philoromaios' [*CIRB* 30] was first added to the king's titles. However, the traditions started by Mithridates, according to which local governors, to become more powerful, had to seek the support of the barbarian periphery and war settlers (Saprykin 1985a, 63; 1996, 315) continued to develop. This fact was highly disturbing for the Romans, who considered it a potential menace to their Empire from the north-east. Indeed, the Asiatic Bosporus, and the Aspurgians in particular, were the ones to oppose most violently the direct interference of Rome in their affairs, when in 14 BC, Augustus and Agrippa wanted Polemo, the ruler of Pontus, to become the king of Bosporus and the husband of Dynamis [Cass. Dio 54. 24. 4].

Contrary to the widely held opinion that no direct interference was actually needed (*e.g.* Golubtsova 1951, 89; Gaidukevič 1971, 328; Shchukin 1994, 179; Maslennikov 1995, 162; Saprykin 1996, 192), one cannot reject the possibility that Agrippa himself took part in the war following the above incident (Parfenov 1996, 101; Boldyrev 2000, 12; Goroncharovskii 2000a, 223). Flavius Josephus mentions that king Herodes' fleet joined the Roman troops near Sinope; according to him, during this campaign Herodes was incessantly with Agrippa, being his ally in battles (sic!) and adviser in serious situations, until they accomplished the mission in Pontus Agrippa had been assigned to carry out [Fl. Jos. *AJ* 16. 2. 2]. Agrippa's victory over Bosporus is also favoured by the fact that the Senate appointed a day of a triumph on his return to Rome; however the celebration never took place [Cass. Dio. 54. 24. 10; see also Eutrop. 7. 9; Oros. 6. 21. 28].

Everything seems to indicate that Dynamis and Polemo never married each other or, if they did, their marriage was short-lived. If Rose's assumption that the figures near that of Agrippa in the southern frieze of the Ara Pacis are of the queen and her son is true (Rose 1990, 453–67), then the queen was taken to Rome as a hostage, where she stayed until the death of Polemo in 8 BC (Parfenov 1996, 95–103; 1997, 132). This assumption seems very attractive, as it can clarify many events related with the supposed second rule of Dynamis (8 BC – AD 7).

Speaking of the above frieze, one should mention that the boy of about five years old depicted at the side of his mother-queen and crowned with a diadem has clearly got barbarian features and is wearing a torque around his neck. It seems rather unlikely that Dynamis could have such a young son: far from being young in 9 BC, when the altar was completed, she had already turned fifty. Therefore, one can suggest that she had to adopt officially an offspring of one of the Aspurgian noble families (Aspurgus?), trying thus to obtain the support of the Aspurgians, who represented a strong military force. If so, she attained her goal and the Aspurgians struggled devotedly against the Roman nominee imposed on Bosporus. Probably, the military campaigns that Polemo conducted at the end of the 1st century BC were the ones to destroy such forts as Chrysaliskos' residence (Sokolskii 1976, 39, 108), the fortress not far from Gorgippia (Alekseeva 1988, 69), and the Raevskoe hill-fort (Onaiko 1984, 92). Obviously, Polemo was not in the least inclined to guarantee the Aspurgians a special status in his kingdom. Yet one can presume that negotiations were in progress, when he attacked the Aspurgians on the pretext that he wanted to conclude a peace agreement, was imprisoned and killed [Strabo 11. 2. 11].

Matianes, the son of Zaidares (or -os), was one of the Aspurgian chiefs, who played an important role in the above events. His grave stele found in the Temryuk region (Fig. 1) had been erected by queen Dynamis 'in memory' (Yailenko 1995, 220–24). The fact that the dedication was made on behalf of a ruler is unique

[1] In this case, one can obviously agree with M.I. Rostovtsev, who believed that the Aspurgians had been not a tribe, but the militia of King Aspurgus brought by the latter either from the littoral of the Sea of Azov or from the hinterland of Sarmatia (Rostovtsev 1916, 16; Rostovtzeff 1919, 88). For the relevant historiography, see Saprykin 1985b, 65.

Fig. 1. Grave monument to Matianes, the son of Zaidar (Temryuk museum)

in the history of Bosporus and suggests the outstanding merits of the deceased and the special attitude towards him of the royal house. In the upper part of the stele one can see an elaborately carved relief depicting a warrior on horseback. This piece of art is evidence of the craftsmanship of its maker, who managed to convey such details as the high leather boots of the horseman, the tail-strap of the horse and its mane cut into crenels. These details are definite attributes of the eastern nomadic milieu that were not common for Bosporus.

Apart from above relief, the crenelated mane occurs on only one other grave monument (Matkovskaya 1992, 404, tabl. 5: 7). On the murals of later Panticapaeum vaults from the 2nd century AD, it is found in the representations of the Bosporus' mounted enemies (Rostovtsev 1914, tabls. 64: 1; 79).[2] The nearest area, where this mane-cut was in fashion, was the Volga river region, which is where the known 1st-century AD silver vessel with a stamped design originates (Treister 1994, 180, fig. 7). The range of earlier analogies of this kind is much wider – from Pazyryk to China (Maenchen-Helfen 1957, 95–137; Rawson 1996, fig. 100b). Horsemen's high boots (Yatsenko 1999, 163–64, fig. 1) and leather horse tail-straps (Zeimal 1979, fig. 36; Marshak 1987, 235–36; Maslov 1999, 227) were characteristic of this area and occur, apart from the Matianes stele, only on a few Bosporan grave monuments (Rostovtsev 1914, tabl. 84: 1–2; Ivanova 1961, fig. 55; Desyatchikov 1972, figs. 1–3; Savostina 1992, 382, 385–86; Matkovskaya 1992, tabls. 2: 4; 5: 7).

Of particular interest is the horseman's armour. To date, it is the earliest known representation of a cataphract in Bosporan art. Clad in a short mail coat with a cut, the horseman is holding the rein in his left hand and a long lance in his right. The relief provides too little room for the lance, which continues beyond its borders.[3] The lance is pointing upwards, a position typical for marching, not for fighting, and rests upon the clearly seen horizontal projection of the saddle, probably, with elements of a wooden frame.

Apart from the lance, there is an unstrung Hunan-type bow and a quiver strapped to the right side of the saddle. This confirms that Bosporus was already acquainted with bows of this kind by the beginning of the 1st century AD (Khazanov 1971, 31; Desyatchikov 1972, 72). Representations of such bows can be found in Bosporan frescoes and reliefs (Kieseritzky and Watzinger 1909, Nos. 574, 626, 650; Rostovtsev 1914, tabl. 89: 2; Shkorpil 1914, 75, No. 6; Ivanova 1961, figs. 82, 89, 90; Davydova 1990, 58, No. 48). They show that Bosporans used to carry bows in a similar way to Central Asian peoples, the late Parthians or the Persians of the Sassanid period (Nicolle 1996, 7, figs. 1, 2, 4, 5, pls. A–C; Nikonorov and Chudyakov 1999, figs. 3, 4, 6), *i.e.*, on the right thigh, unstrung, in a quiver combined with a bow-case or in a long, narrow case tied up with belts.

Thus, the military innovations that appeared during this period in Bosporus can be associated with the Aspurgians, who formed the major part of the Bosporan cavalry.

We cannot share Yailenko's (1995, 224) opinion that the stele was erected at the time of the struggle against Polemo. This must have happened later. One should mention in this connection the inscription made in even and well-formed letters and featuring elements of cursive writing which, according to earlier viewpoints, appeared after AD 14 (Boltunova and Knipovich 1962, 21). If the hypothesis of Dynamis' second reign is true, the Matianes stele should be dated from the turn or the very beginning of the 1st century AD, *i.e.* from the time when the queen, back in power, was able to pay homage to her devoted supporters. Indeed, in this case it becomes clear why as many as nine inscriptions are available from the reign of Dynamis, whereas Asander left us with only two and Aspurgus with only four, although both were in power for quite a long time.

[2] The crenellated mane occurs also on the coins and stamped articles of the end of the 2nd – beginning of the 3rd century AD, depicting Bosporan kings on horseback (Maenchen-Helfen 1957; figs. 3: 4). Most likely, it was a tribute to tradition: the ruling dynasty came from the Sarmatians. The representation of such a mane-cut, dating from the same time, was also found in the Iluraton fortress, where the garrison involved many descendants of the Sarmatians (Goroncharovskii and Nikonorov 1987, fig. 1).

[3] The same detail is present on the well-known grave monument of Athenius: the lower end of the cataphract's lance continues beyond the borders of the stele relief.

It is not improbable that Matianes' descendants were also involved in the history of the Asiatic Bosporus. This Iranian name is met again only in a recently found decree from Tanais. The decree honours a son of Matianes who was brought up by step-parents, had a good position at court and, according to the available fragments of the text, proved to be useful for "the king of kings and the fatherland" (Arseneva *et al.* 1995). The publishers suggest that the decree belongs to the rule of Sauromates I (AD 93–120), when Tanais grew into a large urban centre.

However, one cannot quite agree with this suggestion, since the text is testimony to the further development of cursive writing (which we mentioned in connection with the Matianes stele) and it is hard to believe that there is a whole century separating the two inscriptions. In addition, the term 'fatherland' is first found in the list of the king's titles in a manumission from Gorgippia dated AD 41 [*CIRB* 1123]. The manumission is assigned to the rule of Mithridates (III) VIII (AD 39/40–44/45), therefore, one is not too far from the truth when assuming that the Tanais inscription refers to the same king. In this case the honouree was a son of Matianes to whom Dynamis had dedicated the stele.

All abovementioned allows us to suggest that the man buried in the vault came from the Aspurgian nobility. He does not appear to have been the only Aspurgian who merited burial in the Panticapaeum necropolis. One should note two other grave monuments in closest proximity to the vault of Anthesterius, bearing a remarkable resemblance to the latter in architecture, style and painting techniques – the vault of Alcimus, the son of Hegesippus, and the 1891 vault (Rostovtsev 1914, 196).

The former, which probably belongs to Anthesterius' brother (Rostovtsev 1914, 175), has a Sarmatian sign of property (tamga) carved to the right of the entrance (Rostovtsev 1914, tabl. 50: 2; Drachuk 1975, tabl. 12: 945), its type being close to one of the royal symbols of Bosporus. One can conclude that the vault belongs to a noble, perhaps to a relative of the ruling dynasty. The fresco of the second vault depicts a yurt and a departing horseman (Rostovtsev 1914, tabl. 52: 1).

If above conclusions are true, the Aspurgians were fast to adapt to the local features of the ancient culture. Some of them entered the ruling elite, taking Greek

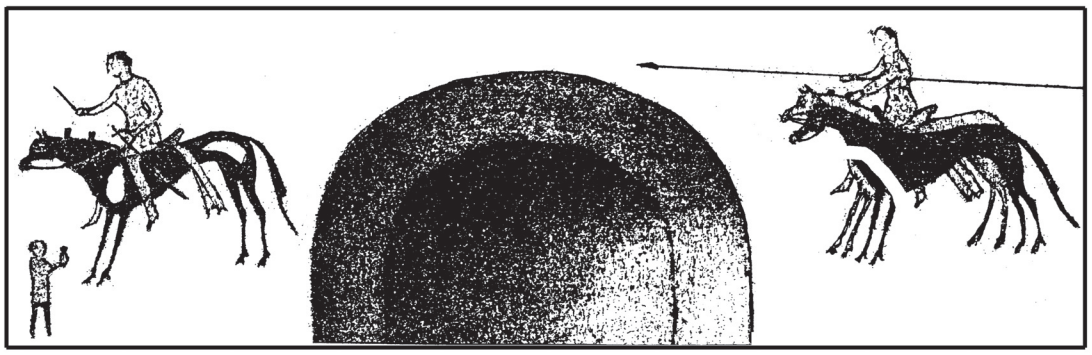


Fig. 2. Anthesterius vault: Fragment of the wall painting depicting horsemen

Most likely some of the Aspurgians served in the capital, in the royal horse guard. One should note in this connection the details represented on the Matianes stele. Similar details can be found in the wall painting of the vault from Panticapaeum (Fig. 2), belonging to Anthesterius, the son of Hegesippus, which is conventionally assigned to the turn of the 1st century AD (Rostovtsev 1914, 182, tabl. 51: 6). The fresco depicts a beardless equestrian and, behind him, an armour-bearer carrying a lance.[4] The scene and the techniques used by the artist belong to the Sarmatian myths (the journey to the other world) and artistic traditions (representations of horses with insets imitating stamps executed in the so-called turquoise-gold style) (Yatsenko 1995, 189–92).

[4] The artist who copied the fresco soon after its discovery in 1877 must have made a number of errors, e.g. the long sword looks much like a saber.

names, and the language and (partly) the religious beliefs of the Bosporans. Later on, this circumstance played a significant role, enabling Aspurgus (AD 14–38) as a representative of a new, Sarmatian dynasty to come to power. Probably, his taking the throne was preceded by military actions against the other candidates. The situation in Bosporus was still unstable in AD 14, when Aspurgus went to Rome, where Tiberius conferred upon him the title of king (Blavatskaya 1965, 35). Therefore, the support of his compatriots was of great importance and with time he must have granted them the privilege of most favoured nation.

The political activity of the Sarmatians in the time of Aspurgus is evidenced by the military operations at the borders of the state. One can find the first reference to the Tarpeites, the tribe never previously subordinate to Bosporus, and the citizens of Tanais in the rich list of Aspurgus' titles [*CIRB* 39, 40]. These dedicatory

inscriptions, one of which is dated to AD 23 [*CIRB* 39], mention that he subdued the Scythians and the Tauri. Linked with these victories may be the statue of Aspurgus erected in Chersonesus [*IOSPE* I² 704] and the head of Ares and a trophy appearing on the coins of that time (Gajdukevič 1971, 338; Anokhin 1984, 150, tabls. 40, 46; Frolova 1997, 71).

The fact that Neapolis Scythica was involved in a war at the beginning of the 1st century AD is confirmed by the archaeological data, which offers evidence of the reinforcement of the city's defences, of fires in the city and its suburbs (Koltukhov 1990, 187), and of the subsequent reconstruction that took place in the second quarter of the century (Puzdrovskii 1999, 108). Traces of fire and destruction from the same time are also found in the western Crimea: in Kerkinitis, Kara-Tobe, Chaika and Ust-Alminskoe sites (Lagutin 1999, 205–6).

It is highly probable that this war enabled Aspurgus to appoint his nominee in Scythia and found the Bosporan-Scythian union (Vinogradov 1994, 155). Therefore, by the end of the first quarter of the 1st century AD, the Bosporan Kingdom, with the Sarmatians as its major support, appears to have been a powerful force dominating the political situation in the North-Eastern Black Sea littoral.

The strengthening of contacts with Rome, as evidenced by the term 'philokaisar' [*CIRB* 40] added at that time to the king's titles, contributed to the stabilisation process in this region.

Such a state of affairs persisted until the AD 40s, when under Mithridates (III) VIII Bosporus was involved in a war against Rome [Tac. *Ann.* 12. 15–21]. This remarkable ruler must have tried to obtain independence by forming a coalition with a number of the tribes of the northern Black Sea littoral.

Emperor Claudius, in his turn, supported another candidate for the throne – Cotys, the king's brother. In AD 45, he returned to his country at the head of a legion of Roman soldiers (Golubtsova 1951, 128; Blavatskii 1985b, 228; Shchukin 1994, 205). His competitor responded by concluding an agreement with Zorsines, the chief of the Siraci. The main events of the protracted war took place, as half a century before, in the Asiatic Bosporus. At last, in AD 49, Mithridates was confronted by Cotys' army and several cohorts under the leadership of Julius Aquila. The success of their operation in the vicinity of Maeotis was secured by the powerful support of the Aorsi, the enemies of the Siraces, headed by king Eunones.

The fact that neither Cotys nor the Romans relied on their own forces in this campaign makes one believe that the allies' cavalry could not compare with that of their adversary in number or equipment. One can also suggest in this regard that the Aspurgian nobility, who had always sympathised with the policy of Mithridates VI Eupator, could hardly refuse to support his successor bearing the same name. Most probably nobody but the Aspurgians provided warriors for the heavy cavalry of the Bosporan army, whereas the light horse was formed from the citizens. In this case it becomes clear why the opponents of the rebel king could not feel at ease in the steppes of the eastern littoral of the Sea of Azov without the Aorsi's support.

Judging from the relieves of Panticapaeum grave monuments dating from the turn of our era, one observes no significant change in the armament of the cavalry or the equipment of their horses (Marti 1941, 36, 40, fig. 7: 11; Davydova 1990, Nos. 43, 44). The Scythian-type bow with its ends curved sharply forward was still in use. Unlike the Hunan-type bow, it was carried in a gorytos on the left thigh, strung and ready for use. Any innovations to appear at that time can be associated only with the cities of the Asiatic Bosporus, neighbouring the Aspurgian territories.

For example, the earliest long sword find belongs to the grave of 1st century BC in the necropolis of Phanagoria (Sokolskii 1954, 155, tabl. 5: 1). Of particular interest is the marble two-storey funerary monument to Apollonius and Antipater, the sons of Pantaleon from Gorgippia (Fig. 3: 1), dated to the end of the 1st century BC (Goroncharovskii 1999, 176).

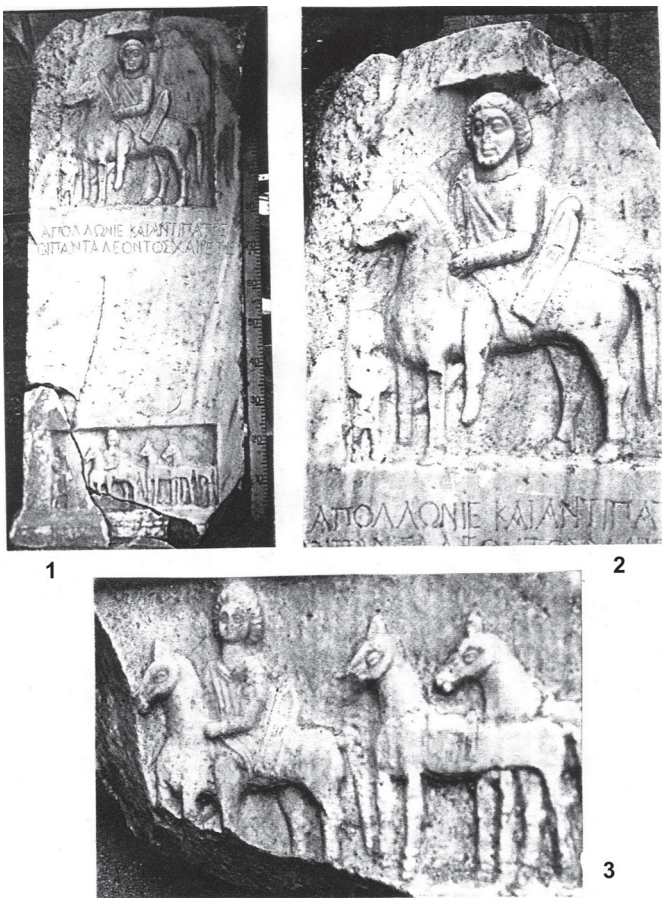


Fig. 3. Marble stele to the sons of Pantaleon from Gorgippia: 1 – general view; 2 – the upper relief; 3 – the lower relief.

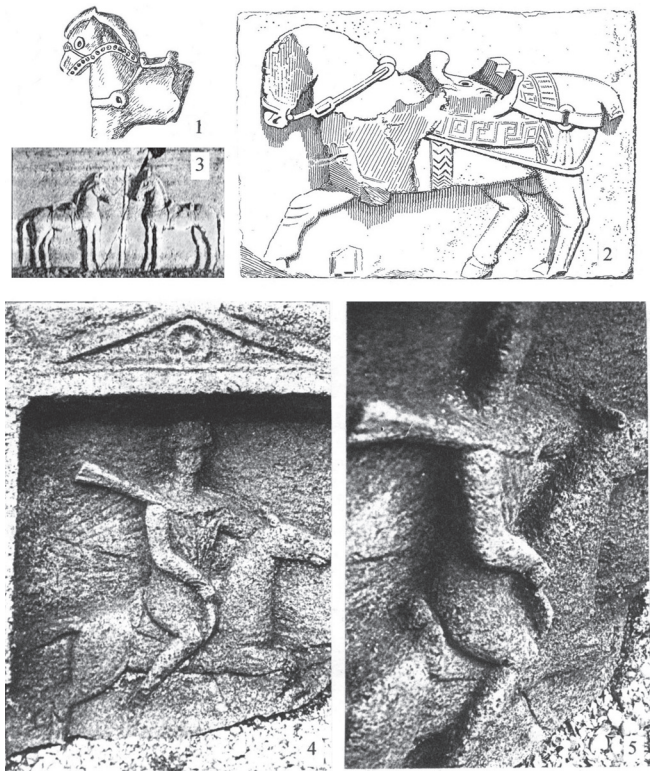


Fig. 4. Representations of saddles from the 1st – 2nd centuries AD: 1 – the terracotta figurine of a saddled horse from Masdzid-i-Suleiman; 2 – the relief from the Baalshamin temple in Seia; 3 – the relief on the grave monument from Gorgippia; 4 – the grave stele with the relief depicting a horseman (Temryuk museum); 5 – a fragment of the same relief

In the upper part of the tombstone, there is a relief depicting an equestrian with a Scythian-type bow in a gorytos (Fig. 3: 2). The young warrior is sitting in the saddle with the head projection of pommel curved slightly inwards. A similar equestrian on the lower relief is leading two saddled long-legged horses by the rein (Fig. 3: 3). Here the saddles have upright front and back 'horns' (pommel and cantle) and a slightly bulging cushion. The closest analogies to such saddles can be found in the representations of horses on Parthian terracottas or on the relief of the turn of the 1st century AD from the Baalshamin temple in Seia (Ghirshman 1973, 103, fig. 6) (Fig. 4: 1–2).

This type of saddle with projecting 'horns' provided a firm 'deep' seat and grew more important with the development of heavy cavalry. The rider had to keep his balance after colliding with an adversary. This required an improvement in the saddle's structure. The rear horns provided a good support for the rider's buttocks and thighs.

A similar type of saddle with projecting 'horns' was used later by the Roman cavalry. P. Connolly reconstructed a leather Roman saddle from Valkenburg (the Netherlands) to demonstrate the surprisingly high efficiency of the 'horns' in simplifying the use of a lance, long sword or bow (Connolly 1987, 8–17; Coulston 1986, 61–2). For greater rigidity, the horns of saddles with a wooden frame were stiffened by bronze plates of the same shape (Connolly 1990, 61, figs. 1–5). Doubtless, all this eased the rider's movements during combat. Even without stirrups, he could feel confident in a saddle that allowed him to lean sideways more freely than hitherto and to manipulate his weapon better. It is worth mentioning that a representation of such a saddle can be found on the 2nd century AD grave monument from the necropolis of Gorgippia (Vainshtein 1991, 220, fig. 96: 4) (Fig. 4: 3).

From the second half of the 1st century AD onwards, most Bosporan relieves depicting horsemen show a 'deep' saddle featuring a rather massive head with rounded horns projecting sideways over the thigh to protect the lower part of the warrior's torso (Goroncharovskii 2000b, 54). To the rear the saddle has upright horns or cantles. A fragment of a 1st – 2nd-century AD grave monument from the Temryuk museum shows an unusual saddle with elements of a wooden frame, which was obviously brought to Bosporus from the East (*cf.* Rudenko 1962, 50, tabl. 24: 3).

In conclusion, one should mention that the events of the middle of the 1st century AD resulting in the advance of the Sarmatian tribes turned out to be of great importance not only for the ethnic situation in the northern Black Sea littoral (Shchukin 1994, 206; Gabuev 1999, 130), but also for the warfare of Bosporus. It is probable that, as a result, the heavy scale and the respective set of offensive arms, hitherto used only by barbarians became popular among rich Bosporan citizens.

Tanais River Region: Greek-Barbarian Relations in the 7th – 6th Centuries BC

V. P. Kopylov

Within the northern Black Sea area of the Ancient Scythian time, one distinguishes separate cultural-historical regions where the interaction between the Greeks and barbarians was the most active. The Tanais region can be regarded as one of them. Archaeological material evidences that the region was involved in Greek-barbarian contacts as early as the 7th – 6th centuries BC (Knipovich, 1935, 94–100; Kopylov, 2000, 158, fig. 1).

The Greeks were aware of the areas around the Sea of Azov long before the colonisation period. The name of Maeotis is mentioned in Early-Greek myths. We find the first reference to the Lake of Maeotis in the play by Aeschylus about Prometheus, in which he describes large Scythian tribes living on the edge of the land, around the Lake of Maeotis [Aeschylus *Prometheus Bound*, 427–40]. In Herodotus' works the name of Maeotis occurs 15 times, six of which [4. 20, 21, 57, 100, 116, 120] are related to the region in question. Telling the myth of the Sauromatians [4. 110, 116], who, according to the legend, come from the union of Scythian youths and the Amazons, Herodotus mentions that the Amazons arrived in Kremnoi on the shore of the Lake of Maeotis to escape imprisonment by the Greeks after their defeat at the Pharmadon River [4. 110].

It seems theoretically justified to consider the historical and cultural development of the Tanais region during the Archaic period within the context of the interaction between different barbarian social and political groups dominating the region and the Milesian colony known in literature as the Taganrog settlement (Kopylov, 1991, 42–6; 1996a, 326–34; 1999, 1–11; Vinogradov, 1999, 18). The archaeological material from the Taganrog settlement allows one to locate the Kremnoi harbour mentioned by Antique authors with higher probability.

Ukrainian archaeologists (Boltrik and Fialko, 1987, 41–2) note that different scholars suggested, on the basis of available ancient sources, different locations of the harbour on the northern coast of Maeotis from the Tanais mouth to the Crimean peninsula. However, their conclusion that the harbour was situated at the mouth of the Korsak River (Boltrik and Fialko, 1987, 46) is absolutely unconvincing, since it is not based on archaeological evidence. The archaeological material available to date shows that the solution to this problem lies in the Taganrog settlement.

One should establish the date of this early Greek colony to understand properly the history of the North-Eastern littoral of the Sea of Azov. The latest works on the chronology of Greek, especially East Greek, pottery (Cook and Dupont 1998; Rizzo 1990; Kerschner 1997, 85–226; Monakhov 1999, 29–60) allow us to identify the dates of the Taganrog settlement with higher accuracy; it was founded not later than the third quarter of the 7th century BC and ceased to exist in the third quarter of the 6th century BC (Kopylov and Larenok, 1998, 107–14). The pottery collection from the Taganrog settlement includes over five thousand fragments of vessels of different kinds. We would like to present the most interesting material from this site submerged by the waters of the Taganrog Gulf.

Early pottery from the Taganrog settlement is represented by 32 fragments of cups decorated with lozenge and bird friezes. This is the most representative collection of pottery of this kind that has ever been found in the sites of the northern Black Sea littoral. These fragments are divided into two groups: one is dated to the third quarter of the 7th century BC (Fig.1: 1–5) and the other, according to the type of the painting, from the last quarter of the same century (Fig. 1: 6–31). However one should admit that these dates are rather approximate, as the vessels are very fragmentary

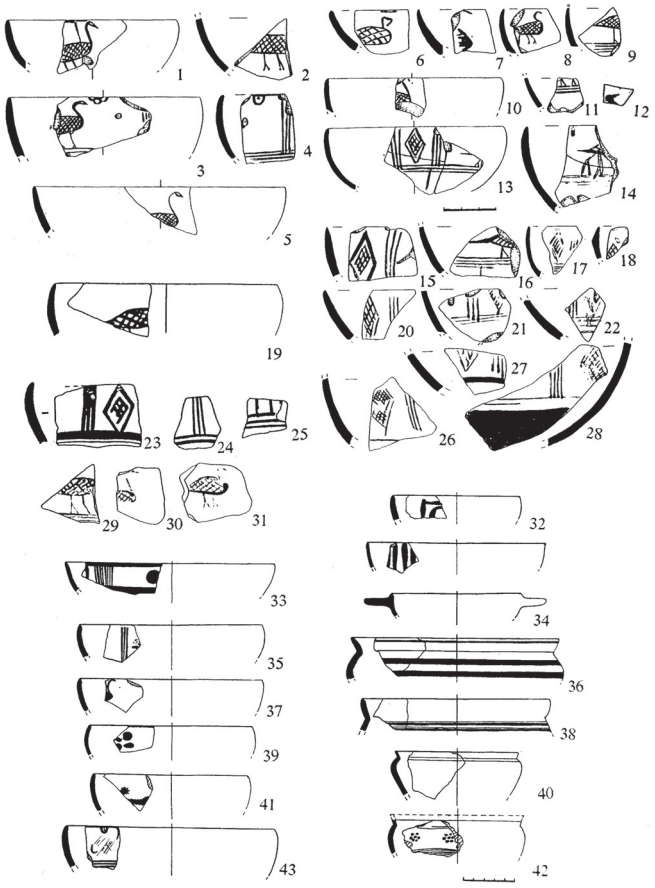


Fig. 1. East Greek table pottery from Taganrog settlement

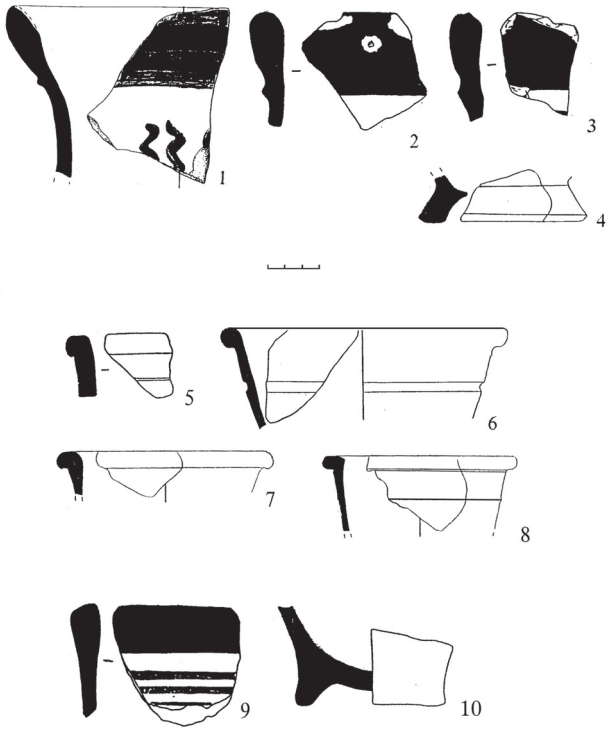


Fig. 2. Amphoras from Taganrog settlement

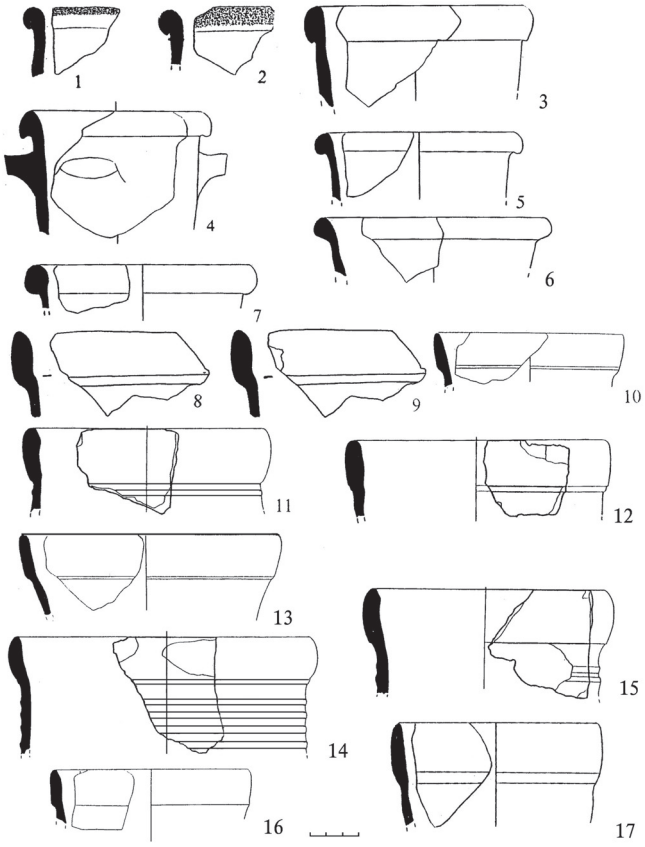


Fig. 3. Ionian amphoras from Taganrog settlement

and their shreds have been rounded by sea to a great extent. Only one more fragment of similar cups from Bosporus was found by accident at Alekseevka near Anapa (Novichikhin 1993, 28, fig. 1). The fragments of shaped parts from other vessels (Fig. 1: 32–43), including bowls with turned out rims (Fig. 1: 38, 40), may be dated to the end of the 7th – third quarter of the 6th centuries BC.

The earliest pottery example from the Taganrog settlement is the fragment of an amphora neck (Fig. 2: 1). The morphological features and proportions of the fragment as well as the design preserved enable us to refer the amphora to the SOS type, which, according to M.A. Rizzo, comes from Attica and is dated 650 BC (Rizzo 1990, 23. tabl. I, fig. 42: 361). Of a similar size and shape is the SOS amphora from the Etruscan vault, whose assemblage also contained a bowl with birds (Rizzo 1990, 49–54).

The typical feature of SOS amphorae from the second–third quarters of the 7th century BC is a small ridge under the rim, which does not occur on later amphorae (Rizzo 1990, 64–7, figs. 79: 364; 80: 365; 68–70, fig. 92: 363). In Etruscan complexes, SOS amphorae without this ridge are found together with vessels from the first half of the 6th century BC. This element tends to disappear towards the turn of the 6th century BC.

Besides the above fragment, the collection of amphorae from the Taganrog settlement contains two other small fragments of the rims of SOS amphorae (Fig. 2: 2, 3). They are dated from not later than the third quarter of the 7th century BC (Rizzo 1990, 43, fig. 26: 360). Another fragment probably belongs to the foot of an amphora of the same type (Fig. 2: 4).

Of particular importance are the shreds of transport amphorae found among early pottery. In contrast to painted vases, they approach most closely the foundation date of the colony (Brashinskii 1980, 12; 1984, 128). Unfortunately, many fragments of amphorae and painted vases from Taganrog are so small and damaged by water that it is practically impossible to date them properly or establish their origin. However, some shreds of the transport amphorae identify them as the produce of such Ionic centres as Lesbos (Fig. 2: 5–8), Chios (Fig. 2: 9, 10), Clazomenae (Fig. 3: 1–7), Miletus (Fig. 3: 8–17).

One should mention that many amphorae found in the Taganrog settlement were brought from Miletus. Based on the latest chronology by P. Dupont (Cook and Dupont 1998, 170–77, figs. 23.7, 23.8), the rim fragments of Milesian amphorae can be divided into three groups. Group (a) dates from the end of the 7th to the first quarter of the 6th centuries BC (Fig. 3: 11, 13), group (b) from the second to the third quarter of the 6th century BC (Fig. 3: 8–10, 15), and group (c) from the third quarter of the 6th century BC (Fig. 3: 14). It should be noted that no Milesian amphorae were found to date from the last quarter

of the 6th – beginning of the 5th centuries BC. No pottery of other kinds, which could be dated to the last quarter of the 6th century BC, was found in the Taganrog settlement. Thus, we can see that Milesian amphorae predominate in the pottery of the Taganrog settlement from that time, which is indirectly supported by the fact that two of five amphorae found in the 6th-century BC burial complexes of the Lower Don region are Milesian.

The contemporary studies of Miletus and its colonisation activity in the northern Black Sea littoral provide enough evidence to establish the chronology of the Greek penetration into this region. The first colony founded by the Ionians was Histria, followed by Borysthenes and probably at the same time Kremnoi (the Taganrog settlement). It is curious that the Ionians managed, within such a short period, to occupy the deltas of the most important rivers of Herodotian Scythia: the Histria, the Borysthenes and the Tanais. This succession of events was not accidental: they took place at the same time with the erection of the Scythian burial mounds in Hither Caucasia, the advance of the Scythians into the wooded steppe of the Dnieper River region and the military activity of those Ionians referred to by ancient sources as the Cimmerians-Himmeri (Alekseev 1992, 159). All above events fall within the period from 660 to 630 BC.

What part did the Taganrog settlement play in the trade relations between the Greeks and natives? The evidence available to date permits one to regard the third quarter of the 7th century BC as the time of its foundation and the third quarter of the 6th century BC as the time of its destruction. This Milesian colony therefore represented for a long period the only centre of Greek civilization on the north-eastern outskirts of Herodotian Scythia.

The evidence of the Greek-barbarian interaction in this area dates as early as the end of the 7th – beginning of the 6th centuries BC. However, this interaction was not as active yet. It can be suggested that in the earliest phase of its history, the Taganrog settlement was the only consumer of goods imported from the metropolis and other Greek centres, such as Histria and Borysthenes. The local population of the Tanais region and Bosporus was so small then that this colony could be in full control of the situation in this large area to trade safely with other Greek centres overseas.

At the end of the 7th – beginning of the 6th centuries BC, no Greek colonies existed yet in the Cimmerian Bosporus. In this connection, it seems important to assess the role of the Milesian colony Kremnoi (the Taganrog settlement) in the colonisation of Bosporus by the Greeks.

It appears useful to summarize the archaeological evidence of the Greek-barbarian relations in the Tanais region. T.N. Knipovich (1935, 90–109) was the first to raise this problem. She could not know about the existence of a Greek colony in the region of Taganrog during the Archaic time. However she suggested that the examples of Ionian pottery from the end of the 7th – beginning of the 6th centuries BC found in this region might be the evidence of pre-colonisation trade between the Greeks and nomads who populated the lower reaches of the Tanais. To substantiate her conclusions T.N. Knipovich published the fragments of two East Greek vessels, which she assigned to the end of the 7th – beginning of the 6th centuries BC (Knipovich 1935, 97, 101, figs. 25, 26). The first, the Ionian vessel from the Khoper territory, comes from a site unknown to us, the second fragment was found in the Scythian grave on the Kalitva River at Krivorozhye.

Nowadays our knowledge of the contacts between the Greeks and the Scythians in the Don region at the end of the 7th – beginning of the 6th centuries BC has grown much wider due to the discovery of Scythian burial complexes with imported Greek pottery.

Four burial complexes contained Greek amphorae (Fig. 4: 1–5). Two amphorae come from the burial complex Krasnogorovka III: Samian (Fig. 4: 1) dating to the end of the 7th – beginning of the 6th centuries BC (Rizzo 1990, 110–16, fig. 213: 352), and Chian (Fig. 4: 2) dating to the same time (Monakhov 1999, 37). The Milesian amphora (Fig. 4: 3) found in the Novo-Aleksandrovskii complex (Maksimenko 1983, 178, fig. 24: 12) represents, according to Dupont's classification, type (b) and dates to the second–third quarter of the 6th century BC (Cook and Dupont 1998, 170, fig. 23.7, b). The 'Clazomenian circle' amphora (Fig. 4: 4) from the complex at Khapry may

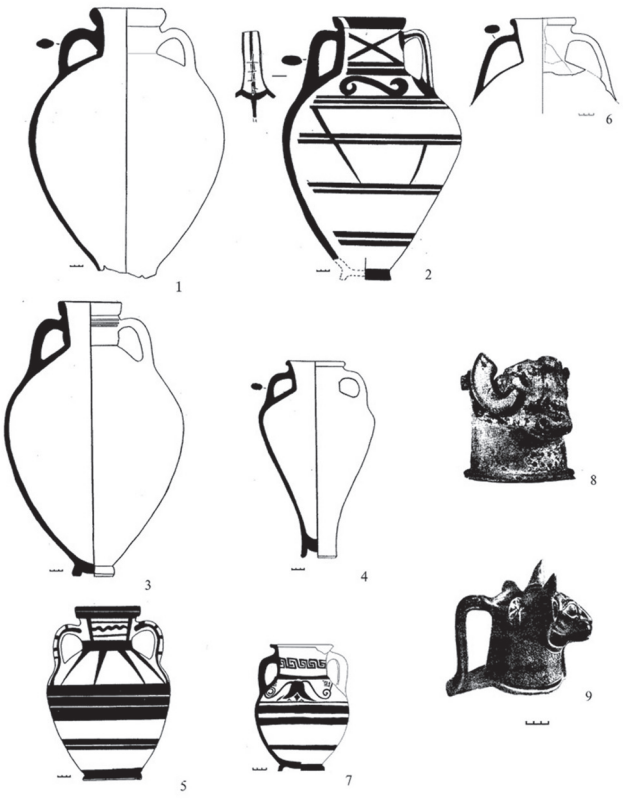


Fig. 4. Greek pottery from Early Scythian burials

be assigned to the end of the 7th – first half of the 6th centuries BC (Monakhov, 1996, 42, tabl. 2: 7). The painted Milesian amphora of type (g) found in the Bushuika cemetery (Bespalyi and Parusimov 1991, 192, fig. 6: 20) (Fig. 4: 5) is dated from the first half of the 6th century BC (Cook and Dupont, 1998, fig. 23.7, g).

The fact that above amphorae originated in the Milesian colony in the Taganrog region is beyond doubt. Evidently, the contacts between the colony and nomads were not confined to the northeastern littoral of the Sea of Azov, but covered a much larger territory. The Taganrog settlement was situated on one of the ways of the Scythian nomadic horde's migration from Hither Caucasus and the Lower Don region to the Dnieper and Crimean regions. In this context, the interaction between the Greeks and barbarians was inevitable. It should be mentioned that these itineraries in the northeastern littoral of the Sea of Azov and Bosporus could easily be traced by the Scythian graves that contain evidence of Greek pottery.

The attempt to establish the regular migration ways of nomads by early Scythian burial complexes containing imported Greek pottery (Vakhtina 1991, 3–8) deserves one's attention, but the conclusion that all the pottery imported to Scythia at the end of the 7th – first half of the 6th centuries BC came from Borysthenes should be revised. We believe that the Ionian vessels found in the Scythian graves on the Taman peninsula and in the area between the Samara and the Orel rivers (Hind 1993, 99, fig. 20) originated in the Taganrog settlement. The Ionian pottery from the first half–middle of the 6th century BC found in the level of the Pekshevskoye settlement on the Voronezh River (Medvedev 1993, 136) and in the nomadic grave on the upper reaches of the Yesaulovskii Aksay river in the Volgograd region (Fig. 4: 6) (Dyachenko *et al*. 1999, 96, fig. 4: 3) is another evidence to support our belief.

We have mapped Scythian burial complexes containing Greek pottery, which is supposed to have been brought from the Taganrog settlement (Fig. 5). We have all reasons to suggest that before it was destroyed by the Scythians interested in taking control over the north-eastern littoral of the Sea of Azov, the Greek colony on the shore of the Taganrog Gulf had played as important a role as Histria in the western part (Marchenko and Vakhtina 1996, 51–3) and Borysthenes in the central part of Herodotian Scythia. It is highly possible that, from the moment of its foundation, the Taganrog settlement, like Borysthenes, grew involved in the active trade with the settled population of

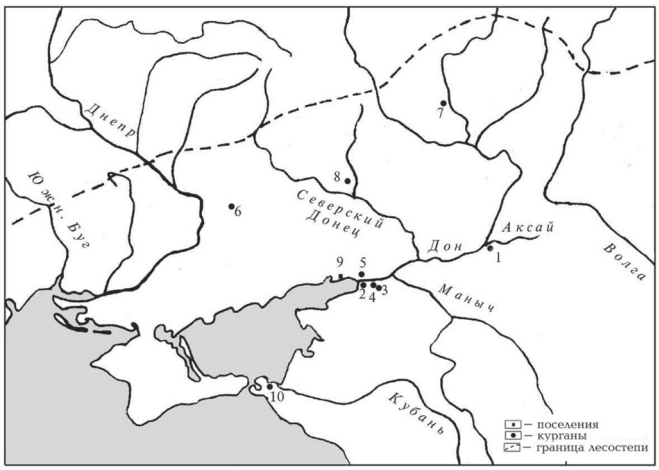


Fig. 5. Early Scythian burials with Greek pottery in the steppe zone

the wooded-steppe zone of the northern Black Sea region. At the end of the 7th – first half of the 6th centuries BC, these centres (Histria, Borysthenes, and Kremnoi) created their spheres of influence independently, which could lead to the separation of the economical and political spheres of influence as early as that time.

The analysis of all available information allows one to conclude that during the time of the Taganrog settlement, the population of the north-eastern littoral of the Sea of Azov was composed mainly of Scythian nomads and Greek colonists, most of whom came from Miletus and other Ionic cities (Vinogradov 1999, 18). The dynamics of the interaction between these two groups in the third quarter of the 7th – third quarter of the 6th centuries BC had a considerable impact on the historical and cultural development of the region and told on the further ethnic and political situation in the northern Black Sea region.

The study of the Scythian burial complexes in the Lower Don region dated on the basis of the imported Greek pottery found in them shows that none of the presently known nomadic burial complexes dates from the end of the third quarter of the 6th – end of first quarter of the 5th centuries BC (Brashinskii 1980, 205; Kopylov 1994, 22–5; 1996b, 35). It was at the end of the first quarter of the 5th century BC that the Scythian settlement Elizavetinskoye was founded in the delta of the Don River. As a result, the Greek-barbarian trade relations grew much closer than in the previous period.

Ancient Fountains and Monuments of the Northern Black Sea Littoral

A. V. Kruglov

Fountains – an important element in the life support system of an ancient city – formed an integral part of the urban structure and played a significant role in the social development. The architectural and sculptural design of water springs was of great diversity. The simplest decoration was the relief framing the natural discharge point of water on the surface of the rock. In aqueducts, the points of use, or the terminals, were enclosed within a rectangular pylon with a lion head from whose mouth water flowed or within a portico with water issuing from a similar mask installed inside. The decoration could also consist of a statue or a group of sculptures, both with and without a shrine built over them (monopterial, aedicula, nymphaeum).

We do not have much information on fountains of the northern Black Sea littoral. Practically no archaeological evidence is available, however we can find some references in epigraphic record [*CIRB* 913, 958, 1250]. In addition, a number of sculptural fountains and their fragments as well as smaller forms of sculpture have survived to give us an idea of the main types of fountain design from the Hellenistic and Roman time.

In the Kerch archaeological museum, there is a slab from Nymphaeum with a hole for a water pipe and an epigram in verse cut to memorise the construction of the fountain by some Glicaria. It belonged to a fountain-building from the second half of the 1st century BC of a design difficult to identify [*CIRB* 913]. According to the hypothesis suggested recently by V.Y. Zuev (1999, 37), it could be a part of the fountain ensemble in the sanctuary of Demeter.

The typical fountain structure was a short pylon. Late Archaic black-figure vases abound with the representations of such pylons. The example is the hydria from the sanctuary of Demeter in Nymphaeum, which is kept in the Hermitage, Inv. No. NF.41.937 (*Drevnii gorod Nimfei* 1999, 32, No. 38).

The representation of fountains on red-figure vases is commonly interpreted as the profile view of the wall set against the spring from which water flowed through the mouth of a lion head (Dunkley 1935–1936, 158) and not as a water jet. However, some of the stone lion masks found in different regions of the northern Black Sea littoral (Olbia, Chersonesus, Charax, Gorgippia) must have belonged to water-jet fountains rather than to cornices, since in architecture, lion-mask outlets were, as a rule, provided with gutters (*sima*). It is highly probable that the mask from Chersonesus (Hermitage Museum, Inv. No. X.1892.106, 0.15 m long) made of limestone and having a short socket was connected to a water-jet pipe (Fig. 1).

Speaking of fountain sculpture, the only fully-preserved example, which is the marble statue of a boy with a wineskin, was found by B.V. Farmakovskii in Olbia (Fig. 2), in one of the basement spaces of the Roman citadel (Hermitage Museum, Inv. No. OL.1448, 0.91 m high). To date the statue, B.V. Farmakovskii associated it with the concurrently found inscription from the 2nd – 3rd centuries AD, reading that the college of Olbian strategists were dedicating a boy statue to Apollo Prostatus. B.V. Farmakovskii suggested that the statue and this inscription had decorated the wall of the citadel, which might have had niches (*exedrae*) with fountain figures (Farmakovskii 1908, 14–7, figs. 15, 16). This reconstruction was proved invalid by later investigations: it had not been possible to supply water to levels above the upper plateau of the city (Karasev 1941, 132–33). Therefore, the statue is believed to have belonged to either a public (Kryzhitskii 1993, 97) or a private fountain; some scholars even suggest its local origin (Shelov 1956, 168; Kobylina 1972, 15, fig. 28).

Fig. 1. Lion's head, a water-jet fountain from Chersonesus. Limestone. The State Hermitage Museum

Figs. 2. Statue of a boy, a fountain from Olbia. Marble. The State Hermitage Museum

In my opinion, this statue, though it has been a subject of many-year research, still needs proper explanation, which should take into account its condition and iconography.

Nobody has paid attention to the fact that the statue is unfinished, which is witnessed by the untreated mass of marble on the back of the boy's neck. The artist must have intended to carve a small braid. In addition, no distinction was made between the statue's support and plinth. The support had no bottom-to-top shaft for water supply, whereas fountain statues from the imperial time used to have one. In the Olbian statue, water was supplied from behind by a lead tube connected to the outlet in the wineskin. This device is known well from the examples of small fountain statues from Pompeii.

Later, the statue's head was remodeled, as evidenced by its flattened volume and rather primitively modeled features, and the surface of the body was newly polished. One cannot be certain as to who did the remodeling: perhaps, it was an Olbian artist. However, it is clear that the original statue was designed and executed in a Roman studio in Italy or Asia Minor, probably in Aphrodisias at the turn of the 2nd century AD, as judged from its resemblance to the statue of a boy with a braid from the Cleveland Museum of Art (Herrmann 1993, 298–323, figs. 1, 2).

It is hardly possible that the statue belonged to a public fountain. Proceeding from its iconography (the supposed braid hinting at the boy's age, the wine-skin), one should interpret it as a statue of a boy-lover or just a boy-servant, *cf.*: Horace [*Odes* 1. 38] or Catullus [27]. It may be concluded therefore that this statue was designed for a rivate house. The iconography of the Olbian boy can be compared to the 1st-century AD fountain figure of a boy with a braid found in Ostia and housed in the Vatican, its type going back to the Late Hellenistic original of the 1st century BC (Herrmann 1993, 306–7, fig. 10).

An example of private fountain sculpture is the small-size marble fragment representing a panther near a vessel with an outlet (Hermitage Museum, Inv. No. A.999, from the Kerch purchases of 1888, 0.17 m high). The fragment has never attracted attention, this is the first time it is being published (Fig. 3). The whole composition may be reconstructed as a fountain sculpture of Dionysos and

Figs. 3. Panther with a vessel, a part of the fountain sculpture from Panticapaeum. Marble. The State Hermitage Museum

a panther or the drunk Dionysos supported by the Satyr and accompanied by a panther.

The Dionysiac themes were very popular in the fountain sculpture. One of Greek epigrams attributed usually to Plato, but dated by philologists to the 3rd century BC, describes the fountain sculpture of the Satyr with an amphora [*AP* 9. 826].

The ancient fountains preserved offer various iconography: the standing Satyr with an amphora, the Satyr (or the Silenus) half-lying awake or lying asleep on an amphora (or a wineskin).

However, the iconography of the Hellenistic epigram goes back to the image, which the Greeks were familiar with from the 5th century BC. Among the characters on the red-figure crater from the Madrid Archaeological Museum, dated 420–390 BC, is a figure of the half-lying Silenus leaning on a big amphora (Mélida 1930, 6–7, No. 2a, pl. 10).

The motif of the epigram is borrowed from the earlier oral tradition, a legend describing the sacral landscape. In the Athenian acropolis, writes Pausanias [1. 23. 5], there is "a stone, not very big… they say that when Dionysos came down to this land, the Silenos was sleeping on it".

Another metaphor is also possible. There must be a reason for a fountain composition to represent the Satyr sleeping on an amphora or wineskin. Dionysos' wine is oblivious and soothing. This explains the scene of the half-lying, dozing Silenos with a wineskin on the shoulders of the gilded bronze crater – a burial vessel from the middle of the 4th century BC (Thesaloniki Archaeological Museum). Water, a symbol of life, and wine, a symbol of oblivion, may seem incompatible. But wine was diluted by water, so in a fountain composition, the sad motifs of death were replaced by another theme. The Satyrs (or the Silens), being the demons of fertility, symbolized the inexhaustiveness of fountain water and were on guard of its purity and coolness.

The iconography of marble fountains can also be found in terracotta statuettes and figured vessels as well as in some bronze items. Examples are artefacts from Panticapaeum, Olbia, Phanagoria, the mountain pasture sanctuary in the Crimea. The Satyr of the popular fountain composition was substituted with a Negro. The grey-clay vessel of this kind was found in the necropolis of Olbia by B.V. Farmakovskii, who described it as a lamp shaped like the Silenos of Nubian appearance (Farmakovskii 1903, 47–9, pl. 4: 1). Later, a special publication (Hausmann 1962, 268, Taf. 77: 2) was devoted to another suggestion: the vessel represents a figure of a Negro slave. Supporting the last suggestion, we would like to add that the Negro clad in a short cloak, with a lamp in his hands (which contradicts the image of the Silenos) must be an old servant who, awaiting his drunk master, has fallen asleep. To be fair however, one should mention that the Silenos of 'Nubian appearance', with thick, flattened lips, half-lying on a wineskin, is represented on a figured vessel from the collection of the Odessa Archaeological Museum (Derewitzkii *et al.* 1898, 27, pl. 12: 2).

Many years ago B.V. Farmakovskii published the fragments of the figured vessel from Panticapaeum that offered another iconographic version of the Satyr on the wineskin: the Satyr is not asleep, but awake. According to the sharp remark of B.V. Farmakovskii (1912, 155), the Satyr is watching the wine flowing from the wineskin and seems to be pouring it into something. With figured vessels, wine was poured into the cup of the one who was drinking; therefore, the depicted scene and the purpose of the vessel were marvellously linked. This method was typical for the Hellenistic time. B.V Farmakovskii believed that the vessel from Kerch reproduced a 3rd-century BC original – the bronze fountain statue of the Satyr from Alexandria.

Modern investigators of ancient art do not distinguish the sculpture of Alexandria into a separate school, nor do they regard it as one of the leading trends of Hellenistic art. Undoubtedly, it was a centre of sculpture, mainly cult and royal, however one can hardly speak of some specific, Alexandrian style. In addition, it seems very unlikely that the original was made of bronze. Bronze fountain statues required a special water-supply system and, consequently, water head, and the latter was brought into use no earlier than the 1st century BC. We are not the first to doubt the righteousness of the above suggestion (Adriani 1966, 14, 17).

As judged from the rare originals that have survived to nowadays, the marble fountain figure of the sleeping Satyr originated in the studios of Greek islands. Typically, it was a relief, approximating sculpture in the round, set against a spring from which water flowed by a tube to the marble outlet.

The archaeological evidence from Rhodes includes the fragments of a marble fountain statue, the Satyr sleeping on a wineskin (Merker 1973, 29, No 55, pl. 16, figs. 37, 38). There exists an opinion that small fountain figures of this kind were used in theatres, where the fountains were probably installed in the external niches of the stage to cool the air on hot days (Stephanidou-Tiberiou 1995, 76). However the question is: does the original of this type come from the 1st century BC, especially if to remember that the epigram mentioned above is dated to the earlier time?

The same epigram describes the figure of Eros sleeping near the fountain. The marble fragment from Chersonesus (Hermitage Museum, Inv. No. X.1905.71: Belov 1971, 117, No. 10) prevents one from interpreting it as a fountain figure. The big terracotta from Kerkinitis, kept in the Odessa Archaeological Museum, gives a better idea of this composition (Nalivkina 1970, 68, No. 15, pl. 6). The base of the clay figurine represents not a rock, but a mat lying

near the water edge, as the curves projecting in the lower part of the terracotta can be nothing but waves.

The figure of the half-lying, feasting Heracles – a frequent theme of fountain relieves and sculptures – reproduces the iconography of a river god. This iconography should not be confused with the one of the funeral feast or the chthonic and heroic aspects of the cult of Heracles, however close to it may seem.

In Hellenistic time, Heracles becomes, like a river god, a giver of all good. Being the guard of life-giving water, he is associated with fertility. One is seduced to think that the 3rd-century BC fragmentary clay sculpture of the resting Heracles from Olbia, found in the well in the southern part of the Gymnasium and reconstructed in archaeological reports (Karasev and Levi 1975, 18, fig. 8), was a part of a fountain.

The fragment of the Thracian relief from Olbia (State Historical Museum) represents two half-lying river gods in the manner most typical of Hellenistic fountains (Rostovtsev 1911, 18–9, pl. VI, fig. 19). The whole composition must have reproduced the specific landscape of the underworld with rivers of Unmindfulness.

Many terracotta statuettes from the northern Black Sea littoral reproduce such popular themes of the fountain sculpture as Aphrodite with a dolphin or Eros on a dolphin (Kobylina 1971, pl. 10). Probably, a marble fountain statue of this kind decorated the temple of Venus Erycina in the Forum of Julius Caesar in Rome.

Although only a few fountain monuments have survived to the present day, we still have enough evidence to follow the development of Greek and Roman fountain sculpture in the northern Black Sea littoral.

On the History of Ancient Agriculture on the Northern Black Sea Littoral

V. A. Kutaisov

It is commonly believed that crop rotation in antiquity was by the two-field system (Bogaevskii 1915, 197; Blavatskii 1953, 90–2; Strzheletskii 1961, 83; Kruglikova 1975, 161; Krizhitskii and Krapivina 1993, 68, 70; Shcheglov 1978, 107; Koshelenko *et al*. 1984, 154). V.I. Kadeev was the first to admit that in Chersonesus, they had used the three-field system with a rotation of wheat, barley (millet), and fallow as early as the 4th century BC (Kadeev 1981, 92–3). V.D. Blavatskii does not reject the possibility that the rotation in Bosporus and Chersonesus included not only fallow, but also legumes, whereas I.T. Kruglikova (1975, 183) suggests alternation of wheat and fodder crops (barley and oats). In essence, this is the recognition of the fact that the northern Black Sea littoral was familiar with the three-field system. Grasses and legumes were known to be effective in preceding winter wheat: they furnished nitrogen (Bogdan and Ivanova 1947, 120–21), providing a better yield of crop, which was lowered only by a quarter (to 73–76 %) compared to the output of the land after fallow (Dubova 1935, 19).

The main cereal cultivated in Kerkinitis was soft, dwarf wheat. During the first two centuries of the colony, when the climate was still cool, it was probably planted in early spring, when the conditions for its planting were the most favourable. This is evidenced by the earliest grain assemblages from the Panskoye I site, dating from the first quarter of the 4th century BC, in which grain was much finer as compared to later finds and was contaminated with weed seeds. Another mainly spring crop found was hard wheat (Shcheglov *et al.* 1989, 58, 67, tabl. 3).

Paleobotanical material evidences that by the turn of the 3rd century BC agriculture had undergone significant changes. The samples of plant remains from this time from the Panskoye I and Masliny settlements in North-West Crimea often contain rye (*Secale sp.*) and its contaminant *Lithospermum arvense L.* (*Opredelitel* 1987, 269; Neyshtadt 1963, 547). Before the abrupt collapse of the settlements at the end of the first third of the 3rd century BC, rye had been grown in pure stands, replacing wheat during severe winters (Janushevich 1975, 27; 1984, 270; 1986, 54; Shcheglov *et al.* 1989, 59; Pashkevich, 1984, 282–83).

Above changes in the cropping system of the littoral valley, among which the change from spring to winter varieties was the most important, indicate some warming of the climate at the time in question (transition from the cool-humid to warm-dry phase according to A.V. Shnitnikov). In other words, the stored effect of various natural factors (*e.g.*, moisture ratio variation) reached a certain point, at which the qualitative change of the environment took place. However it was soon followed by the reverse process, the transition from the warm-dry to cool-humid phase (Shnitnikov 1969, 113).

"The fluctuations of the ratio of the heat and moisture balance components that take place in the course of time," writes A.V. Shnitnikov (1969, 5), "seem to be able to move the latitudinal and longitudinal zones within vast territories". In our case it could result in the shift of geographical belts by 100–150 km, *i.e.* by one degree. P.D. Podgorodetskii writes about the further increase in temperature from the end of the 4th century BC to the turn of our era. However his estimates are lower than the present ranges (Podgorodetskii 1994, 17). It was then that viniculture and wine-making grew important in Bosporus (Koshelenko *et al.* 1984, 157; Vinokurov 1994; 1998, 19–21; 1999, 58, 80, 88, 94, 100, 108) and, though not as important, in the Olbian chora (Kryzhitskii *et al.* 1989, 74, 137). In Panticapaeum warmth-loving plants were grown, such as high fig-trees and wide-crowned pomegranate [Theoph. 4. 5. 3; Pliny *NH*, 16. 137–38] (*cf.* Gablits 1785, 76–7; Simirenko 1912, 10–1). However Theophrastus seems to have contradicted himself, when saying that plants might get frozen within forty days after the winter solstice [4. 14. 13].

Speaking of domesticated animals, donkey was widely used in the Hellenistic period in Kerkinitis and other ancient cities and settlements (Olbia, Panticapaeum, Myrmekion, Tyritake, Iluraton, Neapolis Scythica). Camels were also used, as evidenced by the bones from the 3rd century BC found in the Kamenskoye and Elizavetinskoye sites (Bibikova 1958, pl. 1; Pidoplichko 1956, 88; Tsalkin 1954, 276; 1960, 59–60; Myagkov and Baigusheva 1996, 96).

According to Herodotus [Hdt. 4. 28], mules and donkeys could not stand severely cold Scythian winters. V.I. Tsalkin asserts that these animals were brought to the northern Black Sea region by Greek colonists (Tsalkin 1966, 49).

The 4th–middle of the 3rd century BC coincided, according to M.M. Ievlev (1997, 8), with the climatic optimum in the northern Black Sea littoral, during which annual temperature increased and moisture decreased, while the moisture balance remained positive.

S.V. Polin believes that the steep warm-up at the beginning of the 3rd century BC resulted in the abandonment of the Black Sea steppes and the fall of Greater Scythia. In his opinion, the Scythians had to move to the Lower Dnieper region, the Crimea foothills and the Lower Danube region (Polin 1984, 24–33; 1992, 99–113; *cf.* Medvedev 1998, 51). According to another viewpoint, the climatic change toward aridity is a long-

term process that could not affect in such a dramatic way the life of the northern Black Sea littoral (see, *e.g.* Bruyako 1995, 235–36; 1997; 1999, 325; Vinogradov *et al.* 1997, 94; Vinogradov 1997, 106–7).

It is surprising that the last authors do not take into account quite a consistent theory of N.A. Gavrilyuk (1999), according to which, the decline of Scythia was caused mainly by the ecological crisis: overpopulation and extensive cattle-breeding resulted in the deterioration of pastures. However, the author does not absolutely exclude the negative effects of climate (Gavrilyuk 1989, 24, 94–5; 1993, 61, 64; 1995, 64–8; 1997, 41–2; 1999, 306–15; Gavrilyuk and Abikulova 1991, 29–30; Gavrilyuk and Kravchenko 1995, 94–5). On the other hand, this theory does not explain why the desertion of steppes coincided with the steep reduction of the *chora* of all ancient states in the northern Black Sea littoral (*cf.* Kryzhitskii and Krapivina 1993, 68).

A.A. Maslennikov also believes that one of the reasons why the steppes of the European Bosporus and the Crimean littoral of the Sea of Azov were deserted lies in the local ecological crisis, or even catastrophe. In his opinion, the majority of settlements were abandoned in the first half of the 3rd century BC as a result of "a long and merciless large-scale exploitation of nature by man" rather than due to climatic changes. A century of active farming without any allowance for local conditions, the lack of agronomical knowledge and appropriate methods and technology led to soil dehydration and erosion, the increase in soil salinity, the contamination of crops by weeds, and as a result the drastic reduction of yields. In these conditions, a part of population turned semi-nomads with cattle-breeding to become their main occupation (Maslennikov 1989, 42–3; 1992, 82; 1993, 62–3). Of course, it is not the Greeks we are speaking of, but barbarians (Scythians) who naturally did not possess the 'advanced' Hellenic knowledge and methods.

All above catastrophic changes were in essence caused by general natural conditions – the climatic variations combined probably with a row of unfavourable years that might have been especially disastrous for the continental regions of Asia, such as the Volga River or the Caspian regions. According to S.V. Polin, the reason why the Sarmatians settled in the territory between the Dnieper and Don rivers is associated with the improvement of climatic conditions in the 2nd – 1st centuries BC (Polin 1984, 31; 1992, 106); however this statement does not agree with the bottom-sediment data from Lake Sakskoye, so other reasons should be suggested.

The natural and climatic conditions at the end of the 4th – 3rd centuries BC were approximately the same as in the last third of the 19th – 30s of the 20th century. The same grain crops – winter wheat and spring barley – were grown in the Khersonesskaya valley and the steppe areas of the Tavricheskaya province (Yanson 1870, 17; Verner 1889б, 52–53; *Selskokhozyaistvennyi obzor* 1911, 6, 23, 25; Benenson 1922, 22; Usov 1925, 173; Petrishcheva 1928, 32, 41, 46, 54). Spring wheat was planted only in the northern part of such continental cantons as Melitopolskii or Berdyanskii, and practically over the whole Dneprovskii canton territory (Verner 1889, 53, 55; *Selskokhozyaistvennyi obzor* 1911, 20–1, pl. 1).

In the Crimea, the change from spring to winter varieties took place in the 70s of the 19th century. Spring wheat that was economically important during the first half of the century ceased to be such within a short time: its share reduced to 2–3% of the total crop area (Verner 1889, 54; Bogdan 1941, 27, 102–3; 1949, 48, 236, 238; Bogdan and Ivanova 1947, 13). In the 80s of the 18th century spring wheat prevailed (Gablits 1785, 92), in the first quarter of the 19th century the area under spring crops made about 40%. At the end of the 19th century, we observe the tendency of temperature increase in all latitudes of the Northern hemisphere, the warm-up peak being marked by a succession of droughts (Barabash 1984, 160–69; Logvinov 1984, 23; Klimat Ukrainy 383, 397–98). The maximum changes (temperature increase by 1.0–1.5° C) fell on springtime (April–May), the most important period of the agricultural year.

The similarity in climate between the two periods is evidenced by the variety of insect species found in the well of the Chaika settlement and coinciding almost completely with the present variety (Antipina *et al.* 1991, 160).

All above allows comparison between the cropping systems of these two historical epochs, remote from each other as they were, and leads to the following conclusions. First, it may be suggested that the earliest recorded food supply problem in Chersonesus at the beginning of the 3rd century BC was associated not only with the loss of a certain part of the chora, but also with the natural reduction of yields and the change in crop nomenclature. This might have been the reason why the oath of the citizens of Chersonesus contained the requirement that all cereals from the valley should be brought to Chersonesus only [*IOSPE* I² 401].

At the time, as judged from the grain mixtures found, rye was grown in pure stands. This indicates a severe winter and dry summer or, perhaps, several unfavourable years in a row. In other words, the 70s of the 3rd century BC coincided with a humidity extremum, with effect particularly noticeable in the continental regions of Eurasia and Greek states. The traditional crop rotation required a change. The then advanced agriculture of the Greeks was flexible enough to quickly adapt to the new natural and climatic conditions.[1]

[1] In the long run, it did not help the agriculture of the Greek *poleis* escape full devastation. All the poleis were ruined and burnt almost simultaneously by nomads whose actions were determined by the style of their life: their purpose was not to conquer the territory and settle down in it, but to loot it. That is why they chose for their raids the time right after the current harvest, *i.e.* July–August.

According to modern classifications (Vorobiev *et al*. 1972, 371–72), crop rotation in the rural Kerkinitis was by the crop-and-fallow system. Only one kind of crop was grown in the same field. This system is thought to have been used exclusively on the polis-controlled arable land; the area of each strip separated from another by a mere being strictly regulated. However the excess of virgin lands of a better quality and the absence of the settled aboriginal population in the immediate vicinity to the city must have prompted the Kerkinitians to try (and not once) develop the steppe and thus to put it under their control. If so, they were a hindrance to the seasonal migrations of the Scythians. One therefore may suggest that the Scythian mounds with stone statues located not far from Kerkinitis, apart from their direct purpose, were supposed to border the *chora* of the polis and to restrict its expansion into the hinterland of the peninsula. It is difficult to imagine that these burial mounds were erected right on the arable land.

The Greeks profited from any disorders in Scythia, since this opened access to fertile virgin lands and, consequently, led to the increase in crop export. In the steppe, if our suggestions are true, they practiced shifting agriculture. Found among wheat seeds were three seeds of aegilops, a wheat contaminant typical for the last growing seasons before the field is abandoned and allowed to regenerate (Kiryanov 1962, 95).

Barley finds make the most representative part of our collections. However this does not reflect the real situation in the agriculture of the time: the share of barley in exports was much lower as against wheat and almost all its yields were consumed locally. Some part of produced barley went in food (pearl and fine barley) and flour (Bogdan 1949, 195).

One cannot agree with A.N. Shcheglov's statement that barley crops occupied only small areas (Shcheglov 1978, 106). *Hordeum vulgare* was the main fodder and forage crop in antiquity and not as remote periods. Straw and husk were highly valued as fodder in the Crimea. Barley was second in importance among the Tavricheskaya province's cereals (Maksimovich 1932, 17). In the steppe, mainly spring barley was cultivated (for example, in the 20s, winter barley in the Evpatoria region made only 3%). As a rule, it did not succeed fallow. At the turn of the 20th century barley rarely followed 'black' fallow (Bogdan 1928, 5–9, 44). As early as the 1st century AD, Columella recommended to leave the land fallow after barley harvest for a year or at least to treat it with manure [Colum. 9. 15]. Pliny believed that virgin soil, if treated with manure, could be planted to barley for many years [Pliny *NH* 18. 164, 192]. That was the method used by the German colonists who cultivated mainly barley and fertilized for this purpose the lands in proximity (Verner 1889b, 56).

V.I. Kadeev (1981, 92) included barley in the rotation with wheat and fallow. The alternation of said crops was also admitted by V.A. Latysheva (1985, 75–6).

Indeed, under the three-field system used in the steppe Crimea, the worst lands were planted to barley (both spring and winter), such as fields with stubble left after the harvest of winter wheat preceded by fallow. These fields, as a rule, underwent no previous treatment (Selskokhozyaistvennyi obzor 1911, 10; Bogdan 1928, 7–8). The same succession of crops is recommended in the Byzantine agriculture encyclopaedia "Geoponica" of the 10th century AD [3. 3. 2].

To avoid soil dehydration and contamination by weeds, agricultural practice forbids the reverse crop rotation: winter crops must not follow spring crops. Otherwise, the productivity would grow very unstable and show decrease by 35–40% as against 'black' fallow. Ideally, winter wheat is to be preceded by winter crops. In any case a rotation of crops of more than two years in a row is not permitted, be it winter crops or a succession of winter and spring crops (Dubova 1935,16–25).

Thus, the nomenclature of crops found in Kerkinitis allows us to suggest that in the 5th – 4th centuries BC, the most probable scheme of crop rotation was 'fallow–spring crops–spring crops' and included fallow, spring wheat and spring barley in the regular sequence. During the warmer 4th – 2nd centuries BC, another scheme was used: fallow–winter crops–spring crops, with wheat (and, starting with the 3rd century BC, rye) as winter crop and barley as spring crop. By admitting that virgin soil planted, according to Pliny [*NH* 18. 164], to barley was formerly under wheat, we recognise that, in the ancient Italy, they practised the three-field system and the same rotation (fallow–wheat–barley). One should not exclude however the concurrent use of a less effective rotation: fallow–wheat–wheat and fallow–barley–barley, as well as the two-field system. Both systems could coexist, if used on separate fields. In other words, we are inclined to believe that at a certain stage of agriculture development, but not earlier than the second half of the 5th century BC, there appeared the more advanced, three-field system. Prior to it, shifting agriculture prevailed. However it was unlikely to be in practice for a long time. The use of the *chora* was soon brought under the strict control of the polis.

Nevertheless we have to admit that no direct evidence is available to confirm or reject our suggestion. New data are hopefully to come to elucidate this matter. But the fact that the land plot not far from the Oyrat Cape had three fields free of vineyards and gardens (Shcheglov 1977, 210–12; 1978, 100) is too attractive not to be mentioned here and could have confirmed our hypothesis, had it been proved that these fields were planted to crop. Perhaps the words "ploughed during three years" from the text of *IOSPE* 403, as reconstructed by Y.G. Vinogradov and A.N. Shcheglov (1990, 368), can provide us with this proof, if the text does not deal in reality with the three ploughings of the field during a year. Wheat and barley could be sown on different fields and included in different rotations.

The paleobotanical material considered above evidences that Theophrastus was informed quite well about both

the nomenclature of crops and the time of their planting [Theophr. 8. 4. 6]. Indeed, 'the yonder people' sowed crops two times a year: winter wheat in September–October and spring barley (and outside the Crimean peninsula spring wheat, as well) in March. It is also true that winter crops, in our case soft dwarf wheat, were soft and light-weight. The cultivation of hard wheat seems also plausible, although this crop was more spread in the mountains and foothills inhabited by the Tauri and later Scythians (Janushevich 1986, 49, pl. 9).

