

ORIENTAL AMPHORAE TYPE LRA 1 AND LRA 2 DISCOVERED AT HISTRIA (THE BASILICA EXTRA MUROS SECTOR)

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Cuvinte cheie: *antichitatea târzie, Scythia, Histria, amfore de tip LRA 1 și LRA 2.*

Abstract: *Oriental amphorae are the most common recipients for transportation discovered in Scythia Minor for the Late Roman period, and the two types - Berenice LRA 1 and LRA 2 – sometimes represent more than half of the total number of discovered amphorae. This is the situation in most Oriental provinces of the Empire. In Scythia Minor they were discovered in archaeological contexts dated between the beginning of the 5th and that of the 7th c. AD (Type LRA 1) and between the beginning of the 4th and that of the 7th c. AD (Type LRA 2).*

Rezumat: *Amforele orientale sunt cele mai numeroase vase pentru transport descoperite în Scythia Minor în perioada romano-bizantină, iar cele două tipuri - Berenice LRA 1 și LRA 2 – reprezintă, uneori, mai mult de jumătate din totalul amforelor descoperite. Această situație este întâlnită în majoritatea provinciilor orientale ale Imperiului. În Scythia Minor sunt atestate în contexte arheologice datate între începutul secolului al V-lea și începutul secolului al VII-lea p.Chr. (LRA 1), respectiv între începutul secolului al IV-lea și începutul secolului al VII-lea (LRA 2).*

Archaeological research was resumed in the Basilica Extra Muros Sector in 2001¹ due to the fact that the excavations from 1955-1956² and 1961-1964³ respectively were not published (the former) or were only partially published⁴ (the latter).

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¹ The research team consisted of Alexandru Suceveanu (Institute of Archaeology "Vasile Pârvan", Bucharest) - responsible for the sector, Karl von der Lohe ("Ludwig Maximilian" Institute of Archaeology, University of Munich), Viorica Rusu-Bolindeț (National Museum History of Transylvania, Cluj-Napoca), Alexandru Bădescu (National Military Museum, respectively, in 2002, National History Museum of Romania, Bucharest) - team members.

² POPESCU 1957; POPESCU 1994.

³ NUBAR 1970; NUBAR 1971.

⁴ For historical research see RUSU-BOLINDEȚ, BĂDESCU 2005, p. 103.

The new excavations in the sector conventionally called "Basilica Extra Muros" focused first on refining the chronology of the basilica and verifying its relationship with the two necropolises⁵, and second on obtaining a stratigraphy for the *extra muros* area by excavating a main section⁶. The pottery published in the present paper was discovered in 2001 in the main section (S 1)⁷.

Oriental amphorae are the most common recipients for transportation discovered in Scythia Minor for the Late Roman period, and the two types - Berenice LRA 1 and LRA 2 - sometimes represent more than half of the total number of discovered amphorae. This is the situation in most Oriental provinces of the Empire.

1. Berenice LRA 1; Carthage LRA 1; British B II; Rădulescu 1976, type 10; Scorpan 1976, type VIII B; Egloff 1977, no. 169, 164, 166; Böttger 1982, type II/1; Peacock 1984 shape 2; Keay 1984, type LIII; Kuzmanov 1985, type XIII-XIV; Peacock, Williams 1986, type 44; Hayes 1992, type 5; Kuzmanov, Salkin 1992, type 26; Sazanov 1997, type 1; Opaiț 1991, D I; Papadopoulos 1989, type 2.

If between the middle of the 4th c. and the middle of the 5th c. A.D. the amphorae had a narrow mouth, a cylindrical neck, ovoid body, rounded foot and asymmetric, oval cross-section handles with two or three protruding grooves, they evolved up to the first decades of the 7th c. A.D., when they had a larger mouth, most had a vein under the rim, a smaller body diameter and some had a very wide bell-mouth and a narrow neck⁸. Very few pieces, dated to the time span covered by the Berenice LRA 1 type, namely the beginning of the 5th c. and the first decades of the 7th c. A.D, had a very wide bell-mouth and a very narrow neck⁹.

LRA 1 amphorae were used for wine transport¹⁰, as most recipients were tarred. Some of the wide bell-mouth amphorae were also used for transporting olive oil or vinegar produced in Antioch, as well as other luxury products, because during the Late Roman period there was no more connection between the shape of the pottery and its contents¹¹.

The characteristics of the paste and the wide dissemination of the LRA 1 type

⁵ The first is dated to the 4th and the 5th c. AD; the second is dated to the 6th and the 7th c. AD

⁶ RUSU-BOLINDEȚ, BĂDESCU 2005, p. 104, fig. 1.

⁷ Investigated area was 15 x 3 meters.

⁸ 4th and the 5th c. AD amphorae have the neck and body decorated with spiral grooves made during the spin of the wheel. 6th and 7th c. AD amphorae have "ribs" that run parallel, starting from the bottom. Many have neck or body *tituli picti* - most of which Christian invocations or symbols, and a few representing information concerning their volume. Most LRA 1 amphorae discovered at Argamum have a circle around the neck - a red *dipinto*, probably a control mark. The dimensions of the containers are: H = 45 - 55 cm; DMG = 7 - 8 cm (4th - 5th c. AD) and 8 - 12 cm. (the 5th - 7th c. AD).

⁹ Probably produced in a certain workshop.

¹⁰ The reduced average capacity, results of the chemical analyses and the incompatibility of the tar found on the interior walls with amphorae used for transporting oil are reasons to conclude that wine was the merchandize transported in these amphorae.

¹¹ STECKNER 1989, p. 64-65.

proves the existence of several production centres¹², which were strongly connected to the merchandize transported by these amphorae¹³. The discoveries made during the last 20 years prove that the production area was much larger, covering Cilicia, northern Syria, Cyprus¹⁴ and even the Black Sea¹⁵, but the list is not necessarily final.

This type of amphorae was produced starting with the 5th c. and up to the first decades of the 7th c. A.D. The average capacity of amphorae in the 4th-5th c. was of 25 – 30 liters. Gradually, their volume decreased to 10 - 15 liters in the 5th-6th c. and under 10 liters¹⁶ in the first half of the 7th c.

Amphora type LRA 1 is attested in all researched Late Roman sites¹⁷.

¹² EMPEREUR, PICON 1989, p. 237, 241-242, fig. 18-19; BALLETT, PICON 1987, p. 24. J. Y. Empereur and M. Picon found 15 pottery kilns - one in Rhodes, one in north of the island, on to the coast of Asia Minor, two in Cyprus and eleven in the north-eastern Mediterranean Sea, seven of the latter being in the area of Alexandretta gulf, between Magarsos and Seleucia.

¹³ Böttger believe they were produced and were designed wine Sinope (BÖTGER 1982, p. 90-92); Williams says that Antiochia was the center of production and goods was olive oil (WILLIAMS 1982, p. 102-103).

¹⁴ EMPEREUR, PICON 1989, p. 236 - 237, 241 - 243, fig. 18, 19.

¹⁵ SCIALANO, SIBELLA 1991, p. 100; in 1982 Böttger believed that the production area was on the North Sea coast (BÖTGER 1982, p. 90 – 92).

¹⁶ STECKNER 1989, p. 58 (average capacity, building on the 120 pieces of ecclesiastical deposit discovered in Samos, is about 8 liters).

