

CONTRIBUTIONS TO THE ECONOMIC LIFE OF THE CITY OF CALLATIS IN LIGHT OF NEW CERAMIC FINDS (2ND – 6TH CENTURIES AD)

BY

ANDREI OPAIȚ*, MIHAI IONESCU**

Abstract

The authors present a small ceramic collection sheltered by the archaeological museum of Mangalia. The large variety of wine, olive oil, and fish product amphorae suggested by this modest pottery collection confirms the extensive trade network established by this city not only with Pontic centres but also with many eastern Mediterranean areas during early and late Roman times. The kitchen ware also displays a large variety of pots, casseroles, and frying pans. They attest to the advanced level in cookery reached by the Callatian society and the diversified trade connections that allowed it to import Aegean and west Anatolian cooking vessels, while others were locally or provincially made.

Keywords: *Callatis, amphorae, kitchen ware, diet, trade.*

Callatis, the only West Pontic city, considered by Strabo¹ as deserving of the name πόλις, unfortunately, has not been systematically studied. We have an adequate culture-historical presentation of the evolution of the city from Archaic to late Roman times due only to a few literary testimonia and a rich corpus of epigraphic discoveries made at this site². These approaches present only a conventional politico-military history, as the very few excavations undertaken in this city have paid scant attention to ceramic finds³. However, during the last forty years of archaeological research in Romania, pottery studies have intensified, and the ceramics have been used not only for dating archaeological contexts but also as a source of information on ancient economic life. Of course, these studies represent only a beginning as they have dealt with only a few ceramic finds discovered either in a province⁴ or on a certain site⁵. The ceramics discovered at Callatis were studied after the First World War by Tافرالی⁶ and Sauciu Saveanu⁷, and it was continued in the second half of the 20th century by numerous other scholars⁸. However, nearly all these studies paid attention only to Hellenistic ceramics,

* Institute of Archaeology, Romanian Academy-Iasi Branch; aopait@gmail.com.

** Cultural Complex "Callatis", Mangalia, Constanta County; ionescumihai2000@yahoo.it.

¹ STRABO, Geography 7.6.1.

² AVRAM 2007; AVRAM 2015; BARNEA 1991.

³ AVRAM 2007: 242.

⁴ POPILIAN 1976; OPAIȚ 1996, 2004; ARDEȚ 2006; PARASCHIV 2006.

⁵ COJA, DUPONT 1979; SUCEVEANU 2000; TOPOLEANU 2000; OPRİȘ 2003; BÎRZESCU 2012; RUSU-BOLINDET 2007.

⁶ TAFRALI 1925; TAFRALI 1927.

⁷ SĂVEANU 1924; SĂVEANU 1925; SĂVEANU 1927-1932; SĂVEANU 1935-1936; SĂVEANU 1937-1949; SĂVEANU 1941-1944.

⁸ From the long list of articles, we can mention: PREDA 1980; ICONOMU 1968; RĂDULESCU, BĂRBULESCU, BUZOIANU 1986; BĂRBULESCU, BUZOIANU, GEORGESCU 1986; RĂDULESCU, BĂRBULESCU, BUZOIANU 1987; BĂRBULESCU, BUZOIANU, GEORGESCU 1987; POENARU-BORDEA 1986; CONOVICI, AVRAM, POENARU-BORDEA 1989; BOUNEGRU 2004-2005; RADU, IONESCU 2014.

especially the amphora stamps discovered at Callatis and its territory. The Roman ceramics were almost completely ignored⁹.

