AMPHORAE OF ROMAN TIME FROM EXCAVATIONS AT SETTLEMENT ON BEREZAN ISLAND (IN COLLECTION OF ODESA ARCHAEOLOGICAL MUSEUM OF NAS OF UKRAINE)

Denis Masutya
The Odesa Archaeological Museum NAS of Ukraine (Odesa, Ukraine)
e-mail: masuta.denis@gmail.com
ORCID: https://orcid.org/0000-0002-3722-154X

The author presents the finds of amphorae of the Roman time, which were found on the island of Berezan. Materials that are introduced into scientific circulation are stored in the depositaries of the Odesa Archaeological Museum of the National Academy of Sciences of Ukraine. They are mainly represented by fragments of amphorae, which were found as a result of the work of archaeological expeditions headed by M.F. Boltenko (1927, 1928, 1930, 1931, 1946) and V.V. Lapin (1960, 1961) at Berezan settlement. Some of the finds also came from the island of Berezan, but the year and place of their finding are unknown.

A comprehensive study of amphorae fragments gives the opportunity to reconstruct the trade relations of the settlement, which was located on the island of Berezan in the first centuries AD. Products in transport amphorae appeared on the island in the early Roman time. Thus, in amphorae of type Vnukov S I, dating no later than the first third of the 2nd century AD, Heraclean wine, made according to Coan recipe, was imported. Subsequently, the products of Heraclea Pontica sporadically came in amphorae of variant Vnukov S IVC.

The peak of trade activity of the settlement was attained in the end of the 2nd – the middle of the 3rd century AD. The range of products imported in transport wares during that period was rather wide. Heraclean wine was imported in large quantities (in amphorae of variant Vnukov S IVD) as opposed to much lesser quantities of the Aegean wine (in vessels of type Kapitän II) and Cilicia wine (in amphora of type Agora G 199). Probably, there was wine in amphora of type Zeest 72 or Zeest 73, which came to the island from an unidentified production site.

Bosporus ‘salsamentum’, which had been very popular among the inhabitants of Berezan settlement since the end of the 2nd century AD was transported in amphorae of type Zeest 75 (variants A, C, D), and from the beginning of the 3rd century AD, also in a rather rare container of type Krapivina 27 (variants ‘a’ and ‘b’). Salted fish was also imported from the non-localized center in vessels of variant Zeest 75B. In addition, a small amount of purchased olive oil was imported in amphorae of type Zeest 80 from several production sites located in the Aegean and the Black Sea regions. Single items represent variants of amphorae that cannot be correlated with already known types.

In Berezan collection of the Odesa Archaeological Museum of the National Academy of Sciences of Ukraine, no ceramic containers were found, which could be dated only later than 264. However, vessels of types Zeest 72 and Kapitän II could come to Berezan in the 4th century AD.

Keywords: transport amphorae, Roman time, settlement, Berezan island, trade relations

One of the most numerous collections stored in the depositaries of the Odesa Archaeological Museum of the National Academy of Sciences of Ukraine is formed of the excavation materials on the island of Berezan. They mainly go back to Archaic time. The finds of subsequent historical periods are much less in number. This is especially true of objects from the Roman time, which are mainly represented by mass archaeological
material – fragments of red slip pottery and transport amphorae. This paper is devoted to introducing the latter into scientific circulation. After all, the study of amphorae allows us to clarify the chronology of the settlement on the island of Berezan, identify the direction of trade relations, and specify the range of commodities imported in transport amphorae.

It should be noted that the amphorae of the Roman time from Berezan settlement already attracted the attention of scholars. For example, I.V. Ksenofontova in her paper studied transport amphorae together with other categories of pottery of that time. Based on the materials of the State Hermitage expeditions (1962-1979), the scholar identified five types of amphorae, which she attributed to the chronological range from the 2nd to the beginning of the 4th century AD. They correspond to types Zeest 75, Zeest 80, Kapitān II, Opaiţ D-II, variants Vnukov S IVC, and Vnukov S IVD. Also, amphorae of the Roman time were analyzed in the publication of the research results of Berezan archeological expedition of the State Hermitage in 2004, 2006, and 2007.

Transport amphorae from Berezan, stored in the Odesa Archaeological Museum, are introduced into scientific circulation for the first time. Our selection includes the fragments of amphorae (necks, profile parts, and walls), which, mostly, were found during archaeological expeditions headed by M.F. Boltenko in 1927, 1928, 1930, 1931, and 1946. They come from digs laid in the northern and northeastern parts of Berezan settlement. Some of the finds were received by the Odesa Archaeological Museum as a result of excavations in the eastern part of the island by Berezan detachment of the Institute of Archeology of the Academy of Sciences of the Ukrainian SSR, headed by V.V. Lapin in 1960 and 1961. The year and place where some of the amphorae fragments included in our selection were found, could not be specified.

