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## THE NORTH AFRICAN RED SLIP WARE AND AMPHORAE IMPORTED INTO EARLY BYZANTINE BOSPORUS<sup>1</sup>

North African red slip ware and amphorae were widespread in the Mediterranean while they were imported to the Black Sea region in only small quantity. For a long time the Russian and Ukrainian researchers were processing and investigating pottery using only morphological features and excluding any study of fabric. As a result a lot of imported finds were not detected or were defined incorrectly. In the complexes of the Early Byzantine Bosphorus the correlation of the amphorae of various Mediterranean and Black Sea production centres in the different chronological periods is still not exactly determined.

In 2007–2009 an archaeological expedition directed by A. I. Aibabin carried out rescue excavations at the foot of Mithridates Mount in Bosphorus Lane in the modern city of Kerch (ancient Pantikapaion and Bosphorus) (fig. 1,7; 2,1). The excavations revealed cultural layers with remains of building and household activities dating to the 3<sup>rd</sup>–6<sup>th</sup> centuries AD, including a complex of fish salting cisterns, as well as a necropolis of the 7<sup>th</sup>–beginning of the 8<sup>th</sup> centuries (tab. 1). Research on the ceramics from these complexes has enabled the discovery of new information about the types and forms, production centers and chronology of the delivery of North African imports to the Crimean Bosphorus.

### ARS and North African amphorae in the North-Eastern Black Sea area

Rare finds of ARS are quite well known on the northern Black Sea littoral. They were found in *Olbia*, Chersonesos, the cemetery of Inkerman, Mangup, Zelenyj Mys, Zenonos Chersonesos, Bosphorus, Tiritaka, Hermonassa, the cemetery of Djurg-Oba in the area of Kytheos, Phanagoria, Il'ičevka, Kepoi and Tanais (fig. 1,1–14).<sup>2</sup> North African amphorae

were detected more seldom. Several fragments were published in the complexes from Chersonesos (fig. 1,2).<sup>3</sup> I have

<sup>1</sup> I would like to express my gratitude to the Director of the Crimean Branch of the Institute of Oriental Studies of National Academy of Sciences of Ukraine A. I. Aibabin (Simferopol) for the possibility to publish pottery from his excavations in Kerch. I am most grateful to M. Bonifay (Centre Camille Jullian, Maison Méditerranéenne des Sciences de l'Homme, Aix-en-Provence) for his advice and important remarks on the paper. I would like to thank Kr. Domžalski (Institute of Archaeology and Ethnology, Polish Academy of Sciences, Warsaw) for his great assistance in my work with ARS. My thanks to D. Zhuravlev (State Historical Museum, Moscow) for his information about some finds of African lamps in the northern Black Sea region. I am also grateful to the organizers of the 28<sup>th</sup> RCRF Congress, as well as D. Zhuravlev and A. Opaït, for their help which allowed me to take part in the Congress.

<sup>2</sup> **Olbia** (Hayes 9A, 50A–B, 59B, 61A, 67); KRAPIVINA/DOMŽAL'SKIJ 2008, 79 fig. 2,1–7. – **Chersonesos** (Hayes 61A–B, 91C, 97?, 99B–C, 104A–C, 104C with stamp Style E (ii), 105A–C, 109); A. I. ROMANČUK/A. V. SAZANOV, Krasnolakovaja keramika rannevizantijskogo Chersona. Srednevekovyj Cherson. Istorija, stratigrafija, nachodki. Čast' 1 (Sverdlovsk 1991) 43–44 fig. 21,215–220; SAZANOV 1994, 409–410 fig. 1,10; 3,2,5; SAZANOV 1999, 230 fig. 4,16; L.A. GOLOFAST, Štampy V–VII vv. na posude gruppy "Afrikanskoj krasnolakovoj" iz raskopok Chersonesskogo gorodišča. Mat. po Arch., Ist. i Ėtnogr. Tavrii 5, 1996, 81–82 fig. 2,1; 3,4; ID., Steklo rannevizantijskogo Chersonesa. Mat. po Arch., Ist. i Ėtnogr. Tavrii 8, 2001, 105–106; 108–109; 111; 113; 116–119 fig. 5,10–11; 26,9; 38,10; 46,1,2; 62,1–3; 66,11,14; 68,3; 77,9,16,18; ID., Štampy V–VII vv. naposudegruppy "Fokejskoj krasnolakovoj" iz raskopok chersonesskogo gorodišča. Mat. po Arch., Ist. i Ėtnogr. Tavrii 9, 2002, 143–144 fig. 11,27; 12,4; ID., Early Byzantine deposits from Chersonesos. In: A. Aibabin/H. Ivakin (ed.), Kiev – Cherson – Constantinople (Kiev/Simferopol/Paris 2007) 52 fig. 10,38–43; L.A. GOLOFAST/S. G. RYŽOV, Kompleks rannevizantijskogo vremeni iz raskopok kvartala X B v severnom rajone Chersonesa. Problemy Ist., Filol., Kul'tury 9, 2000, 81 fig. 12,9–14; ZALESSKAJA 2006, 232 №550; K. K. KOSCIUŠKO-VALJUŽIČ, Otčet o raskopkach v Chersones Tavričeskom v 1904 g. Izv. Imperatorskoj Arch. Komm. 20, 1906, 36–37 fig. 12. – **Inkerman** (Hayes 59A with stamp): E. V. VEJMARN, Archeologični roboti v rajoni Inkermana. Arch. Pam'jatki URSS 13, 1963, 24 fig. 13,1–1a. – **Mangup** (Hayes 99): A. G. GERCEN ET AL., Stratigrafičeskie issledovanija na jugo-vostočnom sklone mysa Teškli-burun (Mangup). Mat. po Arch., Ist. i Ėtnogr. Tavrii 12, 2006, 419 fig. 37,5. – **Zelenyj Mys** (Hayes 104A with stamp was identified by K. Domžalski): MASLENNIKOV 1998 fig. B8,3. – **Zenonos Chersonesos** (Hayes 61A): SAZANOV 1994, 407 fig. 1,4. – **Bosphorus** (Hayes 50B, 59A–B, 59B with stamp Style A (ii), 61A, 64, 67A, 67?, 73, 76?, 82B, 91A, 99B, 104A, 105B/C, 109A): AIBABIN 2011, 123 Abb. 55,5; 56,5; A. V. SMOKOTINA, Keramika gruppy "Afrikanskaja krasnolakovaja" iz raskopok v Kerči. Mat. po Arch., Ist. i Ėtnogr. Tavrii 17, 2011, 332–342 fig. 4–6; ZASECKAJA 2003, 39 tabl.17,12. According to my personal observations in 2006 the rim of Hayes 105B/C was found in the medieval layer in Cooperative lane of Kerch (excavations of A. I. Aibabin) (fig. 2,2; 5,3). – **Tiritaka** (Hayes 99A with stamp of Style E): The red slip ware from Tiritaka is being prepared for publication by K. Domžalski. – **Hermonassa**: By my personal observation in 2012 a fragment of a rim Hayes 61A was discovered in the excavations of T. A. Ilyina (Pushkin State Museum of Fine Arts, Moscow) in a context of the 9<sup>th</sup>–11<sup>th</sup> centuries. – **Djurg-Oba**: A dish of Hayes 67 with stamp of Style A (iii) comes from excavations of A. L. Yermolin in 2008 and sits at the exhibition of Kerch Historical and Cultural preserve. – **Phanagoria** (Hayes 61A, 99): A. G. ATAVIN, Krasnolakovaja keramika IV–VI vv. n.è. iz Fanagorii. Bosporskij Sbornik 2, 1993, 153; 155; 161 fig. 2,6,7; 6,8. – **Il'ičevka** (Hayes 91C, 99): SAZANOV 1994, 408–409 fig. 1,11; 2,12; A.V. SAZANOV, Keramičeskie komplekсы Bospora 570–580 gg. Drevnosti Bospora 3 (Moskva 2000) 227 fig. 10,5,8,9. – **Kepoi**: information from K. Domžalski and G. A. Kamelina (State Historical Museum, Moscow). A wall fragment of ARS was found in the complex of the 3<sup>rd</sup> century which is now being prepared for publication by Galina Kamelina. – **Tanais** (Hayes 53, 59B, 64 with stamp of Style A (ii) or A (iii), 73A): T. M. ARSEN'EVA/K. DOMŽALSKI, Late Roman red slip pottery from Tanais. Eurasia Antiqua 8, 2002, 435 fig. 19,648–652.