Our study is a first attempt to address this situation, at least partially, by discussing a modest quantity of ceramic fragments sheltered in the archaeological museum of Mangalia. These fragments come from two groups: the first is conventionally named “*passim*” (KP) as they are stray finds dating mostly to the 5th and 6th centuries AD and have no known context of discovery; the second lot comes from a rescue excavation undertaken in the courtyard of School No. 5, supposedly from an edifice (conventionally named KT) that may have been a large hypocaust (*thermae?*). Almost all pottery discovered at this latter site can be dated to between the 2nd century and the middle of the third quarter of the 3rd century with some few surviving pieces from Hellenistic layers or intrusions from the late Roman strata. To this fragmentary pottery, we have added some completely preserved vessels from the collection of the museum. Because these two lots complete each other from a chronological point of view, we decided to present them together so we can have a better view of some aspects of the city’s economic life, the diet of its inhabitants, and its trade connections. The lack of any closed archaeological contexts is, of course, a major shortcoming, but, due to the actual level of ceramic studies in the Black Sea and the Mediterranean, the dating of many vessels is quite well-known even if they do not come from a secure archaeological context. Due to the limited number and the fragmentary preservation of this pottery we cannot provide complete answers on the city’s economy. However, the publication of this pottery will give us an important first glimpse on the imports from the Pontic and Mediterranean world as well as on local production. In any case, it is intended to advance the subject in comparison with what we already know on this matter¹⁰.

The coarseware has been divided into two large categories – amphorae and kitchenware – to which we have added a few storage and domestic vessels. The amphorae have been divided according to their content (i.e., wine, olive oil, and fish products), while the kitchen vessels have been separated according to their functionality. They will be presented in chronological order from early to late Roman times, and by production centres, if those are more or less known. Where this identification was not possible, they have been included in the unassigned group.

EARLY ROMAN WINE AMPHORAE

Pontic centres

Zeest 72/73 type

We have united types Zeest 72 and 73 into a single type as some morphological differences, such as the shape of the rim or the transition from shoulder to body, have only minor importance¹¹. The clay matrix is calcareous with a fine texture and regular fracture. It is rich in inclusions of calcareous material varying in size between 0.5 and 1mm, while the brownish iron minerals are less present and much finer (< 0.5mm). The color is light red (10R6/8). They were made in different fractionary sizes of 7 l, 19 l, 63.5 l, and 86 l. These vessels are extremely abundant in the Crimea¹², and less so in the Lower Danube area. Sometimes they penetrate even north of the Danube¹³.

Catalogue¹⁴:

KT 108.	Rim fragment. RD 13	Pl. I/1
KP (Mircea cel Bătrân Street)	Rim fragment. RD 15	Pl. I/2

⁹ Worth mentioning are only some Pergamene pieces; cf. BOUNEGRU 2004-2005.

¹⁰ SUCEVEANU 2010: 336; mentions only “numerous Asia Minor ceramic imports.”

¹¹ ZEEST 1960: 111-112.

¹² ZEEST 1960: 111-112; STRJELETSKIY et al. 2005: Pl. V.2, urn 96; KLENINA 2004: Fig. 5.39-47.

¹³ KOGALNICEANU, MORINTZ 2013: 38, Fig. 35B.

¹⁴ The following abbreviations are used in the catalogue: RD = rim diameter; HD = handle diameter; BD = Base diameter; MD = maximum diameter; H = height. All the dimensions are given in centimeters. The Munsell soil color charts, ed. 1994, is used for the color descriptions. The drawings were inked by Efimov Eugenia.

Heracleian type

This traditional wine exporter to the western coast of the Black Sea is well represented at Callatis with eight fragments of bases and six fragments of upper parts; to these fragments, we should add a half amphora of type Shelov IB/Vnukov S IVA2. All are dated to the 2nd century AD except for a base fragment of Heracleian Pseudo-Coan type that belongs to the second half of the 1st c. BC.

The fabric of these types shows some minor differences in terms of color, sorting and quantity of inclusions. This is perhaps to be expected, taking into account the many workshops spread over the Black Sea coast that was part of Heracleia's territory. In general terms, the fabric composition changed very little from the Classical to Late Roman period. The usual fabric has a reddish-yellow (Munsell 7.5YR 6/6-7/6) to strong brown (7.5YR 5/6) color. Its fracture is irregular to hackly, and not very hard. The temper is ill-sorted with common to abundant rounded and sub-rounded pyroxenes (<0.5mm) and light brownish inclusions, some of them reaching 6-7mm (sandstone with ferruginous cement?), dark brownish inclusions, nuclei (iron ore and minerals, volcanic rocks), and sub-rounded opaque and yellowish quartz.