**Amphorae of type Vnukov S I**

The earliest variants of transport amphorae of the Roman time include a fragment of a rim with a handle of a pseudo-Coan amphora (Fig. 1, 1). Its fabric is quite brittle, has a white color, and contains visually noticeable impurities of quartz, sand, andesite-basalt inclusions, and unidentified brown particles. In his classification of Black Sea amphorae, S.Yu. Vnukov classified such vessels as type SI and dated them to the turn of the 50s and 60s of the 1st century BC – the first third of the 2nd century AD. Such amphorae are

---

1. Ксенофонтова И.В. Керамика первых веков н.э. из раскопок поселения на острове Березань (по материалам Эрмитажа) // Труды Государственного Эрмитажа. 1984. Вып. XXIV. С. 138, 139, Табл. I-V.
4. Соловьёв С.Л. Ancient Berezan: The Architecture, History and Culture of the First Greek Colony in the Northern Black Sea // Colloquium Ponticum. 1999. Vol. 4. Fig. 6.
characterized by a wide neck with a rolled rim, double-barrel handles, an elongated cigar-shaped body, and a foot in the form of an ‘acorn’. Their capacity varies in the range of 9 to 36 liters. They are divided into two chronological variants (S Ia and S Ib), but the small size of the Berezan find does not allow it to be reliably attributed to any of these variants.

One more fragment of a double-barrel handle of a light-clay pseudo-Coan amphora comes from a settlement on the island of Berezan. It is distinguished by a clay band, which was attached to the inner surface across the handle at the place of its bending (Fig. 1, 2). Such an additional design detail is found only on the vessels of type Vnukov S Ib, which were in use from the 10s of the 1st century AD till the first third of the 2nd century AD.

The production of light-clay amphorae with double-barrel handles was carried out in the Southern Black Sea region on the territory of Heraclea Pontica. Probably, they were used for transportation of the wine made according to Coan recipe, which provided the addition of seawater. Taking into account the wide area of amphorae type Vnukov S I distribution, it can be asserted that this drink was very popular both among the inhabitants of ancient cities and among the barbarian population of the Northern, North-Western, and Western Black Sea regions.

**Amphorae of type Vnukov S IV**

These light-clay narrow-necked amphorae also belong to the products of Heraclea Pontica. In the materials of Berezan settlement, it is possible to distinguish fragments of vessels of two variants of this type – S IVC and S IVD. They are made of a fabric identical in composition to the clay fragments of vessels of type Vnukov S I, which were analyzed above. However, the shard color of some fragments is different and has a yellowish hue.

To the amphorae of variant Vnukov S IVC (type Shelov C) only one fragment of the handle can be attributed (Fig. 1, 3). Such amphorae have a long narrow neck, a rolled rim with a clear vertical protrusion, an ovoid body, a foot made in the form of a narrow ring base, widening downwards. The handles are oval in cross section, outside profiled with an asymmetrical crest, with a deep longitudinal cutting. These vessels, like all...
light-clay Late Heraclean amphorae, were used for transporting wine\textsuperscript{16}. Amphorae of variant Vnukov S IVc started to be produced in the second quarter of the 2\textsuperscript{nd} century AD, and their production was stopped at the end of that century or the beginning of the 3\textsuperscript{rd} century AD\textsuperscript{17}.

The area of such vessels distribution covered mainly the Northern, North-Western\textsuperscript{18}, and Western Black Sea regions\textsuperscript{19}. Sometimes they are found in the southern\textsuperscript{20} and eastern parts of Pontic area\textsuperscript{21}, as well as in the Eastern\textsuperscript{22} and Western Mediterranean\textsuperscript{23}.

**Amphorae of variant Vnukov S IVd (type Shelov D)** are widely represented in Berezan collection (necks, fragments of rims, handles, feet) (Fig. 1, 4-13). Such vessels are characterized by a rolled rim with a small vertical protrusion, a narrow neck, an ovoid ribbed body, a foot in the form of a narrow rudimentary ring base, and oval in cross section handles profiled with a longitudinal crest\textsuperscript{24}. The capacity of such vessels is 2.27-5.45 liters\textsuperscript{25}. They were also containers for wine, and their small size facilitated transportation over long distances on both water and land. This is the most common variant of Black Sea region amphorae of Late Roman time\textsuperscript{26}.