<sup>3</sup> **Keay 59/8B transition**: SAZANOV 1999, 229 fig. 3,43; ID. 2002, 43 fig.

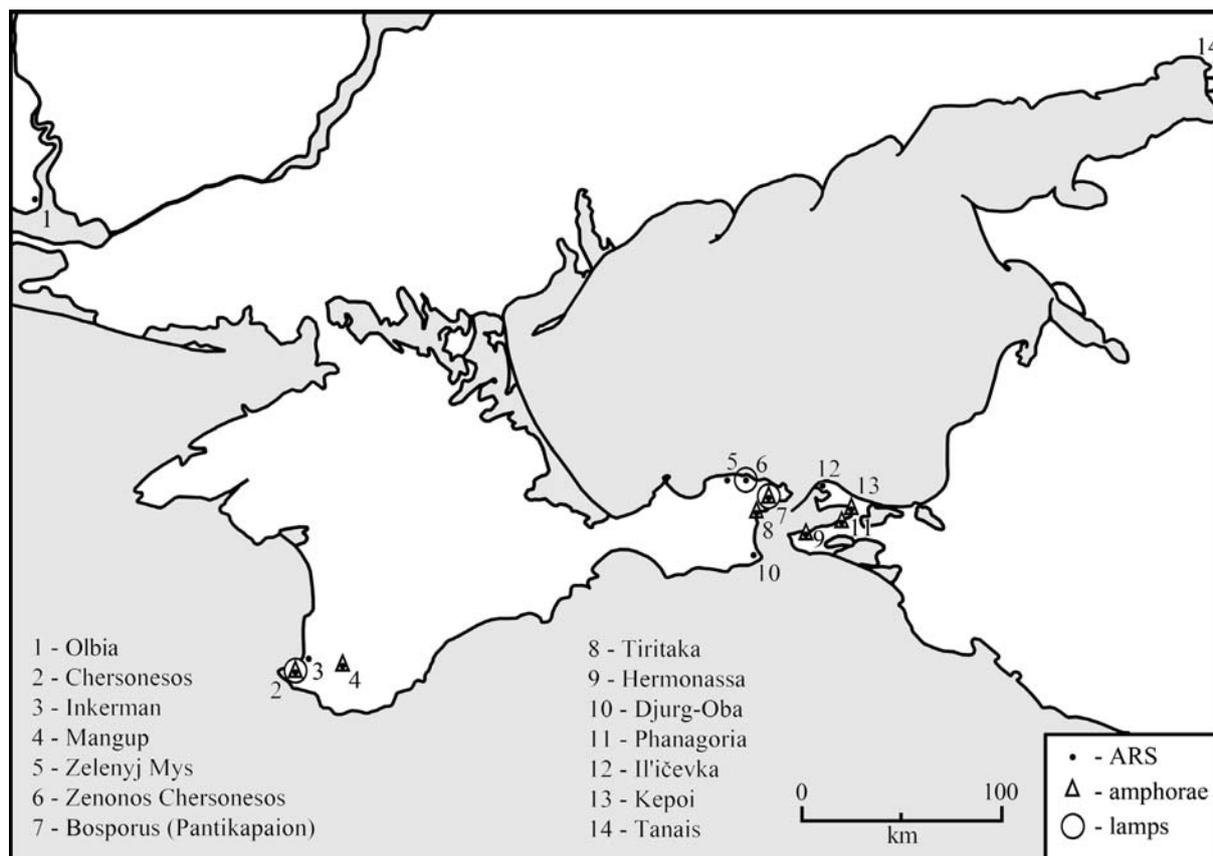


Fig. 1. Distribution of African red slip ware, amphorae and lamps in the north-eastern Black Sea region.

been able to record their presence also in Mangup (fig. 1,4), Tiritaka (fig. 1,8), Kepoi (fig. 1,13), Hermonassa (fig. 1,9) and Phanagoria (fig. 1,11).<sup>4</sup> Our excavations in Kerch in 2007–2009 (fig. 1,7; 2,1) attested more new North African types in the northern Black Sea region. I was able to identify amphorae of types Keay<sup>5</sup> 8B (fig. 6,1–13), spatheion 1 (fig. 6,14), Keay 35B? (fig. 6,15), 40/41 (fig. 6,16,17), 55A (fig. 6,18,19), 57B (fig. 6,20–22), Keay 62/Albenga<sup>6</sup> 11–12? (fig. 6,23–25), Keay 62G/Albenga 11–12? (fig. 6,26–27) and Keay

62Q/Albenga 11–12 (fig. 6,28–30). Some still unspecified amphorae (fig. 6,31–41) as well as a token? (fig. 6,42) also were discovered.

It should be observed that the imports from North Africa were not restricted only to red slip ware and goods in amphorae. I would like to mention also several finds of North African lamps which were excavated in Chersonesos (fig. 1,2), Zenonos Chersonesos (fig. 1,6) and Bosphorus (fig. 1,7).<sup>7</sup>

#### Presumed manufacturing centers of ARS and North African amphorae from Bosphorus

A visual examination of the North African amphorae and ARS from the excavations in Bosphorus Lane in Kerch allowed making some observations on fabrics and suggesting some possible production centers (fig. 4; 7). These hypotheses are preliminary as they are based on scanty samples and need to be confirmed by laboratory analyses.