Attempts were made to include *Triticum durum* in the crop rotation of the Crimean valley. In one of the grain samples from the earliest level of the Panskoye I settlement, hard wheat constituted 25% of the sample[2] (Shcheglov *et al*. 1989, pl. 1). However this spring crop is absent in samples from later levels, which means that it could not adapt to the Crimean steppe and was excluded from rotation. All attempts to plant it in the same region in the 20s of the 20th century were a failure, too. This crop is cultivated mainly in the foothill area of the peninsula. One should also mention that in the second half of the 19th century, when virgin lands were brought into use, the hard kinds of wheat were gradually replaced by less capricious soft kinds (Bogdan 1928, 8–9, 19; 1941, 97, 101; 1949, 247–48; Bogdan and Ivanova 1947, 16).

[2] If one succeeds in proving that *Tritocum durum* was widely spread in the Olbian chora at the turn of the 4th century BC, it will be additional evidence in favour of the Olbian origin of the four-tower fortification at Lake Panskoye. As of now, no information is available on the cultivation of this crop in Olbia (Pashkevich 1984; 1995).

Iconographic Parallels between Terracottas from Western Asia Minor and the Black Sea

Claudia Lang-Auinger

Investigations of Ephesian terracottas attract attention to special jewellery. The whole material shows only two different types of figurine of great value decorated with golden chains. Two chains come from the shoulders down to the thighs, are crossed between the breasts, and are held together by an amulet, fibula, round plaque or something similar. On each shoulder and thigh is same round plaque. The chain ought to be completed on the back side, but on these figurines the back side is undecorated. Jewellery is worn next to the skin by those, who don't need clothes – goddesses like Aphrodite and the adolescent and infant Eros. Eros, when combined with Psyche, also wears this special jewellery. It seems that such jewellery was not considered appropriate for mortals.

The chains worn by the Ephesian terracottas look like a band with a groove, or like two parallel bands as seen in the 'Sandal-Binding' Aphrodite (Fig. 1) and the Eros-and-Psyche group (Fig. 2). Both figurines were found in a late Hellenistic private house in Ephesos. On the first floor, in a cubiculum of this peristyle-house, they were part of a large ensemble of different terracotta figurines, most of them Aphrodities, placed on a marble table, as their context has clearly shown (Lang-Auinger 1996, 86–91; 2003, 213–20, pl. 160). Within an archaeological context, this house was in the centre of the town used until the time of the emperor Tiberius (Lang-Auinger 1996, 25–63).

There are types related to both of the terracotta groups, which may have made using the same mould or may at least have come from the same patrix or archetype. Let us look first at the Eros-and-Psyche pair. There are two other extant pieces known to be from the same mould. One is the group from Berlin, which is suspected to be from Kyme in the Aeolis (Lang-Auinger 1999, 363–75, pls. 31–32), and another is one, which was found in a grave near Sardes, which is now in the museum of Manisa (Dedeoğlu and Malay 1994, 134).[1] It is possible that all three groups came from the same workshop.

A 'Sandal-Binding' Aphrodite, now in a private collection in Heidelberg, seems also to be the product of an Ephesian workshop (Thieme 1988, 316, fig. 200). The use of the same mould and the same way of draping the jewellery point to the same workshop, particularly the crossed chains in the form of parallel bands down to the thighs of the Aphrodite. Her wet hair, which flows down to her shoulders, is also arranged similarly. The clay contains a lot of mica, as is typical for the Western coast. All figurines as far as it was possible to check on the Ephesians were assembled from interchangeable body parts, and the entire jewellery was attached separately before firing the clay.

Starting from Ephesos we can follow a route to the North marked by several places where figurines with crossed bands were found. The first place is Myrina, the famous region for Hellenistic and early Roman terracotta finds in the Aeolis. Two flying Eros figurines wear the so called 'breast-bands or cords with a medallion' (Burr 1934, 55, pl. 24). Across the backs of both is inscribed "Diphilou", the signature of a famous workshop. Probably the same moulds were used, but the Eros figurines are not absolutely identical to one another. It depends on the temperature for drying and firing the clay. The two Eros figurines are very fine pieces from this workshop and probably to be dated in the early 1st century AD. Their jewellery is strongly suggestive of cords and less of golden chains.

Another specimen from Myrina is the 'Sandal-Binding' Aphrodite in the Louvre (Mollard-Beques 1963, No. 943,

Fig. 1. The terracotta of 'Sandal-Binding' Aphrodite (Austrian Archaeological Institute). Late Hellenistic

[1] At the time of the work on the publication of the Istanbuler Mitteilungen, it wasn't possible to get an abstract of this excavation report. Psyche is the same as the Ephesian: she also wears the 'nodus' hairstyle.

Fig. 2. The Eros-and-Psyche terracotta group (Austrian Archaeological Institute). Late Hellenistic

pl. 20). She is nude and the big plaque on her chest is preserved, but not the chains. The round plaque is separately attached, but there is no trace of chains. Maybe the jewellery was painted on like the sandals of the goddess. The left side of her thigh shows signs of a pillar as in the Ephesian piece. The Aphrodite is shown in strong motion and her body is elaborated in a baroque style. Her very strongly bent body and her hairstyle date her in the 2nd century BC. She must be the oldest clay example of the 'Sandal-Binding' Aphrodite.

The next stop is at Balikeşir, the Hadrianou Therai of antiquity. The Aphrodite with a little Eros was supposedly found here (Leyenaar-Plaisier 1979, No. 1071). She is nude, standing with her himation held out behind her with a raised right hand. She wears bangles on her arms and thighs, and crossed chains with a little medallion on her chest. To her right stands the little Eros. The group was made from one mould for the back and one for the front side. Her jewellery is not attached: it was aligned into the mould. Because of the missing features and her coiffure, the figurine is dated between AD 65–85.

The last location in western Asia Minor is Çanakkale, Dardanos at the Hellespont (Akurgal 1993, fig. 24; Naumann-Steckner 1998, 95–8, fig. 13). The standing Aphrodite was found in a tumulus; this type is built after the 'Knidian', who was created by Praxiteles. She is decorated with a great deal of highly valuable jewellery but has only single chain. The whole decoration was separately attached, and after firing was covered with gold leaf. The chain is like one big cord held together by a single little fibula. This terracotta Aphrodite is dated in the 2nd century BC.

Let us have a look to Delos while we continue toward the Black Sea coast. An infant Eros wears the double chains held by a big plaque with an apotropaion (Laumonier 1956, 170, pl. 55, No. 546). The chains are similar to the Ephesian specimens. The richly decorated figure – missing its head and arms – is represented in a standing position like a votive with parallel closed legs. He could belong to the early 1st century AD, like similar specimens from Myrina (Mollard-Besques 1963, 139, pl. 170: a, c).

Continuing to the North we arrive at Kallatis on the western littoral of the Black Sea. In this area many workshops with kilns were discovered during a time when exact documentation was not considered to be important. Many moulds were found including one of an Aphrodite. It is for the front side of a nude Aphrodite with crossed chains, which look like bands (Carnache 1969).[2] The medallion is as big as that of the Eros of Delos, but it is without relief. The type is very similar to an Aphrodite doll from Tyra in the North-western area of the Black Sea (Kobylina 1970, 26, tabl. 2: 3): she is also decorated with broad bands and with the very big round plaque without relief. The doll with arm stubs and legs cut off above the knees is dated back to the 3rd/2nd century BC. The jewellery of both figurines goes from the shoulders down to the waist only. It doesn't extend as far down as chains: thus it reminds one of armbands. Both specimens came out of the moulds already in possession of crossed chains and plaque.

The series of locations of deposits ends at the northern Black Sea littoral. There are standing types wrapped up in a himation from the waist down. The upper part of their bodies is nude and decorated only with the crossed chains. Two identical Aphrodities leaning on a pillar come from Myrmekion (Denisova 1981, 54–5, tabl. 16: M-154, M-155). This fact is evidence for local production – maybe even for the same workshop. The jewellery hangs down to their hips, from whence the himation falls down up to their feet. A similar specimen is of the type with a Priapus instead of a column. It possibly came from the same workshop, because for the body and the head the same moulds were used, but not for the arms (Denisova 1981, 54–5, tabl. 16: M-156). The practice of interchanging body parts was common in every workshop. The same head, as the others have, is not looking towards the front; it's turned to the right. With the fingers of her left hand she touches her hair. All three specimens had only the little plaque attached, but the simple narrow chains were produced in the moulds. The figurines are dated in the 1st century BC and the 1st century AD.

There is an unpublished Aphrodite, which probably also comes from the Crimean peninsula (Krim 1998, 127, No. 32, fig. 129). She is nude, but from her left shoulder to her right hip and down between her feet is draped a himation; to her left side there is a dolphin. She wears the same diadem as

[2] There she is still misinterpreted as Artemis with armbands (Mirtchev 1956, 19–20, pl. 48, 121), as Aphrodite (Rusyaeva 1982, 72–3, fig. 29: 2).

the other three Aphrodities from Myrmekion. She is one of the prominent types, the 'Anadyomene', who is binding her hair. Her jewellery and also the crossed chains were formed in the mould. The whole figure has a coarse finish and should be dated in the 1st century AD.

Another specimen came from Panticapaeum, a neighbour city of Myrmekion, with its own production site. This is a very beautiful and delicate fragment of an Aphrodite draped in a himation from her hips to her feet (Blavatskii 1962, 103, 58–9, fig. 43: 1). The drapery is treated as a veil in front of her body. The figure appears to move, her right arm is raised (her left shoulder and the head are missing); and her weight is on her left leg bringing her right nude hip into striking prominence. The crossed chains with the round plaque were separately attached. This type is close to the Aphrodite of Melos. She is a product of the 2nd – 1st centuries BC.

Winter's catalogue (Winter 1903, 209: 4; 210: 1, 3, 6, 8; 211: 8, 9; 212: 1) contains a lot of nude Aphrodities, which have only the plaques preserved. Only one small figure 13.5 cm in length with a dolphin has complete chains like bands (Winter 1903, fig. 210: 2); the figurine is supposed to have been found in the Cimmerian Bosporus. All the figurines discussed above are between 25 and 32 cm in length. Most of them were found in Asia Minor, and a few in the Northern Black Sea area.

There are parallel specimens made of bronze in the museum of Sofia. They all represent the type of 'Anadyomene' (Ognenova-Marinova 1975, 144–46). On the surface of their nude bodies the chains are curved like cords down to their hips.

In the same museum there is another small (14 cm) interesting bronze, which probably dates back to the Roman Imperial time (*Catalogue* 1984, 83, No. 65). This standing nude Aphrodite is decorated with jewellery similar to that of the specimens from Ephesos and Myrina. On the shoulders and between the breasts there are also round plaques attached. But each link of the crossed chain is carefully worked out. The chains should be imagined to be gilded, as small pieces of gold leaf are still preserved on the figurines from Ephesos and Çanakkale.

Two different golden Greco-Roman earrings in Vienna are fashioned as little nude Baby-Eros with separate crossed chains down to their thighs (Gschwantler 1999, 107, fig. 24). The little earrings give a very natural impression of how the chains must have looked. Their back side is – as in the terracottas – not worked out.

There are five known votive figurines made of lead with complete back sides from the Roman Imperial time (Fig. 3: a, b). They are supposed to have been found at Sirmione. The little figurines (10.1 cm) represent nude Aphrodities

Fig. 3. The Aphrodite-and-Eros terracotta group (Kunsthistorisches Museum Vienna, Inv. VI 5446). Roman Imperial

with slightly bent knees and body. Three figurines were made from the same moulds, using a similar technique to the clay specimens, except that they are rather flat. The little votives are decorated with long crossed pearl chains down to their thighs. On the back side there are also chains but only as far as the hips, so that there is a break between the front and the back sides. Where the chains cross, the goddess holds them together with her right hand; her left hand rests on her stomach. These little votives belong to the very rare examples having chains on both sides. The figurines are found without context.[3]

We have no real explanation of the origin of the custom of the crossed chains. Crossed bands were used to fasten the chiton or peplos since classical times (Jucker 1967, 133–45). Normally they kept the clothing from fluttering up, and as such became a part of it. So there was a transformation from the garments to the skin of a goddess, and to a purely ornamental function. This kind of jewellery worn on nude bodies was limited to Aphrodite and her son Eros and – rarely – to Psyche. It occurs only in the minor arts[4]. We know of one Hittite ancestor of Aphrodite, a little silver figurine ornamented with golden bands, which are crossed between her breasts and a breastband (Akurgal 1961, 37, fig. 22, pl. VIII). Atargatis, the Dea-Syria, a goddess related to Aphrodite, is also represented with crossed chains like bands (Du Mesnil du Buisson 1947). But nevertheless we have to suppose, that the coroplasts followed the forms of real jewellery. One of those could be discovered in a Hellenistic grave of a young girl. Crossed bands were found in situ on her chest, made by gold plating with a round middle piece and round pieces on each end of the bands; the jewellery was laid down on her garment (Παπαποστολου 1977, 284ff., pl. 103). And let us look to the fifth-century vase-painting: some of the armed dancers painted on the Attic lekythoi giving a performance during a banquet wear a costume of perizoma (short pants) and crossed bands on the upper part of their nude bodies; another lekythos shows a nude woman who wears just a sakko and the crossed bands; she is escorted by an Eros. The crossed bands are painted as one simple line without any advice of jewellery (Oakly 1990, 37ff., 44ff., pl. 96–98, note 259)[5].

The custom of crossed chains like bands was common during Hellenistic and early Roman imperial time for Aphrodite figurines in Asia Minor, in Ionia and Aeolia and on the Western and Northern Black Sea littoral. On the other hand, in Greece and Magna Grecia it hardly appears at all. One Eros more is mentioned from Delos (Laumonier 1956) and one Aphrodite from Southern Italy in Winter's catalogue (Winter 1903, fig. 213: 3). In the widespread area of the crossed chains – Western Asia Minor and the Western and Northern Black Sea littoral, all the terracotta figurines were obviously local products. Even the moulds were formed in the local workshops. The archetypes seem to have derived from Asia Minor and were transmitted to the other areas, where new moulds were formed for production on a local level. One striking variation is the long chains down to the thighs, which in Western Asia Minor were attached separately. These were in use until the 1st century AD, and seem to have been a specialty of workshops in this area, whereas in the Black Sea area the chains were aligned into the moulds and extended down only as far as the hips. But we cannot classify a type common to both regions.

The type with the chains occurs also rarely farther East and in the Egyptian world. A large Oriental terracotta figurine is exhibited in the Amman Museum (LIMC II 1984, 159, No. 111; 164, fig. 111). This standing Aphrodite looks to the front, is completely nude, and is decorated only with separately-attached, simple chains. Her forearms are extended and she must have held something in each hand. Another variation is found in Egypt (Besques 1992, 100–1, pl. 60: a, b). These are votive figures with parallel closed legs, and with arms pressed close to their bodies. For sacred rites they are unusually large: 22 – 35.5 cm high. Their chains are symbolized by bands of textile material. This motionless votive type is quite different from the specimens discussed above, which display great motion. The votives display a religious aspect, whereas the delicate figurines were used for decoration at home, and sometimes followed their owners as burial objects into the grave.

The journey from Ephesos to the Bosporus region shows the principal extent of the jewellery with crossed chains. The earliest terracotta specimens are the Aphrodite from Myrina (Mollard-Beques 1963, No. 7) and the Aphrodite from Çanakkale (Naumann-Steckner 1998, 95), which are dated to the end of the 2nd century BC. It seems that from this time onward the crossed breast chains spread out from Western Asia Minor to other places in the Hellenistic and subsequent Roman world. One more observation should be made: the Aphrodities from Asia Minor and the Western Black Sea area are completely nude, whereas those from the Cimmerian Bosporus are draped in their himations from the hips to the feet.

[3] The privately owned figurines are in charge of the Kunsthistorisches Museum Vienna VI 5442, VI 5443, VI 5444, VI 5445, VI 5446. It is a pleasure to thank my colleague, Director K. Gschwantler, who left one of the votives to me for publication. Those votives were used during the 2nd and 3rd century AD.

[4] The wall painting (fourth style) is an exception: Aphrodite with Ares in the Casa delle Nozze di Ercole, Pompei VII, 9, 47 is painted with crossed chains (De Carolis 2000, 41).

[5] In the last quarter of the 5th century BC crossed bands were worn by the hetairai and the dancing girls. Till the creation of Praxiteles there is no nude Aphrodite at all only the hetairai and the dancing girls were nude.

Pottery from the Kutlak Fortress in the Crimea

S. B. Lantsov and V. Y. Yurochkin

The Kutlak fortress dated to the second half of the 1st century BC is located 60 km to the southwest of the ancient Theodosia, 4 km to the southeast of the village of Veseloe and 4 km to the west of Novyi Svet (the suburbs of Sudak). It occupies the western, coastal slope of the Mount Karaul-Oba (Guard-Hill) overlooking the Kutlak bay and the valley of the now dry river.

The fortress was discovered in 1982. I.A. Baranov started its investigation in 1983. E.A. Parshina (1986, 288–89)[1] followed him in 1984. Since 1991 excavation has been carried out under S.B. Lantsov (1999a, 121–36; 1999b, 162–70). As a result, the fortifications and other structures inside the fortress have been fully uncovered, which allows the graphical reconstruction of the site (Fig. 1).

The fortress formed a pentagon of an area of about 1500 m^2. Its defensive perimeter was about 200 m, and it had four towers and a bastion. Inside the fortress, the remains of four buildings have been found. In front of the eastern gate was a platform surrounded by a stone fence, from which the stairs led up to the defensive wall. On the platform, there was a cistern rectangular in plan and a large pithos half-dug into the earth. The few pits cleared here had different purposes.

Based on the periploi by Arrian (2nd century AD) and the anonymous author of the 5th century AD [Arr. *P. Pon.* 30; Anonim. *P. Pon.* 76. 50, 78. 52, 82. 56], we suggest to identify the port of Athenaion with the Kutlak fortress (Lantsov 1999a). The information contained in both periploi seems to come from the same source. Describing the coastline from Theodosia to Chersonesus, Arrian writes: "It is two hundred stades to the abandoned port of the Scythian Tauri". The later periplus gives the name of the place: "It is 200 stades, 26.6 miles, from Theodosia to the deserted port of Athenaion, or the port of the Scythian Tauri; it is a quiet place to harbour". Depending on which stade is used for calculation, the short, Eratosthenes' stade of 157.7 m or the long 'royal' one of 210 m, this distance makes 32 or 42 km. These are the distances from Theodosia to the modern townships of Kurortnoye and Koktebel (*cf.* Agbunov 1987, 14–5, 111–12, 118).

However 200 years of search for Athenaion has given no results. Neither ancient settlement has been discovered here, no traces from the time preceding the second third of the 2nd century AD, *i.e.*, before Arrian's travel. The anonymous source estimates the extension of the coastline from Athenaion to Kalos Limen at 2600 stades, or 346.6 Roman miles (not less than 410 km). This figure agrees with the suggested location of Athenaion between Theodosia and Lampada [Arr. *P.Pon.* 30; Anonim. *P.Pon.* 78. 52].

Although its location does not fully coincide with Arrian's coordinates, the Kutlak fortress is the only ancient site known to date that had existed on the shore of the South-East Crimea before the first periplus of the Pontus Euxinus was written. No other ancient settlements have been discovered so far between Theodosia and Kutlak. It is significant that the given periplus describes Theodosia and Athenaion in sequence. The fort located high on the cliff must have been seen well from the sea and could serve as a landmark for coasting navigation, which was worth mentioning in the periplus. Both sources describe Athenaion as abandoned, deserted. This agrees with the results of excavation. Before Arrian, the fortress had been in ruins for

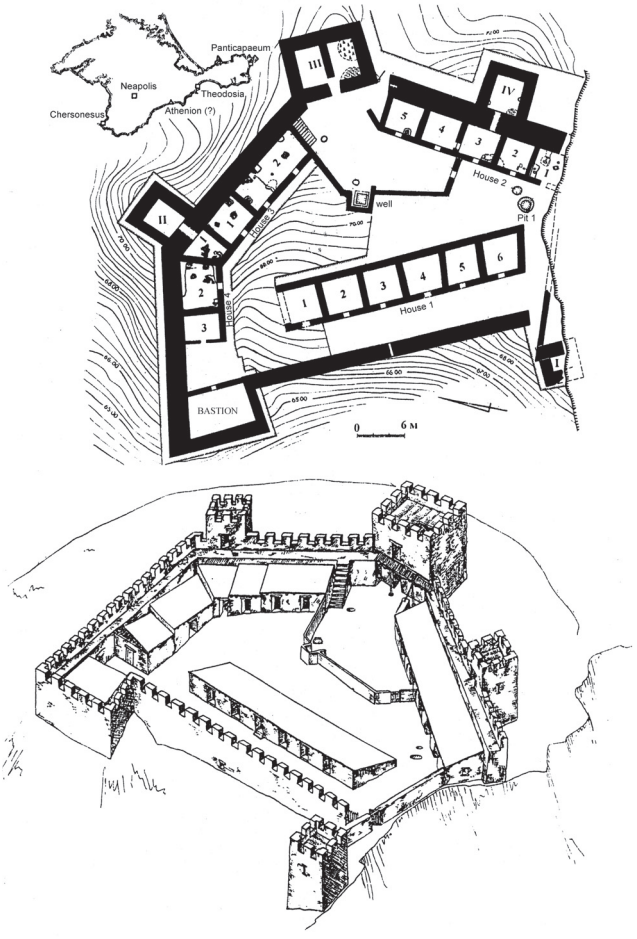


Fig. 1. Layout and reconstruction plan of the Kutlak fortress.

[1] We are grateful to E.A. Parshina for the permission to use materials from her excavations.

not less than a century. Judging from what has survived to the present day, the ruins must have looked quite impressive at his time.

Both periploi call Athenaion Scythian-Tauric. The Anonym adds that the Scythians lived between Athenaion and Kytaia, further was the Cimmerian Bosporus [Anonim. *P. Pon*. 76. 50].

The location of the fortress suggests that it was conceived as a fort to control the adjacent segment of the coast. It provided a clear view of the sea as far as the Mount Ayu-Dag (the ancient cape Sheep's Forehead), which in antiquity was thought to be the southern extremity of the Tauric peninsula. Probably located on the nearby Mount Karaul-Oba was an additional fort to survey the coast as far as the Meganom Cape.

The plan of the fortress and the type of fortifications indicate that the construction was directed by a highly-professional Greek engineer. Located in close proximity to the Bosporan Kingdom, the Kutlak fortress may be regarded as one of the Bosporan forts.

Archaeological data showed that the fortress has never been attacked by enemy. Its garrison left it abruptly for reasons that remain unclear. Its walls and towers were ruined intentionally. The most valuable things made of metal and other materials were taken away, while household ware and containers not amenable to transportation were left behind. All objects found here fall within a short period of time.

The pottery unearthed at Kutlak is of great importance for Late Hellenistic and Early Roman chronology. In addition, it helps one establish the ethnic composition of the population of the areas contiguous to the Bosporan Kingdom.

The pottery is represented by three major groups: amphorae, wheel-made table ware (Lantsov and Trufanov 1999, 161–73), and handmade ware.

Amphorae

The prevailing type of containers found at Kutlak is the wide-necked light-clay amphora with double handles (Fig. 2: 3, 4). The typology and chronology of such amphorae have been described by S.Y. Vnukov. Based on his classification, one can refer them to the earliest type C1a, dated from the second half of the 1st century BC to the beginning of the 1st century AD (Vnukov 1988, 198–206). Other types found in the Kutlak fortress are red-clay amphorae with double handles and light-clay amphorae with a cylindrical handle (Fig. 2: 1, 2).

Wheel-made table ware

Wheel-made table ware is represented by various forms typical for Bosporan settlements of the time. Their variety is of primary significance for the chronology of the site.

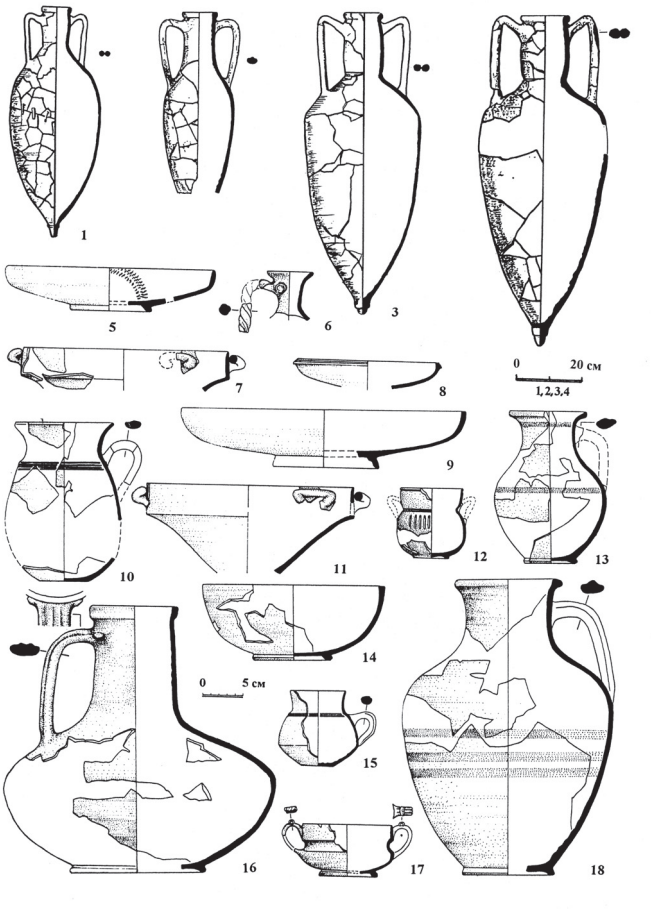


Fig. 2. Amphorae and wheel-made table ware from the Kutlak fortress.

Some ware bears the traces of red (Fig. 2: 5–8, 10, 11, 14–17), and black (Fig. 2: 12) glaze on their outer surface (Lantsov and Trufanov 1999). Wide-necked white-painted jugs (Fig. 2: 13, 18) and various table bowls prevail among other wheel-made items. Of particular interest is a lagynos with one handle, covered with red glaze of high quality (Fig. 2: 16). The clay, of which the vessels are made, is mostly of the same type. The majority of them must have been manufactured in pottery workshops of Bosporus. This suggestion is confirmed by multiple finds of similar produce in the sites of the European and Asiatic Bosporus from the same time.

Some items of the Kutlak wheel-made pottery (Fig. 2: 7, 11, 17) bear analogy to specimens from Pergamon (Meyer-Schlichtman 1988, Taf. 43; Lantsov and Trufanov 1999, 163–65). Nowadays, it is difficult to say whether they were imported or whether they were made by local craftsmen in imitation of Pergamian examples. Even if they were imported from Pergamon, it is beyond doubt that they found their way to the fortress via Bosporus.

The comparison of the Kutlak wheel-made and red-glazed vessels with the already dated specimens from other Bosporan sites allows one to date most of them between the second half of the 1st century BC and the beginning of the 1st century AD.

Handmade pottery

Handmade pottery is represented by widest variety of finds and is of primary importance from the ethnical standpoint. Amphorae and wheel-made table pottery are indicative of the trade contacts and the chronology of the site, whereas handmade ware suggests the ethnical composition of the garrison and elucidates the matters related with the interaction between the Cimmerian Bosporus and the neighbouring local tribes.

The Kutlak fortress was built to the Greek fortification standards, however its garrison was composed mainly of natives, who most likely were hired by Bosporan rulers. This is evidenced, first of all, by the handmade pottery found in all structures of the fortress, in pits and on the old ground surface. The study of the pottery brought us to the following conclusions.

1. Handmade pottery compensated for the deficiency of containers and wheel-made table ware in the fortress. It was made right in the fortress by the soldiers – the natives – who had no skill at using the wheel. This is confirmed by the composition of clay from the nearby deposit. In addition, two heaps of ash and chamotte (pounded red-clay wheel-made pottery) found on the ground floor of one of the towers were evidently used for making the ware. Also found in the fortress were stone and mud-brick kilns. Some of them must have been used for firing finished products.

The widely-held opinion that pottery making was carried on by women in its primitive stage cannot be confirmed by our case. Investigations have found no evidence of women's presence in the fortress. The fort, as judged from its layout and small size, left no room for families. Moreover, no settlements have been discovered so far in the Kutlak valley to date from the same time. We believe that the tradition of pottery making had formed in some other area long before it was brought here by the natives of the garrison. The short lifetime of the fortress (several decades or even shorter) and typologically different vessels found together in the same structures make one regard the whole variety of the Kutlak pottery as a unique assemblage.

2. The garrison of the fortress must have been an ethnically homogeneous group. If the ethnical composition of the hired native soldiers had been inhomogeneous, it could have led to differences not only in material culture, but also in methods of warfare, the mode of life; it would have created the language problem and thus reduced the fighting efficiency of the garrison. Since no letter graffiti has ever been found in the fortress, we can conclude that its inhabitants did not know Greek writing, nor could they speak the Greek language. The number of soldiers was not very big (no more than 100), that is why it seems unlikely that the composition of the garrison was multi-ethnical.

3. Studying the handmade pottery from the Kutlak fortress, we face the problem of its origin. Separate shapes and decoration motifs compare it to pottery from various archaeological sites of East Europe.[2] In such cases, as far as we know, the mixed origin of population is the common conclusion, which proceeds from the differences in handmade pottery specimens. However the above assumption that the ethnic composition of the garrison was uniform makes most of formal analogies inapplicable in our case. We believe that the Kutlak pottery reflects the traditions of the unique ethnic group, showing the combination of all possible forms and decoration patterns or most of them.

It is well-known that hiring was widely accepted in Bosporus during the Mithradatic wars and in the following period. Hired could be both locals and inhabitants of other European regions, *e.g.*, the Celts or the Thracians. However we failed to find any other archaeological culture outside the Crimea that would present the range of forms similar to that discovered in the Kutlak fortress. We therefore decided to compare the assemblage with the local pottery of the Crimean peninsula instead of looking for analogies outside.

4. We find little information on handmade pottery from Tauric settlements and cemeteries in archaeological literature. The handmade pottery from Bosporus, which was the closest to the Kutlak fortress, is represented by a great variety of forms; all of them however are assigned to the Late Roman period (Kastanayan 1981; Maslennikov 2000). The complex ethnical situation in Bosporus as well as the constant movement of its population hinder the comparison of Late Roman handmade ware to earlier pottery from the turn of the 1st century AD. The number of published examples from Late Roman levels and Bosporan cemeteries is not very big. As a result, information on Bosporan pottery from the 1st century BC – 1st century AD is far from being full.

Much more information is available on pottery of the Crimean Scythia. Items dating between the 3rd – 2nd centuries BC and the 1st century AD come from the archaeological sites which, in our opinion, provide an ideal framework for the research into the local traditions of the pottery production in the Crimea.

The Kutlak handmade pottery assemblage is mainly represented by kitchenware and containers (Fig. 3: 1–10, 13–15). Most of vessels are roughly worked, but the share of burnished pottery is also high. Among others, one should mention the burnished jug-like two-handled vessels with remarkable decoration patterns (Fig. 3: 1, 7). As indicated above, the demand for table ware was covered by the available wheel-made pottery, its deficiency being compensated by the locally produced burnished handmade

[2] We are grateful to V.P. Vlasov, S.G. Koltukhov, V.A. Kolotukhin, K.K. Marchenko, S.N. Senatorov, S.L. Solovyov, and A.A. Trufanov for their assistance in finding analogies and valuable advice, and to I.S. Kamenetskii, and A.I. Melyukova for their recommendation to look for parallels in the Crimea.

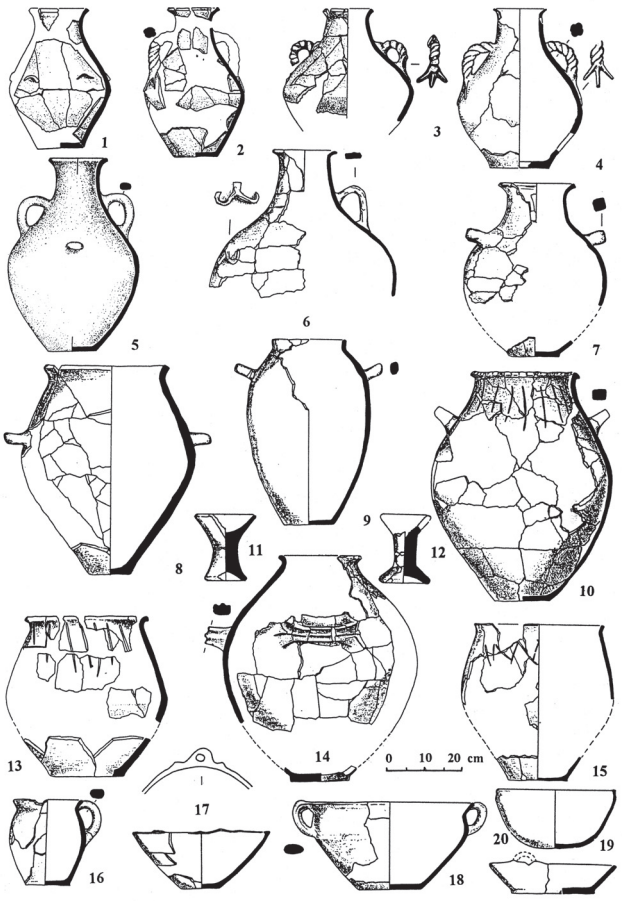


Fig. 3. Hand-made pottery from the Kutlak fortress.

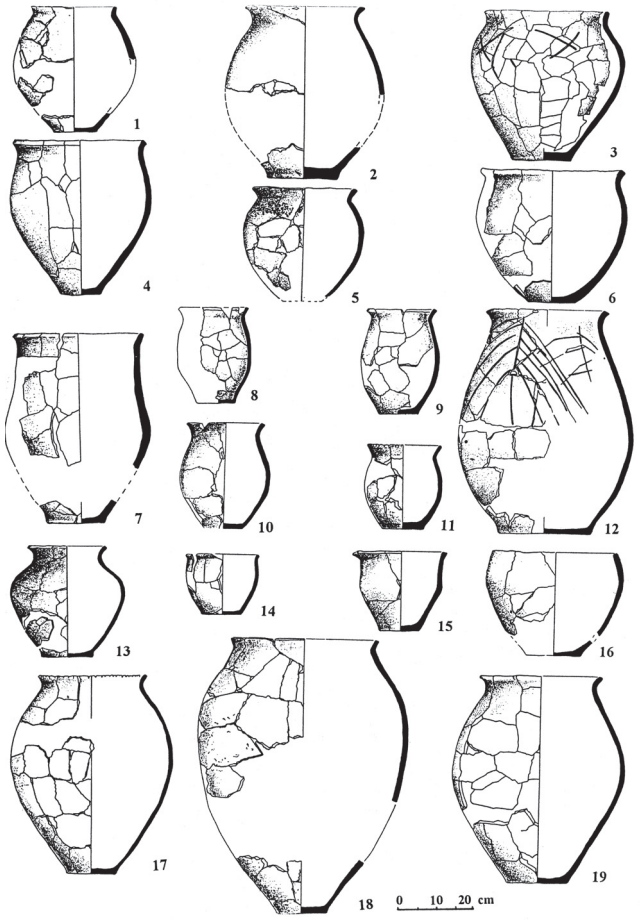


Fig. 4. Hand-made pottery from the Kutlak fortress.

ware of various shapes (Fig. 3: 17, 18, 19). The finds also included handmade high-footed cups and censers typical of Late Scythian culture (Fig. 3: 11, 12, 16).

A considerable part of handmade pottery has relief (Fig. 3: 1–6, 14) or incised (Fig. 3: 10, 13, 15; 4: 3, 12) decoration. Of particular interest are jug-like vessels with a twisted handle shaped like a three-clawed 'bird's foot' at the point it joins the body (Fig. 3: 2–4).

Having studied the Kutlak pottery in all its variety, we can conclude that the majority of the handmade forms present here compare to ones from the 2nd century BC – 1st century AD, typical of the so-called Late Scythian culture, which existed in the Late Hellenistic period and first centuries AD in the foothills of the Central and the South-West Crimea and in the north-western part of the peninsula (Dashevskaya 1958; 1991; Vysotskaya 1979; Symonovich 1983; Yatsenko 1983; Puzdrovskyi 1989).

We are not going to discuss here the origin and development of the above ethnical and cultural phenomenon. What interests us is the very fact that analogies to the Kutlak pottery can be found within the Tauric territory. Therefore one should not regard the Kutlak assemblage as absolutely foreign to the Crimea and should search the Crimean milieu for the roots of the pottery-making tradition. On the other hand, it does not mean that the core of the fortress garrison was composed of the Scythians. One should take into account that Late Scythian culture is in itself a syncretic and ethnically inhomogeneous phenomenon. Various factors participated in its formation: the transition of nomads to the settled life, the migration of population, the penetration of foreign elements, the persistence of local population, for example the Tauri, *etc*.

Available material is too inhomogeneous to allow any suggestion as to the origin of the inhabitants of Kutlak. Let us try to establish the prototypes of typical handmade vessels and their shapes, jugs in particular (Fig. 3: 1–7). It is important that no absolutely identical forms have been found either in or outside the Crimea. Let us compare the forms and decoration elements of Kutlak pottery with those of Tauric pottery.

The closest parallel is jug-like vessels from the Central and the North-West Crimea. Some of them are contemporary with the Kutlak fortress (Vlasov 1997, pl. 7: 8; Symonovich 1983, 51, pl. 2: 8; Dashevskaya 1991, pl. 10: 15), other date from the first centuries AD (Vysotskaya 1979, figs. 40: 16; 45: 9; Dashevskaya 1991, pl. 24: 10, 12; Puzdrovskii 1989, fig. 5: 1). Not too many of them have been found, but they make a characteristic group of Late Scythian antiquities. It should be mentioned that these jugs (like those from

Kutlak) are decorated with relief designs, such as 'arch', oval or conical patterns. Finds differ in shapes and dates, variants abound. But vessels with such decoration motifs continued in production throughout the Late Hellenistic and Roman periods.

At present, this group of vessels is generally considered as evidence of the Geto-Thracian influence on Scythian culture (Vysotskaya 1979, 184; Kastanayan 1981, 124–27; Dashevskaya 1991, 43; Krykin 1993, 132–35). However nobody has proved this hypothesis yet. Usually, its supporters just state the fact, taking it for granted, or compare the hand-made pottery forms and decoration patterns of the Crimea to those of the Balkan-Danube region.

We do not deny by any means that the Geto-Thracian world could influence other cultures. But we think it more reasonable to consider above hypothesis in connection with the Lower Dnieper variant of Late Scythian culture, rather than with the Crimean variant, as the former was closer, from the territorial point of view, to the Thracians. The influences here were inevitable, resulting from the contiguity of the two ethno-cultural groups, their migration and mixing in the contact zone, which is reflected in the material culture, including pottery (Vyazmitina 1969; Shcheglov 1998).

The latest publications are more cautious with the hypothesis of the Geto-Thracian influence on the forms and decoration patterns of Crimean pottery (Krykin 1993 133–36; Vlasov 1997, 289, 296; 1999). In the Tauric pottery, we do not find the whole variety of forms typical for the Thracians: we can speak of a distant resemblance only in few cases. For example, no jar-like vessels the Thracians are famous for or the so-called Dacian high-footed cups have been found in the Tauric territory. In turn, the Geto-Thracian forms of the first centuries AD go back to the Balkan-Danube pottery of Late Bronze and Early Iron Ages (Nikulitse 1987, 42–50). One should remember that the pottery from the Carpathians, the Volga River Region, and the Caucasus has a number of similar features in that time (Stepi Evropeyskoy chasti SSSR 1989, pls. 3–6, 8, 10, 17, 20, 21 24, 27, 29, 51, 89, 104; Melyukova 1979). The most typical and frequent form is represented by vessels with a long neck and biconical body, which in many respects resemble the ones discussed in the present article. In all regions mentioned above, jug-like vessels were widely used in later times, as well.

Kizil-Koba culture of the Crimean Mountains and their foothills is one of the cultures that existed within the above area. As a rule, its bearers are identified with the Tauri. Jug-like vessels also occur in Kizil-Koba pottery (Kris 1981, pls. 20: 1, 5, 6; 31: 10, 12; Kolotukhin 1996, fig. 25: 4, 13). They come from the Early Iron Age graves of the steppe zone (Kolotukhin 2000, figs. 3: 9; 8: 15; 21: 17; 22: 2; 24: 9). These jugs as against the ones from the Kutlak fortress have no handles, however it should be mentioned that similar Thracian vessels typically have no handles, either. Therefore, choosing between the two origins (Thracians and Tauri) of the Kutlak and Late Scythian forms, one should admit that their prototypes can be found in both cultures and first and foremost in Kizil-Koba culture.

The resemblance of 'jug-like' vessels to amphorae suggests that handles were introduced in imitation of ancient examples. The evidence is flat-bottomed amphorae with twisted handles from the Hellenistic time (Rotroff 1997, figs. 26–33; 34: 460–462). Twisted shapes occur in the Bosporan pottery found in the local sites of the Kuban and the Crimean Scythia from the 3rd–2nd centuries BC to the first half of the 1st century AD (Marchenko 1996, 156–57, fig. 24; Vysotskaya 1979, fig. 46: 3; Dashevskaya 1991, pl. 5: 5). One example was found in the Kutlak fortress, as well: it is a fragment of a red-glazed jug neck with a twisted handle (Fig. 2: 6).

The comparative analysis shows that many other Kutlak forms find their parallels in Tauric pottery (Kris 1981; Kolotukhin, 1996), although the close of Kizil-Koba culture and the date of the assemblage under consideration are set apart in time. Therefore we do not claim that Kutlak pottery reflected the latest Kizil-Koba culture, we just admit that it inherited some features of Tauric culture, that of the local population in Crimea.

K.I. Kris tended to date the Kizil-Koba culture from not later than the 5th century BC (Kris 1981, 561). The handmade pottery and amphorae fragments found together in the Shpil settlement are assigned to the 4th century BC (Khrapunov and Vlasov 1995, 28). V.A. Kolotukhin mentions several settlements with Kizil-Koba pottery and fragments of amphorae dating to the 3rd – 2nd centuries BC (Kolotukhin 1996, 62–3). This list is concluded by finds from the sites of South-West Crimea, dating to the same time (Savelya 1974, 92; Senatorov 1998, 8–15).

Even if Kizil-Koba (Tauric) culture ceased to exist, the full disappearance of its bearers who could maintain for a long time its traditions in pottery-making, is most unlikely. The influence of the Kizil-Koba cultural legacy on Late Scythian culture is not denied, though it has not become yet a subject of special research. Analyzing in his thesis pottery from the Crimean Scythia, V.V. Vlasov distinguishes a number of forms coming from Tauric prototypes and remarks that they grow fewer in later sites (Vlasov 1999, 9–12). In our opinion, this tendency is reflected in the Kutlak pottery assemblage.

At the turn of our era, Tauric material culture underwent some sort of homogenisation (Olkhovskiy 1990, 33); therefore it is rather difficult to distinguish between Late Scythian and Tauric pottery. The narrative sources from this very time introduce a new ethnonym – Tauro-Scythian. If to admit that the archaeological material from the Kutlak fortress belongs to the syncretic Tauro-Scythian culture showing Greek influence, then the inhabitants of the fortress came from the territories adjacent to Bosporus,

Fig. 5. General view of the Kutlak fortress from the east – from the Mount of Karaul-Oba.

such as the foothills of East Crimea or probably the region of Theodosia. Unfortunately no information is available on the handmade pottery of the time from this region. Our hypothesis therefore can be proved only if new data are obtained.

Speaking of the 'Late Tauri' or 'Tauro-Scythians', one should mention that this ethnonym was familiar to Late Hellenistic and Roman authors.[3] The decree of Mithridates' general Diophantus (113 BC) [*IOSPE* I^2 352] reads about the victory over the Tauro-Scythians. According to Strabo [7. 4. 2], the Tauro-Scythians were a local tribe, which lived by robbery. Their harbours were known between the Bay of Symbolon (Balaklava) and Theodosia, located the other side of the Baranii Lob Cape (Ay-Todor or Ayu-Dag) [Pliny *NH* 4. 86]. In 49 BC, a number of Roman ships on their way back after the military operation against Mithridates VIII were driven by wind to the Tauric shore. The prefect of the cohort and many soldiers were killed [Tacitus *Ann*. 12. 17]. Flavius Josephus placed the Tauri among other tribes of the Black Sea littoral who were under the Roman military control [2. 16. 4]. And finally the ancient periploi, as mentioned above, refer to Athenaion (that we identify with the Kutlak fortress) as the port of the 'Scythian Tauri' (Fig. 5).

The hypothesis that the Tauri persisted in the Crimea throughout the Late Hellenistic and Early Roman periods and influenced the culture of the Late Scythians and Bosporus is much criticized. Scholars believe that the Tauric cultural traditions were lost, proceeding from the disappearance or considerable transformation of Kizil-Koba culture. Even if to accept this opinion, one cannot agree that the Tauri disappeared completely to become some 'mythical people'. It contradicts the available sources. Two famous epigraphic monuments (tombstones) referring to the Tauri was found in Chersonesus, whose citizens must have known the ethnical situation in their region much better than foreign authors and could easily tell the Tauri from other natives. One of the monuments (1st century AD) mentions "the Tauri-wife" [*IOSPE* I^2 528], the other (2nd century AD) accuses the Tauri of the murder of two freedmen (Solomonik 1983, No. 13).

It is useful to mention that as a rule, ancient sources associated the Tauri with the piracy on the Black Sea. Indeed, after the Mithridatic wars, the piracy on the Black Sea was steadily growing. To a certain extent, it was the result of the confrontation between Mithridates Eupator and the Romans. It is curious that Appian [12. 15] calls the Tauri among Mithridates' allies. If it is true that the Tauri and Mithridates concluded the military alliance, Pompey's statement about his having suppressed "the ferocious Cilicians and Tauri" [M.Ann.Lucani. *De bello civili* 2. 590–5) becomes clear. The Tauri-pirates may be regarded not only as robbers, but also as the allies of the Pontic king, helping Bosporus control the sea routes. Appian [12. 92. 95] mentions that the pirates had garrisons and fortresses everywhere, knew all deserted islands and harbours, rocks and bays.

Available evidence is not enough to let us date the Kutlak fortress to the time of Mithridates. However we cannot reject the possibility that the Pontic king's successors adopted his practice of hiring the barbarians (and the Tauri in particular)

[3] For the review of sources, see Shults 1959; Solomonik 1962; Olkhovskii 1981; Puzdrovskii 1999b.

to carry out control over the sea coast. Of course, the Tauri or Tauro-Scythians populating the mountainous part of the peninsula and divided into numerous small tribes could not represent a consolidated political force. Some of them became pirates, others served the Bosporan rulers. It is worth noting in this connection that the conflicts with the Tauri mentioned above date from the period of hostility between Bosporus and Rome.

The destruction of the Kutlak fortress may be associated with the rule of Polemo I (14–8 BC), the Roman nominee in Bosporus who looked forward to the collapse of the current military and administrative system in the state (Lantsov and Trufanov 1999, 167). The Bosporan king Aspurgus, who also carried out the pro-Roman policy, must have also faced the 'Tauric problem' (Zubar 1998, 26–31). As follows from the dedicatory inscriptions of Bosporus, Aspurgus conquered the Scythians and Tauri no later than AD 23 [*CIRB* 39. 40]. If the garrison of the Kutlak fortress did consist of the Scythians and Tauri, the fortress could be identified with Athenaion, or the deserted port of the Tauro-Scythians from Arrian's periplus.

In conclusion, we would like to underline that the Kutlak pottery assemblage is Crimean by origin. The inhabitants of the fortress came from the mountainous territories or the foothills of South-East Crimea, bordering Bosporus. The pottery of the fortress bears features typical for Tauric or Tauro-Scythian culture. The foundation and destruction of the fortress took place in the post-Mithridatic time, when the Bosporan rulers tried to establish control over the seacoast.

Kytaia: Phases of History

E. A. Molev

The Bosporan city of Kytaia is mentioned by many ancient authors of the 4th century BC – 7th century AD [Ps. Scyl. 68; Anon. *PPE*. 76; Schol. Apoll. Rod. 399; Pliny *NH*. 5. 86; Ptol. 3. 6. 5; Hdt. 13. 378. 15; Steph.Byz. s.v.; Anon. Rav., s.v.), who all indicate its location, but give no information on its history. They just refer to Kytaia as the city or fortress located at the entrance to the Cimmerian Bosporus (Fig. 1).

The first investigation of Kytaia started as far back as 1820 (Fig. 2). Then, P. Dubrux surveyed the site to identify two lines of fortifications and the acropolis, and compiled a map of the city. He indicated that the coastline was badly damaged (Fig. 3). By mistake, P. Dubrux identified the discovered city with Acra (Dubrux 1858). It took almost a century to establish the truth. In 1918, the Kytaian community's table for sacrifice was found on the shore, in the central part of the site, and confirmed that the city was that of Kytaia [*SEG* II 481]. In 1927–1929, the team of the Kerch Museum undertook a small-scale excavation of the site and its necropolis. The team uncovered fortifications in the eastern part of the city (the remains of the fortification wall and two towers), unearthed material from the ash-mound in its centre, estimated the thickness of the layer of occupation, and revealed six vaults of the necropolis. Among the then finds, the marble sun-dial decorated with the relief image of a bull's head (Fig. 4) is of particular interest. The investigation succeeded in establishing the phases of the city's history and dated it from the 5th century BC to the Late Roman period (Marti 1928; 1929).

In 1957 the team of the Bosporan Expedition of the Leningrad Branch of the Institute of Archaeology under the direction of N.S. Belova investigated the western, coastal district of the city and two quarters in its central and south-eastern parts. The team studied the stratigraphy of the site, uncovered the remains of a residential complex from the 3rd – 4th centuries BC and dated the western section of fortification wall from the 1st century AD (Belova 1961).

In 1970 excavation was resumed by the Kerch Historical and Archaeological Museum joined later by the Belgorod Teachers' Institute and Nizhnii Novgorod University and continued until 1996. At first the expedition was headed by S.S. Bessonova, starting with 1974 by the author of the present article. Investigations were carried out on five plots and in the necropolis. They revealed the remains of residential buildings, pavements, household pits, sewage lines, cult structures and fortification walls, various types of tombs. Some of this material has been published (Molev 1985; 1986; 1990; 1999; 2000a; 2000b; Molev and Sazanov 1991; Molev and Shestakov 1991; Molev and Moleva 1996a; 1996b; Moleva 1989; 1995). The archaeological evidence available to date, both from recently and previous years, allows one to determine the main phases of the city's history.

The earliest level of the site was revealed near the Kytaian sanctuary, a big ash-mound in the city centre (Fig. 2), and on a small plot on the shore, in the eastern part of the city. The red-figure pottery and early Chian and

Fig. 1. Site of Kytaia. View from the north

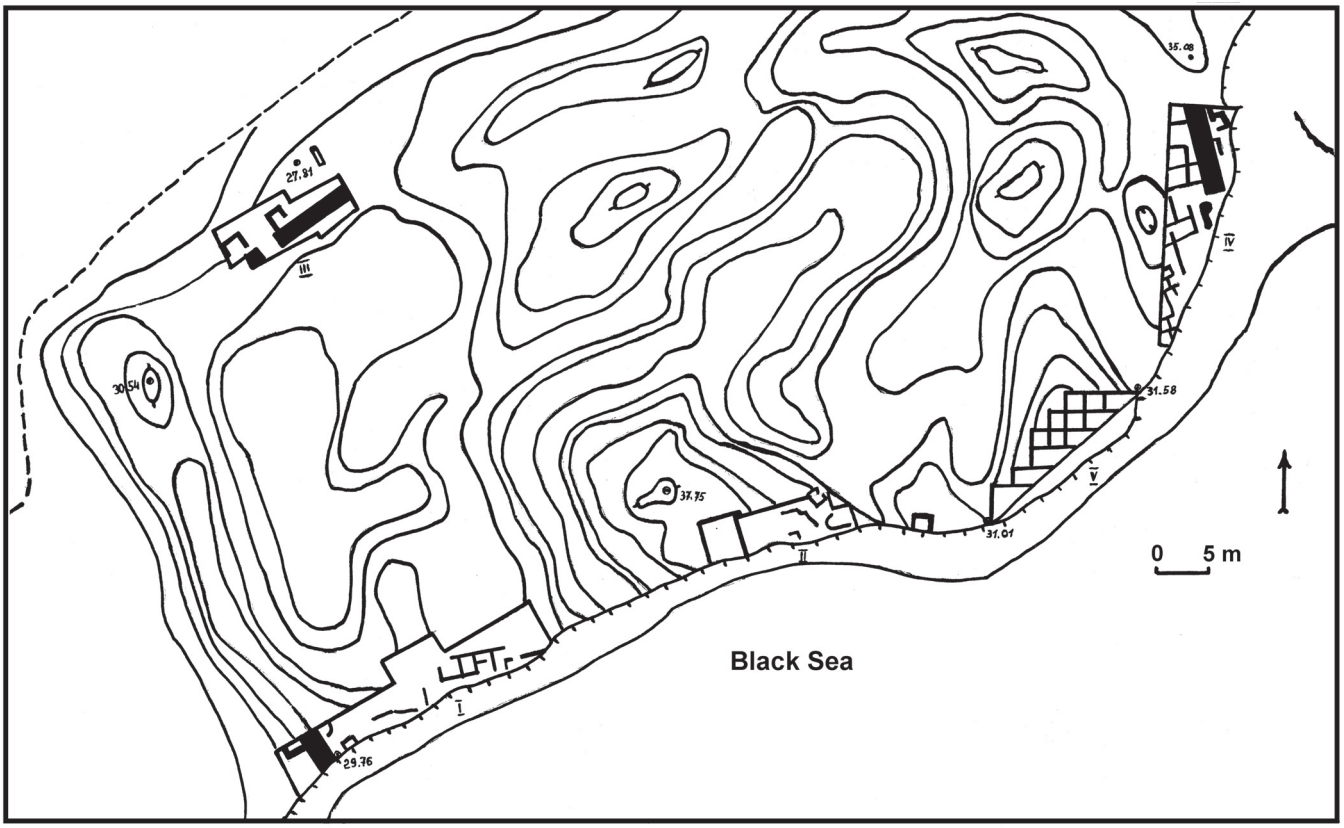


Fig. 2. Plan of Kytaia

Thasian amphorae found in the lower layer of the ash-mound date the latter to the last quarter of the 5th – first half of the 4th century BC (Molev 2000b, 42). Underlying it is bedrock ruptured by large clefts that have not been investigated yet. It is possible that these clefts can furnish evidence from earlier times. The layer is about 1.00 m thick. The coastal plot in the eastern part of the city was found to contain a number of objects from the second half of the 6th – beginning of the 5th century BC. Here, the layer is thinner, just about 0.50 m. In both cases, no architectural remains have been discovered.

If to assume that a minimum layer of occupation develops within 25–30 years, then Kytaia was founded at the end of the 6th – beginning of the 5th century BC. This suggestion is confirmed by the earliest material from the necropolis: fragments of amphorae and one whole proto-Thasian amphora, shreds of a black-figure krater and askos. The metropolis of Kytaia still remains unknown; however proceeding from the date of its foundation, its founders could be the citizens of Panticapaeum.

The early phase of the city's history (the 5th – first half of the 4th century BC) is characterised by the gradual development of its territory and *chora*. Within the area of the city, the layer from this period is second in thickness; in the ash-mound, it constitutes nearly half of its height. Since the oldest, coastal part of the city has been ruined by the sea, only few early architectural structures have survived to nowadays. At the escarp, on plot 5, the remains of a dugout cut in the rock have been found. Due to the bad state of preservation, the purpose of this structure is unclear.

During this phase, no fortifications were built, which means that the city had peaceful relations with its neighbours, the Scythians. Probably Kytaia entered the union of Bosporan cities under the aegis of Panticapaeum as early as that time.

The earliest residential and household structures date from the first half of the 4th century BC. Residential structures are represented by one-chamber houses with courtyards and household structures by pavements, dust-holes and a cistern for water lined with stones. Finds of ferriferous slag evidence that the city had metallurgical industry based on ore from the local Kerch mines. Some slag finds indicate that ore was also brought from the Krivoi Rog deposit.

All coins from the earliest level are from Panticapaeum.

Finds of amphorae suggest that Chios was the major import source till the beginning of the 4th century BC. In the first half of the 4th century BC, Kytaia started importing amphorae from Heraclea Pontica, which suggests that Heraclea was highly interested in the trade with Kytaia. Probably Kytaia played a certain part in the war

Fig. 3. View of Kytaia from the sea

for Theodosia between Bosporus and Heraclea, however no direct evidence thereof is available.

The predominant burial rite in Kytaia was extended inhumation, with the body lying on its back. The dead were buried in rectangular pits. The set of things placed in graves was typically Greek. Many graves from that time were looted or destroyed by later burials. Some graves were Scythian, as evidenced by the added sea sand and pebble or war horses placed near the dead. In one of such graves, there was a spearhead found near the head of a horse, dating to the 5th century BC.

All above indicates that the earliest population of Kytaia included the Scythians who had the equal right to be buried in the necropolis of the city. It is not impossible that some of the mounds surrounding the valley of Kytaia date to the same time. However they have not been investigated yet and our suggestion is based on few pottery finds.

In the necropolis of Kytaia, there are graves with the dead lying crouched on their side. They resemble the burials typical for Kizil-Koba culture (Kolotukhin 1996, 29). Found are also ritual dog burials that are commonly assigned to the Indo-Iranian, or Scythian religious tradition (Khrshanovskii 1996, 39). On the other hand, the dog was esteemed by the Greeks, too, and a similar ritual was known in Greece. We therefore cannot reject the Greek origin of these burials (Moleva 1998, 62).

The second phase of the city's history started from the second half of the 4th century BC and continued till the end of the 3rd century BC. Buildings of that period include residential two- and three-chamber houses, household, public and cult structures. They were typically built on the foundation of old structures.

In addition to the main sanctuary in the centre a new cult complex was built in the coastal quarter of the city. Four altars and pits filled with pottery fragments, food remains and ash have been uncovered here. The use of the architectural order at the time is evidenced by the fragments of marble column bases and capitals as well as a number of white and grey marble tiles.

Multiple archaeological finds indicate that Kytaia, as many other ancient cities, had both home and craft production. The remains of finely-ground aggregate of broken brick and other ceramics, and press-beds show that the city was familiar with wine production. Large quantities of fish bones, hooks, needles for making nets, net weights suggest fishing. The Kytaians also made pottery (finds include pottery spoilage, polishers, cinders), carved ivory (a flute and an ivory plaque shaped like Eros) and wood (figurines and carved adornments), practised weaving (fragments of spindles and spindle-whorls, loom weights). Two bronze styli and numerous graffiti on vessels from that time indicate that the Kytaians were familiar with Greek writing.

At the end of the 4th century BC, Kytaia was surrounded by a fortification wall. The wall attained maximum thickness in the eastern part of the city, where probably the harbour was located. The thickness of the earliest wall varied from 2.90 to 3.20 m. The outer face of the wall was rusticated.

The burial rite remained the same, whereas burial structures had changed. Found are graves with walls lined with hewn slabs of local limestone. The ritual and sets of burial goods indicate the Hellenistic origin of the graves. However one of the earthen graves from that time had

Fig. 4. Sun-dial from Kytaia

an entrance blocked with rubber stones, which was typical for the Scythians (Yakovenko 1975, 34).

The third phase of the city's history started at the end of the 3rd century BC and was marked by radical changes. A number of structures bear traces of fire and destruction. Later, considerable reconstruction was undertaken. However no evidence of military intrusion has been found; it is possible that fire and destruction were caused by earthquakes.

In the 2nd century BC, the western line of fortification wall was built. Excavation uncovered its small section and the remains of a rectangular tower near the shore. In contrast with the northern and eastern lines, the outer face of the western wall was not rusticated. Its thickness attained 3.40 m.

In the Late Hellenistic period, one observes the further development of domestic industries. By this means, Kytaia tried to reduce its economic dependence on import. Containers constitute 14% of all pottery finds from that time. Sinope and Panticapaeum became the major trade partners of Kytaia. Imported pottery is represented quite widely by bowls and figured vases from Asia Minor.

At this time coins from Amis, Sinope, Phanagoria and Dioscurias appeared in the city. The numismatic evidence (coins from Dioscurias, anonymous obols) suggests that under Mithradates Kytaia had a Pontic garrison.

The material from the necropolis indicates that the burial rites and traditions remained unchanged.

The fourth phase started from the second half of the 1st century BC. All lines of fortification wall were reinforced during this phase. The eastern wall was additionally shielded from the outside, attaining the thickness of 4.50 m. A new square tower was constructed 8.00 m to the north of the ruined corner tower found nowadays right on the shore. Separate sections of the northern wall were thickened by 0.50–0.70 m. In addition, the northern gateway was strengthened by two massive, rectangular flanking towers, each having a door for sorties. Old structures were levelled and new ones were built in their place.

One should pay attention to the layer of clay and crushed limestone traced in the foundation of both the fortification wall and residential houses. Probably substructions of this kind were brought into use after the 63 BC earthquake.

In the necropolis, this phase is represented by collective stone vaults covered with mounds and used many times up to the 4th century AD. All of them were ruined and some looted in antiquity. One of the vaults bears traces of cremation.

In the second half of the 1st century BC – 1st century AD, Kytaia reached the highest level of prosperity. The layer from this time is the thickest. The central ash mound lost its importance as a sacral place, which evidently resulted from the change in the religious beliefs of Kytaians and the decline of the former burial traditions based on sacrifices to chthonic gods. The area of the mound decreased, and its slopes were covered with new architectural structures.

The residential quarters of that time are represented by new buildings and household structures, including stone pavements, sewage lines and grain pits. Former crafts coexisted with new ones, such as glass production, which is evidenced by finds of window glass and glass slag. Glass vessels unearthed from the graves of the city's necropolis are typical Bosporan with one exception – an oinochoe, to which no analogy has been found yet.

Fish bones discovered in quantities even larger than earlier, numerous net weights and hooks indicate that fishing was one of the main occupations at the time. Probably fish had a considerable share in the export of Kytaia, which was common for all Bosporan cities during this period.

South-Pontic cities continued to remain Kytaia's trade partners. As previously, the city imported wine, olive oil, tile, pottery and other craft produce. The prosperity period lasted till the end of the 3rd century AD.

The next, fifth phase was the last in the history of Kytaia. It was marked by rebuilding, involved in which were all parts of the city. Another wall (outwork) was constructed to shield the northern wall, the gate towers were reinforced to provide good resistance to battering ram. New residential houses and household structures were built, as a rule, on old foundations. Typical of this phase is the frequent occurrence of containers for grain storage, pithoi and big amphorae dug into the earth. Goods produced locally, in Bosporus and Kytaia in particular, prevail among other finds.

The evidence of the change in the cult system is provided by the central sanctuary, where the temple of the thundering God was built. The worship of this deity in such a small provincial city indicates that Bosporus was influenced by the developing Christianity. On the central ash-mound, the layer from that time is very thin, which evidences that the pagan sanctuary was not in use anymore at the beginning of the 4th century AD.

Finds of amphorae from the first half of the 6th century AD in the coastal part of Kytaia as well as a quern (its upper part), an Early-Byzantine press-bed, fragments of red-glazed pinakes with cross representations, a gold solidus of the Emperor Justinian confirm that the city still existed at that time. Probably it had a Byzantine garrison then.

New types of graves found in the city necropolis and dating to the 3rd century BC are vaults cut in rock or clay and communal burials covered with mounds. Their walls bear traces of frescoes and representations of cross.

No evidence of violence that could have resulted in the death of the city was found anywhere within its territory. Apparently it was abandoned due to the shortage of drinking water caused by aquifer exhaustion.

Sindian Cleft

A. A. Nikonov

Among Russian scholars, V.D. Blavatskii was the first to suggest that the term 'Sindian Cleft' should be regarded as a place-name (Blavatskii 1985a). Since then, nobody has raised this problem again and it has been mentioned just incidentally. However, it appears to be closely associated with the history and historical geography of the north-eastern Black Sea littoral, and one may no longer discard it as insignificant. To clarify the whole matter, we have attracted data of various sciences. The present article offers an unconventional approach, which considers the Sindian Cleft in the context of the history of Greek penetration into the north-eastern Black Sea region.[1]

Interpretation of the term 'Sindian Cleft'

First of all, it is important to establish the meaning and etymology of the term 'Sindian Cleft'. This subject was investigated by the linguists and historians S.N. Muravev (1991), D. Braund (2000) and S.R. Tokhtasev (2002). All of them agree that Hipponax [fr. 2 Diehl[3]], the first to have mentioned the Sindian Cleft (and the Sindians as a people), and later Hesychius used this term in the obscene meaning, that of woman's pudendum. S.R. Tokhtasev thinks that this expression, the way it was used by Hipponax, cannot be regarded as a place-name, although the scholar admits that it comes from an *ethnonym*, and does not deny the existence of some place, which might have given birth to the above association (Tokhtasev's letter to the author of the present article, dated 2 October 2000).

S.N. Muravev, who in general agrees to the specific explanation of the term by Hipponax and Hesychius, writes that "the Sindians populated the Taman peninsula; by the Sindian crevice or Sindian strait (?) is undoubtedly meant the Cimmerian Bosporus" (Muravev 1991, 148), *i.e.*, the scholar recognises that this term could be used as a *toponym*. "All this pornographic nomenclature probably originated in the folklore of Pontic sailors" (Muravev 1991, 149).

According to the helpful explanation by A.A. Zavoikin, the term used by Hipponax is translated exactly as a cleft, a site for sacrifice, the pudendal cleft, an out-of-the-way place, and a 'hole' on the outskirts of the world.

Of importance for our study is not how Hypponax, Hesychius and their readers understood the term under discussion, but the very fact that the Greeks were aware of the Sindians and that this term grew very popular, especially in certain social circles of the metropolis, as early as that time. Only Greek sailors, travelling as far as the shores of Sindike, could bring it into use. Indeed, this euphemism could hardly appear in the slang of sailors, if they had not previously seen with their own eyes the cleft (not a strait!), a natural site, resembling the so desired part of a woman's body. Before the time of Hipponax, when the obscene, pornographic meaning was attached to this term, it must have been used as a place-name, denoting a really existing natural site, which only few could boast to have seen. As judged from the above quotations, S.N. Muravev and S.R. Tokhtasev do not exclude this possibility.

According to D. Braund (2000), Hipponax mentioned the Sindian Cleft in connection with the export of women-slaves from Sindike. If so, the (only) time the poet could have in mind was prior to colonisation, *i.e.*, before the middle of the 6th century BC.

The term 'Sindian Cleft' may be regarded as a place-name like other similar ancient toponyms in the basin of Pontus, such as the Scythian desert, Achilles' race, the cape of Herakles, the Maeotian marshes, the Hellespont, the Cyanean rocks. Of interest is a place-name of anatomical meaning – the Breasts, for the peninsulas in the delta of the Histria. Clefts, too, were given common names, for example, three clefts called 'the Bellows' [Strabo 16. 4. 11].

We believe that sailors who discovered the cleft far from their home, in the land of the Sindians, were so fascinated by its resemblance (as it seemed to them) to a particular intimate part of a woman's body, that they called it the 'Sindian Cleft'. Coastal navigation was based then on landmarks easy to remember, and this site met perfectly this requirement. Therefore, originally, this term must have been brought into use as a place-name, although the expression itself had an anatomical (obscene, pornographic) meaning.

Let us proceed from the assumption that the 'Sindian Cleft' is a place-name (irrespectively of the meaning assigned to it by Hipponax), as it was previously suggested by V.D. Blavatskii (1985a).

Is it possible that by a cleft the Greeks meant a narrow crevice in steep rocky mountains?

It seems unlikely that the Greeks, whose homeland combined various types of relief and whose travels to remote places contributed much to their knowledge of geomorphology, failed to develop distinct and rich terminology. One should attentively read the works by

[1] I am grateful to A.A. Zavoikin, A.M. Novichikhin, S.N. Muravev, S.L. Solovyov and S.R. Tokhtasev for consultations and critics.

the Geographer to realise that it is not true. Not only did Strabo know geomorphologic terms, but, as seen from his separate texts, he could use these terms in their direct (*i.e.*, contemporary) meaning. For example, he operates such notions as depression (with a water stream), (narrow) strait, river-bed, channel, valley, river (with tributaries and delta), ravine, (narrow) mountain pass, gorge, crack (in a mountain), (deep) precipice and, finally, cleft. The latter occurs very often in his texts in the meaning of 'crevice in a rock', 'narrow, gaping sink-hole', 'crack in a rock' [Strabo 1. 3. 10. 18. 20; 11. 14. 13; 12. 4. 8; 13. 4. 11].

Let us give two examples from Strabo, who is known to have used the 2nd-century BC and earlier sources, to prove that the Greeks could easily distinguish a strait from a cleft: "… testified by… who wrote the book *On foundation of cities*". He says that the strait near Chalcedon and Byzantium, which now bears the name of the Thracian Bosporus, was previously called the Mysian Bosporus [Strabo 12. 4. 8]; "The soil between the rocks is stony; in the middle is a deep cleft, so narrow that a dog or a hare can jump over it. This cleft is a river-bed. It is filled with water up to its edges and resembles a large channel" [Strabo 12. 2. 4].

These extracts, containing an absolutely exact description of particular geomorphologic features, evidence that the Greeks could not use the term 'Cleft' to denote, for instance, the wide Akhtanisovskii Liman with gently-sloping shores or the Strait of Kerch.

Another question is: which geomorphologic feature in Sindike could the Greeks call the Sindian Cleft?

On possible location of the Cleft

The geographical location of the Cleft is a subject of scholarly controversy. Two views prevail. According to the first, it is identified with the Strait of Kerch (T. Bergck, see: Blavatskii 1985a; Muravev 1991), according to the second, it is believed to have been an ancient strait in the former bed of the Kuban (now it is the Kyzyltash Liman) (Blavatskii 1985a; Zubarev 1999). To locate a natural site that would meet the meaning of the place-name, the scholars proceed from geographical (location in Sindike) and morphological (relief depression) premises.

Little information is available on the geographical and morphological features of the territories populated by the Sindians. What is available is interpreted differently. We agree that the search should be based on data of both geography and geomorphology, but at the same time one should strictly follow the meaning of the word 'cleft/crevice'. In addition, a feature of respective configuration must be easy to see from the surface (and not submerged by water, since no large-scale perturbations have occurred in the Sindian territory during the last three thousand years). The north-western spurs of the Caucasus, south of the ancient Gorgippia, seem to be the most probable environment for a feature of this kind.

The above scholars proceed from the geography and landscape of the territory, which conventionally is associated with the Sindians. They have never tried to put together the place-name under discussion and the geological meaning of the term 'Cleft', confining their search to the northern Sindike only, where the relief is flat and low. Naturally, this kind of environment cannot (and could not *a priori*) produce clefts. As a result, this place-name has been identified with a hollow or a low, but not with a cleft. Geographical (geomorphologic) features of this type can occur only in foothills or mountainous regions, *i.e.*, on the south.

The groundlessness of the suggestion that the Sindian Cleft was the name of the Strait of Kerch is obvious. As judged from the cross-section of its floor (which was unknown in antiquity, except, probably, for its shallow places – fords), this strait could hardly be denoted by the term 'Cleft' in the sense in which the latter was used by the Greeks.

In addition, the Greeks had their own name for the Strait of Kerch – the Cimmerian Bosporus, – which dated to even earlier times. Herodotus associates this name with an ancient (even for him) epoch, when this area was populated by the Cimmerians [Hdt. 4. 28]. The Cimmerian Bosporus is often mentioned by later authors (Strabo, Pliny, Arrian), who sometimes call it 'the mouth of the Maeotis', 'the gorge between Achillion and Myrmekion' or 'the strait'. Of course, they mean the strait separating Bosporus from the territory of the Sindians rather than a cleft (or a canyon) in Sindike.

M.V. Skrzhinskaya (1991) believes that the Greeks were familiar with Bosporan place-names since pre-colonisation times, especially with those in the region of the Strait of Kerch. Thus, both versions mentioned above should be rejected, as they place the Sindian Cleft within the Bosporan territory. The Greeks had their own names for the Strait of Kerch and other Bosporan sites; in addition, they could hardly apply the term 'Cleft' to geomorphologic features other than clefts.

On the possible southern border of Sindike

At present, most scholars believe that the Sindian territory covered the valleys of the Taman Peninsula and the Trans-Azov region, with the foothills of Hither Caucasia forming its southern border. D.B. Shelov (1981) quotes ancient and early medieval authors, who by Sindike meant the territory of the Asiatic Bosporus and the region southeast of the Taman Peninsula.