Their production began at the end of the 2\textsuperscript{nd} century AD and lasted until 264, when Heraclea Pontica was destroyed\textsuperscript{27}. Probably from the last quarter of the 3\textsuperscript{rd} century AD, after the rebuilding of the city, the production of vessels of variant Vnukov S IVd was restarted. However, those produced items were notable for the carelessness of manufacturing and different design of profile parts\textsuperscript{28}. Finds of such amphorae in materials originating from the settlement on Berezan are not yet known. At the same time, among the fragments of transport ware, there are walls of light-clay narrow-necked amphorae, which cannot be reliably correlated with specific variants of Late Heraclean amphorae.

\textsuperscript{16} Внуков С.Ю. Причерноморские амфоры I в. до н.э. – II в. н.э. Часть II... С. 232; Дзиговський О.М., Масюта Д.О. Амфорна тара з сарматських поховальних пам’яток Буджака (остання третина ІІ-ІІІ ст. н.е.) // Археологія і давня історія України. 2020. Вип. 3 (36). С. 289.
\textsuperscript{17} Внуков С.Ю. Указ. соч. С. 163-166; Внуков С.Ю. Еще раз о типологии... С. 43.
\textsuperscript{18} Внуков С.Ю. Причерноморские амфоры I в. до н.э. – II в. н.э. Часть II... С. 182.
\textsuperscript{19} Paraschiv D. Les amphores romaines d’Héraclée du Pont en Dobroudja // The Bosporus: gateway between the Ancient West and East (1\textsuperscript{st} Millennium BC – 5\textsuperscript{th} Century AD): proceedings of the Fourth International Congress on Black Sea antiquities Istanbul, 14\textsuperscript{th}-18\textsuperscript{th} September 2009 // BAR International Series. 2013. № 2517. P. 214, Fig. 3.
\textsuperscript{20} Внуков С.Ю. Указ. соч. С. 183.
\textsuperscript{22} Opaiţ A. Pontic Wine in the Athenian Market // Κεραμική της Ύστερης Αρχαιότητας από τον ελλαδικό χώρο (3ος-7ος αι. μ. Χ.): επιστημονική συνάντηση, Θεσσαλονίκη, 12-16 Νοεμβρίου 2006. Θεσσαλονίκη: Αρχαιολογικό Ινστιτούτο Μακεδονικών και Θρακικών Σπουδών, 2010. P. 111, Fig. 1; 3; Hayes J.W. The villa Dionysos excavations, Knossos: The pottery // Annual of the British School at Athens. 1983. № 78. P. 147, Fig. 21, 32.
\textsuperscript{23} Panella C. Oriente ed Occidente: considerazioni su alcune anfore «Egee» di eta imperial a Ostia // Bulletin de Correspondance Hellenique. 1986. Suppl. XIII. P. 628, Fig. 27.
\textsuperscript{24} Шелов Д.Б. Указ. соч. С. 18, 19, Рис. 7; Внуков С.Ю. Указ. соч. С. 16, Рис. 1, 10.
\textsuperscript{25} Ильяшенко С.М. Стандартные dipinti на узкогорлых светлоглиняных амфорах Танаиса и его округи III-IV вв. н.э. // Боспорские исследования. 2013. Вып. XXIX. С. 63, Табл. 6.
\textsuperscript{26} Внуков С.Ю. Указ. соч. С. 183, 184; Иванова О.С. Узкогорлье светлоглиняные амфоры из раскопок Мангупа // Материалы по археологии, истории и этнографии Таврии. 2011. XVII. С. 293-296.
\textsuperscript{27} Внуков С.Ю. Еще раз о типологии... С. 44.
\textsuperscript{28} Дзиговський О.М., Масюта Д.О. Вказ. праця. С. 289, 291-293.
Amphora of type Zeest 72/73

In 1931, a fragment of a handle flattened-oval in cross section was found, profiled on the outside by five longitudinal grooves, and on the inside by one wide groove, which was supplemented with a deep groove (Figs. 4, 1). Its fabric is quite brittle, containing sand, limestone, and dark unidentified particles. The surface of the fragment is covered with light engobe, and the color of the fabric due to uneven firing has light-gray and red hues.

This design of the handles is typical for amphorae of types Zeest 72 and Zeest 73, which are rather difficult to distinguish. Vessels of both variants have a wide neck, a ribbed cylindrical, rarely ovoid body, a small conical foot, which often ends in a cone-like widening. They mainly differ in the profile of the rims. In type Zeest 72 amphorae it is roller-shaped, and in type Zeest 73 vessels it is beak-shaped\(^29\). These are large transport wares. We know about their capacity from 23 to 86 liters\(^30\).