7.5. – **Keay 62:** A. I. ROMANČUK/A. V. SAZANOV/L. V. SEDIKOVA, *Amfory iz kompleksov vizantijskogo Cherson. Srednevekovyj Cherson. Istorija, stratigrafija, nachodki. Čast' 2* (Ekaterinburg 1995) 44–45 tabl. 13,90; A. V. SAZANOV, *Amfornyj kompleks pervoj četverti VII v.n.è. iz severo-vostočnogo rajona Chersonesa. Mat. po Arch., Ist. i Ètnogr. Tavrii 2*, 1991, 70 fig. 13,6; probably some other sherds of African amphorae: SAZANOV 1999, 243; 249 fig. 11,8; 15,18; id. 2002, 39–41 fig. 6,8; 7,9.

<sup>4</sup> **Mangup:** A neck of Keay 59 was found in a pit fill of the 5<sup>th</sup> century in 2005 (excavations of Taurida National V. I. Vernadsky University, directed by A.G. Gertzen). – **Tiritaka** (Keay 8B): Now we are preparing for publication the results of the excavations in Tiritaka directed by V. N. Zin'ko (head of the "Demetra" Foundation, Kerch) in 2002–2009. – **Kepoi:** I am grateful to Galina Kamelina who showed me some ceramics from Kepoi. The bottom of an African amphora was discovered in a context of the 3<sup>rd</sup>–4<sup>th</sup> centuries. – **Hermonassa and Phanagoria:** In 2012 I found several wall sherds in Phanagoria (from the underwater excavations of the Institute of Archeology of the Russian Academy of Sciences, directed by V. D. Kuznecov and S. V. Olkhovskiy) and in contexts of the 9<sup>th</sup>–11<sup>th</sup> centuries at Hermonassa (excavations of T. A. Ilyina). According to M. Bonifay (to whom photographs were showed), these amphorae could be of Tripolitanian manufacture.

<sup>5</sup> KEAY 1984.

<sup>6</sup> F. PALLARÉS, *Alcune osservazioni sulle anfore del Battistero di Albenga. Riv. Stud. Liguri 53*, 1987, 269–306.

<sup>7</sup> **Chersonesos:** L. CHRZANOVSKI/D. ZHURAVLEV, *Lamps from Chersonesos in the State Historical Museum Moscow* (Roma 1998) 158–159 № 96; ZALESSKAJA 2006, 212 № 489; V. I. KADEEV/S. B. SOROČAN, *Èkonomičeskie svjazi antičnich gorodov Severnogo Pričernomor'ja v I v. do n.è.–V v. n.è.* (Char'kov 1989) fig. 13,1. – **Zenonos Chersonesos:** MASLENNIKOV 1998 fig. B7,5. – **Bosphorus:** A lamp in D1 fabric was found in Bosphorus lane of Kerch in 2009 (information from E. A. Khairedinova and my personal observation).

Most ARS ware was manufactured in the North Tunisian production centers in **D** fabric (not less than 70%). Obviously, vessels of Hayes 59A/B (**fig. 3,3**), 59B (**fig. 3,4**), 59B with the stamp of Style A (ii) (**fig. 3,5**), 61A (**fig. 3,6**), 67 (**fig. 3,8**), a wall and some flat-based floor fragments (**fig. 3,14–17**) were produced in the area of El Mahrine in **D1** fabric.<sup>8</sup> Their fabric is light red (2.5 YR 6/8; 10 R 6/8) or red (2.5 YR 5/8) with visible inclusions of limestone, sand and rare iron particles. Most vessels were covered by a thick red slip sometimes with large hollows. Some fragments have numerous small hollows so their surface is rougher, especially on the body and rim.

Probably the sherd of Hayes 59A (**fig. 3,2**) and a floor fragment with a stamp of Style A (ii) (**fig. 3,18**) belong to one vessel. They along with Hayes 99B (**fig. 3,11**) and a wall fragment are distinguished by a harder and more pinkish (10 R 6/8-7/8) fabric. Glossy red slip (10 R 5/8) covers the inner and upper part of the outer surface of the vessels partly with large hollows. Obviously they could be produced in North Tunisia in **D** fabric. The main manufacturing center of Hayes 99 was Oudhna<sup>9</sup>, but production of these bowls was also ascertained in El Mahrine<sup>10</sup>. Apparently, the bowl of Hayes 104A (**fig. 3,12**) was produced in “workshop X” (**D2**)<sup>11</sup> whereas the provenance of Hayes 64 (**fig. 3,7**), 67? (**fig. 3,9**) and 76? (**fig. 3,13**) is still completely undetermined.

The vessels of Hayes 50B (**fig. 3,1**), 91A (**fig. 3,10**) and three wall sherds have a red (2.5 YR 5/8; 10 R 5/8) and harder fabric. The glossy red slip has the same or a slightly darker color and covers only the inner surface and outer rim. They have thinner walls with an average thickness of 0,4-0,5 cm. The dishes of Hayes 50B were produced mainly in the centers of Central Tunisia in **C** fabric<sup>12</sup>. The latest variant of these vessels with sloping rim was manufactured in North Tunisia in the first half of the 5<sup>th</sup> century<sup>13</sup>. At the present time the production of Hayes 91A has been detected with confidence only in the centers of North Tunisia<sup>14</sup> despite some suggestions about their possible Central Tunisian origin<sup>15</sup>.

The North African amphorae from excavations in Bosphorus Lane in Kerch (**fig. 6**) were manufactured in various discovered and still unknown centers mainly in the modern Tunisia.<sup>16</sup> Two the most numerous production groups are present in Kerch (**fig. 7**). Obviously, the amphorae of Keay 8B



**Fig. 2.** Kerch (Bosporus), archaeological excavations of A. I. Aibabin (quoted in the text): **1** Bosphorus Lane, 2007–2009; **2** Cooperative Lane, 1990–1992, 2006; **3** Lenin Street 10–12, 2002.

(**fig. 6,1–13**) were manufactured in the workshops of Central Tunisia in the region of Majoura and Iunca and possible in another production center in South Tunisia.<sup>17</sup> The fabric of Keay 8B from Kerch is mainly light red (2.5 YR 6/8; 10 R 6/8) and very hard with small visible inclusions of limestone. Only a few fragments are slightly different by being more coarse-grained (**fig. 7,9**) or having colored layers (**fig. 7,8,10**).

Probably the amphorae of spatheion 1 (**fig. 6,14**), 55A (**fig. 6,18,19**), 57B (**fig. 6,20–22**), a toe fragment (**fig. 6,38**), a token? (**fig. 6,42**) and two handle fragments from Kerch were produced in a workshop in the Nabeul area of Tunisia.<sup>18</sup> Their fabric is red (2.5 YR 5/8) and hard with visible inclusions of limestone, quartz sand and rare iron particles. The vessels are whitened outside and with smoothing traces on the surface of the bottom. The origins of the other amphorae are still unknown.

<sup>8</sup> M. MACKENSEN, Die spätantiken Sigillata- und Lampentöpfereien von El Mahrine (Nordtunesien). Studien zur nordafrikanischen Feinkeramik des 4. bis 7. Jahrhunderts. Münchner Beitr. Vor- u. Frühgesch. 50 (München 1993); Atlante I, 78.