The presence of Heracleian amphorae in the Pontic and Lower Danube areas is overwhelming, as practically no sites are found without them. However, in spite of the numerous examples discovered in the Lower Danube area, we should be aware of the reduced capacities of these amphorae, which vary between 6-7 litres during the early Roman time. Outside the Pontus area, these amphorae are only rarely found¹⁵.

Catalogue:

KT 78.	Base fragment. RD 3. Type Heraclea Pseudo Coan/Vnukov type S I.	Pl. I/3
KT 76.	Base fragment. RD 4.5. Type Shelov B/Vnukov S IVA2.	Pl. I/4
KT 79.	Upper part fragment. RD 6.8. Type Shelov B/Vnukov S IVA2.	Pl. I/5
KT 80.	Upper part fragment. RD 7.4. Type Shelov B/Vnukov S IVA2.	Pl. I/6
KT 81.	Upper part fragment. RD 8.4. Type Shelov C.	Pl. II/7
KT 82.	Upper part fragment. RD 9. Type Shelov C.	Pl. II/8
KP inv. 241.	Preserved the upper half of the amphora. RD 6.8. HD 4.4/2.4; MD 21.	Pl. II/9

Sinopean type

The Sinope amphorae of this period are less abundant than the Heracleian vessels, but they compensate for the shortfall by having large volumes that vary between 72 and 90 litres. The only example presented here is an upper amphora part which, by its morphologic characteristics, suggests a transitional variant from type Vnukov Sin II¹⁶, typical for the 1st century AD, to Tezgör type B Sin I¹⁷. It is interesting that it lacks the slight swallowing of the neck. It has good parallels at Tanais¹⁸. The main inclusions of Sinopean amphora fabrics are of volcanic origin (rock fragments, plagioclase, and pyroxene)¹⁹. All these inclusions can be found not only in the so-called "black-sand" present on many beaches of the Pontic shore in the Sinopean area but also in the clay beds. Other inclusions such as quartz (which is usually sub-rounded) are frequently found in different manufacturing places and exhibit a relatively low ratio. Also, rare flakes of gold and silver mica

¹⁵ RIZZO 2014: 563; Figs. 6.1-6.2: Rome; HAYES 1983: 147, type 14; Fig. 21.32: Crete.

¹⁶ VNUKOV 2003: 133-141, Fig. 52.220.

¹⁷ TEZGÖR 2010: 126, Pl. 15.1.

¹⁸ NAUMENKO 2012: 67, Fig. 5.5; 7.6.

¹⁹ WHITBREAD 1995: 238.

sometimes occur, perhaps as inclusions in the clay mass²⁰. The color of our example is light red (2.SYR 6/8-7/8). The Sinopean wine is found not only in the lower Danube area²¹ but also in Crete²², Beirut²³, and Rome²⁴.

Catalogue:

- KT 75.** Upper part fragment. RD 11.5; HD 4.6/2.7. Pl. II/10
Traces of dipinti in red on the neck.

Aegean centres

Dr 2-4

This bifid handle fragment perhaps has an Aegean origin as its fabric is not Pontic. The fabric has medium sorted white and brownish inclusions (0.5-1mm), abundant whitish-grayish small particles (quartz?); the color is reddish yellow (7.SYR 7/6-7/8). This example is only one of many Dr 2-4 amphorae manufactured by many Aegean workshops unidentified so far. The fabric is calcareous, hard, smooth to irregular break, compact with common white tiny inclusions (foraminifera?), sparse brownish inclusions.

Catalogue:

- KT 169.** Handle fragment. HD 4.8/2.4. Pl. III/11

Pseudo Cretan types

The following amphorae were called pseudo-Cretan because of their horned handles and tall, cylindrical neck. However, their bodies are not common to Cretan types. Before their workshops are identified we prefer to call them "pseudo-Cretan".