It should be noted that in the published materials on Berezan settlement the finds of amphorae of type Zeest 72 are not yet known, and containers of type Zeest 73 are represented by only one item – the upper half of the vessel\(^31\).

Most amphorae of types Zeest 72 and Zeest 73 are made of clay, which differs in composition from the fabric of the find, which we introduce into scientific circulation. It is red, red-brown, or red-orange with visually visible inclusions of limestone, ferruginous particles, and quartz. The surface of the vessels is covered with light engobe\(^32\). The territory of Bosporus is considered to be the main place of production of such amphorae\(^33\). Although the remains of pottery workshops have not yet been found, the results of petrographic analyzes of fabric indicate their Bosporus origin\(^34\). Similar vessels were made in other production centers. Thus, during the study of the burial ground ‘Sovkhoz № 10’, amphorae of type Zeest 72, differing in the composition of the fabric, were found. The material contains only impurities of limestone inclusions. According to scholars, such amphorae could be produced in Chersonesos\(^35\). There are finds of vessels fragments morphologically close to amphorae of type Zeest 72 in the materials of Athenian Agora. However, they have other visual fabric characteristics. A. Opaiț links them with the production of Heraclea Pontica\(^36\).

Amphorae of type Zeest 72 were used for a very long time – from the end of the 2nd


\(^{31}\) Новоселова Н.Ю. Указ. соч. С. 116, Табл. 138, 1.

\(^{32}\) Зеест И.Б. Указ. соч. С. 112; Кленина Е.Ю. Указ. соч. С. 19, 22.


\(^{34}\) Внуков С.Ю. Причерноморские амфоры I в. до н.э. – II в. н.э. Часть II… С. 89, 95.

\(^{35}\) Стржелецкий С.Ф., Высотская Т.Н., Рыжова Л.А., Жесткова Г.И. Население округи Херсонеса в первой половине I тысячелетия новой эры (по материалам некрополя «Совхоз № 10») // Stratum plus. 2005. № 4. С. 67, 68.

\(^{36}\) Opaiț A. Op. cit. P. 112, 113, Fig. 9; 10.
century AD till the 360s–370s. Probably, the production of amphorae of type Zeest 73 was carried out synchronously with them only until the middle of the 3rd century AD. In reliably dated complexes of the second half of the 3rd–4th century AD amphorae of type Zeest 73 are absent.

These variants of transport ware also differ in the area of distribution. If amphorae of type Zeest 72 can be attributed to the most common variants of transport ware in Pontic area, the vessels of type Zeest 73 are not so common. Although rare items of the latter were found even in the Eastern and Western Mediterranean. Probably, both types of amphorae were used to transport wine.

**Amphorae of type Zeest 75**

These vessels belong to the most numerous kind transport amphorae included in our selection. Amphorae of type Zeest 75 also prevail among the materials that were introduced into scientific circulation by I.V. Ksenophontova. They are characterized by a wide cylindrical neck, oval body, conical foot, and massive complex profiles handles, the outer surface of which is decorated with a wide groove with a protrusion in the center, and the inner surface is with a narrow, deep longitudinal cutting. The surface of the neck and body is ribbed. Their capacity can vary from 30 to 190 liters.

A. Opaiţ, based on the differences in the design of the rims, proposed to divide the amphorae of type Zeest 75 into four variants (A-D). During archaeological excavations on Berezan, the fragments of vessels of all four variants were found: 75A (with a rim which is subtriangular in cross section of the upper part) (Fig. 2, 1), 75B (with a roller-shaped rim with longitudinal edges) (Fig. 2, 2), 75C (with a trapezoidal rim with a rounded upper part) (Figs. 2, 3-5), 75D (with an almost rectangular in cross section rim, the upper part of which is beveled outwards) (Figs. 2, 6). Moreover, most of the items that can be identified correspond to variant 75C. The surface of all fragments is covered with dark red engobe, but the dense fabric of variant 75B amphorae has a light-red color and contains visually visible inclusions of ferruginous particles, quartz, and large unidentified white fractions. The necks of the vessels, similar in shape, color, and
composition of the fabric, were found in Tanais\(^47\) and the north of Dobroudja\(^48\).

The rims of vessels 75A, 75C, 75D, as well as almost all fragments of amphorae with complex profile handles in our selection (Fig. 4, 2-9), are made of fabric, which contains inclusions of limestone, and ferruginous particles, quartz. Their fabric is dense, red or red-orange. Such visual characteristics have the clay of the transport wares made on Bosporus\(^49\).