In 'Orphic Argonautics' (the 2nd century AD), rather a late and confused work, one reads about "the Sindians who lived in the Kharandeiskikh canyons near the Caucasus Mountains" (Latyshev 1900, 913–15). Of interest is Polyaenus' narrative of the 4th-century BC events and his story about Tirgatao, the wife of the Sindian king Hecataeus. She escaped from a fortress (where she was kept in confinement by her husband) and on her way to

the *Ixamatai*, *i.e.* to the north-eastern shores of Maeotis, she hid in the *woods* and chose *abandoned rocky* roads. From the Caucasus to the Don River, woods and rocks can be found only in the foothills of the Caucasus. It must have been there, in the least accessible part of the kingdom, that the Sindian king Hecataeus kept his wife.

Although ancient sources are rather controversial, it becomes clear that the Sindian territory included the north-western foothills of the Caucasus, which form the Abrau peninsula. Some historians suggest the same. According to ancient authors, the Sindians and their city of Patus (Bata) were located (if to look from the south) behind steep mountains populated by the Toretai (Latyshev 1904, 180). Some scholars admit that the territory of the Bosporan Kingdom, which from the 5th century BC included Sindike, stretched as far as the present Tsemesskaya Bay and the foothills of the Caucasus (Anfimov 1948; Krushkol 1967; Vlasova 2001). Therefore, one should survey this area, as cleft is a feature of mountainous environment.

Let us consider archaeological evidence. Finds from a ruined cemetery in the valley of the River Sukko, 12 km to the southeast of Anapa, in close proximity to the Utrish Cape, confirm that the north-western spurs of the Caucasus were populated as early as the first half of the 1st millennium BC. All finds date from the end of the 9th – beginning of the 6th centuries BC (Novichikhin 1995).

However, most objects found in the foothills of the Caucasus and associated with the Sindians, are assigned to a later time – the 6th or the 5th century BC. Some come from Dzhemete, a township near Anapa, located in the basin of the rivers Shirokaya Balka and Glebovka on the Abrau peninsula (Raevskoe and Semibratnee sites) (Anfimov 1967; Dmitriev 1989). Others were found in the Sindian cemeteries (over 200 graves) of the 6th – 5th centuries BC not far from Rassvet (a farmstead), 13 km to the northeast of Anapa (Novichikhin 2000). Probably, stone box graves found in the north-western foothills of the Caucasus, in the basin of the Tsemesskaya Bay and further to the north, belonged to the Sindians, as well. Since graves of this kind (in low mountains) and earthen ones (in intervening valleys) are located within the same territory of the foothills, they may be assigned to the same culture (most probably, Sindian), that of the local tribes of Caucasian origin, whose roots should be sought in the Bronze Age (Krushkol 1967). Some scholars believe that these stone box graves were built by the Kerketai (Dmitriev 1989) or other southern neighbours of the Sindians. They proceed from the differences in grave construction (Alekseeva 1999), but these can easily be explained by either availability (low mountains) or unavailability (intervening valleys) of stone.

Therefore, it is highly probable that the Sindians populated the north-western spurs of the Caucasus between the Tsemesskaya Bay and Anapa since early times, which suggests their early contacts with the Greeks especially in the littoral part of this territory (the Abrau peninsula).

On the time of Greek acquaintance with Sindike and local tribes

The first acquaintance of the Greeks with the north-eastern Black Sea littoral and Sindike in particular should be considered in the context of the history of Greek penetration into the Black Sea. As evidenced by Hecateus of Miletus and Herodotus [Hdt. 4. 28], the Greeks were aware of the Sindians as early as the middle of the 6th century BC.

The poet Hipponax, who lived in the middle–third quarter of the 6th century BC, used the term 'Sindian Cleft' as a stable, obscene expression (*cf.* Muravev 1991; Tokhtasev 2001) after it had ceased (or continued) in use as a place-name. This language process must have taken years, even decades. Prior to it, the introduction of the place-name into the language of the metropolis also required time. One can only agree with V.D. Blavatskii that the term "appeared much earlier, when merchants/sailors started establishing trade contacts with Sindike, *i.e.*, at the turn of the 6th century BC" (Blavatskii 1985a, 58). New archaeological data on the Sindians and their neighbours suggest that the Greeks were familiar with the north-eastern Black Sea littoral as early as the 7th century BC or even earlier (Korfman *et al.* 1999; Vakhtina 1999b; Ksenofontova 2000).

In 1993, A.M. Novichikhin published a fragment of a cup, found among other pottery of the first half of the 6th – second quarter of the 5th centuries BC in one of the ancient sites near Anapa. The fragment is assigned to the last quarter of the 7th century BC. The publisher admits "the possibility of trade relations between the Greeks and the population of the Asiatic Bosporus as early as the end of the 7th – beginning of the 6th century BC" (Novichikhin 1993, 28–9; 2000).

Thus, we may almost be sure that in the 7th century BC Greek sailors were familiar with the areas, lying within 2–3 hours of sailing southwards from the present Anapa, as far as the Utrish Cape. In other words, at that time or even earlier, they were acquainted (at least from the sea) with the Black Sea shore of the north-western Caucasus, and probably with the Maeotis, as well.

In S.Y. Saprykin's opinion (1999, 218), the Greeks, trying to avoid wild and ferocious tribes of the eastern Black Sea littoral, sailed into the open sea right from the Thermodon mouth and reached Sindike in three days and two nights. This hypothesis is beyond doubt for the 5th century BC, but it also can mean that before the 5th century BC, Greeks navigation in the eastern part of the Black Sea was predominantly coastal, and the Greeks had many chances to meet with the wild tribes of the eastern littoral. Myths and legends of Greek navigation in the eastern Black Sea in the 7th century BC and earlier are confirmed by archaeological material. Therefore, it seems quite possible that the Greeks were familiar with the Sindian Cleft as early as the 7th century BC.

Let me summarise my speculations:

1. The acquaintance of the Greeks with the eastern coast of the Black Sea dates back to the 7th century BC (if not earlier), which means that they could be familiar with the coastline between the present Tsemesskaya and Anapskaya bays as early as that time.

2. The valleys and coastal part of this mountainous region (the Abrau peninsula) were populated by local tribes, with the Sindians probably among them.

3. The term 'Sindian Cleft', used by Hipponax of Euphesus/Clazomenae, a poet of the third quarter of the 6th century BC, in the meaning of 'woman's pudendum', originally served as a place-name, derived from the *ethnonym Sindoi* and popular with Greeks sailors, travelling as far as the north-eastern Black Sea littoral.

4. The geomorphologic meaning of the term 'cleft/crevice', which had a strictly defined place in the Greek system of terms, makes impossible identification of the place-name under discussion with the Strait of Kerch or the gentle depression in the ancient bed of the Kuban near its mouth.

5. According to the meaning of the term 'cleft/crevice', the location of a respective structure can be only a mountainous region (or foothills) and not the valley of the Kuban delta or the present Taman Peninsula. Therefore, the Sindian Cleft should be searched in the foothills of the Caucasus, south of Anapa (the area conventionally associated with the Sindians). As this archaic place-name was brought into use by ancient Greek sailors familiar only with the coastline, the search should be confined to the coast between the present Tsemesskaya and Anapskaya bays.

Let me discuss which geomorphologic features of this coast can fit in the definition of 'Cleft'.

The Sindian Cleft as a geographical site and a geological feature

The Abrau peninsula located between the Tsemesskaya and Anapskaya bays (and the ancient cities of Bata and Gorgippia) represents an extension of mountainous terrain into the Black Sea. This is a small massif 40 km long, with maximum elevation of 540 m and steep slopes facing the sea. The closer to water the steeper the slopes are, from 30–50° in their upper part to 60–80° (to the point of being vertical) at their foot. Only in places, they leave room for a narrow beach. The exception is two capes – Small Utrish (on the south) and Big Utrish (on the north). Each covers an area of a few hundreds of square metres. The capes are composed of nearly flat blocks of rock, with gaps filled with unconsolidated sediments.

Characteristic of this very part of the shoreline from Turkey to the mouth of the Don River (the Tanais) are 'trenches/ravines', extending in solid, competent limestone parallel to the coastline. Although the shore is covered with woods, these trenches are clearly seen from afar, as they run at 100–200 m above the sea. Only in one place, namely near the Cape of Big Utrish, 15 km to the south of Anapa, a large and impressive trench approaches the shore as near as 50–150 m (Figs. 1; 2). The trench is about 500 m long;

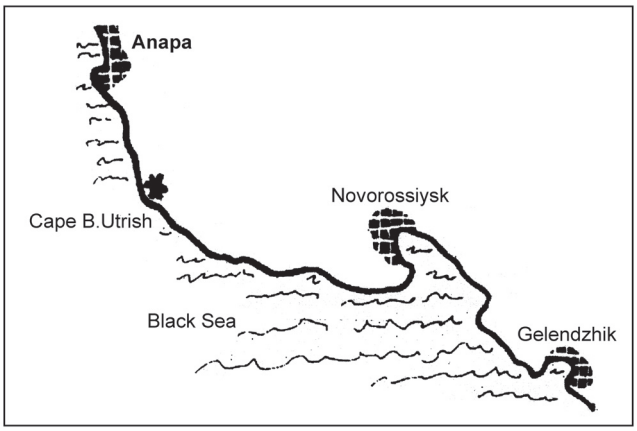


Fig. 1. Location of the Cape of Big Utrish and the Utrish Trench ('Sindian Cleft') on the shore of the Black Sea

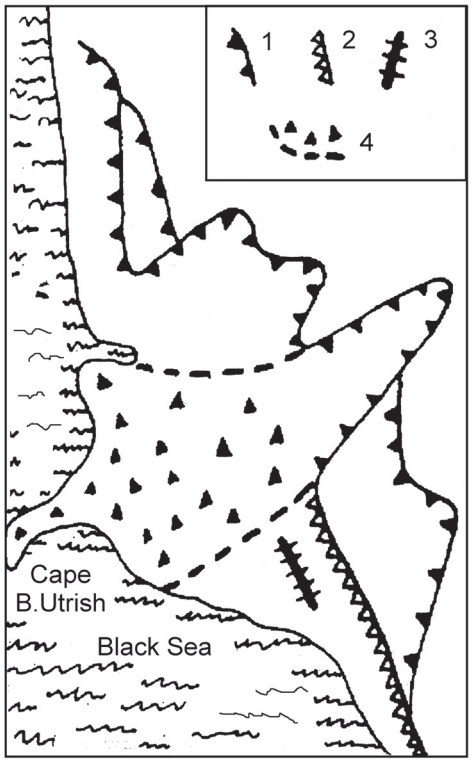


Fig. 2. Relief and seismotectonic map of the Cape of Big Utrish: 1 – mountain scarps formed as a result of large dislocations; 2 – the rear vertical wall of the Utrish Trench seen from the sea; 3 – the bottom of the Utrish Trench; 4 – a chaotic accumulation of rock debris resulting from a later (12th century) collapse

Fig. 3. General view of the Utrish Trench, a view to the north from the top of its western end (a picture made by the author)

Fig. 4. Southern part of the Utrish Trench, approaching the sea (in the background): a view to the south

its back wall is formed by a vertical rock about 100 m high and clearly seen from the sea (Figs. 3; 4). This unique structure is widely known as the Utrish Trench, formed as a result of subsidence processes and earthquakes (Ostrovskii 1970; Paleoseismology 1979; Nikonov 1996).

Due to its morphology, location and length, this trench, looking like a large cleft in a steep rock, could not go unnoticed from the sea; its southern (sea) end and the vertical rock of its back wall can be seen from the water even in bad weather.

An important feature of this site is a chaotic accumulation of boulders, descending from the trench down to and into the sea and thus composing the Cape of Big Utrish (Fig. 2). The cape rises only a few metres above the water and thus is accessible for landing (in contrast with the rest of the Abrau peninsula) and provides a safe harbour in nasty weather. The trench and the cape had obviously formed long before the Greeks reached this place, but they developed their final shape much later (in antiquity and the Middle Ages) as a result of earthquakes and collapses (Nikonov 1996).

Conclusions

The striking view of the coastline, which could not be passed by unnoticed, and the possibility of landing made this site important as a temporary harbour and a landmark for coastal navigation. The outline and morphology of the shoreline here changed in the Middle Ages as a result of a large-scale collapse (Nikonov 1996), which made the bay less convenient, but did not affect the dramatic features of the site. The morphology and visual properties of the sea floor have remained the same.

Greek sailors could not miss this site, as it was the only place over many kilometres of the rocky shore, where they could land safely and approach the trench. The deep cleft, with its sides merging together at the ends, surrounded by a thick wood, must have impressed them by its resemblance to an intimate part of a woman's body and thus gave birth to an obscene slang expression.

In conclusion, we would like to underline that the Utrish Trench is the sole geomorphologic feature on the eastern shore of the Black Sea that satisfies the meaning of the term 'cleft' and which could serve in antiquity as a reliable landmark in coastal navigation. As it was located within the Sindian territory, it was called the 'Sindian Cleft'. It was familiar to Greek sailors as early as the middle – end of the 7th century BC.

Early Scythian Burial Mounds in the Western Trans-Kuban Region: Ethnic Evidence

A. M. Novichikhin

Among the Iron Age sites of the western Trans-Kuban region is a group of burial mounds from the second half of the 7th – 6th centuries BC, which is noticeably different from the majority of contemporary monuments. This group includes the following mounds (Fig. 1: a)[1]:

1. Mounds at the Cossack village of Krymskaya. These Early Scythian burials were discovered in 1886 (the Vorontsovskii mound) by I.A. Khoinovskii (1896, 60) and 1895 (the Mazepinskii mound) by N.I. Veselovskii (OAK 1895, 26, 129).

2. Mounds of the Kholmskii 1 and Tsiplievskii Kut 1 groups in the Abinskii region. Excavated by A.V. Piankov and A.V. Kondrashev in the middle of 1980 (Vasilinenko *et al*. 1993, 21–38). Three mounds (4 and 5 of the Kholmskii group, mound 9 of the Tsiplievskii Kut group) contained burials of the time under consideration; two mounds (5 and 7 of the Tsiplievskii Kut group) had sacrificial complexes in them. The archaeological material unearthed is housed in the Krasnodar State Historical and Archaeological Museum/Reserve.

3. Ruined mound at Fadeevo, in the western part of the Krymskii region. The latest investigations were carried out in 1972 by A.I. Salov, archaeologist from Anapa (Salov 1979, 101). The material is housed in the Anapa Archaeological Museum.

4. Burial 4 in the Sheskharis cemetery near Novorossiisk, which in the past must have consisted of mounds. Excavated in 1973 by A.V. Dmitriev (1974, 108–9). The material is housed in the Novorosiisk State Historical Museum/ Reserve.

5. Ruined mounds at Sauk-Dere in the Krymskii region. The material collected by A.V. Dmitriev is housed in the Novorosiisk State Historical Museum/Reserve.

6. Ruined cemetery of the Semibratnee mounds. Known from separate finds in the mounds of the 5th – 4th centuries BC, excavated by V.G. Tizengauzen in 1875–1876. Some of the finds were published by A.K. Korovina (1957, 174–87). The material is housed in the State Hermitage Museum. New evidence is available (Novichikhin 1998, 19–22).

7. Ruined cemetery in Tsemdolina, in the suburbs of Novorossiisk. Collections of N.A. Onaiko and A.V. Dmitriev. Excavation by A.V. Dmitriev and A.A. Malyshev (Malyshev and Dmitriev 1996, 228–30). The material is kept in the Novorossiisk State Historical Museum/Reserve.

[1] Numbers in the text correspond to those in the figures.

Graves of the necropolises listed above are rectangular (often square) 2.7–4.7 x 1.5–3.5 m pits of depth 0.6–1.2 m (Fig. 1: b). In most cases, each grave had a mound over it. Judged from the remains discovered in mound 4 of the Kholmskii group and grave 4 of the Sheskharis cemetery, the dead were laid with their heads to the south. Some graves represented wooden framed structures (mound 5 of the Kholmskii group). The filling of grave pits contained pebble (mound 4 of the Kholmskii group and grave 4 of the Sheskharis cemetery); their bottom was covered with finely-ground limestone (mound 4 of the Kholmskii group). Found in graves or near them were whole carcasses of bridled and saddled horses or their parts (mounds 4 and 5 of the Kholmskii group, grave 4 of the Sheskharis cemetery).

The burial goods from these mounds (Fig. 1: c) include quivers with up to one hundred arrowheads (mound 4 of the Kholmskii group, mound 9 of the Tsiplievskii Kut group, Sauk-Dere, Tsemdolina), a long Scythian-type sword of a horseman (Sauk-Dere), cast bronze helmets of the so-called Kuban type (mounds at the village of Krymskaya), metal plates of armour (Tsemdolina), bronze stirrup-shaped bits (mound 5 of the Kholmskii group, mounds 5 and 7 of the Tsiplievskii Kut group), bronze three-holed Sialk-type and iron three-looped cheek-pieces (Sheskharis, Tsemdolina, Semibratnee mounds), bronze situlae (mound 5 of the Kholmskii group and mound 7 of the Tsiplievskii Kut group), a bronze Siberian-type mirror (Semibratnee mounds).

The above items compare the Trans-Kuban group of monuments with those of Early Scythian culture, which was located in the Kuban region and Hither Caucasia and assigned to which are the mounds of Kelermesskaya, Krasnoznamenskaya, Nartanovskaya, Nalchinskaya groups (Petrenko 1989, 216–23; Makhortykh 1991; Galanina 1997, 125–37). It may be concluded therefore that the Trans-Kuban burial mounds were built by a Scythian-Sauromatian tribe.

These Scythian-looking mounds of the Trans-Kuban region remind one of the *Ixamatai* (*Ixibatai*). The name of this tribe occurs in various ancient sources. According to Hecateus [166], the *Ixibatai* are the people, who live near Pontus, next to the Sindians. Hellanicus, speaking of the same tribe, calls it 'the Maeotians-Scythians' [Hell. 92]: "Pass the Bosporus, there come the Sindians and further the Maeotians-Scythians".

Later authors from the 4th century BC onwards report that the *Ixamatai* (*Ixibatai*) populated the north-eastern littoral of the Sea of Azov. According to Ps.-Skymnos

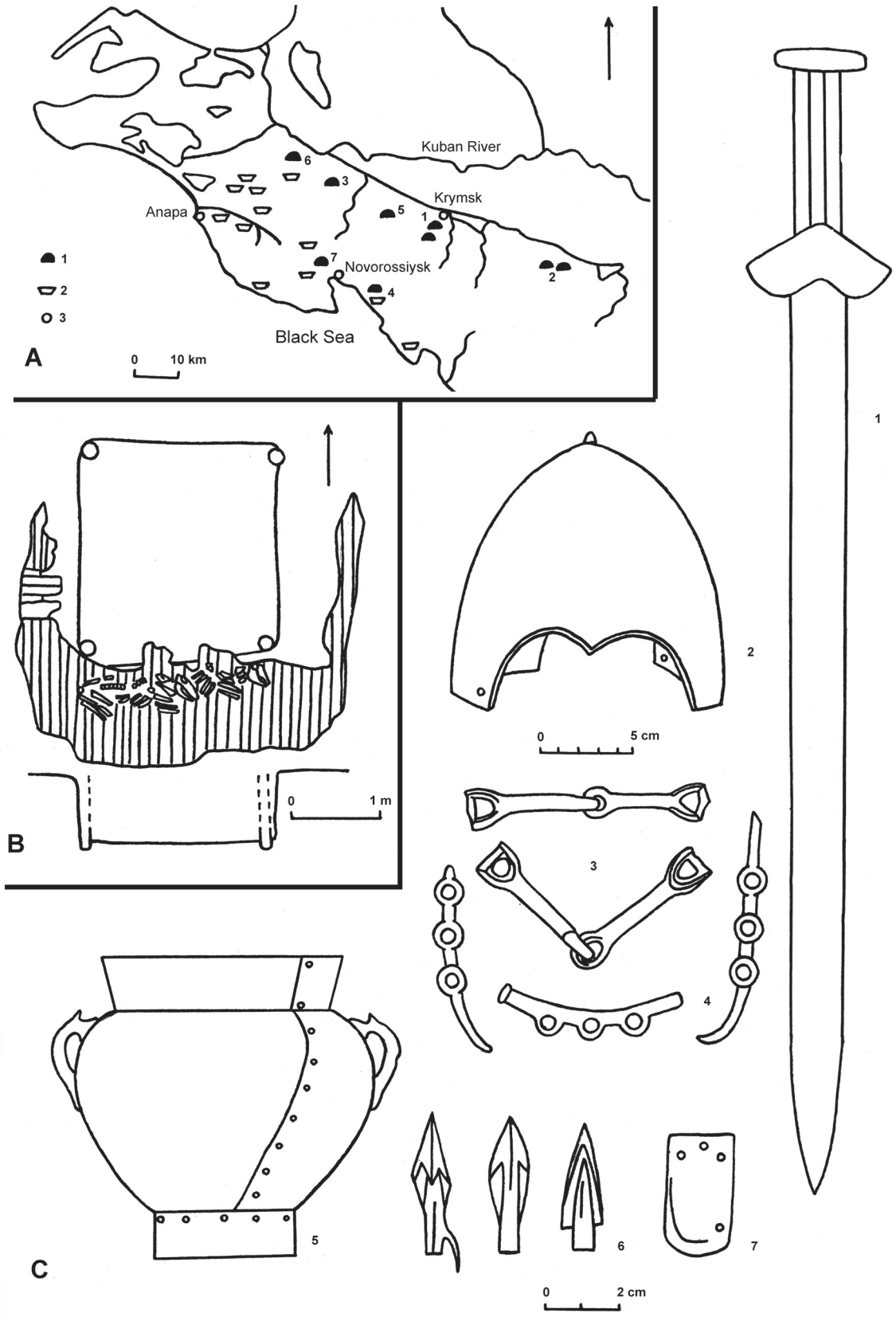


Fig. 1. A: Map of the western Trans-Kuban monuments of the 7th – 5th centuries BC: Scythian-like burial mounds; 2 – cemeteries of the Sindoi and the Toretai-Kerketai; 3 – modern cities; B: Burial complex of Mound 5 in the Kholmskii cemetery (a plan view and a cross-section); C: Burial goods: 1 – Scythian-type iron sword (Sauk-Dere); 2 – bronze helmet (the village of Krymskaya); 3 – bronze bits (Kholmskii, Tsiplievskii Kut); 4 – bronze and iron cheek-pieces (Tsemdolina, Semibratnee mounds); 5 – bronze situla (Kholmskii); 6 – bronze arrowheads (Kholmskii); 7 – bronze armour plate (Tsemdolina)

[874–85], Demetrius believed them to be a Maeotian tribe and Ephorus identified them with the Sauromatians.

At present, most scholars agree that the *Ixamatai* were nomads of Iranian origin and bearers of Scythian or Scythoid culture. In the 5th century BC they populated the low reaches of the Kuban River (Hyppanis), north of Sindike, later, they migrated to the north to settle in the low reaches of the Don River (Tanais) (Kamenetskii 1971, 165–70; Vinogradov 1974, 153–59; Elnitskii 1977, 112; Maksimenko 1992, 64–8; Lukyashko 1992, 57–64; Galanina 1997, 126–27). It is worth noting in this connection that some burial mounds of the 6th – 4th centuries BC, discovered in the lower Don region and the north-eastern littoral of the Sea of Azov (Lukyashko 1988, 65–75) and associated with the *Ixamatai*, bear analogy to the Trans-Kuban sites under discussion.

I.S. Kamenetskii suggests that the *Ixamatai* should be identified with the Maeotians. This suggestion is a subject of scholarly controversy, which is easy to settle by regarding the term 'Maeotians' as an *exoethnonym* rather than an *endoethnonym*. In this case, this term will include all peoples, populating territories close to the Maeotis (Vinogradov 1974, 158; Elnitskii 1977, 110; Galanina and Alekseev 1990, 50).

Indeed, the majority of the mounds under discussion are concentrated in the area to the south of the lower Kuban (Krymskii, Kholmskii 1, Tsiplievskii Kut 1, Sauk-Dere cemeteries), northeast of the 'stone cemeteries' of the Anapa district (Alekseeva 1991, 28–36), which conventionally are associated with the Sindians (Maslennikov 1981, 18). All this favours the possibility that the Trans-Kuban burial mounds of the early Scythian type were built by the historical tribe of the *Ixamatai* (Maeotians-Scythians) at the time of Hecateus and Hellanicus. The assignment of the Trans-Kuban monuments of the early Scythian type to the *Ixamatai* does not contradict early sources and agrees with the common view of the Iranian (nomadic) origin of this tribe and the Scythoid character of its early culture.

It is worth noting that the above lower Kuban group of mounds superseded the ones of the previous proto-Maeotian culture, which are represented by the Abinskii and Chernoklenovskii cemeteries (Anfimov 1981, 48–58; Anfimov and Pyankov 1989, 11–26). One may suggest that the original population of this region was destroyed or forced out by newcomers. The dense concentration of the Early Scythian mounds evidences that in the 7th – 6th centuries BC this area was an important political centre of the *Ixamatoi*.

Some burial mounds are found at the northern border of Sindike (Fadeevo, the cemetery of the Semibratnee mounds) and in the territory of its eastern neighbours, the *Toretai* and the *Kerketai* (Tsemdolina and Sheskharis, not far from Novorossiisk). This suggests the dependence of the native population on nomads. Probably, armed groups of nomads dominated the area, taking food, cattle and craft produce away from the natives. Such relations between the early Scythians, the Maeotians and the Koban tribes are evidenced by archaeological material (Makhortykh 1991, 104–11; Galanina 1997, 131). Another evidence is, probably, Lucian's phrase about the former dependence of the Sindians on the Scythians [Luc. *Toks.* 55].

Further events in this area and the middle Trans-Kuban (Galanina 1997, 131) region must have led to the foundation of a multi-ethnic union between the *Ixamatai* and local tribes. The purpose of this union, according to Herodotus [4. 28], was to restrain the advance of the Scythians into the Sindian territories and, probably, to protect the Bosporan Greeks against nomads' raids.

It is commonly believed that the rapid expansion of Bosporus as far as the lower Kuban in the 5th century BC forced the *Ixamatai* to leave the western Trans-Kuban region and to move to the north-eastern littoral of the Sea of Azov (Kamenetskii 1971, 169). At the beginning of the 4th century BC, the *Ixamatai* made an attempt to recover their control over Sindike and nearby territories. The armed interference of the *Ixamatai* in the conflict between the Sindians and the Bosporans is mentioned in the famous story by Polyaenus about the Maeotian Tirgatao [Polien. *Strat.* 8. 55]. Although the events are romanticised by the author, one can easily divine the political reasons of the Ixamatian involvement.

Origin-Legends of the Greek Colonisation of the Northern Black Sea Littoral: Historical Tradition and/or Literary Fiction

A. V. Podosinov

Ancient sources offer little information on the origin and early history of Greek colonies in the northern Black Sea littoral.[1] They mainly indicate who, *i.e.* the citizens of which metropolis, were the founders of this or that settlement, colony or polis. For example, we know that Tyras, Olbia, Theodosia, Panticapaeum, Kepoi were founded by the citizens of Miletus in Asia Minor, and Chersonesus by the immigrants from the south-Pontic city of Heraclea possibly in conjunction with the Delians. Phanagoria are reported to have been established by the people of Teos. According to some sources, Hermonassa was founded by the citizens of Mytilene (see below).

This information is of high value for the historians of Greek cities in the Black Sea region: it allows comparison between metropolies and colonies, their state system, culture, language and religious beliefs (especially during the first phase of the colonisation history, when the ties were still very close).[2]

Yet, many details of the early colonisation period, such as names of founders (*oikistai*), their origin and status, the situation in the metropolis that could promote colonisation, reasons for the establishment of a colony on a particular site, relations with local population, if any, *etc*., were forgotten and thus did not enter the annals. Even if local chroniclers did record them, the records were lost later, and as a result, practically no information is available. According to David Braund's witty remark (1998, 287–88), "in the Archaic period there was no Herodotus to survey the recent past, still less a Thucydides to present an analytical interpretation of contemporary events. ... No historian took part in archaic colonisation, for as yet there were no historians. Oral traditions were no doubts significant, but beyond our knowledge in detail".

That is why, the more valuable and attractive are the few echoes of local folk-tales and legends about colony-founders that we find in later sources devoted to the northern Black Sea littoral.

However, some ancient legends have survived to nowadays, such as the ones about the foundation of Chersonesus, Panticapaeum (the capital of the Bosporan Kingdom) and two largest cities of the Asiatic Bosporus, Phanagoria and Hermonassa.

For example, the 6th-century AD author Stephanus of Byzantium, whose encyclopaedia Ἐθνικά contains a great number of ancient legends quoted from the books of ancient historians, geographers, and grammarians, describes the origin of Panticapaeum as follows: "Founded by the son of Aietes, to whom this site was granted by the Scythian king Agaietes and who called it after the name of the local river Panticapos" (or -es; s.v. Παντικάπαιον). In his commentary on Dionysius' *Periegesis* [v. 311], Eustathius (the 12th century) indicates that Panticapaeum was founded by the son of Aeetes.

Ancient mythology and historiography were familiar with the name of the Colchian king Aeetes, whose daughter Medea was believed to have helped Iason and the Argonauts steal the Golden Fleece and flee to Greece. According to the then common view, the Colchians, chasing the Argonauts, founded a number of cities in the Black Sea and even in the Mediterranean region.[3] Probably, this was the case with Panticapaeum. The legend about the foundation of the city by Aeetes or his son must have originated in the learned Hellenistic poetry of Alexandrian epoch[4], which invented most of myths about the foundation of cities by the Argonauts or their pursuers, the Colchians.[5] On the other hand, the mention of the Scythian king Agaaetes, who was said to have granted the Colchians the land for the colony (though his name never occurs in other sources), agrees with the fact that the Greeks arrived at the shores of the Cimmerian Bosporus to find them populated by local tribes (mainly, the Scythians), with whom they had to establish contacts. It is highly probable that the story by Stephanus of Byzantium represents a blending of real events, which led to the foundation of Panticapaeum in the Scythian territory (perhaps the name of the Scythian king was not fictitious and survived in the oral tradition of the Bosporans), and myths of the Colchians as founders of Pontic cities, invented by later writers.

[1] It should be noted that most ancient historians of the northern Black Sea region pay much more attention to the Scythians, the Sarmatians and other local tribes than to Greek cities and their history.

[2] On these ties, see, *e.g.* Ehrhardt 1983.

[3] See, *e.g.* Ps.-Scymn. 440; Strabo 1. 2. 39; Mela 2. 57; Pliny *NH*. 3. 129, 144, 145; *cf.* Ovid. *Trist*. 3. 9, on the 'Colchian' etymology of the name of Tomi.

[4] See: Koshelenko and Kuznetsov 1998, 259: "This piece of information is, however, purely legendary in character. It is associated with the cycle of myths about the Argonauts...".

[5] *Cf.* Pomponius Mela's information on the foundation of the temple of Jupiter in Chalcedon by Iason [1. 101], of Cotyora on the Paphlagonian coast of the Black Sea by Cytisorus, the son of Phrixus [1. 104], of the city of Dioscurias in the northeastern Black Sea littoral by Castor and Pollux, who accompanied Iason in his trip to Colchis, [1. 111; *cf.* Pliny *NH*. 6. 16], *etc*. Even the whole peoples, such as the Achaeans and the Heniochoi, were claimed to have been Iason's companions (for details, see: Asheri 1998, 265–85).

Another example of contamination is the mention by Pomponius Mela (the middle of the 1st century AD) that the goddess Diana was a founder of the city of Chersonesus.[6] This early myth, identifying a local goddess of the Crimean Tauri (Parthenos/Virgin) with the Hellenic goddess Diana (Artemis) and containing a story of Iphigenia brought to Tauri by Artemis to serve the goddess' temple, was an important element of the local cult[7] and assigned the function of a city-founder to the deity worshipped as a patroness of the city. Such an aberration must have occurred later in the works by geographers and historians, who thus multiplied the powers of the well-known deity of Chersonesus.

One tends to believe that legends of this kind originated in the heads of foreign writers rather than in the local milieu[8] and represented literary constructions based just partly or not based at all on local tradition.[9]

Legends about the founders of Phanagoria and Hermonassa are of absolutely different character. They do not deal with the gods or the heroes, like those of Chersonesus or Bosporus, they describe real and concrete people.

In their stories about Phanagoria, many authors mention the name of its founder – Phanagorus, or simply call it 'the city of Phanagorus' (Φαναγόρου πόλις).[10] In his commentary on Dionysius' *Periegesis* [v. 549], Eustathius relates that "Phanagoria and Hermonassa were colonised by the Ionians under the leadership of some Phanagorus and Hermonus, after whom these two sites were named".[11] Further, he proceeds with Arrian's version from the "History of Bithynia": "Phanagoria was established by Phanagorus of Teos, who had escaped the violence of the Persians", and "Hermonassa [was named after] Hermonassa, the wife of Semander, the citizen of Mytilene. Together with a few Aeolians, he founded a colony, but died in the process of foundation, and after his death the city was ruled by his wife, whose name became that of the city".[12]

Of course, one may call the above legend a fiction, too, since it was typical of ancient and medieval authors to derive the name of a city-founder from an already existing name of the city in order to explain its etymology.

The names mentioned in the above legend are not those of mythological heroes (who usually 'gave' their names to cities), moreover, they are chronologically related to the real events of Greek history (the rule of the Persians in Ionia) and possible reasons for colonisation (the escape from the Persians). Therefore, I believe that there are no serious objections to the authenticity of this legend, even though it was told by much later authors.[13] Compared to it may be Pomponius Mela's trustworthy stories about Themistagorus of Miletus, who founded Phasis in Colchis [1. 108], and Archias, the leader of the Megarians and a founder of Chalcedon [1. 101].

Probably, legends of this kind persisted in the historical memory of the citizens, going on from generation to generation, until they entered written tradition.[14] At first they must have been recorded by local Bosporan historians; later, when these records (which, unfortunately, have not survived) found their way to the 'general' history, they emerged in the works of Greek and Roman authors.[15]

All this evidences that the known legends about the Greek colonisation of the northern Black Sea littoral vary in origin.[16] Some authors intentionally enriched their histories

[6] Mela 2. 3: "Chersonesus, a Diana, si creditur, conditum, et nymphaeo specu quod in arce eius nymphis sacratum est maxime inlustre".

[7] On the cult of Parthenos/Virgin in Chersonesus, see: Meshcheryakov 1979; Paltseva 1979; Rusyaeva 2000b, 75–9.

[8] *Cf.* Braund 1998, 293: "Extant texts on those traditions (origin-stories of colonisation. – *A.P.*) may very well tell us more about the period, in which they were written than about the events, which they purport to 'record'".

[9] A.I. Ivantchik (1998, 307), however, suggests that the origin-stories from the cycles of myths about Herakles, Troy, the Argonauts, *etc*., originated in local patriotic mythology, too, the purpose of which was to integrate local history into the general framework of Greek mythological poetry and history.

[10] See: Ps.-Scyl. 72; Anon. *PPE*. 73; *cf.* Steph. Byz. s.v. Φαναγόρεια.

[11] Φαναγόρα και Ἑρμώνασσα, Ἰώνων ἄποικοι πόλεις, ὧν οι τόποι καλοῦνται.

[12] FGrHist. 2. B. F 71 = Fragm. 55 Roos: Φαναγόρεια, ἣν ἔκτισε Φαναγόρας ὁ Τήιος, φεύγων τὴν τῶν Περῶν ὕβριν Ἔτι δὲ Ἑρμώνασσα ἐπι Ἑρμώνασση τῇ γυναικι Σημάνδρου Μυτιληναίου τινός, οὗ τινας τῶν Αἰολέων εἰς ἀποικίαν μεταστήσαντος καὶ θανόντος ἐν τῶ τῆς πόλεως οἰκισμῷ, η γυνὴ τῆς τε πόλεως ἐγκρατὴς ἑαυτῆς ὄνομα τῆ πόλει ἐπέθετο.

[13] These legends are the source of information on the foundation of Phanagoria, which is dated from 545–540 BC, on the participation of the Aeolians in the colonisation of Hermonassa, on the Bosporan dynasty of the Archaeanactids and its origin from the (Mytilenian) *oikistai* of Hermonassa, Semander in particular (see, *e.g.*: Blavatskii 1985c, 207–11; *cf.* Koshelenko and Kuznetsov 1988, 259–60).

[14] On oral tradition and historical record in Greece, see: Thomas 1989; 1992. See also a recent research into elements of local tradition and literary fiction in stories about Sinope: Ivantchik 1998, 297–330 (301, 303, 305, 307, 311 in particular).

[15] On the local, Bosporan historiography, see Rostovtsev 1925, 122–28: "It is clear therefore that in the epoch of the highest prosperity, in Bosporus, there developed and existed a vast historical literature, which was supported by the archons, who in general were trying to establish a purely Greek society in their kingdom and who were… the bearers of the cultural and political traditions of the Greek world". See also: Gaidukevich 1949, 75, 162; Kallistov 1949, 167–70; Zhebelev 1953, 348; Struve 1968, 147–200; Blavatskii 1985c, 203–7. Also of interest is a decree from Chersonesus in honour of the local historian Syriscus (the second half of the 3rd century BC), who "recorded diligently the appearances of the goddess Virgin and read them, described the relations with Bosporan kings and friendly relations with cities, respectively of the merits of their people" (*IOSPE* I^2 344; for details see: Rostovtsev 1915, 151).

[16] For modern interpretation of origin-stories, see: Schmid 1947; Prinz 1979; Loraux 1986; Gruen 1993, 1–14; Dougherty 1993; Braund 1998, 287–96.

with popular mythological subjects and names, borrowing them, if possible, from geographically close areas (Aeetes, the Argonauts, Artemis–Virgin–Taurike). Thus they tried to assign some historical importance to a local polis and enhance its role in the general Greek history. Other provided just bare facts on first colonists, or city-founders, which had survived in local oral or written tradition. In some narratives, we deal with contamination – a blending of local tradition and inventions of 'learned' writers. Considering all these heterogeneous elements in the ancient sources of the northern Black Sea littoral, one can identify some realities of the early colonisation process, on the one hand, and understand much better the mechanisms of historical memory and its development from oral tradition to written history.

The Western Part of Hellenistic Tanais

Tomasz Scholl

Since 1996 the Institute of Archaeology and the Centre for Archaeological Research, NOVAE, at Warsaw University have been conducting excavations in Tanais(Arseneva and Scholl 1999, 15–6). Our expedition operates as part of the Archaeological Expedition of the Lower Don at the Institute of Archaeology of the Russian Academy of Sciences in Moscow, working under the guidance of Mrs Tatiana Arseneva. The aim of our research is to study the area located directly behind the western defensive wall of the so-called Hellenistic Tanais, also called western, or Barbarian Tanais (Fig. 1).

The most interesting finds from the point of view of this conference are those discovered in trench XXV in the recent two years. The site was selected after a geophysical survey carried out by Krzysztof Misiewicz from the Institute of Archaeology and Ethnology, Polish Academy of Sciences, Warsaw (Fig. 2).

Using the discoveries made during the excavations in trench XIII in 1962 (Boltunova 1969, 121–23) as our basis we wanted to locate the defensive wall in its western part but, contrary to the campaign from 1962, our search did

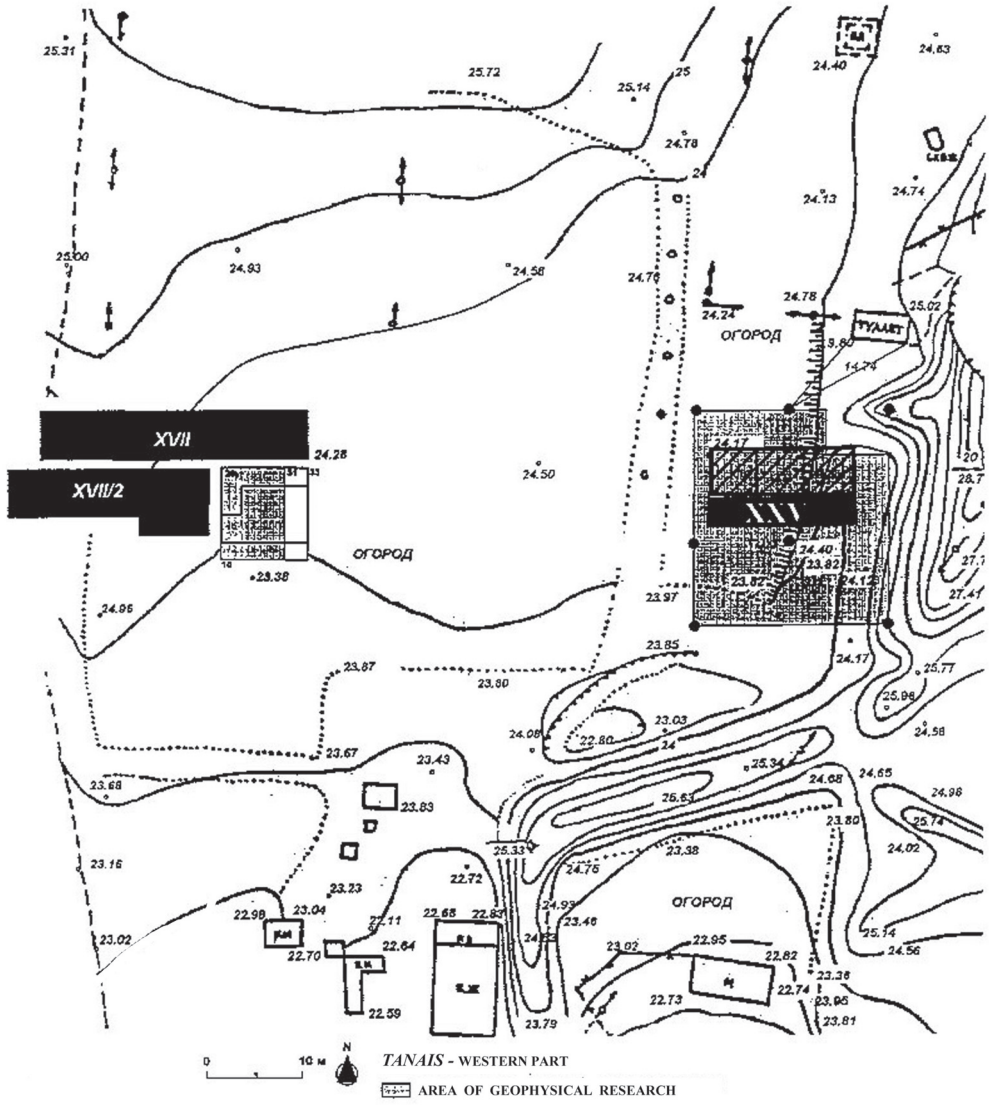


Fig. 1. Western part of Tanais, localisation of the trenches XVII and XXV

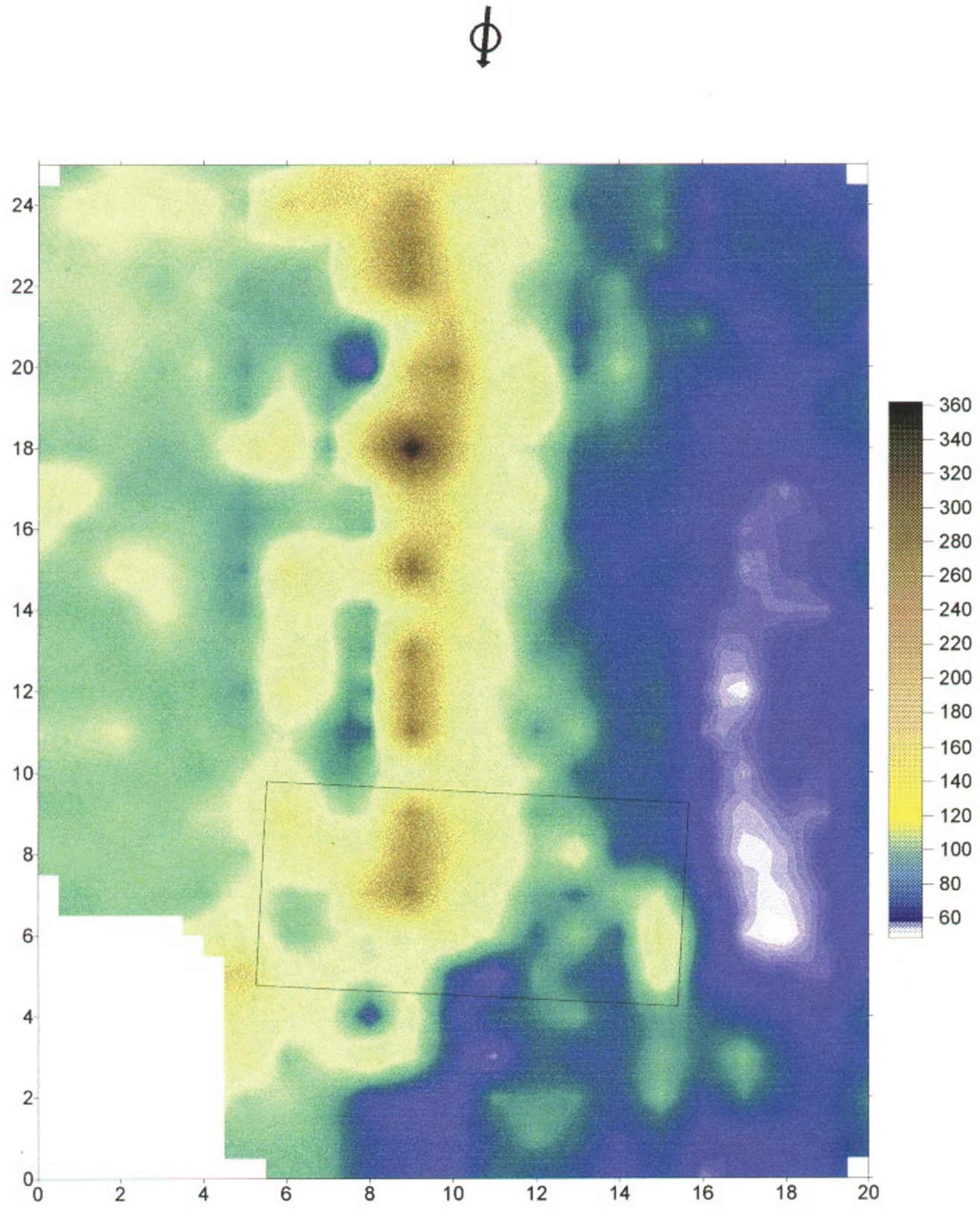


Fig. 2. Results of geophysical survey and localisation of the trench XXV

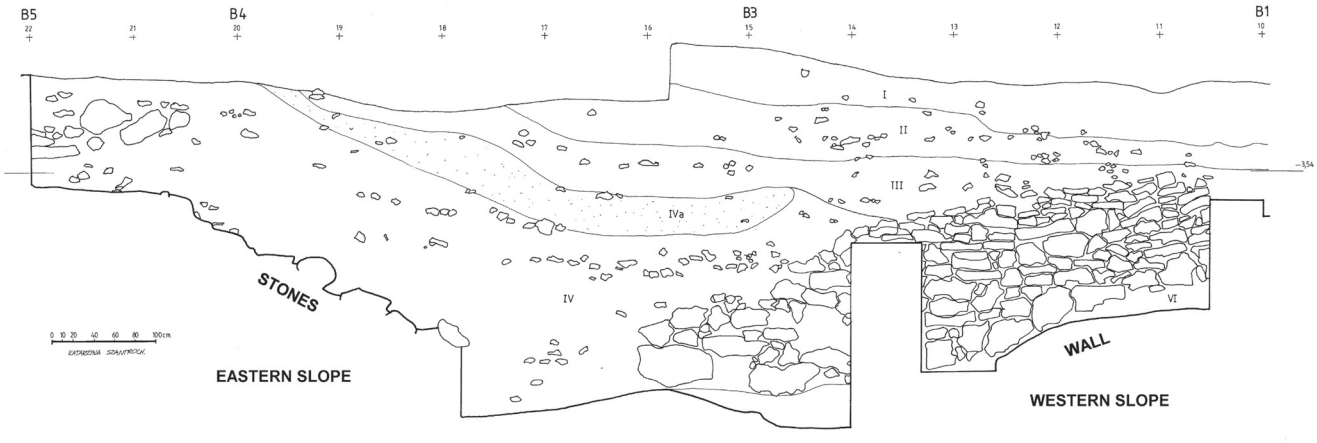


Fig. 3. Southern profile in the defensive trench

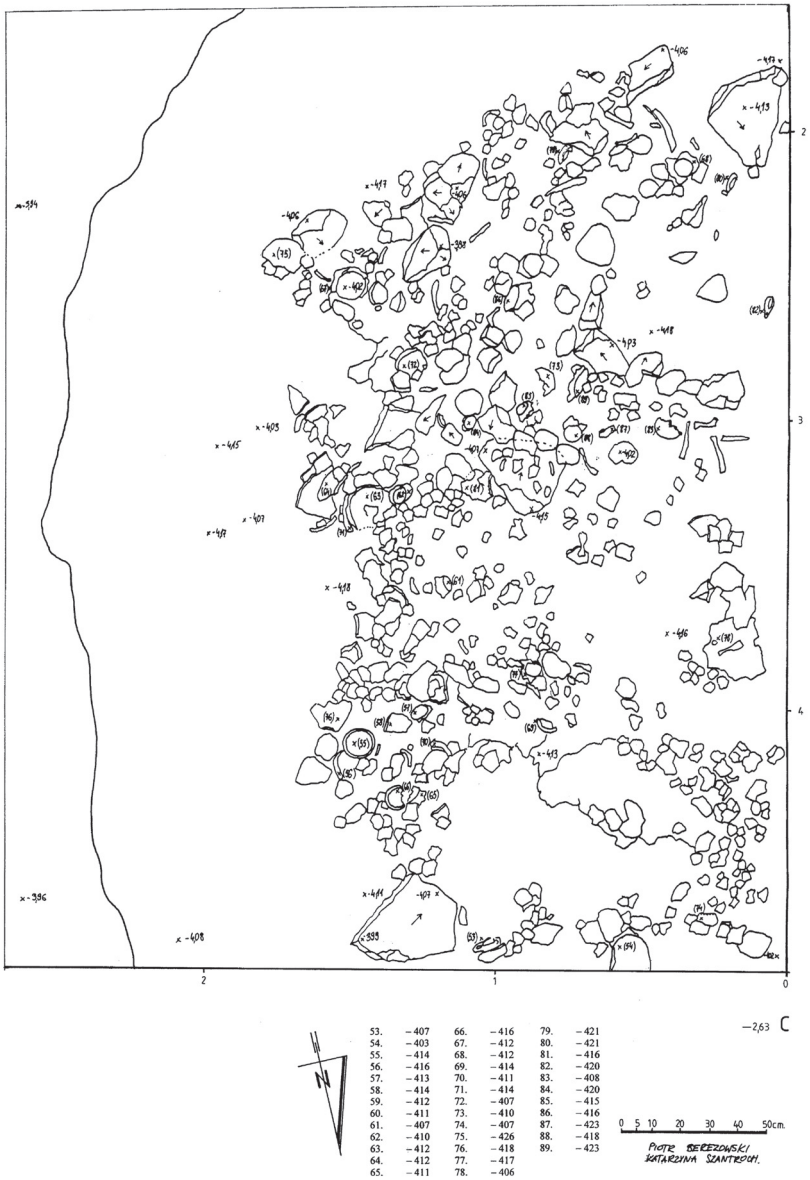


Fig. 4. Part of the hut

not go along the N–S axis, but along the E–W axis so as to uncover the area between private gardens and the defensive wall. Altogether during the campaign of the last year and this year, 135 m² have been excavated.

The geophysical survey revealed the existence of two different milieus and the archaeological excavations confirmed these results: in the western part there are numerous pits of various shapes and purposes, and in the eastern one there are horizontally arranged large stone slabs and flagstones. Farther east we have probably revealed a defensive trench and the broken external part of the defensive wall destroyed, according to Strabo [11. 2. 3], by the Bosporan king Polemon I in the final years of the 1st century BC. We have also discovered the part of the defensive wall that remained in situ – probably its foundations, which is suggested by the results of the 1962 excavations (Fig. 3).

One more wall was uncovered in the south profile of our trench. It is a stone wall constructed along the bank of the trench. So far a length of 10 m has been revealed. At the moment little is known about this wall besides the fact that all the rubbish layers from the filling of the trench adjoin it. Thus it may be assumed that the wall was erected in the 1st century AD, after the trench had ceased to be a defensive structure and before the great restructuring of Tanais in the late 1st – early 2nd centuries AD.

My particular interest is attached to the above-mentioned hypothetical defensive trench located to the west of the defensive wall. The trench is 10 m wide in its upper part and c. 2 m in the lower one. The western slope is gentle and the eastern one is steep. The trench is filled with horizontally arranged layers of rubbish, which contain material dated up to the 2nd century AD. The dating artefacts consist mainly of pottery analysed by Mrs Svetlana Naumenko. At the top of the filling there are large quantities of material from Late Antiquity, whereas at the bottom there is Hellenistic material – mainly fragments of Rhodian amphorae.

In front of, and to the west of the trench, which was dug in virgin soil, there was a layer with material very similar to that from the bottom of the trench. That layer contained large slabs of local limestone and at least three layers of flagstones with archaeological material dated to the 2nd century AD. In the top layer of stones also material from Late Antiquity and early Middle Ages was found.

To the north-west of the flagstones probably one quarter of a hut of local type was uncovered (Fig. 4). It had walls of reeds covered with clay. It was probably used as a store for pottery wares. According to Mrs Arseneva the lamps found in the hut (more than 20) and hand-thrown vessels (more than 50) can be dated to the second half of the 2nd century BC. I believe that this was a store because such a large number of lamps (including two imported ones) and the arrangement of vessels (they seemed to fall off a shelf) are not implements typically found in a tribal hut.

During the two years of research conducted just outside the limits of the western necropolis, in trench XXV we also uncovered several burials. This subject, however, exceeds the scope of the conference.

One of the burials contained the remains of a warrior of the Khazar khanate (Fig. 5), dated to the 9th – 10th centuries AD (Arseneva *et al*. 1999/2000, 27–9).

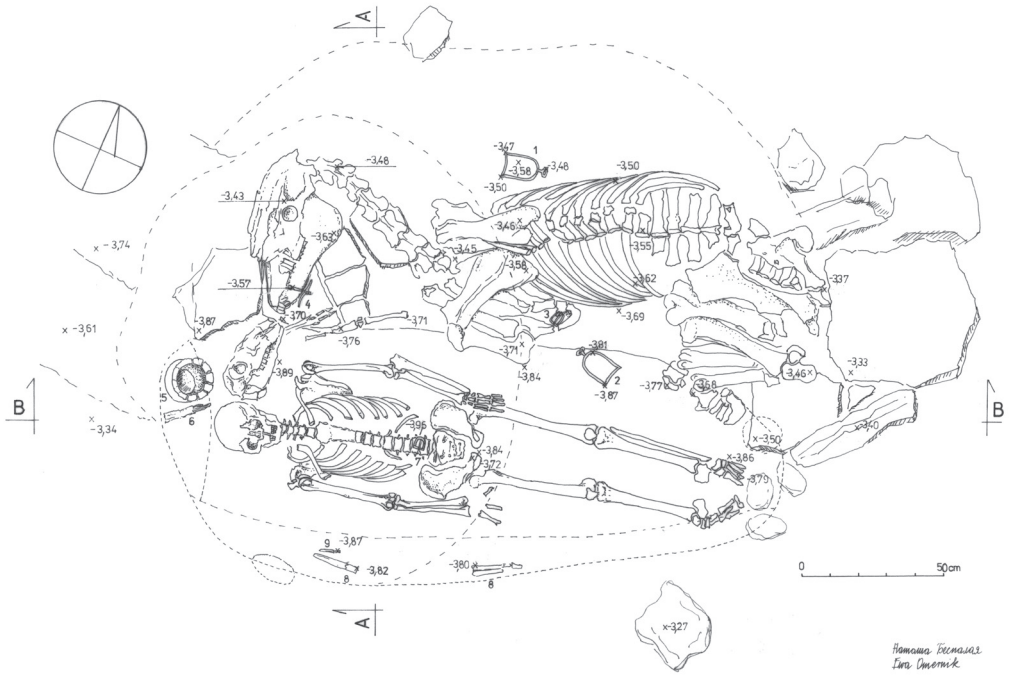


Fig. 5. Burial of a warrior of the Khazar khanate

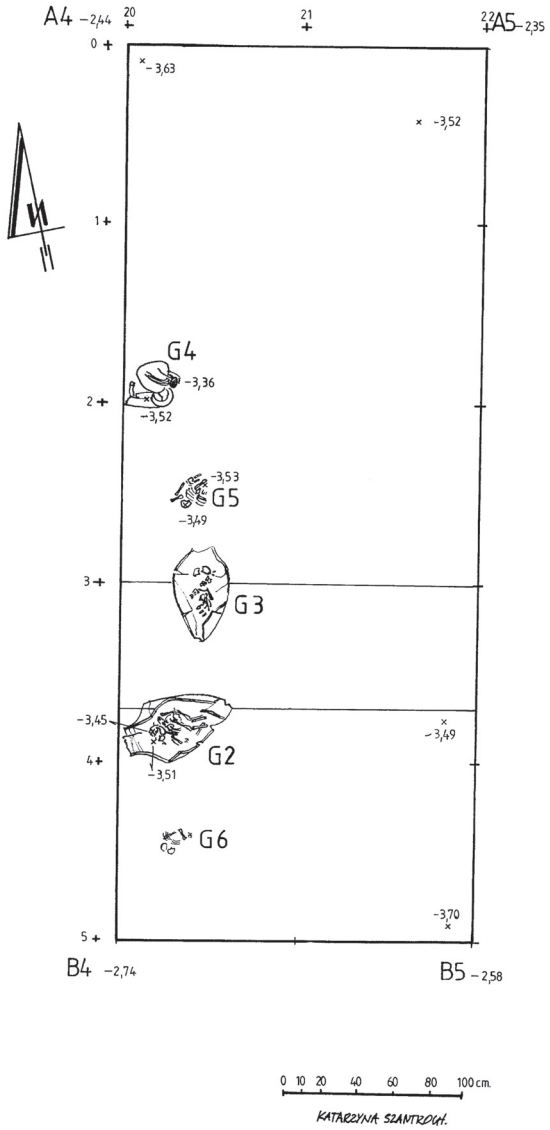


Fig. 6. Children's necropolis

Moreover, on the broken, western, Hellenistic defensive wall we uncovered part of children's necropolis: two burials in amphorae, one covered by an amphora, and two skeletons lying side by side (Fig. 6). The children were of the age up to 0,5 years, there were no grave goods, and the amphorae are dated to the 2nd century AD.

Hand-made Pottery from Nymphaeum: Bronze and Early Iron Ages

S. N. Senatorov

Hand-made pottery is an important category of the archaeological evidence from Nymphaeum.[1] It was found in abundance in 1948–1949 by M.M. Khudyak in the Late Archaic level of plot S. The scholar associated it with the Scythians, whose settlement had preceded the Greek city of Nymphaeum at the end of the 7th – beginning of the 6th centuries BC (Khudyak 1962, 13–6).

The attribution of hand-made pottery from Nymphaeum to a particular culture has been a subject of multiple discussions. A.M. Leskov distinguished a group of early hand-made pottery, assigning it to Srubnaya culture spread in the northern Black Sea littoral in the Late Bronze Age (Leskov 1961, 260–61, fig. 1). This was followed by the publication of ornamented pottery from the Middle and Late Bronze Age, and the Early Iron Age unearthed in 1951 by M.M. Khudyak on plot S (Senatorov 1999, 60–6, figs. 1–32).

The culture, to which the Early Iron Age hand-made pottery from Nymphaeum belongs, is the main subject of scholarly controversy. Some scholars support the hypothesis of the Scythian origin of the pottery (Skudnova 1954, 313; Yakovenko 1978, 41; Grach 1981, 261; 1999, 26; Shurgaya 1984, 63), others associate it with Kizil-Koba (Tauric) culture (Dashevskaya 1951, 118; Shults 1959, 246; Dzis-Raiko 1959, 39; Leskov 1961, 262; Grakov 1971, 78–9; Kastanayan 1981, 19–20; Shcheglov 1981, 211; Shchepinskii 1987, 83; Kolotykhin 1996, 83; Butyagin 1998a, 67; 1999, 11).

The 'Scythian' hypothesis presented in full detail by E.V. Yakovenko is based on the following arguments. First, Nymphaean tableware with incised pattern has no analogies in Kizil-Koba pottery. Second, household vessels with impressed patterns along their rims find parallels among the Scythian pottery from the Elizavetovskaya site. Third, all hand-made pottery from Nymphaeum, both household and table, belongs to the same assemblage. Since the household ware with impressed patterns is Scythian, the table pottery with incised patterns shall be regarded Scythian, too. And fourth, according to Herodotus [Hdt. 4. 100], the territory of the Kerch peninsula was populated with the Scythians (Yakovenko 1978, 37–41).

The supporters of the Kizil-Koba hypothesis proceed, as a rule, from the obvious similarity between the incised patterns of some items from Nymphaeum and those of Kizil-Koba pottery (Shults 1957, 65–6). At the same time they do admit the Scythian origin of the vessels with impressed patterns (Ilinskaya and Terenozhkin 1983, 206) and explain their presence in the Kizil-Koba pottery assemblage by nomads, who might have brought some items along with them (Leskov 1961, 262; Kolotykhin 1996, 83).

Another question, often raised by scholars, is whether or not the Greek colony was preceded by a local settlement. M.M. Khudyak and V.M. Skudnova, who were the first to excavate Nymphaeum, tended to identify some storage pits on plot S (pit 4 found in 1948, and pit 15 found in 1949) as dwellings, or dugouts (Khudyak 1962, 13–4; Skudnova 1954, 314). The hypothesis that Nymphaeum was preceded by a Scythian settlement is supported by I.G. Shurgaya (Shurgaya 1984, 63). V.A. Ilinskaya and A.I. Terenozhkin also admit that in the Early Scythian time, there was a local settlement in its place; however they do not associate it with any culture (Ilinskaya and Terenozhkin 1983, 206).

According to another hypothesis, the dugouts revealed in 1948–49 by M.M. Khudyak had been built by Greek colonists (Kryzhitskii 1982, 64).

N.K. Zhizhina has made the special research, which was devoted to the constructional characteristics of the pits uncovered in 1948–1949 and to the pottery from their fillings. The author's convincing conclusions are as follows: (1) the pits identified by M.M. Khudyak as dugouts with 'beds' are in reality the remains of storage pits, one dug over another in the course of time; (2) the Greek pottery from the filling of these pits is mainly dated from not earlier than the middle of the 6th – first third of the 5th centuries BC; (3) in separate pits, hand-made ware exceeded wheel-made Greek pottery (Zhizhina 1978, 24).

In my report devoted to the analysis of the hand-made pottery unearthed in 1948–1949, I made a suggestion that no Kizil-Koba settlement had existed before the foundation of Nymphaeum by Greek colonists. The reason for such a suggestion was the relatively frequent occurrence in Nymphaeum of pottery with impressed pattern, which was not typical at all for pottery assemblages from Kizil-Koba sites (Senatorov 1987, 146). However this conclusion turned out to be false, since the initially selected material contained by mistake hand-made ware from the Middle and Late Bronze Age. The further study of the hand-made pottery from the Late Archaic level of Nymphaeum showed a wider chronological range of the collection, from the Middle Bronze Age to the last quarter of the 6th century BC (Senatorov 1999, 65).

The Middle Bronze Age pottery (Fig. 1: 1–6) is represented by fragments of ornamented pots with a curved-

[1] I am very grateful to N.K. Zhizhina and O.Y. Sokolova (State Hermitage Museum) and O.Y. Savelya (National Reserve *Chersonesus Tauric*) for the permission to use unpublished material.

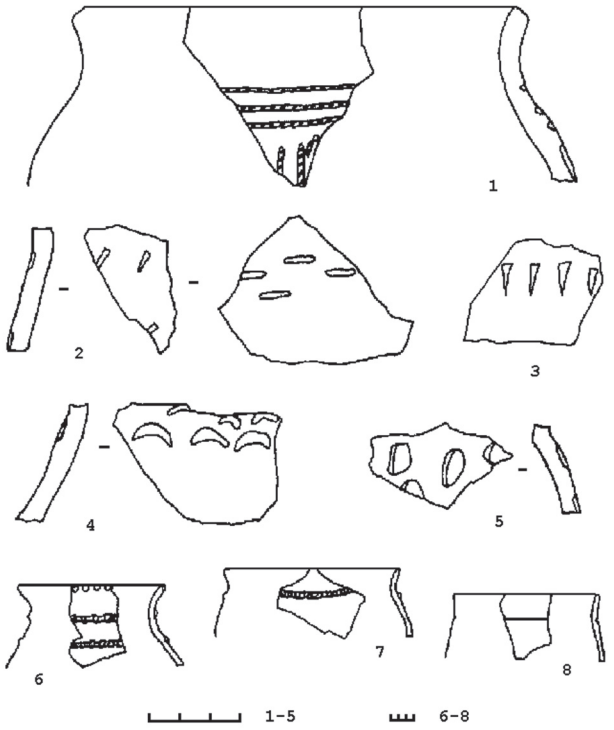


Fig. 1. Hand-made pottery from Nymphaeum: Bronze Age

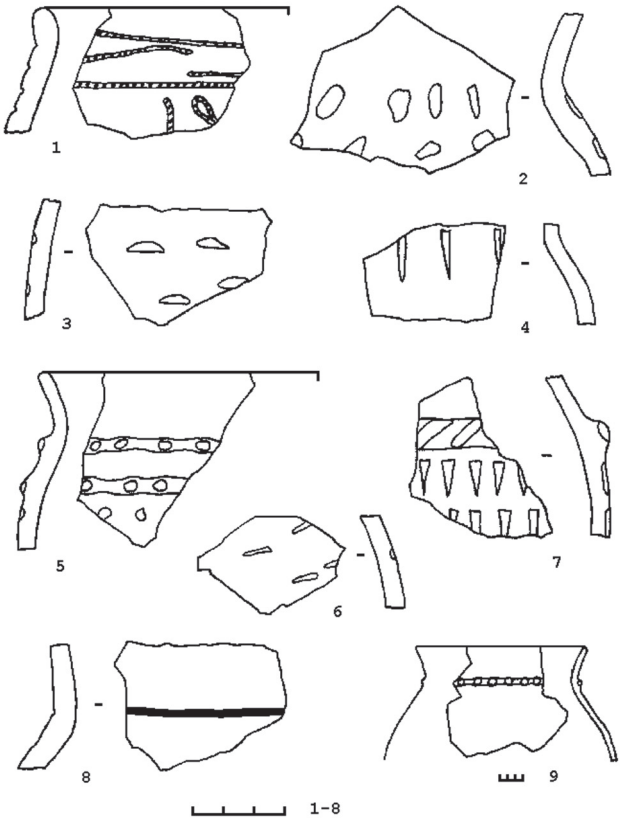


Fig. 2. Hand-made pottery from the Kamenka site near the town of Kerch: Bronze Age

out rim and a convex body. The outer surface of the vessels is roughly worked, its colour being either black or greyish-brown. The decoration patterns are of three types: 'cord', impressed and relief.

The 'cord' pattern is composed of horizontal and vertical bars that form a cord (Fig. 1: 1). The second type is represented by impresses of various shapes – circular, semicircular, oval and triangular (Fig. 1: 2–5). And at last the third type is represented by two horizontal ridges on the shoulders; both the ridges and the rim of the vessels are decorated with round impresses (Fig. 1: 6).

The above types of decoration find close analogies in the pottery assemblage of the 16th – 15th centuries BC from the Kamenka site (Fig. 2: 1–7) (Bratchenko 1985, 458, 462).

The Late Bronze Age pottery of Nymphaeum (Fig. 1: 7–8) is represented by shreds of a jar and a pot. The outer surface of the vessels is rough, black or greyish-brown. The jar is decorated with a horizontal groove (Fig. 1: 8); the pot has a horizontal ridge with round-shaped impresses (Fig. 1: 7). Both patterns can be found in the Late Bronze Age pottery from the Kamenka site (Fig. 2: 8–9) and the settlements of the early phase of Kizil-Koba culture (Kris 1981, 30–1; Kolotykhin 1996, 43) dating between the 12th and 9th centuries BC (Senatorov 2000, 159).

The Bronze Age pottery of Nymphaeum was found in the layer, which can conventionally be divided into three chronological periods. The first period is represented by the Late Archaic layer that contained four shreds of hand-made vessels (Fig. 1: 2, 4, 5, 8) and numerous fragments of Greek pottery (including a Rhodian cup, a Corinthian skyphos, black-figure vessels, Ionian banded amphorae) from the second half of the 6th – beginning of the 5th centuries BC. One more shred of a hand-made vessel (Fig. 1: 6) was found in the same level as the Greek pottery from the Late Archaic and Roman times.

Referred to the second period is the pottery unearthed by M.M. Khudyak from storage pit 11 (excavations of 1948). It includes: (1) a shred of a hand-made pot with 'cord' pattern (Fig. 1: 1); (2) shreds of hand-made vessels with incised geometrical pattern assigned to the second phase of Kizil-Koba culture (Skudnova 1954, 317, fig. 1: 2, 4; 3); (3) fragments of Greek wheel-made pottery dated by N.K. Zhizhina to 500–480 BC (Zhizhina 1978, 20).

The third period is characterized by the material from the layer of the end of the 6th – beginning of the 3rd centuries BC. The layer contained fragments of: (1) hand-made pottery (Fig. 1: 3, 7); (2) Chian swollen-necked and Lesbian amphorae, black-figure and red-figure vessels from the end of the 6th – beginning of the 5th centuries BC; (3) Bosporan amphorae, Solokha I amphorae and tiles probably from the 4th – beginning of the 3rd centuries BC.

All hand-made vessels mentioned above probably belong to the pottery assemblage of the Bronze Age settlement

that preceded the Greek colony of Nymphaeum. One may suggest that it was by accident that these vessels found their way into the level of Nymphaeum.

The Early Iron Age pottery is represented by the finds from two storage pits, 14 and L, which did not contain Greek pottery. Pit 14 was revealed on plot S in 1949 by M.M. Khudyak. It consisted of a main pit and two hollows in its northern and south-eastern walls (Khudyak 1952, 76, fig. 1; Skudnova 1954, 309). In N.K. Zhizhina's opinion, these 'hollows' (or 'beds', as thought by M.M. Khuduak) are the remains of two earlier household pits overlain by the later, main pit (Zhizhina 1978, 24).

One should mention that the south-eastern pit contained a shred of a hand-made black-burnished storage pot with the body 0.52 m across. Preserved on the shoulder of the vessel is a carving consisting of slanting parallel bars (Fig. 3: 1). A similar pattern occurs on the black-burnished storage pot from the Shturmovoe settlement (Fig. 3: 3), found in the level corresponding to the second phase of Kizil-Koba culture.

Pit L was discovered in 1966 by N.L. Grach. This pit filled with material from the 2nd – 3rd centuries AD was found to have been dug over an earlier pit, of which only a part of the bottom 1 m across and 0.37 m high had survived (Grach 1966, 16). The filling of the earlier pit contained only ash and several shreds of a hand-made pot and a bowl. The only part preserved of the pot is the rim with impressed pattern along its lip (Fig. 3: 2). Vessels with similar patterns are typical of all phases of Kizil-Koba culture and therefore cannot be used as a chronological or ethnical, and cultural *criterion*.

The black-burnished bowl (body diameter 10.5 cm) is decorated with carved triangles (Fig. 3: 5). A bowl with a similar pattern (Fig. 3: 4) comes from grave No. 14 of the Druzhnoe-2 cemetery (Kolotykhin 1996, 153, fig. 53: 30) and is assigned to the second phase of Kizil-Koba culture.

The important feature of the above two pits is that they lacked any fragments of Greek wheel-made pottery, while containing shreds of hand-made vessels with incised pattern, which dates them to the second phase of Kizil-Koba culture, between the 8th and the first half of the 6th centuries

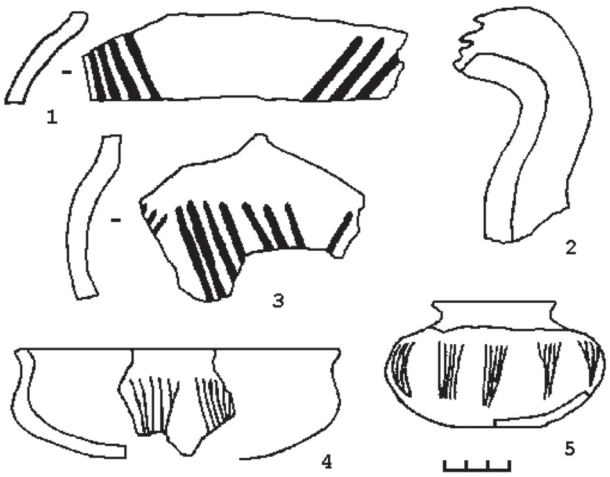


Fig. 3. Hand-made pottery from Nymphaeum and sites of Kizil-Koba culture from the 8th – first half of the 6th centuries BC: 1 – Nymphaeum. Pit 14 (1949); 2 – Nymphaeum. Pit L (1966). A drawing by N.L. Grach; 3 –Shturmovoe, a site of Kizil-Koba culture near the town of Belokamensk; 4 – grave 14 at Druzhnoe, a Kizil-Koba cemetery in the Sympheropol region; 5 – Nymphaeum. Pit L (1966)

BC (Senatorov 2000, 159). This confirms the existence of a Kizil-Koba settlement during this period.