Pseudo Cretan type I

This type is well known in the Lower Danube area, especially in the military sites, at Viminacium, Singidunum, Pontes, Mala Vrbica, Kurvingrad²⁵, Drobeta²⁶, Sarmizegetusa, Romula²⁷, Cioroiul Nou²⁸, Barboși²⁹, Troesmis, Ibida³⁰, Tomis³¹, and Tyras³². It seems to imitate a Cretan amphora³³ as it has horned handles, but it exhibits a narrow, cylindrical neck and an ovoid body that ends in a long, solid spike-peg expanded at its end with a central nipple. The fabric is a very fine, sedimentary clay, compact, smooth fracture, with no inclusions visible to the naked eye; **KT 77** still has some elongated voids. The color is reddish-yellow (7.SYR6/6).

Catalogue:

- KT 70.** Handle fragment. HD 2.7/2. Pl. III/12
KT 77. Base fragment. BD 3.7. Pl. III/13

²⁰ VNUKOV 2006: 64-65.

²¹ POPILIAN 1976: 172, Pl. XV.203-206: Sucidava, Romula, Slăveni; BONDOC 2014, 109; Figs. 9, 10: Cioroiul Nou; ARDEȚ 2006: 103-104, Fig. 45, Pl. XIV.123: Drobeta, Tibiscum.

²² HAYES 1983: 151, types 26/27; Fig. 24.67-68, 70.

²³ REYNOLDS 2010: 93, Fig. 2e.

²⁴ RIZZO 2014: 563, Fig. 6.5.

²⁵ BJELAJAC 1996: 39-41, type XI.

²⁶ Unpublished example.

²⁷ ARDEȚ 2006: 124-25, Pl. 15.201-203.

²⁸ BONDOC 2014: 105, Fig. 7.

²⁹ SANIE 1981: 137, Pls. 32.1; 33.5.

³⁰ Unpublished examples.

³¹ BĂJENARU 2013: 73-74, Pl. 14.117.

³² SAMOILOVA 1978: 255, Fig. 1.1.

³³ HAYES 1983: 143-45, Fig. 21.26-27, Knossos type 3.

Pseudo-Cretan type II

Related to this type is Zeest 67a³⁴. The body is more ovoid with horned handle while the base is hollow and it has a nipple on its exterior. The fabric is similar to the previous two examples, but the fracture is irregular and the color is yellowish-red (5YR 5/8).

Catalogue:

KT 72. Base fragment. BD 3.2. Pl. III/14

Pseudo-Cretan type III

Another similar amphora, also included by Zeest in the same type 67 (but typed as 676³⁵), reaches its maximum diameter on the upper part of the body and ends in a peg spike with a flat base. The fabric is similar to the previous three examples, but it seems to have more silver mica and the fracture is smooth to irregular; the color is reddish-yellow (7.5YR 6/8-7/8).

Catalogue:

KT 71. Base fragment. BD 3.2. Pl. III/15

Agora M 126/Pergamene type (?)

This amphora is well known in the Pontic and Lower Danube areas³⁶. Although it shares many morphological characteristics with some amphorae from the Ephesus area, it still has its characteristics both in shape and the external cover. The fabric is also sedimentary, with no inclusions visible to the naked eye, common silver mica, and sparse whitish inclusions (foraminifera?). The color is very pale brown (10YR 7/4). Usually, three-quarter of the exterior of the body is covered by a blackish paint. However, a complete example found at Callatis has a dark red slip³⁷. It is known also as Agora M 126³⁸, which was quite popular in this area. If this variant was manufactured in the Pergamon area³⁹ it is possible that it traveled together with Çandarli tableware, a product found in abundance in this region. The fabric has a smooth to irregular fracture, sparse silver mica, and the color varies between very pale brown (10YR 7/4) and yellow (10YR 7/6).

Catalogue:

KT 59. Mouth fragment. RD 4.6. Pl. III/16

KT 67. Handle and shoulder fragment. HD 2.8/1.6. Pl. III/17

Callatis Inv. 1292. Complete profile, missing handle. It is covered on the exterior by a reddish-orange slip (2.5YR 5/8). RD 3.7; H 24; MD 12; BD 2.8. Pl. IV/18

Kapitan 1/ Peacock & Williams 56 type

This amphora had a modest circulation over a wide area of the Mediterranean, but it is almost unknown in the Black Sea region⁴⁰. The shape of the rim is very similar to the shape of amphora Pompeii 5 type. However, the fabric lacks pyroxene; it is very hard, compact, fine fracture, well-sorted inclusions, with sparse to common, sub-rounded, grayish quartz, sparse brownish inclusions, white inclusions (shell?). The color is reddish yellow (5YR 6/8).