<sup>9</sup> HAYES 1972, 298; BONIFAY 2004, 55; 181.

<sup>10</sup> MACKENSEN/SCHNEIDER 2002, 143.

<sup>11</sup> M. MACKENSEN, Centres of African red slip ware production in Tunisia from the late 5th to the 7th centuries. In: L. Sagui (ed.), *Ceramica in Italia: VI–VII secolo. Atti del Convegno in onore di John W. Hayes, Roma 11–13 maggio 1995. Bibl. Arch. Medievale 14* (Florence 1998) 33–37; BONIFAY 2004, 183 pl. 2,13.

<sup>12</sup> Atlante I, 58–60; MACKENSEN/SCHNEIDER 2002, 132; PEACOCK/BEJAOUI/BEN LAZREG, Roman Pottery production in central Tunisia. *Journal Roman Arch.* 3. 1990,70 fig. 7,19.

<sup>13</sup> BONIFAY 2004, 57, 197.

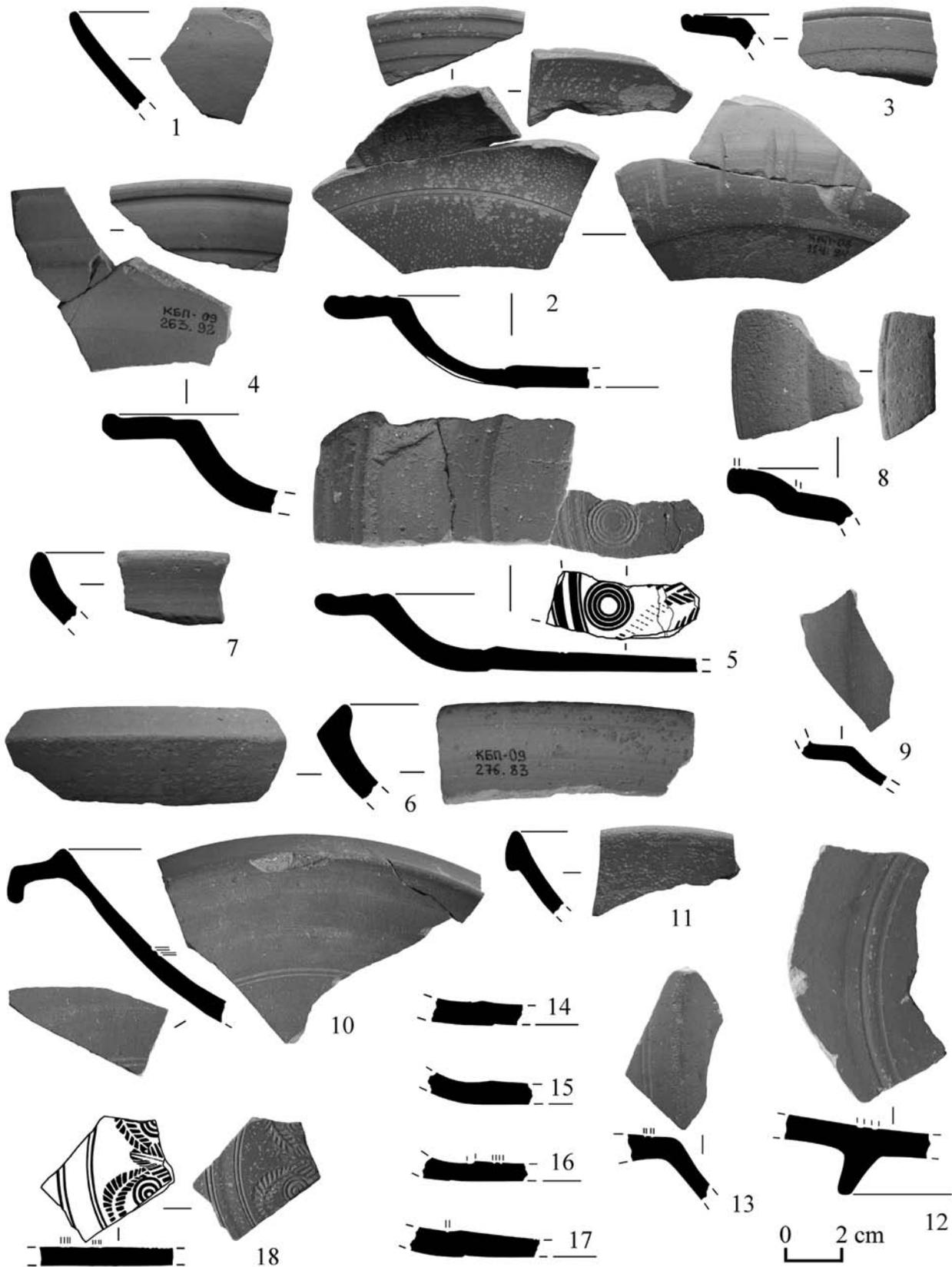
<sup>14</sup> MACKENSEN/SCHNEIDER 2002, 143; 145; 147; 149; BONIFAY 2004, 177; 179.

<sup>15</sup> J. W. HAYES, North African flanged bowls: A problem in fifth-century chronology. In: J. Dore/K. Greene (eds.), *Roman Pottery Studies in Britain and Beyond. BAR Suppl. Ser. 30* (Oxford 1977) 280–282; Atlante I, 106; P. REYNOLDS, Trade in the Western Mediterranean, AD 400–700: The ceramic evidence. *BAR Internat. Ser. 604* (Oxford 1995) 151.