It should be noted that one of the fragments belongs to the vessel of variant 75C with considerable manufacturing defects (Fig. 3). Thus, as a result of the violation of the temperature regime, the amphora was unevenly fired, which can be traced at the fracture site of the shard. It is light-gray on the outside and dark-gray on the inside. The fabric of the ware is layered, with large cavities and bulging. It contains limestone, quartz, but the ferruginous particles are not visible. This find requires individual consideration and further detailed study. It is unlikely that it was made on the island of Berezan. Obviously, amphorae of type Zeest 75 were produced in several settlements located in the Black Sea region. And if the center of variant 75B vessels production remains non-localized, then amphorae of variants 75A, 75C, 75D, probably, are of Bosporus origin.

The studied transport wares most likely contained ‘salsamentum’ (salted fish)\(^50\). From the end of the 2\(^{nd}\) to the middle of the 3\(^{rd}\) century AD\(^51\), it came in large quantities to the markets of the North, North-Western\(^52\), and, to a lesser extent, the Western Black Sea regions\(^53\). Some batches of this product in amphorae of type Zeest 75 reached the Mediterranean\(^54\).

**Amphorae of type Krapivina 27**

Amphorae of type Krapivina 27, which are divided into two morphological variants (27a and 27b) could also be used for the transportation of salted fish\(^55\). During archeological excavations at Berezan settlement, a fragment of a beveled inwards beak-shaped rim of a variant 27a vessel was found (Fig. 4, 10). These are amphorae with a very wide ribbed neck, an ovoid body, and a foot on a high and wide ring base. The outer surface of the oval in cross section handles is profiled with a wide cutting or two or three longitudinal grooves\(^56\). The capacity of these vessels does not exceed 10

\(^{47}\) Арсеньева Т.М., Науменко С.А. Усадьбы Танаиса. Москва: ИА РАН, 1992. С. 151, Рис. 29, 3.


\(^{49}\) Крапивина В.В. Указ. соч. С. 97, 99; Винуков С.Ю. Указ. соч. С. 86, 88, 89, 95.


\(^{51}\) Науменко С.А. Указ. соч. С. 71.

\(^{52}\) Иванова О.С. Указ. соч. С. 114.


\(^{55}\) Масюта Д.А. Амфоры типа 27 по классификации В.В. Крапивиной из Тиры /// Емінак. 2019. № 1 (25). С. 139, 144, 145.

\(^{56}\) Арсеньева Т.М., Науменко С.А. Указ. соч. С. 148, 149, Рис. 28, 1; Крапивина В.В. Указ. соч. С. 98, Рис. 30, 25.
liters. It is possible that a fragment of a ring base is a shard from the variant 27b amphora (Fig. 4, 11). Such vessels are characterized by the small size and the rim in the form of the roller. In its visual features, the clay of the studied fragments is similar to the fabric of transport wares associated with Bosporus production – it is dense, red-orange, contains the inclusions of limestone, ferruginous particles and quartz. The outer surface of their shard is covered with a light engobe.

Amphorae of type Krapivina 27 were in use throughout the whole 3rd century AD. The range of their distribution is much narrower than of containers of type Zeest 75. Variant 27a vessels are quite rare and were used, mainly in the Northern Black Sea region, although they also came to the western part of Pontic area. Finds of variant 27b items, in general, were previously known only in Olbia and Tyras.

**Amphorae of type Zeest 80**

Three fragments of such amphorae come from excavations on the island of Berezan (Figs. 5, 1, 2, 6). The vessels of type Zeest 80 are characterized by a wide neck with a massive rim, decorated with two deep grooves, a ribbed body of ovoid or almost spherical shape, a conical foot, and massive handles. On the outside, the handles are profiled with longitudinal grooves. The capacity of such amphorae varies from 60 to 100 liters.

The fabric of Berezan finds is different. The clay of the first amphora rim is red and contains limestone and ferruginous particles, as well as unidentified white inclusions. The handle of the second vessel is made of fabric, which contains sand and mica, and at the fracture site it is reddish-brown. The foot of the third amphora is formed of clay containing sand, quartz, and ferruginous particles. It also has a reddish-brown color. Differences in the composition of fabric indicate the production of type Zeest 80 amphorae in various production centers. The latter, according to most scholars, could be located in the Northern Aegean region and in the Black Sea region. Probably this container was used to transport olive oil. Amphorae of type Zeest 80 were ubiquitous in the Mediterranean (mainly in the eastern part of the region), Western, Northwestern, and Northern Black Sea regions.