Catalogue:

KT 73. Rim fragment. RD 12.2. Pl. IV/19

³⁴ ZEEST 1960: 110-11, Pl. 29.67a.

³⁵ ZEEST 1960: 110-111, Pl. 29.67b.

³⁶ Tanais: ARSEN'EVA, NAUMENKO 1992: 158, Figs. 29.1; 38.3; Gorgipija: ALEKSEEVA 1997: Pl. 156.21; 223.5; Chersonesos: KOVALEVSKAYA 1998: 94, Fig. 3.1; STRJELETSKIY et al. 2005: 116, Fig.19.3; Tibiscum: ARDEŢ 2006: 126-27, Pl. 26.207; Singidunum, and Viminacium: BJELAJAC 1996: 45-46, Pl. XIV.61-63.

³⁷ PREDA 1980: 28, 100; Pl. LXIX,M 185.

³⁸ ROBINSON 1959: 95-96, Pl. 23, M 126.

³⁹ J. HAYES, pers. comm.

⁴⁰ PANELLA 1973; CARANDINI, PANELLA 1981; PEACOCK, WILLIAMS, 1986; AURIEMMA, QUIRI, 2004; MARTIN-KILCHER, 1994; PEACOCK, WILLIAMS 1986.

Kapitän 2 type

At Callatis, in spite of the arbitrary collection of pottery fragments, this is one of the most frequently found amphora types. It is also one of the most frequently found vessels in the Roman Empire from the end of the 2nd to the beginning of the 5th century. The predecessor of Kapitän 2, which may have had a Chian origin⁴¹, occurs in reduced quantities at Transdierna⁴², Gorsium⁴³, Ampelum⁴⁴, Slăveni⁴⁵, Callatis⁴⁶, and Ibida⁴⁷. During the 3rd and the 4th centuries, this amphora could be found from Britain to Iraq and from northern Romania to Nubia⁴⁸. What is worth pointing out is the fabric of **KT 18** and **KT 61**, both of which are irregular with abundant grayish quartz (?) and sparse whitish inclusions; this fabric differs from the typical fine fabric of this predecessor type of Kapitän 2 but is closer to the fabrics of the classical Kapitän 2 of the 3rd and the 4th centuries. Three other bases (**KT 56**, **KT 57**, and **KT 60**) may also belong to this predecessor. At least three fabric types have been identified at Callatis. The first has tiny white inclusions (limestone?), quite abundant gold mica and is an orange-light red (2.5YR 6/8) in color (**KP 4**). The second has inclusions of iron nuclei and ferruginous cemented sandstone with less common large, whitish particle (limestone?). The color varies between pink (5YR 5/4) and light red (2.5YR 6/8) (**KP 5**, **KP 31**, **KT 56**, **Callatis**, **Mircea cel Bătrân Street**). The third fabric is also rich in iron nodules, some of them larger than 1mm, but it has streaks of quartz rich pellets; also sub-rounded grains of quartz are common to abundant (**KP 33**). The wide variety of fabrics points up the multitude of workshops that manufactured this type.

Catalogue:

KT 18	Rim fragment. RD 7	Pl. IV/20
KT 61	Upper-part amphora fragment. HD 4.8/2.8	Pl. IV/21
KT 60	Base fragment. BD 8.2.	Pl. IV/22
KT 56	Base fragment. BD 8.	Pl. IV/23
KT 57	Base fragment. BD 8.6.	Pl. V/24
KP 5	Rim fragment. RD 9.	Pl. V/25
KP 4	Base fragment. BD 9.	Pl. V/26
KT 33	Preserved only the base. BD 8.	Pl. V/27
KT 39	Base fragment. BD 10.	Pl. V/28
Callatis	Upper amphora part recovered from the Black Sea. RD 6;	Pl. V/29
inv. 2616.	HD 4.3/2.2.	
KP	(Mircea cel Bătrân Street). Base fragment. BD 5.6;	Pl. VI/30

Pontic imitation of Kapitän 2 (?)