Thus, the analysis of hand-made pottery brings one to the conclusion that a local settlement existed for a long time in the same place before Nymphaeum. The pottery of this settlement bears close analogy to that of the Katakombnoi, multi-band-relief pottery, Sabatinovskaya and Kizil-Koba cultures, which is widely represented in the native sites of the Crimea.

One should also mention that at the lower level of plot S (excavation of 1952 by M.M. Khudyak) hand-made Kizil-Koba pottery fragments from the 8th – first half of the 6th centuries BC predominated, whereas Greek pottery from the second – third quarter of the 6th century BC was represented only by few finds. This fact may be indicative of the trade relations between the Greeks and natives or even their coexistence in Nymphaeum as early as the first half of the 6th century BC.

City of Nymphaeum: Excavation Results (1991–2000)

O. Y. Sokolova

On the Cape of Kara-Burun, 17 km to the south of Kerch, one can still see the ruins of an ancient city, and a necropolis west of it (Khudyak 1962, 10). Paul Dubrux, whose contribution to the investigation of ancient sites on the Kerch Peninsula is hard to overestimate, believed that this site, covering such a small area and surrounded by so few mounds, could be nothing more but a military observation post (Dubrux 1858, 13, 34). I.A. Stempkovskii (Khudyak 1962, 10), Dubois de Montpéreux (1839–1843, 246–50) and a number of other scholars argued that the Cape of Kara-Burun had been occupied with the city of Nymphaeum, known from numerous ancient sources. At present, their suggestion has proved to be true (Latyshev 1909, 398; Gaidukevich 1949, 174; Khudyak 1962, 10). The first investigations of the city and its necropolis were carried out in the 19th century (OAK 1876–80; Gardner 1884, 62–73). The systematic excavation of the site was started in 1939 and continues to present day (Sokolova 1999a).

Nymphaeum is a unique site; although its territory is very small, it represents a concentration of monuments varying in purpose and importance: the city centre, the necropolis, the *chora*, transportation and public utilities, residential districts and estates. It is worth noting that practically no residential construction was carried out within the area of the city itself, which opens new horizons for further investigations not only within the city, but also outside its limits.

Of primary importance is the historical topography of the city. Excavation has been carried out to reveal the plan of the city and to trace the development of its southern and south-western parts. At the same time, geophysical methods have been tested for their efficiency in the archaeological and geological investigation of the site (Sokolova 1993, 6; 1995, 11; Stepniewski 1993, 277).

Geophysical surveys over the south-western part of the city were verified by excavations. The data obtained allow one to establish the date and the plan of construction in this part of the city (Sokolova 1999b, 149–50; Chistov 1998). Twenty-five complexes were investigated over an area of 175 square meters. The earliest is a Late Archaic household pit, which contained almost an intact Clazomenian vase from the last quarter of the 6th century BC (Fig. 1). A number of large pits dug deep in virgin soil may be dated to the second half of the 5th – first half of the 4th centuries BC. The purpose of these pits remains obscure. During the first centuries of our era, they were dust-holes, as judged from the upper layer of their filling.

Also dated from the first centuries AD are the remains of a courtyard, namely, its stone pavement, a wall of some structure, a deep household pit and a pithos (Sokolova 1995, 12). Probably a number of household pits located to the north belong to the same complex. These pits, both pear- and trapeze-shaped, are of a considerable depth (up to 4.0 m); their walls and floor were covered with clay and their mouths were lined with stones. The filling of the pits contained stone caps (Sokolova 1999b, 150; Chistov 1998, 35–6).

One should note that excavations failed to discover the cultural horizon and construction remains from the second half of the 4th – 1st centuries BC on the above plot, which is worth being compared with the results obtained earlier in the central part of the city.

Another subject of archaeological investigation in Nymphaeum is its fortification system. Magnetometer surveys showed the fortification wall to extend along the southern slope of the plateau and located one of its towers. Magnetic data were verified by excavations.

Recent excavations provide us with a better idea of the pottery production in Nymphaeum (Sokolova 2001). Lately, three kilns have been found on the southern slope of the plateau. One of them, dating to the 2nd – 1st centuries BC, as judged from its size, was used for firing small objects (Sokolova 1993, 7). In close proximity to it is a kiln, which has not been investigated yet. The remains of another two kilns, much bigger in size, are located to the south-west of

Fig. 1. Amphora from Clazomenae

the above three. The first may be assigned to the end of the 1st or, possibly, the beginning of the 2nd centuries AD. Only a part of its firing chamber has survived, damaged in places by a later construction. Its hearth with air holes has a diameter of 1.8 m. The overlying ash layer contained pottery fragments from the end of the 1st – beginning of the 2nd centuries AD, including the bottom of a red-glazed cup with a foot-shaped stamp and a shred of a glass bowl rim (assigned by N.Z. Kunina to the 1st – 2nd centuries AD).

The second kiln is located in close proximity to the first (Sokolova 2000, 18). Its straw-brick debris was mixed with fragments of amphorae from the end of the 2nd – first half of the 3rd centuries AD. The vessels have a light coating, a rim with a raised border, and massive handles of a round cross-section (Zeest 1960, tabls. 30, 84; Abramov 1993, 48, tabl. 58). Separate fragments are cracked or swollen (production scratch), which suggests that amphorae of this kind were made right in Nymphaeum.

Of particular interest is the monumental architectural complex from the Hellenistic time, located on the southern slope of the plateau. N.L. Grach interprets it as a sanctuary dedicated to the gods-patrons of sailors and sea navigation (Grach 1984; 1987). West of it is another architectural ensemble (Sokolova 1998). Built on the terraces of the slope, it must have represented an impressive view from the sea and the harbour of Nymphaeum. The terraces were linked by a grand staircase decorated with a rusticated balustrade.

In 1996–1997, excavation of the middle terrace unearthed over 50 architectural fragments (Fig. 2), which must have belonged to the same monumental structure. They included almost all elements of the Ionic column and entablature, which allowed reconstruction of the main facade of the edifice.

The Ionic capital of Nymphaeum is an excellent example of the Ionic order from the northern Black Sea littoral.

Fig. 2. Complex of architectural details

The elongated proportions of the capital, the widely-set volutes and the type of their scrolls, the light curve of the pillow separated from other elements by a fillet, the shape of oves, the absence of pearls under the oves, – all this compares the Nymphian capital with those from Panticapaeum and Hermonassa, which may be placed, according to their type, between the Late Archaic capital of the Asia Minor littoral and the classical specimens from Attica.

It is worth comparing the typological features of the Nymphian capital with those of the column bases, found nearby. These two elements, with profiles formed by numerous mouldings, are the most reliable indicators of the order. The base, consisting of two members – the spira and the torus, belongs with the Samian-type bases (*cf.* Pichikyan 1984, fig. 39). The lateral surface of the spira is slightly concave and is bounded on both sides by a narrow band chamfered towards the centre. It is articulated with two scotiae separated by a central fillet. The torus, comprising the upper part of the base, has a flattened, roll-like profile and is articulated with four shallow scotiae, separated by three narrow bands. The taper of the spira, typical of later Nymphian bases, distinguishes them from Late Archaic Samian examples.

Four fragments of the shaft channelled with 16 flutes compose in pairs (as judged from the chips) two separate blocks. The fifth block is the drum of the lower fust, the lower diameter of which is 0.45 m. In the middle of its bottom, there is a hole, like the one in the centre of the upper surface of the base. The whole column could have been reconstructed, if not for a small fragment, which is missing.

As evidenced by surviving examples of the Ionic order, the later the time the more elongated the proportions of the column are. If to proceed from the ratio of the lower diameter to the height of the whole Ionic order (typically 1 : 8) in such monument of the 5th century BC as the temple of Nike Apteros, with the diameter of columns 0.52 m, *i.e.* comparable with that of the Nymphian column, the height of the latter could not exceed 3.6 m.

The typical Ionic entablature of Asia Minor is composed of two members – the architrave and the cornice. The architectural fragments found in Nymphaeum include two blocks of the architrave, one from the façade and the other from a lateral side of the edifice. The profile of each block is crowned with a narrow band and a cyma reversa. The surface underneath is divided into four (not typical three) fasciae with regulae attached at their lowermost surface. The proportions of the fasciae from Nymphaeum are close to those of an architrave fragment from the temple of Apollo in Panticapaeum. The architrave of this temple had a height equal to the average diameter of the column, which met the proportions of the Classical Ionic order: Hellenistic or Roman architraves were not as high (Pichikyan 1984, 157–58).

The first block of the architrave from Nymphaeum is 3.53 m long, which corresponds to the intercolumniation

of 3.2 m, the latter determined from the space between the bases. The height of the block is 0.565 m. The length of the second block is 2.5 m, which corresponds to the space between the column and the pylon. With such an elongated bay, the introduction of the lower regula must have provided an additional support for the beam. At the same time, it did not fail the proportions accepted during the period in question.

The lower surface of the beam is 0.19 m wide and is equal to the lower radius of the capital. This suggests that the architrave, carrying the main load, consisted of two parts, whereas the cornice did not: its lower width is equal to the lower diameter of the capital.

The lower surface of the cornice blocks is enriched with large dentils, almost square in shape, which is more characteristic of archaic architecture. Over them is a line of egg-like oves, which grew popular in the 5th century BC. The cornice is crowned with a painted cyma reversa and a narrow band. In Asia Minor, these cornice elements were used instead of the frieze. In the angle, the cornice had a graceful palmette. The decoration was accomplished by lion-masks to drain water from the simae.

The members of the order were made of limestone by local stone-cutters, whose craftsmanship evidently was very high. Their surface was covered with a special lime mortar mixed with crushed marble and was perfectly polished. The majority of mouldings were brightly painted. The slabs of the cornice bore drawings of the flowers of Araceae and 'Lesbian cymatium' in bright red, blue and yellow colours; the relief mouldings of the capital were painted red and blue. The yellow manes and red jaws of lions stood out against the blue background.

The style and proportions of all these details evidence that the early Ionic architecture school of the Asia Minor littoral had a considerable impact on the development of the architecture and stone cutting in Nymphaeum. On the other hand, separate elements of decoration suggest the influence of the Attic style of Ionic architecture. Of particular interest is the use of Doric elements in the architectural complex under discussion, such as the Doric capital of the antae.

Fig. 3. Construction remains of the propylon

Together with the objects found *in situ* on the terrace, the above architectural fragments indicate that this complex represented a gatehouse at the entrance of a sacred enclosure – a kind of a propylaeum (*propylon*) (Fig. 3).

The purpose of this structure can be identified from the inscription on the façade block of the architrave (Sokolova and Pavlichenko 2002) (Fig. 4). The three lines of the inscription have left alignment; the red, distinct letters

Fig. 4. Architrave with a dedicatory inscription

are enriched with apexes at the end. Paleographers assign it to the first half of the 4th century BC (see, *e.g.*, Boltunova and Knipovich 1962, 12; Belova 1967, 65; Blavatskaya 1993, 34–6), *i.e.* the rule of Leucon I, whose name is mentioned in the text of the inscription, reading as follows:

Θεοπροπίδης Μεγακλέος τὴν εἴσοδον ἀνέθηκεν Διονύσωι ἀγωνοθετέων Λέοκωνος ἄρχοντος Βοσπόρο καὶ Θεοδοσίης καὶ τῆς Σινδικῆς πάσης καὶ Τορετέων καὶ Δανδαρίων καὶ Ψησσῶν.

The inscription relates that the gatehouse was dedicated to Dionysos by the *agonothetes* Teopropides, the son of Megakles. The mention of *eisodos* suggests that in Nymphaeum, they held celebrations, which included *agones*, such as musical competitions during Dionysia. This dedicatory inscription, containing the name and the titles of a Bosporan ruler, is of high value for the history of Bosporus.

One should note that the Nymphian inscription calls Leucon I the archon of Bosporus and Theodosia, of all Sindike, the Toretai, the Dandarioi and the Psessoi. This poses new problems for scholars to solve: how and when were separate territories, Sindike in particular, attached to Bosporus? What was the status of Bosporan rulers in these territories? When was the term 'king/ruler' added to the king's titles? Other subjects, requiring further research, are the system of co-rulers in Bosporus and the maintenance of Ionic traditions in its language and architecture.

Thus, it is certain that the architectural complex described above represented an entryway, or propylaeum. Probably, it was a portico, built with the use of the Ionic order and Doric elements. It formed a part of a sanctuary ensemble and was associated with the worship of Dionysos. The ensemble must have collapsed in a severe earthquake, which took place about the middle of the 3rd century BC. This is evidenced by cracks in the masonry walls, traces of shifting, and the angles, at which architectural fragments must have fallen down. The complex was never rebuilt and later was covered with earth. Its territory was not in use over many decades.

The expedition also excavated the necropolis of Nymphaeum, which, in essence, was a necessary measure, with looters being its main reason. Investigation was carried out on two plots, which had been looted in previous time. Of particular interest are two graves in the north-eastern part of the necropolis (Sokolova *et al.* 2000). Arranged in a small trench, they comprise one burial complex. The main grave is represented by the surviving rectangular 2.0 x 0.75 x 0.4 m pit with 'shoulders', oriented along a northeast-southwest line. The pit was roofed with three sub-triangular stone stelae, two of which bore inscriptions, dating from the first quarter of the 5th century BC. The names mentioned in these inscriptions are known in Bosporus with exception of the rare name Molpotemis (Pavlichenko 1999; Sokolova *et al.* 2000, 326–29).

Fragments of amphorae found in the filling of the grave pit lead to more accurate dates of the complex. I.B. Zeest

Fig. 5. A set of bridle

assigns them to the 5th century BC (Zeest 1960, 90, pl. 13: 27), A.P. Abramov to the second quarter – end of the 5th century BC (Abramov 1993, 33, fig. 22), S.Y Monakhov to the second – third quarter of the same century (Monakhov 1999, 116, 154).

The second grave, located 0.9 m to the northwest of the main, contained a horse burial. The horse was lying on its left side with its legs tucked underneath and its head to the northeast. It was about 4–4.5 years; its height to the withers reached 138–140 cm. Its proportions were those of an average-size Scythian horse and it probably was a riding horse.

The horse had a bridle on its head – an iron bit and bronze Γ-shaped cheek-pieces with zoomorphic tips. Near its head were two bronze caps for tassels, a pair of bronze padlock-shaped hangers, four bronze convex buckles with zoomorphic representations and an eye on their reverse side, a bronze figured nose-plaque (Fig. 5). Based on known analogies, one may date this bridle set from the third quarter of the 5th century BC (Sokolova 1999).

In conclusion, one should underline that Nymphaeum played an important part in the Bosporan life, and its further investigation may clarify many problems related with the history and culture of Bosporus.

Chorai of Borysthenes, Olbia, Nymphaeum and Hermonassa: Investigation Results and Comparative Study

S. L. Solovyov

In the last two decades, the study of the rural neighbourhood of ancient colonies in the northern Black Sea region has become a first-priority trend of Russian classical archaeology (Marchenko 1999b, 344).[1] During this period, our knowledge about the centres of Greek colonisation in the northern Black Sea has been enriched with new archaeological data on their rural surroundings. The investigations of ancient rural sites were especially successful in the north-western Black Sea region (Kryzhitskii *et al.* 1989; 1990; Marchenko 1991; Marchenko *et al.* 2005), West Crimea (Shcheglov 1978; Carter 1995; Nicolaenko 2001), and the Crimean littoral of the Sea of Azov (Maslennikov 1998; 2001). Similar works, though on a smaller scale, were carried out in the Black Sea littoral of East Crimea[2] and on the Taman Peninsula[3], where until recently investigations had been confined to the cartography of rural monuments and their visual or, at most, geomagnetic study (Paromov 1992a; 1992b; Gorlov and Lopanov 1995; Scholl and Zinko 1999). At present, however, the situation in these two regions has started improving: the new approach to the archaeology of rural sites includes comprehensive, systematic research by means of excavation and reconnaissance (Solovyov and Zinko 1995; Savostina 1998; Solovyov and Butyagin 1998; 2002; Zinko 2001; Gavrilov 2001; Solovyov 2003; Solovyov, Shepko 2004; 2006). This, in the long run, will fill gaps in our knowledge of the rural environment in different parts of the northern Black Sea littoral.

At present, it is beyond doubt that socioeconomic and ethno-cultural processes that took place in the *chora* of the northern Pontus had an important impact on the historical development of Greek poleis.[4] It is also obvious that the demographic and ethnic situation in both the regions of direct colonisation and the hinterland played a key part in the formation of their cultural features.[5]

Local population, surrounding Greek colonies, displayed a great ethnic and economic diversity, which could not but tell on the process of colonisation. The example is the contrast between the settled farmers of the wooded-steppe zone and foothills and the nomads of the Scythian steppes, which was especially pronounced in the lower Bug basin (Marchenko 1985; 1988; 1991; 1994) and East Crimea (Marčenko and Vinogradov 1989b; Vinogradov 2000a). The economic and cultural heterogeneity of the ancient population of these two regions determined the difference in the way of their colonisation.[6]

The ethnic variations within the groups of Greek colonists, in their turn, had at times an essential effect on the socio-psychological forms of Greek-barbarian relations. The best illustration is the Ionian poleis of the northern Pontus (Borysthenes, Olbia, Nymphaeum, and Hermonassa, in particular) and the Dorian Chersonesus: their interaction with the aboriginal population was built on directly opposite socio-psychological bases – a wide spectrum of intensive socioeconomic relations, in the first case, and a narrow range of non-economic coercion forms with full deprivation of rights, in the second.[7]

The present article concerns only four poleis of the northern Black Sea littoral – Borysthenes, Olbia, Nymphaeum, and Hermonassa (Fig. 1). This choice is explained by the fact that these colonies were established mainly by the citizens of Miletus and other Ionian cities, which means that they were ethnically and culturally rather homogeneous. In addition, their foundation dates to quite an early time, at least, to the first wave of Greek colonisation into the northern Pontus. All the four *apoikiai* grew quickly into large economical, political, and religious centres of their regions and became colonies of classical type. And, lastly, they all have long since been subject to systematic archaeological excavation.[8]

[1] The importance and urgency of this trend was realised by Soviet scholars long ago (Blavatskii 1958), but its practical implementation dates from a much recent time.

[2] Systematic research on the rural territories of the European Bosporus was initiated by V.F. Gaidukevich (1940) and resumed by I.T. Kruglikova (1975).

[3] Earlier, the more or less extensive archaeological excavation of rural sites on the Taman Peninsula was carried out by V.D. Blavatskii in 1950–1954 (Blavatskii 1955; 1958) and N.I. Sokolskii in the mid-50s (Sokolskii 1959).

[4] The most complete substantiation to this viewpoint was provided by K.K. Marchenko (1991; Marchenko *et al.* 2005). See also: Solovyov 1994; Tsetskhladze 1998, 44–50.

[5] Different aspects of this problem were discussed at the symposia of 1977, 1979, and 1988 in Tskhaltubo (*Tskhaltubo* 1979; 1981; 1988). This interest has not disappeared; on the contrary, we witness its further growth in the proceedings of many subsequent conferences devoted to the Greek-barbarian relations in various regions of the ancient world, including the northern Black Sea littoral (*Greek colonists and Native population* 1990; *Ancient Polises* 1995; *Taman conference* 2000; *Second Pontic Congress* 2001).

[6] See Tsetskhladze 1997b; 1998 for the latest and most detailed survey of Greek colonisation of the northern Black Sea littoral.

[7] For relations between the citizens of the Dorian Chersonesus and the surrounding native population, see: Shcheglov 1981; 1988; Vinogradov and Shcheglov 1990.

[8] For major historical phases and archaeology of these four ancient Greek colonies, see: Khudyak 1962; Vinogradov 1981; Korovina 1984; 1992; Vinogradov and Kryzhitskii 1995; Solovyov 1999.

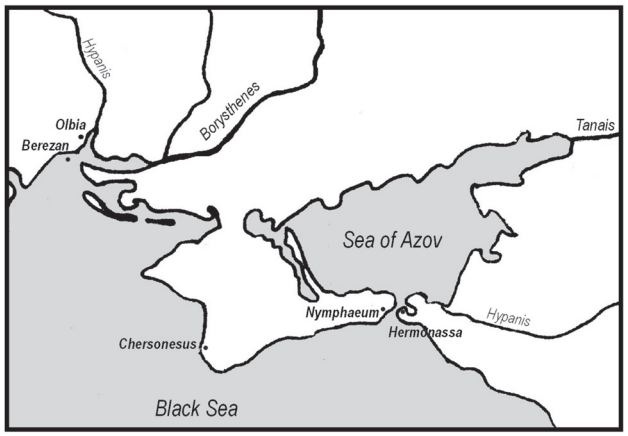


Fig. 1. Map of the northern Black Sea littoral sites

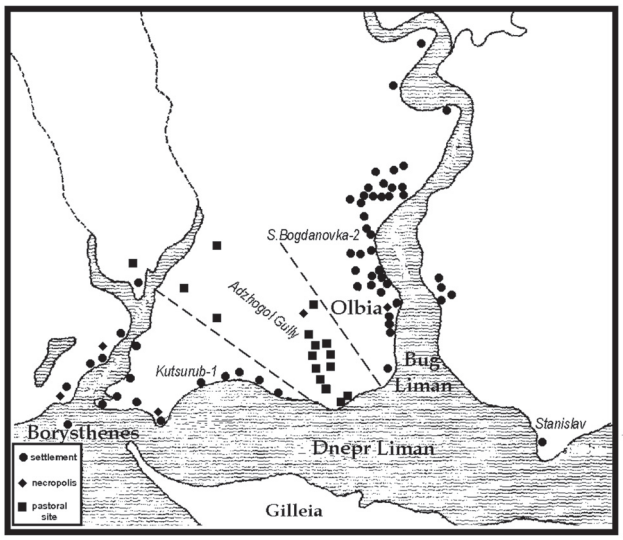


Fig. 2. Map of the Low Bug area sites

Of all the four, the rural surroundings of Borysthenes (an archaic site on the Berezan Island) and Olbia are undoubtedly the best-studied: known to date are more than two hundred rural settlements from the earliest colonisation period and a few hundreds of sites from later times (Kryzhitskii *et al.* 1990).

The cultural differences between the rural surroundings of Borysthenes and Olbia (Fig. 2) – two early Greek *poleis* in the lower Hypanis (Southern Bug) – have already been discussed by various scholars (Marchenko 1985; Vinogradov *et al.* 1989; Solovyov 1998). The border between the two cities was probably the deep Adzhigolskaya Gully (Solovyov 2001b), with slopes used mainly as a pasture for small cattle and neat (Buiskikh and Olgovskii 1990).

Differences between the rural monuments to the north and south of this gully become apparent, first of all, from the plan of the sites, the type of dwellings, and the assemblage of hand-made pottery (Solovyov 1992; Marchenko and Domanskii 1999). To a great extent, they may be explained by the different economic dominants of the colonies – trade in Borysthenes and agriculture in Olbia. As a result, the rural population of the former, coming mainly from the agricultural areas located between the Dniester and the Southern Bug Rivers,[9] had a more homogeneous composition, whereas the population of the Olbian *chora* was heterogeneous, dominated by the immigrants from the wooded-steppe middle Dnieper and the Vorskla River regions.[10] After Borysthenes had been included in the Olbian polis, the former links with the wooded steppe persisted. At the same time, the population of the lower Bug region grew to contain more and more representatives of the steppe Scythian world, who gradually formed one of the major demographic components in the rural surroundings of Olbia (Marchenko 1999a, 162–63).

Based on the data of the long-standing, large-scale archaeological excavation, one can reliably distinguish different types of rural monuments represented in the Olbian *chora*: farms, ordinary hamlets characterised by sporadic construction, urban settlements with primitive fortification systems, farmsteads, agrarian-military sites of insular type (fortresses),[11] and, of course, cult structures – temples and sanctuaries, known to us not only from written sources, but also from archaeological data (Golovacheva *et al.* 1998; Golovacheva and Rogov 2001).

[9] The typical site of the *chora* of Borysthenes is the Kutsurub-1 (Marchenko and Domanskii 1986). Its features include: the subdivision of the settled area into two zones – household and residential, with the latter represented by scattered dwellings of a mainly rounded dugout form; the stability of construction traditions (Marchenko and Solovyov 1988a). The material culture of this site is dominated by the components characteristic of the Carpathian-Danube basin, especially of regions occupied by Geto-Thracian culture. Of particular interest in this respect is the hand-made pottery found in this site (Marchenko and Domanskii 1986; Marchenko and Solovyov 1988b).

[10] The typical site of the Olbian *chora* is Staraya Bogdanovka-2 (Marchenko and Domanskii 1981; 1983). The dynamic, intensive development of house-building resulted here in quite a rapid replacement of big and small single-chamber dugouts and semi-dugouts by ground mud-brick and stone structures. The typologically heterogeneous hand-made pottery, among which predominate vessels characteristic of the forest-steppe Scythian culture from the middle Dnieper region, probably reflects the ethnic diversity of the local population.

[11] The typology of the Olbian *chora* sites, which in general has been developed by the team of Ukrainian archaeologists (Kryzhitskii *et al.* 1989), at present, requires revision. The reason is the new information obtained in a number of sites in the nearest surroundings of Olbia (Golovatchova *et al.* 1991; Domanskii *et al.* 2000) and its remote *chora* (Vinogradov and Solovyov 1996; Vinogradov and Shcheglov 1990). This information may become a crucial point in our understanding of not only the spatial structure of the Olbian *chora*, but also its time history.

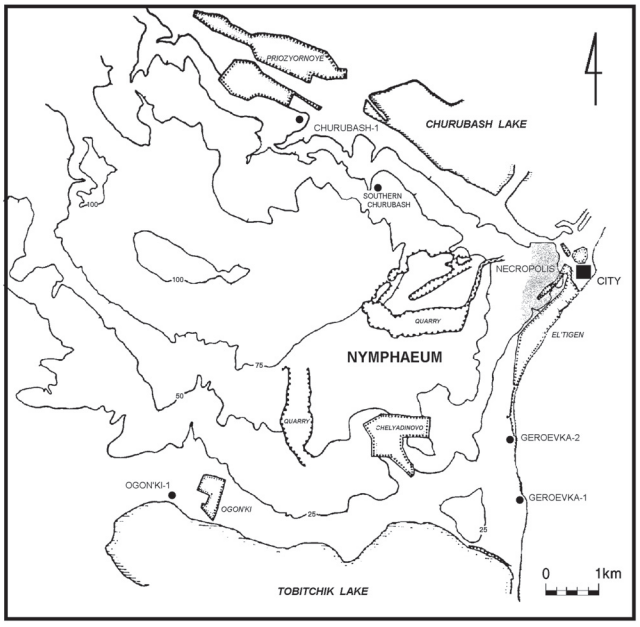


Fig. 3. Map of Nymphaeum

As it has recently become clear, the *chora* of Nymphaeum had developed in an absolutely different way[12] (Fig. 3). Its core comprised fertile lands, suitable for agriculture and covering an area of 60 km^2 of the shore between two ancient limans – the present lakes. This was where the city-centre and its adjacent chora were located. The western border of the *chora* was probably formed by two large and deep gullies, which extended from the western extremities of the lakes towards each other. The remote *chora* must have started west of the gullies, occupying an area of about 30 km^2 and bounded by a range of rocky hills with steep western slopes, which probably served as a natural border of the Nymphaean *polis* (Scholl and Zinko 1999).

Originally, the *chora* of Nymphaeum included two or three large settlements – some kind of 'base stations' in the nearest rural surroundings of the city-centre, founded in the process of secondary colonisation[13]. This was typical of the majority of Greek *poleis* in the European Bosporus, which initially were very few – presumably, only three or four. The common explanation to this phenomenon, which seems rather sensible, is based on the demographic situation in the region of the Strait of Kerch – historically a way of the nomadic Scythian horde (Vakhtina *et al.* 1988).[14] The ensuing political and military instability in this region retarded the colonisation of rural lands located far from city-centres.

With time, the situation must have changed. The sedentarisation of nomads, slow as it was, led to an extensive development of the region and a wider participation of the local population in the social and economic activities of Greek *poleis*, including Nymphaeum, which for a long time had enjoyed a special status in the structure of the Bosporan state. At present, we know that Nymphaeum, in contrast to other *apoikiai* of the European Bosporus, had a highly developed network of links as early as the Classical period: its roads connected sites of various kinds – farms[15], urban settlements[16], fortresses[17]. This feature compares it with Olbia.

The ethnic composition of the population of Nymphaeum still presents many problems (Solovyov 2001a). Nevertheless, this cannot prevent us from making cautious suggestions. First, the great bulk of the population of the city and large rural sites was obviously composed of Greeks and to a lesser extent, natives, a part of whom was personally dependent on Greeks. Second, the population composition of small hamlets and farms must have been more heterogeneous, as the share of socially dependent locals was evidently rather high there. Third, the owners of small farmsteads most likely belonged to the non-Greek population of the northern Black Sea littoral, involved in the economic life of Nymphaeum and probably socially dependent on its civic community. Such a gradation of different ethnic groups by their socioeconomic statuses seems to be valid for the majority of Ionian colonies in the northern Black Sea littoral.

[12] Complex archaeological investigation of the *chora* of Nymphaeum has started quite recently (Solovyov and Zinko 1995; Butyagin and Solovyov 2001; Solovyov 2003). It was preceded by several stages of studies: in the 19th century, the efforts were focused (as usually) on the burial complexes of the rural surroundings – mounds and necropolises; this stage was followed by archaeological reconnaissance, and only in the 50–60s of the 20th century the first large-scale excavations were carried out on two sites of the *chora* – Yuzno-Churubashskoe and Geroevka-1 (Kruglikova 1975).

[13] Proceeding from archaeological excavations and reconnaissance data, they were Geroevka-1, Ogonki-1 and Churubash-1 (Butyagin and Solovyov 2001). The latter is located in the north-western corner of the adjacent *chora*, but almost nothing is left of it. N.P. Kondakov is the only person who has ever mentioned this site. Its large size and multiple traces of ancient culture brought the scholar to a false conclusion that these were remains of the ancient Tyritake. In close proximity to this site were isolated farms, around which in the 30s V.F. Gaidukevich discovered traces of land-surveying (Gaidukevich 1940, 316–17).

[14] According to a different viewpoint (Maslennikov 2001, 249–51), the territory of East Crimea was poorly populated during the archaic period, and nomads were rare guests here. If so, it is unclear why the Greek colonisation of rural areas was so slow in this region.

[15] The example of a farm is Geroevka-2, which represented an isolated farmstead, located on the sea shore not far from Nymphaeum (Butyagin and Solovyov 2001; Solovyov 2003). The farm probably belonged to one family and consisted of a residential building and household structures – a storehouse and a few pits for storing grain. A wooden fence separated the residential zone from agricultural lands. Within the enclosed area, bounded by two deep coastal ravines, there was a family cemetery (a small mound) and a shelter for domestic animals.

[16] At present, owing to systematic archaeological excavation, the sites of Geroevka-1, Ogonki-1, and Yuzhno-Churubashskoe may reliably be classified as urban settlements.

[17] Possibly, the above-mentioned Churubash-1 site was an important outpost on the north-western border of Nymphaeum.

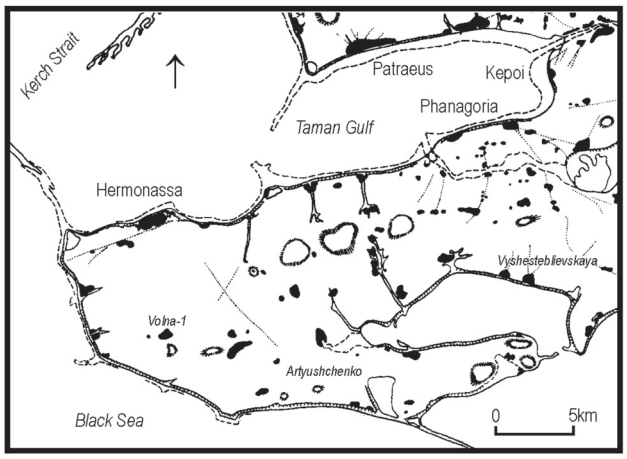


Fig. 4. Map of Hermonassa Chora (after Paromov)

Much less is known to date about the *chora* of Hermonassa (Fig. 4). Archaeological reconnaissance, conducted during the last 20 years over the Taman Peninsula with the use of aerial photography, indicated more than a hundred ancient rural sites, a developed network of roads, and signs of land surveying from various epochs (Paromov 1992a).[18]

As of now, large-scale excavations have been carried out only on one site out of the two dozens located in the vicinity of Hermonassa – Volna-1 (Solovyov and Butyagin 1998; Solovyov 2002).[19] According to archaeological data obtained, the typical archaic house of the settlement was a light seasonal multi-chamber, ground wattle-and-daub hut[20] surrounded by a rustic wood fence. An absolutely different construction tradition is evidenced by the Artyushchenko-2 site, where dwellings have a dugout form (Vinogradov 2001b).

The site of Volna-1 reached its peak in the 4th – 2nd centuries BC. This time is marked by the construction of a large mud-brick and stone farmhouse, probably two-storey, with numerous residential and household spaces and a courtyard roofed with reed. Found near the farmhouse are household structures, including a few dozens of pits for storing agricultural products and a large water-supply reservoir – a public well with stairways descending to the water surface.

The constant links between the Volna-1 inhabitants and the city-centre of the polis are evidenced by multiple finds of articles made by ancient craftsmen, potters in particular, whose produce along with other goods of ancient import found its way to Hermonassa and adjacent rural settlements, owing to the active trade of Greek merchants. Table ware from Attica and Asia Minor, transport amphorae from the isles in the Aegean Sea and the southern shores of the Pontus, of course, full of wine and olive oil, were in everyday use of the Volna-1 inhabitants, among whom, as evidenced by archaeological material, were literate and more or less educated people, capable of writing a note on a potsherd or healing a wound with the help of copper medical tools.

It is an established fact that farming and cattle-breeding were the main occupations of the Volna-1 inhabitants. It is confirmed by finds of agricultural tools made of iron, stone querns, and a great many of bones of domestic animals. Agricultural produce was brought to the city, where it was traded for necessary craft goods or sold on the city market. Numerous Bosporan coins, found in the site, evidence the wealth of its inhabitants. At the same time, the ethnic composition of the latter was rather inhomogeneous, which is confirmed by multiple shreds of hand-made pottery probably to be associated with the native population of Sindike.

In the first few centuries of our era, this site was occupied by mixed, hellenised population, which covered the area with ground structures of rural type. Its main occupation was cattle-breeding.

As of now, the Volna-1 site is the only archaeological monument in the territory of the Taman Peninsula that provides a most thorough insight into the life of the rural population of the Asiatic Bosporus over almost an entire millennium. With regard to recent cartographic data, evidencing a complex character of Greek spread into the Taman Peninsula, one can hardly expect that excavations of other sites in the neighbourhood of Hermonassa will give a similar archaeological picture.[21] That is why the investigation of these monuments is becoming a high priority.

Concluding the analysis of results obtained in the northern Black Sea littoral, one should note that during the early Greek colonisation of the regions under discussion, the development of the rural environment of Greek cities took different ways and shapes. The reason for this should

[18] One cannot agree with Y.M. Paromov that all these traces date exclusively from ancient time, at least, until archaeological excavations have verified all results of visual examination. Even the material collected immediately on the site does not reflect all phases of its history.

[19] During the last two years, excavations have been carried out on two other sites east of Hermonassa – Artyuschenko-1 and Vyshesteblievskaya-1 (Vinogradov 2001a; Vinogradov *et al.* 2001). In the summer of 2001, archaeologists from Moscow started excavating another two rural settlements not far from Hermonassa – the Tamanskii 9 and 11 sites. The former had been excavated by Sokolskii in 1959. Hopefully, the new investigation is not going to be as brief as Sokolskii's, and all its results will be published.

[20] Similar structures from the same time were discovered during the excavation of Hermonassa (Kuznetsov 2001, 326–29). This makes one reconsider the question of the boundaries, which the second capital of Bosporus had in the archaic time.

[21] This has already been evidenced by the recent archaeological excavation of the remote *chora* sites – the above-mentioned ancient settlements at Artyushchenko and Vyshesteblievskaya.

obviously be sought in the composition of the surrounding native population, its economic, cultural and demographic features, rather than in the poleis themselves. Later, when Greek colonies strengthened their socioeconomic influence in the littoral zone of Scythia and the Scythians secured their domination in the hinterland, the ancient rural environment grew more and more noticeably dependent on the military and political relations not only between Greek and local ethno-political unions, but also between ancient states themselves.

Bemerkungen zum silbernen Kalbskopfrhyton in der Ermitage

Latife Summerer

Den Ausgangspunkt für die folgenden Überlegungen bildet das silberne Kalbskopf-Rhyton in der Ermitage, dessen Herkunft in der archäologischen Literatur fälschlicherweise als Kertsch gilt (Abb. 1). Grund dafür ist eine Verwechslung in der Erstpublikation im 19. Jhs., die erstaunlicherweise bis heute fortgesetzt wird.[1]

Eine Überprüfung im Inventarbuch der Ermitage zeigt deutlich, dass das 'Kertscher Rhyton' weder in Kertsch noch im kimmerischen Bosporos, sondern im Kaukasus im heutigen Georgien gefunden wurde.[2] Das Silbergefäß kam 1835 in einem sehr fragmentarischen Zustand in der Nähe des Dorfes Kasbek in Nord-Ossetien in einem 'Posthaus' genannten Gebäude zutage.[3] Über den Fundumstand ist sonst nichts Näheres bekannt. Unklar ist auch, inwiefern dieses Rhyton mit dem berühmten Kasbek-Schatz in Verbindung steht.[4]

Trotz häufiger Erwähnungen in der archäologischen Literatur ist das Rhyton aus Kasbek weitgehend unbekannt. Denn es liegen bis heute weder gute fotografische Aufnahmen noch eine ausführliche Beschreibung vor. Bedauerlicherweise wird auch in dem vorliegenden Aufsatz auf eine alte Aufnahme und Zeichnung zurückgegriffen.[5]

Das 17 cm große Rhyton hat die Form eines Stierkopfes. Die kleinen tropfenförmig angegebenen Hörner deuten darauf hin, dass es sich hier um ein Kalb handelt. Hörner, Ohren und Reliefdetails sind vergoldet. Der Gefäßhals des Rhytons trägt einen figürlichen Fries, der eine mythische Szene darstellt. Die Bildkomposition besteht aus zwei Gruppen, die jeweils aus drei menschlichen Gruppen gebildet werden (Abb. 2). Im Zentrum der Darstellung befindet sich ein Altar. Rechts davon kniet ein bärtiger Mann mit einem Kind im linken Arm, das sich offenbar aus der Umarmung windet. In der ausgestreckten rechten Hand hält der Mann ein Schwert, dessen Spitze zum Kind ausgerichtet ist. Von rechts eilt eine Frau mit erhobenen Händen auf den Mann zu und will offenbar auf das Geschehen einwirken.

Abb. 1. Rhyton aus Kasbek (Byvanck-Quarles van Ufford 1966, Abb. 3).

Bei der anderen Figurengruppe ist ein weiterer bärtiger Mann mit einem Schwert zwischen zwei Frauen dargestellt,

[1] Die unrichtige Angabe des Fundortes als *Kul Oba Kurgan bei Kertsch* geht auf Tolstoi und Kondakov 1889, 86, Abb. 116 zurück, die von Reichnach 1892, 87–8; Puschi, Winter, 1902, 121 übernommen und von Rumpf 1923/24, 451, Abb. 2; Züchner 1938, passim; Tuchelt 1962, 123, Nr. 2; Byvanck-Quarles van Ufford 1966, 17 Abb. 3; Маразов 1978, 178; Pfrommer 1983, 270; Dörig 1987, 9; Strauss 1994, 867; Ebbinghaus 1999, 4001; Giumlia-Mair 2002, 131. 140 fortgesetzt wurde.

[2] Es ist verwunderlich, warum Pfrommer 1983, 270 dieses Rhyton 'Kerčer Rhyton' nennt, obwohl ihm bekannt ist, dass es nicht aus dem berühmten Kurgan Kul-Oba stammt. Giumlia-Mair und La Niece 1998, 143 geben an einer Stelle den Fundort als 'Cimmerian Bosporus' an, widersprechen dem aber eine Seite weiter. Vgl. Giumlia-Mair und La Niece 1998, 144: "the rhyton in the Hermitage, which has often wrongly attributed to the famous tumulus at Kul-Oba, but was allegedly found at Kasbek". Unverständlicherweise spricht Giumlia-Mair 2002, 131 an einer anderen Stelle weiter von 'il rhyton di Kerc'.

[3] Das stark restaurierte Rhyton wurde zunächst unter der Inventarnummer 575 in der Antikenabteilung der Ermitage aufbewahrt. Seit 1935 befindet es sich unter der Inventarnummer Kz 5306 in der Orientabteilung desselben Museums. Für diese Informationen danke ich A. Ierusalimskaya und I. Ilyina aus der Staatlichen Ermitage.

[4] Der Schatz von Kasbek ist 1877 im Dorf Stepanzminda (heute Qasbegi) von Filimonov gefunden worden. Der Schatz beinhaltet 200 Objekte, darunter auch achämenidische Silbergefäße. Teile dieses Schatzes befinden sich im Historischen Museum in Moskau und im Museum von Tbilissi. Viele der damals illegal ausgegrabenen Stücke gelangten in verscheidene Privatsammlungen und Museen. Kasbek-Schatz: Bayern 1985; Abka´i-Khvari 1988, 91–138; Gogoschidse 1995, 163–64.

[5] Bei meinem Besuch im Oktober 2002 war es leider nicht möglich, die fest verschlossene Vitrine zu öffnen, um neue Aufnahmen zu machen.

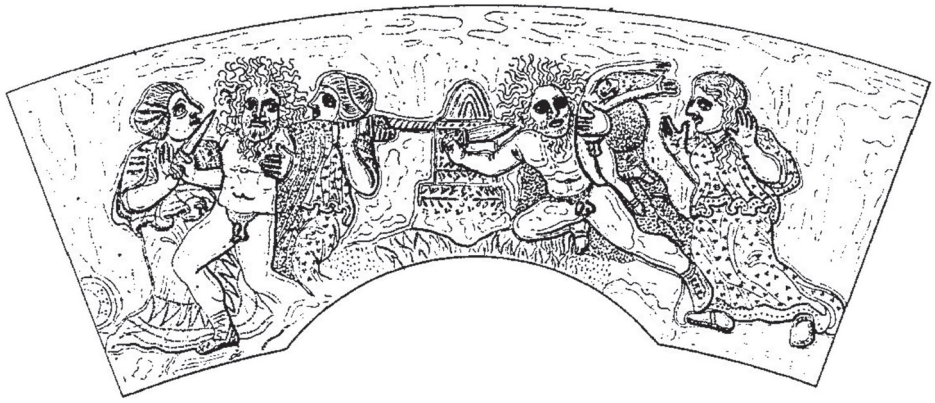


Abb. 2. Relieffries eines Rhyton aus Kasbek (Reinach 1892, Taf. 37: 1)

die ihn an den Armen festhalten. Die rechte Frau fasst den Mann am linken Handgelenk. Die linke Frau umfasst mit dem linken Arm von hinten den Oberkörper des Mannes und versucht mit der rechten Hand ihm das Schwert zu entwenden. Die heftig agierenden Frauen und die zerzausten Haare der beiden Männer mit Schwert deuten auf ein dramatisches Geschehen hin.

Ohne Zweifel handelt es sich hier um eine Darstellung des Mythos, Telephos als Hiketes.[6] Telephos flieht in Argos zum Altar mit seiner Geisel Orest im Arm. Die heftig gestikulierende Frau ist möglicherweise die Mutter des Kindes, Klytaimestra oder eine Amme. Der Vater Agamemnon eilt mit gezücktem Schwert von rechts, will Telephos angreifen und seinen Sohn befreien, doch wird er zurückgehalten. Die Figuren, die Agamemnon an den Armen festhalten, sind mit langen Gewändern und Haaren eindeutig als Frauen gekennzeichnet. Daher ist die jüngst vorgeschlagene Deutung, hier seien der unbewaffnete Odysseus und eine Dienerin dargestellt, abzulehnen (Strauss 1994, 867). Bei den anderen Fassungen dieses Themas wird der Angriff des Agamennon meist von seiner Frau Klytaimestra vereitelt.[7] Die zweite Frauenfigur könnte die Tochter Elektra sein, wenngleich sie bei den bekannten Hikesie-Darstellungen sonst nicht erscheint. Wenn man aber die von rechts herbeieilende Frau auch als Klytaimestra deutet, wäre sie in der Szene zweimal dargestellt.

Da aber die Figuren nicht näher charakterisiert sind, ist hier eine sichere Benennung nicht möglich. Vielleicht handelt es sich um Dienerfiguren aus dem Umfeld des Agamemnon, die ihren Herrn vereiteln.

Die nächste Parallele für das Rhyton aus Kasbek stammt wiederum aus dem Kaukasus. Es ist ein Kalbskopfrhyton in Eriwan (Abb. 3) (*Armenien* 1995, 56, 100 Anr. 108; Hačatrian und Markarian 2003, 16–20, Abb. 7), das zu einem Ensemble von vier Silberrhyta gehörte. Diese Rhyta kamen im Feuertempel Susi bei Erebuni zutage (Armenien 1995, Nr. 106–108; Hačatrian und Markarian 2003, 20). Dort wurden unter anderem auch Perlen, Silberschmuck, Pfeilspitzen und zwei milesische Münzen des 5. Jhs. v. Chr. Gefunden (Hačatrian und Markarian 2003, 20).

Das Kalbskopfrhyton aus Erebuni stimmt typlogisch mit dem Rhyton aus Kasbek weitgehend überein. Es hat allerdings keinen Henkel, womit es einem orientalischen Rhytontypus folgt.[8] Außerdem ist die Stilisierung der Details des Tierkopfes, wie Wangenfalten und Augebrauen, so schematisch ausgeführt, wie dies bei den achämenidischen Tierköpfen üblich ist. Achämenidische Einflüsse sind auch im Figurenfries des Gefäßhalses zu beobachten (Abb. 3; 4). Im Zentrum des Frieses ist ein bärtiger Mann dargestellt, der auf einem aufwendig verzierten Diphros sitzt. Ein reich bemusterter Mantel bedeckt Rücken und Beine, lässt aber seinen Oberkörper nackt. Der Mann hält in der linken Hand seinen Mantelbausch fest und wendet seinen Kopf nach rechts, um offenbar der Flötenspielerin zu lauschen. Den rechten Arm hat er angewinkelt. Mit geöffneter Hand scheint er der von links kommenden Frau ein Zeichen zu geben. Die Flötenspielerin trägt einen dünnen gegürteten Peplos mit feinen Falten, aber keine Schuhe. Sie ist mit Halskette und Armreifen geschmückt. Ihre wohlgeordneten langen Haare sind am Nacken hochgesteckt.

Von links nähert sich eine weitere Frauenfigur dem sitzenden Mann. Sie trägt ein persisches Faltengewand mit reicher Verzierung am Saum und Ärmel.[9] Ungewöhnlich ist allerdings, dass es nicht die weiten offenen Ärmel

[6] Zur schriftlichen Überlieferung des Mythos: Gould 1973, 74–103. Zu den Hikesie-Darstellungen: Strauss 1994, 866–68.

[7] Auf den attischen Darstellungen dieses Mythos ist entweder Agamemnon oder Klytaimestra anwesend. Bei den italischen Darstellungen dagegen werden beide zusammen dargestellt, wobei Klytaimestra den Angriff zu vereiteln versucht. Gelegentlich tritt an ihre Stelle auch Odysseus: Strauss 1994, 601–2, Nr. 51–62.

[8] Zu den Rhyta ohne Henkel: Pfrommer 1983, 282.

[9] Dagegen beschreiben Hačatrian und Markarian 2003, 20 alle Frauenkleider unverständlicherweise als ‘chitoni attici’.

Abb. 3. Rhyton aus Erebuni (Hačatrian und Markarian 2003, Abb. 7)

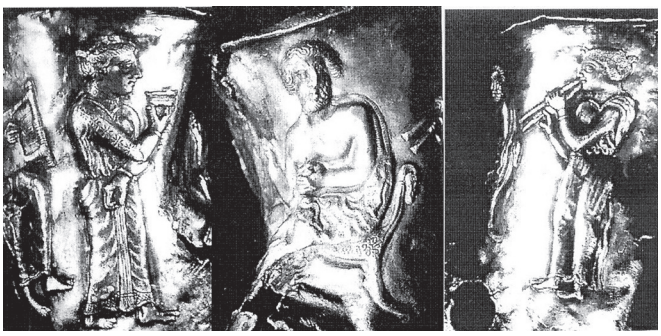


Abb. 4. Relieffries eines Rhyton aus Erebuni (Boardman 2003, Abb. 68 b-d. Dort ist die Abb. 68 d seitenverkehrt abgebildet)

der persischen Gewänder hat.[10] Diese Frau trägt wie die Flötenspielerin Armreifen und Halskette. Auf den hochgesteckten wohlgeordneten Haaren liegt ein kranzartiger Kopfschmuck. Die reich geschmückte 'Perserin' verschränkt ihre Arme vor dem Oberkörper in merkwürdiger Manier und trägt auf den Fingerspitzen der rechten Hand eine Schale, die sie offenbar dem Lagernden reichen will.

Hinter ihr sitzt eine weitere Musikantin und spielt auf einer Lyra. Sofern erkennbar, scheint die Lyraspielerin, wie auch die Flötenspielerin, ein griechisches Gewand zu tragen, wobei die Details auf den zur Verfügung stehenden Fotos nicht zu erkennen sind.

[10] Zu Gewändern der persischen Frauen: Koch 1992, Abb. 174–76. Pfrommer 1983, 270 nennt dieses Gewand pseudoachämenidische Frauentracht.

Die dargestellte Szene ist von den armenischen Archäologen Hačatrian und Markarian jüngst als die Darstellung des Gottes Asklepios in Begleitung von Epione, Hygeia und Panakea gedeutet worden (Hačatrian und Markarian 2003, 17–8). Als Argument dafür führen die Autoren die Schale in der Hand der 'Perserin' an, die ein eindeutiges Attribut Asklepios sein soll.[11] Doch ist die Schale als gewöhnliches Trinkgefäß keineswegs ein ausschließliches Attribut des Heilgottes. Außerdem sind vergleichbare Darstellungen, die Asklepios in Begleitung von Musikantinnen zeigen, nicht bekannt.

Die dargestellte Szene lässt am ehesten an Symposium denken. Etwas ungewöhnlich ist allerdings, dass der Symposiat nicht auf einer Kliene liegt, sondern auf einem diphros sitzt. Wie bereits von Arakeljan vorgeschlagen wurde (Arakelyan 1976, 55), kann hier nur der Weingott Dionysos gemeint sein. Akzeptiert man diese Deutung, so liegt die Vermutung nahe, dass es sich bei der Frau mit dem Kranzschmuck und der Weinschale um Ariadne handelt.

Das Kablskopfrhyton in der Ermitage entspricht typologisch und stilistisch auch dem 'Coppa Tarantina' genannten Silberrhyton in Triest (Puschi und Winter 1902, 112–27, Taf. 1–2; Abb. 27; 31; 32; 36; Wuilleumier 1930, 60–1, Taf. 9; Dörig 1987, 8–9 Taf. 1: a, b; Giumlia-Mair 1998, 144; 2002, 131) (Abb. 5), weshalb die beiden Gefäße öfter gemeinsam behandelt wurden (Puschi und Winter 1902, 121–27; Rumpf 1923/24, 451; Pfrommer 1983, 268, Anm. 164 mit Lit.). Man erwog sogar tarentinischen Ursprung für das Rhyton in der Ermitage (Schefold 1938, 18, Anm. 4). Das Tarentiner Rhyton hat die Form eines Rehkopfes. Auf dem Gefäßhals sind mittig über dem Rehkopf ein bärtiger Mann mit zerzausten Haaren und eine junge Frau dargestellt. Von rechts eilt Athena (Abb. 3) auf das Paar zu. Links wird die Gruppe von einem bärtigen Mann mit Himation und Stock eingerahmt. Die Szene ist als hieros gamos von Boreas und Oreithya im Beisein von Athena und Erechtheus gedeutet worden (Simon 1967, 101–26; Dörig 1987, 8–9). Erika Simon interpretiert das Rhyton als ein attisches Werk und den Figurenfries dionysisch (Simon 1967, 101–26). Nach Dörig muss das Rhyton in Thrakien entstanden sein (Dörig 1987, 8–9). Der Autor erkennt sogar eine politische Aussage bei der Darstellung des hieros gamos von Boreas und Oriethya: Demnach wollten die Thraker mit diesem Mythos ihre Verbundenheit mit Athen zum Ausdruck bringen.

[11] Hačatrian und Markarian 2003, 18: "Punto di partenza, per l´interpretazione della scena può essere la nitida iconografia del personaggio maschile, che i dettagli iconografici e l´analisi storico-artistica permettono di identificare con Asclepio, dio legato all´aldilà e capace di resuscitare i morti. La scena del rhyton di Erebuni è una variante del banchetto funebre con partecipazione del dio ctonio Asclepio. …La tazza tenuta in mano dalla donna sulla sinistra era l´attributo usuale di Asclepio, e compare in quasi tutte le sue raffigurazioni. Le figure femminili quindi possono essere intepretate qui prima di tutto come sua consorte e le figlie Igea e Panacea".

Abb. 5. Rhyton aus Tarent (Giumlia-Mair 2002, 126)

Abb. 6. Rhyton aus Sinope (Royal Academy 1994, No. 154)

Wie auf dem Exemplar in der Ermitage sind auch hier Haare, Kleider und Schmuck der Figuren vergoldet. Eine enge stilistische Verwandtschaft zwischen den beiden Rhyta zeigt sich auch in der Wiedergabe der zersausten Haare und der Gewandwiedergabe. Wie bereits oben bemerkt, ist der Stil der 'Coppa Tarantina' als tarentinisch, attisch aber auch als alexandrinisch beurteilt worden (Segall 1965, 554–55; Reinsberg 1980, 175). Da auch aus den thrakischen Fundorten vergleichbare Gießgefäße bekannt sind, vermutete man Thrakien als Herstellungs und Verbreitungsort der vergoldeten Silberrhyta (Marazov 1978, 55–5, Abb. 50–51; Dörig 1987, 6).

Im Rahmen der Ausstellung *Le arti die Efesto. Capolavori in metallo della Magna Grecia* in Triest wurde die 'Coppa Tarantina' jüngst metallurgisch untersucht. Dabei wurde festgestellt, dass es nicht nur mit Goldauflagen verziert war, sondern auch einige Details, wie Nasenlöcher, Maul und Wimpern, mit einem schwarzen Metall hervorgehoben wurden (Giumlia-Mair 1998, 139–45). Diese Niello genannte Technik ist eher aus der spätrömischen Zeit bekannt. Nach Giumlia-Mair und La Niece ist das Triester Rhyton das früheste Beispiel für die Verwendung dieser Technik.

Diese Niello-Technik findet sich auch bei einem weiteren Silberrython im Schweizer Privatbesitz (Abb. 6), das in technischer und typologischer Hinsicht große Ähnlichkeiten mit den beiden Exemplaren in St-Petersburg, Eriwan und Triest zeigt. Es hat, wie bei der 'Coppa Tarentina', die Form eines cerviden Tierkopfes. Nach den separat bearbeiteten angelöteten Hörnern zu urteilen, die heute fehlen, handelt es sich hier um einen Hirschkopf.

Dieses Hirschkopfrhyton gehört zu einem Ensemble von fünf silbernen Prunkgefäßen. Wie die Verfasserin des vorliegenden Artikels an einer anderen Stelle gezeigt hat, machen diese einen Teil eines größeren Hortfundes aus, der sich aus Rhyta, Silbermünzen, Hacksilber und Silberbarren zusammensetzte (Summerer 2003, 28–39). Er gelangte in den siebziger Jahren in den europäischen Kunstmarkt und befindet sich heute in Teilen in verschiedenen Privatsammlungen und Museen. Da den Großteil der Münzen im Schatz die sinopischen Prägungen bilden, kann dieser Hortfund nur in Sinope selbst oder in seiner Umgebung illegal zutage gefördert worden sein (Summerer 2003, 28–39).

Das Sinoper Hirschkopfrhyton hat mit dem Triester Rhyton Ähnlichkeiten in Kopfform und Wiedergabe des flaumigen Fells über Schädel und Stirn. Ebenso übereinstimmend ist die Augenbildung; besonders die Darstellung der Wimpern mit tiefen Ritzungen. Diese Ritzungen, wie auch die Mundspalte und Naselöcher hat man wie beim Tarentiner Rhyton nielliert (Giumlia-Mair 2002, 129).

Der Gefäßfries des Sinoper Hirschkopfrhytons ist ähnlich wie beim Erebunirhyton mit einer Gelageszene dekoriert (Abb. 7). Die Mitte nimmt ein bärtiger Mann ein, der aufgestützt halb sitzt, halb liegt. Das rechte Bein ist aufgestützt, während das linke Bein wie im 'Schneidersitz' angezogen ist.[12] Vor der Brust hält er eine Schale, deren Form dem Gefäß in der Hand der 'Perserin' auf dem Erebunirhyton ähnelt. Mit der Rechten trägt der Lagernde einen Thyrsosstab. Ein mit Noppen gemusterter Mantel liegt locker auf den Beinen und der linken Schulter, lässt aber den fülligen Körper zum größten Teil unbedeckt. Der lange Bart reicht bis zur Brust. Die langen, wehenden Haare sind mit einem breiten Stoffstück zusammengebunden, dessen freie Enden über die Schultern herabfallen. Der Thyrsosstab kennzeichnet

[12] Dieses Sitzmotiv erscheint häufig auf parthischen Reliefs: Dentzer 1982, 63–5, Taf. 16–18.

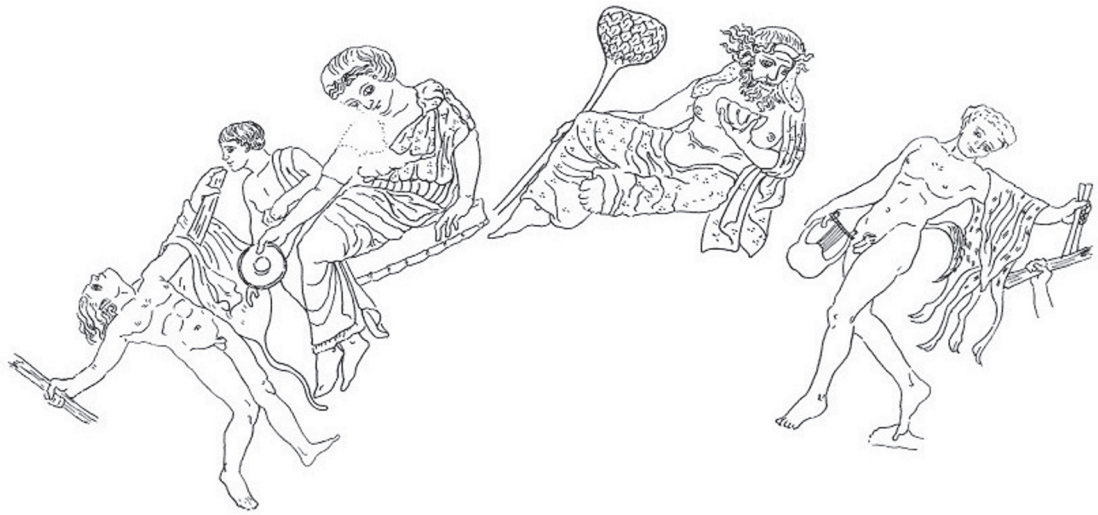


Abb. 7. Relieffries eines Rhyton aus Sinope (Summerer 2003, Abb. 11)

den Dargestellten eindeutig als Dionysos.[13] Links neben den Füßen des Dionysos sitzt eine mit Chiton und Mantel bekleidete weibliche Gestalt wohl auf einem Altar oder auf einem Möbel. Mit ihrer linken Hand stützt sie sich auf ihren Sitz, während die rechte Hand eine Omphalosphiale hält. Obgleich eindeutige Hinweise fehlen, ist die Frau in Verbindung mit Dionysos als Ariadne zu deuten. Die jugendlich-männliche Gestalt, die neben der Ariadne halb verdeckt im Profil wiedergegeben ist, ist wohl Eros.[14]

Zwei Satyrn sind seitlich des Henkels in ekstatischem Tanz dargestellt (Abb. 8). Der links von Dionysos befindliche Satyr schreitet im Tanzschritt nach rechts. Er trägt in der gesenkten rechten Hand eine Schildkrötenlyra, über den zurückgestreckten linken Arm hängt ein Pantherfell herab. Die linke Hand hält einen Diaulos. Da der Satyr zurückblickt, sind sein Kopf und sein Oberkörper in Dreiviertelansicht dargestellt, während seine Beine im Profil zu sehen sind. Der andere Satyr schreitet in ähnlichem Tanzschritt nach links, wobei er beide Arme ausstreckt und den Kopf ekstatisch nach hinten wirft. Über den linken Arm hängt ein Pantherfell. In seinen Händen hält der Satyr je eine Fackel.

Die extatisch tanzenden Satyren gehen auf Mänadentypen in der Vasenmalerei des späten 5. Jhs. v. Chr. Zurück (Boardman 1989a, Abb. 332). Diese Figurentypen begegnen auch bei den tanzenden Mänaden auf dem bekannten Berliner Bronzekrater aus dem frühen 4. Jh. v. Chr., der in einem Tumulusgrab bei Maikop gefunden worden sein soll (Züchner 1936, 14, Taf. 6).

Die Darstellung von Dionysos Ariadne in Begleitung von Eros und musizierenden, tanzenden Satyren mit Fackeln deutet sicher auf den hieros gamos des Götterpaars hin, der in der Vasenmalerei der klassischen Zeit ein beliebtes Thema war.[15]

Die Rhyta aus Kasbek (Abb. 1), Erebuni (Abb. 3), Tarent (Abb. 5) und Sinope (Abb. 6) stimmen nicht nur gefäßtypologisch überein, sondern zeigen dieselbe technische Ausführung: Man formte sie aus Silberblech zuerst grob als Tierkopf, anschließend wurden die feinen Details mit Repoussé-Technik getrieben. Einzelteile des Tierkopfs und des Reliefschmucks wurden mit Blattgoldauflagen verziert. Die Niello-Technik, die Akzentuierung der Wimpern, Nüstern und des Mauls dieses Tierkopfes mit einer schwarzen Metallschmelze, ist zwar nur bei den Rhyta in Triest und Schweizer Privatbesitz nachgewiesen, doch kann angenommen werden, dass sie auch bei den Rhyta aus den kaukasischen Fundorten verwendet wurde (Giumlia-Mair und La Niece 1998, 143).

Gemeinsam ist den vier Rhyta auch die Gestaltung des Gefäßrandes mit feinem Eierstabmotiv. Der Gefäßhals ist immer mit mehrfigurigem Relieffries geschmückt. Die Zahl der Figuren variieren zwischen vier und fünf (Abb. 2, 4, 7, 8). Mit Ausnahme des Rhytons aus Kasbek, auf dem die hikesie des Telephos dargestellt ist, beziehen sich die dargestellten Themen immer auf den dionysisch-hochzeitlichen Bereich: hieros gamos von Boreas und Oreithyia oder von Dionysos und Ariadne.

Ähnlichkeiten zeigen sich auch in der stilistischen Wiedergabe der Figuren: Die Köpfe der Figuren sind mal in dreiviertel Ansicht, mal im strengen Profil gezeigt. Die Augen sind stets in Frontalansicht ohne Rücksicht auf

[13] Unverständlich bleibt, warum Melikian-Chirvani 1993b, 26 in dieser Figur den phrygischen König Midas sehen will.

[14] Darstellungen der Ariadne mit Eros: *LIMC* III, 2, 733, Nr. 111–112, s.v. Ariadne.

[15] Vgl. z. B. das Randfragment eines rotfigurigen Kraters in Tübingen, das um 420 v. Chr. datiert wird: *LIMC* III, 2, 733, Nr. 11, auf der der stehende Dionysos von einem Satyr begleitet wird. Ariadne sitzt auf einer Kline mit gesenktem Haupt. Hinter ihr schwebt der geflügelte Eros mit einer Phiale in der Hand.

Abb. 8. Relieffries eines Rhyton aus Tarent (Giumlia-Mair 2002, 176)

die Perspektive wiedergegeben.[16] Die Haare der Figuren sind zum Teil wohlgeordnet und zum Teil zersaust, als wären sie von einem Windstoß erfasst. Die Wiedergabe der zersausten Frisuren fehlt nur beim Erebunirhyton. Dort tragen alle Figuren geordnete Haare, wie dies bei Ariadne des Sinoper Rhytons und bei den weiblichen Figuren des Rhytons aus Kasbek vorkommt.

Gemeinsamkeiten lassen sich auch in der Gestaltung der Gewänder feststellen. Der Noppendekor der Stoffe kommt bei allen vier Rhyta vor. Das Zickzackmotiv auf dem Gewandsaum bei einer der Frauen neben Agamemnon auf dem Rhyton aus Kasbek (Abb. 2) findet sich auch beim Gewand der Athena auf dem Tarentiner Rhyton (Abb. 8). Das Motiv der gestauchten Mantelfalten auf dem Schoß des sitzenden Mannes beim Sinoper Rhyton erscheint in ähnlicher Weise bei den Rhyta aus Erebuni und Tarent. Schließlich findet sich der Arm- und Halsschmuck der Oreithyia beim Tarentiner Rhyton auch bei den Frauen der Erebunirhytons Neben diesen Übereinstimmungen zeigen die vier Rhyta aber auch stilistische Abweichungen, die auf die unterschiedliche Entstehungszeit zurückzuführen sind. Die cerviden Tierköpfe aus Tarent und Sinope weisen weitgehend dieselben Proportionen und Stileigentümlichkeiten auf, weshalb sie innerhalb desselben Zeitraumes entstanden sein müssen. Da das Sinoper Beispiel aufgrund der Zusammensetzung der Münzen des Schatzfundes nicht später als im frühen 4. Jh. v. Chr. entstanden sein kann, ist das Tarentiner Rhyton auch in diese Zeit zu datieren.[17] Die beiden Kalbskopfrhyta in der Ermitage und Eriwan gehören zeitlich zusammen. Für beide wird unabhängig voneinander eine Datierung in das späte 4. Jh. v. Chr. vorgeschlagen.[18]

Die typologischen und stilistischen Eigentümlichkeiten, die diese vier Rhyta auszeichnen, weisen auf einen Kunstkreis hin, in dem attische, ionische und achämenidische Stilelemente vereint wurden.[19] In der neueren Forschung lokalisiert man die persisch beeinflussten Werkstätten der toreutischen Prunkgefäße allgemein im Nordwesten Kleinasiens, vorzugsweise im Gebiet des Hellespont, unweit von Thrakien[20] (Marazov 1978, 144–48; Pfrommer 1990a, 208–9; Ebbinghaus 1999, 405–6).

Die hier besprochenen vier Tierkopfrhyta, die sich in typologisch-stilistischer Hinsicht zu einer Gruppe zusammenschließen lassen, sind aber mehrheitlich im Kaukasus bzw. im südöstlichen Schwarzmeergebiet in achämenidischen Kontexten gefunden worden. Dieser Befund zeigt tendenziell, dass diese Werkstatttradition eher im Nordostanatolien zu suchen ist.[21]

Die Frage, wie das Rhyton in Triest nach Unteritalien gelangen konnte, versucht Pfrommer mit einer Anekdote zu erklären, nach der Alexander nach der Schlacht in Granikos einen Teil des Beuteguts an Kroton geschickt hat.[22] Doch überliefert diese Anekdote nur einen der vielen Anlässe, zu denen Silberrhyta als diplomatische Geschenke oder Beutegüter ausgetauscht wurden.

[16] Pfrommer 1983, 278 vergleicht diese eigentümliche Augenbildung mit 'Vogelauge'.

[17] Da das Sinoper Rhyton aufgrund des Fundkontextes nicht später als das frühe 4. Jhs. v. Chr. entstanden sein kann. Vgl. Summerer 2003, 38–9. Das Trantiner Rhyton wurde von Pfrommer 1983, 281 stilistisch ins frühe 4. Jh. v. Chr. datiert. Eine Datierung ins späte 5. oder ins frühe 4. v. Chr. findet sich im rezenten Ausstellungs Katalog *Le arti die Efesto. Capolavori in metallo della Magna Grecia*, 234.

[18] Kalbskopfrhyton aus Kasbek: Marazov 1978; Pfrommer 1983, 274. Kalbskopfrhyton aus Erebuni: Hačatrian und Markarian 2003, 19–20 halten es sogar für möglich, dass das Rhyton im frühen 3. Jh. v. Chr. hergestellt worden ist.

[19] Im Falle des Erebunirhytons sieht Booadman 2003, 224 eine enge Verbindung zu anatolischen Werkstätten der sog. gräco-persischen Siegeln.

[20] Pfrommer 1983, 281: "...im Bereich der Griechenstädte im Hellespont".

[21] Das südliche Schwarzmeergebiet als Herstellungsort der Metallrhyta wurde bereits von Byvanck-Quarles van Ufford 1966, 38–9 vorgeschlagen. Amandry 1958, 52–54; Melikian-Chirvani 1993a, 125–27 zogen allgemein Nordostanatolien in Erwägung.

[22] Michael Pfrommer hat bereits vor zwei Jahrzehnten versucht zu erklären, auf welche Weise Kunstgegenstände aus Edelmetall aus Nordkleinasien nach Unteritalien gelangt sein könnten (Pfrommer 1983, 284). Er verweist auf die Schlacht in Granikos im Jahre 335 v. Chr., nach der Alexander einen Teil seiner Beute zu Kroton geschickt haben soll.

A Set of Ornaments from Burial No. 1 of the Elder Three Brothers Barrow

Mikhail Treister

A rich burial in a tomb with stepped ceiling of the Elder Three Brothers Barrow, excavated in the chora of Nymphaion in the region of the Tobechik Lake by D.S. Kirilin in 1965 has never been a topic of a specialist study.[1] The given paper represents a publication of jewellery found in the burial and is done in frames of the forthcoming publication of the Three Brothers Barrows, the project sponsored by the German Science Foundation (DFG).[2] A special significance of the burial discussed is stressed by the possibility of estimating of rather exact date burial, in which besides the numerous finds of red-figured and black-glazed vessels, there was also found a biconical Thasian transport amphora with a stamp of magistrate Krinis and the emblem in form of the Gorgon head, which is dated to 320-s BC.[3]

1. A calathos (Cat. Nos. 1–3)

A gold plate represents a main decoration of *calathos*. Besides it is supposed, that the latter was additionally decorated with alternating sewn plaques with palmettes and images of Nike. Indeed these plaques were found in the area of the skull and, according to D.S. Kirilin and T.V. Miroshina (Miroshina 1980, 36f., pl. I, No. 15; 42), had been sewn on the veil, while the latter, as suggested by Miroshina, was a small one, like that of the fourth set in Chertomlyk. Miroshina further suggested that the *calathos* from the Elder Three Brothers barrow occupies an intermediary place between the Scythian and the Greek *calathoi*: "it is too long, 51 cm, for a Scythian *metopis*, besides it has holes below for hanging of pendants".[4]

Given its shape (Fig. 1) the nearest parallel is a *calathos* from tomb No. 1 (the so-called burial of the Priestess) in Bolshaya Bliznitsa barrow, the metal plate of which is decorated with applied gold plaques, showing a battle between griffins and Arimaspoi. These low *calathoi* of the Greek type (Miroshina 1983, 15ff.; Klochko and Vasina 2003, 44–9) vary from high head-dress sewn with rows of plaques, which were found in the Scythian barrows in the steppe (Miroshina 1980, 30–45; Klochko 1982a; 1982b).

The main frieze of the metal plaque of the *calathos* from the Elder Three Brothers barrow is decorated with repeated compositions, showing the images of a panther (to the left) and a lion, looking at each other (Fig. 2). The images of felines on the *calathos* find close stylistic and compositional parallels on the upper friezes of the *gorytoi* overlays of the Chertomlyk series (Treister 1999, 75; 2001, 144).