¹⁷ General analogies: PARASCHIV 2006, p.89, 90 (Argamum, Noviodunum, Beroe); RĂDULESCU 1976, p. 109; SUCEVEANU 1982 a, phase III, 116/cat. no. 2-3, pl. 16, pl. 17/6 (Histria, end of the 6th c. AD); SUCEVEANU 1982, N III B, 87/cat. no. 13-14, fig. 8; N IV B, 97/cat. no. 75-80, pl. 13; OPAIȚ 1984, p. 318-319 (Histria); RĂDULESCU 1976, p. 109, pl. XI/2, XII/1, 6th c. AD; OPAIȚ 1984, p. 318 – 319, pl. XV/1, 2; OPAIȚ 1996, pl. 7/3-4 (Tomis); KUZMANOV 1978, p. 22, fig. 2; KUZMANOV 1985 a, p. 18-20/cat. no. 82-89, pl. 9, the 4th - early 7th c. AD; KUZMANOV, SALKIN 1992, p. 44-47/cat. no. 63-65, 67-68, 70-73, 75-80, 83-84, 86-88, 90-94, pl. V-VII, the 4th and early 7th c. AD (Acrae); KUZMANOV/SALKIN 1992, p. 44-47/cat. no. 66, 69, 74, 82, 85, 89, 95-96, pl. V-VII (Bizone); OPAIȚ 1984, p. 319, pl. 14/3-4; OPAIȚ 1991, p. 145-146/cat. no. 101-108; 146-147/cat. no. 111-112, pl. 17-19; TOPOLEANU 2000, p. 134-136/cat. no. 336-343, pl. XLI-XLII; 154/cat. no. 408, pl. LI; PARASCHIV 2006, p. 89-92, 112, cat. no. 39, pl. 22/39 (Halmyris); OPAIȚ 1984, pl. XIII/3; PARASCHIV 2006, p. 89-92, 113, cat. no. 43, pl. 23/43 (Aegyssus); RĂDULESCU 1976, p. 109; OPAIȚ 1984, p. 318, pl. XIII/5; OPAIȚ 1996, pl. 7/2 (Dinogetia); OPAIȚ 1984, p. 319, pl. XV/5; PARASCHIV 2006, p. 89-92, 113, cat. no. 42, pl. 23/42 (Troesmis); COVACEF 1980, pl. IV/1, V/2-3; OPRIS 2003, p. 53-59/cat. no. 8-60, pl. XVII-XIX (Capidava); BOGDAN-CĂTĂNICIU, BARNEA 1979, fig. 167/3.5 (Tropaeum Traiani, 6th c. AD); RĂDULESCU 1976, p. 109, pl. XI/1; OPAIȚ 1984, p. 319 (Axiopolis); IRIMIA 1968, p. 388, fig. 14; RĂDULESCU 1976, p. 109; OPAIȚ 1984, p. 319 (Altinum); SCORPAN 1973, fig. 34; SCORPAN 1975, p. 274-275, pl. III/5-8, X/3-6; SCORPAN 1976, p. 163, pl. VIII/1-3, 6th and 7th c. AD; SCORPAN 1977, p. 277-278, pl. fig. 12/I, 3; RĂDULESCU 1976, p. 109 (Sacidava); OPAIȚ 1991 b, p. 30/cat. no. 38-39, fig. 7; 33, 35/cat. no. 53-56, 58. fig. 8; 37/cat. no. 71-80, fig. 9-10, 12, the second half of the 5th - the eighth decade of the 6th c. AD (Libida); OPAIȚ 1984, p. 318, pl. XIII/4, XIV/1-2; OPAIȚ 1991, p. 217, pl. 21/1-3; OPAIȚ 1996, pl. 7/1 (Babadag-Topraichioi); OPAIȚ A., OPAIȚ C., BĂNICĂ 1990, p. 26/cat. no. 10 (monastic complex at Slava Rusă); IRIMIA 1968, p. 388, fig. 14, 20, 21 (Oltina); KUZMANOV 1985 a, p. 18/cat. no. 70, pl. 8; (Odessos); BÖTGER 1982, p. 45 - 47, tip II 1, cat. 136 -148, 254 -275, 540 - 544, Taf. 11 d, 22, the second half of the 5th - beginning of the 7th c. AD; BÖTGER 1991, cat. 684 – 686 (Periode C), 735 - 736 (Periode D), Taf. 47/684 - 686, 735 - 736, first half of the

In Scythia it was discovered at Argamum¹⁸, Histria¹⁹, Fântânele²⁰ (in Histria's territory), Tomis²¹, Acrae²², Bizone²³, Halmyris²⁴, Aegyssus²⁵, Noviodunum²⁶,

5th - beginning of the 7th c. AD, BÖTGER 1980, p. 431, pl. 1/7; VON BÜLOW 2000, p. 212, fig. 1/II-1 (Iatrus); BÖTGER 1982, p. 46 (Abritus); FALKNER 1999, p. 252, 254/cat. no. 1064, 1066-1068, fig. 9.52, 9.53 (Nicopolis ad Istrum); BÖTGER 1982, p. 46 (Vojvoda, Madara); MACKENSEN 1992, p. 243-244, pl. 51/8-11, 52/1-2 (Sadovec); WILLIAMS, ZERVOS 1983, p. 29/cat. no. 77-78, pl. II, beginning of the 6th c. AD; LAKO 1984, p. 178, pl. II/7-9; STECKNER 1989; CRAWFORD 1990, p. 84, fig. 428-440, mainly fig. 430, beginning of the 7th c. AD; USCĂTESCU BARRÓN 1992, p. 157 -158, type Anfora tardia 1, cat. 140 -143, fig. 19/140 -143, fig. 22/LRA 1, first half of the 5th - the 7th c. AD; ABADIE-REYNAL, SODINI 1992, p. 53-56, cat. no. CC 210-CC 283, fig. 23-24, the 6th - 7th c. AD; HAYES 1978, p. 49 - 50, cat. 2, fig. 11, the end of 7th c. AD; HAYES 1992, p. 63 - 64, tip 5, cat. Fig. 47/156 - 157, fig. 47/30.156 -157, the beginning of the 5th - the 7th c. AD; KINSLEY, RAVEH 1996, p. 44, 49/cat. no. P 16-P 18, fig. 35; POBLOME, BES, DEGRITSE 2005, p. 228, fig. 3/a; VROOM 2005, p. 251. fig. 6 (Orient); RILEY 1979, p. 212 - 216, fig. 91/348, M6, 5th - the end of 7th c. AD; EGLOFF 1977, no. 164 - 167; RILEY 1979, p. 212-213, fig. 41; PEACOCK 1984, p. 119, 121, fig. 34/1-2, the 4th - the beginning of the 7th c. AD; BALLET, PICON 1987, p. 21-26, fig. 2/1; BALLET 1995, p. 18, fig. 19, the 6th - 7th c. AD; OPAIȚ 1998, p. 25, cat. no. 48, pl. 3 (north Africa); YAKOBSON 1951, p. 330, fig. 3/14; YAKOBSON 1979, p. 13-14, fig. 2/6, 3/8-9; KOŠELENKO *et alii* 1984, pl. LXXIV/30; SAZANOV 1997, p. 87-88, fig. 1/1 (north of the Black Sea); MARDEŠIĆ 1994, 294/cat. no. 1; REYNOLDS 2004, *passim*; TOPIĆ 2004, p. 29-31, cat. no. 72-80, pl. XII-XIII (Dalmatia); PAPADOPOULOS 1991, p. 87-89, cat. 3, fig. 12, the beginning of the 4th - the beginning of the 5th c. AD (Torone); BONIFAY 1986, p. 279, fig. 7/20-21, p. 290, fig. 13/56, the 5th - the end of the 7th c. AD, p. 294; BONIFAY, VILLEDIEU 1989, p. 23 - 25, fig. 5/1 - 2, the middle of the 5th - the 6th c. AD; CONGRÉS, LEGUILLOUX 1991, p. 220; BONIFAY, PIÉRI 1995, p. 108-109, fig. 6-7 (Galia); KAPITÂN 1972, p. 252, fig. 12; PENSABENE 1981, p. 190-195. 197-207, cat. no. 1-39, fig. 1-18; WHITEHOUSE *et alii* 1982, p. 69, cat. no. 145, fig. II; WHITEHOUSE *et alii* 1985, p. 192-193, fig. 9-14; VENTURA, DEGRASSI 2005, p. 98, fig. 3/13; VERREYKE 2005, p. 106, fig. 2/12; PASQUINUCCI *et alii* 2005, p. 123, fig. 7; MARTIN 2005, p. 127 (Italia); KEAY 1984, p. 268 - 272, 278, tip LIII, fig. 116 -120, the 5th - the end of the 7th c. AD; RAMALLO *et alii* 1996, p. 141, 156, cat. no. 12, 158, cat. no. 43-44, fig. 3. 4, 20/A; ROSSELLÓ MESQUIDA, RIBERA I LACOMBA 2005, p. 156, fig. 2/10, 13 (Hispania); BJELAJAC 1996, p. 72 - 76, tip XXI, fig. XXV, the 5th - 6th c. AD; BASS, DOORNICK JR. 1982, p. 155-157, tip 1, fig. 8/1-3, the end of 6th - 625/6 AD; PEACOCK, WILLIAMS 1986, p. 185 -187, class 44, fig. 104 A, beginning of the 5th - middle of the 6th c. AD; GUDEA 1977, p. 59 - 60, cat. IV.1, fig. 21/5, 27/2, the end of 3rd - the end of 5th c. AD; KINSLEY, RAVEH 1996, p. 49, P 16-17, fig. 35/16 -17, Pl. 44, the end of the 4th - the beginning of the 7th c. AD.