This is a rare amphora type that occurred at Odessos, where it was dated to the 4th century AD⁴⁹, and at Romula⁵⁰. Another imitation occurs in Pannonia and is dated to the second half of the 2nd century AD⁵¹. Our

⁴¹ A. OPAIȚ, "On the origin and evolution of Kapitän II amphora type", in press.

⁴² BJELAJAC 1996: 66, Fig. XXII.120.

⁴³ KELEMEN 1990: 177, type 21, No. 13, Fig. 6.

⁴⁴ NEGRU et al. 2003: 121, Fig. 2.24.

⁴⁵ D. BONDOC, pers. comm.

⁴⁶ Fragments preserved in the storeroom of Archaeological Museum Callatis.

⁴⁷ Fragments preserved in the storeroom of Archaeological Museum Tulcea.

⁴⁸ RILEY 1979: Fig. 35; PANELLA 1986: Fig. 25.

⁴⁹ KUZMANOV 1985: No. 67, Pl. 7.

⁵⁰ ARDEȚ 2006: Pl. XXVII.213.

⁵¹ HÁRSHEGYI 2008: 173-174, Fig. 6.

example confirms an earlier dating for this amphora. The fabric is sedimentary, hard, smooth break, sparse to common tiny, white inclusions (shell?), sparse rounded grayish quartz, and brownish inclusions; the color is light red 2.5YR 6/6-6/8 on the exterior, while the interior is grayish brown (10YR 5/2).

Catalogue:

KT 14 Upper amphora part. RD 5; HD 3.4/1.7; PH 17.5. Pl. VI/31

Cylindrical type II (?)

This amphora fragment is close to the type discussed in a recent paper⁵². The mouth is slightly flaring with a flat rim, grooved on the top. Although we do not know the shape of the body, we can assume a narrow shoulder and a cylindrical body. The fabric of our examples is very fine, with no inclusions visible to the naked eye. The color is yellow (10YR 7/6). An identical example has been found at Ibida⁵³.

Catalogue:

KT28. Mouth and handle fragment. RD ?; HD 4.7/2.1. Pl. VI/32

Troesmis type X

This type, discussed in a previous study⁵⁴, has a large, rolled rim, cylindrical neck, and massive handles. It is frequently found at Brad⁵⁵, Poiana-Tecuci⁵⁶, Aegyssus⁵⁷, Ibida⁵⁸, Histria⁵⁹, Kalos Liman⁶⁰, and Kara Tobe⁶¹ during the 1st century AD. It continues to be in use in the 2nd century AD, as the discoveries at Troesmis attest⁶². Worth pointing out is its occurrence in Athens⁶³. The fabric is rich in ill-sorted quartz, small whitish and brownish inclusions, sparse foraminifera, and voids which may contain calcareous materials. The color is yellowish red (5YR 5/6-5/8). Our example, discovered in the *chora* of Callatis, has already been published⁶⁴.

Catalogue:

KP Mouth and handle fragment. RD 16. Pl. VI/33

inv. 2612

KT 90. Rim fragment. RD 18. Pl. VII/34

KT 91. Rim fragment. RD 20.6. Pl. VII/35

KT 92. Rim fragment. RD 19. Pl. VII/36

Unknown types

1. Amphora conical base. Fabric very fine, sedimentary fabric with abundant silver mica. The color is brownish yellow (10YR 6/8).

Catalogue:

KT 43. Base fragment. BD 4.4. Pl. VII/37

2. Amphora rim fragment. Rolled rim, cylindrical neck (?) and handle attached immediately under the rim. The fabric is hard, compact, irregular break, sparse tiny grayish quartz and brownish inclusions, sparse to common silver mica; the color is light red (2.5YR 5/8).

⁵² OPAIȚ 2014: 50-52.

⁵³ Unpublished example.

⁵⁴ OPAIȚ 1987b; this amphora type has traces of pitch inside the walls.