On the upper frieze there is stamped a variant of a rather wide-spread motif of alternating palmettes and lotus flowers, which do not have direct parallels among the items of the 4th century BC toreutics from the North Pontic area. The frieze of palmettes and lotus flowers looks rather archaic – the parallels are known already in the late 5th century BC toreutics, *e.g.*, on the frieze framing the *omphalos* of the phiale from Bashova Mogila (Filow 1934, 63ff., pl. IV; Strong 1966, 74, 80, pl. 15B; Venedikov and Gerassimov 1973, fig. 172; *Cat. Venice* 1989, No. 180.4; *Cat. Saint Louis* 1988, No. 64; *Cat. Bonn* 2004, No. 211e). I would also point to the frieze, decorating a silver, covered with gold foil, fragmented phiale, found in the male burial of Karagodeuashkh barrow (Lappo-Danilevskii and Malmberg 1894, 152ff., pl. VI, 4).

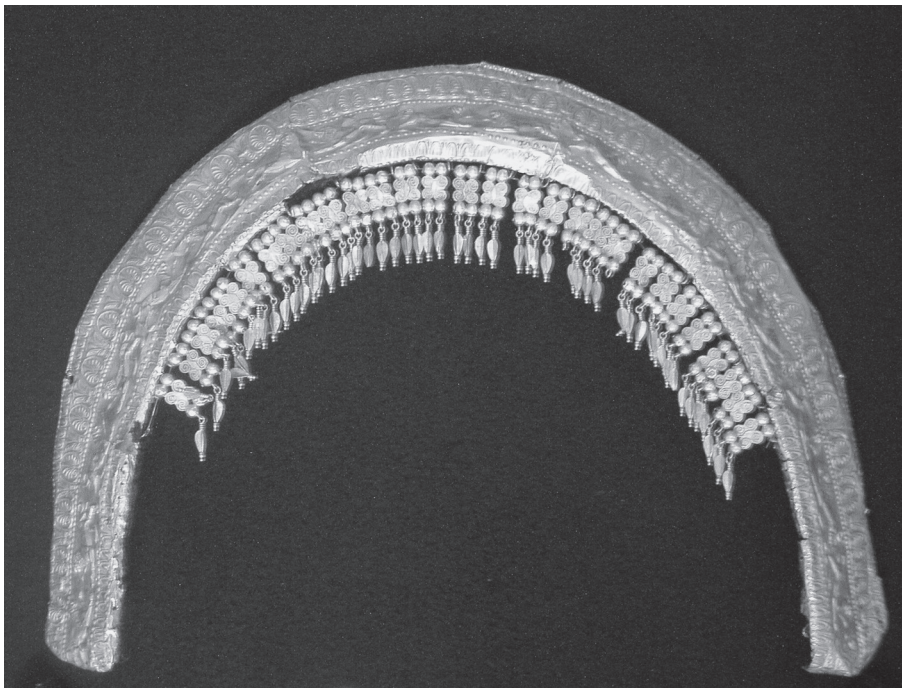
The pendants, hanging in the frontal part of the *calathos*, represent a variant of beech-nut pendants. They are distinguished by the fact, that they are fixed to a open-worked band, formed by a row of round beads with plates in-between, decorated with double spirals (Fig. 3). The only

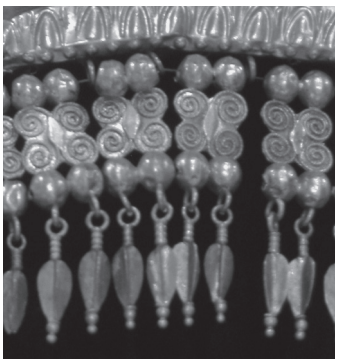
[1] For the preliminary publication of the complex, see Kirilin 1968. See also ScholL and Zinko 1999, 87–90; Zinko 2003b, 120–22. For a rather cursory analysis of ornaments from the burials, see, *e.g.*, Klochko and Berezova 2001, 105–8.

[2] The project is housed at the Institute of Classical Archaeology of the Free University of Berlin and is directed by Prof. Friederike Fless. The author expresses his sincere gratitude to the director of the Museum of Historical Treasures in Kiev, L.V. Strokova and the curator of this Museum, E.I. Podvysotskaya for the possibility to study the jewellery from the Elder Three Brothers barrow, which is kept in the Museum. Deputy Director and chief curator of the Museum in Kerch, N.V. Bykovskaya rendered a support in study of the materials from the Three Brothers barrows, kept in Kerch. Due to the director of the Department of archaeology of Eastern Europe and Siberia of the State Hermitage, A.Yu. Alekseev, and the curator of the precious metals of the Department of Greek and Roman World of the same museum, L.A. Nekrasova, the author got a possibility to study *de viso* rich comparative materials, kept in St-Petersburg.

[3] Monakhov 2003, 70, pl. 46: 2. *Cf.* erroneously dating to the early 3rd century BC: Pfrommer 1990b, 268ff., note 2348, FK 126.

[4] Miroshina 1980, 36ff., pl. I, No. 15; 42. It is worth to note that according to the opinion of Miroshina (1980, 44) on the stele found in the same barrow there is shown a goddess in a Scythian *calathos* because Greek stephanoi with veils are unknown. On the stelae from the Elder Three Brothers barrow, see: Bessonova and Kirilin 1977, 130ff., figs. 3–4; Savostina 1995, 110–19, pls. I, 1–2; II, 1; Rusyaeva A.S. 2000b, 130–34; Zinko 2003b, 288, pl. XVI, 1; *Antichnaya skulptura* 2004, No. 12.





Figs. 1–3. Plate of calathos with pendants. General view and details. Cat. No. 1

one known parallel of such a construction demonstrate the pendants found in a ritual complex of the barrow No. 5/1982 near Ulyap, dated to the first half of the 4th century BC (*Cat. Moscow* 1985, No. 326, fig. 58; 1987, No. 47, fig. 29; *Cat. Mannheim* 1989, No. 47, fig. 26 below), each of which consists of two rows of two beads each with a filigree element in the form of double spirals between them and hollow, matrix-stamped pendants shaped as acorns. Typologically similar necklace element in the form of hollow beads, decorated with soldered rosettes, with two pendants, and with an additional decoration in the form of griffin's head, originates from the Merle de Massoneau collection (Greifenhagen 1975, 37, pl. 34: 9).

The element shaped as double spirals, being one of the most ancient motifs known in the jewellery of Near East and Asia Minor since the 3rd millennium BC, was continued to be used in Asia Minor in the Archaic period, given the find of a necklace originating from the area of Uşak, composed of such beads (Özgen and Öztürk 1996, No. 132). Eleven similar elements together with necklace terminals, characteristic for the 4th century BC, with the parallels among the dated finds from Sardis and Iasos in Asia Minor, are kept in Brooklyn (Davidson and Oliver 1984, No. 15).

Beech-nut pendants were usually decorating strap necklaces, which were wide-spread in the 4th century BC in various regions of the ancient world, from Southern Italy to Northern Greece, Asia Minor and North Pontic region.[5] Such pendants were also used for decoration of earrings.[6] They are usually associated with ὅρμοι λογχωτόι, mentioned in the inventories of the Delian sanctuary of 279 and 276 BC (Amandry 1953, 81; Blanck 1974, 40ff., 43). The North Pontic finds testify that the necklaces of the type discussed were wide-spread especially in the last third of the 4th and in the late 4th – early 3rd centuries BC.[7]

[5] About the distribution of such necklaces, see, *e.g.*, Treister 2001, 285ff.

[6] For instance, from Pydna: Besios and Pappa n.d., 113.

[7] About the finds of such necklaces in the North Pontic area, see Saverkina 2001.

Fig. 4. Sewn plaque with the image of Nike. Cat. No. 2

Fig. 5. Sewn plaque with the palmette. Cat. No. 3

The trapezoid plaques of the *calathos* (or the veil) are decorated with frontal images of Nike (Fig. 4). Similar images are represented on rectangular plaques from Elizavetinskaya barrow No. 6/1915 (Galanina 2003, 93, fig. II; 98, No. 38). L.K. Galanina dates these plaques to the third quarter of the 4th century BC, basing on iconographical grounds (Galanina 2003, 94ff.). Rectangular plaque with a similar image was found in Kurdzhips barrow (Galanina 1980, 92, No. 49). I would also point to the contour plaques with the image of Nike: one found in the burial of the second half of the 4th century BC of the necropolis of Lampsacos (Körpe and Treister 2002, 442ff., No. 7, fig. 13), and another of the unknown provenance, kept in the British Museum (Marshall 1911, No. 2076a, pl. XXXIX).

Sewn plaques decorated with palmettes in relief, similar to those, found in the Elder barrow (Fig. 5), are practically unknown; they are characterized by a high quality of execution. Among the finds from the Scythian barrows, such plaques are rare, although I would mention the find from the Melitopol barrow of the seven sewn plaques in the form of the nine-petal palmette of the similar dimensions (Terenozhkin and Mozolevskii 1988, 91, fig. 98, 17; 94, No. 49). Stylistically similar are somewhat smaller (1.6 cm high) sewn plaques from the Merle de Massoneau collection, as well as the plaques from the former Eduard Gans collection (Greifenhagen 1970, 51, pl. 27, 8; *Sammlung Eduard Gans* 1928, No. 59, pl. IX). The nearest parallel, however, represent seven plaques found in the main burial of the Olbian barrow, the burial No. 2/1912, also of somewhat smaller dimensions (2.1 cm high),[8] as well as four plaques from the female grave, excavated by D.V. Kareisha in 1839–1840 near the customs station Podgornyi in Kerch (Reinach 1892, pl. 23, 7).[9]

2. Earrings with pendants shaped as sphinxes (Cat. No. 4)

The closest parallels to these earrings (Figs. 6–8) are the earrings from the barrow near Theodosia, which vary from the Three Brothers specimens by the absence of the enamel decoration and the fact, the basements of the pendants are decorated with filigree plant scrolls. Besides, there are additional pendants on the Theodosian earrings, which are hanging from the basement, whereas the loop is decorated with a soldered ordinary rosette.[10]

[8] Hermitage, Inv. No. Ol.17550: Pharmakowsky 1913, 197ff., fig. 39: 7.9. The same burial yielded round plaques with female head in profile, with frontal head of Gorgo, a finger ring, beads and a pendant in the form of a female head in a diadem (Hermitage, Inv. No. Ol.17551), decorated with a palmette in filigree. About the burial, see also CR St-Petersburg 1912, 33; Kozub 1974, 155ff. B.V. Farmakovskii dated the burial to the Hellenistic period, Yu.I. Kozub dated it to the 4th century BC (Kozub 1974, 156), or even to the first half of the 4th century BC (Kozub 1984, 162). See about the pendant also Kozub 1974, 89; Skrzhinskaya 2000, 174.

[9] Together with a pendant in the form of a female head (Reinach 1892, pl. VII, 10), two spiral-shaped pendants and two bronze bracelets with silver overlays and lion-head terminals, bronze mirror with an ivory handle, glass figure and a small amphora (Reinach 1892, 48).

[10] Hermitage, Inv. No. F.5: Ht. 6.4 см. Reinach 1892, 53, pl. 12a: 2; Deppert-Lippitz 1985, 171, fig. 120 (right above); Pfrommer 1990b, 288, FK 169, pl. 5: 4; Petrova 2000, 164, fig. 42.

Figs. 6–8. A pair of earrings with sphinx-pendants. Cat. No. 4

It is also worth to note a miniature earring found in the North tomb of Oguz barrow with the filigree decoration on the basement and a triple rosette, decorating the loop (Boltrik and Fialko 1991, 128, pl. 15; *Cat. Rimini* 1995, No. 77).

The above-discussed earrings most probably served as prototypes for the pendants found in Deev barrow, with high basements, showing filigree decoration. The sphinxes pendants from Deev barrow have additional chains with bird-shaped pendants (Petrenko 1978, 32, pl. 20: 4; Artamonow 1970, 64, fig. 122; Galanina and Grach 1986, figs. 131–132). Even more primitively executed are the temple pendants in the form of sphinxes from Certomlyk (Petrenko 1978, 32, pl. 20: 7; Artamonow 1970, 56, fig. 108; Galanina and Grach 1986, fig. 253; Alekseev *et al.* 1991, 197, No. 116).

Double-layered rosettes, decorating the loops of the earrings from the Elder Three Brother barrow (with the upper layer enamelled) (Fig. 7), find the closest parallel on one of the pair of the gold earrings in the shape of Nike figures, found in Pavlovskii barrow (CR St.Petersburg 1859, pl. III: 3; Artamonow 1970, pl. 273; Deppert-Lippitz 1985, 203, 226, fig. 162; Pfrommer 1990b, 251; *Cat. London* 1994, No. 107: *ca.* 350 BC; Despini 1996, No. 100; *Cat. Bonn* 1997, No. 81). It is worth to note, that the double-layered rosettes with the upper layer bearing enamel decoration find parallels among the shields of the necklace from the same burial in the Elder Three Brother barrow (see below).

The decoration of the *stephanoi* of the sphinxes in the form of the filigree palmettes and ivy scrolls with enamel filling (Fig. 7), finds formal parallels on the earrings with pendants in the form of sculptured female heads from the necropolis of Pantikapaion[11], although the motifs of the *stephanoi* decoration vary: on the earrings from Pantikapaion – these are palmettes and lotus flowers. Similar filigree motifs, however, without enamel filling shows the diadem of the one-sided pendant in the shape of the female head from the barrow near Velikaya Belozerka (*Cat. Schleswig* 1991, No. 130; *Cat. Vienna* 1993, No. 40; Rusyaeva 1994, 104ff., fig. 1: 4–5; *Cat. San Antonio* 1999, No. 95). Ivy scroll with enamel decorate a gold pendant in the form of the bull head from the 'wooden tomb', excavated in the necropolis of Pantikapaion in 1845 (*Cat. London* 1994, No. 100).

It is worth to note the parallels between the decoration of the *stephanoi* of the sphinx pendants and the pendants in the form of the sculptured female heads from the North Pontic area, including the finds from Theodosia (filigree palmette decoration)[12] and Olbia[13], especially given the

[11] Tomb made of stone plates, excavations by D.V. Kareisha, 1840: *Cat. London* 1994, No. 61; Rusyaeva 1994, 104ff., fig. 1: 3; *Cat. Bonn* 1997, No. 61; *Cat.Amsterdam* 2004, 84, fig. 51.

[12] Hermitage, Inv. No. F.19 (*Cat. Bonn* 1997, 150).

[13] Hermitage, Inv. No. Ol.17551. There is also another silver head with a loop and a filigree decoration on the *stephanos*: Hermitage, Inv. No. Ol.17646 (*Cat. Bonn* 1997, 150). One more gold head from Olbia was published by A.S. Uvarov (1851, 120, pl. XIV, 8; Rusyaeva 1994, 104ff., fig. 1, 2).

suggestions of the manufacture of the latter in Olbia or in the Bosporan Kingdom.[14]

The treatment of the wings, which were executed separately and soldered to the bodies of the sphinxes (Figs. 6, 8), finds the nearest parallels in the wings of Pegasos – a pendant of an earring with the shield in the form of the two-layered rosette from the tile tomb of the necropolis of Pantikapaion, excavated by D.V. Kareisha in 1840 and dated to the first half of the 4th century BC.[15]

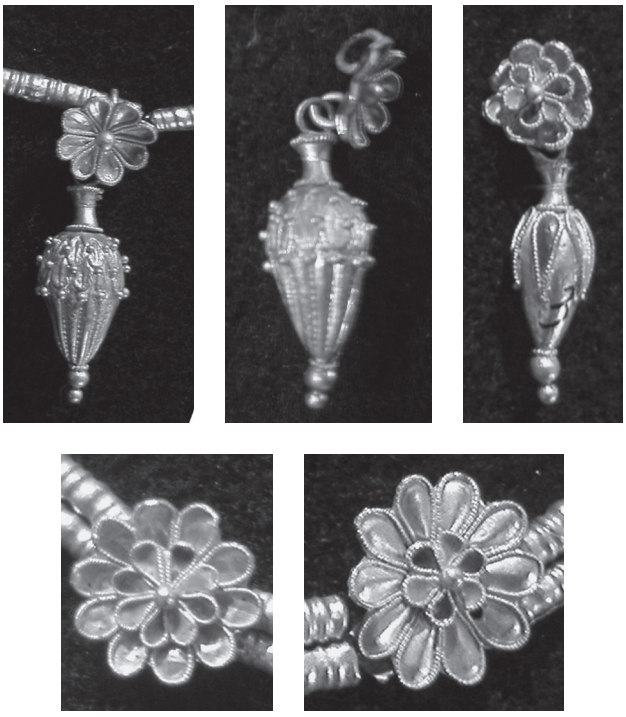
3. A necklace in the form of tubes with several rows of pendants (Cat. Nos. 5–8)

Among the gold ornaments found in the burial there is singled out a group of corrugated tubes of two sizes, links in the form of the rosettes and the pendants, shaped as rosettes with hanging seed-like pendants of two various types (Figs. 9–13). D.S. Kirilin mentioned, that all these ornaments were found along the backbone down to the waist. In the area of the neck-bones and the forearms there were found round links with relief images of Pegasos (Fig. 14), as well as contour links in the form of eagles (Fig. 15), and two triangular plaques decorated with lotus flowers in relief (Fig. 16). Functionally all these plaques vary from the sewn plaques in the form of the palmettes and the trapezoid plaques with the images of Nike. I did not have the possibility to study their rear, but according to the curator of the collection in Kiev, E.I. Podvysotskaya and judging by the photograph, published by G.I. Sokolov (1973, 44, fig. 23), the corrugated tubes are soldered to the rear of the plaques discussed. This fact corroborates with the observation of D.S. Kirilin: "our Pegasoi are the elements of the necklace" (Kirilin 1968, 184).

D.S. Kirilin supposed, that the ornaments composed of the links and seed-like pendants could have been attached to the head-dress. Most recently it was suggested by L.S. Klochko and S.A. Berezova that the ornaments discussed could have been used as shoulder decorations (Klochko and Berezova 2001, 107). Indeed, in the rich Scythian barrows of the 4th century BC there are known finds of tubes, which formed originally net-patterns,

[14] Higgins 1980, 130; I. Saverkina, in *Cat. Bonn* 1997, 150. *Cf.* the viewpoint about their manufacture by the Athenian jewellers specially for the North Pontic area: Rusyaeva 1994, 108; Skrzhinskaya 2000, 174. The variety of decoration of such pendants is testified also by the find from the barrow, excavated by V.G. Tiesenhausen in 1868 on the Taman peninsula on the road to Tuzla (a head in round with a diadem, with filigree decoration in the form of spirals; with earrings): Hermitage, Inv. No. T.1868.18 (Archive IIMK, No. 40/1868, 5; 10, No. 10; CR St-Petersburg 1868, XII): unpublished. From the same stone tomb originate gold plaques (T.1868.16–17), black-glazed pottery (T.1868.15) and red-figured pelike (T.1868.14), a bronze mirror with a figure of a sitting Eros, gold finger rings, alabastra made of alabaster: CR St-Petersburg 1868 X–XII.

[15] Hermitage, Inv. No. P.1840.2: Reinach 1892, pl. VII, 2; *Cat. London* 1994, No. 101.



Figs. 9-13. Necklace elements in the form of corrugated tubes, rosette-shaped links and pendants in the form of rosettes and seed-like pendants of two types. Cat. No. 5

Fig. 14. Link with the image of Pegasos. Cat. No. 6

Fig. 15. Link in the form of an eagle. Cat. No. 7

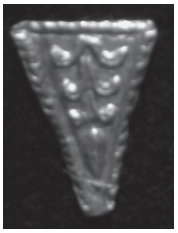


Fig. 16. Triangular plaque with the lotus flower. Cat. No. 8

with the cross-points fixed with the rosettes. Such nets often had pendants reminiscent the seed-like pendants of the type found in the Elder Three Brothers barrow. These decorations, which vary in details and the level of execution, originate from Deev, Mordvinov, Mastyugin, Alexandropol, Chertomlyk barrows (Alekseev *et al.* 1991, 196ff., No. 114; Rolle *et al.* 1998, 21, No. 114, colour pl. 12: 1), as well as from Gaimanova Mogila (*Cat. San Antonio* 1999, No. 127).

Seed-like pendants and the links in the shape of the rosettes (Figs. 9–13), to my mind, are the keys to the reconstruction of the ornament, to which the elements under discussion originally belonged. Compareneous double-layered rosettes, including those with enamelled decoration, as well as pendants, stylistically extremely similar and represented, as a rule, by two or three types, in the same combination are found on the few ornaments of several types.

First, these are temple ornaments in the form of the medallions with pendants such as those with the heads of Athena Parthenos from Kul-Oba (Sokolov 1973, 49, fig. 32; Galanina and Grach 1986, fig. 134; Schiltz 1994, 378, fig. 294; *Cat. London* 1994, No. 88; Schwarzmaier 1996, 129, fig. 17; *Cat. Bonn* 1997, No. 72) and with Nereids on the *hyppokampoi* from Bolshaya Bliznitsa (*Cat. Zurich* 1993, No. 54; *Cat. London* 1994, No. 120; Schwarzmaier 1996, 128, fig. 16; *Cat. Bonn* 1997, No. 86; *Cat. Amsterdam* 2004, 105, fig. 64). The framework of the pendants is formed not by the tubes, but by the chains. It is noteworthy that the seed-like pendants are represented by the two types: with relief and granulated decoration and those decorated with alternating blue and green enamelling. Besides, the pendants with enamel decoration are smaller then the pendants of the first type, thus, they are extremely close to those, found in the burial of the Elder Three Brothers barrow. The seed-like pendants of the two types (Figs. 9, 11) from the Elder Three Brothers barrow are very similar in their dimensions and details of decoration to the compareneous pendants of the temple ornaments from Bolshaya Bliznitsa (the enamelled pendants of the Kul-Oba medallions vary by somewhat bigger dimensions and details of decoration).

Second, these are earrings: with round shield, lunula with figures of Nereids, from Kul-Oba[16], as well as those with round shield and pyramidal pendants and figures of barbarians, found in the stone tomb No. 5 of Bolshaya Bliznitsa (Artamonow 1970, pl. 309; *Cat. London* 1994, No. 116; *Cat. Bonn* 1997, No. 99; *Cat. Amsterdam* 2004, 95, fig. 57).

Third, these are strap necklaces with pendants arranged in three rows. Similar pendants with enamelling or without decorate a necklace with the terminals in the form of the lion heads from tomb No. 1 of Bolshaya Bliznitsa.[17] A similar combination of the pendants occur also on a fragmentary necklace from Kul-Oba, which is extremely similar, if not identical to the necklace from tomb No. 1 of Bolshaya Bliznitsa.[18] It is noteworthy that among the elements of the above discussed necklaces from Kul-Oba[19] and tomb No. 1 of Bolshaya Bliznitsa there are two-layered rosettes, with the lower layer consisting of ten petals, and the upper, which eight-petalled, decorated with alternating inlays of green and blue enamel, similar to the rosettes from the Three Brothers barrow (Figs. 12–13).

On some necklaces, belonging to the type under discussion, the fixing points of the chains were additionally decorated not only with rosettes, but with griffin protomes, as on the necklace from the barrow No. 1 near Theodosia, excavated by I.K. Aivazovskii in 1853.[20] Also on the strap necklace from Bolshaya Bliznitsa with beech-nut pendants, the rosettes fixed along the lower edge of the strap alternate with the protomes of Pegasos.[21]

Thus, it may be suggested, that the necklace discussed with seed-like pendants was restored in antiquity, while the chains were substituted with corrugated tubes threaded on the strings. In a similar way, the necklace was originally reconstructed in Kiev, judging by the photograph published in 1974 (Ganina 1974, fig. 62 below). To my mind, this reconstruction should be précised. The cross-points of the strings with tubes were most probably decorated also with round links, showing the image of Pegasos (Fig. 14). Eleven such links fit exactly between twelve rosette-shaped links (Figs. 12–13), whereas the triangular-shaped plaques, decorated with lotus flowers (Fig. 16), could serve as terminals of the necklace. However, it is unclear, in which places the links in the form of eagle-plaques (eight pieces) (Fig. 15) were fixed, which, given the double tubes, soldered to their rear, should have been fixed in a vertical position.

This reconstruction, to my mind, is more likely than that shown on the negatives of the photographs in the archive of the Kerch Museum, made between 1965 and 1968.[22]

[16] Hermitage, Inv. No. KO.6: Segall 1966, 20, pl. 21b; Artamonow 1970, pls. 221–223; Mozolevskii 1983, 53, fig. 39; Ilinskaya and Terenozhkin 1983, colour pl.; Galanina and Grach 1986, fig. 230; Pfrommer 1990b, 201ff., 283, FK 153, pl. 27: 1; *Cat. Zurich* 1993, No. 53; *Cat.London* 1994, No. 88; Despini 1996, No. 83; Schwarzmaier 1996, 119, fig. 6; Saverkina 2000, 10ff., fig. 1.

[17] Hermitage, Inv. No. BB.34: CR St-Petersburg 1865, pl. II, 4; Rostovtsev and Stepanov 1917, 73, pl. V; Prushevskaya 1955, 344, fig. 26; Segall 1966, pl. 5; Sokolov 1973, 63, fig. 50; Grach 1986, 83ff., 169, fig. 6; Galanina and Grach 1986, fig. 230; *Cat. London* 1994, No. 121; Schwarzmaier 1996, 122, fig. 9; *Cat. Bonn* 1997, No. 88; *Cat. Amsterdam* 2004, 54ff., fig. 28.

[18] Hermitage, Inv. No. KO.8: Grach 1986, 82–6, note 24; 168, fig. 5: 8; 170ff., fig. 7; pl. I.

[19] Hermitage, Inv. No. KO.83–84: Grach 1986, 90, note 34; 171, pl. I, 7.

[20] Hermitage, Inv. No. F.2: *Cat. St-Petersburg* 1995, No. 201; Despini 1996, No. 153; Petrova 2000, 163, fig. 41.

[21] Hermitage, Inv. No. BB.33: *Cat. London* 1994, No. 123.

[22] The gold jewellery found in the tomb was transferred from the Kerch Museum to the Museum of Historical Treasures in Kiev in 1968, see: Bykovskaya 2002, 27ff.

I can hardly imagine that the net-pendants of the types of the temple ornaments from Kul-Oba and Bolshaya Bliznitsa could not have medallions and were fixed directly to the *calathos*. We do not know examples of such ornaments and it is also unclear, how in this case, the rosettes and the pendants could occur in the area of the backbone. Even more improbable is a present reconstruction of the necklace, made after the reconstruction of the Museum of Historical Treasures in Kiev in 2004.

The suggested variant is all the more probable, because in the Scythian barrows of the 4th century BC there are known necklaces with pendants of local shapes, with the framework composed of corrugated tubes.[23] Some of these necklaces have pendants reminiscent of Greek seed-like pendants.

The closest parallel to the round links with the image of Pegasos (Fig. 14) are somewhat bigger plaques with protomes of Pegasos to the right from Bolshaya Bliznitsa.[24] D.S. Kirilin mentioned as the nearest parallel to the plaques in the shape of an eagle (Fig. 15) the plaques from tomb No. 4 of Bolshaya Bliznitsa. However, the latter show eagles with widely spread wings and look not very similar (CR St. Petersburg 1869, pl. 1: 21–22). There are known much more closer comparandas. A contour plaque in the shape of an eagle with the wings lifted upwards and the head turned to the right originates from Kurdzhips barrow (Galanina 1980, 90ff., No. 40). Similar plaques with the head turned to the left were found in Babina Mogila (*Cat. Rimini* 1995, No. 43a), Oguz (Fialko 2003, 126, fig. 2: 21; 131, No. 21), Chmyreva Mogila (Onaiko 1970, No. 496k, pl. XLII), Karagodeuashkh (Lappo-Danilevskii and Malmberg 1894, 160, pl. III, 4–5; Minns 1913, 217, fig. 119, III.5). E.E. Fialko mentions similar plaques from Alexandropol barrow, Zheltokamenka and Nosaki (Fialko 2003, 131).[25] Compareneous plaques from the Merle de Massoneau collection are kept in Berlin (Greifenhagen 1970, 51, pl. 27: 10).

4. Necklaces composed of beads and pendants (Cat. Nos. 9–13)

Pendants in the form of hollow balls, decorated as myrtle buds (Fig. 17), find parallels among the pendants of the necklace (Silanteva 1959, 7, fig. 2, 3) from the complex of jewellery, found in Nymphaion in 1866 (CR St-Petersburg 1868, 5–51; Silanteva 1959, 7, fig. 2; *Cat. London* 1994, 173; *Cat. Bonn* 1997, 135). Similar decoration of the lower part show beads with pendants of the necklace found allegedly in Akarnania (*Cat. London* 1994, No. 7: 450–400 BC), as well as similar items of

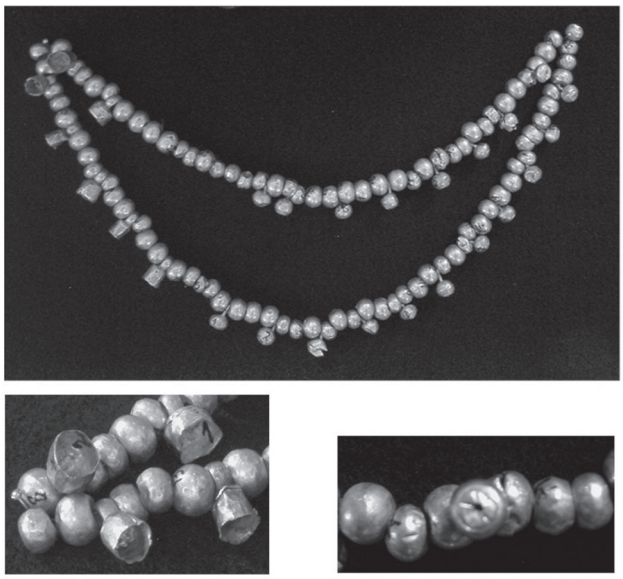


Fig. 17. A necklace of hollow beads with pendants. Cat. No. 9

Fig. 18. A necklace of gilt terracotta pendants. Cat. No. 10

the necklace from the 4th century BC burial at Iasos in Asia Minor (Levi 1964, 208, pl. I: 4).

Terracotta gilt beads (Fig. 18) belong to the category of the 'imitation jewellery' (Kriseleit 1977; Lunsingh-Scheurleer 1982, 192–96; Williams 2003, 226–35). Faience gilt beads of similar shape originate from the burials of the second half of the 4th century BC in Macedonia: tombs A (Themelis and Touratsoglou 1997, 58, No. A58, pl. 61) and D (Themelis and Touratsoglou 1997, 111, No. D19, pl. 61) at Derveni, tomb B at Pella (Chrysostomou 1998, 341, 350, fig. 11), tomb B at Aenea (Vokotopoulou 1990, 83, No. 8, pl. 51a, g).

A necklace composed of glass, paste, cornelian, amber, rock crystal and gagate beads (Fig. 19), as well as cowrie shells (Fig. 20) was found not on the skeleton, but in a special enclosure constructed of thin stone slabs.

[23] See, *e.g.*, a necklace from Chertomlyk: Alekseev *et al.* 1991, 204, No. 124; 214; 137; Rolle *et al.* 1998, 23, No. 124, colour pl. 12: 2; 24, No. 137, pl. 39: 2.

[24] Hermitage, Inv. No. BB.58: Artamonow 1970, 78, fig. 150 in the middle.

[25] The plaque from Alexandropol barrow, see: Tolstoi and Kondakov 1889, 97, fig. 85.

Fig. 19. A necklace of glass, paste, cornelian, amber, gagate and rock crystal beads. Cat. No. 11

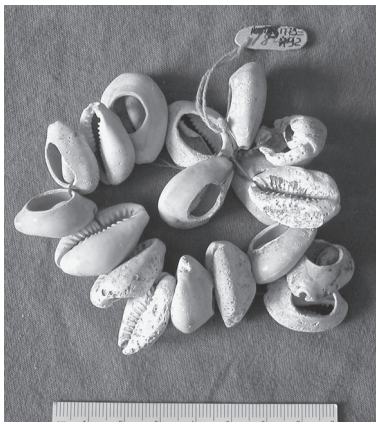
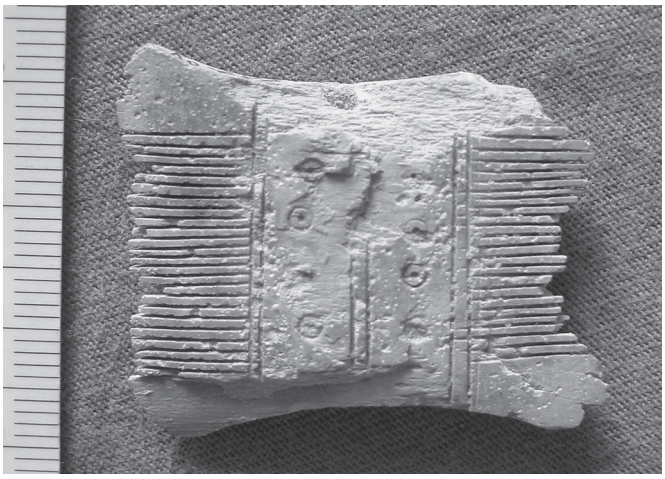
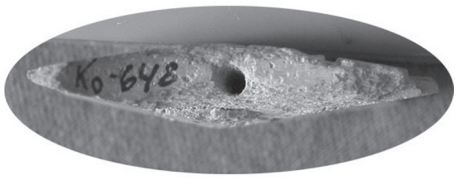


Fig. 20. A necklace of cowrie shells. Cat. No. 12

In a casket nearby among the other inventory there was found a comb-shaped pendant.

V.G. Petrenko compiled a list of the finds of cowrie shells in the 5th – 4th centuries BC Scythian burials of the Middle Dnieper basin (Petrenko 1967, 34, pl. 23, 21a–b),[26] such shells were also known in Chertomlyk (Alekseev *et al.* 1991, 159, No. 36; Rolle *et al.* 1998, 7, No. 36), in the Scythian burials of the forest-steppe zone of the Bug basin (Bessonova 1994, 27, fig. 8, 4). Cowrie shells with cut backs, similar to the finds from the Elder Three Brothers barrow (Fig. 20) are known both in the barbarian burials of the steppe and mountainous Crimea[27], and in the necropolises of the *chora*





Figs. 21–22. A pendant in the form of a miniature bone comb. Cat. No. 13

of the European part of the Bosporan Kingdom, dated to the late 5th – 4th centuries BC.[28]

The nearest comparanda to the comb-pendant from the Elder Three Brothers barrow decorated with incised lines and circular pattern with dots in the centre (Figs. 21–22), is a double-sided bone comb-pendant from the so-called Small barrow on the road to Oguz, excavated by the peasants of the village Upper Serogozy and further studied by K.E. Dumberg in 1897.[29] The barrow is dated by A.Yu. Alekseev to the last third of the 4th century BC, basing on the find of the plaque, reproducing the rear of the Pantikapaion staters (Archive IIMK, 1897/51, 83ff.; Alekseev 1992, 154; 2003, 269). This comb-shaped pendant has similar small dimensions (2.6 x 3.7 cm), compareneous profile, and on one of the circles there are also remains of a red paint. As the comb-pendant from the Elder Three Brothers barrow, the comb-pendant from the Small Oguz has

[26] Twenty-five pierced cowrie shells were found near pelvis and knee-bones in the girl's burial No. 2 of the barrow No. 447/1899 near the village of Pastyrskoe, of the former Chigirin region (Galanina 1977, 29, 33, pl. 14: 11). It is supposed that they were used for decoration of clothes (Petrenko 1967, 34).

[27] For instance, from the barrow No. 1/1930 near the village Kamkaly (modern Berezhnoe) of the Dzhankoi region of the Crimea, dated to the 4th – 3rd centuries BC: Skoryi 1982, 234ff., No. 12, fig. 5: 4. About the finds of the cowrie shells with backs cut off in the Early Iron Age necropolises of the mountainous Crimea, see: Kolotukhin 1996, 49, 150, fig. 50: 31–32 (necropolis Druzhnoe-2).

[28] Four cowrie shells were found in 1989 at the cremation place No. 3 of the barrow near the rural settlement in the *chora* of Myrmekion, together with the materials dated to the last third of the 4th century BC (Zinko 2003a, 181, 184, fig. 15, 17.). Another four cowrie shells were found in the robbed child burial No. 7/1997 of the necropolis of the South-Churubash settlement in the *chora* of Nymphaion, together with beads and a fragmentary red-figured lekythos of the late 5th – early 4th century BC (Zinko 2002, 227, 241, fig. 10: 6; Zinko 2003b, 145, fig. 89; 156).

[29] Hermitage, Inv. No. Dn.1897.5/114: Spitsyn 1906, 168, pl. XIV, 28; Peters 1986, 66, 140, pl. XIII, 2.

a round cavity ca. 0.6–0.7 cm deep to insert a wire loop for hanging. On the both combs the teeth are not finally cut and it may be supposed that they were hardly used as combs. The fact that the combs discussed had loops also allows suggesting that they were rather used as amulets. Similar bone comb-shaped pendants with loops were found in the 5th century BC burial No. 94/1911 of the Olbian necropolis (Alekseeva 1982, 32, type 33, pl. 45: 17), in the room No. 3 of the House A at the Olbian Agora (together with black-glazed and red-figured pottery of the 4th century BC) (Levi 1956, 75, fig. 40: second from the left; Sokolskii 1971, 139, fig. 44: 2; Peters 1986, 66, 141, pl. XIII: 3), as well as in a barrow near Evpatoria, excavated in 1948 (Smirnov 1952, 194, fig. 3). A comparaneous comb is also represented on a miniature gold pendant of the necklace from the tomb II of the barrow, excavated by A.B. Ashik on the road leading to Adzhimushkai in 1841–1842. It is worth to note, that even on this miniature pendant, the central part of the comb is decorated with circular pattern (Reinach 1892, pl. IX: 3; Sokolskii 1971, 139, fig. 44: 1; Ruxer and Kubsczak 1972, 234, pl. V: 2; Deppert-Lippitz 1985, 210ff., fig. 149a; Pfrommer 1990b, 311, pl. 4: 1; Despini 1996, No. 127; I. Saverkina, in *Cat. Bonn* 1997, No. 63: second quarter of the 3rd century BC). A similar gold pendant decorates a necklace from the Merle de Massoneau collection, now in Berlin, also found in the North Pontic area (Greifenhagen 1975, 30, No. 1, pl. 24).

5. Bracelets (Cat. No. 14)

From the viewpoint of its construction – the use of bronze cores – the bracelets from the Elder barrow (Figs. 23–24) find parallels among such masterpieces of jewellery as the bracelets made of two twisted wires with the terminals in the form of the springing lioness[30] and springing rams[31] from Bolshaya Bliznitsa, bracelets with sphinx protomes from Kul-Oba,[32] and the bracelet with lion head terminals from the burial No. 83 on Temir-Gora (Yakovenko 1977, 141ff., fig. 1; Williams 1998, 101, fig. 14: 1). Among the items originating from outside of the North Pontic area constructive and stylistical similarity show the bracelets coming allegedly from Taranto and Asia Minor. The first of them, kept in the Metropolitan Museum, has a wide flat hoop with a bronze core and the terminals in the form of lion protomes with collars, decorated with palmettes in filigree (*Cat. London* 1994, No. 152, *ca.* 300 BC). The second one, kept in Bloomington, has a flat core and gold terminals in the form of lion heads with collars decorated with a five-petal filigree palmette in the middle (*Cat. Bloomington* 1995, No. 25.B: *ca.* 325–250 BC).

[30] Hermitage, Inv. No. BB.35–36: Galanina and Grach 1986, fig. 234; *Cat. Zurich* 1993, No. 38; *Cat. London* 1994, No. 124; *Cat. Bonn* 1997, No. 89.

[31] Hermitage, Inv. No. BB.194–195: Pfrommer 1990b, pl. 21: 2; *Cat. London* 1994, No. 118; *Cat. Bonn* 1997, No. 101.

[32] Hermitage, Inv. No. KO.19–20: Mozolevskii 1983, 50, fig. 36; Galanina and Grach 1986, fig. 182; *Cat. Zurich* 1993, No. 40; *Cat. London* 1994, No. 83; Despini 1996, No. 197; *Cat. Bonn* 1997, No. 69.

Figs. 23–26. A pair of spiral bracelets with the lion head terminals. Cat. No.14

However, the bracelets from the Elder barrow have a much closer circle of parallels. The nearest comparandas to the bracelets discussed originate from the Theodosian barrow No. 1/1853,[33] and have a hoop of a similar shape, made of silver (in contrast to the bracelets from the Elder barrow, the hoops of which are flat in the central part, the bracelets from Theodosia have a rib in the central part, decorated with grooves), with gold terminals in the form of the lion heads with collars, decorated with filigree. The frieze of the alternating palmette and lotus flowers on the bracelets from Theodosia is extremely similar to those on the bracelets under discussion; it varies by the absence of the enamel decoration of the framing ovulae friezes. Instead between the palmette-and-lotus-flowers frieze and the lion head terminals on the Theodosian bracelets there is a narrow frieze of plant scrolls. Besides, the bracelets from Theodosia have more miniature and delicately worked filigree decoration.

Evidently to the same group of bracelets belongs a gold bracelet from the so-called tomb of the 'Third Lady' of Bolshaya Bliznitsa,[34] with the collars decorated with filigree palmette and the terminals in the form of a couchant lion figure in relief. The hoop, which is flat inside, is decorated with rims along the edges and in the centre (those along the edges are decorated with grooves, the one in the centre – with soldered twisted wires). Similar profiles of lamellar hoops demonstrate also spiral bracelets with the terminals in the form of *hyppokampoi*, found in Karagodeuashkh.[35] Compareneous decoration of the outer surface of the hoops show silver spiral bracelets with the terminals in shape of the snake heads from the Central Macedonia (a chance find) (*Cat. Melbourne* 1988, No. 243; *Cat. Hanover* 1994, No. 306, *Cat. Thessaloniki* 1997, No. 112) and from the burial of the Radhime necropolis in Illyria, dated to the second half of the 4th century BC (*Cat. Hildesheim* 1988, No. 280).

From the constructive viewpoint the closest parallels among the finds from the Scythian barrows is the pair of spiral bracelets from Soboleva Mogila with hoops flat inside and modelled outside (similar to those of the bracelets from the Elder Three Brothers barrow); the hoops have bronze cores, the terminals are shaped as the figures of couchant wolves.[36]

Lion protomes, similar to those decorating the bracelets discussed (Fig. 25), are hammered (besides the bracelets from Theodosia) also on the pair of lamellar bracelets from Kul-Oba;[37] on the decoration of the head-dress from the same barrow,[38] on the right end of a lamellar bracelet from Chayan barrow, which was probably redesigned in the head-dress decoration in antiquity.[39] I would also mention the terminals of the necklace with beech-nut pendants from Pavlovskii barrow,[40] as well as silver plaques from the horse-harness found in Babina Mogila.[41]

The combination of the hammered lion protomes with collars, decorated with the frieze of alternating palmette and lotus flowers (Fig. 26), executed in filigree, although without enamelling, is also represented on the terminals of the pectoral from Tolstaya Mogila.[42] Stylistically similarly executed filigree friezes of the alternating palmette and lotus flowers decorate the collars of a torque with lion heads terminals from Solokha,[43] a torque terminal in the form of a lion head from Kul-Oba (with inlays of blue and green enamel),[44] as well as a cap of a touchstone from Talaev barrow in the Crimea.[45] In the toreutics a rather close parallel occur on the frieze decorating the funnel of the rhyton from Bashova Mogila (Filow 1934, 67, pl. VI; Strong 1966, 86, pl. 20, A; Marazov 1978, 30–5; *Cat. Venice* 1989, No. 180.3; *Cat. Saint Louis* 1998, No. 124; *Cat. Bonn* 2004, No. 211b).

[33] Hermitage, Inv. No. F.13–14. Excavations by I.K. Aivazovskii, 1853: Tolstoi and Kondakov 1889, 157, fig. 141; Reinach 1892, pl. XIIa, 7; Minns 1913, 401, fig. 294; Deppert-Lippitz 1985, 189, fig. 137; Schwarzmaier 1996, 120, fig. 7; Petrova 2000, 164, fig. 42; *Cat. Amsterdam* 2004, 107, fig. 66.

[34] Hermitage, Inv. No. BB.118: CR St.Petersburg 1869, pl. I, 16; Artamonow 1970, 79, fig. 152; Schwarzmaier 1996, 125, fig. 13; 132ff. About the dating of the tomb of the 'Third Lady' to the late 4th – early 3rd century BC, see Pruglo 1974, 77; Schwarzmaier 1996, 136.

[35] Hermitage, Inv. No. 2492/5: Lappo-Danilevskii and Malmberg 1894, 157, pl. III.8–9; Minns 1913, 217, fig. 119; III.8; Galanina and Grach 1986, fig. 250; Anfimov 1987, 158; Jacobson 1995, 135, II.E.4; Treister 2003, 70, fig. 14.

[36] Kiev, Institute of Archaeology, National Academy of Sciences of the Ukraine, Inv. No.Z-1829–1830: *Cat. Milan* 1995, No. 55; *Cat. San Antonio* 1999, No. 158.

[37] Hermitage, Inv. No. KO.3–4: Artamonow 1970, pls. 237–238; Galanina and Grach 1986, fig. 179; *Cat. London* 1994, No. 86; Grach 1994, 137ff., figs. 2–3; Jacobson 1995, 136, II.E.5; *Cat. Bonn* 1997, No. 73.

[38] Hermitage, Inv. No. KO.16: Reinach 1892, 41, pl. 2: 1; Minns 1913, 202, fig. 96; Galanina and Grach 1986, fig. 181; Shcheglov and Katz 1991, 103, 105, figs. 7–8; *Cat. Zurich* 1993, No. 36; Grach 1994, 141ff., fig 7.

[39] Private collection in Munich: Hoffmann and Davidson 1965, No. 82; Shcheglov and Katz 1991, 106, 108–11, No. 4, fig. 16–21.

[40] Hermitage, Inv. No. Pav.2: Artamonow 1970, pl. 277; *Cat. London* 1994, No. 106.

[41] Kiev, Institute of Archaeology, National Academy of Sciences of the Ukraine, Inv. No. KP-IV-383: *Cat. Rimini* 1995, I.42b; *Cat. San Antonio* 1999, No. 151; Treister 1999/2000, 19ff., 42, fig. 12; 2001, 428, fig. 61.

[42] Kiev, Museum of Historical Treasures of the Ukraine, Inv. No. AZS-2494: Mozolevskii 1979, 73ff., No. 135; 1983, 170, fig. 148; Galanina and Grach 1986, fig. 119–120; Boardman 1994, 210ff., fig. 6.35; Schiltz 1994, 202, fig. 158; Jacobson 1995, 115ff. II.A.1, fig. 11–14.

[43] Hermitage, Inv. No. Dn.1913.1/7: Petrenko 1978, 46, pl. 35: 2–2a; Galanina and Grach 1986, fig. 122; Mantsevich 1987, No. 33; Jacobson 1995, 119ff., II.B.1, fig. 16–17; Williams 1998, 101, colour pl. 15.

[44] Hermitage, Inv. No. KO.121: Petrenko 1978, pl. 31: 4; Galanina and Grach 1986, fig. 212; *Cat. Zurich* 1993, No. 37; Jacobson 1995, 120, fig. 18; Williams 1998, 101, colour pl. 16.

[45] Hermitage, Inv. No. Kr.1891.1/25: Galanina and Grach 1986, fig. 175; *Cat. Zurich* 1993, No. 57; Williams 1998, 101.

Similar ornaments were widely used in the period discussed in vase-painting (Stutzinger 2000, 138ff., No. 54),[46] architectural decoration,[47] gold and silver plate (Shefton 1994, 584ff.) and jewellery.

6. Finger rings (Cat. No. 15)

In spite of the fact that, given the shape of the hoops and the decoration of the ends, the spiral finger rings from the Elder Three Brothers barrow were evidently produced with the aim of making a set with the bracelets found in the same burial, the level of their execution reflects a work of a less competent craftsman, proved especially in a rather primitive treatment of the ends in the form of chiselled lion heads (Fig. 27).

Fig. 27. A pair of spiral finger rings. Cat. No. 15

Four lion protomes decorate a gold finger ring from Kekuvatskii barrow.[48] A similar in dimensions and in the treatment of the hoop spiral ring made of 4.5 turns from the collection of Merle de Massoneau is kept in Berlin – it has the ends decorated with stylised dog heads (Greifenhagen 1970, 47, pl. 24: 8). The finger ring with two turns and similar profile of the hoop with the ends shaped as sculptured lion heads with collars decorated with ovae in filigree originates from the late 4th century BC burial of the necropolis of Taranto (*Cat. Milan* 1984, No. 217; Guzzo 1993, 244; *Cat. Venice* 1996, 477, No. 324; *Cat. Trieste* 2002, No. 81), a similar finger ring was kept in the Dr. Carl Kempe collection (Hoffmann and Davidson 1965, No. 102).

[46] In the red-figured vase-painting of Apulia it was especially wide-spread in the second-third quarters of the 4th century BC.

[47] See in general, Pfrommer 1989, 433ff., pl. 42; Shefton 1994, 587ff., fig 2: 2, 4–5.

[48] Hermitage, Inv. No. Кек.2: *Cat. London* 1994, No. 104; Artamonow 1970, 74, fig. 141; Neverov 1986, 23; *Cat. Bonn* 1997, No. 79.

Figs. 28-30. A scarab ring. Cat. No. 16

7. A scarab ring (Cat. No. 16)

A scarab ring from Elder Three Brothers barrow (Figs. 28–30) belongs to the series of rings of the middle of the 4th century BC, the main finds of which are concentrated in Southern Italy (Williams 1988, 89ff., pl. 39: 1–3; Musti *et al.* 1992, 159, No. 124.1; 263; *Cat. London* 1994, No. 140; Guzzo 1998, 57, 64, note 50; fig. 7.5)[49] and in the Kingdom of Bosporus. D. Williams has singled out

[49] See also a finger ring from Heraclea in Lucania: Pianu 1990, 52, No. 33.5, pl. XXI, 1–2.

a western and eastern type of such scarab rings (Williams 1988, 89ff.).

Compareneous construction of the hoop made of two twisted wired with a beaded wire laid into the central valley demonstrate a finger ring with inlayed jasper scarab found in the barrow No. 5/1914 of Elizavetinskii necropolis (Galanina 2003, 93, pl. II; 97, No. 28), a scarab ring from the tomb No. 1 of Bolshaya Bliznitsa,[50] as well as finger ring with couchant lion on a movable oval bezel, also found in the tomb No. 1 of Bolshaya Bliznitsa.[51]

A similar construction of the hoop have also two finger rings from tomb D at Derveni: a cornelian scarab (Themelis and Touratsoglou 1997, 129, pl. 28. 144: Z11; *Cat. Thessaloniki* 2000, 74, fig. 76) and a ring with a high bezel and an oval cabochon inlay of cornelian (Themelis and Touratsoglou 1997, 129, pl. 28. 144: Z10; *Cat. Thessaloniki* 2000, 45, fig. 41), as well as cornelian scarabs from Pydna necropolis (Bessios and Pappa n.d., pl. 118B) and North Pontic area,[52] an agate scarab with the head of Apollo (Özet 1994, 92, No. 3b, fig. 8) and a finger ring with a movable oval gem on chalcedon (Özet 1994, 91, No. 3a, fig. 6), both found in the so-called burial of a 'Carian princess', excavated in Halicarnassos in 1989 and dated to the middle – third quarter of the 4th century BC, a cylinder-pendant made of chalcedon and found in the burial of the second half of the 4th century BC of the Kepoi necropolis.[53] We find a similar construction of a hoop also on the gold bracelet with the terminals in the form of Pegasos protomes from Sphendami in Macedonia (Bessios and Pappa n.d., pl. 117).

The 'dog teeth' framing of the inlay, as on the scarab ring from the Elder Three Brothers barrow (Figs. 29–30), although characteristic primarily for the Hellenistic jewellery, appears already in the 4th century BC, judging by the find of a finger ring with a movable bezel and a glass inlay coming from the silver casket, found in the late 4th century BC barrow in Aghios Anastasios, Thessaloniki (*Cat. Thessaloniki* 2000, 66, fig. 63). On the plaque inlayed in the scarab discussed there is an image of a dancing female.[54]

[50] Hermitage, Inv. No. BB.40: CR St-Petersburg 1865, pl. III, 24; Artamonow 1970, 75, fig. 144, pl. 280; Segall 1966, pl. 37: 1; *Cat. New York* 1975, No. 64; Neverov 1986, 23, pl. 2: 6–7; *Cat. London* 1994, No. 126; *Cat. Bonn* 1997, No. 91; Boardman 2001, 233, pl. 820.

[51] Hermitage, Inv. No. BB.37: CR St-Petersburg 1865, pl. III, 23; Artamonow 1970, 74ff., fig. 142–143; Segall 1966, pl. 37, 4; *Cat. Bonn* 1997, No. 90; Boardman 2001, 233, pl. 819; *Cat. Amsterdam* 2004, 58, fig. 33.

[52] Collection of Merle de Massoneau: Greifenhagen 1970, 48, pl. 25: 1.

[53] Moscow, State Historical Museum, Inv. No. 103413: *Cat. Moscow* 2002, No. 166.

[54] *Cf.* for instance an image on a gold plate inserted in a glass finger ring from Kurdzhips barrow: Hermitage, Inv. No. 2495/70: Galanina 1980, 89, No. 34; Galanina and Grach 1986, fig. 244.

8. Conclusions

The peculiarities of decoration allow uniting in one group the pairs of bracelets, earrings as well as the necklace with pendants. It is worth to note that in spite of the variation in scale of this objects, the friezes of ovae, decorated with enamel on the bracelets and earrings, have practically the same dimensions (Fig. 31). Characteristic both for the bracelets, earrings and the rosette-shaped links of the necklace is the use of inlays of blue and green enamel in filigree settings of thin beaded wire.[55] Most probably, these jewellery items were parts of the set, executed in the same workshop.

Fig. 31. A bracelet, an earring and a finger ring. Cat. Nos. 14, 4, 15

Similarly executed inlays of green and blue enamel decorate temple pendants, earrings and necklaces, originating mainly from several burial complexes from the area of the Bosporan Kingdom, in particular from Kul-Oba and tomb No. 1 of Bolshaya Bliznitsa. There are weighty grounds to suggest the manufacture of the jewellery set from the Elder Three Brothers barrow in the same workshop, in which the abovementioned necklaces with seed-like pendants, earrings and temple medallions have been executed. Given the chronology of Kul-Oba and Bolshaya Bliznitsa, we can date the creation of the 'Three Brothers' set of jewellery to *ca.* 350–340 BC.

D. Williams and J. Ogden pointed to the style and technique links between the temple pendants with Nereid

[55] *Cf.* enamel inlays of the torque terminals with the figures of the Scythians from the same barrow: the settings are made of flat wire (Hermitage, Inv. No. KO.17: Ilinskaya and Terenozhkin 1983, colour pl.; Mozolevskii 1983, 49, fig. 35; Galanina and Grach 1986, figs. 126–127; *Cat. Zurich* 1993, No. 39; Schiltz 1994, 162ff., fig. 120, *Cat.London* 1994, No. 81; *Cat. Amsterdam* 2004, 31, fig. 8); also in the flat wire settings there enamel inlays on the torque terminal in the form of the lion head from Kul-Oba (Hermitage, Inv. No. KO.121: Galanina and Grach 1986, fig. 212), of the torque with the lion head terminals from Solokha (Hermitage, Inv. No. Dn.1913.1/7: Galanina and Grach 1986, figs. 122–123).

medallions from Bolshaya Bliznitsa and other ornaments from the same barrow: necklaces Inv. Nos. BB34, BB117 and earrings Inv. No. BB32, coming to the conclusions that they are "all products of the same workshop", having clear links with other items of jewellery from the North Pontic area (*Cat. London* 1994, 189). Also R. Minasyan mentioned the proximity of construction and composition of the temple pendants from Kul-Oba and Bolshaya Bliznitsa and proposed that they had been manufactured in one and the same workshop (Minasyan 1999, 39).

Concerning the strap necklaces with pendants arranged in three rows from Bolshaya Bliznitsa and Kul-Oba, the scholars usually expressed views that they were imported, pointing to the finds of similar necklaces in other regions of the ancient world (Grach 1986, 86). I.I. Saverkina discussed as products of workshops of Asia Minor and Northern Greece earrings of the 'luxurious style', including those from Kul-Oba and Bolshaya Bliznitsa (Saverkina 2000, 21), whereas E.Ya. Rogov considered that at least some of them, *e.g.* the items found in Theodosia and Chersonesos, could had been produced by itinerant craftsmen from Southern Italy during his stay at Chersonesos (Rogov 2001, 72).

The list of strap necklaces with pendants arranged in three rows, which, according to B. Deppert-Lippitz (1985, 170), mark the "Höhepunkte des reichen Stils" is not very long,[56] while the known find spots of such necklaces concentrate in North Pontic area and Asia Minor – it is worth to note the absence of the finds of such necklaces in Macedonia and Southern Italy, where the finds of somewhat later necklaces with beech-nut pendants[57] are well known. If one tries to trace the genesis of the necklaces with seed-like pendants than their Asia Minor origin would be quite possible. Already in the 5th century BC in this region there were known necklaces with beads-pendants alternating with beads, whereas the complete surface of the seed-like pendants was covered with granulation. Such a necklace originates from the child burial of the mid-5th century BC in Kizöldün barrow in Western Asia Minor (Özgen and Öztürk 1996, 57, fig. 126; Sevinç and Rose 1999, 498ff., No. 13, figs. 13–14; Meriçboyu 2001, 100, fig. 1 above). Compareneous construction shows a necklace from the above mentioned burial of the 'Carian princess' of the mid-4th century BC, it has similar bead-pendants, only upper part of which is decorated with feather pattern, while the lower – with vertical fluting. A similar necklace from Lampsacos is kept in Istanbul (Meriçboyu 2001, 169, fig. 1).

The pendants of the strap necklaces, arranged in three rows, belong primarily to the two types. The bigger seed-like pendants with several rows of feather decoration above and soldered grains are comparable with the corresponding pendants of the necklaces from Kul-Oba and Bolshaya Bliznitsa, although vary in details.[58] However, the smaller pendants have completely flat surface, lacking enamel decoration. Similar combination of pendants occur also on the earrings with a round shield, lunula and figures of Nike from Kul-Oba,[59] compareneous earrings with figures of Erotes from Madytos,[60] earrings with Nike and quadriga from Theodosia[61] and their close comparanda from Rize,[62] as well as on the other items of jewellery. There are also known seed-like pendants decorating jewellery from Southern Italy, although varying in details from those originating from the North Pontic area. In particular, this is a lunula-shaped earring from Taranto, however, also in this case there are smaller pendants decorating with vertical fluting,[63] or only bigger pendants with feather decoration and granulation in the upper part and vertical fluting in the lower part, as on the earrings and the pendant from the burial in Lecce, dated to the third quarter of the 4th century BC.[64]

Thus, there exist grounds to single out a North Pontic variant of seed-like pendants, which were used in the items

[56] 1) Madytos: *Cat. London* 1994, No. 64; Despini 1996, No. 154; 2) allegedly, Trapezous. From the N. Schimmel collection, now Israel Museum, Jerusalem: Deppert-Lippitz 1985, 170, pls. XII–XIII; Pfrommer 1990b, 242, FK 75; Despini 1996, No. 150; 3) allegedly, Asia Minor: Segall 1966, 10ff., pl. 4; 4) allegedly, Melos: Marshall 1911, No. 1947; Richter 1974, 266, fig. 380; Higgins 1980, pl. 49b; *Cat. London* 1994, No. 22; 5) Theodosia: see above note 33.

[57] About the finds of necklaces with beech-nut pendants in the North Pontic area, see above note 18. Perhaps, to the earliest of them belongs a necklace from the burial No. 83 on Temir-Gora, in which such pendants are used together with acorn-pendants: Yakovenko 1977, 142, fig. 2: 1. The coexistence of the pendants of the both types about the middle of the 4th century BC is testified by the finds from the burial of the 'Carian princess' in Halicarnassos, in which there were found two necklaces, including one with beads-pendants in the shape of seeds (without enamel) (Özet 1994, 92ff., No. 4, fig. 11; Özgen and Öztürk 1996, 58, fig. 130; Meriçboyu 2001, 121, fig. 2), and another one – with beech-nut pendants (Özet 1994, 94, No. 6b, fig. 14; Özgen and Öztürk 1996, 58, fig. 131; Meriçboyu 2001, 121, fig. 3).

[58] I would also mention a single find of such a pendant, coming from the barrow No. 7/1917 of Elizavetinskaya necropols: Galanina 2003, 92ff., pl. II; 98ff., No. 44.

[59] Hermitage, Inv. No. KO.7: Galanina and Grach 1986, fig. 130; *Cat. Zurich* 1993, No. 52; *Cat. London* 1994, No. 89; Schwarzmaier 1996, 119, fig. 5; Despini 1996, No. 84; Saverkina 2000, 12, fig. 2; *Cat. Amsterdam* 2004, 38, fig. 14.

[60] Pfrommer 1990b, pl. 26, 14; *Cat. London* 1994, No. 63.

[61] Hermitage, Inv. No. F.1: Artamonow 1970, pls. 326–327; Maksimova 1958; Sokolov 1973, 49, fig. 33; Mozolevskii 1983, 186ff., figs. 163–165; Pfrommer 1990b, 288, FK 170, pl. 28: 1; *Cat. St-Petersburg* 1995, No. 200; Saverkina 2000, 16, fig. 5; Petrova 2000, 162, fig. 40; Podossinov 2002, 28, fig. 10.

[62] *Archaeological Museums of Istanbul Third Report* (No. 3), 1949, 23ff., fig. 12; *Annual of The Archaeological Museums of Istanbul* No. 7, 1956, fig. 20; Pfrommer 1990b, 242 FK 73, note 1888; Meriçboyu 2001, 159ff., fig. on pp. 160–61.

[63] *Cat. Milan* 1984, No. 68; Guzzo 1993, 250ff., fig. 43; *Cat. Venice* 1996, 475, No. 309.

[64] *Cat. Trieste* 2002, No. 87.3–4.

of jewellery, primarily in several variants, one of which bears enamel inlays in filigree settings. It seems that we have enough grounds at least to suppose the possibility of the Bosporan manufacture of the jewellery set from the Elder Three Brothers barrow. Evidently, in imitation of the bracelets from the jewellery set, a less competent craftsman produced the spiral finger rings with the ends decorated as lion protomes (Fig. 31). The necklace, as I tried to show above, was most probably redesigned in antiquity. Perhaps in a different workshop there were executed the plate and the plaques of the head-dress, which demonstrate, as the main set of jewellery, a high level of execution, whereas the constructive and decorative elements of the *calathos* pendants testify probable Asia Minor prototypes.

It is worth to note, that the above discussed first-rate items were combined in the costume of the deceased with a string of ordinary and rather primitively executed hollow beads with pendants in the form of caps and myrtle buds (the latter with the parallels both from Asia Minor, and North Pontic area) (Fig. 17), a string of faience gilt seed-like beads (Fig. 18) having numerous parallels in the burials of the second half of the 4th century BC in Macedonia. In a casket and in a special enclosure together with black-glazed and red-figured pottery and bronze mirrors there were also deposited typical for the ordinary Scythian burials beads of glass, paste, cornelian, amber, rock crystal and gagate (Fig. 19). These were completed by the small delicately carved and painted double-sided comb-shaped pendant having parallels both among the bone and gold pendants from the Scythian burials of the North Pontic area and the necropolises of Olbia and the Bosporan Kingdom. Such a variegated character of ornaments in the female burial of the Elder Three Brothers barrow certainly reflects the acculturation process, taking place in the Bosporan Kingdom in the Early Hellenistic period.

Supplement. Catalogue of ornaments from the Elder Three Brothers barrow

The decoration of *calathos* (Cat. No. 1):

1. The decoration of *calathos* in the form of a bent plate with hammered relief friezes in the form of ovae, alternating palmettes and lotus flowers, and animals (pairs of lions and panthers). The frieze with animals is framed below and above with rows of relief dot-pattern. In its central inner part the plate is additionally decorated with 29 elements consisting of two rows of big hollow beads soldered to each other, with contour plaques between them, flat on the rear and decorated with double relief spirals from the front, with beech-nut pendants. Along the upper edge of the plate there were holes for sewing.
Gold 958˚, hammering, forging, soldering, granulation, filigree. L. 51 cm (along the lower edge) – 57.0 cm (along the upper edge). Ht. 4.0 cm (at the edges) – 4.8 cm (in the centre). Circumference inner along the base 20.3 см. Ht. of the frieze with dot framing 1.7 см. Pairs of animals: L. of each composition: *ca*. 5.0 cm. Ht. of the frieze with alternating palmettes and lotus flowers *ca*. 1.2 cm. Beads with pendants: total Ht. 2.8 cm. Ht. of the beech-nut pendants with loops 1.3 cm. Dm. of the beads *ca*. 0.35 cm. Plaques with spirals: *ca*. 0.8 x 0.8 cm.
Plate – MIDU, Inv. No. AZS-2267. Wt. 28.60 g. Pendants – MIDU, Inv. No. AZS -2269/1. Wt. 0.88 g. (total Wt. 23.63 g).
Bibliography: Kirilin 1968, 181ff., fig. 4; Sokolov 1973, 44, fig. 24; Ganina 1974, fig. 62–63; *Orfèvrerie ancienne* 1975, no No.; Shtitelman 1977, No. 161; Miroshina 1980, 36ff., pl. I, No. 15. Galanina and Grach 1986, fig. 223; Pfrommer 1990b, 268ff., note 2348, FK 126; Jacobson 1995, 150 III. A.5; *Ancient Greek Sites* 2004, 269 (fig).; Chaikovsky *et al*. 2004, No. 23.
Figs. 1–3.

Sewn plaques from a calathos or a veil (Cat. Nos. 2–3):

2. Trapezoid plaques widening upwards with relief images of Nike with the wings downwards, dressed in a long chiton with folds waving below. In the right hand, bent in the shoulder and slightly stretched forward there is a torch (?). In the left hand, put aside behind – a jug with a biconical body. Along the edge a band of relief dot pattern. Six small round holes for sewing, three holes along the upper edge, each one in the middle of other sides. Seven pieces.
Gold 958˚, hammering. Ht. 2.6 cm. L. of the upper edge 2.5–2.6 cm, lowere edge 1.0–1.1 cm. Wt. 0.91 g (total Wt. 6.3 g).
MIDU, Inv. No. AZS-2274/1.
Bibliography: Kirilin 1968, 181ff., fig. 3: 2; Sokolov 1973, 44, fig. 24 below.
Fig. 4.

3. Half-oval sewn plaques with nine-petal palmettes with S-shaped scrolls at the base. Four holes for sewing, pierced from the rear, two holes above, and each one below at the edges. Eight pieces.
Gold 958˚, hammering. Ht. 2.8 cm. L. of the basement 2.5 см. Wt. 0.64 g. (total Wt. 5.49 g).
MIDU, Inv. No. AZS-2273/1.
Bibliography: Kirilin 1968, 181ff., fig. 3: 1; Sokolov 1973, 44, fig. 24 below.
Fig. 5.

4. Earrings with sculptured pendants in the form of sphinxes. Hollow figures of various dimensions on low rectangular basements. The wings and tails made separately and soldered, the tail made of round in section wire. The wings are additionally fixed from the rear with the soldered wire, quadrate in section. To the rear of the head there is soldered a curved wire rectangular in section forming the hoop. The hoop is decorated with the soldered in front of it a two-layered lamellar rosette with the petals framed with beaded filigree. The lower level of the rosette represents a flat seven-petal rosette. The upper six-petal rosette is decorated with alternating inlays of blue and green enamel. In the centre there is soldered a grain. The *stephanoi* of the sphinxes are decorated in the middle with filigree palmettes and ivy ranks with inlays of blue and green enamel. Round earrings are also filled with enamel.

The basement is decorated with beaded filigree settings in the form of an ovae frieze with alternating blue and green enamel inlays. Above and below along the edges of the basement there are soldered a flat plate and a row of small grains. On the lower surface of the basement there are holes of a round and triangular shapes, which probably served originally for fixation of pendants.
Gold 900˚ (2282/1) and 958˚ (2282/2), blue and green enamel, casting, soldering, forging, engraving, granulation, filigree, incrustation.
MIDU, Inv. No. AZS-2282/1: Ht. total 4.57 cm. Ht. of the sphinx figure 3.4 cm. Basement 1.5 x 0.7 cm, Ht. 0.6 cm. Rosette: Dm. 0.65 cm. Wt. 9.27 g.
MIDU, Inv. No. AZS-2282/2: Ht. total 4.38 cm. Ht. of the sphinx figure 3.2 см. Basement 1.5 x 0.8 cm, Ht. 0.5 cm. Rosette: Dm. 0.65 cm. Wt. 9.08 g.
Bibliography: Kirilin 1968, 183ff., fig. 5; Ganina 1974, fig. 64; Sokolov 1973, 45, fig. 26; *Orfèvrerie ancienne* 1975, no. No.; Petrenko 1978, 32, pl. 20: 5; Mozolevskii 1983, 112, fig. 89; Galanina and Grach 1986, fig. 245; *Cat. Schleswig* 1991, No. 110; *Cat. Vienna* 1993, No. 52; Jacobson 1995, 95.I.D.1, fig. 2, 3; *Cat. Milan* 1995, No. 37; *Cat. San Antonio* 1999, No. 96; Zinko 2003b, 120, 289, pl. XVII: 2; *Ancient Greek sites* 2004, 133 (fig.); Chaikovsky *et al*. 2004, No. 40.
Figs. 6–8, 31.

5. Elements of a necklace in the form of corrugated tubes, links in the form of the rosettes and seed-like pendants of two types.
A) eight-petal rosettes, petals framed with soldered thin beaded wire. Grains in the centre. To the rear there are soldered vertically one above another two wire loops. The upper loop was used for threading of the necklace string. The lower loop for hanging of a seed-like pendant, composed of a body with hammered and granulated decoration, a basement in the form of a ring made of thin beaded wire with two grains vertically soldered onto it one below another, as well as flat reel-shaped neck with a loop for hanging soldered into it. Tubes: 91 pieces. Rosettes with pendants: 11 pieces.
Gold 958˚, hammering, forging, soldering, filigree, granulation.
MIDU, Inv. No. AZS-2290/1-91: Tubes: a) L. 2.6–2.7 cm, Dm. 0.2 см; b) L. 1.2–1.4 cm, Dm. 0.2 cm. Total Wt. 13.4 g.
MIDU, Inv. No. AZS-2279/1: Rosettes: Dm. 0. 9 cm. Pendants: total Ht. 2.8 cm. Seed-like pendants: Ht. 2.1 cm (without loop). Dm. of the body max. 0.8 cm. Wt. 1.52 g (total Wt. 16.54 g).
Figs. 9–10.
B) links in the form of two-layered rosettes and pendants with shields in the form of two-layered rosettes, with seed-like pendants. Upper rosettes of the links and the shields of the pendants, as well as seed-like pendants, are decorated with beaded filigree settings with inlays of blue and green enamel. Rosette-shaped links: a lower layer – a ten-petal rosette with petals convex in the central part, upper layer – a six-petal rosette (petals are decorated with alternating inlays of green and blue enamel), in the centre – a miniature grain, on the rear a tube for threading a string is soldered (Fig. 12). Another variant of links represents an eight-petal rosette in the upper layer (Fig. 11). Shields of the pendants in the form of two-layered rosettes: lower layer – an eight-petal rosette, upper layer – a six-petal rosette (the petals are decorated with alternating inlays of green and blue enamel). Two vertical loops one above another are soldered to the rear. Seed-like pendants with flat body, the upper part of which is decorated with vertically arranged drop-shaped settings of thin beaded wire, filled with enamel. Flat reel-shaped neck with a loop soldered into it. The basement is made of two alternating rings and two grains (Fig. 13). Links: 12 pieces. Rosettes with pendants: 10 pieces.
Gold 958˚, green and blue enamel; forging, hammering, soldering, filigree, granulation, incrustation.
MIDU, Inv. No. AZS-2283/1: Links: Dm. 1.2 cm (upper rosette – Dm. 0.7 см). Wt. 0.50 g. (total Wt. 6.67 g).
MIDU, Inv. No. AZS-2284/1: Pendants: total Ht. 2.3 cm. Shields: Dm. 0.8 cm, upper rosette Dm. 0.4 cm. Wt 1.0 g (total Wt. 9.39 g).
Figs. 11–13.
Bibliography: Kirilin 1968, 183; Ganina 1974, fig. 62 below.

Links from the necklace (Cat. Nos. 6–8):

6. Round plaques with convex central part; along the narrow horizontal edge a relief ‘bracket’ pattern. In the central part: a relief image of Pegasos in profile to the left. Two corrugated tubes are soldered to the rear, one above another. 11 pieces.
Gold 958˚, hammering, soldering. Dm. 1.1 cm. Wt. 0.36 g (total Wt. 3.9 g).
MIDU, Inv. No. AZS-2275/1.
Bibliography: Kirilin 1968, 182, fig. 3: 5; 184; Sokolov 1973, 44, fig. 23.
Fig. 14.