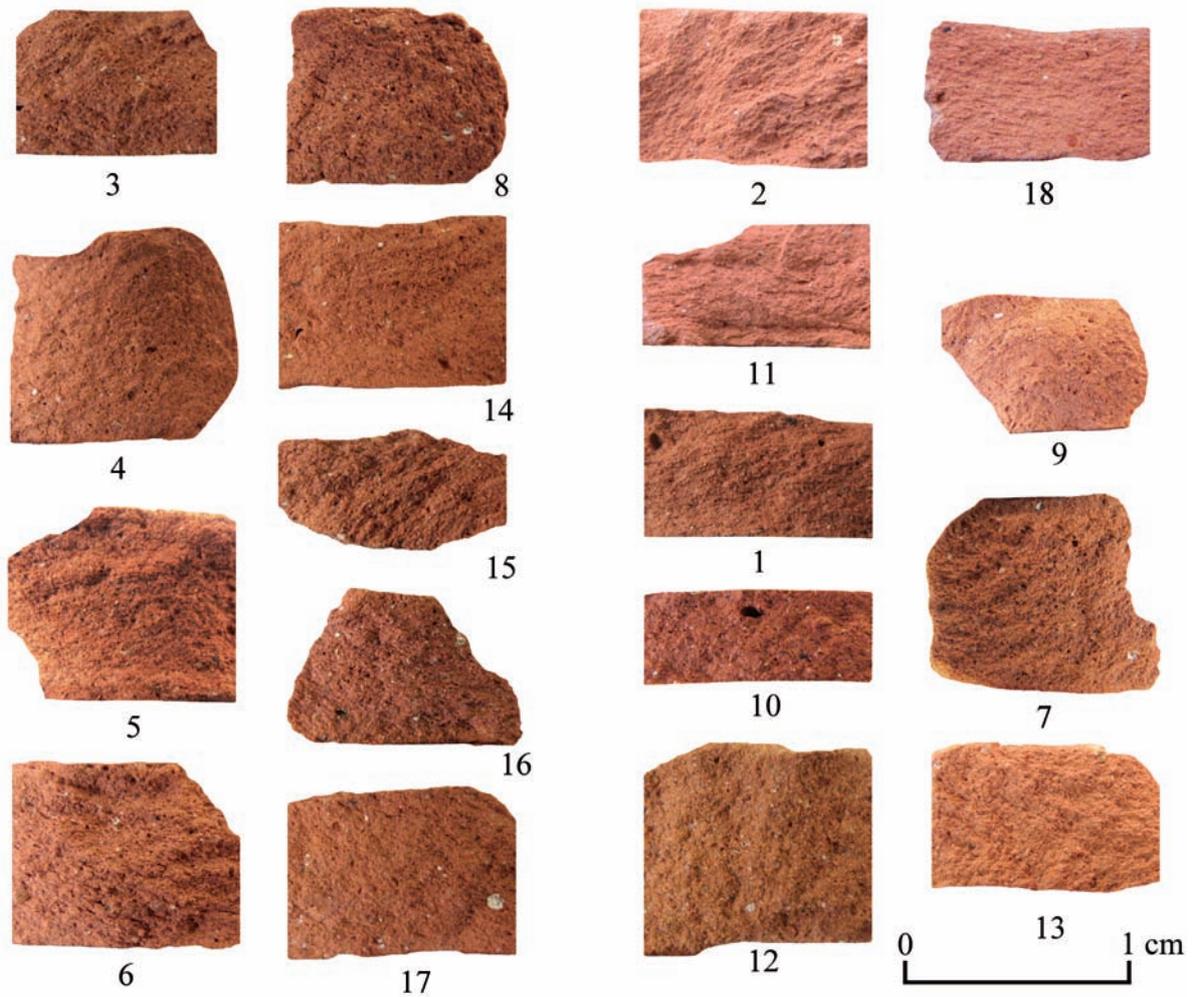
<sup>16</sup> BONIFAY 2004 fig. 2.

<sup>17</sup> BONIFAY 2004, 31; 132; D. GANDOLFI/G. MURIALDO/C. CAPELLI/M. BONIFAY, Anfore africane di tardo V–VII secolo in Liguria (Italia): un aggiornamento dei dati archeologici e archeometrici. In: S. Menchelli/S. Santoro/M. Pasquinucci/G. Guiducci (eds.), *LRCW 3. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean: Archaeology and Archaeometry 3. Comparison between Western and Eastern Mediterranean. BAR Internat. Ser. 2185* (Oxford 2010) 36 tab. 1.

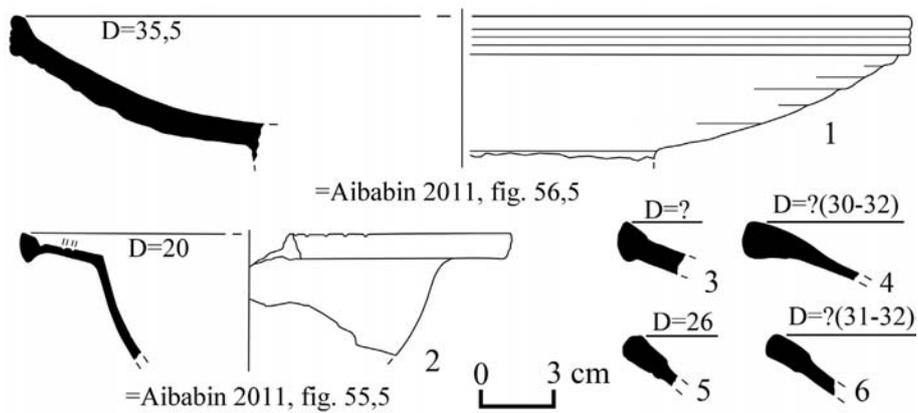
<sup>18</sup> GHALLIA/BONIFAY/CAPELLI 2005, 495–508.



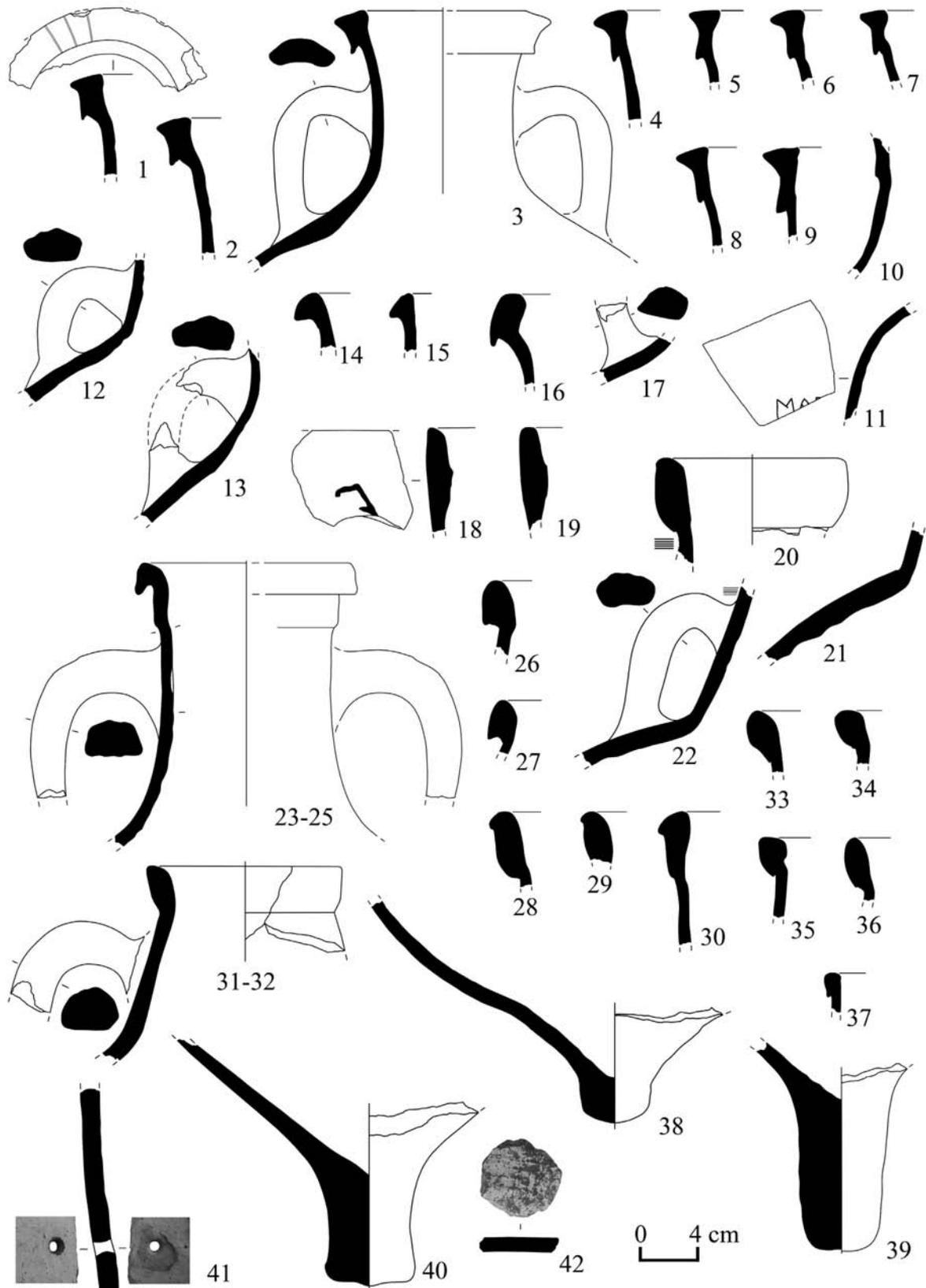
**Fig. 3.** African red slip ware from Bosphorus Lane in Kerch: Hayes 50B (1); 59A (2), 59A-B (3), 59B (4), 59B with stamp Style A (ii) (5), 61A (6), 64 (7), 67 (8-9), 91A (10), 99B (11), 104A (12), 76? (13), unidentified floors (Hayes 59, 61, 62 and 64?) (14-17), floor with stamp of Style A (ii) (18).