⁵⁵ URSACHI 1995: Pls. 175.4; 182.1,3; 183. 17; 184.18, 22-23.

⁵⁶ VULPE, TEODOR 2003: Fig. 243.10.

⁵⁷ Unpublished material.

⁵⁸ Unpublished material.

⁵⁹ Personal observations in the Histria museum's storeroom.

⁶⁰ UZHENTSEV 2001: 166, Fig. 6.7-8.

⁶¹ VNUKOV 2013: Fig. 11B.

⁶² OPAIȚ 1980: 308, tip X, Pls. X.2, XV.2.

⁶³ OPAIȚ 2015: 328, Pl. I.

⁶⁴ IONESCU, CHELUTA 1997: 167-168, Fig. 6.20.

Catalogue:

KT 65. Rim fragment. RD 11; HD 3/2.8. Pl. VII/38

3. Amphora rim fragment. Rolled rim, cylindrical neck. Fine, sedimentary fabric, calcareous with elongate streaks due to the calcination of the particles. The color is yellow (2.5Y 7/6). It has good parallels at Ibida⁶⁵, Novae⁶⁶, and Ephesus⁶⁷.

Catalogue:

KT 74 Rim fragment. RD 13.8. Pl. VII/39

4. Amphora rim and base fragment; both examples seem to belong to the same amphora due to its fabric characteristics. It is beveled to the outside rim, underneath which the handles were attached; the base is a massive spike peg. The fabric is quite well levigated but with common tiny white inclusions (calcareous?) and sparse, large red-brownish particles (iron minerals?). The color is orange (reddish yellow 5YR 6/8).

Catalogue:

KT 99 Rim fragment. RD 13. Pl. VII/40

KT 101 Base fragment. BD 3. Pl. VIII/41

5. Amphora rim. Cup-shape mouth with a groove on the top. Fine, irregular fracture, well-levigated fabric with only few inclusions of crystalline quartz, quartz sand (?); the color is yellowish red (5YR 5/6).

Catalogue:

KP 6 Rim fragment. RD 5.5. Pl. VIII/42

6. Amphora rim and handle. Beveled rim at the exterior, massive, flattened handle. The exterior of the vessel is covered by a whitish paint. There are three examples of this type. Their fabric is quite similar; not well-sorted, common, white and brownish inclusions, sparse, angular opaque quartz; color varies between (orange) light red (2.5YR 6/8) to reddish yellow (7.5YR 7/6-7/8).

Catalogue:

KP 27 Preserved rim, neck, and handles. RD 10, HD 4/2.2. Pl. VIII/43

The fabric is hard, irregular break, ill-sorted inclusions with common, angular quartz and whitish inclusions (calcareous materials, foraminifera?) that left voids, sparse flakes of gold mica visible at the interior. The color on the exterior is light red (2.5YR 6/6), and pink (5YR 7/4) on the interior; a whitish slip with a good adherence is visible on the exterior.

Troesmis type XIII

The mouth is flaring and the rim is beveled toward the exterior, with shallow ribbing at its lower part. The ribbed area was intended for better upper attachment of the handle. This is a rare type that occurs in different variants and sizes. A large-size variant dated to the first half of the 3rd century occurs at Troesmis⁶⁸. Similar examples have been found at Tibiscum⁶⁹, Drobeta⁷⁰, and Durostorum⁷¹. The examples from Tibiscum and Drobeta still preserve groups of dipinti in red on the neck and under the handles, perhaps representing customs notations. The morphology of these amphorae suggests contents of either an olive oil or fish product, which arrived from the eastern Mediterranean. The fabric is fine, sedimentary, with a sub conchoidal break, rich in silver mica and no other inclusions visible to the naked eye; the color is reddish yellow (7.5YR 7/6-6/6); the exterior is covered by a pale yellow (2.5Y 8/4) slip.

⁶⁵ Unpublished example.

⁶⁶ KOVALEVSKAYA, pers. comm.

⁶⁷ LADSTÄTTER 2010: 246, Pl. 94.K 568.

⁶⁸ OPAIȚ 1980: 310, type XIII; Pl. X.1; XV.4 (RD 21!).