Mostly, such amphorae are dated back to the 2nd – 3rd century AD. This dating can
be specified by analyzing materials from Tanais and the Alma-Kermen settlement in the South-Western Crimea. Such vessels are widely represented in the closed assemblages associated with the final destruction of Tanais in the middle of the 3rd century AD but are absent in the filling of buildings that were destroyed by a fire around the middle of the 2nd century AD. A similar situation can be traced to Alma-Kermen, which was destroyed twice in the third quarter of the 2nd and in the middle of the 3rd century AD. Thus, the usage time of the studied variant of containers can be dated to the last quarter of the 2nd – the middle of the 3rd century AD.

Amphorae of type Kapitän II (type Zeest 79)

During archaeological excavations at Berezan settlement, amphorae of type Kapitän II (type Zeest 79) were also found. In our collection, they are represented by three fragments (rim and two handles) (Fig. 5, 3-5). This type of transport wares is characterized by a narrow ribbed neck with a rim in the form of a pinched roller and a horizontal rib under it, an ovoid body, a foot in the form of a thick and wide ring base, and high-raised handles, the outer surface of which is profiled with one or two wide longitudinal grooves. The capacity of such vessels is 9-15 liters.

The fabric of the fragments found on the island of Berezan differs in visual characteristics. In the rim, it is reddish-brown, with small limestone and big ferruginous particles. Instead, the surface of the handles is covered with a dark-red engobe. The shard of one of the fragments at the fracture site is red and contains limestone, sand, quartz, and the other contains ferruginous particles, limestone, and a large amount of sand. Thus, these amphorae came to the Berezan settlement from several exporting centers. It is probable that the ceramic workshops in which Kapitän II amphorae were made were located in the Aegean region. Such vessels are dated from the end of the 2nd till the 4th century AD.

The wine transported in them was very popular among the population of the Roman Empire provinces and even was delivered to its capital. Amphorae of type Kapitän II became ubiquitous outside the Roman state as well. And in the Northern and North-Western Black Sea regions, their finds are mainly concentrated at ancient sites.

---

68 Науменко С.А. Указ. соч. С. 73.
Amphorae of type Agora G 199

From the island of Berezan comes a fragment of a neck with a handle which is a part of type Agora G 199 amphora (Fig. 5, 7). Exact location and circumstances of its finding are unknown, but the surface of the find is covered with limestone algae knobs, which indicate a long stay in seawater. The vessel is made of fine clay, which has a layered structure and contains a large number of small impurities of mica. The shard at the fracture site is of light-brown color.

A characteristic feature of amphorae of type Agora G 199 is the specific design of the handles – they are short, oval or rounded in cross section, externally profiled with a light longitudinal cutting, bent at right angles, and strongly pinched on the sides at the bend. These vessels have a short and wide neck with a roller-shaped rim, almost horizontal shoulders that turn into a cylindrical ridged body, as well as a thick cylindrical foot with a widening at the bottom. Their capacity ranges from 36 to 53 liters. Type Agora G 199 amphorae were produced in the Eastern Mediterranean, in Cilicia, where the remains of four ceramic workshops were found.

They were probably used for the transportation of wine, although some scholars believe that they may have contained other products. The products transported in such containers were the most popular in the Eastern Mediterranean. They also sporadically came to the Western Mediterranean. Finds of type Agora G 199 amphorae are very rare in Pontic area. They were found in Novae, Tanais and Panticapaeum. Their production lasted from the 1st to the beginning of the 4th century AD, but they appeared in the Black Sea region no earlier than the 2nd century AD. The earliest items of this type of containers come from the closed assemblages of Tanais, formed in the middle of that century.

Amphorae of unidentified types

This group includes fragments of vessels that cannot be correlated with specific types of transport amphorae. The fragment of a ridged neck with a handle (Fig. 5, 8) is morphologically close to type Zeest 75 amphorae. However, it differs in design of the handle: its outer surface is profiled with a wide groove without a protrusion in the center, and the inner surface has a light longitudinal cutting. In addition, this amphora is made of fabric, not typical for vessels of type Zeest 75. It contains sand, quartz, limestone inclusions, but ferruginous particles are absent. The firing of the fragment is

---

84 Арсеньева Т.М., Науменко С.А. Указ. соч. С. 148, 149, Рис. 28, 1; Науменко С.А. Указ. соч. С. 67, 68, Рис. 5, 6; 7, 9; 15, 8.
85 Голова́кт Л.А. Амфорная тара из раскопок зольника римского времени у подножия горы Митридат в Керчи // Материалы по археологии, истории и этнографии Таврии. 2010. XVI. С. 102, Рис. 26, 24-30.
87 Науменко С.А. Указ. соч. С. 67.
uneven – it is red on the outside and gray on the inside.