¹⁸ PARASCHIV 2006, p. 89-92, 113, cat. no. 44, pl. 23/44-45; PARASCHIV 2006 a, p. 314-317, pl. IV/55.

¹⁹ SUCEVEANU 2007, p. 214, pl. LXXVII/66-67, pl. LXXVIII/68-75; CONDURACHI *et alii* 1960, p. 240, fig. 11/6.

²⁰ ANGELESCU 1998, p. 231, cat. no. 144, Pl. XV/155.

²¹ PARASCHIV 2006, p. 89-92, 113-114, cat. no. 46-48, pl. 24/46-48.

²² KUZMANOV 1978, p. 22, fig. 2; KUZMANOV 1985 a, p. 18-20, cat. no. 82-89, pl. 9, the 5th - the beginning of 7th c. AD; KUZMANOV, SALKIN 1992, p. 44-47, cat. no. 63-65, 67-68, 70-73, 75-80, 83-84, 86-88, 90-94, pl. V-VII.

²³ KUZMANOV, SALKIN 1992, p. 44-47/cat. no. 66, 69, 74, 82, 85, 89, 95-96, pl. V-VII.

²⁴ OPAIȚ 1984, p. 319, pl. 14/3-4; OPAIȚ 1991, p. 145-146, cat. no. 101-108; p. 146-147, cat. no. 111-112, pl. 17-19; TOPOLEANU 2000, p. 134-136, cat. no. 336-343, pl. XLI-XLII; p. 154, cat. no. 408, pl. LI; PARASCHIV 2006, p. 89-92, 112, cat. no. 39, pl. 22/39.

²⁵ OPAIȚ 1984, pl. XIII/3; PARASCHIV 2006, p. 89-92, 113, cat. no. 43, pl. 23/43.

²⁶ PARASCHIV 2006, p. 90, n. 174.

Dinogetia²⁷, Troesmis²⁸, Beroe²⁹, Capidava³⁰, Axiopolis³¹, Tropaeum Traiani³², Altinum³³, Sacidava³⁴, Libida³⁵, Babadag-Topraichioi³⁶ and in the monastic complex at Slava Rusă³⁷.

At Murighiol³⁸ and Topraichioi this type represents 15-18 % of all amphorae dated to the first half of the 5th c. A.D., and the percentage increased to approximately 20%³⁹ at the end of the 6th and beginning of the 7th c. A.D. At Halmyris it represents 26.7 %⁴⁰, at Capidava 30.1 %⁴¹, at Libida 44.1%⁴², at Babadag - Topraichioi 18.2 %⁴³, and at Acrae and Bizone 34 %⁴⁴. At Iatrus, the Berenice LRI type was surpassed by the Berenice LRA 2 type, covering 6.5 %, but this number increased in the 4th-7th c. from 5 to 16 %⁴⁵. At Carthage and Berenice it represents over 50 % of the amphorae dated to the beginning of the 6th c. and approximately 25 % of those dated to the middle of the 6th c.⁴⁶ At Marseille it represents approximately 20 % of the amphorae dated to the middle of the 5th c. A.D.⁴⁷.

In Moesia Secunda they are documented at Odessos⁴⁸, Iatrus⁴⁹,

²⁷ RĂDULESCU 1976, p. 109; OPAIȚ 1984, p. 318, pl. XIII/5; OPAIȚ 1996, pl. 7/2.

²⁸ OPAIȚ 1984, p. 319, pl. XV/5; PARASCHIV 2006, p. 89-92, 113, cat. no. 42, pl. 23/42.

²⁹ PARASCHIV 2006, p. 90, nota 177.

³⁰ COVACEF 1980, pl. IV/1, V/2-3; OPRIȘ 2003, p. 53-59, cat. no. 8-60, pl. XVII-XIX.

³¹ RĂDULESCU 1976, p. 109, pl. XI/1; OPAIȚ 1984, p. 319; PARASCHIV 2006, p. 89-92, 112, cat. no. 38, pl. 22/38.

³² BOGDAN-CĂTĂNICIU, BARNEA 1979, p. 190, fig. 167, 170/3(5), fig. 168/3(6); the authors say there are "numerous amphorae in all sectors".

³³ IRIMIA 1968, p. 388, fig. 14, 20, 21; RĂDULESCU 1976, p. 109; OPAIȚ 1984, p. 319.

³⁴ SCORPAN 1973, fig. 34; SCORPAN 1975, p. 274-275, pl. III/5-8, X/3-6; SCORPAN 1976, p. 163, pl. VIII/1-3; SCORPAN 1977, p. 277-278, pl. fig. 12/I, 3; RĂDULESCU 1976, p. 109.

³⁵ OPAIȚ 1991 b, p. 30, cat. no. 38-39, fig. 7; p. 33, 35, cat. no. 53-56, 58, fig. 8; p. 37, cat. no. 71-80, fig. 9-10, 12.

³⁶ OPAIȚ 1984, p. 317-320, pl. XIII/4, XIV/1-2; OPAIȚ 1991 a, p. 255, cat. no. 38-39, PI. 21/2-3; OPAIȚ 1996, pl. 7/1; PARASCHIV 2006, p. 89-92, 112, cat. no. 36, pl. 21/36.

³⁷ OPAIȚ A, OPAIȚ C, BĂNICĂ 1990, p. 26, cat. no. 10.

³⁸ TOPOLEANU 2000, p. 132 (the 197 specimens representing almost a quarter of the total number of amphorae determined and almost 37% of the oriental products.; in the levels dated to the 5th c. AD they are present in a proportion of 17.3%, a percentage that is growing during the 6th c. AD, reaching almost 45% on last layer - N 13).

³⁹ OPAIȚ 1996, p. 48.

⁴⁰ TOPOLEANU 2000, p. 132.

⁴¹ OPRIȘ 2003, p. 177-178.

⁴² OPAIȚ 1991 (Catalog); *apud* PARASCHIV 2006, p. 91, n. 194.

⁴³ Calculations by OPAIȚ 1991, p. 240, tab. I; *apud* PARASCHIV 2006, p. 91, n. 195 (the author included types D I and D II amphorae).

⁴⁴ PARASCHIV 2006, p. 91.

⁴⁵ BÖTGER 1991, p. 157, table 1.