7. Relief contour plaques in the form of an eagle with the wings downwards and the head turned to the left. Feathers on the wings, body and tail. Two corrugated tubes are soldered vertically one close to another on the rear. Eight pieces.
Gold 900˚, hammering, soldering. Ht. 1.4 cm. W. max 1.2 cm. Wt. 0.39 g (total Wt. 3.38 g).
MIDU, Inv. No. AZS-2276/1.
Bibliography: Kirilin 1968, 182, fig. 3: 4; 184; Sokolov 1973, 44, fig. 23.
Fig. 15.

8. Plaques of triangular shape, with relief ‚rope’ pattern along the edge. In the middle a relief lotus flower. Two corrugated tubes are soldered on the rear at a sharp angle towards the peak. Two pieces.
Gold 958˚, hammering, soldering. Ht. 1.9 cm. L. of the basement 1.3 cm. Wt. 0.59 and 0.55 g.
MIDU, Inv. No. AZS-2277/1-2.
Bibliography: Kirilin 1968, 182, fig. 3: 5; 184; Sokolov 1973, 44, fig. 23.
Fig. 16.

9. Hollow beads of round and of biconical shapes (87 pieces), soldered of two halves, with pendants of two types. Bigger pendants in the form of cylindrical caps, rolled from gold plates with the ends line-on-line and lamellar loops soldered above (seven pieces). More delicately executed hollow spherical pendants with loops made of thin beaded wire (24 pieces): the lower part of the pendants is decorated with petals in relief and small hole in the centre, imitating myrtle buds (?).
Gold 958° (2268/1) and 900 (2270/1, 2278/1), forging, hammering, soldering.
MIDU, Inv. No. AZS-2268/1: Beads: Dm. max. 0.7–0.8 cm. Wt. 0.31g (total Wt. 23.58 g).
MIDU, Inv. No. AZS-2270/1: Cap-shaped pendants: Ht. 1.3–1.5 cm, Dm. 0.5–0.7 cm. Wt. 0.90 g (total Wt. 5.79 g).
MIDU, Inv. No. AZS-2278/1: Ball-shaped pendants: Ht. with loops *ca*. 1.0 cm, Dm. of the balls 0.6 cm. Wt. 0.27 g (total Wt. 5.76 g).
Bibliography: Kirilin 1968, 183.
Fig. 17.

10. Necklace composed of miniature seed-like terracotta gilt pendants. Wire loops for hanging. 79 pieces.
Terracotta, bronze, gold foil, forging, gilding. Ht. without loops 0.75 cm, Dm. max. 0.48 cm, holes for the loops, Dm. *ca*. 0.1 cm, Ht. with loops 1.1 cm. 20 pendants without loops.
KGIKZ, Inv. No. Б-1675-1773.
Bibliography: unpublished.
Fig. 18.

11. String of beads of various type. 147 pieces.
Glass, glass paste, cornelian, amber, rock crystal, gagate.
KGIKZ, Inv. No. Б-1501.
Bibliography: unpublished.
Fig. 19.

12. Cowrie shells with cut off backs. 19 pieces.
L. 2.6–2.7 cm, W. 1.9–2.0 cm, thickness *ca*. 1.0–1.1 cm.
KGIKZ, Inv. No. Б-1775-1792, Б-2325.
Bibliography: unpublished.
Fig. 20.

13. Pendant in the form of a miniature double-sided comb.
Miniature bone comb with incomplete close toothing, double-sided. Slightly bent inwards front sides; in the centre of one of them there is a round cavity, in which there was originally fixed a bronze loop. A central part of the comb bears a delicate decoration in the form of three groups of paired vertical lines, between each of which there is a vertical row of circle pattern with dots in the centre. Each row consists of four circles. Inside some of them there are preserved remains of red paint. The decoration on the rear is almost lost.
Bone, bronze, red paint; carving, polishing, painting. W. 3.8 cm. Ht. at the edges 3.15 cm, in the centre 2.53 cm. Thickness max. 0.77 cm. Cavity for fixation of the loop: Dm. 0.2 cm, depth *ca*. 0.9 cm. Circles, Dm. *ca*. 0.15 cm. Depth of toothing *ca*. 1.0–1.1 cm.
KGIKZ, Inv. No. Ko-648.
Bibliography: unpublished.
Figs. 21–22.

14. Lamellar bracelets with a bronze core plagued with gold plate, spiral in two and a quarter turns. The outside surface of the hoops is modelled in the form of the wide flat somewhat convex central part and two rims at the edges, which are decorated with grooves. The terminals are decorated with relief hammered lion heads with ezes inlaid with enamel. The collars are decorated with friezes of ovae, with a frieze consisting of a palmette framed with two lotus flowers. The friezes executed in flat filigree, are decorated with alternating inlays of blue and green enamel. A filigree decoration between the terminals and the collars is represented by a 'braid', framed with soldered beaded wires. The collars are separated from the hoop with the soldered beaded wires, framed with flat wires. The collar and the terminal represent a single plate, with its ends turned inside the hoop and ending line-on-line. They are additionally fixed with thin wires, being the continuation of the filigree decoration of the outer side of the terminals and the collars.
Bronze, gold 958°, blue and green enamel; casting, hammering, forging, soldering, filigree, incrustation.
MIDU, Inv. No. AZS-2281/1: Dm. 8.0 x 7.6 cm. Hoop: W. 1.5 cm, thickness 0.27 cm. Plate of collar and terminal: total L. 4.0 cm, W. of outer side 1.57 cm. L. of lion heads 1.85 cm. Wt. 129.85 g.
MIDU, Inv. No. AZS-2281/2: Dm. 7.8 x 7.6 cm. Hoop: W. 1.5 cm, thickness 0.28 cm. Plate of collar and terminal: total L. 4.0 cm, W. of outer side 1.60–1.65 cm. L. of lion heads 1.85 cm. W. of palmette-lotus flowers frieze 1.2 cm. Wt. 129.47 g.
Bibliography: Kirilin 1968, 184ff., fig. 6: 1; Ganina 1974, fig. 65; *Orfèvrerie ancienne* 1975, no No.; Petrenko 1978, 57, pl. 47: 13; Mozolevskii 1983, 115, fig. 94; *Cat. Vienna* 1993, No. 53; *Cat. Milan* 1995, No. 35; *Cat. San Antonio* 1999, No. 97; Treister 1999, 77; 2001a, 90, 144ff., fig. 60; Zinko 2003b, 120, 289, pl. XVII, 1; Chaikovsky *et al*. 2004, No. 47.
Figs. 23–26, 31.

15. A pair of spiral finger rings. Made of a band in three and a half and in four turns. The edges of the hoop are grooved, the central part of the hoop is convex. The ends are decorated with chiselled lion heads with schematically treated manes and round eyes.
Gold 900°, hammering, chiselling.
MIDU, Inv. No. AZS-2271/1: finger-ring in four turns. L. 2.6 cm. Dm. 1.8 cm (outer). W. 0.42 cm. Thickness 0.07 cm. L. of the lion head 0.9 cm. Wt. 8.40 g.
MIDU, Inv. No. AZS-2271/2: finger-ring in three and a half turns. L. 2.7 cm. Dm. 1.9 cm (outer). W. 0.43 cm. Thickness 0.07 cm. L. of the lion head 0.9 cm. Wt. 8.24 g.
Bibliography: Kirilin 1968, 184ff., fig. 6: 2; Sokolov 1973, 44, fig. 23; Petrenko 1978, 57, pl. 47, 14 (mistakenly designated as bracelets).
Figs. 27, 31.

16. Finger-ring with a movable scarab with an image of a dancing female figure, executed in intaglio on the inner side. The hoop is soldered of two twisted wires with a beaded wire, laid from outside in a central valley. The ends of the wires are flattened out to form lamellar receivers, through which a flat wire is threaded. This wire serves as an axis for a hollow bezel in the form of the scarab. The ends of the wire are twisted spirally to the hoop. The plate with the image of an dancing figure is made separately and is fixed with frame having the edge in the shape of ovae with the wires soldered along their edges. The side part of the scarab is decorated with soldered flat and beaded wires with a 'braid' of two flat twisted wires in the middle.

Gold 958°, hammering, forging, chiselling, soldering, incrustation.

Bezel: L. 9 x 1.4 cm, thickness 0.8 cm. Hoop: Dm. 2.7 x 1.55 cm, W. 0.4 cm, thickness 0.28 cm. Wt. 10.36 g.

MIDU, Inv. No. AZS-2272.

Bibliography: Kirilin 1968, 185f., fig. 7; Sokolov 1973, 44, fig. 23; *Cat. Schleswig* 1991, No. 111; *Cat. Vienna* 1993, No. 58; *Cat. Milan* 1995, No. 41; *Cat. San Antonio* 1999, No. 98; Zinko 2003b, 121, 288, pl. XVI, 2; Chaikovsky *et al.* 2004, No. 50. Figs. 28–30.

Cimmerian Bosporus: Main Phases of Pre-Roman History

Y. A. Vinogradov

At the turn of the 21st century, the growth of interest in history in general and the history of science in particular seems quite natural. The two-century research into the history of the Cimmerian Bosporus is of doubtless value for both disciplines. Only recently has the intensive archaeological investigation of Bosporan and other ancient sites of the northern Black Sea littoral and the adjacent, barbarian territories allowed development of a new approach to the history of the region, which, contrary to the conventional subdivision of ancient history into the Archaic, Classical, Hellenistic, and Roman periods, provides a more detailed chronology and pays more attention to regional features and local content.

This approach cannot be regarded as absolutely new. Widely-known is the periodisation of the history of the northern Black Sea littoral suggested by V.D. Blavatskii (1959). His scheme is based on the concept of the social and political development of local Greek states and the origination of such a phenomenon as 'proto-Hellenism'. We do not reject the validity of this periodisation, but it is useful to stress that the most important feature of the northern Black Sea littoral, which distinguishes the northern Pontus from other regions of Greek colonisation, is its unique demographic situation, influenced in many respects by nomads. New and new waves of nomads, who periodically (once per 200–300 years) migrated along the steppe corridor from east to west, led each time to dramatic military, political, and demographic changes within the whole region. Of course, these changes could not but tell on the life of local Greek colonies, the Cimmerian Bosporus in particular, since geographically they were the first sites located on the way of nomadic hordes.

To formulate a periodisation of the history of any ancient state in the northern Black Sea littoral, it is critical to study the development of Greek-barbarian relations in this region and to establish major periods of nomadic (Scythian, Sarmatian and others) advance from the east. Being a serious military power, very mobile, *etc.*, nomads gained a foothold in the northern Black Sea steppes and eventually grew here into the dominating political factor. This could not but influence the economical situation not only in the territories populated by natives, but also in the ancient states of the northern Pontus, including Bosporus.

With the above approach in mind, we can divide the history of the pre-Roman Cimmerian Bosporus into seven major periods. The principle of this periodisation is formulated in a series of publications written by the author in conjunction with K.K. Marchenko (Marčenko and Vinoradov 1989a; 1989b; Vinogradov and Marchenko 1991) or K.K. Marchenko and E.Y. Rogov (Vinogradov *et.al.* 1997), and in individual papers by the same authors, reflecting the differences in their approaches (Marchenko 1996; Vinogradov 1999a).

From the very beginning, it is necessary to stress that the chronological boundaries of the periods to be discussed below are rather conventional; some of them fall into sub-periods, which, in their turn, may be divided further on with regard to new data to come. But on the whole, the scheme suggested may be useful for the systematisation of available archaeological material and, consequently, for a better understanding of its historical background.

1. Greek colonisation of the shores of the Strait of Kerch: founding a number of apoikiai; establishing contacts with local tribes

At present, one has every reason to believe that Greek acquaintance with the north-eastern Black Sea and the Sea of Azov dates back to quite an early time. Archaeological data from the Taganrog settlement evidences that it was founded as far back as the third quarter of the 7th century BC (Kopylov and Larenok 1994, 5; Kopylov 1999b, 174–75). However, the majority of sites on both shores of the strait arose later, approximately at the turn of the second quarter of the 6th century BC (Kuznetsov 1991, 33–4; Koshelenko and Kuznetsov 1992, 18–9).

In contrast to other regions of Greek colonisation in the northern Black Sea littoral, Bosporus had multiple *apoikiai* located within a comparatively small area (Vinogradov 1993, 79, 86; 1995, 152–54; Molev 1997b, 9; Tsetskhladze 1997b, 44). The following sites may be regarded as *apoikiai*: Panticapaeum, Nymphaeum, Phanagoria, Hermonassa, Kepoi, and Gorgippia (*Sindon Limen*). Other settlements – and according to literary sources and archaeological data there were dozens of them (Latyshev 1909, 61; Gaidukevich 1949, 154; Gajdukevič 1971, 32, 170) – were founded probably as a result of internal colonisation. It is curious that most of early settlements in the European Bosporus were rather large and grew later into towns. This was not common for other regions of Greek colonisation.

Such a density and size of Greek sites in Bosporus may be explained by the proximity of the Cizcaucasian Scythia; in addition, according to Herodotus [4. 28], the territory of Bosporus lied across one of the historical ways of the Scythian nomadic horde (Vakhtina *et.al.* 1980). Therefore the Greeks, populating the region of the strait, could not feel safe and preferred to live in large cities built on sites easy to defend (capes, plateaus, *etc.*) and at a small distance from each other.

Around the middle of the 6th century BC, Bosporus must have become the scene of dramatic events provoked, probably, by the aggravation of the relations between the Greeks and local tribes. This is evidenced by traces of disastrous fires in Kepoi, Myrmekion, and Porthmeion (Kuznetsov 1992, 32, 42; Vakhtina 1995, 32–3; Vinogradov 1999a, 288); destroyed at approximately the same time was the Taganrog settlement (Kopylov 1999b, 174–75). Remains of fortifications have been discovered in Myrmekion and Porthmeion (Vakhtina 1995, 32–3; Vinogradov 1999a, 290–93); they are the earliest defensive structures in the northern Black Sea littoral known to date. Of particular interest are the unique masonry walls of these fortifications: built to the same standard, they differ completely from all later structures of this kind. It is worth mentioning that these walls were constructed in Myrmekion (and probably in Porthmeion, as well) at the time when Greek colonists lived mainly in miserable semi-dugouts of semi-barbarian appearance (to be discussed below).

Lately, a curious opinion has appeared to associate fires in Bosporan cities with the naval campaign of the Persians against the Scythians, mentioned by Ktesias of Cnidus [*FrGrHist* 688 F13]. This campaign is believed to have resulted in the submission of the Cimmerian Bosporus to the Persian state (Koshelenko 1999, 134; Maslennikov 1999, 175–76). In my opinion, this event could hardly take place. One should note that traces of destruction from the middle of the 6th century BC have been found not only in Bosporus, but also, for example, in the lower Dnieper region: the production complexes of the Yagorlytskoe site were destroyed at this very time, as well (Ruban 1983, 289; Vinogradov and Fonyakov 2000, 96).

Modern archaeological data suggest that initially almost all Greek settlements had rather a primitive, semi-barbarian appearance, with residential and household structures of a semi-dugout form. Dugout construction probably persisted for 70–80 years from the foundation of a settlement; then all dugouts were filled up with earth and new ground structures, paved courtyards, sidewalks, *etc*., were built on their site (Vinogradov and Rogov 1997, 67–8; Vinogradov 1999c, 108–9; 2000b, 230–31). The development of the urban structure meant that Greek colonists had finally adapted to the complex climatic, ecological, and demographic conditions of the region. At the turn or the very beginning of the 5th century BC, the most important Bosporan settlements turned into large urban centres and entered a period of prosperity, which embraced all spheres of life and lasted until the end of the first quarter of the 5th century BC.

At this early stage, we observe a number of important tendencies, such as the development of individual power in the majority of Bosporan colonies. The *poleis* grew to realise the advantages of their unification in critical situations. This, in my opinion, was possible only because Greek colonists came, as a rule, from various metropolises. Having settled in the region of the strait in close proximity to each other, they could subdue their patriotic feelings towards their new homeland (devotion to native stones, woods, *etc*.) much easier than if they had been in their original countries. The above tendencies took shape during the next phase of Bosporus' history.

2. Rule of the Archaeanactid dynasty (480–438/37 BC)

This period was marked by a noticeable destabilisation in the steppes of the northern Black Sea region, associated, according to Y.G. Vinogradov and his followers (Vinogradov 1980, 70; 1983, 398; Tolstikov 1984, 24; Shelov-Kovedyaev 1985, 63), with the growth of Scythian threat. The situation was dominated by a number of factors, among which the westward advance of a new Scythian horde from the territories east of the Don River was the most important (Marčenko and Vinogradov 1989b, 807; Vinogradov and Marchenko 1991, 150; Alekseev 1992, 109; 1993, 33). As a result, Greek colonies experienced hard times, as evidenced by traces of fire in many Bosporan sites and by fortifications in Myrmekion, Tyritake, Porthmeion, and Phanagoria (Tolstikov 1984, 30; Vinogradov and Tokhtasev 1994).

These very circumstances must have prompted Bosporan poleis to form a defensive alliance (*symmahia*) with the Archaeanactids at its head [Diod. 12. 31. 1]. This union can hardly be regarded as an indivisible state. The coinage of Phanagoria and Nymphaeum (Shelov 1956b, 49–50), dating from a later time, evidences that it was not so. Another proof is provided by the burial mounds of barbarian nobility at Nymphaeum, Panticapaeum, Phanagoria, Kepoi, and probably, Hermonassa (Rostowzew 1931, 232, 241–42, 344, 348–49; Silanteva 1959; Yakovenko 1974, 105; 1977; Vickers 1979; Maslennikov 1981, 36–7), dating to the rule of the Archaeanactids. All this indicates that Bosporan *apoikiai* did not (on the whole) lose their independence on having entered the above union.

At present, one tends to exaggerate the importance of the Archaeanactid state. Nevertheless, the Archaeanactids played an essential part in the history of Bosporus. Apart from the victory over the Scythians, their *symmahia* demonstrated all apparent advantages of a union, particularly in the region located at the meeting-point of two parts of the world (Europe and Asia, as believed in antiquity), two seas (the Black Sea and the Sea of Azov), two large river arteries opening the way to the *hinterland* (the Kuban and the Don) and two principal groups of barbarian population, or in other words, two worlds – nomadic and settled. In principle, one may say that the Archaeanactids laid the first brick in the foundation of the unified Bosporan state, that of the Spartocids.

3. The Spartocids

In 438/37 BC, the power in Bosporus was taken by Spartocus [Diod. 12. 31. 1]. At approximately the same time, the northern Black Sea littoral enters a stabilisation period, which led later to the golden age of Great Scythia (Marčenko and Vinogradov 1989b, 808). Different sources report that the economical and cultural rise in the Cimmerian Bosporus fell on the last third of the 5th –

4th centuries BC. The then favourable military and political situation is confirmed by the intensive development of the Bosporan *chora*, the history of which knew several peaks, one falling on the time under discussion (Kruglikova 1975, 53, 254, fig. 101; Paromov 1990, 64; Maslennikov 1998, 43).

It is well-known that the first Spartocids carried out an active policy aimed at the reinforcement of their state and the expansion of its territory. Satyrus I conquered Nymphaeum [Aeschin. 3, 171–72], Leucon I attached Theodosia and a number of territories in the Asiatic Bosporus populated by barbarian tribes [*cf. CIRB* 1111, 6, 6a, 8, 1037, 1038]. It is under Leucon I that Bosporus grew into a Greek-barbarian state with a mixed socioeconomic structure and an unparalleled Greek-barbarian culture, so remarkably represented by the graves of the Bosporan elite – the famous mounds of the Cimmerian Bosporus. These mounds perfectly reflect the new structure of the state. They group around two capitals – Panticapaeum and Phanagoria, the ones at Panticapaeum being larger in number and more representative (Kul-Oba, the Patinioti mound, the mound on the land of Mirza Kekuvatskii and others). They evidence that Bosporus had close political, economical, and cultural links with the Scythian steppe of the northern Black Sea region and are indicative of an alliance between the two.

The Bosporan-Scythian alliance was based on similar political, economical, and cultural goals of Bosporan rulers and Scythian kings. The former concentrated innumerable treasures in their hands, with the main bulk coming from the bread trade with Greece. We agree with V.D. Kuznetsov and other scholars that only a despotic regime, under which all power was in the hands of the ruling dynasty, could guarantee the Spartocids such a concentration of material resources (Kuznetsov 2000, 117). It would have been impossible under any democratic system.

In these circumstances, the rise of the Bosporan toreutics school, which falls on the 4th century BC, is not surprising. The Bosporan elite were so wealthy at the time that it could afford the best craftsmen and artists from Greece, who created remarkable pieces of art to the taste of the local Greek-barbarian aristocracy. Their works, even in larger quantities, have also been found in the hinterland, in the graves of barbarian kings. These should be interpreted as the so-called diplomatic gifts rather than mere imports (evidence of trade contacts). Diplomatic gifts were an important factor in the regulation of the Greek-barbarian relations on the topmost level: Bosporan rulers resorted to them to pursue their political goals. Diplomatic gifts are a reliable indicator of an alliance between Bosporus and Scythia. However this alliance could be successful only as long as the situation in the region was comparatively stable and the royal Scythians dominated Steppe Scythia, treating other Scythians as slaves [Herod. 4. 20].

It took only a short period before this stability came to an end. From Demosthenes' speech against Phormion, we learn about a war of the Bosporan king Pairisades I against the Scythians, which led to complications in trade [Dem. 34. 8]. But this war was only a symptom of forthcoming dramatic events.

The conflict of Pairisades' sons in 310/9 BC [Diod. 20. 22–4] can hardly be regarded as a simple dissension or a small civil war. The quarrel of the brothers over the Bosporan throne coincided with the time of the struggle between two ethnical and political groups – the Scythians and the Sarmatians. Evidently, Satyrus and Prytanis were supported by the Scythians, whereas Eumelus – by the Siraces, *i.e.* the Sarmatians (Rostovtzeff 1922, 145; 1930, 577; Desyatchikov 1977; Marchenko 1996, 114–15). Eumelus was the one to take the power, and this event marks the beginning of a new phase in Bosporan history.

4. Sarmatian 'horde'

The first half of the 3rd century BC can be described as a period of destabilisation in the northern Black Sea region, associated with the fall of Greater Scythia. Evidently, the Sarmatians carried out a number of successful raids against the Scythians, but failed to take root in the northern Black Sea area. For quite a long time, they were confined to territories located further to the east – the Don and the Kuban regions (Marchenko 1996, 113), whereas the steppes of the northern Pontus littoral remained practically unpopulated (Abramova 1961, 91; Polin 1992, 111; Simonenko 1994, 116, 119). This unusual phenomenon can probably be explained by the expansion of the Celts from the west. Perhaps, the Don region witnessed the collision between two waves of expansion – the western (Celtic) and the eastern (Sarmatian). None appears to have won, and the northern Black Sea steppes remained, in essence, 'nobody's' land until the beginning of the 2nd century BC (Vinogradov *et al*. 1997, 101–2).

Towards approximately the first third of the 3rd century BC, the rural settlements of Bosporus and other Greek states of the region tend to disappear, being too weak to withstand enemy's attacks. A number of sites in the eastern Crimea provide us with vivid examples of the dramatic events that took place at the time (Maslennikov 1998, 63). Cities started active defensive construction, but again, involved in it was mainly the European part (Panticapaeum, Myrmekion, Tyritake, *etc*.). We do not know exactly who their enemy was. One can only suggest that it was the Scythians (or what remained of them), who had earlier been forced out to the Crimea and who tried to recover their former territories in the northern Black Sea region.

The military and political events described above led to the crisis of the Bosporan grain trade. Bosporan agriculture could not provide sufficient bread for export (Kruglikova 1975, 53). This resulted in the reduction of the income from grain sales, which, in its turn, told on Bosporan finance. In addition, the situation was complicated by the crisis of the monetary system, which befell Bosporus (Shelov 1956, 144; Anokhin 1986, 48) and other Greek states of the region.

In the Asiatic part of Bosporus, located closer to the territories occupied by the Sarmatians, the situation was supposed to be even worse. However, no evidence thereof has been found. Traces of a fire, revealed in the Semibratnee site, date from the same time (Anfimov 1951, 242), but the relations with new neighbours seem to have been regulated within a short time. In this connection, the victory of Eumelus in the internecine war of 310/9 BC was not accidental. He was supported by the Siraces, which could not but tell on his further policy. It is not surprising that at the end of the 4th century BC, the Elizavetinskoe settlement became an important centre of Bosporan influence in the Kuban region (Anfimov 1967, 130). Also significant is the fact that burial mounds of Bosporan aristocracy, dating from this time onwards, occur almost exclusively in the Asiatic Bosporus. The latest of them – the Ak-Burun mound, located in the eastern Crimea and excavated in 1875, – has obvious Maeoto-Sarmatian features (Vinogradov 1993a, 46).

The same situation is observed in the Don delta, *i.e.* on the way of the Sarmatian horde. Archaeological material from the Elizavetinskoe site evidences that Bosporans founded here a colony at the very beginning of the 3rd century BC. The colony, however, did not exist for a long time: it must have been burnt by the Sarmatians in the 70–80s of the same century (Marčenko *et al.* 2000, 259). Around the same time, Tanais arose (Shelov 1970, 23) to grow soon into the largest centre of Bosporan influence in the Don region [Strabo 7. 4. 5].

5. Period of 'cultural revival'

Following M.I. Rostovtsev, we regard the second half of the 3rd – the first half of the 2nd centuries BC as a period of cultural revival in Bosporus (Rostovtzeff 1930, 581; 1932, 227). As previously, this revival was associated with the stabilisation process in the steppes of the northern Black Sea littoral; however this time, only a relative stability was achieved. Its effect was most pronounced in the eastern part of the region (Vinogradov 1999a).

In Bosporus, this period was marked by the revival of rural settlements, many of which had now their own fortifications (Kruglikova 1975, 95–6; Maslennikov 1998, 89–90). The financial system of the state recovered, as evidenced by the monetary reform of Leucon II (Zograf 1951, 179; Shelov 1978a, 192; Anochin 1986, 57). In the Asiatic part, rich burial mounds of the barbarian nobility were built: among them are the complexes of the Vasyurinskaya Gora, Buerova Mogila, and Merdzhany. The relations with the barbarian tribes of the Don and the Kuban regions must have remained as close and friendly as during the previous period.

6. Period of destabilisation

Towards approximately the middle of the 2nd century BC, the above stability was interrupted by a new horde of nomads from the eastern Don River basin (Simonenko 1994, 118–19). As a result, the region was thrown into political and economical crisis. From time to time, according to Polybius, Pontus had to import grain from the Mediterranean region [Polyb. 4. 4–5].

It is almost beyond doubt that the main threat for the Bosporan state came from the East. Strabo reports on belligerent barbarians at the borders of the Asiatic Bosporus [Strabo 11. 2. 4], revolts of subordinate tribes [Strabo 11. 2. 11]. All this led to the destruction of some rural settlements in the Asiatic Bosporus, among which was the famous Taman tholos (Sokolskii 1976, 46; Onaiko 1967, 168; Sorokina 1985, 377). It must have been then that the construction of a complex defence system started on the Fontalovskii Peninsula (Sokolskii 1976, 107, 116). To resist the nomadic advance from the east, the rulers of Bosporus had to seek support from the kings of Crimean Scythia, as we can learn from the epigraphic document found in Panticapaeum (Vinogradov *et al.* 1985, 590; Vinogradov 1987, 58). However, the close contacts with the Scythians did not bring any positive results: Bosporus was forced to cooperate with the piratical tribes – the Achaeans, the *Zygoi*, and the *Heniochoi* [Strabo 11. 2. 12] and paid natives a constantly growing tribute [Strabo 7. 4. 4].

The ongoing scholarly discussion as to whom Bosporus paid this tribute – the Scythians or the Sarmatians (Molev 1994, 114; Vinogradov 1987, 67–9; Saprykin 1996, 140) – seems to have no point. One can hardly find any example in ancient history, when a barbarian leader would refuse of his own free will to accept a tribute or 'traditional gifts' from the Greeks under the pretext of peaceful and friendly relations. The very purpose of these gifts was to guarantee the friendship of the barbarians. Under the circumstances described above, Bosporans had to pay everybody who might represent a threat; therefore tributes, according to Strabo, grew "bigger than earlier" [Strabo 7. 4. 4].

Based on what has been said above, one may suggest that Bosporus concluded a union with Crimean Scythia. But this union could hardly protect Bosporus against other barbarians – the Sarmatians, the Achaeans, *etc*. The potential of Minor (Crimean) Scythia could not compare with that of Greater Scythia, the union with which had resulted in the prosperity of the 4th century BC. Under new circumstances, Bosporans did not profit from the Scythian support, which, in my opinion, aggravated the tragedy of the situation. The affairs of the state grew worse and worse, the power of the once multi-potent rulers suffered degradation. The Bosporan Kingdom was on the verge of a catastrophe, which was a direct result of its de-Hellenisation (Yailenko 1990, 129). These circumstances forced the last Pairisades to give over the power to the Pontic king Mithridates VI Eupator.

7. Bosporus as a part of the Pontic state

The rule of Mithridates VI Eupator had a dramatic impact on the further, Roman period of the history of Bosporus.

Most likely, barbarians – the Scythians and the Achaeans in particular – wanted to recover their influence over Bosporus. Probably, the revolt of Saumacus in 107 BC should be regarded in this context (Rubisohn 1980). It was suppressed by Diophantus, whereas another Mithradatic general Neoptolemus won two victories over barbarians in the Cimmerian Bosporus, one on the sea and the other in the battle of horse cavalries on the ice of the frozen strait [Strabo 2. 1. 16; 7. 3. 18]. Most probably, these natives were the Achaeans and other piratical tribes of the north-western Caucasus.

Mithridates assigned an important part to Bosporus as a source of soldiers, munitions, food, *etc*. But the Mithridatic wars against Rome had a negative effect on the situation in Bosporus. After the First Mithridatic War, Bosporus separated from Pontus [App. *Mithr*. 64, 67]. One should associate this event with barbarians rather than Greeks (Shelov 1978b, 56; 1983, 53). The sources available to date allow us to suggest that these natives were the ones who fought against Mithridates for their control over Bosporus, *i.e*. the Scythians and the Achaeans. The common belief that the Scythians were the major support to the king in his wars seems too exaggerated; his more devoted allies were the Maeotian tribes of the Kuban region, the Sarmatians and the Bastarnae (Yailenko 1990, 130).

After the defeat in the last war with Rome, Mithridates had to flee to Bosporus, where he started preparations for his new campaign against Rome. The hardships of the previous unsuccessful wars, preparations for another war, and the well-planned actions of the Romans led to a revolt of Bosporan *poleis* against Mithridates, which was supported even by his own army. Of interest is the fact that the barbarians of the northern Black Sea littoral did not take part in this revolt. The death of Mithridates under these circumstances (63 BC) marked the end of a great epoch in the history of Bosporus and the beginning of a new one.

In conclusion, one should stress that the seven periods, into which we divide the six-century pre-Roman history of the Cimmerian Bosporus – the history of revivals and falls, should be regarded only in connection with the events that took place in the steppes of the northern Black Sea region. This dynamic, 'pulsating' process was perfectly characterised by Y.V. Gotie; 75 years ago he wrote that the lands of Bosporan rulers at times had stretched very far, but "at certain stages of decline, the steppe would free itself from the domination of Bosporan cities and start its advance, extending its barbarian influence almost towards the very Panticapaeum" (Gotie 1925, 187). This view on Bosporan history, formulated so clearly at the beginning of the 20th century and forgotten later for unknown reasons, seems still valid in the 21st century.

Bosporus: Panticapaeum and the Territorial State

A. A. Zavoikin

The present article contains preliminary conclusions on the genesis of the Bosporan Kingdom rather than a summary of a detailed research. Of course, it is impossible to cover such a complex subject within the limits of a small paper. At the same time, the term 'Bosporus' itself, if considered from the historical and terminological standpoints, may clarify a number of problems related with the history of the Bosporan Kingdom.

The term Βόσπορος has many meanings, and its use is not always justified. It is the subject to different interpretations, but we will confine our discussion to commonly-accepted meanings only. In the modern historiography the term 'Bosporus'[1] is understood, firstly, as the *name* of a strait or the state of the Spartocids and their successors, and secondly, as 'Bosporan Kingdom'.[2] But how justified are these interpretations? Are they true for all phases of Bosporan history? And is it righteous to say that the term 'Bosporus' was the official name of a state, and if it was, then since what time? The answers to these questions may seem obvious, but in reality the problem is not as simple. Let us consider all meanings of this term.

1. The history of the term dates from the Great Greek colonisation period. Bosporus was then a short name for the Strait of Cimmerian Bosporus (as against the Thracian Bosporus[3]) (Tokhtasev 1999, 86–90; Zavoikin 1994, 66–7). Probably, this was a Greek equivalent to the ancient Iranian term *panti-kap-, which became the name of the oldest Milesian colony in this region, that of Panticapaeum (Blavatskii 1964, 18–9). We have no opportunity to dwell on the curious details of this story or consider possible mythological parallels to the place-name under discussion, dating back to the epoch, when the Euxine Sea was conceived by the Greeks as the Ocean with 'the blessed' inhabiting its islands and the Cimmerians populating its littoral, at the very entrance of Hades.[4] For the purpose of the present article, it is sufficient to say that all subsequent meanings of this term come from this 'ancient' predecessor. This statement entails another question: which meaning should be considered the next? Different opinions exist, but we will turn to them later.

2. 'Bosporus' is an informal name of Panticapaeum,[5] a capital, a political core in the 'historical core' of the state (see item 3). The first author to have used this term in the above meaning is Demosthenes [XX. 33, 36],[6] who knew the official name of the capital – Panticapaeum – as well [35, 31 – *ca*. 328 BC] (Zavoikin 1994, 67). However in written sources this meaning was not popular until the 1st century BC (Blavatskii 1964, 20–2)[7]; in Bosporus itself, it was brought in use only at the turn of the 5th century AD (Tokhtasev 1999, 91). The abbreviation of the official Greek name of ΠΑ, ΠΑΝ, ΠΑΝΤΙ occurs on coins from the second quarter of the 5th century BC onwards (Shelov 1956b, 21, fig. 1: 7).[8]

3. 'Bosporus' is a part of the Spartocid state, which starting with the time of Leucon I [*CIRB* 1111] (Belova 1967), is invariably mentioned in the titles of the archons of "Bosporus and Theodosia…". According to A.N. Vasilev (1985a, 16–7; 1985b; 1992, 122–24), this 'Bosporus' stands for the historical core of the territorial state (which, in his

[1] Or 'Cimmerian Bosporus', which is absolutely incorrect, since this was the name of the present Strait of Kerch (Kallistov 1949, 171–72; Zavoikin 1994, 67). Only once Diodorus Siculus [20, 22] refers to Pairisades I as βασιλεὺς τοῦ Κιμμερικοῦ Βοσπόρου.

[2] Unfortunately, this term is often used for the period, when the Spartocids did not have the status of kings.

[3] The parallel is the Propontic name 'Borysthenes', transferred to the Dnieper region.

[4] According to the hypothesis of O. Gruppe (1906, 389) supported by I.I. Tolstoy (1918, 158), K. Khommel (1981, 75–6), A.S. Ostroverkhov and S.B. Okhotnikov (1993, 78), one of the names of Hades – Εὔξεινος – was transferred to the name of the 'hospitable' (*i.e*. meeting the dead) sea.

[5] Similarly to Olbia (the official name of the polis), which in foreign sources was referred to as Borysthenes. According to the sharp remark of M.V. Skrzhinskaya (1998, 28), "Greek sailors thought this name to be more expressive than Olbia…, and it easily produced an association with the northern Black Sea littoral. From oral tradition it passed into written literature".

[6] One should pay special attention to this fact, as Demosthenes, being closely associated with Bosporus (owing to his business interests and his father's father Gylon) [Aeschin 3. 171–72], was perfectly informed of the real situation in this region. Comparing Theodosia to Bosporus (Panticapaeum), he uses the term 'Bosporus' in the same meaning, in which it is used in the titles of Bosporan rulers (see Item 3). On the other hand, comparing Bosporus (Panticapaeum) with Athens and Piraeus, he mentions that the former was where the decree stelae were located.

[7] Plin. *NH*, 78; Steph. Byz. s.v. Βόσπορος; Luc. *Tox*. 44, 54; Ps.-Arr. *PPE* 82 (*cf*. 67, 75, 76); Epithan. *Adv. haer*. 1. 1. 9; Procop. *De aed*. 3. 7. 10–1. In his narrative of the 'deeds' of Demosthenes' grandfather, Aeschines [3. 171] relates that the latter turned Nymphaeum (a locality "in Pontus") over to the tyrants; after having been convicted, he fled "to Bosporus". What Aeschines means here by the term 'Bosporus' can hardly be divined from this context (a country? state? city?).

[8] *Cf*.: V.V. Latyshev [*IOSPE* I² 15]: This city was called Panticapaeum by the Bosporans and Bosporus by the Greeks; (Zhebelev 1953, 160–61, footnote 3): officially the city had the name of Panticapaeum, in informal speech (sometimes, in official, as well), it was called Bosporus (*cf*. Blavatskii 1964, 20–1).

opinion, included Panticapaeum and the adjacent territories). One of surviving inscriptions evidences [*CIRB* 1111] that the term embraced the whole state of Leucon I, except Theodosia, *i.e*. Panticapaeum and other *poleis* on both shores of the strait. As one can see, the historical and geographical boundaries of this 'core' coincide.

4. 'Bosporus' is the name of the Spartocid state as a whole. The term enters the descriptive construction 'the whole Bosporus' (*cf*. Vasilev 1985a, 15–7; 1985b, 289), which occurs in the extant decrees of the state (Shelov-Kovedyaev 1985, 59–60) from (at least) the rule of Leucon I onwards. In literary sources from the beginning of the 4th century BC (Isocrates, Lysias) to the 1st century BC, its equivalent is the term 'Pontus' (Zavoikin 1994, 67–8; Marinovich and Koshelenko 1999, 87),[9] although the political meaning of the latter is not always clear (probably, 'country').

In foreign sources [Syll^3 370, 424, *etc*.], the *politonym* 'citizen of Bosporus' appears in the first half of the 3rd century BC (Zavoikin 1994, 68). In Bosporus itself, it occurs only in inscriptions of the 4th century BC (mainly its first half).[10] It is curious that the decree of the Arcadians, honouring Leucon I [*CIRB* 37], refers to the latter as "a citizen of Panticapaeum", whereas Spartocus III in the decree of the Athenians [Syll^3 370] is called "a citizen of Bosporus".

One should mention that the expression ἐν παντὶ Βοσπόρῳ occurs in all known decrees of the Spartocids.[11] If the term 'Bosporus' had referred to the entire state of tyrants, the attribute 'whole' would have become a pleonasm or an excessive poetical schema.[12] Evidently, it is not so. Therefore, at least in the epoch of the early Spartocids, the term 'Bosporus' had a different, much narrower meaning, the one, in which it was used in the titles of Bosporan rulers (*cf*. Item 3).

In the 4th century BC, according to E.A. Molev (1997a, 145), the Greeks "transferred the official name of the state" (Bosporus) to the name of its capital, since the Greek term 'Bosporus' seemed more euphonious to them than the local 'Panticapaeum'. As the city played an important part in the colonisation of the region, "this name might have become traditional and dates back to the 6th century BC".[13]

However, the available sources (as has been shown above) do not allow us to agree with such a conclusion. At the time of Pliny the Elder, only few called Panticapaeum "Bosporus" [*NH*. IV. 78], whereas its official name was Καισάρεια (see Podosinov 1997, 160–62; Boldyrev 1999, 30–6). According to A.V. Podosinov (1997, 161), "only foreign (to Bosporus) geographical descriptions and *periploi*, based on more ancient sources, continued to use…the former name (of the city – *A.Z.*)".[14] The scholar admits that later, when the capital was renamed, the term could similarly be used in foreign sources as a substitute for 'Kaisareia' (Podosinov 1997, 162). All above means that the term 'Bosporus' as an equivalent to Panticapaeum appeared in an earlier epoch (although it occurs in later sources, except Demosthenes' speeches) and had an absolutely (or almost absolutely) *literary character*. As for the state itself, the contemporary literature called it 'Pontus'.

At the same time, not a single fact known to date can prove that the term under discussion was used to denote the capital of Bosporus. Therefore, one cannot agree that the name of the city was a loan translation of the name of the state (*cf*. Podosinov 1997, 162; Molev 1997b, 27; 1997a, 145), and not just because this explanation violates the principle of formal logic (from generals to particulars; *e.g*., Moscow and the Kremlin may denote the whole Russia, but not *vice versa*). The 'Bosporus' of the titles (item 3) and the 'whole Bosporus' of the decrees (Item 4) allow us to follow the dynamic development of the term (*cf*. Molev 1997a, 142–43; 1997b, 26–7). The state of Satyrus I–Leucon I might have been called Bosporus long before the invasion of Theodosia, but it could hardly represent the original, historical core of the state. It is unanimously recognised that the Spartocid regime was a tyranny. Therefore, only Panticapaeum can be regarded as a political core, independently of the way other poleis were attached. The question is: did the term 'Bosporus' become the name of the state after the Spartocids had submitted the *poleis* on both shores of the Cimmerian Bosporus or, on the contrary, the second name of Panticapaeum was extended to all lands attached in the process of state expansion? (One should remember that formally, under the Spartocids, this term did not include ἐν παντὶ Βοσπόρῳ, *i.e*. Theodosia and other lands, which were attached later).

The lack of evidence from the time, preceding Demosthenes' speech of 335 BC, makes one turn to historical parallels. Plato's view on the state of Dionysius

[9] See Ps.-Scymn. *Per*. 835–840: further, at the very mouth of the Lake of Maeotis, there is the remote Panticapaeum, which is known as the capital of Bosporus; Strabo 11. 2. 1: Near the sea is the Asiatic part of the Bosporan Kingdom and Sindike.

[10] *CIRB* 1059 (the citizen of Ahillion), 188 (the citizen of Kepoi), 231 (the citizen of Theodosia). The mentions of ἐθνικά occur again from the time of Mithridates VI Eupator onwards (the earliest mentions: citizens of Nymphaeum in the dedicatory inscription from Delos, dating to the last decade of the 2nd century BC [Syll^3 1126] and in the decree from Phanagoria dated 88/7 BC: Vinogradov 1991, 14–33; *CIRB* 495 (the citizen of Hermonassa, the 1st century AD), 1048 [the citizen of Panticapaeum, the time of Sauromates I]).

[11] Therefore, we have no reasons to believe that this term was introduced to 'extend' the effect of these decrees over all territories (in contrast to privileges, which were granted selectively).

[12] *Cf. CIRB* 113: The lands of Pairisades I stretch from the Tauric Mountains to the Caucasus.

[13] *Cf*. Molev 1997, 27: the author suggests that "the Bosporan union… with this name (Bosporus – *A.Z.*)" was formed "as early as the end of the 6th century BC", whereas the name of the state was extended to Panticapaeum "as early as the 4th century BC".

[14] *Cf. CIRB* 1051 – AD 307: the archon of Kaisareia.

the Elder seems to be of particular value. According to Plato [*Ep*. 331e], Syracuse absorbed other Sicilian *poleis* (εἰς μίαν πόλιν ἀθροίδας πᾶσαν Σικελίαν) as a result of the tyrant's policy (see Frolov 1979, 136–37). Not only does this judgment reflect the essence of these events, but it reveals the very mechanism, which leads to the formation of a territorial state.[15] Unfortunately, no documents available to date give the name of Dionysius' state. The Athenian decree of 393 BC [Syll^3 I. 128] refers to the tyrant as "the archon[16] of Sicily[17]", *i.e*. it uses the name of the country. In other words, written sources, abundant as they are, never mention the name of the state. It is possible that the state had no name at all (and was formally called Syracuse). Under the Spartocids, Bosporus consisted of a number of territories (the European part was located in the 'Scythian land' and the Asiatic part in Sindike), which had no common geographical name, but represented one political unit. The Panticapaean polis with the Spartocids at its head absorbed entire peoples and their lands, which resulted in the formation of a territorial state.

Thus, it seems plausible that the territorial expansion of the Panticapaeum under Satyrus I–Leucon I promoted the extension of the second, unofficial name of the city to new political domains in the region of the strait and (later) beyond its limits. This name embodied the dualism of the tyranny – the persistence of polis traditions, on the one hand, and the exclusive power of the archons[18] over invaded territories, on the other. At the same time, it reflected the exact geographical location of the new state. In any case, 'Bosporus' was first and foremost a political term and only then the name of the country. This interpretation excludes the possibility that the name of the territorial state could be invented artificially; at least, antiquity gives no examples of this kind. Other Hellenistic monarchies are known to have had no names, either. In this respect, ἡ ἀρχὴ τῶν Σελευκιδῶν did not differ from the state of the Lagids or, more exactly, the states formed as a result of Alexander's invasions (as against the state of the Antigonids, the Macedonian kings).

One should add that the introduction of the official name 'Bosporus' for the Spartocid state of the 4th century BC excluded, in essence, any possibility of its use as the second name of Panticapaeum. The literary tradition, started by Demosthenes, must have reflected the realities of an earlier epoch (when Satyrus I conquered Nymphaeum and other poleis on the Taman Peninsula, *i.e*. the time prior to the end of the 5th century BC). It seems only natural that foreign authors refer to Bosporus as Pontus. This name persists in literary sources until the 1st century BC, when Mithradates VI Eupator, the king of Pontus, took power in Bosporus. It is only then that the term 'Bosporus' started being used as the second name of Panticapaeum again.

[15] For example, the cities of Leontini, Caulonia, Hipponion were absorbed by large poleis of the Dionysius state – Syracuse and Epizephyrian Locri; for the fate of other Chalcidian colonies – Catana and Naxos: see Frolov 1979, 31, 60, 71, 79–80, 123.

[16] No archonship existed in Syracuse both before and after the rule of Dionysius (Frolov 1979, 105). The same can be said of the pre-Spartocid Panticapaeum (as well as its metropolis and other Milesian *apoikiai* of the archaic and classical periods: Vinogradov 1983, 411–12).

[17] In contrast to it, the decree of the Athenians from 347/6BC omits the title of Bosporan archons [IG II^2 212].

[18] It is necessary to stress that unlike the title 'the archon of Bosporus and Theodosia…', 'the archon of Bosporus' cannot be proved (for want of evidence) to have existed [*CIRB* 1111]. It is possible that Leucon I was given the title of archon only after the invasion of Theodosia. If so, the term 'Bosporus', in the meaning it was used in the list of titles, refers to the political structure, which preceded the formation of the territorial monarchy of the Leukonids (the name of the Bosporan ruling dynasty used by ancient authors [Ael. *Var. hist*. 6. 13; Strabo 7. 4. 4; 7. 3. 8] with reference to Chrysippus); for more details, see Zavoikin 2001.

Bibliography

Abka'i-Khvari, M. 1988: 'Die achämenidischen Metallschalen'. *AMI* 21, 91–138.

Abramov, A.P. 1993: 'Antichnye amfory. Periodizatsiya i khronologiya'. *BS* 3, 4–135.

Abramova, M.P. 1961: 'Sarmatskie pogrebeniya Dona i Urala 2 v. do n.e. – 1 v. n.e.' *SA* 1, 91–110.

Adriani, A. 1966: 'Il satiro veleggiante sull'otre'. *Klearchos* 29–32, 5–21.

Agbunov, M.V. 1987: *Antichnaya lotsiya Chernogo morya* (Moscow).

Akurgal, E. 1961: *Die Kunst der Hethiter* (München).

Akurgal, E. 1993: *Eski Cağda. Ege ve Izmir* (Izmir).

Alabe, F. 1986: 'Les timbres amphoriques de Sinope trouves en dehors du domaine Pontique'. *BCH* Suppl. XIII, 375–89.

Alekseev, A. 1986: 'Nashivnye blyashki iz Chertomlykskogo kurgana'. In Grach, N.L. (ed.), *Antychnaya torevtika* (Leningrad), 64–74.

Alekseev, A.Y. 1992: *Skifskaya khronika* (St-Petersburg).

Alekseev, A.Y. 1993: 'Velikaya Skifiya ili dve Skifii?'. In Raev, B.A. (ed.), *Skifiya i Bospor* (Novocherkassk), 28–38.

Alekseev, A.Yu. 2003: *Khronografiya evropeiskoi Skifii (VII–IV vv.do n.e.)* (St-Petersburg).

Alekseev, A.Yu., Murzin, V.Yu. and Rolle, R. 1991: *Chertomlyk. Skifskii tsarskii kurgan IV v. do n.e.* (Kiev).

Alekseeva, E.: 1978: *Antichnye busy Severnogo Prichernomoriya* (Moscow).

Alekseeva, E.M. 1982: *Antichnye busy Severnogo Prichernomorya* III. (*SAI* G1-12) (Moscow).

Alekseeva, E.M 1988: 'Gorgippia v sisteme Bosporskogo tsarstva pervykh vekov n.e.' *VDI* 2, 66–87.

Alekseeva, E.M. 1991: *Grecheskaya kolonizatsiya Severo-Zapadnogo Kavkaza* (Moscow).

Alekseeva, E.M. 1997: *Antichnyi gorod Gorgippiya* (Moscow).

Alekseeva, E.M. 1999: 'Mestnaja sreda rannei Gorgippii'. In Abramzon, M.G. (ed.), *PIFK* 7 (Moscow; Magnitogorsk), 160–70.

Almagro, M. 2002: 'Una probable divinidad tartésica identificada: Niethos/Netos'. *Palaeohispanica* 2, 37–70.

Amandry, P. 1953: *Collection Hélène Stathatos. Les bijoux antiques* (Strasbourg).

Ancient Greek Sites 2004: Samoilova, T.L. (ed.), *Ancient Greek Sites of the Crimea* (Kiev).

Ancient polises 1995: Kryzhitskii, S.D. (ed.), *Antichnye polisy Severnogo Prichernomoriya i mestnoe naselenie* (Sevastopol).

Andreev, Y.V. 1996: 'Greki i varvary v Severnom Prichernomorie (osnovnye metodologicheskie i teoreticheskie aspekty mezhetnicheskikh kontaktov)'. *VDI* 1, 3–17.

Anfimov, N.V. 1948: 'Gorodishche vostochnoi okrainy Bosporskogo gosudarstva'. In Smirnov, A.P. (ed.), *Istoriko-arkheologicheskii sbornik* (Moscow), 136–44.

Anfimov, N.V. 1951: 'Raskopki Semibratnego gorodishcha'. *KSIIMK* 36, 238–45.

Anfimov, N.V. 1953: 'Issledovaniya Semibratnego gorodishcha'. *KSIIMK* 51, 99–112.

Anfimov, N.V. 1967: 'Meoty i ikh vsaimootnosheniya s Bosporom v epokhu Spartakidov'. In Blavatskaya, T.V. (ed.), *Antichnoe obshchestvo* (Moscow), 127–31.

Anfimov, N.V. 1981: 'Drevnemeotskii mogilnik u g. Abinska'. In Anfimov, N.V. and Autlev, P.U. (eds.), *Voprosy arkheologii Adygei* (Maikop), 48–58.

Anfimov, N.V. 1987: *Drevnee zoloto Kubani* (Krasnodar).

Anfimov, N.V. and Pyankov, A.V. 1989: 'Protomeotskie pogrebeniya v kurganakh epokhi bronzy Zakubanya'. In Anfimov, N.V. (ed.), *Meoty – predki adygov* (Maikop), 11–26.

Anokhin, V.A. 1986: *Monetnoe delo Bospora* (Kiev).

Antichnaya skulptura 2004: Davydova, L.I. (ed.), *Antichnaya skulptura iz sobraniya Kerchenskogo Gosudarstvennogo istoriko-kulturnogo zapovednika* (Kiev).

Antipina, E.E., Nazarov, V.I. and Maslov, S.P. 1991: 'Nasekomye iz kolodtsa na vinodelne poseleniya Chaika'. In Shchapova, Y.L. and Yatsenko, I.V. (eds.), *Pamyatniki zheleznogo veka v okrestnostyakh Evpatorii* (Moscow), 155–61.

Aquilué, X., Castanyer, P., Santos, M. and Tremoleda, J. 2001: 'Les ceràmiques grecques arcaiques de la Palaià Polis d'Empòrion'. In Cabrera, P. and Santos, M. (eds.), *Ceràmiques Jònies d'època arcaica: Centres de producció i comercialització al Mediterrani Occidental* (Barcelona), 285–337.

Arakelyan, N. 1976: *Ocherki po istorii iskusstva Armenii* (Erevan).

Armenien 1995: *Armenien. 5000 Jahre Kunst und Kultur. Katalog zur Ausstellung in Bochum* (Tübingen).

Arseneva, T.M., Böttger B. and Vinogradov J.G. 1995: 'Griechen am Don. Die Grabungen in Tanais 1994'. *EA* 1, 213–63.

Arseneva, T., Piasecki, K. and Scholl, T. 1999/2000: 'Żelazny wojownik z Tanais'. *Archeologia Żywa* 4(13), 27–9.

Arseneva, T. and Scholl, T., 1999: 'Tanais – trzy lata badań nekropoli zachodniej'. *Światowit* 42-A, 15–6.

Artamonow, M.I. 1970: *Goldschatz der Skythen* (Prague).

Asheri, D. 1998: 'The Achaeans and the Heniochoi: Reflections on the Origins and History of a Greek Rhetorical Topos'. In Tsetskhladze, G. (ed.), *The Greek Colonisation of the Black Sea Area* (*Historia* 121) (Stuttgart), 265–85.

Avram, A., Conovici, N. and Poenaru Bordea, Gh. 1990: 'Etude quantitative sur les timbres amphorique Sinopéens de Callatis'. *Dacia* 34, 111–27.

Aubet, M.E. 1997: 'Un lugar de mercado en el Cerro del Villar'. In Aubet, M.E. (ed.), *Los Fenicios en Málaga* (Málaga), 197–213.

Aubet, M.E. 2000: 'Mainake, la primera Malaka'. In *Tuxiveddu la necropoli occidentale di Karales* (Cagliari), 27–42.

Aubet, M.E., Carmona, P., Curiá, E., Delgado, A. and Fernández, A. 1999: *Cerro del Villar I. El asentamiento fenicio en la desembocadura del río Guadalhorce y su integración con el hinterland* (Sevilla).

Balabanov, P. and Drazheva, S. 1985: 'Trakiiski nekropoli v kv. Pobeda v Burgas'. *Izvestia na muzeite ot yugoiztochna Balgariya* VIII, 9–29.

Banev, K., Lazov, B. and Salkin, A. 1982: 'Timbres amphoriques de Sinope dans le musee de la ville de Kavarna'. *Thracia Pontica* 2, 29–33.

Barabash, M.B. 1984: 'Sovremennye izmeneniya klimata'. *Priroda SSSR. Klimat* (Kiev), 160–69.

Bayern, F. 1985: *Untersuchungen über die ältesten Gräber und Schatzfunde in Kaukasien* (Berlin).

Beglova, E. 1989: 'Pogrebalnyi obryad Ulyapskikh gruntovyh mogilnikov v Krasnogvargeiskom raione'. In Anfimov, N. (ed.), *Meoty – predki adygov* (Maikop), 140–57.

Beglova, E. and Erlikh, V. 1998: 'Drevneishaya fortifikatsia meotskoi kul'tury'. In Kiyashko, V. (ed.), *Problemy arkheologii Vostochnoi Evropy* (Rostov-upon-Don), 86–7.

Belov, G.D. 1971: 'Skulptura iz Khersonesa v sobranii Ermitazha'. In Gorbunova, K.S. (ed.), *Kultura i iskusstvo antichnogo mira* (Leningrad), 107–22.

Belova, N.S. 1961: 'Archeologicheskie razvedki v Kitee'. *KSIA* 83, 83–90.

Belova, N.S.1967: 'Novaya nadpis' iz Germonassy'. *VDI* 1, 60–8.

Benenson, M.E. 1922: *Ekonomicheskie ocherki Kryma* (Simferopol).

Benndorf, O. and Niemann, G. 1889: *Das Heroon von Gjölbaschi – Trysa* (Vien).

Bergemann, J. 2001: 'Spätklassischer Mischstil oder hellenistische Schlachtdarstellung? Stilistische und typologische Überlegungen zum Kampfrelief von der Tamanhalbinsel'. in *Savostina* 2001, 90–163.

Bertucchi, G., Gantès, L.F. and Treziny, H. 1995: 'Un atelier de coupes ioniennes à Marseille'. In Arcelin, P., Bats, M., Garcia, D., Marchand, G. and Schwaller, M. (eds.), *Sur les pas des Grecs en Occident. Hommages à André Nickels* (Paris; Lattes), 367–70.

Besios, M. and Pappa, M. n.d.: *Pydna* (Athens).

Bespalyi, E.I. and Parusimov, I.N. 1992: 'Kompleksy perekhodnogo i ranneskifskogo periodov na Nizhnem Donu'. *SA* 3, 176–96.

Besques, S. 1992: *Catalogue raisonné des figurines et reliefs en terre cuite grecs étrusques et romains* (Paris).

Bessonova, S.S. 1994: 'Kurgany lesostepnogo Pobuzhya'. In Chernenko, E.V. (ed.), *Drevnosti skifov* (Kiev), 3–34.

Bessonova, S.S. and Kirilin, D.S. 1977: 'Nadgrobnyi relief iz Trekhbratnego kurgana'. In Terenozhkin, A.I. (ed.), *Skify i sarmaty* (Kiev), 128–39.

Bibikova, V.I. 1958: 'Fauna Olvii ta periferii za materialami rozkopok 1935–48 rr.' *Arkheologichni pamyatki URSR* 7, 143–55.

Bikerman, E. 1985: *Gosudarstvo Selevkidov* (Moscow).

Blanck, I. 1974: *Studien zum griechischen Halsschmuck der archaischen und klassischen Zeit. Diss. Mainz* (Cologne).

Blavatskaya, T.V. 1965: 'Aspurg i Bospor v 15 g. n.e.' *SA* 3, 28–37.

Blavatskaya, T.V. 1993: 'Posvyashchenie Levkona I'. *RosA* 2, 34–48.

Blavatskii, V.D. 1953: *Zemledelie v antichnykh gosudarstvakh Severnogo Prichernomoriya* (Moscow).

Blavatskii, V.D. 1955: 'Tretii god raboty v Sindike'. *KSIIMK* 58, 88–95.

Blavatskii, V.D. 1958: 'Ob arkheologicheskom issledovanii khory'. *VMU* 4, 9–14.

Blavatskii, V.D. 1959: 'Protsess istoricheskogo razvitiya antichnykh gosudarstv Severnogo Prichernomoriya'. In Smirnov, A.P. (ed.), *Problemy istorii Severnogo Prichernomoriya v antichnuyu epokhu* (Moscow), 7–39.

Blavatskii, V.D. 1962: 'Otchet o raskopkakh Pantikapeya v 1945–1949, 1952 i 1953 gg.' *MIA* 103, 6–85.

Blavatskii, V.D. 1964: *Pantikapei. Ocherki istorii stolitsy Bospora* (Moscow).

Blavatskii, V.D. 1985a: 'Drevneishee svidetel'stvo o Sindike'. In Kobylina, M.M. (ed.), *Antichnaja arkheologia i istoria* (Moscow), 55–9.

Blavatskii, V.D. 1985b: 'O rimskikh voiskakh na Tavricheskom poluostrove v 1 v. n.e.' In Kobylina, M.M. (ed.), *Antichnaya arkheologiya i istoriya* (Moscow), 228–34.

Blavatskii, V.D. 1985c: *Antichnaya archeologiya i istoriya* (Moscow).

Blázquez, J.M. 1993: 'El enigma de Tarteso en los escritores antiguos y en la investigación moderna'. In Alvar, J. and Blázquez, J.M. (eds), *Los enigmas de Tarteso* (Madrid), 11–30.

Blok, J. 1994: *The Early Amazons* (Leiden).

Boardman, J. 1989a: *Rotfigurige Vasen aus Athen* (Mainz).

Boardman, J. 1989b: *Athenian Red-Figure Vases, the Classical Period* (London).

Boardman, J. 1994: *The Diffusion of Classical Art in Antiquity* (London).

Boardman, J. 1999: *The Greeks Overseas. Their Early Colonies and Trade* (4th ed.) (London).

Boardman, J. 2001: *Greek Gems and Finger Rings: Early Bronze Age to Late Classical* (2nd ed.) (London).

Boardman, J. 2002: 'Greeks and Syria: Pots and People'. In Tsetskhladze, G.R. and Snodgrass, A.M. (eds.), *Greek Settlements in the Eastern Mediterranean and the Black Sea* (*BAR* Int. Series 1062) (Oxford), 1–16.

Boardman, J. 2003: *Die Perser und der Westen* (Mainz am Rhein).

Boardman, J. 2004: 'Copies of pottery: by and for whom?'. In K. Lomas (ed.), *Greek Identity in the Western Mediterranean. Papers in Honour of Brian Shefton* (Leiden), 149–62.

Boer, J.G. de 1999: 'The origins and beginning of the Greek colonisation in the Black Sea area'. In Docter, R. and E. Moorman (eds.), *Proceedings of the XVth International Congress of Classical Archaeology* (Amsterdam), 138–39.

Bogaevskii, B.L. 1915: 'Ocherk zemledel'cheskogo khozyaistva Afin'. *Zhurnal ministerstva narodnogo prosveshcheniya* 4, 171–99.

Bogdan, P.I. 1928: *K voprosu ozimoi kultury tverdoi pshenitsy v Krymu* (Simferopol).

Bogdan, P.I. 1941: *Pshenitsy Kryma* (Moscow).

Bogdan, P.I. 1949: *Polevye kultury Kryma* (Simferopol).

Bogdan, P.I. and Ivanova, A.I. 1947: *Sorta polevykh kultur Kryma* (Simferopol).

Boldrini, S. 1994: *Le ceramiche ioniche. Gravisca. Scavi nel santuario greco*, II-4 (Bari).

Boldrini, S. 2001: 'Coppe Ioniche e altro: una produzione occidentale a Gravisca'. In Cabrera, P. and Santos, M. (eds.), *Ceràmiques Jònies d'època arcaica: Centres de producció i comercialització al Mediterrani Occidental* (Barcelona), 101–10.

Boldyrev, S.I. 1999: 'O vremeni pereimenovaniya Fanagorii v Agrippiyu'. *DB* 2, 30–6.

Boldyrev, S.I. 2000: 'O kharaktere prebyvaniya Polemona na Bospore'. *DB* 3, 11–7.

Boltrik, Ju. V. and Fialko, E.E. 1991: 'Der Oguz-Kurgan. Die Grabanlage eines Skythenkönigs der Zeit nach Ateas'. *Hamburger Beiträge zur Archäologie* 18 (1996), 107–29.

Boltrik, Y.V. and Fialko, E.E. 1987: 'K voprosu o lokalizatsii gavani Kremny'. In Chernenko, E.V. (ed.), *Skify Severnogo Prichernomorya* (Kiev), 40–8.

Boltunova, A.I. 1969: 'Raskopki oboronitelnoi steny zapadnogo raiona Tanaisa (1958–1963 gg.)'. *MIA* 154, 121–53.

Boltunova, A.I. and Knipovich, T.N. 1962: 'Ocherk istorii grecheskogo lapidarnogo pis'ma na Bospore'. *NE* 3, 3–31.

Bouzek, J. 1989: 'Athènes et la Mer Noire'. *BCH* 113, 249–59.

Bouzek, J. 1990: *Studies of Greek Pottery in the Black Sea Area* (Prague).

Bouzek, J. 1996: 'Palastartige Anlagen im Schwarzmeergebiet'. *Basileia, Die Paläste der hellenistischen Könige* (Mainz), 213–20.

Bozkova, A. 1990: 'Novi sinopski amforni pechati ot rezervata Sboryanovo Isperikhsko'. *Arkheologiya* 2, 37–40.

Bozkova, A. 1994: 'Le role des ports antiques dans l'importation de produits en tare amphorique en Thrace ancienne'. *Thracia Pontica* 5, 159–64.

Börker, C. and Burow, J. 1998: *Die hellinistischen Amphorenstempel aus Pergamon* (Berlin).

Brashinskii, I.B. 1963: 'Ekonomicheskie svyazi Sinopy'. In Blavatskii, V.D. (ed.), *Antichnii gorod* (Moscow), 132–45.

Brashinskii, I.B. 1980: *Grecheskii keramicheskii import na Nizhnem Donu v V–III vv. do n.e* (Leningrad).

Brashinskii, I.B. 1984: *Metody issledovaniya antichnoi torgovli* (Leningrad).

Bratchenko, S.N. 1985: 'Kamensko-liventsovskaya gruppa pamyatnikov'. In Telegin, D.Y. (ed.), *Arkheologiya Ukrainskoi SSR* 1 (Kiev), 458–62.

Braund, D. 1994: *Georgia in Antiquity* (Oxford).

Braund, D. 1998: 'Writing and Re-Inventing Colonial Origins: Problems from Colchis and the Bosporus'. In Tsetskhladze, G.R. (ed.), *The Greek Colonisation of the Black Sea Area* (*Historia* 121) (Stuttgart), 287–96.

Braund, D. 2000: 'Sindians and Greeks'. *TS* 3, 68–9.

Braund, D. 2003: 'The Bosporan Kings and Classical Athens: Imagined Breaches in a Cordial Relationship'. *The Cauldron of Ariantas* (Aarhus), 197–208.

Briese, C. and Docter, R. 1992: 'Der Phönizische Skyphos: adaption einer griechichen Trinkschale'. *Madrider Mitteilungen* 33, 25–69.

Bruyako, I.V.1995: 'Retsensiya: Polin S.V. Ot Skifii k Sarmatii. Kiev, 1992'. *RosA* 1, 230–37.

Bruyako, I.V. 1997: 'Ot Skifii k Sarmatii bez prirodnykh katastrof'. *RosA* 4, 215–18.

Bruyako, I.V. 1999: 'Ot dioramy k panorame (o perspektivakh na puti resheniya prodlemy severopontiyskogo krizisa 3 v. do n.e.)'. *Stratum Plus* 3, 325–31.

Bujskich, A.V. 1999: 'L'architecture religieuse des villes grecques du littoral nord-pontique'. *Religions du Pont-Euxin* (Besançon), 53–60.

Buiskikh, S.B. and Olgovskii, S.Y. 1990: 'K istorii naseleniya Olviiskoi khory'. In Kryzhytskii, S.D. (ed.), *Voprosy istorii i kultury Ukrainy* (Kiev), 3–11.

Burr, D. 1934: *Terracottas from Myrina* (Vienna).

Butyagin, A.M. 1997a: 'Fragmenty arkhaicheskoi amfory s izobrazheniem zhenskoi protomy iz Mirmekiya'. *SGE* 57, 41–3.

Butyagin, A.M. 1997b: 'O perekhode k kamennomu domostroitelstvu na gorodishche Mirmekii'. In Vakhtina, M.Y. and Vinogradov, Y.A. (eds.), *Stratum+PAV* (St-Petersburg; Kishinev), 94–100.

Butyagin, A.M. 1998a: 'Archaic dug-outs at Nymphaion'. *Archeologia* 48 (Warsaw), 61–70.

Butyagin, A.M. 1998b: 'Lepnaya keramika arkhaicheskogo Mirmekiya'. In Khrchanovskii, V.A. (ed.), *Bosporskoe tsarstvo kak istoriko-kulturnyi fenomen* (St-Petersburg), 82–7.

Butyagin, A.M. 1999: 'Nekotorye problemy izucheniya arkhaicheskogo Nimfeya'. In Boriskovskaya, S.P. (ed.), *Bosporskii gorod Nimfei* (St-Petersburg), 10–1.

Butyagin, A.M. 2000a: 'Arkhaicheskii dom v Mirmekii'. In Zuev, V.Y. (ed.), *ΣΥΣΣΙΤΙΑ* (St-Petersburg), 237–42.

Butyagin, A.M. 2000b: 'Raspisnaia keramika iz rannikh kompleksov Mirmekiya (raskopki 1992 g.)'. In Solovyov, S.L. (ed.), *Antichnoe Prichernomorie* (St-Petersburg), 166–85.

Butyagin, A.M. 2000c: 'Mirmekii v period arkhaiki'. *TS* 3, 142–44.

Butyagin, A.M. and Solovyov, S.L. 2001: 'Archaeological Research at the Chora of Nymphaeum'. In Tsetskhladze, G.R. (ed.), *North Pontic Archaeology. Recent Discoveries and Studies* (*Colloquia Pontica* 6) (Leiden; Boston; Köln), 261–84.

Butyagin, A.M., Vinogradov, Y.A. and Chistov, D.E. 2001: 'Mirmekiiskaya arkheologicheskaya ekspeditsiya v 2001 godu'. In Piotrovskii, Y.Y. (ed.), *OASGE za 2000 god* (St-Petersburg), 18–9.

Buzoianu, L. 1986: 'Les premieres importations d'amphorestimbrees dans les cites grecques de Tomis et de Callatis'. *BCH* Suppl. XIII, 407–15.

Bykovskaya, N.V. 2002: 'Iz istorii komplektovaniya kollektsii antichnykh predmetov iz dragotsennykh metallov Kerchenskogo zapovednika (1944–2000 gg.)'. In Zinko, V.N. (ed.), *Bospor Kimmeriski, Pont i varvarskii mir v period antichnosti i srednevekovya* (Kerch), 25–30.

Byvanck-Quarles van Ufford, I. 1966: 'Remarques sur les relations entre l´Ionie grecque, la Thrace et L´Italie méridionale'. *BABesch* 41, 34–49.

Cabrera, P. 1987: *El comercio griego en Huelva en época arcaica*. Diss. Univ. Autónoma de Madrid.

Cabrera, P. 1988–89: 'El comercio foceo en Huelva: cronología y fisonomía'. *Huelva Arqueológica* 10–11, 41–100.

Cabrera, P. 1994a: 'La cerámica griega arcaica. Calle del Puerto 10'. In *Garrido and Orta* 1994, 243–53.

Cabrera, P. 1994b: 'Importaciones griegas arcaicas del Cerro del Villar (Guadalhorce, Málaga)'. *Huelva Arqueológica* 13, 97–121.

Cabrera, P. 2000: 'Los primeros viajes al Extremo Occidente: Tartessos y la fundación de Ampurias'. In Cabrera, P. and Sánchez, C. (eds.), *Los griegos en España. Tras las huellas de Heracles* (Madrid), 69–85.

Cabrera, P. 2001: 'El comercio jonio arcaico en la Península Ibérica'. In Cabrera, P. and Santos, M. (eds.), *Ceràmiques Jònies d'època arcaica: Centres de producció i comercialització al Mediterrani Occidental* (Barcelona), 165–75.

Cabrera, P. and Santos, M. 2001: 'Introducción'. In Cabrera, P. and Santos, M. (eds.), *Ceràmiques Jònies d'època arcaica: Centres de producció i comercialització al Mediterrani Occidental* (Barcelona), 7–9.

Carnache, V. 1969: *Masken und Tanagrafiguren aus Werkstätten von Kallatis* (Konstanca).

Carter, J.C. 1995: 'ΧΩΡΑ of Metapont in Lucania and Chersonesus in Taurica (The Experience of Comparative Study)'. In Kryzhitskii, S.D. (ed.), *Antichnye polisy Severnogo Prichernomoriya i mestnoe naselenie* (Sevastopol), 167–75.

Catalogue 1984: *Chidozhestven brons ot rimskata epocha. Archeologicheski musei pri ban* (Sofia).

Catalogue Amsterdam 2004: Kalashnik, Yu. *Greek Gold. From the Treasure Rooms of the Hermitage* (Zwolle).

Catalogue Bonn 1997: Barkova, L. and Kalashnik, Ju. (eds.), *Zwei Gesichter der Eremitage. Die Skythen und ihr Gold* I (Bonn).

Catalogue Bonn 2004: Echt, R. (ed.), *Die Thraker. Das goldene Reich des Orpheus* (Bonn).

Catalogue Hanover 1994: Vokotopoulou, I.-K. (ed.), *Makedonen die Griechen des Nordens* (Athens).

Catalogue Hildesheim 1988: Eggebrecht, A. (ed.), *Albanien: Schätze aus dem Land der Skipetaren* (Mainz).

Catalogue London 1994: Williams, D. and Ogden, J., *Greek Gold. Jewelry of the Classical World* (New York).

Catalogue Melbourne 1988: *Ancient Macedonia* (Athens).

Catalogue Milan 1984: De Juliis, E.M. (ed.), *Gli ori di Taranto in età ellenistico* (Milan).

Catalogue Milan 1995: Curletti, M.G. (ed.), *Tesori delle Steppe. Cimmeri, Sciti, Sarmati, Unni, Avari e Cazari* (Milan).

Catalogue Moscow 1985: Leskov, A.M. (ed.), *Sokrovishcha kurganov Adygei* (Moscow).