**Fig. 4.** African red slip ware from Bosphorus Lane in Kerch: close-up of clay of Hayes 50B (1); 59A (2), 59A-B (3), 59B (4), 59B with stamp Style A (ii) (5), 61A (6), 64 (7), 67 (8-9), 91A (10), 99B (11), 104A (12), 76? (13), unidentified floors (Hayes 59, 61, 62 and 64?) (14-17), floor with stamp of Style A (ii) (18).



**Fig. 5.** Red slip ware from the excavations in Cooperative Lane in Kerch: 1990-1992 (1-2); 2006 (3-6).



**Fig. 6.** North African amphorae from Bosphorus Lane in Kerch: Keay 8B (1–13), spatheion 1 (14), Keay 35B? (15), 40/41 (16–17), 55A (18–19), 57B (20–22), Keay 62/Albenga 11-12?(23–25), Keay 62G/Albenga 11-12? (26–27), Keay 62Q/Albenga 11-12 (28–30), unidentified types (31–41) and token? (42).

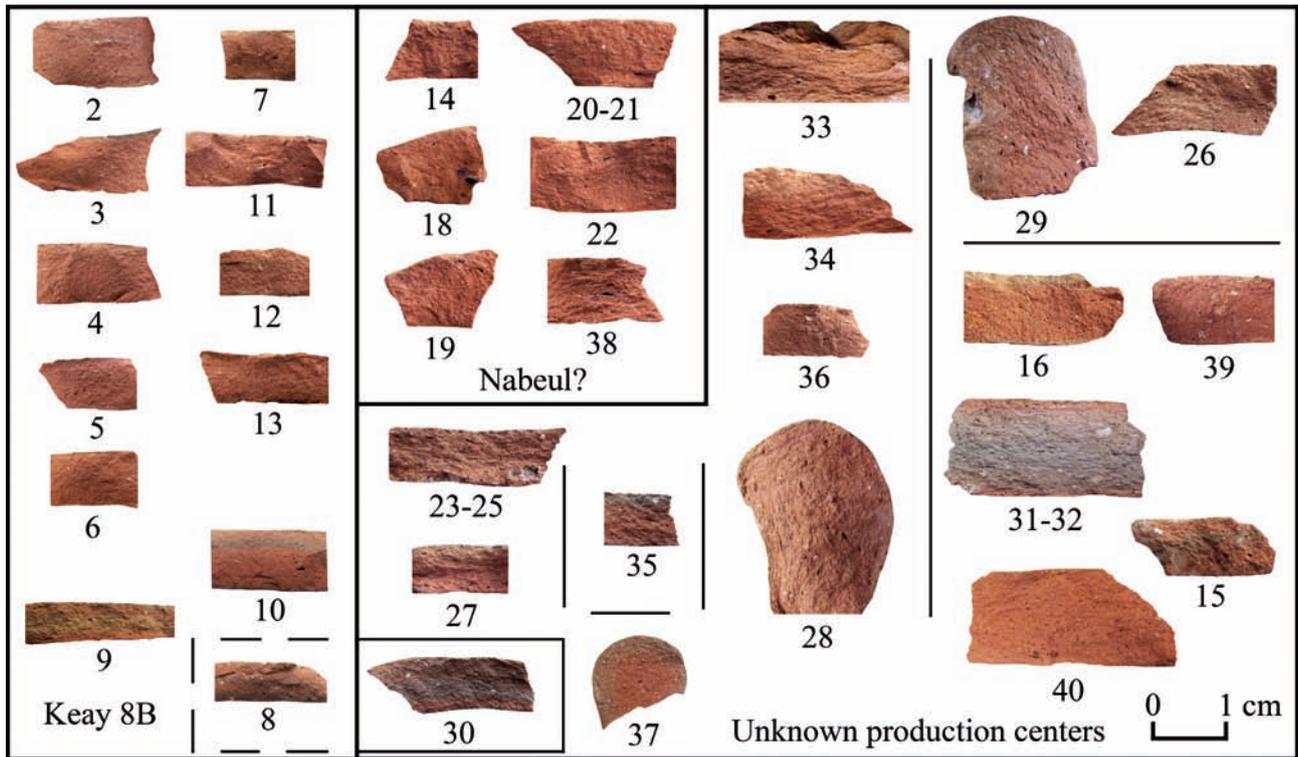


Fig. 7. North African amphorae from Bosphorus Lane in Kerch: close-up of clay of Keay 8B (2–13), spatheion 1 (14), Keay 35B? (15), 40/41 (16), 55A (18–19), 57B (20–22), Keay 62/Albenga 11–12? (23–25), Keay 62G/Albenga 11–12? (26–27), Keay 62Q/Albenga 11–12 (28–30) and unidentified types (31–40).