⁴⁶ RILEY 1976, M6; EGLOF 1977, no. 169. 164. 166; RILEY 1979, p. 212-213, fig. 41; PEACOCK 1984, p. 119, 121, fig. 34/1-2; BALLETT, PICON 1987, p. 21-26, fig. 2/1; BALLETT 1995, p. 18, fig. 39; OPAIȚ 1998, p. 25, cat. no. 48, pl. 3.

⁴⁷ BONIFAY 1986, p. 279, fig. 7/20-21; p. 290, fig. 13/56; p. 294; BONIFAY, VILLEDIEU 1989, p. 23, 25, fig. 1, 4, 5/1-2; CONGRÉS, LEGUILLOUX 1991, p. 220; BONIFAY, PIÉRI 1995, p. 108-109, fig. 6-7.

⁴⁸ KUZMANOV 1985 a, p. 18, cat. no. 70, pl. 8; BÖTGER 1982, p. 46.

⁴⁹ BÖTGER 1980, p. 431, pl. 1/7; BÖTGER 1982, p. 45-47, 106-107, cat. no. 136-148, 115-

Abritus⁵⁰, Nicopolis ad Istrum⁵¹, Vojvoda⁵², Madara⁵³ and Sadovec⁵⁴, on dwelling levels dated between the middle of the 4th c. and the beginning of the 7th c. A.D.

In Scythia this type of amphora was discovered in archaeological layers dated between the beginning of the 5th c. and the beginning of the 7th c. A.D. in all researched sites, including rural settlements and the above-mentioned analogies represents only the published material.

CATALOG*

1. Fragment, rim. Histria 2001, sector BEM, Basilica, -0,30 m, no. 48, Pl. 1/1. Dimensions: MDM = 111 mm, MPD = 111 mm, H = 21 mm.

Rounded rim, thickened on the outside. Fine and compact fabric, porous, reddish yellow color (5YR6/8), very rare limestone.

2. Fragment, rim. Histria 2001, sector BEM, S 1, sq 2, -0,30 m, no. 100, Pl. 1/2. Dimensions: MDM = 130 mm, MPD = 130 mm, H = 34 mm.

Rounded rim, thickened on the outside. Fine and compact fabric, porous, reddish yellow color (5YR6/8), medium and rare particles of limestone, iron oxides and silver mica.

3. Fragment, rim. Histria 2001, sector BEM, S 1, sq 2, -0,30 m, no. 99, Pl. 1/3. Dimensions: MDM = 100 mm, MPD = 100 mm, H = 32 mm.

Rounded rim, thickened on the outside. Fine and compact fabric, porous, pink color (5YR7/4), oyster shell and sporadic silver mica.

4. Fragment, rim. Histria 2001, sector BEM, Basilica, -0,30 m, no. 57, Pl. 1/4. Dimensions: DF = 22 mm, MPD = 118 mm, H = 29 mm.

Grooved outer surface, bottom screw. Fine and compact fabric, porous, red color (2,5YR5/6), red angoba (10R5/8), fine particles of iron oxides and sporadic silver mica.

5. Fragment, base. Histria 2001, sector BEM, Basilica, -0,30 m, no. 260, Pl. 1/5. Dimensions: DF = 21 mm, MPD = 86 mm, H = 28 mm.

Smooth outer surface, bottom screw. Fine and compact fabric, porous, reddish yellow color (5YR6/8), fine particles of iron oxides, rare limestone, pyroxene and golden mica.

2. Berenice LRA 2; Carthage LRA 2; British B I; Keay 1984, type LXV; Dimitriu, Zirra, Condurachi 1954, type 4; Rădulescu 1976, type 8; Scorpan 1976, type VII-A; Böttger 1982, type I, shape 1; Peacock 1984, shape 1; Kuzmanov 1985, type I; Peacock, Williams 1986, type 43; Hayes 1992, type 9; Kuzmanov, Salkin

11, cat. no. 254-275, 139, cat. no. 540-544, pl. 11/d, 22; BÖTGER 1991, p. 163, cat. no. 684-686; p. 166, cat. no. 735-736, pl. 47; VON BÜLOW 2000, p. 212, fig. 1/II-1.

⁵⁰ BÖTGER 1982, p. 46.

⁵¹ FALKNER 1999, p. 252, 254, cat. no. 1064, 1066-1068, fig. 9.52, 9.53.

⁵² BÖTGER 1982, p. 46.

⁵³ BÖTGER 1982, p. 46.

⁵⁴ MACKENSEN 1992, p. 243-244, pl. 51/8-11, 52/1-2.

* Abbreviations: BEM = Basilica Extra Muros (located outside the walls); sq = square; MDM = maximal diameter of the mouth; DF = diameter of the foot; MPD = maximal preserved diameter; MT = maximal thickness (for pottery other than vases); H = preserved height of the ceramic fragment; S = section.

1992, type 28; Krapivina 1993, type 18; Sazanov 1997, type 2; Papadopoulos 1989, type 1.

LRA 2 amphorae have a very wide bell-mouth, a tronconic neck, piriform body ending in a small button⁵⁵ and oval cross-section handles. The upper part of the body, under the handles' lower attaching element, was decorated with horizontal or undulated dents⁵⁶. The mouth and the neck are tronconic, the handles have an oval cross-section, the body is piriform, ending in a small foot or button⁵⁷.

The fact that most of the amphorae that were discovered were tarred, and wine production was an important industry in the area where this type of pottery was produced, indicates wine as the main product to be transported in them⁵⁸. The analyses of 120 LRA 2 amphorae discovered in the Roman Public Building with Mosaic in Tomis have demonstrated that they also transported different organic substances - rosin, pine resin, terebenthene, mastix (Chios resin), styrax, incense, myrrh, as well as iron nails⁵⁹.

The different colors of the paste in this type of amphora suggest the existence of several production centres. The concentration of discoveries in the Aegean and Black Seas⁶⁰ area suggests that the centres of production were located there, and the only kiln related to this production⁶¹ was discovered in Chios⁶². The petrography analyses indicate an area of volcanic rock as the source of material, most probably the Greek islands in the Bodrum area⁶³ and North-Western Africa⁶⁴. D. P. S. Peacock and D. F. Williams also plead for an area not far from Athens⁶⁵, but the production centres were discovered at Cnidus, in the Datça Peninsula and possibly at Kounoupi, in the Argolid.

⁵⁵ This is no longer present in pieces dated to the end of the 6th and beginning of the 7th c. AD.

⁵⁶ At the beginning of the 4th c. AD straight dents appeared – on the body's lower part or in the area of the shoulder – which became undulated in the 6th c. AD

⁵⁷ OPAIȚ 1996, p. 48 (Andrei Opaîţ supports the appearance of this type of amphora as early as the 2nd c. AD, which in Dobrudja is found as late as the beginning of the 7th c. AD. At the end of the 6th and beginning of the 7th c. AD the small foot disappeared.

⁵⁸ STECKNER 1989, p. 64-65. The author believes that they were used for wine, as well as for oil transportation. Analyses of the residues and the low presence of this amphora type at Carthage, an important oil exporter, indicate wine as the merchandize transported by them.

⁵⁹ RĂDULESCU 1973, p. 197-198.

⁶⁰ PARASCHIV 2006, p. 95; D. Paraschiv's conclusion was that part of the LRA 2 pieces in the deposits of the Archaeological Museum of Tulcea has a paste identical to a number of certain Pontic amphorae. The information is important for at least two reasons: first of all it constitutes another argument in favour of the theory that this type of amphora was produced in the Pontic area, and secondly, this explains the continuous decrease of the percentage of "Pontic" amphorae in the sites of Moesia Secunda and Scythia for which statistics were drawn up.

⁶¹ PEACOCK, WILLIAMS 1986, p. 182; BONIFAY, VILLEDIEU 1989, p. 25; SCIALANO, SIBELLA 1991, p. 101.

⁶² BONIFAY, VILLEDIEU 1989, p. 25, n. 12.