The other fragment of the handle also belongs to the unidentified type. It is pinched-oval in cross section, its outer surface is profiled with two deep longitudinal cuttings, and the inner surface has a wide groove (Fig. 5, 9). The surface of the fragment is covered with a dark-red engobe, and the shard at the fracture site has a red-orange color and contains ferruginous particles, limestone particles, and sand.

Thus, the analysis of amphorae fragments in the collection of the Odesa Archaeological Museum of the National Academy of Sciences of Ukraine allows to reconstruct the trade relations of the settlement, which was located on Berezan island in the first centuries AD. Products in transport amphorae appeared on the island in early Roman times. Thus, in amphorae of type Vnukov S I, dating no later than the first third of the 2nd century AD, Heraclean wine, made according to Coan recipe, was imported. Subsequently, the products of Heraclea Pontica sporadically came in amphorae of variant Vnukov S IVC.

The peak of trade activity of the settlement was attained in the end of the 2nd – the middle of the 3rd century AD. The range of products imported in transport wares during that period was rather wide. Heraclean wine was imported in large quantities (in amphorae of variant Vnukov S IVD) as opposed to much lesser quantities of the Aegean wine (in vessels of type Kapitän II) and Cilician wine (in amphora of type Agora G 199). Probably, there was also wine in the amphora of type Zeest 72 or Zeest 73, which came to the island from an unidentified production site. Interestingly enough that in our selection there are no finds of such vessels made of clay, typical of transport wares from Bosporus.

Bosporus ‘salsamentum’, which had been very popular among the inhabitants of Berezan settlement since the end of the 2nd century AD was transported in amphorae of type Zeest 75 (variants A, C, D), and from the beginning of the 3rd century AD, also in a rather rare container of type Krapivina 27 (variants ‘a’ and ‘b’). Salted fish was also imported from the non-localized center in vessels of variant Zeest 75B. In addition, a small amount of purchased olive oil was imported in amphorae of type Zeest 80 from several production sites located in the Aegean and the Black Sea regions. Single items represent variants of amphorae that cannot be correlated with already known types.

In Berezan collection of the Odesa Archaeological Museum of the National Academy of Sciences of Ukraine, no ceramic containers were found, which could be dated only later than 264. However, vessels of types Zeest 72 and Kapitän II could come to Berezan in the 4th century AD.

Thus, during the Roman time, the vast majority of products in amphorae came to the inhabitants of Berezan settlement from the Black Sea region centers. The amount of the Aegean and Eastern Mediterranean Sea region products in amphora imports was small. The settlement’s pottery assemblage of that time mainly comprises very common types of transport amphorae. However, single fragments belong to rare and exotic for Pontic area amphorae. It is noteworthy that the Roman times materials from Berezan do not include the Eastern Mediterranean amphorae of type Dressel 24 as well as amphorae produced in Sinope and Colchis, found in neighboring Olbia and its chora.

REFERENCES


Il'yashenko, S.M.
Ivanova, O.S.
Ksenofontova, I.V.
Lund, J.
Krapivina, V.
Ivanova, O.S.
Krapivina, V.V.
Hayes, J.W.
Klenina, E.
Golofast, L.А.
Dzyhovskyi, О.М., & Masiuta, D.О.
Klenina, E.Yu.
Dyczek, P.
Khalvashi, M.
Chistov, D.E.
Masyuta, D.А.
Вezeczky, T.
Auriemma, R., & Quiri, E.
vicinity in the 3 okrugi III -IV vv. n.e. [ Standard dipinti on narrow-necked light clay amphorae from Tanais and its Late Roman Period Excavated in Mangup ]. (pp. 93-154). Simferopol-Bakhchisarai: Dolia [in Russian].
materialam Ermitazha) [ Pottery of the First Centuries AD from Excavations on Berezan Island and its vicinity in the 3rd-4th centuries AD] .
Amphorae in the Black Sea. PATABS I: Actes de la Table Ronde internationale de Batoumi et Trabzon, 27-29 Avril 2006. Varia Anatolica, ХХІ , 266-327 [in Russian].

ODYS: Aktualni problemy istorii, arkheolohii ta etnolohii. (pp. 27-29). Odessa [in Russian].