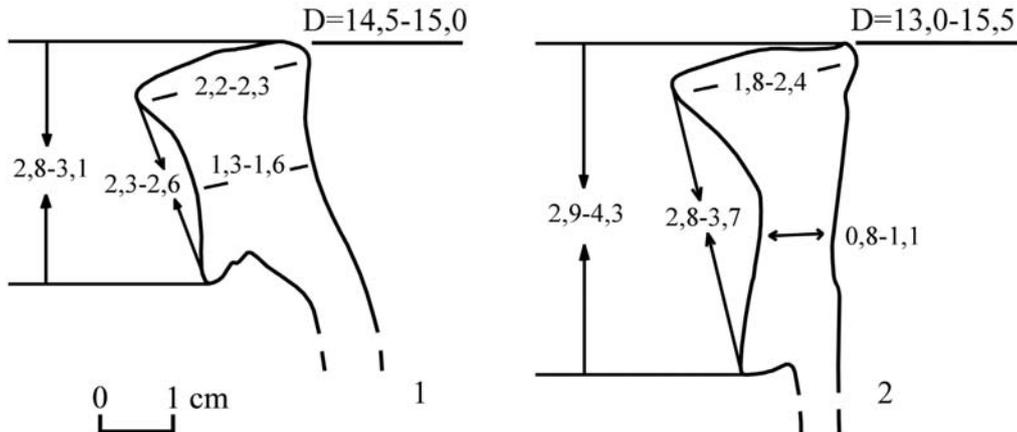


Fig. 8. Two variants of the amphora Keay 8B from Kerch.

### ARS and North African amphorae in the complexes of Bosphorus

Apparently few ARS vessels might have been delivered into the northern Black Sea region during the 2<sup>nd</sup>–3<sup>rd</sup> centuries when rare finds were identified in Olbia (Hayes 9A)<sup>19</sup> and presumed in Kepoi.<sup>20</sup> At the same time ARS wasn't detected in Bosphorus in the Roman cinder heap with materials of the

1<sup>st</sup> to first half of the 3<sup>rd</sup> centuries during the excavations in Lenin street 10–12 (fig. 2,3) or in the layers of the 3<sup>rd</sup>–4<sup>th</sup> centuries in Bosphorus Lane in Kerch (fig. 2,1).<sup>21</sup> ARS import to Bosphorus increased in the late 4<sup>th</sup>/early 5<sup>th</sup> centuries. This period corresponds to the general eastern Mediterranean peak of the ARS delivery in D1 fabric in the second half of the 4<sup>th</sup>–early 5<sup>th</sup> centuries along with limited distribution of the North African amphorae at the same time.<sup>22</sup> All the North

<sup>19</sup> KRAPIVINA/DOMŽALSKIJ 2008, 79.

<sup>20</sup> Information from G. Kamelina and K. Domžalski.

<sup>21</sup> Personal observations.

<sup>22</sup> M. BONIFAY, Observations sur la diffusion des céramiques africaines en

African amphorae and ARS from Bosphorus Lane in Kerch were found in contexts dated from the late 4<sup>th</sup>/early 5<sup>th</sup> to the 6<sup>th</sup> centuries apart from a fragment of a dish Hayes 59B with the stamp of Style A (ii) (**fig. 3,5**) and a sherd of an amphora handle, which were found in the backfill of graves dated to the 7<sup>th</sup>–early 8<sup>th</sup> centuries. A lot of the ceramics found in the destruction deposits of the 6<sup>th</sup> century are residual and belong to earlier archaeological contexts (**table 1**).

The vast majority of the ARS from Bosphorus Lane in Kerch was produced in the period dated from the second half/end of the 4<sup>th</sup> century to the middle of the 5<sup>th</sup> century and only two fragments of the bowls Hayes 99B and 104A belong to the 6<sup>th</sup> century. Probably the fragment of Hayes 73 (**fig. 5,2**) from the later contexts of Cooperative Lane in Kerch (**fig. 2,2**) could also have been shipped around the middle of the 5<sup>th</sup> century, whereas the dish of Hayes 82 (presumed 82B) (**fig. 5,1**) appertains to the production of the second part of the 5<sup>th</sup> century<sup>23</sup>. Quite an opposite situation is observed in the amphorae material. The North African amphorae found in Kerch were manufactured mainly in the period from the second half of the 5<sup>th</sup> century to the first half of the 6<sup>th</sup> century (**tab. 1**). While the most numerous amphora fragments belong to Keay 8B<sup>24</sup> other examples are less numerous. Obviously the complete absence of African amphorae and red slip ware of the 7<sup>th</sup> century in the contexts of Bosphorus Lane in Kerch was caused by the extinction of life in this city district which started to be used for burials. The excavations in Cooperative Lane in Kerch in 2006 revealed some vessels of the 7<sup>th</sup> century including ARS Hayes 105B/C (**fig. 5,3**) and LRC/PhRS Hayes 10C (**fig. 5,4–6**) which were residual and found in the later layers. Moreover, a dish of Hayes 109A was discovered in the

necropolis by the excavations of V.V. Shkorpil in Gospital' naja Street in 1904.<sup>25</sup> Thus African import to Bosphorus continued at least until the central decades of the 7<sup>th</sup> century.<sup>26</sup>

The presence of North African pottery in Bosphorus indicates the active role played by private trade during the Late Roman and Early Byzantine time. The content of many Tunisian amphorae is controversial or still not defined. North African amphorae from the excavations in Bosphorus Lane in Kerch didn't have or didn't preserve a resin lining on the interior, which might have pointed to the conveyance of such goods as wine or fish products. Apparently, these vessels were used mainly for transporting to Bosphorus olive oil which was in great demand in this part of the Black Sea area. Obviously just olive oil was shipped from South Byzacena in the most numerous type Keay 8B (**fig. 6,1–13**).<sup>27</sup> The second largest production group of North African amphorae (**fig. 6,14.18–22.38.42**) was probably used for delivery of goods from the Nabeul area in North Tunisia.<sup>28</sup> The amphorae Keay 35B? (**fig. 7,15**) were regularly pitched and were used usually for carrying fish while the content of Keay 55A and 57B is still not clearly identified<sup>29</sup>.

The variation in supply of Tunisian amphorae and ARS in the Bosphorus area corresponds to the general fluctuations of North African production in the North-Eastern Mediterranean and the basin of the Aegean Sea. The trade of the Black Sea region is distinguished only by the smaller volume of the deliveries, as the share of the African amphorae and red slip ware in the investigated Bosphorus complexes amounts to only about 0,5–1% of all numbers of sherds.<sup>30</sup>

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Méditerranée orientale durant l'antiquité tardive. Travaux et Mémoires 15/Mélanges Jean Pierre Sodini 2005, 568; 572; 574.

<sup>23</sup> AIBABIN 2011, 123 Abb. 55,5; 56,5; HAYES 1972, 124; 131 fig. 21,1,2; 23,7; J.W. HAYES, Roman pottery: fine-ware imports. In: The Athenian Agora 32 (Princeton 2008) 79; 229 fig. 35,1118. – The figures for this paper were taken from the private archives of A. I. Aibabin.