⁶³ An argument for the production of amphorae in the Bodrum area is the discovery of a shipwreck that contained over 600 such vases, dated to the first quarter of the 7th c. AD.

⁶⁴ WILLIAMS 1982, p. 102.

⁶⁵ PEACOCK, WILLIAMS 1986, p. 182.

LRA 2 amphorae were produced starting with the 4th c. and up to the 7th c. A.D. They are part of the large amphorae category, ranging between 30 and 65 liters⁶⁶; the 29 pieces of this type, discovered in the Roman Public Building with Mosaic in Tomis, are dated to the beginning of this period⁶⁷. At Halmyris⁶⁸ and Capidava⁶⁹ the inscriptions suggest the same capacity, but most of the entirely preserved amphorae could carry over 50 liters⁷⁰.

In the area between the Danube and the Black Sea⁷¹ this type of amphora was

⁶⁶ STECKNER 1989, p. 5; BASS, DOORNICK JR. 1982, p. 161-163. The average for 20 amphorae discovered in a deposit in Samos and for over 600 such pieces discovered on the shipwreck at Yassi Ada is of 30-35 liters.

⁶⁷ RĂDULESCU 1973, p. 202-203; OPAIȚ 1984, p. 320-321, table 1 (most were between 50 and 60 *sextarii*). The inscriptions in Tomis mention the capacity in both Latin – *graffiti* –, as well as Greek letters – *dipinti* – on the same vase. A. Rădulescu suggested that a *graffito* represented the amphora's conventional capacity, and the *dipinto* the volume of the product contained at a certain moment.

⁶⁸ TOPOLEANU 2000, p. 132, 160-162, cat. no. 418-421, 430, 432-433, 330, pl. LII-LIV.

⁶⁹ OPRIȘ 2003, p. 59, 60.

⁷⁰ Large amphorae have a capacity of over 60 liters and one piece, discovered at Novae on a layer dated to the second half of the 4th c. AD, almost 65 liters. (GACUTA, SARNOWSKI 1981, p. 122-123, cat. no. 1, fig. 54). There are also small, 5 liters amphorae. A piece discovered at Halmyris had a capacity of approx. 5 liters - 10 *sextarii* – and one at Capidava approx. 12 liters - 22 *sextarii* or 0.5 *amphora*. (OPAIȚ 1991, p. 140, cat. no. 63, pl. 10; OPAIȚ 1996, p. 49; TOPOLEANU 2000, p. 133, cat. no. 332, pl. XL; OPRIȘ 2003, p. 59, 60, 64, cat. no. 100, pl. XXII).

⁷¹ Analogies for the early version: GUDEA 1977, p. 59 - 60, cat. IV.6, fig. 23/1, the end of the 3rd – end of the 4th c. AD (Gornea); OPAIȚ 1980, p. 296, 298, Pl. IV/4, XI/3, middle of the 2nd.c. AD (Troesmis); ARDEȚ 1998, p. 88-89, fig. 77-78, pl. LI-LIII (Tibiscum, Slăveni, Romula și Dierna); p. 112-114, fig. 117-118, pl. LXXXI-LXXXII (Gornea, Dierna, Romula); DYCZEK 2001, type 23, 25, p. 173-194 (Lower Danube area); DAŠEVSKAJA 1991, p. 20, pl. 28/22 (2nd - 3rd AD). Analogies for later version: RĂDULESCU 1976, p. 107, type 8, Pl. VIII/1, 1a, IX/1, 1a, the end of the 4th - 6th c. AD; OPAIȚ 1984, p. 315, pl. XI/I (Argamum); DIMITRIU, ZIRRA, CONDURACHI 1954, p. 455, 458, fig. 382-384, the 5th - 6th c. AD; SCORPAN 1976, p. 159 -163, type VII - A, Pl. VII/2 - 4, 8, the 5th - 7th c. AD; SCORPAN 1977, p. 274, fig. 7/6, 10/3; OPAIȚ 1984, p. 312, 315, pl. 1/3, 2/5; SUCEVEANU 1982, N IV B, 97/cat. no. 68-74, fig. 13 (Histria); RĂDULESCU 1973; RĂDULESCU 1976, p. 107; SCORPAN 1976, p. 159-160, pl. VII/8; SCORPAN 1977, p. 274, fig. 10/7-8; OPAIȚ 1984, p. 314-315, pl. II/3-4, X; BUCOVALĂ, PAȘCA 1989, p. 146, Pl. 9/d, e, 12/e, the end of the 4th – the beginning of the 5th c. AD (Tomis); DRAGOMIR 2001, p. 90, fig. 30/3 (south of Moldova); RĂDULESCU 1976, p. 107 (Callatis); KUZMANOV 1978, p. 21-22, fig. I; KUZMANOV 1985 a, p. 9-11, cat. no. 11-13, 18-20, 23, 26, pl. 1-3; KUZMANOV, SALKIN 1992, p. 47-50, cat. no. 100-114, 116-119, 122-129, pl. VII-X, the 4th – half of the 7th c. AD (Acrae); KUZMANOV 1985, p. 9, tipul I, cat. A 1-26, Pl. 1-3, the 4th – half of 7th c. AD; KUZMANOV, SALKIN 1992, p. 47-50, cat. no. 115, p. 120-121, 130, pl. IX-X (Bizone); OPAIȚ 1991, p. 139-140, cat. no. 52-53, pl. 8-10; OPAIȚ 1996, pl. 8/2-3, 5-8; TOPOLEANU 2000, p. 132-134, cat. no. 324-332, pl. XXXIX-XL (Halmyris); OPAIȚ 1984, p. 313, pl. IX/I; OPAIȚ 1996, pl. 8/1 (Aegyssus, the 6th c. AD); BARNEA I, BARNEA A 1984, p. 102, pl. VIII/3 (Noviodunum); BARNEA I 1966, p. 244, fig. 5/7; p. 244-245, fig. 8/7; 250, fig. 12, 7, the 6th c. AD; OPAIȚ 1984, p. 313-315 (Dinogetia); OPAIȚ 1996, p. 51, pl. 9/4; PARASCHIV 2006, p. 92-95, cat. no. 43-60 (Troesmis); PARASCHIV 2002, p. 150, 152, 155/cat. no. 1, 2, fig. 1 (Beroe); BAUMANN 1977, pl. 1/1; BAUMANN 1984, p. 54, pl. XII/2; OPAIȚ 1996, p. 51 (Telița - La Pod and Niculițel); RĂDULESCU 1976, p. 107; COVACEF 1983, p. 361, fig. 6/2; OPAIȚ 1984, p. 315, pl. II/6; OPRIȘ 2003, p. 59-64, cat. no. 61-100, pl. XX-XXII; SCORPAN 1976, p. 158-159, pl. V/5