Catalogue Moscow 1987: Leskov, A.M. (ed.), *Art Treasures of Ancient Kuban* (Moscow).

Catalogue Moscow 2002: Zhuravlev, D.V. (ed.), *Na krayu oikumeny. Greki i varvary na severnom beregu Ponta Evksinskogo* (Moscow).

Catalogue New York 1975: *From the Lands of the Scythians* (*Bulletin of the Metropolitan Museum of Art* 32.5, 1973/74) (New York).

Catalogue Rimini 1995: *Dal Mille al Mille. Tesori e popoli dal mar Nero. Rimini, 5 marzo – 25 giugno 1995* (Milan).

Catalogue Saint Louis 1988: Marazov, I. (ed.), *Ancient Gold: The Wealth of the Thracians. Treasures from the Republic of Bulgaria* (New York).

Catalogue San Antonio 1999: Reeder, E. (ed.), *Scythian Gold. Treasures from Ancient Ukraine* (New York).

Catalogue St-Petersburg 1995: Williams, D. and Ogden, J., *Grecheskoe zoloto* (St-Petersburg).

Catalogue Schleswig 1991: Rolle, R., Müller-Wille, M. and Schietzel, K. (eds.), *Gold der Steppe. Archäologie der Ukraine* (Schleswig).

Catalogue Thessaloniki 1997: *Greek Jewellery. 6000 Years of Tradition* (Athens).

Catalogue Thessaloniki 2000: Tsigarida, B. and Ignatiadou, D., *The Gold of Macedon. Archaeological Museum of Thessaloniki* (Thessaloniki).

Catalogue Trieste 2002: Giumlia-Mair, A. and Rubinich, M (eds.), *Le arti di Efesto. Capolavori in metallo dalla Magna Grecia* (Trieste).

Catalogue Venice 1989: *Traci. Arte e cultura nelle terre di Bulgaria dalle origini alla tarda romanità* (Milan).

Catalogue Venice 1996: Pugliese Carratelli, G. (ed.), *The Western Greeks* (Venice).

Catalogue Vienna 1993: Seipel, W. (ed.), *Gold aus Kiew. 170 Meisterwerke aus der Schatzkammer der Ukraine. Eine Ausstellung des Kunsthistorischen Museums Wien* (Vienna).

Catalogue Zurich 1993: Karabelnik, M. (ed.), *Aus den Schatzkammern Eurasiens* (Zurich).

Chaikovsky, S.M., Rimar, P.O., Strokova, L.V. and Starchenko, O.V. 2004: *Museum of Historical Treasures of Ukraine* (Kiev).

Chistov, D. E. 1998: 'Issledovaniya poslednikh let v yugo-zapadnoi chasti gorodishcha Nimfey'. In Khrschanovskii, V. A. (ed.), *Bosporskoye tsarstvo kak istoriko-kulturnyi fenomen* (St-Petersburg), 33–8.

Chistov, D.E. 1999: 'Stroitelnyi kompleks vtoroi chetverti 4 v. do R.X. iz raskopok Mirmekiya'. In Fedoseev, N.F. (ed.), *Arkheologiya i istoriya Bospora* 3 (Kerch), 161–73.

Chrysostomou, P. 1998: 'Tymboi Pellas 1998'. *AEMΘ* 12, 337–52.

Cisneros, M.I.; Suárez, J.; Mayorga, J. and Escalante, M.M. 2001: 'Cerámicas griegas arcaicas en la bahía de Málaga'. In Cabrera, P. and Santos, M. (eds.), *Ceràmiques Jònies d'època arcaica: Centres de producció i comercialització al Mediterrani Occidental* (Barcelona), 189–205.

Clairmont, Ch.W. 1993: *Classical Attic Tombstones* (Kilchberg).

Coja, M. 1986: 'Les centres de production amphorique identifiés à Istros Pontique'. *BCH* Suppl. XIII, 417–32.

Connolly, P. 1987: *The Roman Saddle. Roman Military Equipment. The Accoutrements of War* (Oxford).

Connolly, P. 1990: 'The Saddle Horns from Newstead'. *Journal of Roman Military Equipment Studies* 1, 61–5.

Conovici, N. 1998: *Histria* VIII: *Les timbres amphoriques* 2, *Sinope* (Bucharest; Paris).

Conze, A. 1900: *Attische Grabreliefs* (Leipzig; Berlin).

Cook, R.M. and Dupont, P. 1998: *East Greek Pottery* (London).

Coulston J.C. 1986: *Roman, Parthian and Sassanid Tactical Developments. Defence of the Roman Army in the East* (Oxford), 59–75.

Dashevskaya, O.D. 1951. 'Raskopki Simferopolskogo poseleniya Kizil-kobinskoi kultury (1949 g.)'. *KSIIMK* 39, 110–9.

Dashevskaya, O.D.1958: 'Lepnaya keramika Neapolya i drugikh skifskikh gorodishch Kryma'. *MIA* 64, 248–70.

Dashevskaya, O.D. 1991: *Pozdnie skify v Krymu* (Moscow).

Davidson, P.F. and Oliver, A. Jr 1984: *Ancient Greek and Roman Gold Jewelry in the Brooklyn Museum* (Brooklyn).

Davydova, L.I. 1990: *Bosporskie nadgrobnye relefy 5 v. do n.e.–3 v. n.e. Katalog vystavki* (Leningrad).

Davydova, L.I. 2002: 'La sculpture archaïque et classique trouvée dans la région nord-pontique et conservée à l'Hermitage'. In Lordkipanidze, O. (ed.), *Pont Euxin et commerce. La genèse de la route de la soie* (Besançon), 149–59.

De Carolis, E. 2000: *Dei ed eroi nelle pittura pompeiana* (Roma).

Dedeoğlu, H. and Malay, H. 1994: 'Kuzey Lydia'da ortaya cikan gec hellenistik bir mezar'. *Arkeoloji dergisi* II, 134.

Denisova, V.I. 1981: *Koroplastika Bospora* (Leningrad).

Dentzer, J.-M. 1982: *Le motiv du banquet couché dans le Proche-Orient et le monde grec du VIe au IVe siècle avant J.-C.* (Rom).

Deppert-Lippitz, B. 1985: *Griechischer Goldschmuck* (Mainz).

Derewitzkii, A., Pavlowskii, A. and Stern, E. von 1898: *Terracotten. Das Museum der kaiserlich Odessaer Gesellschaft für Geschichte und Altertumskunde* II (Odessa).

Despini, A. 1996: *Ellenike Techne. Archaia chrysa kosmemata* (Athens).

Desyatchikov, J.M. 1972: 'Katafraktarii na nadgrobii Afenia'. *SA* 4, 68–77.

Desyatchikov, Y.M. 1977: 'Arifarn, tsar sirakov'. In Kobylina, M. M. (ed.), *Istoriya i kultura antichnogo mira* (Moscow), 45–8.

Dmitriev, A.V. 1974: 'Pamyatniki epokhi rannego zheleza v raione Novorossiiska'. *AO* 1973, 108–9.

Dmitriev, A.V. 1989: 'Sindy, кerkety, torety'. In Koshelenko, G. A. (ed.), *Problemy issledovaniya antichnykh gorodov* (Moscow), 40–1.

Docter, R.F. and Niemeyer, H.G. 1994: 'Pithekoussai: the Carthaginian connection. On the archaeological evidence of Euboeo-Phoenician partnership in the 8th and 7th centuries BC'. *APOIKIA. I più antici insediamenti greci in Occidente: Funzione e modi dell'organizzazione politica e sociale. Scritti in onore di G. Buchner. Annali dell'Istituto universitario orientale di Napoli, Sezione di archeologia e storia antica* 1 (Napoli), 101–15.

Domanskii, Y.V., Beketova, N.S., Marchenko, K.K., Popov, S. G. and Rogov, E.Y. 2000: 'Osnovnye resultaty rabot Berezanskoi (Nizhnebugskoi) arkheologicheskoi ekspeditsii v 1999 godu'. In Vilinbakhov, G.V. (ed.), *OASGE za 1999 god* (St-Petersburg), 15–7).

Dominguez, A.J. 1986: 'Reinterpretación de los testimonios acerca de la presencia griega en el Sudeste peninsular y Levante en época arcaica'. In *Homenaje a L. Siret* (Sevilla), 601–11.

Domínguez, A.J. 1991a: 'El enfrentamiento etrusco-foceo en Alalia y su repercusión en el comercio con la Península Ibérica'. In Remesal, J. and Musso, O. (eds.) *La presencia de material etrusco en la Península Ibérica* (Barcelona), 239–73.

Dominguez, A.J. 1991b: 'Samios y foceos en los inicios de la colonización griega de Iberia'. In *Estudios de Historia Medieval en homenaje a Luis Suárez Fernández* (Valladolid), 131–47.

Domínguez, A.J. 1993: 'Mecanismos, rutas y agentes comerciales en las relaciones económicas entre griegos e indígenas en el interior peninsular'. *Estudis d'Història Econòmica*, 59–66.

Domínguez, A.J. 1994: 'Los griegos de Occidente y sus diferentes modos de contacto con las poblaciones indígenas. I.- Los contactos en los momentos precoloniales (previos a la fundación de colonias o en ausencia de las mismas)'. *Huelva Arqueológica* 13, 19–48.

Domínguez, A.J. 2001a: 'Las mecanismos del emporion en la práctica comercial de los foceos y otros griegos del Este'. In Cabrera, P. and Santos, M. (eds.), *Ceràmiques Jònies d'època arcaica: Centres de producció i comercialització al Mediterrani Occidental* (Barcelona), 27–45.

Domínguez, A.J. 2001b: 'La religión en el emporion'. *Gerión* 19, 217–53.

Domínguez, A.J. and Sánchez, C. 2001: *Greek Pottery from the Iberian Peninsula. Archaic and Classical Periods* (Leiden).

Domínguez, A.J. 2003: 'Fenicios y griegos en Occidente. Modelos de asentamiento e interacción'. In Costa, B. and Fernández, J.H. (eds.) *Contactos en el extremo de la oikouméne. Los griegos en Occidente y sus relaciones con los fenicios. XVII Jornadas de Arqueología Fenicio-Púnica* (Ibiza), 19–59.

Doonan, O. 2002: 'Production in a Pontic Landscape: The Hinterland of Greek and Roman Sinope'. In Lordkipanidze, O. (ed.), *Pont-Euxin et Commerce: La genèse de la "Route de soie"* (Besançon), 185–98.

Dougherty, C. 1993: *The Poetics of Colonization. From City to Text in Archaic Greece* (New York; Oxford).

Dörig, J. 1987: *Les trésors d'orfèvrerie Thrace* (*RIA* Suppl. 3) (Rom).

Drachuk, V.S. 1975: *Sistemy znakov Severnogo Prichernomoriya* (Kiev).

Drevnii gorod Nimfei 1999: Boriskovskaya, S.P. (ed.), *Drevnii gorod Nimfei. Katalog vystavki* (St-Petersburg).

Dubois de Montpéreux, 1839–1843: *Voyage autour du Caucase, chez les Tcherkesses et les Abkases, en Colchide, en Géorgie, en Arménie, en Crimée* (Paris).

Dubova, P.F. 1935: *Sevooboroty v Krymu. Zernovye, tabachnye i ovoshchnye* (Simferopol).

Dubrux, P. 1858: 'Opisanie razvalin i sledov drevnikh gorodov i ukreplenii, nekogda sushchestvovavshchikh na evropeiskom beregu Bosfora Kimmeriiskago, ot vkhoda v proliv bliz Enikalskogo mayaka do gory Opuk vkluchitelno, pri Chernom more'. *ZOOID* IV, 1, 3–84.

Du Mesnil du Buisson 1947: *Le sautoir d'Atargatis et la chain d'amulettes* (Leiden).

Dunkley, B. 1935–6: 'Greek Fountain-Buildings before 300 BC.' *BSA* 36, 142–204.

Dyachenko, A.N., Mabe, A., Skripkin, A.S. and Klepikov, V.M. 1999: 'Arkheologicheskie issledovaniya v Volgo-Donskom mezhdurech'e'. *Nizhnevolzhskii arkheologicheskii sbornik* 2 (Volgograd), 93–110.

Dzis-Raiko, G.O. 1959: 'Lipna keramika z o. Berezani 7 – 6 st. do n.e.' *MAPP* 2, 36–43.

Ebbinghaus, S. 1999: 'Between Greece and Persia: Rhyta in Thrace from the Late 5th to Early 3rd Centuries BC'. In Tsetskhladze, G.R. (ed.), *Ancient Greeks West & East* (Leiden), 384–425.

Ehrhardt, N. 1983: *Milet und seine Kolonien. Vergleichende Untersuchung der kultischen und politischen Einrichtungen* (Frankfurt-am-Main; New York).

Elnitskii, L.A. 1977: *Skifiya Evraziiskikh stepei* (Novosibirsk).

Erlikh, V. 1986: *Vooruzhenie i konskoe snaryazhenie v kulture naseleniya Zakubanya v Skifskoe vremya* (Archive of Institute of Archeology Russian Academy of Science, Fund R-II, No. 2509).

Erlikh, V. 1992: 'Tenginskoe gorodishche II v svete bytovykh pamyatnikov meotskoi kultury Zakubanya'. In Afanasev, G. (ed.), *Aktualnye problemy arheologii Severnogo Kavkaza* (Moscow), 161–67.

Farmakovskii, B.V. 1903: 'Raskopki nekropolya drevnei Olvii v 1901 godu'. *IAK* 8, 1–70.

Farmakovskii, B.V. 1908: 'Raskopki v Olvii'. *OAK* 1905, 1–35.

Farmakovskii, B.V. 1912: 'Oblomki stauetki satira iz Kerchi'. *ZOOID* 30, 151–66.

Fedoseev, N.F. 1999: 'Classification des timbres astynomiques de Sinope'. In Garlan, Y. (ed.), *Production et commerce des amphores anciennes en Mer Noire* (Aix-en-Provence), 27–48.

Fernández Jurado, J. 1984: *La presencia griega arcaica en Huelva* (Huelva).

Fernández Jurado, J. 1985: 'Die Phönizier in Huelva'. *Madrider Mitteilungen* 26, 49–60.

Fernández Jurado, J., 1988–89a: 'Aspectos de la minería y la metalurgia en la Protohistoria de Huelva'. *Huelva Arqueológica* 10–11, III, 177–214.

Fernández Jurado, J. 1988–89b: 'Tartessos y Huelva'. *Huelva Arqueológica* 10–11, I, 1–310.

Fernández Jurado, J. and Olmos, R. 1985: 'Una inscripción jonia arcaica en Huelva'. *Lucentum* 4, 107–13.

Fialko, E.E. 2003: 'Zolotye blyashki iz kurgana Oguz'. *RosA* 1, 124–33.

Filow, B. 1934: *Die Grabhügelnekropole bei Duvanlij in Südbulgarien* (Sofia).

Frel, J. 1969: *Les sculpteurs attiques anonymes* (Prague).

French, D. 1985: 'Sinope and the Thracian coast'. *Thracia Pontica* 2, 85–8.

Frolov, E.D. 1979: *Sitsiliyskaya derzhava Dionisiya* (Leningrad).

Frolova, N.A. 1997: *Monetnoe delo Bospora (ser. 1 v. do n.e. – ser. 4 v. n.e.)* 1 (Moscow).

Gablits, F. 1785: *Fizicheskoe opisanie Tavricheskoi oblasti* (St-Petersburg).

Gabuev, T.A. 1999: *Rannyaya istoriya alan (po dannym pismennykh istochnikov)* (Vladikavkaz).

Gagoschidze, I. 1995: 'Der Kasbek-Schatz'. *Unterwegs zum goldenen Vlies. Archäologische Funde aus Georgien. Katalog zur Ausstellung in München* (München), 163–64.

Gaidukevich, V.F. 1940: 'Raskopki Mirmekiya i Tiritaki. Arkheologicheskie issledovaniya na Kerchenskom poluostrove v 1937–1939 gg.' *VDI* 3/4, 300–17.

Gaidukevich, V.F. 1941: 'Arkheologicheskoye izuchenie Mirmekiya'. *MIA* 4, 96–109.

Gaidukevich, V.F. 1949: *Bosporskoe tsarstvo* (Moscow; Leningrad).

Gaidukevich, V.F. 1952a: 'Raskopki Mirmekiya v 1935–1938 gg.' *MIA* 25, 135–223.

Gaidukevich, V.F. 1952b: 'Raskopki Tiritaki v 1935–1940 gg.' *MIA* 25, 15–134.

Gaidukevich, V.F. 1958: 'Raskopki Tiritaki i Mirmekiya v 1946–1952 gg.' *MIA* 85, 149–218.

Gaidukevich, V.F. 1987: Antichnye goroda Bospora. Mirmekii (Leningrad).

Gaidukevich,V.F., Levi, E.I. and Prushevskaya, E.O. 1941: 'Raskopki severnoi i zapadnoi chastei Mirmekiya v 1934 g.' *MIA* 4, 110–48.

Gajdukevič, V.F. 1971: *Das Bosporanische Reich* (Berlin; Amsterdam).

Galanina, L.K. 1977: *Skifskie drevnosti Podneprovya (Ermitazhnaya kollektsiya N.E. Brandenburga)* (*SAI* D1-33) (Moscow).

Galanina, L. 1980: *Kurdzhpskij kurgan* (Leningrad).

Galanina, L. 1997a: *Die Kurgane von Kelermes* (Moscow).

Galanina, L.K. 1997b: 'K voprosu o kubanskom ochage ranneskifskoi kultury'. *VDI* 3, 125–37.

Galanina, L.K. 2003: 'Zolotye ukrasheniya iz Elizavetinskikh kurganov v Prikubanye'. *ASGE* 36, 2003, 89–99.

Galanina, L.K. and Alekseev, A.Y. 1990: 'Novye materialy k istorii Zakubaniya v ranneskifskoe vremya'. *ASGE* 30, 34–54.

Galanina, L. and Grach, N. 1986: *Skythische Kunst* (Leningrad).

Galanina, L. and Leskov, A. 1996: 'Ulskie kurgany kak istoricheskii istochnik'. In Vilinbakhov, G. (ed.), *Ermitazhnye chteniya pamyati B.B. Piotrovskogo* (St-Petersburg), 13–5.

Ganina, O.D. 1974: *Kiev Museum of Historical Treasures* (Kiev).

Gantès, L.F. 1999: 'La physionomie de la vaisselle tournée importée à Marseille au VIe siècle av. J.-C.' In Villanueva Puig, M.C. (ed.) *Céramique et peinture grecques. Modes d'emploi* (París), 365–81.

Gantès, L.F. 2001: 'Un atelier de Grèce d'Occident a l'époque archaïque: l'exemple de Marseille'. In Cabrera, P. and Santos, M. (eds.), *Ceràmiques Jònies d'època arcaica: Centres de producció i comercialització al Mediterrani Occidental* (Barcelona), 111–23.

García Martín, J.M. 2001: 'El comercio de cerámicas griegas en el sur del País Valenciano en época arcaica' In Cabrera, P. and Santos, M. (eds.), *Ceràmiques Jònies d'època arcaica: Centres de producció i comercialització al Mediterrani Occidental* (Barcelona), 207–23.

García Sanz, C. 1988–89: 'El urbanismo protohistórico de Huelva'. *Huelva Arqueológica* 10–11, 143–75.

Gardner, E.A.1884: 'Ornaments and Armour from Kerch in the New Museum at Oxford'. *JHS* 5, 62–73.

Garlan, Y. and Tathcan, I. 1999: 'Premières fouilles de l'atelier amphorique de Zeytinlik 1 à Sinope'. In Garlan, Y. (ed.), *Production et commerce des amphores anciennes en Mer Noire* (Aix-en-Provence), 21–5.

Garrido, J.P. 1995: 'Nuevas aportaciones sobre la presencia griega y fenicia al oeste del Estrecho de Gibraltar: La colonia focense occidental de Olbia'. In *Actas del II Congreso Internacional El Estrecho de Gibraltar* II. *Arqueología Clásica e Historia Antigua* (Madrid), 71–83.

Garrido, J.P. and Orta, E.M. 1989: *La necrópolis y el hábitat orientalizante de Huelva* (Huelva).

Garrido, J.P. and Orta, E.M. 1994: *El hábitat antiguo de Huelva (períodos orientalizante y arcaico). La primera excavación arqueológica en la Calle del Puerto* (Madrid).

García Martín, J.M. 2001: 'El comercio de cerámicas griegas en el sur del País Valenciano en época arcaica' In Cabrera, P. and Santos, M. (eds.), *Ceràmiques Jònies d'època arcaica: Centres de producció i comercialització al Mediterrani Occidental* (Barcelona), 207–23.

Gavrilov, A.V. 2001: 'Theodosia's Rural Hinterland in the 5th – 2nd Centuries BC'. *Local Population of the Black Sea Littoral and their Relations with Greek, Roman and Byzantine World and Near Eastern Civilisations. Abstracts of Second International Congress on Black Sea Antiquities* (Ankara), 16–8.

Gavrilyuk, N.A. 1989: *Domashnee proizvodstvo i byt stepnykh skifov* (Kiev).

Gavrilyuk, N.A. 1993: 'Paleoekologichna situatsiya i zanepad Velykoi Skifii'. In Kryzhytskii, S. D. (ed.), *Otochuyuche seredovyshche i starodavne naselennya Ukraini* (Kiev), 52–65.

Gavrilyuk, N.A. 1995: *Skotovodstvo stepnoi Skifii (Skify: ekonomika i istoriya)* (Kiev).

Gavrilyuk, N.A. 1997: 'Ekologichno-ekonomichnyi aspekt istorii stepovoy Skifii'. *Arkheologia* 1, 37–46.

Gavrilyuk, N.A. 1999: *Istoriya ekonomiki Stepnoy Skifii 6 – 3 vv. do n.e.* (Kiev).

Gavrilyuk, N.A. and Abikulova, M.I. 1991: *Pozdneskifskie pamyatniki Nizhnego Podneprovya* (Kiev).

Gavrilyuk, N.A. and Kravchenko, S.M. 1995: 'Pochatok osilosi u stepovykh skifiv'. *Arkheologia* 3, 85–97.

Gei, A. 1984: *Otchet o rabote Abinskogo otryada Severo-Kavkazskoi ekspeditsii v 1984 g.* (Archive of Institute of Archeology Russian Academy of Science, Fund R-I, No. 11062).

Getov, L. 1995: *Amfori i amforni pechati ot Kabyle* (Sofia).

Ghirshman R. 1973. 'La selle en Iran'. *Iranica Antiqua* 10, 94–107.

Giumlia-Mair, A. 2002: 'Il niello e il Rhyton di Trieste'. *Le arti die Efesto. Capolavori in metallo della Magna Grecia. Katalog zur Ausstellung in Trieste* 2002 (Triest), 126–31.

Giumlia-Mair, A. and La Niece, S. 1998: 'Early Niello Decoration on the Silver Rhython in the Trieste Museum'. *The Art of the Greek Gold Smith* (London), 139–45.

Golovatchova, N.V., Marchenko, K.K., and Rogov, E.Y. 1998: 'Unikalnye sooruzheniya v severnom raione Olviiskoi khory'. *RosA* 3, 99–110.

Golovachova, N.V., Marchenko, K.K., Rogov, E.Y., and Solovyov, S.L. 1991: 'Antichnoe poselenie Kozyrka-12 (klassicheskii period)'. *KSIA* 204, 66–70.

Golovacheva, N.V. and Rogov, E.Y. 2001: 'Note on the Rural Temple on the Northern Edge of the Archaic Chora of Olbia'. In Tsetskhladze, G.R. (ed.), *North Pontic Archaeology. Recent Discoveries and Studies* (*Colloquia Pontica* 6) (Leiden; Boston; Köln), 143–48.

Golubtsova, E.S. 1951: *Severnoe Prichernomorie i Rim na rubezhe n.e.* (Moscow).

Gold der Steppe 1991: Rolle, R., Müller-Wiener, M., Toločko, P. J., Murzin, V.J. and Schnietzel K. (eds.), *Gold der Steppe – Archäologie in der Ukraine* (Kiel).

González Prats, A. 1982: 'El componente tipológico griego en el ambiente cerámico de Peña Negra II (675–550 a.C.)'. *Lucentum* 1, 93–113.

González Prats, A. 1999: *La Fonteta, 1996–1998. El emporio fenicio de la desembocadura del río Segura* (Alicante).

Gorlov, Y.V. and Lopanov, Y.V. 1995: 'Antichnaya sistema melioratsii na Tamanskom poluostrove'. *VDI* 3, 121–37.

Goroncharovskii, V.A. 1999: 'Nadgrobie synovei Pantaleonta iz Gorgippii'. In Khrshanovskii, V.A., Rogov, E.Y., Vakhtina, M.Y., and Zuev, V.Y. (eds.), *Bosporskii phenomen: grecheskaia kul'tura na periferii antichnogo mira* (St-Petersburg), 176.

Goroncharovskii, V.A 2000a: 'Mezhdu Imperiei i varvarami: voenno-politicheskaya istoriya Bospora na rubezhe n.e.' *Stratum Plus* 3 (Kishinev), 229–36.

Goroncharovskii, V.A 2000b: 'Kavaleriya pozdneantichnogo Bospora'. In Zinko, V.N. (ed.), *Bospor Kimmeriiskii: na perekrestye grecheskogo i varvarskogo mirov* (Kerch), 52–60.

Goroncharovskii, V.A. and Nikonorov, V.P. 1987: 'Iluratskii katafraktarii (k istorii antichnoi tyazheloi kavalerii)'. *VDI* 1, 201–13.

Gotie, Y.V. 1925: *Ocherki po istorii materialnoi kultury Vostochnoi Evropy* (Leningrad).

Gould, J. 1973: 'Hikesia'. *JHS* 93, 74–103.

Grace, V. 1971: 'Samian amphoras'. *Hesperia* XL, 52–95.

Grach, N.L. 1966: *Polevoi dnevnik № 1 raskopok Nimfeya 1966 g.* (Archiv Otdela antichnogo mira Gosudarstvennogo Ermitaga).

Grach, N.L. 1981: 'K kharakteristike etnicheskogo sostava naseleniya Nimfeya v 6–5 vv. do n.e.' In Lordkipanidze, O.D. (ed.), *Demograficheskaya situatsiya v Prichernomorie v period Velikoi grecheskoi kolonizatsii* (Tbilisi), 260–67.

Grach, N.L.1984: 'Otkrytie novogo istoricheskogo istochnika v Nimfee (predvaritelnoe soobshchenie)'. *VDI* 1, 81–8.

Grach, N. 1985: *Antichnoe khudozhestvennoe serebro* (Leningrad).

Grach, N.L. 1986: 'Greben' i ozherel'e iz kurgana Kul-Oba (dve rekosntruktsii)'. In Gach, N.L. (ed.), *Antichnaya torevtika*, 75–90.

Grach, N. 1987: 'Ein neuentdecktes Fresko aus hellenistischer Zeit in Nymphaion bei Kertsch'. In Herbert, F. (ed.), *Skythika* (*Abhandl. Du Bayer. Abad. Der Wiss.* 98), 87–95.

Grach, N.L. 1994: 'Plastinchatye braslety iz kurgana Kul-Oba'. *VDI* 1, 135–42.

Grach, N.L. 1999: *Nekropol Nimfeya* (St-Petersburg).

Grakov, B.N.1929: *Drevne-grecheskie keramicheskie kleima s imenami astinomov* (Moscow).

Grakov, B.N. 1971: *Srify: Nauchno-populyarnyi ocherk* (Moscow).

Gran, J.M.J. 1988: 'Cerámicas griegas y etruscas de Málaga. Excavaciones de 1980 a 1986'. *Archivo Español de Arqueología* 61, 201–22.

Gran, J.M.J. 1991: *Malaga Phénicienne et Punique. Recherches franco-espagnoles 1981–1988* (Paris).

Greek Colonists and Native Populations 1990: Descœudres, J.-P. (ed.), *Greek Colonists and Native Populations* (Oxford).

Greek Goldsmith 1998: Williams, D. (ed.), *The Art of the Greek Goldsmith* (London).

Greifenhagen, A. 1970: *Schmuckarbeiten in Edelmetall* I (Berlin).

Greifenhagen, A. 1975: *Schmuckarbeiten in Edelmetall* II (Berlin).

Gruen, E.S. 1993: 'Cultural Fictions and Cultural Identity'. *TAPhA* 123, 1–14.

Gruppe, O. 1906: *Griechische Mythologie* 1 (München).

Gschwantler, K. 1999: *Catalogue Vienna. Barbarenschmuck und Römergold* (Vienna).

Gurevich, G. and Grmek, M. 2001: 'Interprétation medicale et parallèles artistiques'. In *Savostina* 2001, 179–84.

Guzzo, P.G. 1993: *Oreficerie dalla Magna Grecia. Ornamenti in oro e argento dall'Italia Meridionale tra l'VIII ed il I secolo* (Tarent).

Guzzo, P.G. 1998: 'Ritrovamenti recenti di oreficerie dalla Lucania antica'. In *Greek Goldsmith*, 55–65.

Hačatrian, Ž. and Markaran, A.Z. 2003: 'I Rhyta di Erebuni. Nel contesto dell´arte achemenide e Greco-persiana'. *Parthica* 5, 9–20.

Hausmann, U. 1960: *Griechische Weihreliefs* (Berlin).

Hausmann, U. 1962: 'Hellenistische Neger'. *AM* 77, 255–81.

Herrmann, A. 1993: 'The Boy with the Jumping Weights'. *The Bulletin of the Cleveland Museum of Art* 80 (7), 298–323.

Higgins, R. 1980: *Greek and Roman Jewellery* (London).

Hind, J.G.F. 1993: 'Archaeology of the Greeks and Barbarian Peoples around the Black Sea (1982–92)'. *BAR* 39, 82–112.

Hoffmann, H. and Davidson, P.F. 1965: *Greek Gold: Jewelry from the Age of Alexander* (Mainz).

Hoz, J. de 1994: 'El grafito griego de Guadalhorce'. *Huelva Arqueológica* 13, 122–25.

Ievlev, M.M. 1997: *Prirodne seredovyshche Nizhnego Pobuzhiya ta Nizhnego Podniproviya v dobu antychnosti (Abstracts of PhD dissertation)* (Kiev).

Illinskaya, V. 1968: *Skify Dneprovskogo lesostepnogo levoberezhya* (Kiev).

Ilinskaya, V.A. and Terenozhkin, A.I. 1983: *Skifiya 7 – 4 vv. do n.e.* (Kiev).

Isler, H.P. 1978: 'Samos: la ceramica arcaica'. In *Les céramiques de la Grèce de l'Est et leur diffusion en Occident* (Paris; Naples), 71–84.

Ivanova, A.P. 1961: *Skulptura i zhivopis Bospora* (Kiev).

Ivantchik, A.I. 1998: 'Die Gründung von Sinope und die Probleme der Anfangsphase der griechischen Kolonisation des Schwarzmeergebietes'. In Tsetskhladze, G.R. (ed.), *The Greek Colonisation of the Black Sea Area* (*Historia* 121) (Stuttgart), 297–330.

Jacob, P. 1994: 'Mainakè. Réflexion sur les sources'. *Ktema* 19, 169–94.

Jacobson, E. 1995: *The Art of the Scythians. The Interpretation of Cultures at the Edge of the Hellenic World* (*Handbuch der Orientalistik* 8. 2) (Leiden; New York; Cologne).

Janushevich, Z.V. 1975: 'Fossil remains of cultivated plants in the South-West of the Soviet Union'. *Folia quaternaria* 46, 23–30.

Janushevich, Z.V. 1984: 'The specific composition of wheat finds from ancient agricultural centres in the USSR'. *Plant and Ancient Man. Studies in palaeoethnobotany* (Rotterdam), 267–73.

Janushevich, Z.V. 1986: *Kulturnye rasteniya Severnogo Prichernomoriya. Paleobotanicheskie issledovaniya* (Kishinev).

Jeppesen, K. 2002: 'The Superstructure'. *The Maussolleion at Halikarnassos* 5 (Aarhus).

Johansen, K. 1951: *The Attic Grave Reliefs of the Classical Period* (Copenhagen).

Jones, R.C. 1986: *Greek and Cypriotic Pottery* (Athens).

Johnson, F.R. 1955: 'A Note on Owl Skyphoi'. *AJA* 59, 119–24.

Jucker, I. 1967: 'Artemis Kindyas'. *Festschrift für Schefold K.* (Bern), 133–45.

Kadeev, V.I. 1981: 'Nekotorye voprosy istorii antichnogo zemledeliya Khersonesa'. *Vestnik Kharkovskogo Universiteta* 214, 90–5.

Kallistov, D.P. 1949: *Ocherki po istorii Severnogo Prichernomorya antichnoi epokhi* (Leningrad).

Kamenetskii, I.S. 1971: 'O yazamatah'. In Liberov, P.D. and Gulyaev, V.I. (eds.), *Problemy skifskoi arkheologii* (Moscow), 165–70.

Karasev, A.N. 1941: 'K voprosy o vodosnabzhenii Olvii'. *SA* VII, 129–39.

Karasev, A.N. and Levi E.I. 1975: 'Raskopki Olviiskoi agory v 1970 g.' *KSIA* 143, 11–20.

Kastanayan, E.G. 1981: *Lepnaya keramika Bosporskikh gorodov* (Moscow).

Kerschner, M. 1997: 'Ein stratifizierter Opferkomplex des 7. Jh. s v. Chr. aus dem Artemision von Ephesos'. *Sonderdruck aus den Jahresheften des Österreichischen Archäologischen Institutes* 66, 86–226.

Khommel, Kh. 1981: 'Akhill – bog'. *VDI* 1, 53–76.

Khazanov, A.M. 1971: *Ocherki voennogo dela sarmatov* (Moscow).

Khodza, E.N. 2000: 'Terrakotovyi byust iz Pantikapeya: popytka interpretatsii'. In Solovyov, S.L. (ed.), *Antichnoe Prichernomorie* (St-Petersburg), 192–216.

Khrapunov, I. N. and Vlasov, V. P. 1995: 'Kizil-kobinskoe poselenie Shpil'. In Mogarichev, Y.M. and Khrapunov, I.N. (eds.), *Problemy arkheologii drevnego i srednevekovogo Kryma* (Simferopol), 3–31.

Khoinovskii, I.A. 1896: *Arkheologicheskie svedeniya o predkakh slavyan na Rusi* (Kiev).

Khrshanovskii, V.A. 1996: 'Sobaka v pogrebalnom obryade antichnogo Bospora'. In Dmitrieva, T.N. and Khrshanovskii, V.A. (eds.), *Zhivotnye i rastenia v miforitualnych sistemach* (St-Petersburg), 36–7.

Khudyak, M.M. 1952: 'Predvaritelnye itogi raskopok poslednikh let v Nimfee'. In Gaidukevich, V.F. (ed.), *Arkheologiya i istoriya Bospora* 1 (Simferopol), 75–83.

Khudyak, M.M. 1962: *Iz istorii Nimfeya* (Leningrad).

Kiachkina, P. 1994: 'Les contacts commerciaux des Thraces de la region de Bourgas avec le monde Egeen (IVe – IIe s. a. J.C.)'. *Thracia Pontica* 5, 175–90.

Kiesritzky, G. Von and Watzinger, C. 1909: *Greiechische Grabreliefs aus Südrussland* (Berlin).

Kirilin, D.S. 1968: 'Trekhbratnie kurgany v raione Tobechikskogo ozera'. In Gaidukevich, V.F. (ed.), *Antichnaya istoriya i kultura Sredizemnomorya i Prichernomorya* (Leningrad), 178–88.

Kiryanov, A.V. 1962: 'Materialy po zemledeliyu iz raskopok antichnykh poselenii Bospora'. *KSIA* 91, 92–7.

Kitov, G. and Dimitrova, D. 1998/1999: 'New discoveries in the Thracian Valley of the Kings in the region of Kazanluk, Excavations by a Thracian Expedition for Tumuli Investigations 'TEMP' in the region of Kazanluk from 1995–1997'. *Talanta* 30/31, 31–54.

Kitov, G. and Krasteva, M. 1992/1993: 'A 4th century BC Thracian royal tomb from the Kazanluk region, Southern Bulgaria'. *Talanta* 24/25, 59–76.

Klimat Ukrainy 1967: *Klimat Ukrainy* (Leningrad).

Klochko, L.S. 1982a: 'Novye materialy k rekosntruktsii golovnykh uborov skifyanok'. In Terenozhkin, A.I. (ed.), *Drevnosti stepnoi Skifii* (Kiev), 118–30.

Klochko, L.S. 1982b: 'Skifskie nalobnye ukrasheniya VI – III vv. do n.e.' In Baran, V.D. (ed.), *Novye pamyatniki drevnei i srednevekovoi khudozhestvennoi kultury* (Kiev), 37–53.

Klochko, L.S. and Berezova, S.A. 2001: 'Kostyum bosporskikh zhinok'. In Fedoseev, N.F. (ed.), *175 let Kerchenskomu muzeyu drevnostei. Materialy mezhdunarodnoi konferentsii (27–29 iyulya 2001 g.)* (Kerch), 105–8.

Klochko, L. and Vasina, Z. 2003: 'Novye materialy dlya rekonstruktsii skifskikh golovnykh uborov'. In Zakharova, N. (ed.), *Yuvelirnoe iskusstvo i materialnaya kultura* (St-Petersburg), 44–9.

Knauer (Kezia), E.R. 2001: 'Observations on the Barbarian Custom of Suspending Enemy Heads from the Necks of Horses'. In *Savostina* 2001, 186–229.

Knipovich, T.N. 1935: 'K voprosu o torgovykh snosheniyakh grekov s oblastyu r. Tanaisa 7–5 vv. do n.e.' *IGAIMK* 104, 90–110.

Kobylina, M. 1951: 'Pozdnie bosporskie peliki'. *MIA* 19, 136–70.

Kobylina, M.M. 1956: 'Fanagoria'. *MIA* 57, 5–101.

Kobylina, M.M. 1971: *Terrakotovye statyetki Pantikapeya i Fanagorii* (Moscow).

Kobylina, M.M. 1970: *Terrakoty Severnogo Prichernomoriya* (*SAI* G1-11) (Moscow).

Kobylina, M.M. 1972: *Antichnaya skulptura Severnogo Prichernomoriya* (Moscow).

Kobylina, M.M. 1984a: 'Arkhitektura'. In *Koshelenko et al*. 1984, 207–10.

Kobylina, M.M. 1984b: 'Skulptura; Zhivopis; Mozaika; Vazopis; Torevtika; Koroplastika; Teatr, akteyory, muzykalnye instrumenty'. In *Koshelenko et al*. 1984, 212–18.

Koch, H. 1992: *Es kündet Dareios der König...Vom Leben im persischen Großreich* (Main am Rhein).

Kolotukhin, V.A. 1996: *Gornyi Krym v epokhu bronzy – nachale zheleznogo veka* (Kiev).

Kolotukhin, V.A. 2000: *Kimmeriyzy i skify Stepnogo Kryma* (Simferopol).

Koltukhov, S.G. 1990: 'Novye materialy k periodizatsii i rekonstruktsii oboronitel'nykh sooruzhenii Neapolya Skifskogo'. *SA* 1, 176–82.

Kopeikina, L. 1986: 'Zolotye blyashki iz kurgana Kull-Oba'. In Grach, N.L. (ed.), *Antychnaya torevtika* (Leningrad), 28–74.

Kopylov, V.P. 1991: 'Pervaya grecheskaya koloniya v Priazovie'. In Maksimenko, B.E. (ed.), *Istoriko-arkheologicheskie issledovaniya v Azove i na Nizhnem Donu v 1990 g.* 10 (Azov), 42.

Kopylov, V.P. 1994: 'Grecheskaya keramika iz ranneskifskikh pogrebenii Nizhnego Podonya'. In Kopylov, V.P. (ed.), *Mezhdunarodnye otnosheniya v basseine Chernogo morya v drevnosti i srednie veka* (Rostov-upon-Don), 22–5.

Kopylov, V.P. 1996a. 'Taganrog et la premiere colonisation grecoue du littoral Nord-Est de la mer d Asov'. In Lordkipanidze, O. and Lévêque, P. (eds.), *Sur les traces des argonautes. Actes du 6e symposium de Vani (Colchide) 22–29 septembre 1990* (Paris), 324–27.

Kopylov, V.P. 1996b: 'Grecheskaya kolonizatsiya i utverzhdenie skifov v Severo-Vostochnom Priazovie'. In Kopylov, V. P. (ed.), *Mezhdunarodnye otnosheniya v basseine Chernogo morya v drevnosti i srednie veka* (Rostov-upon-Don), 33–6.

Kopylov, V.P. 1999a: 'The Place of the Tadanrog Settlement within the System of the Early Greek Colonies in the Region to the North of the Black Sea'. *ACSS* 6, 1–2, 1–11.

Kopylov, V.P. 1999b: 'Taganrogskoe poselenie v sisteme rannegrecheskikh kolonii Severnogo Prichernomoriya'. *VDI* 4, 170–76.

Kopylov, V.P. 2000: 'Naselenie delty Dona v 5 – 4 vv. do n. e.' In Gulyaev, V.I. (ed.), *Skify i sarmaty v 7 – 3 vv. do n.e.: paleoecologiya, antropologiya i arkheologiya* (Moscow), 155–66.

Kopylov, V.P. and Larenok, P.A. 1994: *Taganrogskoe poselenie* (Rostov-upon-Don).

Kopylov, V.P. and Larenok, P.A. 1998: 'O vremeni osnovaniya Taganrogskogo poseleniya'. In Masson, V.M. (ed.), *Izuchenie pamyatnikov morskoi arkheologii* 3 (St-Petersburg), 107–14.

Korfman, M., Pizchelauri, K. and Jablonka, P. 1999: 'Vorbericht zu den Ausgrabungen in der Siedlung Didi Gora, Ostgeorgien, 1997 und 1998'. *Studia Troica* 9, 527–50.

Korovina, A.K. 1957: 'K voprosu ob izuchenii Semibratnikh kurganov'. *SA* 2, 174–87.

Korovina, A.K. 1984: 'Germonassa'. In Koshelenko, G.A., Kruglikova, I.T. and Dolgorukov, V.S. *Antichnye gosudarstva Severnogo Prichernomoriya* (Moscow), 81–2.

Korovina, A.K. 1992: 'Istoria izucheniya Tamanskogo gorodishcha'. *SGMII* 10, 7–40.

Koshelenko, G.A. 1999: 'Ob odnom svidetelstve Diodora o rannei istorii Bosporskogo tsarstva'. In Melnikova, E. A. (ed.), *Drevneishchie gosudarstva Vostochnoi Evropy (1996–1997)* (Moscow), 130–41.

Koshelenko, G.A. and Kuznetsov, V.D. 1992: 'Grecheskaya kolonizatsiya Bospora'. In Koshelenko, G.A. (ed.), *Ocherki arkheologii i istorii Bospora* (Moscow), 6–28.

Koshelenko, G.A. and Kuznetsov, V.D. 1998: 'Greek Colonisation of the Bosporus'. In Tsetskhladze, G. R. (ed.), *The Greek Colonisation of the Black Sea Area* (*Historia* 121) (Stuttgart), 249–63.

Koshelenko, G.A., Kruglikova, I.T. and Dolgorukov, I.S. (eds.) 1984: *Antichnye gosudarstva Severnogo Prichernomoriya* (*Arkheologiya* SSSR) (Moscow).

Kozub, Yu.I. 1974: *Nekropol Olvii V – IV st.do n.e.* (Kiev).

Kozub, Yu.I. 1984: 'Istoricheskaya topografiya nekropolya Olvii'. In Kryzhitskii, S.D. (ed.), *Antichnaya kultura Severnogo Prichernomorya* (Kiev), 156–74.

Körpe, R. and Treister, M. 2002: 'Rescue Excavations in the Necropolis of Lampsacus, 1996'. *Studia Troica* 12, 429–50.

Krim 1998: *Archäologische Schätze aus drei Jahrtausenden* (Heidelberg).

Kris, K.I. 1981: *Kizil-Kobinskaya kultura i tavry* (Moscow).

Kriseleit, I. 1977: 'Griechischer Schmuck aus vergoldetem Ton'. *Funde und Berichte* 18, 13–20.

Križickij, S.D. 1999: 'Le temple d'Apollon Iatros dans le temenos occidental d'Olbia: essai de restitution'. *Religions du Pont-Euxin* (Basançon), 85–98.

Kron, U. 1976: *Die zehn attischen Phylenreoen: Geschichte, Mythos, Kult und Darstellungen* (Berlin)

Kruglikova, I.T. 1975: *Selskoe khozyayistvo Bospora* (Moscow).

Krushkol, Y.S. 1967: 'K voprosu ob etnogeneze sindov'. In Blavatskaya, T.V. (ed.), *Antichnoe obshchestvo* (Moscow), 156–61.

Krykin, S.M. 1993: *Frakiytsy v antichnom Severnom Prichernomorie* (Moscow).

Kryzhitskii, S.D. 1982: *Zhilye doma antichnykh gorodov Severnogo Prichernomoriya* (Kiev).

Kryzhitskii, S.D. 1993: *Arkhitektura antichnykh gosudarstv Severnogo Prichernomoriya* (Kiev).

Kryzhitskii, S.D., Buiskikh, S.B., Burakov, A.V. and Otreshko, B.M. 1989: *Selskaya okruga Olvii* (Kiev).

Kryzhitskii, S.D., Buiskikh, S.B., and Otreshko, V.M. 1990: *Antichnye poseleniya Nizhnego Pobuzhiya (arkheologicheskaya karta)* (Kiev).

Kryzhitskii, S.D. and Krapivina, V.V. 1993: 'Naselennya i otochuyuche seredovishche v antychnykh derzhavakh Pivnichnogo Prychornomoriya'. In Kryzhytskii, S.D. (ed.), *Otochuyuche seredovishche i starodavne naselennya Ukrainy* (Kiev), 66–72.

Ksenofontova, I.V. 2000: 'Antichnye importy Tenginskogo mogilnika i Ulskikh kurganov'. *TS* 3, 81–4.

Kuzmanov, G. and Salkin, A. 1992: 'Antichni amfori ot akvatoriyata na Chernomorskoto kraibrezkhie na yukhna Dobrudkha'. *Izvestia na narodniya muzei Varna* 28/43, 27–61.

Kuzmina, E. 1976: 'O semantike izobrazhenii na Chertomlytskoi amfore'. *SA* 3, 68–75.

Kuznecov, V.D. 1999: 'L'organisation du territoire du Bosphore asiatique'. *Territoires des cités grecques* (*BCH* Suppl. 34), 341–53.

Kuznetsov, V.D. 1991: 'Ranniye apoikii Severnogo Prichernomoriya'. *KSIA* 204, 31–7.

Kuznetsov, V.D. 1992: 'Raskopki v Kepakh 1984–89 gg.' In Koshelenko, G.A. (ed.), *Ocherki arkheologii i istorii Bospora* (Moscow), 28–45.

Kuznetsov, V.D. 2000: 'Afiny i Bospor: khlebnaya torgovlya'. *RosA* 1, 107–20.

Kuznetsov, V.D. 2001: 'Archaeological Investigations in the Taman Peninsula'. In Tsetskhladze, G.R. (ed.), *North Pontic Archaeology. Recent Discoveries and Studies* (*Colloquia Pontica* 6) (Leiden; Boston; Köln), 319–44.

Kyrieleis, H. 1993: 'The Heraion at Samos'. In Marinatos, N. and Hägg, R. (eds.) *Greek Sanctuaires. New Approaches* (London), 125–53.

Lagutin, A.B. 1999: 'Zheleznye nakonechniki metatelnogo oruzhiya iz raskopok greko-skifskogo gorodishcha Kara-Tobe v Krymu'. *SA* 4, 203–7.

Lang-Auinger, C. 1996: 'Das Hanghaus 1'. *Forschungen in Ephesos* 8/3, 86–91.

Lang-Auinger, C. 2003: 'Hanghaus 1. Funde und Ausstattung'. *Forschungen in Ephesos* 8/4, 213–20.

Lang-Auinger, C. 1999: 'Die Terrakottagruppe Eros und Psyche aus dem Hanghaus 1 in Ephesos und das Gegenstück aus Berlin – Beide aus derselben Werkstatt?'. *IstMit* 49, 363–75.

Lantsov, S.B. 1999a: 'Kratkie svedeniya o bosporskoi kreposti Kutlake – Afineone Psevdo-Arriana'. *VDI* 1, 121–36.

Lantsov, S.B. 1999b: 'Antichnaya krepost Afineon v Tavrike'. In Kazarin, V.P. (ed.), *Piligrimy Krima* (Simferopol), 162–70.

Lantsov, S.B. and Trufanov, A.A. 1999: 'Stolovaya posuda s lakovym pokrytiem iz Kutlakskoi kreposti'. *DB* 2, 161–73.

Lappo-Danilevskii, A. and Malmberg, V. 1894: *Drevnosti Yuzhnoi Rossii. Kurgan Karagodeuashkh* (*MAR* 13) (St-Petersburg).

Latyshev, V.V. 1900: 'Izvestiya drevnikh pisatelei o Skifii i Kavkaze'. *Zapiski Imperatorskogo Russkogo obshchestva* XI (3–4) (St-Petersburg).

Latyshev, V.V. 1904: 'Izvestia drevnikh pisatelei o Skifii i Kavkaze'. *Zapiski klassicheskogo otdeleniya Imperatorskogo Russkogo obshchestva* II (1) (St-Petersburg).

Latyshev, V.V. 1909: Ποντικα (St-Petersburg).

Latysheva, V.A.1985: 'Razvitie zemledeliya na territorii khersonessoy khory'. In Dvoretskii, E.V. (ed.), *Arkheologicheskie pamyatniki Yugo-Vostochnoi Evropy* (Kursk), 68–86.

Laumonier, A. 1956: *Les figurines de terre cuite* (*Exploration archéologique de Délos* 23) (Paris).

Lawton, C.L. 1995: *Attic Document Reliefs* (Oxford).

Lazarov, M. 1978a: 'Sinope i Zapadnopontiiskiyat Pazar'. *IHMB* XIV(XXIX), 11–65.

Lazarov, M. 1978b: 'Amphores et timbres amphoriques d'Heraclée Pontique trouves à Apollonie'. *Studia in honorem Vesselin Besevliev* (Sofia), 299–309.

Lazarov, M. 1980: 'Timbres amphoriques de Nessebre'. *Nessebre* 2 (Sofia), 156–85.

Lazarov, M. 1986: 'Les timbres amphoriques Grecs et les problèmes commerciaux en Thrace Pontique'. *BCH* Supll XIII, 401–5.

Les ateliers amphoriques de Sinope (Turquie) // http//www.france.diplomatie.fr/culture/france/archeologie/turk/index.html, turk/atelier_boz_tepe/atelboztepe.html, turk/atelier_dimirci/ateldemirci.html.

Leskov, A.M. 1961: 'Ob ostatkakh tavrskoi kultury na Kerchenskom poluostrove'. *SA* 1, 259–66.

Leskov, A. 1972: *Treasures from the Ukrainian Barrows: Latest Discoveries* (Leningrad).

Leskov, A. 1974: *Skarbi kurganiv Khersonshchini* (Kiev).

Leskov, A.M. 1990: *Grabschätze der Adygeen* (München).

Leskov, A. and Erlikh, V. 1999: *Mogilnik Fars/Klady* (Moscow).

Levi, E.I. 1956: 'Olviiskaya agora'. *MIA* 50, 35–118.

Levi, D. 1964: 'Le oreficerie di Iasos'. *BdA* 49, 199–217.

Leyenaar-Plaisier P.G. 1979: *Les terres cuite grecques et romains* (Leiden).

Lippold, G. 1950: *Die Plastik, Handbuch der Archäologie* (München).

Logvinov, K.T. 1984: 'Evolyutsiya klimata i raschet ego kharakteristik'. *Priroda SSSR. Klimat* (Kiev), 17–25.

Loraux, N. 1986: *The Invention of Athens* (Cambridge Mass.).

Lukyashko, S.I. 1988: 'Etnicheskie protsessy na Nizhnem Donu i v Severo-Vostochnom Priazove v 6 – 4 vv. do n.e.' In Maksimenko, V.E. (ed.), *Problemy sarmatskoi arkheologii i istorii* (Azov), 65–75.

Lukyashko, S.I. 1992: 'K voprosu ob etnicheskoi kharakteristike naseleniya Severo-Vostochnogo Priazovya v 6–4 vv. do n.e.' *DD* 1, 57–64.

Lungu, V. 1994: 'Amfore stampilate din nordul Dobrogei'. *Pontica* 27, 133–55.

Lunsingh-Scheurleer, R.A. 1982: 'Terracotta 'imitation' jewellery'. *BABesch* 57, 192–6.

Maenchen-Helfen, O. 1957: 'Crenelated Mane and Scabbard Slide'. *CAJ* 3, 2, 85–138.

Makhortykh, S.V. 1991: *Skify na Severnom Kavkaze* (Kiev).

Maksimenko, V.E. 1983: *Savromaty i sarmaty na Nizhnem Donu* (Rostov-upon-Don).

Maksimenko, V.E. 1992: 'Ob etnicheskoi prinadlezhnosti yazamatov i yazygov (po dannym antichnoi traditsii)'. *DD* 1, 64–8.

Maksimova, M.I. 1958: 'Miniatyurnaya gruppa na feodosiiskikh sergakh'. *TGE* 2, 62–6.

Maksimovich, G.A. 1932: *Zernovye kyltyry v sisteme krymskogo polevodstva* (Simferopol).

Malyshev, A. 1996: 'Anticnyi import v Zakubanie (6 – 4 vv. do n.e.). Po materialam raskopok Tengiskogo II gorodisha'. In Afanasev, G. (ed.), *Aktualnye problemy arkheologii Severnogo Kavkaza* (Moscow), 109–11.

Malyshev, A.A. and Dmitriev, A.V. 1996: 'Arkheologicheskie issledovaniya v Tsemesskoi doline'. *AO* 1995, 228–30.

Mantsevich, A. 1969: 'Paradnyi mech iz kurgana Solokha'. *MIA* 150, 96–118.

Mantsevich, A. 1987: *Kurgan Solokha* (Leningrad).

Marazov, I. 1978: *Ritonite v drevna Trakiya* (Sofia).

Marchenko, I. I. 1996: *Siraki Kubani* (Krasnodar).

Marchenko, K.K. 1985: 'Sravnitelnyi analis dvukh pozdne-arkhaicheskikh poselenii Nizhnego Pobuzhiya: Staraya Bogdanovka-2 i Kutsurub-1'. In Kryzhitskij, S.D. (ed.), *Problemy issledovaniya Olvii* (Parutino), 50–1.

Marchenko, K.K. 1988: *Varvary v sostave naseleniya Berezani i Olvii* (Leningrad).

Marchenko, K.K. 1991: *Greki i varvary Severo-Zapadnogo Prichernomoriya 7–1 vv. do n.e. (Abstracts of doctoral dissertation)* (Leningrad).

Marchenko, K.K. 1994: 'Stikhiinaya liniya grecheskoi kolonizatsii ili k voprosu o kharaktere i putyakh formirovaniya selskogo naseleniya Severo-Zapadnogo Prichernomoriya pozdnearkhaicheskogo perioda'. *VDI* 4, 92–9.

Marchenko, K.K. 1996: 'Tretii period stabilizatsii v Severnom Prichernomorie antichnoi epokhi'. *RosA* 2, 70–80.

Marchenko, K.K. 1999a: 'K probleme greko-varvarskikh kontaktov v Severo-Zapadnom Prichernomorie 5 – 4 vv. do n.e. (selskie poseleniya Nizhnego Pobuzhiya)'. In Dobrolubskii, A. (ed.), *Skifskii kvadrat* (*Stratum Plus* 3) (St-Petersburg; Kishinev; Odessa), 145–72.

Marchenko, K.K. 1999b: 'Osnovnye aspekty i resultaty izucheniya greko-varvarskikh kontaktov i vzaimodeistvii v Severnom Prichernomorie skifskoi epokhi'. In Dobrolubskii, A. (ed.), *Skifskii kvadrat* (*Stratum Plus* 3) (St-Petersburg; Kishinev; Odessa), 333–53.

Marchenko, K.K. and Domanskii, Y.V. 1981: 'Antichnoe poselenie Staraya Bogdanovka-2'. *ASGE* 22, 62–75.

Marchenko, K.K. and Domanskii, Y.V. 1983: 'Kompleks veshchestvennykh nakhodok na antichnom poselenii Staraya Bogdanovka-2'. *ASGE* 24, 56–72.

Marchenko, K.K. and Domanskii, Y.V. 1986: 'Antichnoe poselenie Kutsurub-1'. *ASGE* 27, 48–61.

Marchenko, K.K. and Domanskii, Y.V. 1999: 'Dva poseleniya Nizhnego Pobuzhiya arkhaicheskogo vremeni (opyt sravnitelnoi kharakteristiki materialnoi kultury pamyatnikov)'. In Dobrolubskii, A. (ed.), *Skifskii kvadrat* (*Stratum Plus* 3) (St-Petersburg; Kishinev; Odessa), 26–74.

Marchenko, K.K., Rogov, E.Y., Vakhtina, M.Y., Vinogradov, Y. A. and Zuev, V.Y. 2005: *Greki i varvary Severnogo Prichernomoriya v skifskuyu epokhu* (St-Petersburg).

Marchenko, K.K. and Solovyov, S.L. 1988a: 'K tipologii stroitelnykh kompleksov Nizhnego Pobuzhiya 4 v. do n.e.' *KSIA* 194, 49–54.

Marchenko, K.K. and Solovyov, S.L. 1988b: 'Novaya gruppa lepnoi keramiki Nizhnego Pobuzhiya pozdnearkhaicheskogo vremeni'. *Arkheologia* (Kiev) 63, 56–60.

Marchenko, K.K. and Vakhtina, M.Y. 1996: 'Skify v Severnoi Dobrudzhe i etno-politicheskaya situatsiya v stepyakh Severnogo Prichernomorya v 7 – 6 vv. do n.e.' In Kopylov, V.P. (ed.), *Mezhdunarodnye otnosheniya v basseine Chernogo morya v drevnosti i srednie veka* (Rostov-upon-Don), 51–3.

Marčenko, K.K. and Vinogradov, J.A. 1989a: 'Das nordliche Schwarzmeergebiet in der scythischen Epoche. Periodisierung der Geschichte'. *Klio* 71 (2), 539–49.

Marčenko, K.K. and Vinogradov, Y.A. 1989b: 'The Scythian Period in the Northern Black Sea Region (750–250 BC)'. *Antiquity* 63 (241), 803–13.

Marčenko, K.K., Žitnikov, V.G. and Kopylov, V.P. 2000: *Die Siedlung Elizavetovka am Don* (Moscow).

Marinovich, L.P. and Koschelenko, G.A. 1999: 'Kuda i zachem plaval Demeya?' In Marinovich, L.P. (ed.), *Zakon i obychai gostepriimstva v antichnom mire* (Moscow), 80–98.

Marshak, B.I. 1987: 'Iskusstvo Sogda'. In Piotrovskii, B.B. and Bongard-Levin G.M. (eds.), *Tsentralnaya Aziya. Pamyatniki pismennosti i iskusstva* (Moscow), 218–42.

Marshall, F.H. 1911: *Catalogue of the Jewellery, Greek, Etruscan and Roman, in the Departments of Antiquities, British Museum* (London).

Marti, Y.Y. 1928: 'Gorodishcha Bosporskogo tsarstva k yugu ot Kerchi'. *ITOIAE* 2, 12–23.

Marti, Y.Y. 1929: 'Raskopki gorodishcha Kiteya v 1928 g.' *ITOIAE* 3, 8–9.

Marti, Y.Y. 1941: 'Pozdneellinisticheskie nadgrobiya Bospora kak istoriko-kulturnyi dokument'. *SA* 7, 31–44.

Maslennikov, A.A. 1981: *Naselenie Bosporskogo gosudarstva v 6 – 1 vv. do n.e.* (Moscow).

Maslennikov, A.A. 1989: 'Istoriko-geografichne raiononuvannya Shidnogo Krymu v antichnu epokhu'. *Arkheologiya* 4, 35–47.

Maslennikov, A.A. 1992: 'Evolyutsiya organizatsii silskoi teritorii evropeyskogo Bosporu'. *Arkheologiya* 2, 69–84.

Maslennikov, A.A. 1993: 'Skify na Bospore v 3 – 1 vv. do n.e.' In Raev, B.A. (ed.), *Skifiya i Bospor* (Novocherkassk), 58–68.

Maslennikov, A.A. 1995: 'Polemon I na Bospore'. *BS* 6, 158–67.

Maslennikov, A.A. 1998: *Ellinskaya khora na krayu Oikumeny (selskaya territoriya evropeiskogo Bospora v antichnuyu epokhu)* (Moscow).

Maslennikov, A.A. 1999: 'Greki i varvary na 'granitsach' Bospora (Vzlgyad na problemu k kontsu tysyacheletiya)'. In Melnikova, E.A. (ed.), *Drevneishie gosudarstva Vostochnoi Evropy (1996–1997)* (Moscow), 170–92.

Maslennikov, A.A. 2000: 'Gruntovye nekropoli selskikh poselenii Karalarskogo poberezh'ya (Vostochnii Krym) pervykh vekov n.e.' *DB* 3, 136–200.

Maslennikov, A.A. 2001: 'Some Questions Concerning the Early History of the Bosporan State in the Light of Recent Archaeological Investigations in the Eastern Crimea'. In Tsetskhladze, G.R. (ed.), *North Pontic Archaeology. Recent Discoveries and Studies* (*Colloquia Pontica* 6) (Leiden; Boston; Köln), 247–60.

Maslov, V.E. 1999:'O datirovke izobrazhenii na poyasnykh plastinakh iz Orlatskogo mogil'nika'. In Demidenko, S. V. and Zhuravlev, D.V. (eds.), *Evraziiskie drevnosti* (Moscow), 220–36.

Matheson, S.B. 1995: *Polygnotos and Vase Painting in Classical Athens* (Wisconsin).

Matkovskaya, T.A. 1992: 'Masterskie nadgrobnogo relefa Evropeiskogo Bospora 1 v. do n.e. – 2 v. n.e.' *SGMII* 10, 387–407.

Matkovskaya, T.A. 2000: 'Muzskoi kostyum evropeiskogo Bospora pervykh vekov n.e.' In Zinko, V.N. (ed.), *Bospor kimmeriiskii. Na perekrestye grecheskogo i varvarskogo mirov* (Kerch), 82–5.

Mattingly, H.B. 1996: 'Athens and the Black Sea in the Fifth Century BC'. In Lordkipanidze, O. and Lévêque, P. (eds.), *Sur les traces des Argonautes* (Paris), 151–7.

Medvedev, A.P. 1993: 'Reka Tanais v sisteme istoriko-arkheologicheskikh realii skifskogo vremeni'. In Rayev, B.A. (ed.), *Antichnaya tsivilizatsiya i varvarskii mir* 2 (Novocherkask), 127–37.

Medvedev, A.P. 1998: 'Prirodno-klimaticheskie ritmy i napravleniya migratsii naseleniya v lesostepnom Podon'e v rannem zheleznom veke'. In Stolyar, A.D. (ed.), *Skify, Khazary, Slavyane. Drevnyaya Rus.* (St-Petersburg), 51–2.

Mélida, J.R. 1930: *Museo Archeologico Nacional. Madrid. CVA Espagne* 2.

Melikian-Chirvani, A. S. 1993a: 'The Intenational Achaemenid Style'. *BAsInst* 7, 111–30.

Melikian-Chirvani, A.S. 1993b: 'L'emblème de gloire solaire'. *BAsInst* 7, 21–9.

Melyukova, A. 1964: *Vooruzhenie skifov* (Moscow).

Melyukova, A. 1976: 'K voprosu o vzaimosvyazyakh skifskogo i fgrakyiskogo isskustva'. In: Melukova, A. and Moshkova, M. (eds.) *Skifo-sibirskyi zverinyi stil v iskusstve narodov Evrazii* (Moscow), 106–27.

Melyukova, A.I. 1979: *Skifiya i frakiyskii mir* (Moscow).

Meriçboyu, Y.A. 2001: *Antikçağ de Anadolu takilari* (Istanbul).

Merker, G.S. 1973. 'The Hellenistic Sculpture of Rhodes'. *Studies in Mediterranean Archaeology* XI (Göteborg), 5–34.

Meshcheryakov, V.F. 1979: 'O kulte bogini Devy v Chersonese Tavricheskom'. In Kozhurin, Y.Y. (ed.), *Aktualnye problemy izucheniya istorii religii i ateizma* (Leningrad), 104–19.

Meyer, M. 1989: *Die griechischen Urkundereliefs* (Berlin).

Meyer-Schlichtman, C. 1988: 'Die Pergamenische Sigillata aus der Stadtgrabung von Pergamon Mitt 2 Jh v. Chr. – mitte 2 Jh. n.Chr.' *PF* 6, 36–72.

Minns, E.H. 1913: *Scythians and Greeks* (Cambridge).

Minasyan, R. 1999: 'O pervonachalnom oblike zolotykh podvesok s izobrazheniem golovy Afiny iz kurgana Kul-Oba'. *SGE* LVIII, 35–9.

Miroshina, T.V. 1980: 'Skifskie kalafy'. *SA* 1, 30–45.

Miroshina, T.V. 1983: 'Grecheskie golovnye ukrasheniya Severnogo Prichernomorya'. *KSIA*, 174, 10–7.

Mirtchev, M. 1956: 'The Terracotta Collection in the Museum in the City of Varna'. *Izvestija na Varnenskogo archeologičesko družesko* 10, 19–20.

Mollard-Beques, S. 1963: *Catalogue raisonné des figurines et reliefs en terrecuite grecs et romains* II, *Myrina* (Paris).

Molev, E.A. 1985: 'Arkheologicheskie issledovaniya Kiteya v 1970–1983 gg.' In Dvoretskii (ed.), *Arkheologicheskie pamyatniki yugo-vostochnoi Evropy* (Kursk), 40–67.

Molev, E.A. 1986: 'Bosporskii gorod Kitei 4 – 3 vv. do n.e.' *Arkheologia* 54, 33–46.

Molev, E.A. 1990: 'Moneti iz raskopok gorodishcha i nekropolya Kiteya'. *AMA* 7, 111–21.

Molev, E.A. 1997a: 'Termin 'Bospor' u Diodora'. In Meshcheryakov, V. F. (ed.), *Antichnyi mir i Visantiya. K 70-letiyu professora V.I. Kadeeva* (Kharkov), 141–54.

Molev, E.A. 1997b: *Politicheskaya istoriya Bospora 6 – 4 vv. do n.e.* (Nizhnii Novgorod).

Molev, E.A. 1999: 'Torgovlya Kiteya s Rodosom'. *NIKA* 3, 95–8.

Molev, E.A. 2000a: 'Sinopskie keramicheskie kleima iz Kiteya'. *NIKA* 4, 93–112.

Molev, E.A. 2000b: 'Osnovnye etapy istorii Kiteya'. *TS* 3, 42–4.

Molev, E.A. and Moleva, N.V. 1996a: 'Denezhnoe obrashchenie v Kitee'. *PIFK* (Moscow; Magnitogorsk), 75–82.

Molev, E.A. and Moleva, N.V. 1996b: '25 let Kiteiskoi ekspeditsii'. *NIKA* 1, 76–94.

Molev, E.A. and Sazanov, A.V. 1991: 'Pozdneantichnye materialy iz raskopok Kiteya'. In Molev, E.A. (ed.), *Voprosy istorii i arkheologii Bospora* (Voronezh; Belgorod), 63–73.

Molev, E.A. and Shestakov, S.A. 1991: 'Nekropol Kiteya'. In Molev, E.A. (ed.), *Voprosy istorii i arkheologii Bospora* (Voronezh; Belgorod), 74–101.

Molev, E.A. 1994: *Bospor v period ellinizma* (Nizhnii Novgorod).

Moleva, N.V. 1989: 'O charaktere rannego Kiteiskogo svyatilishcha'. In Filippova, R.F. (ed.), *Problemy religievedeniya i ateisma v museyakh* (Leningrad), 42–51.

Moleva, N.V. 1995: 'Grecheskoe i varvarskoe v religioznom mirovozzrenii gorodskoi obshchiny Kiteya'. In Chernyshov, Y.G. (ed.), *Ideologiya i politika v antichnoi i srednevekovoi istorii* (Barnaul), 3–26.

Monakhov, S. Y. 1996: 'Amfory Klazomen i 'kruga Klazomen''. In Kopylov, V.P. (ed.), *Mezhdunarodnye otnosheniya v basseine Chernogo morya v drevnosti i srednie veka* (Rostov-upon-Don), 33–6.

Monakhov, S.Y. 1999: *Grecheskiye amfory v Prichernomorie. Kompleksy keramicheskoy tary 7 – 2 vv. do n. e.* (Saratov).

Monakhov, S.Yu. 2003: *Grecheskie amfory v Severnom Prichernomorie* (Moscow; Saratov).

Moore, M.B. 1997: *Attic Red-Figured and White-Ground Pottery* (*The Athenian Agora* XXX) (Princeton).

Moorey, P.R.S. 1988: 'The Tecnique of Gold-Figure Decoration on Achaemenid Silver Vessels and its Antecents'. *IranAnt* 23, 231–46.

Mozolevskii, B. 1979: *Tovsta mogila* (Kiev).

Mozolevskii, B.M. 1983: *Skifskii step* (Kiev).

Möller, A. 2000: *Naukratis. Trade in Archaic Greece* (Oxford).

Muravev, S.N. 1991: 'Problema Araksa–Tanaisa–Jaksarta i uroven Kaspiya v 6–3 vv. do n.e.' In Rozhanskii, I. D. (ed.), *Mathesis. Iz istorii antichnoi nauki i filosofii* (Moscow), 115–73.

Museteanu, C., Conovici, N. and Atanasiu, A. 1978: 'Contribution au problème de l'importation des amphores grecques dans le sud-est de la Munténie'. *Dacia* XXII, 173–99.

Musti, D., Benzi, M. and Rocchetti, L. 1992: *L'oro dei Greci* (Novarra).

Myagkov, Y.Y. and Baygusheva, V.S. 1996: 'Etnicheskie i ekologicheskie aspekty v ispolzovanii mlekopitayushchikh Elizavetinskogo gorodishcha'. In Kopylov, V.P. (ed.), *Mezhdunarodnye otnosheniya v basseine Chernogo morya v drevnosti i srednie veka* (Rostov-upon-Don), 94–7.

Nalivkina, M.A. 1970: 'Statuetki iz Kerkinitidy'. In Kobylina, M. M. (ed.), *Terrakoty Severnogo Prichernomoriya* (*SAI* G1-11) (Moscow).

Naumann-Steckner, F.: 1998: 'Greek Jewelery and its Representation'. *The Art of the Greek Goldsmith* (London), 95–8.

Nekhaev, A. 1986: *Otchet Adygeiskoi arkheologicheskoi ekspeditsii za 1986 god*. (Archive of Institute of Archeology Russian Academy of Science, Fund R-I, No. 14072).

Neverov, O.Ya. 1986: 'Metallicheskie perstni epokhi arkhaiki, klassiki i ellinizma v Severnom Prichernomorye'. In Grach, N.L. (ed.), *Antichnaya torevtika*, 17–27.

Neyshtadt, M.I. 1963: *Opredelitel rasteniy sredney polosy Evropeiskoy chasti SSSR* (Moscow).

Nicholls, R.V. 1958–59: 'Old Smyrna: the Iron Age Fortification and Associated Remains on the City Perimeter'. *BSA* 53–54, 35–137.

Nicolle, D. 1996: *Sassanian Armies* (Dewsbury).

Nikolaenko, G.M. 2001: 'The Adjacent Chora of Tauric Chersonesus in the 4th Century BC'. In Tsetskhladze, G. R. (ed.), *North Pontic Archaeology. Recent Discoveries and Studies* (*Colloquia Pontica* 6) (Leiden; Boston; Köln), 177–204.

Nikonorov, V.P. and Khudyakov, J.S. 1999. 'Izobrazheniya voinov iz Orlatskogo mogilnika'. In Khudyakov, J. S. (ed.), *Evraziya: kulturnoe nasledie drevnikh tsivilizatsii* 2 (Novosibirsk), 141–54.

Nikonov, A.A. 1996: 'Ob istoricheskikh zemletryaseniyakh i seismicheskom potenziale v raione g. Anapy'. *Seismologicheskii bulleten Ukrainy za 1993 god* (Simferopol), 84–7.

Nikulitse, I.T. 1987: *Severnye frakiytsy v 6 – 1 vv. do n.e.* (Kishinev).

Novichikhin, A.M. 1993: 'Issledovaniya arkheologicheskikh pamyatnikov u pos. Alekseevka'. *Muzeinyi vestnik* 1 (Krasnodar), 27–30.

Novichikhin, A.M.1995: 'Materialy pervoi poloviny 1 tys.do n.e. iz doliny Sukko'. *Istoriko-arkhaeologicheskii almanakh* 1 (Armavir; Moscow), 63–7.