Nazarov, V.V. (1997). V.V. Lapin yak doslidnyk antychnoi Berezani [V.V. Lapin as a researcher of ancient Berezan]. Arkheolohiia, 4, 134-140 [in Ukrainian].


Eminak, 2021, 3 (35)
Денис Масюта
(Одеський археологічний музей НАН України, Одеса, Україна)
e-mail: masuta.denis@gmail.com
ORCID: https://orcid.org/0000-0002-3722-154X

Амфори римського часу з розкопок поселення на острові Березань (у зібранні Одеського археологічного музею НАН України)

Автор публікує знахідки амфорної тари римського часу, що були виявлені на острові Березань. Матеріали, які вводяться до наукового обігу, зберігаються у фондах Одеського археологічного музею Національної академії наук України. Вони, переважно, представлені фрагментами амфор, що були знайдені в результаті робіт на Березанському поселенні археологічних експедицій під керівництвом М.Ф. Болтенка (1927, 1928, 1930, 1931, 1946 рр.) та В.В. Лапіна (1960, 1961 рр.). Частина знахідок також походить з острову Березань, проте рік і місце їх виявлення встановити не вдалося.

Всебічне вивчення фрагментів амфор дозволило реконструювати торговельні зв'язки поселення, що розташовувалося на острові Березань у перші століття н. е. Товари в амфорній тарі почаються надходити вже у ранньоримський час. Так, в амфорах типу С I за С.Ю. Внуковим, які датуються не пізніше першої третини ІІ ст. н. е., було ввезено гераклеєвське вино, виготовлене за коським рецепт. Згодом продукція Гераклеї Понтійської спорадично надходить в амфорах варіантів C IVB за С.Ю. Внуковим.

Пік торгової активності поселення припадає на кінець ІІ – середину ІІІ ст. н. е. Асортимент товарів, що в цей період ймовірніше за керамічний тарі, відрізняється різноманітністю. В значному обсязі ввозяться гераклеєвське вино (в амфорах варіантів C IVD за С.Ю. Внуковим) і в набагато меншому – егейське (у посудинах типу Kapitán II) та кілійське (у тарі типу Agora G 199). Вірогідно, вино містилося і в амфорі типу 72 або 73
за І.Б. Зеєст, яка потрапила на острів з невстановленого виробничого пункту.

Великою популярністю у мешканців Березанського поселення користувався боспорський salsamentum, який з кінця ІІ ст. н.е. надходив у амфорах варіантів 75А, 75С, 75D за І.Б. Зеєст, а з початку ІІІ ст. н.е. – ще й у тарі типу 27 за В.В. Крапівіною (варіантів «а» і «б»). Солону рибу також імпортували з нелокалізованого центру у посудинах варіанту 75В за І.Б. Зеєст. Крім того, у невеликій кількості закуповували оливкову олію, що ввозилась в амфорах типу 80 за І.Б. Зеєст з кількох виробничих пунктів, розташованих в Егеїді та Причорномор'ї. Одиничними екземплярами представлені різновиди амфор, котрі не вдається співвіднести з вже відомими типами.

У березанській колекції Одеського археологічного музею НАН України не виявлено керамічної тари, яку можна було б датувати лише часом більш пізнім, ніж 264 р. Проте посудини типів 72 за І.Б. Зеєст і Kapitän II могли потрапити на Березань і в IV ст. н.е.

**Ключові слова:** амфорна тара, римський час, поселення, острів Березань, торговельні зв'язки

Nадійшла до редакції / Received: 17.05.2021

Схвалено до друку / Accepted: 04.10.2021
Fig. 1. Fragments of amphorae of Heraclea Pontica:
1, 2 – type Vnukov S I; 3 – variant Vnukov S IVC; 4-13 – variant Vnukov S IVD.
Fig. 2. Fragments of type Zeest 75 amphorae:
1 – variant 75A; 2 – variant 75B; 3-5 – variant 75C; 6 – variant 75D.
Fig. 3. A fragment of amphora of variant Zeest 75C with manufacturing defects.
Fig. 4. Fragments of amphorae of the Roman time from the settlement on the island of Berezan:
1 – type Zeest 72/73; 2-9 – type Zeest 75; 10 – variant Krapivina 27a; 11 – variant Krapivina 27b.
Fig. 5. Amphorae of production sites of the Aegean and Eastern Mediterranean (1-7), and non-localized centers (8, 9):
1, 2, 6 – type Zeest 80; 3-5 – type Kapitän II; 7 – type Agora G 199; 8, 9 – unidentified types.