discovered in quantities similar to those of the LRA 1. In Scythia they were

(Capidava); SCORPAN 1973, fig. 36/3. 4; SCORPAN 1975, p. 272-274, pl. II/10. IX/8; SCORPAN 1976, p. 159-160, pl. VII/4; SCORPAN 1977, p. 274, fig. 10/4 (Sacidava); RĂDULESCU 1976, p. 107 (Altinum, Ulmetum); BOGDAN-CĂTĂNICIU, BARNEA 1979, fig. 161/3.1, fig. 167/3.2 (Tropaeum Traiani, the level N VI A, the 6th c. AD); OCHEȘEANU, DUMITRAȘCU 1972, p. 538, fig. 1 (Medgidia); OPAIȚ 1991b, p. 28, cat. no. 24. fig. 5; p. 37, cat. no. 70, fig. 10, the second half of the 4th - the end of the 6th c. AD (Libida); OPAIȚ 1984, p. 312-313, pl. III-VIII, IX 12-5; OPAIȚ 1991, p. 212, pl. 14/1-8; OPAIȚ 1996, pl. 8/4 (Babadag-Topraichioi); OPAIȚ A, OPAIȚ C, BĂNICĂ 1990, 26/cat. no. 1-3 (monastic complex from Slava Rusă); BJELAJAC 1996, 46-49/cat. no. 64-67, fig. XV (the Midle Danube); DONČEVA-PETKOVA 1989, 44. pl. 111/10 (Odărcei); KUZMANOV 1985 a, 9-10/cat. no. 4, pl. 1, cat. no. 5, p. 9, pl. 2; OPAIȚ 1984, p. 314, pl. 11/2 (Odessos); BÖTGER 1967, pl. XVI, 62, the 6th c. AD; BÖTGER 1980, p. 429, pl. 1/1; BÖTGER 1982, p. 38 - 42, tipul 1.1, cat. 99 - 110 (Periode B), 220 - 228 (Periode C), 529 - 538 (Periode D), Taf. 11 a, 17 - 18, the second half of the 4th - beginning of the 7th c. AD; BÖTGER 1990, p. 925-926, fig. 1, the 4th - 7th c. AD; BÖTGER 1991, cat. 663 (Periode B), 677 - 678 (Periode C), 731 - 732 (Periode D), Taf. 46, the second half of the 4th - the beginning of the 7th c. AD; VON BÜLOW 2000, p. 212, fig. I/II-8 (Iatrus); ANDERSON-STOJANOVIĆ 1992, p. 96, no. 700-701, pl. 82, 184 (Stobi); GACUTA, SARNOWSKI 1981, p. 122-123, cat. no. I. 127, cat. no. 3-4, fig. 54, 59, the 4th c. AD; KUZMANOV 1985 a, p. 9, 11, cat. no. 10, 22. pl. I, 2; BÖTGER 1982, p. 40 (Novae); BÖTGER 1982, p. 40 (Abritus); FALKNER 1999, p. 252, cat. no. 1056-1062, fig. 9.52 (Nicompolis ad Istrum); BÖTGER 1982, p. 39-40 (Vojvoda, Madara); MACKENSEN 1992, p. 239-242, fig. 1-2, pl. 51/1-7 (Sadovec); SCIALANO, SIBELLA 1991, p. 101 (Tarragona, Atena, in Agora, M. 272); RILEY 1979, p. 217-219, fig. 44; WILLIAMS, ZERVOS 1983, p. 26, cat. 72, Pl. 10/72, the end of the 4th c. AD; LAKO 1984, p. 177 -178, type 2, fig. 29, Pl. H/1 - 6, the 4th - 6th c. AD; MARDEŠIĆ 1994, p. 295, cat. no. 5-6; VIDRIH PERKO, ŽBONA TRKMAN 2005, p. 282, fig. 9/9, 12 (Dalmatia); PEACOCK, WILLIAMS 1986, p. 182 - 184, class 43, fig. 101, the 4th - 6th c. AD; MACKENSEN 1987, p. 248-249, 251, fig. 42/1-15; ABADIE-REYNAL 1989, p. 50, fig. 6-7 (the 5th - 6th c. AD; Argos); ABADIE-REYNALD, SODINI 1992, p. 56 - 57, type 2, cat. CC 284 - 319, fig. 24, CC 284 - 285 (the 5th - the middle of 6th c. AD, Thasos); STECKNER 1989; HAYES 1992, p. 66, type 9, 224, fig. 22/8, 10, 11 (first half of the 6th c. AD; Constantinople); KINSLEY, RAVEH 1996, p.50-51/cat. no. P 23. fig. 35; VROOM 2005, p.251, fig. 6 (Eastern coast of the Mediterranean); KAPITÂN 1972, p., 252, fig. 11, the 6th - 7th c. AD (Siracusa); BASS, DOORNICK JR. 1982, p.157 -160, type 2, Pl. 8/4 - 6, the end of 6th - 625/6 AD (Yassi Ada); PAPADOPOULOS 1991, p.183 - 187, type I, cat. 1 - 2, fig. 11/a, c - e (the 5th - the end of the 6th or the beginning of 7th c. AD; Torone); ZEEST 1960, p.118-119, type 5, pl. XXXVIII; KOŠELENKO *et alii* 1984, pl. LXXIV/28; YAKOBSON 1979, p.16, fig. 2/7-8, 3/2, 3; KRAPIVINA 1993, p.96 - 97, group II, type 18, fig. 29/35, the 5th -6th c. AD; SAZANOV 1997, p.88. fig. 1/2 (north of the Black Sea); RILEY 1976, p.116; RILEY 1979, p.217 - 219, type LR Amph. 2, fig. 91/348, 92/349, the 5th - the beginning of the 7th c. AD; PEACOCK 1984, p.119, type British B I, fig. 34/3, the 4th - 6th c. AD; OPAIȚ 1998, p. 23, cat. no. 16, 26, cat. no. 33, pl. 3 (north Africa); EGLOFF 1977, no. 181 (Egipt); BONIFAY 1986, p.279, 281, type Carthage LR 3, fig. 7/22, 23, the beginning of the 5th - the end of the 6th c. AD; BONIFAY, VILLEDIEU 1989, p.25 - 27, fig. 5/3, the end of 6th c. AD; LAUBENHEIMER 1990, p.144; BONIFAY, PIÉRI 1995, p.109-111, fig. 8/53-55; CONGRÉS, LEGUILLOUX 1991, p.220, fig. 8/34-37 (Gallia); USCĂTESCU BARRÓN 1992, p.158-159, type Anfora tardia 3, fig. 22, the beginning of the 5th - the beginning of the 7th c. AD; RAMALLO *et alii* 1996, p.162, cat. no. 99, fig. 6; KEAY 1984, p. 286-289 (Hispania); KAPITÂN 1972, p. 250, 252, fig. 11; ARTHUR 1989, p. 82; VERREYKE 2005, p. 106; PASQUINUCCI *et alii* 2005, p. 123. fig. 7; MARTIN 2005, p.217, fig. 6 (Italia); REYNOLDS 2004, *passim*; TOPIĆ 2004, p. 29, cat. no. 69-71, pl. XII (Dalmatia); WHITEHOUSE *et alii* 1982, p. 69, cat. no. 143-144, fig. 11/143, 144, the 4th - 5th c. AD; VERREYKE 2005, p. 106, fig. 2/13.

discovered at: Argamum⁷², Histria⁷³, Tomis⁷⁴, Callatis⁷⁵, Acrae⁷⁶, Bizone⁷⁷, Halmyris⁷⁸, Aegyssus⁷⁹, Noviodunum⁸⁰, Dinogetia⁸¹, Troesmis⁸², Beroe⁸³, Capidava⁸⁴, Sacidava⁸⁵, Altinum⁸⁶, Ulmetum⁸⁷, Tropaeum Traiani⁸⁸, Libida⁸⁹, Babadag - Topraichioi⁹⁰, Medgidia⁹¹, Telița - La Pod and Niculițel⁹², as well as in the monastic complex at Slava Rusă⁹³, Odârci⁹⁴. In Moesia Secunda they are attested at Odessos⁹⁵,

⁷² RĂDULESCU 1976, p.107, type 8, Pl. VIII/1, 1a, IX/1, 1a, the end of the 4th - 6th c. AD; OPAIȚ 1984, p. 315, pl. XI/I; PARASCHIV 2006 a, p. 306-308, pl. III/42-52.

⁷³ DIMITRIU, ZIRRA, CONDURACHI 1954, p. 455, 458, fig. 382-384; CONDURACHI *et alii* 1960, p. 240, fig. 11/8; SCORPAN 1976, p. 159 -163, tipul VII - A, Pl. VII/2 - 4, 8; SCORPAN 1977, p. 274, fig. 7/6, 10/3; OPAIȚ 1984, p. 312, 315, pl. 1/3, 2/5; SUCEVEANU 1982, N IV B, 97, cat. no. 68-74, fig. 13; SUCEVEANU 1982 a, p. 98, Pl. 4/3-4; SUCEVEANU 2007, p. 213-214, pl. LXXVII/61-65.