Novichikhin, A.M. 1998: 'Ranneskifskoe bronzovoe zerkalo iz Zapadnogo Zakubanya'. *DK* 11, 19–22.

Novichikhin, A.M. 2000: '"Kogda proplyvesh' Bospor, budut sindy"'. In Smaglyuk, T.V. and Novichikhin, A.M. (eds.), *Ocherki po istorii Anapy* (Anapa), 24–37.

Nymphaeum 1999: *Drevnii gorod Nimphei. Katalog vystavki* (St-Petersburg).

Oakly, J. 1990: *The Phiale Painter* (*Kerameus* 8) (Athens).

Odessa Museum 1983: *Odesskii arkheologicheskii muzei AN SSSR* (Kiev).

Ognenova-Marinova L. 1975: 'Statuettes en bronze du Musée national archéologique à Sofia'. *Statuettes de culte* (Sofia), 144–46.

Okhotnikov, S.B. and Ostroverkhov, A.S. 1993: *Svyatilishche Akhilla na ostrove Levke (Zmeinom)* (Kiev).

Olkhovskii, V.S. 1981: 'Naselenie Kryma po dannym antichnykh avtorov'. *SA* 3, 52–65.

Olkhovskii, V.S. 1990: 'Do etnichnoi istorii davnogo Krumu'. *Arkheologiya* 1, 27–38.

Olkhovskij, V.S. 2001: 'A Relief from the Settlements Jubilejnoje I, Ethnographic and Folklore Features'. In *Savostina* 2001, 164–78.

Olmos, R. 1991. 'Le facteur grec à Malaga et dans le contexte des installations phéniciens du littoral andalou'. In *Gran* 1991, 140–3.

Olmos R., 1994: 'La cerámica griega'. In *Garrido and Orta* 1994, 231–42.

Onaiko, N.A. 1967: 'Ellinisticheskoe zdanie Raevskogo gorodishcha i ego mesto v architekture Bospora'. *SA* 2, 155–68.

Onaiko, N.A. 1970: *Antichnyi import v Pridenprovye i Pobuzhye v IV – II vv.do n.e.* (*SAI* D1-27) (Moscow).

Onaiko, N.A. 1984: 'Raevskoe gorodishche. Torik.' In Koshelenko, G.A.,Kruglikova, I.T. and Dolgorukov, V. S. (eds.), *Antichnye gosudarstva Severnogo Prichernomoriya* (Moscow), 92.

Opredelitel vysshikh rasteniy Ukrainy 1987: *Opredelitel vysshikh rasteniy Ukrainy* (Kiev).

Orfèvrerie ancienne 1975: Bondar I.V. (ed.), *Orfèvrerie ancienne. De la collection du Musée des trésors historiques d'Ukraine* (Moscow).

Ortega, J. 1999: 'Poblamiento y población en la Onuba prerromana: algunas consideraciones'. *Complutum* 10, 267–77.

Ostrovskii, A.B. 1970: 'Paleoseismotektonicheskie dislokazii na Chernomorskom poberezh'e Severo-Zapadnogo Kavkaza v sviazi s otsenkoi sovremennoi seismichnosti etoi territorii'. In Boulanger, Y.D. and Blagovolin, N. S. (eds.), *Kompleksnye issledovania Chernomorskoi vpadiny* (Moscow), 46–58.

Osuna, M., Bedia, J. and Domínguez, A.M. 2001: 'El santuario protohistórico hallado en la calle Méndez Núñez (Huelva)'. In Cabrera, P. and Santos, M. (eds.), *Ceràmiques Jònies d'època arcaica: Centres de producció i comercialització al Mediterrani Occidental* (Barcelona), 177–88.

Ozyigit, O. 1994: 'The City Walls of Phokaia'. *Revue des Études Anciennes* 96, 77–109.

Ozyigit, O. 1995: 'Les dernieres fouilles de Phocée'. In *Phocée et la fondation de Marseille* (Marseilles), 47–58.

Özgen, I. and Öztürk, J. 1996: *Heritage Recovered. The Lydian Treasure* (Istanbul).

Özet, M.Y. 1994: 'The Tomb of a Noble Woman from the Hekatomid Period'. In Isager, J. (ed.), *Hekatomid Caria and the Ionian Renaissance* (*Halicarnassian Studies* I) (Odense), 88–96.

Paleoseismogeologiya 1979: *Paleoseismogeologiya Bolshogo Kavkaza* (Moscow).

Paltseva, L.A. 1979: 'Kult bogini Devy v Chersonese'. In Frolov, E.D. (ed.), *Iz istorii antichnogo obshchestva* (Gorkii), 30–46.

Parfenov, V. N. 1996: 'Dynamis, Agrippa und der Friedenaltar. Zur militarische und politische Geschihte des Bosporanische Reihes nach Asandros'. *Historia* 45 (1), 95–103.

Parfenov, V.N. 1997: 'Dinamiya, tsaritsa Bospora'. In Sizov, S. K. (ed.), *Bospor i antichnyi mir* (Nizhnii Novgorod), 126–36.

Paromov, Y.M. 1990: 'Printsipy izucheniya evolyutsii sistemy rasseleniya na Tamanskom poluostrove v antichnoye i srednevekovoye vremya'. In Zhdanovskii, A.M. (ed.), *Drevniye pamyatniki Kubani* (Krasnodar), 56–69.

Paromov, Y.M. 1992a: *Arkheologicheskaya karta Tamanskogo poluostrova* (Archive of ISISS RAS No. 47103) (Moscow).

Paromov, Y.M. 1992b: 'Ocherk istorii arkheologo-topograficheskikh issledovanii Tamanskogo poluostrova'. *BS* 1, 109–46.

Parshina, E.A. 1986: 'Raskopki Kutlakskoi ekspeditsii'. *AO* 1984 g., 288–9.

Pashkevich, G.A. 1984: 'Palaeoethnobotanical Examination of Archaeological Sites in the Lower Dnieper Region, Dated to the Last Centuries BC and the First Centuries AD'. *Plants and Ancient Man, Studies in Palaeoethnobotany* (Rotterdam), 277–83.

Pashkevich, G.O. 1995: 'Paleobotanichni materialy z pozkopok Olvii'. *Arkheologiya* 3, 97–108.

Pavlichenko, N.A. 1999: 'Dve novye nadpisi iz Nimfeiya'. In Vakhtina, M.Y., Zuev, V.Y., Rogov, E.Y. and Khrschanovskii V.A. (eds.), *Bosporskii fenomen: grecheskaya kultura na periferii antichnogo mira* (St-Petersburg), 186–87.

Peters, B.G. 1986: *Kostereznoe delo v antuchnykh gosudarstvakh Severnogo Prichernomorya* (Moscow).

Petrenko, V.G. 1967: *Pravoberezhe Srednego Pridneprovya v V – III vv.do n.e.* (*SAI* D1-4) (Moscow).

Petrenko, V.G. 1978: *Ukrasheniya Skifii VII – III vv.do n.e.* (*SAI* D4-5) (Moscow).

Petrenko, V.G. 1989: 'Skify na Severnom Kavkaze'. In Melukova, A.I. (ed.), *Stepi evropeiskoi chasti SSSR v skifo-sarmatskoe vremya. Arkheologiya SSSR* (Moscow), 216–23.

Petrie, W.F. 1886: *Naukratis* I: 1884–1885 (London).

Petrishcheva, N.M. 1929: 'Zernovoe khozyaistvo i semennoe delo v Krymu'. *Puti rekonstruktsii narodnogo khozyaistva. Trudy siezda po izucheniyu proizvoditelnykh sil Kryma. 6–10.05, 1928* (Simferopol), 29–84.

Petrova, E.B. 2000: *Antichaya Theodosia* (Simferopol).

Pfrommer, M. 1983: 'Italien-Makedonien-Kleinasien. Interdependenzen spätklassicher und frühhellenistischer Toreutik'. *JdI* 98, 235–85.

Pfrommer, M. 1989: 'Zum Fries des Dionysostempels von Milet'. *IstMitt* 39, 433–9.

Pfrommer, M. 1990a: 'Ein achämenidiches Amphorenrhyton mit ägyptischem Dekor'. *AMI* 23, 191–209.

Pfrommer, M. 1990b: *Untersuchungen zur Chronologie früh- und hochhellenistischen Goldschmucks* (*IstForsch* 37) (Tübingen).

Pfrommer, M. 1993: 'Ein Grab-Drei Kulturen'. *IstMitt* 43, 339–49.

Pharmakowsky, B. 1913: 'Archäologische Funde im Jahre 1912. Rußland'. *AA*, 178–234.

Pianu, G. 1990: *La necropoli meridionale di Eraclea*. 1. *Le tombe di secolo IV e III a.C.* (Rome).

Pichikyan, I.R. 1975: 'Ordernaya arkhitektura Severnogo Prichernomoriya VI–V vv. do n.e.' *VDI* 1, 117–37.

Pichikyan, I.R. 1984: *Malaya Aziya – Severnoe Prichernomorye. Antichnye traditsii i vliyaniya* (Moscow).

Pidoplichko, I.G. 1956: *Materialy do vyvchannya faun URSR* 2 (Kiev).

Podgorodetskii, P.D. 1994: 'Priroda Zapadnogo Kryma v antichnuyu epohu'. Kutaisov, V.A. (ed.), *Severozapadnyi Krym v antichnuyu epokhu* (*Materialy po arkheologii Kryma* 2) (Simferopol), 11–29.

Podosinov, A.V. 1997: 'Eschche raz o proiskhozhdenii imeni goroda Kerch'. In Meshcheryakov, V.F. (ed.), *Anichnyi mir i Visantiya. K 70-letiyu professora V.I. Kadeeva* (Kharkov), 155–71.

Podossionov, A.V. 2002: 'Am Rande der griechischen Oikumene'. In Fornasier J. and Böttger, B. (eds.), *Das Bosporanische Reich: der Nordosten des Schwarzen Meeres in der Antike* (Mainz), 21–38.

Polin, S.V. 1984: 'Pro sarmatske zavouyvannya Pivnichnogo Prichornomorya'. *Arkheologia* 45, 24–34.

Polin, S.V. 1992: *Ot Skifii k Sarmatii* (Kiev).

Popova, E.A. 1991: 'Yugo-zapadnyi kvartal skifskogo poseleniya u sanatoriya "Chayka" bliz Evpatorii'. In Shchapova, Yu. L. and Yatsenko, I.V. (eds.), *Pamyatniki zheleznogo veka v okrestnostyakh Evpatorii* (Moscow), 37–75.

Prinz, F. 1979: *Gründungsmythen und Sagenchronologie* (München).

Pritchett, W.K. 1993: *The Liar school of Herodotus* (Amsterdam).

Pruglo, V.I. 1960: 'Vostochnye kvartaly Mirmekiya v svete arkheologicheskikh issledovanii 1957 g.' *ZOAO* I (34), 266–74.

Pruglo, V.I. 1974: 'K voprosu o date kurgana Bolshaya Bliznitsa'. *SA* 3, 64–77.

Prushevskaya, E.O. 1945: 'Oblomok krasnofigurnogo kilika iz Mirmekiya'. *TOIKAMGE* 1, 119–29.

Prushevskaya, E.O. 1955: 'Khudozhestvennaya obrabotka metalla (torevtika)'. In Gaidukevich, V.F. and Maksimova, M.I. (ed.), *Antichnye goroda Severnogo Prichernomoriya. Ocherki istorii kultury* I (Moscow; Leningrad), 325–55.

Puschi, A. and Winter, F. 1902: 'Silbernes Trinkhorn aus Tarent in Triest'. *ÖJh* 5, 112–27.

Puzdrovskii, O.E. 1989: 'Okhrani robotu na skifskomu gorodishchi Kermen-Kyr'. *Arkheologia* 2, 136–42.

Puzdrovskii, A.E. 1999a: 'Ocherk etnosotsial'noi istorii Krymskoi Skifii vo 2 v. do n.e.–3 v. n.e.' *VDI* 4, 97–119.

Puzdrovskii, A.E. 1999b: 'Etnicheskaya istoriya Krymskoi Skifii'. *KhS* 10, 209–25.

Raevskii, D. 1985: *Model mira skifskoy kultury* (Moscow).

Rawson, J. 1996: *Mysteries of Ancient China. New Dicoveries from the Early Dynasties* (London).

Recio, A. 1990: *La cerámica fenicio-púnica, griega y etrusca del sondeo de San Agustín (Málaga)* (Málaga).

Reinach, S. 1892: *Antiquités du Bospohore Cimmérien* (Paris).

Reinsberg, C. 1980: *Studien zur hellenistischen Toreutik* (Hildesheim).

Richter, G.M.A. 1974: *A Handbook of Greek Art. A survey of the visual Arts of Ancient Greece* (7 ed.) (London; New York).

Rizzo, M.-A. 1990: *Complessi tombali dall Etruria Meridionale* (Roma).

Rogov, E.Ya. 2001: 'O meste proizvodstva feodosiiskikh i khersonesskikh sereg roskoshnogo stilya'. In Zuev, V. Yu. (ed.), *Bosporskii fenomen. Kolonizatsiya regiona. Formirovanie polisov. Obrazovanie gosudarstva* II (St-Petersburg), 66–73.

Rolle, R., Murzin, V.Ju. and Alekseev, A.Ju. 1998a: *Königskurgan Čertomlyk. Ein skythischer Grabhügel des 4. vorchristlichen Jahrhunderts* 1 (*Hamburger Forschungen* 1, 1997) (Mainz).

Rose, Ch.B. 1990: '"Princes" and Barbarians on the Ara Pacis'. *AJA* 94 (3), 453–67.

Rostovtsev, M. I. 1911: 'Svyatilishche frakiiskikh bogov i nadpisi benefitsiariev v Ai-Todore'. *IAK* 40, 1–42.

Rostovtsev, M.I. 1914: *Antichnaya dekorativnaya zhivopis na yuge Rossii* (St-Petersburg).

Rostovtsev, M.I. 1915: 'Sirisk – istorik Chersonesa Tavricheskogo'. *ZhMNP* 5, 151–70.

Rostovtsev, M.I. 1916: 'Bronzovyi byust bosporskoi tsaritsy i istoriya Bospora v epokhu Avgusta'. *Drevnosti* 25 (Moscow), 1–26.

Rostovtsev, M.I. 1925: *Skifiya i Bospor. Kriticheskoe obozrenie pamyatnikov literaturnykh i arkheologicheskikh* (Leningrad).

Rostovtsev, M.I. and Stepanov, P.K. 1917: 'Ellino-skifskii golovnoi ubor'. *IAK* 63, 69–101.

Rostovtzeff, M.I. 1919: 'Queen Dynamis of Bosporus'. *JHS* 39, 88–109.

Rostovtzeff, M. 1922: *Iraniens and Greeks in South Russia* (Oxford).

Rostovtzeff, M. 1930: 'The Bosporan Kingdom'. *CAH* VIII, 561–89.

Rostovtzeff, M. 1932: 'Pontus and It's Neighbours: the First Mithridatic War'. *CAH* IX, 211–60.

Rostowzew, M. 1931: *Scythien und der Bosporus* (Berlin).

Rotroff, S.I., 1997: *Hellenistic pottery* (*The Athenian Agora* XXIX) (Princeton, New Jersey).

Rouillard, P. 1990: 'Phéniciens et grecs à Toscanos. Note sur quelques vases d'inspiration gréco-géométrique de Toscanos (1967)'. *Madrider Mitteilungen* 31, 178–85.

Rouillard, P. 1991: *Les Grecs et la Péninsule Ibérique du VIIIe au IV siècle avant Jésus-Christ* (Paris).

Rouillard, P. 2001: 'Les céramiques de Grèce de l'Est dans le Sud-Est de la Péninsule Ibérique: nouveaux éléments'. In Cabrera, P. and Santos, M. (eds.), *Ceràmiques Jònies d'època arcaica: Centres de producció i comercialització al Mediterrani Occidental* (Barcelona), 225–31.

Royal Academy 1994: *In Pursuit of the Absolute Art of the Ancient World from the George Ortiz Collection. Ausstellung Royal Academy of Arts* (Bern).

Ruban, V.V. 1983: 'Keramika Yagorlytskogo poseleniya iz sobranii Chersonskogo muzeya'. *SA* 1, 285–90.

Rubinsohn, Z.W. 1980: 'Saumakos: Ancient History, Modern Politics'. *Historia* 29, 50–70.

Rudenko, S.I. 1962: *Kultura khunnov i Noinulinskie kurgany* (Moscow; Leningrad).

Rufete, P. 1989: 'Die Phönizische Rote Ware aus Huelva'. *Madrider Mitteilungen* 30, 118–34.

Rufete, P. 1999; 'Las primeras cerámicas fenicias en los poblados tartésicos de Huelva'. In González Prats, A. (ed.), *La cerámica fenicia en Occidente. Centros de producción y áreas de comercio* (Alicante), 215–40.

Ruiz Mata, D. 1999: 'La fundación de Gadir y el Castillo de Doña Blanca: contrastación textual y arqueológica'. *Complutum* 10, 279–317.

Rumf, A. 1923/24: 'Relief in Villa Borghese'. *RM* 38/39, 446–78.

Rusyaeva, A.S. 1982: *Antichnye terrakoty Severo-Zapadnogo Prichernomoriya (VI – I vv. do n.e.)* (Kiev).

Rusyaeva, A.S. 2000a: 'Kulty i svyatilishcha v sfere politiki demokraticheskikh polisov Severnogo Prichernomorya v ranneellinisticheskoe vremya'. *VDI* 3, 74–84.

Rusyaeva, A.S. 2000b: 'K interpretatsii izvestnyakovogo rel'efa iz Trekhbratnego kurgana'. In Zinko, V.N, (ed.), *Bospor kimmeriiskii. Materialy I Bosporskikh chtenii* (Kerch), 130–34.

Rusyaeva, M.V. 1994: 'Zoloti prikrasi u viglyadi golovi Geri'. *Arkheologiya* (Kiev) 1, 104–9.

Rusyaeva, M.V. 1999: 'Zolotoi greben iz kurgana Solocha'. In Koshelenko, G.A. (ed.), *VI Chtenia pamyati professora V.D. Blavatskogo* (Moscow), 96–7.

Rusyaeva, M.V. 2000: 'Zolotoi predmet ritualno-kultovogo naznacheniya iz kurgana Perederieva mogila'. In Vakhtina, M.Y., Zuev, V.Y., Rogov, E.Y. and Kharshanovskii, V.A. (ed.), *Bosporskii fenomen: grecheskaya kultura na periferii antichnogo mira* (St-Petersburg), 208–15.

Ruxer, M.S. and Kubsczak, J. 1972: *Naszynik grechi w okresach hellenistycznym i rzymskim* (Warsaw; Poznań).

Salov, A.I. 1979: 'Materialy dlya arkheologicheskoi karty Anapskogo raiona'. *KSIA* 159, 98–102.

Sammlung Eduard Gans 1928: Jaeger R., *Die Sammlung Eduard Gans. Antike Schmucksachen und Gegenstän de. Der Kleinkunst in Gold, Edelstein, Halbedelstein, Glas, Bronze usw. Auktuionskatalog. Paul Cassirer und Hugo Helbig. 11 Dezember 1928* (Berlin).

Samoilova, T.L. 1988: *Tira v VI – I vv. do n.e.* (Kiev).

Saprykin, S.Y. 1985a: 'Mitridatovskie traditsii v politike Bospora na rubezhe nashei ery'. In Isaenko, A. (ed.), *Antichnost i varvarskii mir* (Ordzhonikidze), 63–86.

Saprykin, S.Y. 1985b: 'Aspurgiane'. *SA* 2, 65–78.

Saprykin, S.Y. 1996: *Pontiiskoe tsarstvo. Gosudarstvo grekov i varvarov v Prichernomorie* (Moscow).

Saprykin, S.Y. 1999: 'Khersonesskie proksenii i puti plavaniya po Pontu'. In Abramzon, M.G. (ed.), PIFK 8 (Moscow; Magnitogorsk), 217–29.

Saprykin, S. 2002: 'Bosporus on the verge of the Christian era (outlines of economic development)'. *Talanta* 32/33, 91–102.

Savelya, O.Y. 1974: 'Tavrskoe poselenie v doline Belbeka'. In Antonova, I.A. and Borisova, V.V. (eds.), *Khersones Tavricheskii. Remeslo i kultura* (Kiev), 92–5.

Saverkina, I.I. 2000: 'Roskoshnye sergi v Ermitazhe i drugikh muzeyakh'. In Solovyov, S.L. (ed.), *Antichnoe Prichernomore* (St-Petersburg), 7–23.

Saverkina, I.I. 2001: 'Grecheskie ozherelya na rubezhe klassiki i ellinizma'. In Zakharova, N.A. (ed.), *Yuvelirnoe iskusstvo u materialnaya kultura* (St-Petersburg), 95–102.

Savostina, E.A. 1987a: 'Antichnoe poselenie Yubileinoe I na Tamani (predvaritelnye itogi izucheniya)'. *SA* 1, 58–71.

Savostina, E.A. 1987b: 'Trouvaille de reliefs antiques dans un établissement agricole du Bosphore Cimmérien (Taman)'. *RosA* I, 3–24.

Savostina, E.A. 1992: 'Mnogoyarusnye stely Bospora: semantika i struktura'. *SGMII* 10, 357–86.

Savostina, E.A. 1997: 'Statuya v khram. Bosporskaiya Artemida'. In Akimova, L.I. (ed.) *Vvedenie vo khram* (Moscow), 170–9.

Savostina, E.A. 1998: 'Issledovanie khory Aziatskogo Bospora: usadby 'Yubileinoe' na Tamani'. *TS* 1, 30–6.

Savostina, E.A. 1995: 'Tema nadgrobnoi stely iz Trekhbratnego kurgana v kontekste antichnogo mifa'. *Istoriko-arkheologicheskii almanakh* (Armavir) 1, 110–19.

Savostina, E.A. 1999: 'Grecheskaiya torevtika na 'skifckie' temy: zametki o stile skul'pturnogo dekora'. In Vakhtina, M.Y., Zuev, V.Y., Rogov, E.Y. and Kharshanovskii, V.A. (ed.), *Bosporskii fenomen: grecheskaya kultura na periferii antichnogo mira* (St-Petersburg), 199–204.

Savostina, E.A. (ed.) 2001: *Bosporan Battle Relief (Amazonomachia?) – Bosporskii relief so stsenoi srazheniya* (Moscow; St-Petersburg).

Savostina, E.A. 2001a: 'The 'Bosporan' Style and Motifs from Herodotus in Plastic Arts from the Northern Pontic Area'. In *Savostina* 2001, 304–27.

Savostina, E.A. 2001b: 'History and Archaeology of the Relief with Battle Scene'. In *Savostina* 2001, 49–57.

Savostina, E. and Simon E. (eds.) 1999: *Greek Stele with Two Warriors from the North of the Black Sea* (Moscow).

Sazonov, A. 1995a: 'Protomeotskii kultovyi komplex v urochishche Leninohabl na reke Pshish'. In Ditler, A. (ed.), *Arkheologia Adygei* (Maikop), 73–83.

Sazonov, A. 1995b: 'Rannyaya gruppa konskikh zakhoronenii protomeotskogo mogil'nika Pshish I'. In Ditler, A. (ed.), *Arkheologia Adygei* (Maikop), 84–107.

Schiltz, V. 1994: *Die Skythen und andere Steppenvölker* (Munich).

Schlotzhauer, U. 2000: 'Die südionischen Knickrandschalen: Formen und Entwicklung der sog. Ionischen Schalen in archaischer Zeit'. In Krinzinger, F. (ed.) *Die Ägäis und das Westliche Mittelmeer. Beziehungen und Wechselwirkungen 8. bis 5. Jh. v.Chr.* (Wien), 407–16.

Schmalz, B. 1970: *Untersuchungen zu den attischen Marmorlekythen* (Berlin).

Schmid, P.B. 1947: *Studien zu griechischen Ktisissagen* (Diss. Freiburg in der Schweiz).

Scholl, T. and Zinko, V. 1999: *Archaeological Map of Nymphaion (Crimea)* (Warsaw).

Schwarzmaier, A. 1996: 'Die Gräber in der Großen Blizniza und ihre Datierung'. *JdI* 111, 105–37.

Second Pontic Congress, 2001: *Local Population of the Black Sea Littoral and their Relations with Greek, Roman and Byzantine World and Near Eastern Civilisations. Abstracts of Second International Congress on Black Sea Antiquities* (Ankara).

Segall, B. 1965: 'Alexandria und Tarent'. *AA*, 553–88.

Segall, B. 1966: *Zur griechischen Goldschmiedekunst des 4.Jhs. v. Chr.* (Wiesbaden).

Selskokhozyaistvennyi obzor 1911: *Selskokhozyaistvennyi obzor Tavricheskoi gubernii za desyatiletie. 1899–1908* (Simferopol).

Senatorov, S.N. 1987: 'K voprosy o varvarskom poselenii arkhaicheskogo vremeni na meste Nimfeya'. In Maksimov, E. V. (ed.), *Aktualnye problemy istoriko-arkheologicheskikh issledovanii* (Kiev), 145–46.

Senatorov, S.N. 1998: 'Poselenie pozdnego etapa kizil-kobinsroi kultury Karan-2'. *KhS* 9, 8–16.

Senatorov, S.N. 1999: 'O lepnoi keramike varvarskogo poseleniya na meste Nimfeya'. In Boriskovskaya, S. P. (ed.), *Bosporskii gorod Nimfei* (St-Petersburg), 60–6.

Senatorov, S.N. 2000: 'Rannyaya kizil-kobinskaya keramika iz raskopok v Khersonese'. *AV* 7, 159–63.

Sevinç, N. and Rose, C.B. 1999: 'A Child's Sarcophagus from the Salvage Excavations at Gümüşçay'. *Studia Troica* 9, 489–509.

Shcheglov, A.N. 1977: 'Zemelnyi nadel u mysa Oyirat'. In Kobylina, M.M. (ed.), *Istoriya i kultura antichnogo mira* (Moscow), 210–15.

Shcheglov, A.N.1978: *Severo-Zapadnyi Krym v antichnuyu epokhu* (Leningrad).

Shcheglov, A.N. 1981: 'Tavry i grecheskie kolonii v Tavrike'. In Lordkipanidze, O.D. (ed.), *Demograficheskaya situatsiya v Prichernomorie v period Velikoi grecheskoi kolonizatsii* (Tbilisi), 204–18.

Shcheglov, A.N. 1988: 'Tavry v 7 – pervoi polovine 4 vv. do n.e. i greko-tavrskie vzaimootnosheniya'. In Lordkipanidze, O. (ed.), *Mestnye etno-politicheskie obedineniya v Prichernomorie v 7 – 4 vv. do n.e.* (Tbilisi), 53–81.

Shcheglov, A.N. 1998: 'Eshche raz o pozdneskifskoi kulture v Krymu'. In Stolyar, A.D. (ed.), *Istoriya i kultura drevnikh i srednevekovykh obshchestv* (*Problemy arkheologii* 4) (St-Petersburg), 141–53.

Shcheglov, A.N. and Katz, V.I. 1991: 'A Fourth-Century BC Royal Kurgan in the Crimea'. *MetMusJ* 26, 97–122.

Shcheglov, A.N., Kuzminova, N.N., Janushevich, Z.V. and Chavchavadze, E.S. 1989: 'Zemledelie na poselenii Panskoe 1 (Severo-zapadnyi Krym) v 4 – nachale 3 v. do n.e.' *Botanicheskie issledovaniya* 5, 50–69.

Shchepinskii, A.A. 1987: *Krasnye peshchery: Dolgorykovskaya yaila* (Simferopol).

Shchuchenko, V.A. (ed.) 1998: *Kulturnyi sintez Rossii* (St-Petersburg).

Shchukin, M.B. 1994: *Na rubezhe er* (St-Petersburg).

Shefton, B.B. 1982: 'Greeks and Greek Imports in the South of the Iberian Peninsula. The Archaeological Evidence'. *Phönizier im Westen. Madrider Beiträge* 8, 337–70.

Shefton, B.B. 1994: 'The Waldalgesheim Situla: Where was it made?'. In Dobiat, C. (ed.), *Festschrift für Otto-Herman Frey zum 65. Geburtstag* (*Marburger Studien zur Vor- und Frühgeschichte* 16) (Hitzeroth), 583–93.

Shelov, D.B. 1956a: *Antichnyi mir v Severnom Prichernomorie* (Moscow).

Shelov, D.B. 1956b: *Monetnoe delo Bospora v 5 – 2 vv. do n.e.* (Moscow).

Shelov, D.B. 1970: *Tanais i Nizhnii Don v 3 – 1 vv. do n.e.* (Moscow).

Shelov, D.B. 1978a: *Coinage of the Bosporus 6–2 centuries BC* (*BAR* International Series 46) (Oxford).

Shelov, D.B. 1978b: 'Machar, pravitel Bospora'. *VDI* 1, 55–72.

Shelov, D.B. 1981: 'Sindy i Sindika v epokhu grecheskoi kolonizatsii'. In Lordkipanidze, O.D. (ed.), *Demograficheskaya situaziya v Prichernomorie* (Tbilisi), 232–47.

Shelov, D.B. 1983: 'Goroda Severnogo Prichernomoriya i Mitridat Evpator'. *VDI* 2, 40–58.

Shelov-Kovedyaev, V.F. 1985: 'Istoriya Bospora v 6 – 4 vv. do n.e.' In Novoseltsev, A.P. (ed.), *Drevneiishie gosudarstva na territorii SSSR* (Moscow), 5–187.

Shkorpil, V.V. 1914: 'Bosporskie nadpisi, naidennye v 1913 g.' *IAK* 54, 65–82.

Shnitnikov, A.V. 1969: *Vnutrivekovaya izmenchivost komponentov obshchey uvlazhnennosti. Ocherki* (Leningrad).

Shtitelman, F.M. 1977: *Antique Art (Works of World Art in the Museums of Ukraine)* (Kiev).

Shults, P.N. 1957: 'Issledovaniya Neapolya Skifskogo (1945–1950 gg.)'. In Shults, P.N. (ed.), *Istoriya i arkheologiya drevnego Kryma* (Simferopol), 61–93.

Shults, P.N. 1959: 'O nekotorykh voprosakh istorii tavrov'. In Smirnov, A.P. (ed.), *Problemy istorii Severnogo Prichernomoriya* (Moscow), 235–72.

Shurgaya, I.G. 1984: 'Nimfei, Mirmekii, Tiritaka, Porfmii, Ilurat'. In Koshelenko, G.A., Kruglikova, I.T. and Dolgorukov, V.S. (ed.), *Antichnye gosudarstva Severnogo Prichernomoriya* (Moscow), 63–71.

Silanteva, L.F. 1959: 'Nekropol Nimefeya'. *MIA* 69, 5–107.

Silberman, A. 1995: *Arrien, Periple du Pont Euxin* (Paris).

Simon, E. 1967: 'Boreas und Oreithya auf dem silbernen Rhyton in Triest'. *AuA* 13, 101–26.

Simirenko, 1912: L.P. *Krymskoe promyshlennoe plodovodstvo* 1 (Moscow).

Simonenko, A.V. 1994: 'The Problem of the Sarmatian Penetration in the North Pontic Area According to Archaeological Data'. *Il Mar Nero* I, 99–136.

Skoryi, S.A. 1982: 'Skifskii kurgan s katakombami v Severnom Krymu'. In Terenozhkin, A.I. (ed.), *Drevnosti stepnoi Skifii* (Kiev), 231–36.

Skrzhinskaya, M.V. 1991: *Drevnegrecheskii folklor i literatura v Severnom Prichernomorye* (Kiev).

Skrzhinskaya, M.V. 1998: *Skifiya glazami ellinov* (St-Petersburg).

Skryzhinskaya, M.V. 2000: *Budni i prazdniki Olvii* (Kiev).

Skudnova, V.M. 1954: 'Skifskie pamyatniki iz Nimfeya'. *SA* 21, 306–18.

Smirnov, G.D. 1952: 'Raskopki skifskogo kurgana bliz gorodishcha Kalos-Limena'. *VDI* 4, 187–92.

Smirnov, K. 1961: *Vooruzhenie savromatov* (*MIA* 101) (Moscow).

Smirnov, K. 1964: *Savromaty. Rannaya istoriya i kultura sarmatov* (Moscow).

Sokolov, G.I. 1973: *Antichnoe Prichernomorye. Pamyatniki arkhitektury, skulptury, zhivopisi i prikladnogo iskusstva* (Leningrad).

Sokolov, G.I. 1999: *Iskusstvo Bosporskogo tsarstva* (Moscow).

Sokolova, O.Y. 1993: 'Issledovaniya Nimpheya v 1991–1992 godakh'. In Piotrovskii, Y.Y. (ed.), *OASGE* za 1992 god (St-Petersburg), 6–7.

Sokolova, O.Y. 1995: 'Issledovaniya Nimpheya v 1994 godu'. In Piotrovskii, Y.Y. (ed.), *OASGE* za 1994 god (St Petersburg), 11–2.

Sokolova, O.Y. 1998: 'K voprosu o pamyatnikakh ioniyskogo ordera iz Nimpheya'. In Piotrovskii, Y.Y. (ed.), *Ermitazhnye chteniya pamyati B.B. Piotrovskogo* (St-Petersburg), 85–8.

Sokolova, O.Y. 1999a: 'Osnovnye itogi raskopok Nimfeiya (1939–1999)'. In Boriskovskaya, S.P., Vilinbakhov, G. V., Zhizhina, N.K., Lavrova, N.P., Piotrovskii, M.B. and Sokolova, O.Y. (eds.), *Bosporskii gorod Nimfey: novye issledovaniya i materialy i voprosy izucheniya antichnykh gorodov Severnogo Prichernomorya* (St-Petersburg), 68–71.

Sokolova, O.Y. 1999b: 'Raboty Nimfeyskoi ekspeditsii (1994–1999)'. *Arkheologichni vidkrittya v Ukraini 1998–1999 rr.* (Kiev), 149–52.

Sokolova, O.Y. 1999c: 'Konskaya uzda iz nekropolya Nimfeiya'. In Vakhtina, M.Y., Zuev, V.Y., Rogov, E. Y. and Khrschanovskii, V.A (eds.), *Bosporskii fenomen: grecheskaya kultura na periferii antichnogo mira* (St-Petersburg), 184–86.

Sokolova, O.Y. 2001: 'O keramicheskom proizvodstve v Nimfee'. In Ivanenko, P.I. (ed.), *Bospor Kimmeriyskii i Pont v period antichnosti i srednevekovya* (Kerch), 140–44.

Sokolova, O.Y. and Pavlichenko, N.A. 2002: 'Novaya posvyatitelnaya nadpis iz Nimfeya'. *Hyperboreus* 8/1, 99–121.

Sokolova, O.Y., Pavlichenko, N.A. and Kasparov, A.K. 2000: 'Novye nakhodki na territorii nimfeyskogo nekropolya'. *Hyperboreus* 5/2, 326–40.

Sokolskii, N.I.1954: 'Bosporskie mechi'. *MIA* 33, 123–96.

Sokolskii, N.I. 1959: 'Raskopki antichnogo poseleniya okolo stanitsy Tamanskoi'. *KSIIMK* 74, 49–57.

Sokolskii, N.I. 1971: *Derevoobrabatyvayushchee remeslo v antichnykh gosudarstvakh Severnogo Prichernomorya* (*MIA* 178) (Moscow).

Sokolskii, N.I. 1976: *Tamanskii tolos i rezidentsiya Khrisaliska* (Moscow).

Solomonik, E.L. 1962: 'Pro znachennya termina 'tavro-skify'. *AP* 11, 153–7.

Solomonik, E.L. 1983: *Latinskie nadpisi Khersonesa Tavricheskogo* (Moscow).

Solovyov, S.L. 1992: 'Osobennosti domostroitelstva Nizhnego Pobuzhiya 6 – nachala 3 vv. do n.e. v kontekste greko-varvaskogo vzaimodeistviya v Sevro-Zapadnom Prichernomorie'. In Raev, B.A. (ed.), *Antichnaya tsivilizatsiya i varvarskii mir* (Novocherkassk) 3 (1), 44–52.

Solovyov, S.L. 1994: 'Greek-Barbarian Relations During Early Colonisation on the Northern Shore of the Black Sea: Their Patterns and Evolution'. *State, City and Society* (*World Archaeological Congress* 3) (Dehli), 46.

Solovyov, S.L. 1998: 'Archaic Berezan: Historical-Archaeological Essay'. In Tsetskhladze, G.R. (ed.), *The Greek Colonisation of the Black Sea Area* (*Historia* 121) (Stuttgart), 205–26.

Solovyov, S.L. 1999: *Ancient Berezan. The Architecture, History and Culture of the First Greek Colony in the Northern Black Sea* (*Colloquia Pontica* 4) (Leiden; Boston; Köln).

Solovyov, S.L. 2001a: 'Nimfeiskii polis: prostranstvennaya struktura i etnosy'. In Kopylov, V.P. (ed.), *Mezhdunarodnye otnosheniya v basseine Chernogo morya v drevnosti i srednie veka* (Rostov-upon-Don), 53–7.

Solovyov, S.L. 2001b: 'On the History of the City-States in the Lower Bug Area: Borysthenes and Olbia'. In Boardman, J., Solovyov, S.L. and Tsetskhladze, G. R. (eds.), *Northern Pontic Antiquities in the State Hermitage Museum* (*Colloquia Pontica* 7) (Leiden; Boston; Köln), 113–25.

Solovyov, S.L. 2002: 'Khora Germonassy'. *TS* 4, 33–60.

Solovyov, S.L. 2003: *Arkheologicheskie pamyatniki selskoi okrugi i nekropolya Nimfeya* (St-Petersburg).

Solovyov, S.L. and Butyagin, A.M. 1998: 'Kompleksnaya nauchno-issledovatelskaya programma 'Sindskii ostrov': kratkie itogi kampanii 1996–97 gg.' *TS* 1, 37–47.

Solovyov, S.L. and Butyagin, A.M. 2002: 'Arkhaicheskie kompleksy poseleniya Volna-1 v okrestnostyakh Germonassy'. *TS* 4, 67–80.

Solovyov, S.L. and Shepko, L.G. 2004: *Arkheologicheskie pamyatniki selskoi okrugi Akry. Poselenie Zavetnoe-5* I (St-Petersburg).

Solovyov, S.L. and Shepko, L.G. 2006: *Arkheologicheskie pamyatniki selskoi okrugi Akry. Poselenie Zavetnoe-5* II (St-Petersburg).

Solovyov, S.L. and Zinko, V.N. 1995: 'Research in the Chora of Nymphaion. Study Problems'. *Archeologia* (Warsaw) 45, 73–8.

Sorokina, N.P.: 'Novye dannye po istorii architekturnogo ansamblya epochi ellinizma na aziatskom Bospore'. In Lordkipanidze, O.D. (ed.), *Prichernomore v epochu ellinizma* (Tbilisi), 374–82.

Sparkes, B. and Talcott, L. 1970: *Black and Plain Pottery of 6th, 5th and 4th Centuries BC* (*The Athenian Agora* XII) (Princeton).

Spitsyn, A.A. 1906: 'Serogozskie kurgany'. *IAK* 19, 157–74.

Stainhauer, P. 1998: *The mnemeia kai to Archailogiko Mouseio tou Peiraia* (Athens).

Stephanidou-Tiberiou, Th. 1995: 'Silenoz kathedonos'. *Archaiologike Ephemeris* 34, 67–76.

Stephens, S., Winkler, J.J. 1995: *Ancient Greek Novels: the Fragments* (Princeton).

Stepi evropeyskoi chasti SSSR 1989: Melukova, A.I. (ed.), *Stepi evropeyskoi chasti SSSR v skifo-sarmatskoe vremya. Arkheologiya SSSR* (Moscow).

Stoyanov, T. 2002: 'The Getic capital at Sboryanovo (North-Eastern Bulgaria)'. *Talanta* 32/33, 207–22.

Strauss, M. 1994: 'Telephos'. *LIMC* VII, 1, 862–70.

Strong D.E. 1966: *Greek and Roman Gold and Silver Plate* (London).

Stronk, J.P. 1995: *The Ten Thousand in Thrace* (Amsterdam).

Struve, V.V. 1968: 'Drevneishii istorik SSSR'. In Struve, V. V. (ed.), *Etudy po istorii Severnogo Prichernomorya, Kavkaza i Srednei Azii* (Leningrad), 147–200.

Strzheletsky, S.F.1961: *Klery Khersonesa Tavricheskogo. K istorii drevnego zemledeliya v Krymu* (*KhS* 6) (Simferopol).

Stupperich, R. 2001: 'Das Skythenkampfrelief von der Tamanhalbinsel'. In *Savostina* 2001, 58–89.

Stutzinger, D. 2000: *Neuerwerbungen des Museums aus den Jahren 1986–1999* (*Archäologische Reihe* 16) (Frankfurt am Main).

Summerer, L. 2003: 'Achämenidische Silberfunde aus der Umgebung von Sinope'. *ACSS* 9, 1–2, 17–42.

Symonovich, E.A. 1983: *Naselenie stolitsy pozdneskifskogo tsarstva* (Kiev).

Taman Conference, 2000: Solovyov, S.L. and Tsetskhladze, G. R. (eds.), *Greeks and Natives in the Cimmerian Bosporus (7th – 1st Centuries BC)* (*TS* 3) (St-Petersburg).

Terenozhkin, A.I. and Mozolevskii, B.N. 1988: *Melitopolskii kurgan* (Kiev).

Themelis, P. and Touratsouglou, I. 1997: *Oi taphoi tou Derveniou* (Athens).

Thieme, W.-G. 1988: *Catalogue exhibition Hildesheim Albanien. Schätze aus dem Land der Skipetaren* (Heidelberg).

Thomas, R. 1989: *Oral Tradition and Written Record in Classical Athens* (Cambridge).

Thomas, R. 1992: *Literacy and Orality in Ancient Greece* (Cambridge).

Tokhtasev, S.R. 1999: 'ΒΟΣΠΟΡΟΣ'. In Khrshanovskii, V.A., Rogov, E.Y., Vakhtina, M.Y. and Zuev, V.Y. (eds.), *Bosporskiy fenomen: grecheskaya kultura na periferii antichnogo mira* (St-Peterburg), 86–92.

Tokhtasev, S.R. 2002: 'ΣΙΝΔΙΚΑ'. *TS* 4, 10–32.

Tolstikov, V.P. 1984: 'K probleme obrazovaniya Bosporskogo gosudarstva'. *VDI* 3, 24–59.

Tolstikov, V.P. 1986: 'L'Apport de la fortification a l'Histoire du Bospore antique'. In Leriche, P. and Tréziny, H. (eds.), *La Fortification Dans L'Histoire du Monde Grec. Actes du Colloque International* (Paris), 167–77.

Tolstikov, V.P. 1992: 'Pantikapei – stolitsa Bospora'. In Koshelenko, G.A. (ed.), *Ocherki arkheologii i istorii Bospora* (Moscow), 45–99.

Tolstoi, V.P. (ed.) 1998: *Khudozhestvennye modeli mirozdaniya. Vzaimodeistvie iskusstv v istorii mirovoi kultury* 1–2 (Moscow).

Tolstoi, I.I. and Kondakov, N.P. 1889: *Drevnosti skifo-sarmatskie. Russkie drevnosti v pamyatnikakh iskusstva* 2. (St-Petersburg).

Tolstoy, I.I. 1918: *Ostrov Belyi* (Petrograd).

Treister, M.Y. 1994: 'Sarmatskaya shkola khudozhestvennoi torevtiki (k otkrytiyu serviza iz Kosiki)'. *VDI* 2, 172–203.

Treister, M. 1998: 'Ionia and the North Pontic area. Archaic metalworking: tradition and innovation'. In Tsetskhladze G.R. (ed.), *The Greek Colonisation of the Black Sea Area* (*Historia* 121), (Stuttgart), 179–99.

Treister, M.Y. 1999: 'The Workshop of the Gorytos and Scabard Overlays'. In *Catalogue San Antonio* 1999, 71–81.

Treister, M.Y. 1999/2000: 'Toreutic Objects from the Scythian Kurgan Babina Mogila'. *Il Mar Nero* 4 (2003), 9–42.

Treister, M.Y. 2000: 'Early Classical Motifs in the 4th Century BC Toreutics from the North Pontic Area'. *Civilisation grecque et les cultures périphériques, Hommage à Petre Alexandrescu à son 70° anniversaire* (Bucuresti), 94–101.

Treister, M.Y. 2001a: *Hammering Techniques in Greek and Roman Jewellery and Toreutics* (*Colloquia Pontica* 8) (Leiden).

Treister, M.Y. 2001a: 'The Theme of Amazonomachy in Late Classical and Early Hellenistic Toreutics (Towards Discussion of the Phalerai from Bolshaia Bliznitsa)'. In *Savostina* 2001, 264–303.

Treister, M.Y. 2003: 'Metal Vessels from Zelenskaya Gora Barrow and Related Finds from Karagodeuashkh'. *AWE* 2.1, 19–45.

Tsalkin, V.I. 1954: 'Domashnie i dikie zhivotnye iz skifskogo Neapolya'. *SA* 20, 253–87.

Tsalkin, V.I. 1966: *Drevnee zhivotnovodstvo plemen Vostochnoy Evropy i Sredney Azii* (*MIA* 135) (Moscow).

Tsalkin, V.I. 1960: 'Domashnie i dikie zhivotnye Severnogo Prichernomorya v epokhu rannego zheleza'. *MIA* 63, 7–109.

Tsetskhladze, G.R. 1997: 'Plutarch, Pericles and Pontus: some thoughts'. In Schrader C., Ramon V. and Vela J. (eds.), *Plutarco y la historia* (Zaragoza), 461–66.

Tsetskhladze, G.R. 1997b: 'A Survey of the Major Urban Settlements in the Kimmerian Bosporus (With a Discussion of Their Status as *Poleis*)'. In Nielsen, T. H. (ed.). *Yet More Studies in the Ancient Greek Polis* (*Historia* 117) (Stuttgart), 39–82.

Tsetskhladze, G.R. 1998: 'Greek Colonisation of the Black Sea Area: Stages, Models, and Native Population'. In Tsetskhladze, G.R. (ed.), *The Greek Colonisation of the Black Sea Area* (*Historia* 121) (Stuttgart), 9–68.

Tsetskhladze, G.A. (ed.) 1999: *Ancient Greeks West and East* (Leiden).

Tsirivakos, E. 1971: 'Kallithea – Ergebnisse der Ausgrabung'. *Archaoilogika Analekta ex Athina* 4, 108–10.

Tskhaltubo 1979: Lordkipanidze, O. (ed.), *Problems of Greek Colonization of the Northern and Eastern Black Sea Littoral* (Tbilisi).

Tskhaltubo 1981: Lordkipanidze, O. (ed.), *The Demographic Situation in the Black Sea Littoral in the Period of the Great Greek Colonization* (Tbilisi).

Tskhaltubo 1988: Lordkipanidze, O. (ed.), *Local Ethnic and Political Unites of the Black Sea Littoral in 7th – 4th centuries BC* (Tbilisi).

Tsontchev, D. 1962: 'La navigabilité de l'Hebros-Maritza dans l'Antiquité'. *Latomus* 21, 848–52.

Tuchelt, K. 1962: *Tiergefäße in Kopf-und Protomengestalt* (*Beih. IstForsch* 22) (Berlin).

Тугушева, О.В. 2001: 'The Amazonomachies on Bosporan pelikai'. In *Savostina* 2001, 230–63.

Tunkina, I.V. 2002: *Russkaya nauka o klassicheskikh drevnostyakh yuga Rossii (XVIII – seredina XIX v.)* (St-Petersburg).

Usov, S.A. 1925: *Istoriko-ekonomicheskie ocherki Kryma* (Simferopol).

Uvarov, A.S. 1851: *Issledovaniya o drevnostyakh Yuzhnoi Rossii i beregov Chernogo Morya* (St-Petersburg).

Vainshtein, S.I. 1991: *Mir kochevnikov tsentra Azii* (Moscow).

Vakhtina, M.Y. 1991: '"Skifskii put" v Prikubanie i nekotorye drevnosti Kryma v epokhu arkhaiki'. In Molev, E.V. (ed.), *Voprpsy istorii i arkheologii Bospora* (Voponezh; Belgorod), 3–11.

Vakhtina, M.Y. 1995: 'O drevneishikh oboronitelnykh sooruzheniyakh drevnego Porfmiya'. In Masson, V. M. (ed.), *Fortifikatsiya v drevnosti i srednevekovye* (St-Petersburg), 31–3.

Vakhtina, M.Y. 1999a: 'O nekotorykh grecheskikh elementakh zhenskogo pogrebeniya v kurgane Karagodeuashkh'. In Vakhtina, M.Y., Zuev, V. Y., Rogov, E.Y. and Kharshanovskii, V.A. (ed.), *Bosporskii fenomen: grecheskaya kultura na periferii antichnogo mira* (St-Petersburg), 204–8.

Vakhtina, M.Yu. 1999b: 'K voprosu o nachalnom periode kulturnykh kontaktov mezhdu ellinami i varvarami na territorii Severnogo Prichernomoria'. In Koshelenko, G. A. (ed.), *VI chteniya pamiati prof. V.D. Blavatskogo* (Moscow), 25–6.

Vakhtina, M.Y., Vinogradov, Y.A. and Rogov, E.Y. 1988: 'Ob odnom iz marshrutov voennykh pokhodov i sezonnykh migratsii kochevykh skifov'. *VDI* 4, 150–60.

Van Compernolle, T. 2001: 'Les céramiques ioniennes et Méditerranée centrale'. In Cabrera, P. and Santos, M. (eds.) *Ceràmiques Jònies d'època arcaica: Centres de producció i comercialització al Mediterrani Occidental* (Barcelona) 89–100.

Vasilev, A.N. 1985a: *Problemy politicheskoi istorii Bospora 5 – 4 vv. do n.e. v otechestvennoi istoriografii* (Abstracts of PhD dissertation) (Leningrad).

Vasilev, A.N. 1985b: 'Bosporskie nadpisi kak istoricheskiy istochnik (o ponyatii 'Bospor' na Bospore v 4 v. do n.e.)'. *Vspomogatelnye istoricheskie distsipliny* 17 (Leningrad), 289–96.

Vasilev, A.N. 1992: 'K voprosu o vremeni obrazovaniya Bosporskogo gosudarstva'. In Gavrilov, A.K. (ed.), *Etyudy po antichnoi istorii i kulture Severnogo Prichernomoriya* (Leningrad), 111–28.

Vasilinenko D., Kondrashev A. and Piankov A. 1993: 'Arkheologicheskie materialy predskifskogo i ranne-skifskogo vremeni'. In Raev, B.A. (ed.), *Drevnosti Kubani i Chernomoriya* (Krasnodar), 21–38.

Venedikov, I. and Gerassimov, T. 1973: *Thrakische Kunst* (Vienna; Munich).

Venit, M.S. 1988: *Greek Painted Pottery from Naukratis in Egyptian Museums* (Winona Lake).

Verner, K.A. 1889: 'Zemledelie'. *PKTG* 4, 3, 49–69.

Vickers, M. 1979: *Scythian treasures in Oxford* (Oxford).

Vierneisel-Schlörb, B. 1997: *Die figürlichen Terrakotten* I, *Spätmykenisch – Späthellenistisch* (*Kerameikos* 15) (Berlin).

Vinogradov, J.G. 1980: 'Die historische Entwicklung der Poleis der nördlichen Schwarzmeergebietes in 5. Jahrhundert v. Chr.' *Chiron* 10, 53–100.

Vinogradov, Ju. A., Rogov, E. Ja., Stähler, K. and Fornasier, J. 2001: 'Archäologische Untersuchungen auf der Taman'-Halbinsel, Rußland'. *EA* 7, 169–85.

Vinogradov, V.B. 1974: 'Eshche raz o yazamatakh'. *VDI* 1, 153–9.

Vinogradov, Y.A. 1991a: 'Rannie kompleksy Mirmekiya'. In Molev, E.A. (ed.), *Voprosy istorii i arkheologii Bospora* (Voronezh; Belgorod), 11–9.

Vinogradov, Y.A. 1991b: 'Issledovaniya na zapadnoi okraine Mirmekiya'. *KSIA* 204, 71–7.

Vinogradov, Y.A. 1992: 'Mirmekii'. In Koshelenko, G.A. (ed.), *Ocherki arkheologii i istorii Bospora* (Moscow), 99–120.

Vinogradov, Y.A. 1993a: 'Kurgan Ak-Burun (1875 g.)'. In Raev, B.A. (ed.), *Skifiya i Bospor* (Novocherkassk), 38–51.

Vinogradov, Y.A. 1993b: 'K probleme polisov v raione Bospora Kimmeriiskogo'. *AMA* 9, 79–96.

Vinogradov, Y.A. 1994: 'Eshche odna arkhaicheskaya poluzemlyanka iz Mirmekiya'. *BS* 4, 59–64.

Vinogradov, Y.A. 1995: 'Nekotorye diskussionnye problemy grecheskoi kolonizatsii Bospora Kimmeriiskogo'. *VDI* 3, 152–60.

Vinogradov, Yu. A. 1996: 'Prirodnyi faktor v razvitii Bospora v skifskuyu epokhu'. *VDI* 3, 77–88.

Vinogradov, Y.A. 1999a: 'Severnoe Prichernomorie posle padeniya velikoi Skifii'. *Hyperboreus* 5, 1, 56–81.

Vinogradov, Y.A. 1999b: 'Selected Findings from the Myrmekion Acropolis'. *Centre d'archeologie mediterraneenne de l'Academie Polonaise des Sciences. Etudes et Travaux* 18 (Warsaw), 280–93.

Vinogradov, Y.A. 1999c: 'Grecheskaya kolonizatsiya i grecheskaya urbanizatsiya Severnogo Prichernomoriya'. *Stratum Plus* 3 (Kishinev; Odessa), 101–15.

Vinogradov, Y.A. 2000a: 'The Cimmerian Bosporus: Main Historical Stages in Pre-Roman Time'. *TS* 3, 16–29.

Vinogradov, Y.A. 2000b: 'K probleme stanovleniya drevnegrecheskikh gorodov v raione Bospora Kimmeriiskogo'. In Zuev, V.Y. (ed.), ΣΥΣΣΙΤΙΑ. (St-Petersburg), 227–32.

Vinogradov, Y.A. 2001a: 'Excavations at the Agricultural Settlement of Artyuschenko-1 on the Taman Peninsula'. *Local Population of the Black Sea Littoral and Their Relations with Greek, Roman and Byzantine World and Near Eastern Civilisations. Abstracts of Second International Congress on Black Sea Antiquities* (Ankara), 67.

Vinogradov, Y.A. 2001b: 'Arkhaicheskie kompleksy poseleniya Artyushchenko-1'. *TS* 4, 61–6.

Vinogradov, Y.A. and Fonyakov, D.I. 2000: 'Kollektsiya metallicheskikh predmetov s Yagorlytskogo poseleniya'. *AV* 7, 96–105.

Vinogradov, Y.A. and Marchenko, K.K. 1991: 'Severnoye Prichernomore v skifskuyu epokhu. Opyt periodizatsii istorii'. *SA* 1, 145–55.

Vinogradov, Y.A., Marchenko, K.K. and Rogov, E.Y. 1989: 'K voprosu o kulturno-istoricheskom edinstve selskogo naseleniya Nizhnego Pobuzhiya antichnogo vremeni'. In Gudkova, A.V. (ed.), *Antichnoe Prichernomorie* (Odessa), 16–7.

Vinogradov, Y.A., Marchenko, K.K. and Rogov, E.Y. 1997: 'Sarmaty i gibel "Velikoi Skifii"'. *VDI* 3, 93–103.

Vinogradov, Y.A. and Rogov, E.Y. 1997: 'Nekotorye zakonomernosti stanovleniya i razvitiya grecheskikh gosudarstv v Severnom Prichernomorie'. In Vakhtina, M.Y. and Vinogradov, Y.A. (eds.), *Stratum+PA*V (St-Petersburg; Kishinev), 73–80.

Vinogradov, Y.A. and Solovyov, S.L. 1996: 'Arkheologicheskie issledovaniya na gorodishche Stanislav'. *RosA* 3, 180–85.

Vinogradov, Y.A. and Tokhtasev, S.R. 1994: 'Rannyaya oboronitelnaya stena Mirmekiya'. *VDI* 1, 54–62.

Vinogradov, Y.A. and Tokhtasev, S.R. 1998: 'Novye posvyatitelnye graffiti iz Mirmekiya'. *Hyperboreus* 4, 1, 22–47.

Vinogradov, Y.G. 1981: *Olbia. Geschichte einer altgriechischen Stadt am Schwarzen Meer* (*Xenia* 1) (Konstanz).

Vinogradov, Y.G. 1983: 'Polis v Severnom Prichernomorie'. In Golubtsova, E.S. (ed.), *Antichnaya Gretsiya* 1 (Moskow), 366–420.

Vinogradov, Y.G. 1987: 'Votivnaya nadpis docheri tsarya Skilura iz Pantikapeya i problemy istorii Skifii i Bospora vo 2 v. do n.e.' *VDI* 1, 55–86.

Vinogradov, Y.G. 1991: 'Fanagoriyskie naemniki'. *VDI* 4, 14–33.

Vinogradov, Y.G. 1994: 'Ocherk voenno-politicheskoi istorii sarmatov v 1 v. n.e.' *VDI* 2, 151–70.

Vinogradov, Y.G. 1997: 'Khersonesskii dekret o "nesenii Dionisa" IOSPE I2 343 i vtorzhenie sarmatov v Skifiyu'. *VDI* 3, 104–24.

Vinogradov, Y.G. 1999: 'An Ostrakon from the Taganrog Settlement (Epigraphic Commentary)'. *ACSS* 6, 1–2, 13–8.

Vinogradov, Y.G. and Kryzhitskii, S.D. 1995: *Olbia: Eine altgriechische Stadt im nordwestlichen Schwarzmeerraum* (*Mnemozyne* 149) (Leiden; Boston; Köln).

Vinogradov, Y.G., Molev, E.A. and Tolstikov, V.P. 1985: 'Novye epigraficheskie istochniki po istorii mitridatovoi epokhi'. In Lordkipanidze, O.D. (ed.), *Prichernomorie v epokhu ellinizma* (Tbilisi), 589–600.

Vinigradov, Y.G. and Shcheglov, A.N. 1990: 'Obrazovanie territorialnogo Khersonesskogo gosudarstva'. In Golubtsova, E.S. (ed.), *Ellinizm: ekonomika, politika, kultura* (Moscow), 310–71.

Vinokurov, N.I. 1994: *Vinodelcheskie kompleksy Bospora* (Abstracts of PhD dissertation) (Moscow).

Vinokurov, N.I. 1998: 'Kompozitnye vinodelni Bospora'. *DB* 1, 17–73.

Vinokurov, N.I 1999: *Vinodelie antichnogo Bospora* (Moscow).

Vlasov, V.P. 1997: 'Lepnaya keramika pozdneskifskogo Bulganakskogo gorodishcha'. In Khrapunov, I.N. (ed.), *Bakhchisaraicky istoriko-arkheologocheskiy sbornik* 1 (Simferopol), 204–303.

Vlasov, V.P. 1999: *Etnokulturni protsesy v Krymu u 3 – 4 st. do n.e. (za materialami lipnoi keramiki)* (Abstracts of Phd Dissertation) (Simferopol).

Vlasova, E.V. 2001: 'Semibratnie kurgany'. In Zuev, V.Y. (ed.), *Bosporskii fenomen: kolonizatsiya regiona, formirovanie polisov, obrazovanie gosudarstva* 2 (St-Petersburg), 127–32.

Vnukov, S.Y. 1988: 'Shirokogorlye svetloglinyanye amfory Severo-Zapadnogo Kryma'. *VDI* 3, 198–206.

Vokotopoulou, I. 1990: *Oi tafika tymba tes Aineias* (Athens).

Vorobiev, S.A., Burov, D.I., Egorov, V.E. and Gruzdev, G.S. 1972: *Zemledelie* (Moscow).

Vyazmitina, M.I. 1969: 'Frakiyskie elementy v kulture naseleniya gorodishch Nizhnego Dnepra'. *MIA* 50, 119–36.

Vysotskaya, T.N. 1979: *Neapol – stolitsa gosudarstva pozdnikh skifov* (Kiev).

West, M.L. 1989: *Iambi et elegi graeci ante Alexandrum cantati* (Oxford).

Whitbread, I.K. 1986 'The application of ceramic petrology to the study of ancient Greek amphorae'. *BCH* Suppl. XIII, 96–7.

Whitbread, I.K. 1996: *Greek Transport Amphorae* (London).

Williams, D. 1988: 'Three Groups of Fourth Century South Italian Jewellery in the British Museum'. *RM* 95, 75–95.

Williams, D. 1998: 'Identifying Greek Jewellers'. In *Greek Goldsmith,* 99–104.

Williams, D. 2003: 'Gilded Pottery and golden jewellery'. In Palagia, O. and Tracy, S.V. (eds.), *The Macedonians in Athens 322–229 BC* (Oxford), 226–35.

Winter, F. 1903: *Die Typen der figürlichen Terrakotten* (*Die antiken terrakotten* III, 1–2) (Berlin).

Wuilleumier, P: 1930: *Le trésor de Tarente* (Paris).

Yailenko, V.P. 1990: 'Dinasticheskaya istoriya Bospora ot Mitridata Evpatora do Kotisa I'. In Blavatskaya, T. V. (ed.), *Epigraficheskie pamyatniki i yazyki drevnei Anatolii, Kipra i antichnogo Severnogo Prichernomoriya* (Moscow), 128–215.

Yailenko, V.P.1995: 'Zhenshchiny, Afrodita i zhritsa Spartokidov v novykh bosporskikh nadpisyakh'. In Marinovich, L. P. and Saprykin, S.J. (eds.), *Zhenshchina v antichnom mire* (Moscow), 204–72.

Yakovenko, E.V. 1974: *Skify Skhidnogo Krymu v 5 – 3 st. do n.e.* (Kiev).

Yakovenko, E.V. 1977: 'Pogrebenie bogatoi skifyanki na Temir-Gore'. In Terenozhkin, A.I. (ed.), *Skify i sarmaty* (Kiev), 140–45.

Yakovenko, E.V. 1978: 'Lipna keramika 6 – 5 st. do n.e.' *Arkheologiya* (Kiev) 27, 36–41.

Yanson, Y. 1870: *Krym. Ego khlebopashestvo i khlebnaya torgovlya* (St-Petersburg).

Yatsenko, I.V. 1983: 'Severnyi kvartal 1 skifskogo poseleniya na Chayikinskom gorodishche v Evpatorii'. In Visotskaya, T. N. (ed.), *Naselenie i kultura Kryma v pervye veka n.e.* (Kiev), 46–55.

Yatsenko, S.A. 1995: 'O sarmato-alanskom syuzhete rospisi v pantikapeiskom "sklepe Anfesteriya"'. *VDI* 3, 188–94.

Yatsenko, S.A. 1999: 'Kostyum plemen pazyrykskoi kultury Gornogo Altaya kak istoricheskii istochnik'. *VDI* 3, 145–70.

Zahle, J. 1979: 'Lykische Felsgräber mit Reliefs aus dem 4. Jh.v. Chr.' *JdI* 94, 245–346.

Zavoykin, A.A. 1994: 'Βόσπορος Κιμμέριο – Βόσπορος – Diod. XII.31.1'. *PIFK* 1, 64–70.

Zavoykin, A.A. 2001: '"Bosporskiy fenomen" ili pseudo-ellenism na Bospore'. *DB* 4, 150–81.

Zavoykin, A.A. and Boldyrev, S.I. 1994: 'Tretya tochka zrenya na monety s legendoi Σινδων'. *BS* 4, 43–7.

Zeest, I.B. 1960: *Keramicheskaya tara Bospora* (*MIA* 86) (Moscow).

Zeest, I.B. 1974: 'Vozniknovenie i pervyi rastsvet Germonassy'. *SA* 4, 82–97.

Zeest, I.B. 1977: 'K voprosu o gorodskoi planirovke Germonassy'. In Kobylina, M.M. (ed.), *Istoriya i kultura antichnogo mira* (Moscow), 54–7.

Zeimal, E.V. 1979: *Amu-Darinskii klad. Katalog vystavki* (Leningrad).

Zhebelev, S.A.1953: *Severnoe Prichernomorie* (Moscow; Leningrad).

Zhizhina, N.K. 1978: *K voprosu o dogrecheskom poselenii na meste Nimfeya* (Arkhiv OAM Ermitazha).

Zinko, V.N. 2001: 'Summary of Results of the Five-Year Rescue Excavations in the European Bosporus, 1989–1993'. In Tsetskhladze, G.R. (ed.), *North Pontic Archaeology. Recent Discoveries and Studies* (*Colloquia Pontica* 6) (Leiden; Boston; Köln), 295–318.

Zinko, V.N. 2002: 'Novyi gruntovyi mogilnik na khore Nimfeya'. *BI* II, 219–48.

Zinko, V.N. 2003a: 'Nekropol selskogo poseleniya bliz Mirmekiya'. *BI* III, 168–97.

Zinko, V.N. 2003b: *Khora bosporskogo goroda Nimfeya* (*BI* IV) (Simferopol; Kerch).
Zograf, A.N. 1951: *Antichnye monety* (*MIA* 16) (Moscow).
Zubar, V.M 1998: *Severnyi Pont i Rimskaya imperiya* (Kiev).
Zubarev, V.G. 1999: 'Aziatskii Bospor (Tamanskii poluostrov) po dannym antichnoi pismennoi traditsii'. *BS* 9, 139–45.
Zuyev, V.Y. 1999: 'Eshche raz ob epigramme iz El-Tegena (otvet M.I. Rostovtseva V.V. Latyshevu)'. In Boriskovskaya S.P. (ed.), *Bosporskii gorod Nimfei* (St-Petersburg), 34–7.
Züchner, W. 1938: 'Der Berliner Mänadenkrater'. *BerlWPr* 98, 3–27.
Παπαποστολου, Ι. Α. 1982: 'Ελληνιστικοι ταφοι της Πατρας Ι'. *Αρχαιολογικον Δελτιον* 32Α (1977), 281–343.
Σταϊνχαουερ, Γ. 1998: *Τα Μνημεια και το Αρχαιολογικο Μουσειο του Πειραια* (Αθήνα).

Abbreviations

AA *Archäologischer Anzeiger*
AEMΘ *To archaiologiko ergo Makedonia kai Thrake*
AJA *American Journal of Archaeology*
AM *Mitteilungen des Deutschen Archäologischen Instituts, Athenische Abteilung*
AMA *Antichnyi mir i archeologiya (Ancient World and Archaeology),* Saratov (in Russian)
AO *Arkheologicheskie Otkrytiya (Archaeological Discoveries),* Moscow (in Russian)
AP *Arkheologichni Pamyatki (Archaeological Records),* Kiev (in Ukraine)
ASGE *Arkheologicheski Sbornik Gosudarstvennogo Ermitazha (Archaeological Collection of the State Hermitage),* St-Petersburg (in Russia with summaries in English)
AV *Arkheologicheskie vesti (Archaeologica News),* St-Petersburg (in Russian with summaries in English)
AWE *Ancient West & East*
BABesch *Bulletin antieke Beschaving*
BAR *British Archaeological Report*
BdA *Bolletino d'Arte*
BI *Bosporskie Issledovaniya (Bosporan Research),* Simferopol/Kerch (in Russian)
BS *Bosporskii sbornik (Bosporan Collection),* Moscow (in Russian)
BSA *The Annual of the British School of Athens*
CAJ *Central Asiatic Journal*
CIRB *Corpus Inscriptionum Regni Bosporani,* Moscow/Leningrad
CR St.Petersburg *Comptes-Rendu de la Commission Impériale Archéologique,* St-Petersburg
CVA *Corpus Vasorum Antiquorum*
DB *Drevnosti Bospora (Antiquities of Bosporus),* Moscow (in Russia)
DD *Donskie drevnosti (Don Antiquities),* Azov (in Russian)
DK *Drevnosti Kubani (Kuban Antiquities),* Krasnodar (in Russian)
EA *Eurasia Antiqua*
FGrHist. Jacoby, F. (ed.), *Fragmente der Griechischen Historiker* 1–3, Berlin; Leiden (1923–1958)
IAK *Izvestiya Arkheologicheskoi Komissii (Bulletins of the Archaeological Committee),* St-Petersburg (in Russian)
IG *Inscritiones Graecae,* Berolini
IGAIMK *Izvestiya Gosudarstvennoi Akademii Istorii Material'noi Kul'tury (Bulletins of the State Acedamy of History of Material Culture),* Leningrad (in Russian)
IOSPE Latyshev, V.V. (ed.), *Inscriptiones orae Septentrionalis Ponti Euxini Graecae et Latinae* I, II, IV, Petropoli (1885–1901)
IstForsch *Istanbuler Forschungen*
IstMitt *Istanbuler Mitteilungen*
ITOIAE *Izvestiya Tavricheskogo obshchestva istorii, archeologii i etnographii (Bulletins of Tauric Society of History, Archaeology and Ethnography),* Simferopol (in Russian)
JdI *Jahrbuch des deutschen archäologischen Instituts*
JHS *Journal of Hellenic Studies*
KhS *Khersonesskiy Sbornik (Collection of Papers Devoted to Chersonessus),* Sevastopol (in Ukraine)
KSIA *Kratkie Soobscheniya Instituta Arkheologii (Short Reports of the Institute of Archaeology, Academy of Sciences of the USSR),* Moscow (in Russian)
KSIIMK *Kratkie Soobshcheniya Instituta Istorii materialnoi Kultury SSSR (Short Reports of the Institute of History of the Material Culture, Academy of Sciences of the USSR),* Moscow (in Russian)
MAPP *Materialy po archeologii Pivnichogo Prichernomoriya (Materials on Archaeology of Northern Black Sea Littoral),* Kiev (in Ukraine)
MAR *Materialy po arkheologii Rossii*
MetMusJ *Metropolitan Museum Journal*
MIA *Materialy i Issledovaniya po Arkheologii SSSR (Materials and Investigations on the Archaeology of the USSR),* Moscow/Leningrad (in Russian)
NE *Numizmatika i epigrafika (Numismatics and Epigraphy),* Moscow (in Russian)
NIKA *Nizhegorodskie issledovaniya po kraevedeniyu i archeologii,* Nizhnii Novgorod (in Russian)
OAK *Otchety Arkheologicheskoy Komissii (Reports of the Imperial Archaeological Committee),* St Petersburg (in Russian)
PAV *Peterburgskii arkheologicheskii vestnik (Petersburg Archaeological Gerald),* St-Petersburg (in Russian)
PIFK *Problemy istorii, filologii, kui'tury (Journal of historical, philological and cultural studies),* Moscow/Magnitogorsk (in Russian)
PPE *Periplus Ponti Euxini*
PKTG *Pamyatnaya knizhka Tavricheskoi gubernii (Memorable Book of Tauricheskii Province)* Simferopol (in Russian)
RosA *Rossiiskaya Arkheolojiya (Russian Archaeology),* Moscow (in Russia with summaries in English)
RM *Römische Mitteilungen*
SA *Sovetskaya arkheologya (Soviet Archaeology),* Moscow (in Russian with English summaries)

SAI *Svod arkheologicheskikh istochnikov SSSR (Collection of Archaeological Evidence),* Moscow/Leningrad (in Russian)
SEG *Supplementum epigraphicum graecum*
SGE *Soobscheniya Gosudarstvennogo Ermitazha (State Hermitage Reports),* St-Petersburg (in Russian)
SGMII *Soobshcheniya Gosudarstvennogo Muzeya Izobrazitelnykh Iskusstv im. A.S. Pushkina (Bulletins of the State Pushkin Museum of Fine Arts),* Moscow (in Russian)
Syll.[3] *Dittenberger W. Sylloge Inscriptionum Graecarum (ed. 3) I-IV,* Leipzig (1915–1924)
TAPhA *Transactions and Proceedings of the American Philological Association,* New York
TGE *Trudy Gosudarstvennogo Ermitazha,* St-Petersburg (in Russian)
TS *Tamanskaya Starina (Taman Antiquities),* St-Petersburg (in Russian)
VDI *Vestnik Drevnei Istorii (Journal of Ancient History),* Moscow (in Russian with summaries in English).
ZhMNP *Zhurnal Ministerstva narodnogo prosveshcheniya (Journal of the Ministry of Education),* St-Petersburg (in Russian)
ZOAO *Zapiski Odesskogo Arkheologicheskogo Obschestva (Transactions of the Odessa Archaeological Society),* Odessa (in Russian)
ZOOID *Zapiski Odesskogo Obshchestva Istorii i Drevnostei (Transactions of the Odessa Society of History and Antiquities),* Odessa (in Russian)
ZRAO *Zapiski Imperatorskogo Russkogo Arkheologicheskogo obshchestva,* St-Petersburg (in Russian)