<sup>24</sup> Two variants of the rim Keay 8B were discovered in the contexts in Bosphorus Lane in Kerch (**fig. 8**). The evolution of this type from Keay 59 has already been noted by M. Bonifay: BONIFAY 2004, 132. Further the ratio of the rim's thickness in the middle/lower and upper parts as well as height of the rim gradually changed within the type Keay 8B. The earliest finds from Marseille M. Bonifay dated to the second quarter or the middle of the 5<sup>th</sup> century: M. BONIFAY/C. CAPELLI/M. MOLINER, Amphores Africaines de la Basilique de la Rue Malaval à Marseille (Ve siècle). SFECAG Actes Congrès Arles 2011 (Marseille 2011) 244 fig. 9,25.26. One of them is analogous to some vessels from Bosphorus Lane in Kerch (**fig. 6,1,2**) and similar to a neck from a deposit around the middle of the 5<sup>th</sup> century (**fig. 6,3; tab. 1,19**). At the same time all amphorae with higher and thinner rim from Kerch were discovered only in the complexes of the 6<sup>th</sup> century (**fig. 6,4–10; tab. 1,2,3,8,9,11**). Obviously they belong to a later production period, while the vessels with the highest rims from Majoura M. Bonifay identified as the latest variant of the first third/first half of the 6<sup>th</sup> century: BONIFAY 2004, 31; 132 fig. 14; 71,8.

<sup>25</sup> V. V. ŠKORPIL, Otčet o raskopkach v g. Kerči v 1904 g. Izv. Imperatorskoj Arch. Komm. 25, 1907, 57; ZASECKAJA 2003, 39 tab. 17,12.

<sup>26</sup> This is the chronology of Hayes 105B according to M. Bonifay: BONIFAY 2004, 185 fig. 98,9–16.

<sup>27</sup> BONIFAY 2004, 132 tab. 4.

<sup>28</sup> GHALLIA/BONIFAY/CAPELLI 2005, 495–508.

<sup>29</sup> BONIFAY 2004 tab. 4.

<sup>30</sup> ARS makes about 0,5% of all red slip ware obtained from the excavations in Bosphorus Lane in Kerch, where they were represented by 32 fragments of 25 (or 22) vessels (**fig. 3**). North African amphorae account for about 1% of all amphora finds. Their number is slightly more than one thousand fragments including 58 profile sherds as well as the wall with a hole and the token (**fig. 6**).

№	Context	Preliminary date of context	№ ARS	Form by J. Hayes	Date of ARS	№ amp	Type by S. Key	Date of amphorae
1	2008-2009, mixed layer (74)	c. 6th-20th c.	–	–	–	18	55A	late 5th – first half 6th+ c.
2	2007-2008, the layer of the 2nd level (01, 86, 91)	late 6th c.+ (+19-20 c.)	1	50B	c. 350-400/420	1	8B-1	second-third quarter 5th c.
			10	91A	c. 400/420-450	10	8B-2	last quarter 5th – first quarter 6th c.
			–	–	–	12,13	8B (?)	second half 5th – first half 6th c.
			–	–	–	14	spatheion 1	first half 5th c.
3	2007-2009, 3rd level, destruction layer (11, 26, 35, 38, 40, 42, 43, 103, 112, 121, 126, 251, 263)	c. 550-600 (570-580s?)	–	–	–	19	55A	late 5th – first half 6th+ c.
			3	59A/B	c. 330/350-375/400	5	8B-2	last quarter 5th – first quarter 6th c.
			7	64	c. 400-450	6		
			9	67 (?)	c. 350/360-470	9		
			12	104A	c. 450/460 (end 5th c.?) – 580 (mid-7th c.?)	15	35B?	5th c.
			13	76?	c. 425-475	16	40/41	5th – early 6th c.
			15	–	c. 300/350-450	17		
			–	–	–	20-21	57B	second half 5th c.
			–	–	–	27	62G / Albenga 11-12?	6th – early 7th c.
			–	–	–	28	62Q / Albenga 11-12?	last third 5th – first half 6th c.
			–	–	–	30		
			–	–	–	33	–	4th-6th c. (?)
			–	–	–	35	–	4th-6th c. (?)
			–	–	–	37	–	4th-6th c. (?)
			–	–	–	38	–	4th-6th c. (?)
–	–	–	39	–	4th-6th c. (?)			
4	2009, cistern II-4 (311, 312)	around mid-5th c.	4	59B	c. 400-420/450	–	–	–
			8	67	c. 350/360-400	–	–	–
5	2007, cemetery, tomb 37	7th-early 8th c.	5	59B, Style A (ii)	c. 400-420	–	–	–
6	2007, filling of BC-II, spit 3 (33)	c. 550-600	11	99B	c. 530-580/620	–	–	–
7	2008, BC*-4. Street, spit 3 (114)	c. 525-550+	–	–	–	29	62Q / Albenga 11-12	last third 5th – first half 6th c.
			–	–	–	36	–	4th-6th c. (?)
8	2008, pit 24 (131)	c. 500-550 (510-530s?)	2	59A	c. 350-400/450	8	8B-2	last quarter 5th – first quarter 6th c.
9	2008, BC-IV. Room 1, upper filling (spit 2) (94)	c. 525-550	–	–	–	7	8B-2	last quarter 5th – first quarter 6th c.
			–	–	–	11		
–	–	–	–	–	–	26	62G / Albenga 11-12?	6th – early 7th c.
10	2009, layer under cisterns II-8, II-9 (285)	c. 525-550+	–	–	–	2	8B-1	second-third quarter 5th c.
11	2007, pit 7 (49)	c. 450/500-600	–	–	–	4	8B-2	last quarter 5th – first quarter 6th c.
12	2008, pit 19 (92)	c. 525-550	–	–	–	23-25	Albenga 11-12?	6th c.
13	2007, BC-3. BP 2. Courtyard, filling under the floor (181)	c. 525-550	–	–	–	34	–	4th-6th c. (?)
14	2009, cistern II-10 (258, 265)	c. 525-550	17	–	c. 300/350-450	22	57B	second half 5th c.
			–	–	–	42	lid	4th-6th c.
15	2007, the collapse of ceramics near the wall 7 (165)	c. 450-500 (+500-550?)	–	–	–	41	wall	3rd-6th c. (?)
16	2009, cistern II-2 (354)	c. 475/500-525	–	–	–	31-32	–	3rd-6th c. (?)
17	2008, BC-IV. Room 1, lower filling (spit 4) (122)	c. 400-500/525	18	Style A (ii)	c. 350-420	–	–	–
18	2008, BC-IV. Courtyard, Brown loam under causeway (109)	around mid-5th c.	16	–	c. 300/350-450	–	–	–
19	2009, brown loam between BC-3 and BC-4, spit 1 (under causeway 3) (262)	around mid-5th c.	–	–	–	3	8B-1	second-third quarter 5th c.
20	2009, cistern II-11 (276)	c. 400-450	6	61A	c. 340/350-400/420	–	–	–
			14	–	c. 300/350-450	–	–	–
21	2009, cistern II-7 (356)	c. 390/400-450	–	–	–	40	–	4th-6th c. (?)

\*BC – building complex; BP – building period

**Table 1.** Preliminary dates of the contexts with North African amphorae and ARS from the excavations in Bosphorus Lane in Kerch.

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