⁷⁴ RĂDULESCU 1973; RĂDULESCU 1976, p. 107; SCORPAN 1976, p. 159-160, pl. VII/8; SCORPAN 1977, p. 274, fig. 10/7-8; OPAIȚ 1984, p. 314-315, pl. II/3-4, X; BUCOVALĂ, PAȘCA 1989, p. 146, Pl. 9/d, e, 12/e; PARASCHIV 2006, p. 92-95, 115, cat. no. 58, pl. 25/58-60.

⁷⁵ RĂDULESCU 1976, p. 107.

⁷⁶ KUZMANOV 1978, p. 21-22, fig. I; KUZMANOV 1985 a, p. 9-11, cat. no. 11-13, 18-20, 23, 26, pl. 1-3; KUZMANOV, SALKIN 1992, p. 47-50, cat. no. 100-114, 116-119, 122-129, pl. VII-X.

⁷⁷ KUZMANOV 1985, p. 9, type I, cat. A 1-26, Pl. 1-3; KUZMANOV, SALKIN 1992, p. 47-50, cat. no. 115, 120-121, 130, pl. IX-X.

⁷⁸ OPAIȚ 1991, p. 139-140, cat. no. 51-63, pl. 8-10; OPAIȚ 1996, pl. 8/2-3, 5-8; TOPOLEANU 2000, p. 132-134, cat. no. 324-332, pl. XXXIX-XL; PARASCHIV 2006, p. 92-95, 114, cat. no. 49-50, pl. 24/49-50.

⁷⁹ OPAIȚ 1984, p. 313, pl. IX/I; OPAIȚ 1996, pl. 8/1; PARASCHIV 2006, p. 92-95, 115, cat. no. 55, 57, pl. 25/55-57 (number 55 is found in northern Dobrogea, probably in Tulcea).

⁸⁰ BARNEA I, BARNEA A 1984, p. 102, pl. VIII/3.

⁸¹ BARNEA I 1966, p. 244, fig. 5/7; p. 244-245, fig. 8/7; p. 250, fig. 12, 7, the 6th c. AD; OPAIȚ 1984, p. 313-315.

⁸² OPAIȚ 1980, p. 296, 298, Pl. IV/4, XI/3 (type from the middle of the 2nd c. AD); OPAIȚ 1996, p. 51, pl. 9/4; PARASCHIV 2006, p. 92-95, cat. no. 42.

⁸³ PARASCHIV 2002, p. 150, 152, 155/cat. no. 1, 2, fig. 1.

⁸⁴ RĂDULESCU 1976, p. 107; SCORPAN 1976, p. 158-159, pl. V/5; COVACEF 1983, p. 361, fig. 6/2; OPAIȚ 1984, p. 315, pl. II/6; OPRIȘ 2003, p.59-64/cat. no. 61-100, pl. XX-XXII.

⁸⁵ SCORPAN 1973, fig. 36/3. 4; SCORPAN 1975, p. 272-274, pl. II/10, IX/8; SCORPAN 1976, p. 159-160, pl. VII/4; SCORPAN 1977, p. 274, fig. 10/4.

⁸⁶ RĂDULESCU 1976, p. 107.

⁸⁷ RĂDULESCU 1976, p. 107.

⁸⁸ BOGDAN-CĂTĂNICIU, BARNEA 1979, fig. 161/3.1, fig. 167/3.2.

⁸⁹ OPAIȚ 1991 b, p. 28, cat. no. 24, fig. 5; p. 37, cat. no. 70, fig. 10.

⁹⁰ OPAIȚ 1984, p. 312-313, pl. III-VIII, IX 12-5; OPAIȚ 1991, p. 212, pl. 14/1-8; OPAIȚ 1996, pl. 8/4.

⁹¹ OCHEȘANU, DUMITRAȘCU 1972, p. 538, fig. 1.

⁹² BAUMANN 1977, pl. 1/1; BAUMANN 1984, p. 54, pl. XII/2; OPAIȚ 1996, p. 51.

⁹³ OPAIȚ A, OPAIȚ C, BĂNICĂ 1990, p. 26, cat. no. 1-3.

⁹⁴ DONČEVA-PETKOVA 1989, p. 44, pl. 111/10.

⁹⁵ KUZMANOV 1985 a, p. 9-10, cat. no. 5, 9, pl. 2; BÖTGER 1982, p. 40-41; OPAIȚ 1984, p. 314, pl. 11/2.

Iatrus⁹⁶, Novae⁹⁷, Abritus⁹⁸, Nicopolis ad Istrum, Vojvoda⁹⁹, Madara¹⁰⁰ and Sadovec¹⁰¹, in archaeological contexts dated between the beginning of the 4th and that of the 7th c. A.D.

Type LRA 2 holds the first place among the recipients for transport at Iatrus, with 22.4 %¹⁰² of the total discoveries and the second, after LRA 1, at Halmyris - with 22.6 %¹⁰³. At Capidava it represents 23.1 %¹⁰⁴ of all amphorae discovered, at Libida 23.5 %, at Babadag - Topraichioi 16 % and at Acrae and Bizone 31 %¹⁰⁵. In the Oriental sites and in the Northern Black Sea area the number of LRA 2 recipients is comparable to that of the LRA 1 type of amphora¹⁰⁶. In Northern Africa¹⁰⁷, Gallia¹⁰⁸, Hispania¹⁰⁹, Italia¹¹⁰ and Dalmatia¹¹¹ they are attested especially in 6th and beginning of 7th c. A.D. contexts¹¹².

The frequency of these amphorae in Dobrudja is rather high, as at Topraichioi and Murighiol it reaches 15 % and 8-9 % respectively in the period between the end of the 4th and mid 5th c. A.D. In the period between mid 5th c. and the beginning of the 7th c. A.D. the percentage increased at Murighiol to 19% and later even to 29%¹¹³.

The four rim fragments discovered at Histria can be attributed to two variants¹¹⁴ and are dated to the second half of the 6th and even to the beginning of

⁹⁶ BÖTGER 1980, p. 429, pl. 1/1; BÖTGER 1982, p. 38-42, 95, cat. no. 1-4, 103-104, cat. no. 99-110, 113, cat. no. 220-228, 138-139, cat. no. 529-538, pl. 11/1 a, 17-18; KUZMANOV 1985 a, p. 9-10, cat. no. 4, pl. 1; BÖTGER 1990, p. 925-926, fig. 1; BÖTGER 1991, p. 162, cat. no. 663, 163, cat. no. 677-678, 165-166, cat. no. 731-732, pl. 46; VON BÜLOW 2000, p. 212, fig. 1/1-1.

⁹⁷ GACUTA, SARNOWSKI 1981, p. 122-123, cat. no. I. 127, cat. no. 3-4, fig. 54, 59; KUZMANOV 1985 a, p. 9, 11, cat. no. 10, 22, pl. I, 2; BÖTGER 1982, p. 40.

⁹⁸ BÖTGER 1982, p. 40.

⁹⁹ BÖTGER 1982, p. 39-40.

¹⁰⁰ BÖTGER 1982, p. 40.

¹⁰¹ MACKENSEN 1992, p. 239-242, fig. 1-2, pl. 51/1-7.

¹⁰² BÖTGER 1991, p. 157, table no. 1.

¹⁰³ TOPOLEANU 2000, p. 132.

¹⁰⁴ OPRİȘ 2003, p. 177-178.

¹⁰⁵ *apud* PARASCHIV 2006, p. 94 (for Iatrus, Libida, Babadag - Topraichioi, Acrae and Bizone, calculations are made by BÖTGER 1991, p.157, table 1, the catalog of OPAIȚ 1991 and KUZMANOV, SALKIN 1992).

¹⁰⁶ YAKOBSON 1979, p. 16, fig. 2/7-8, 3/2, 3; KRAPIVINA 1993, p. 96-96, fig. 29/35; SAZANOV 1997, p. 88, fig. 1/2.

¹⁰⁷ RILEY 1976, p. 116; RILEY 1979, p. 217-219, cat. no. 348-350, fig. 91, 92; PEACOCK 1984, p. 119, fig. 34/3; OPAIȚ 1998, p. 23, cat. no. 16, 1.

¹⁰⁸ BONIFAY 1986, p. 290, 292, fig. 13/57-58; p. 294; BONIFAY, VILLEDIEU 1989, p. 25, 27, fig. 5/3, 6; LAUBENHEIMER 1990, p. 144; BONIFAY, PIÉRI 1995, p. 109-111, fig. 8/53-55.

¹⁰⁹ RAMALLO *et alii* 1996, p. 162, cat. no. 99, fig. 6.

¹¹⁰ KAPITÂN 1972, p. 250, 252, fig. 11; ARTHUR 1989, p. 82; VERREYKE 2005, p. 106; PASQUINUCCI *et alii* 2005, p. 123, fig. 7; MARTIN 2005, p. 127.

¹¹¹ REYNOLDS 2004, *passim*; TOPIĆ 2004, p. 29, cat. no. 69-71, pl. XII.

¹¹² PARASCHIV 2006, p. 94-95.

¹¹³ OPAIȚ 1996, p. 49.

¹¹⁴ Keay LXV.3 – no. 61 and Keay LXV.7 – no. 253 (KEAY 1984, p. 128, 45).

the 7th c. A.D.¹¹⁵.

CATALOG

6. Fragment, rim. Histria 2001, sector BEM, S 1, sq 2, -1,30 m, no. 61, Pl. 1/6. Dimensions: MDM = 121 mm, MPD = 121 mm, H = 60 mm.

Edge rounded and thickened, slightly flaring outwards, shiny slip to the interior and to the exterior. Fine and compact fabric, incomplete combustion, porous, red color on the outside (2,5YR5/8) and bluish gray inside (2Gley6/5B), red slip on interior and exterior (10R5/8), medium particles quartz and rare limestone.

7. Fragment, rim. Histria 2001, sector BEM, S 1, sq 1, -0,30 m, no. 128, Pl. 21. Dimensions: MDM = 101 mm, MPD = 101 mm, H = 48 mm.

Edge rounded and thickened, slightly flaring outwards. Fine and compact fabric, porous, light-red color (10R6/8), small particles of limestone.

8. Fragment, rim. Histria 2001, sector BEM, S 1, sq 4, -1,20 m, no. 45, Pl. 21. Dimensions: MDM = 100 mm, MPD = 100 mm, H = 29 mm.

Rounded edge, bilateral thickened. Fine and compact fabric, porous, psle yellow color (2,5Y7/4), medium particles of limestone.

9. Fragment, rim. Histria 2001, sector BEM, Basilica, filler layer, no. 253, Pl. 21. Dimensions: MDM = 70 mm, MPD = 70 mm, H = 39 mm.

Outer surface smooth, rounded edge, bilateral thickened. Fine and compact fabric, porous (with low porosity, up to 1 mm), red color (2,5YR6/8), very fine particles of limestone and iron oxides.

10. Fragment, base. Histria 2001, sector BEM, S 1, sq 3, -0,90 m, no. 113, Pl. 21. Dimensions: DF = 11 mm, MPD = 200 mm, H = 58 mm.

Conical base. Fine and compact fabric, porous, light-red color to interior (10R6/8) and pale-red color on the outside (10R6/4), medium particles of limestone, iron oxides and silver mica.

A disadvantage for the Roman-Byzantine amphorae compared to the Greek and Early Roman ones is the relationship between cargo and the recipient's type. How many types were used for transport? In many cases an amphora type was used to carry different products. Analyses of organic matter on the walls of late Roman packaging confirmed this. Typological and chronological designation becomes more difficult for Roman and Roman-Byzantine amphorae, which had much more varied shapes. And to make things even more complicated very often the same type of amphorae was produced in several centers.

It is no surprise that these products represent almost half of all the Oriental pottery discovered in Scythia (and published), because we know of the economic orientation toward the eastern provinces of the empire during the Roman – Byzantine period. In Scythia oriental amphorae represent almost 54% of the published ceramic material.

¹¹⁵ This is a period when *extra muros* dwelling reached a high density.

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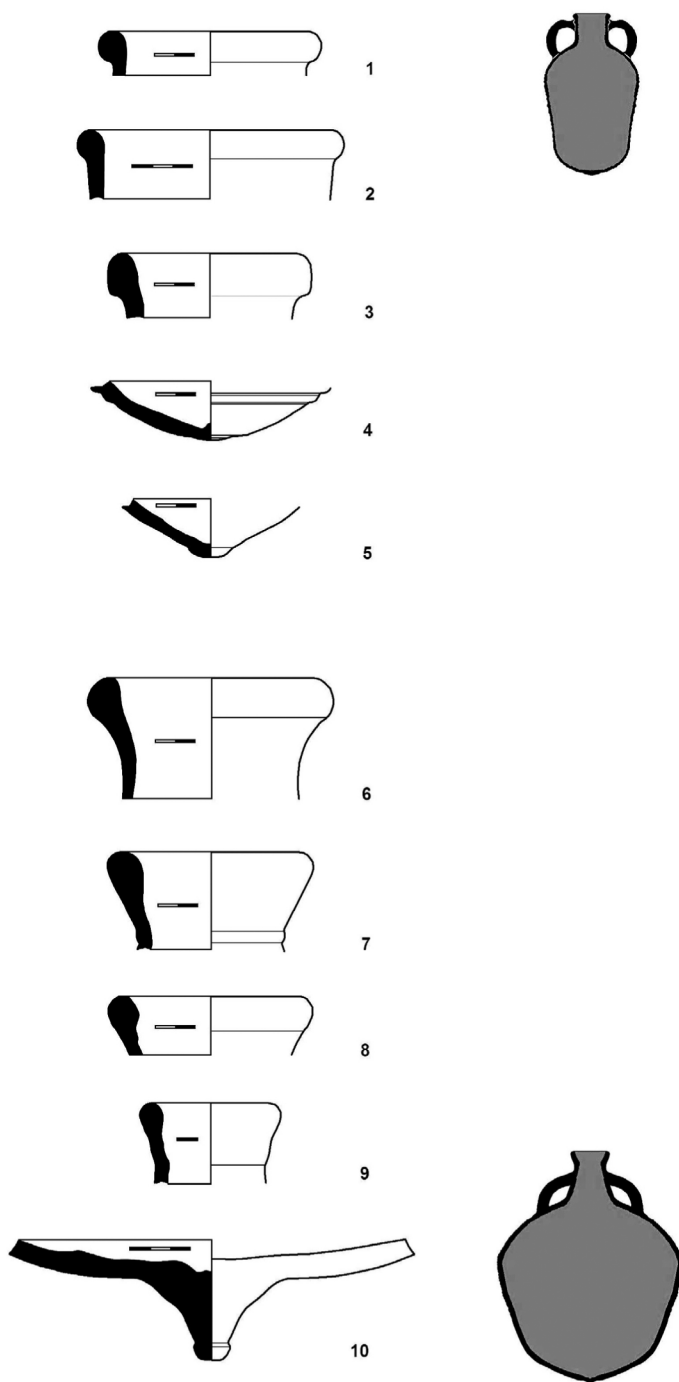
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Pl. 1 – LRA amphora type 1 (1-5) and LRA amphora type 2 (6-10).