⁶⁹ ARDEȚ 2006: 141-142, Pls. XXXV.253-254; XXVI, considered as "Africana II grande".

⁷⁰ Personal observation in the storeroom of the local museum.

⁷¹ HONCU, pers. comm.

Catalogue:

KT 23 Rim fragment. RD 16. Pl. VIII/44

Predecessor of Bag-shape amphora

This is one of the rarest examples known since early Roman times. The rim is flattened on the exterior and set on a short, cylindrical neck, while the handle is ovoid in section with a deep, median groove. The fabric is hard with abundant, semi-rounded translucent quartz and an orange light red (10R 6/8) color. It has good parallels at Tanais where it is dated to the first half of the 3rd century⁷².

Catalogue:

KT 11 Rim, neck, and handle fragment. RD 13; HD 5.3/3. Pl. VIII/45

Table amphora

Only one complete example mended from six pieces, was available for our study. The rim is thickened, rectangular, and beveled toward the interior. The neck is cylindrical with shallow grooves; the handles are rectangular in cross section; the globular body rests on a ring foot. The fabric is fine, reddish yellow (7.5YR 7/8). The exterior of the vessel is covered by a light reddish brown slip. The capacity of this amphora is c. 1.6 litres.

Catalogue:

Callatis, 6 D, Bolintineanu street. Pl. VIII/46

Inv. 365 Completely preserved, mended from six pieces. RD 8; H 19.8; HD 1/1.1; MD 15.5; BD 8.

KT 174 Rim and body fragment. RD 12. Pl. VIII/47

Table pitchers

This type of container reached a considerable popularity between the 1st and 3rd century AD. It was in a strong competition with the table amphora. The pottery discovered at Callatis suggests a certain division of the area of influence. Thus, the rarity of table amphorae and the abundance of table pitchers in this city show that table pitchers were favorite containers for table wine in a Greek environment, while table amphorae were more popular in a Roman milieu. The typical table pitcher has a cylindrical neck, one strap handle, and a bi-tronconic body ending in a tubular foot with a conical base⁷³. However, two vessels discovered at Callatis show a different, local "interpretation" of these table pitchers. The first is closer to the canonical shape as it has nearly all the characteristics of this form, but the base is a simple ring foot similar to those found on numerous jugs (Pl. VIII/ Fig.48). The second is even further removed from the canonical shape as it has a massive handle, ovoid in cross section, with a central, longitudinal groove. The transition from shoulder to the body is rounded, and it ends in a flaring ring foot with a moulded base, which is also typical of jugs (Pl. VIII/ Fig.49). Most likely the former, due to its angularity between shoulder and body, can be dated earlier, perhaps to the 2nd century AD, while the latter might be dated to the 3rd century AD. However, the majority of the examples discovered at Callatis, unfortunately in a very fragmentary form, belong to the canonical type, well-known mainly in the Greek milieu at Histria⁷⁴, Tomis⁷⁵, Olbia⁷⁶ and its territory⁷⁷, Chersonesos⁷⁸, Belbek⁷⁹, necropolis Ust'-Alma⁸⁰,

⁷² ARSEN'EVA, NAUMENKO 1992: 143, Fig. 23.

⁷³ OPAIT 2003.

⁷⁴ ALEXANDRESCU 1966: 207, Pl. 99; SUCEVEANU 2000: 158-159, type L, Pls. 75-76, 77.3.

⁷⁵ BĂJENARU 2013: 70-71, Nos. 106-108, Pl. 13.106-108.

⁷⁶ KRAPIVINA 1993: 120, Figs. 63, 64.1-3.

⁷⁷ BURAKOV 1976: 102, type 8, Pl. X. 17-20, 22-31.

⁷⁸ STRJELETSKIY et al. 2005: 115, Fig. 19.1-2; Pl. 37 (urn 6); 42.16 (urn 81); 43 (urn 101); 58 (pit XIV-5).

⁷⁹ GUŠČINA, ŽURAVLEV 1999: 158-160, Pl. 4.14.

⁸⁰ VYSOTSKAYA 1994: Pl. 41.8; VYSOTSKAYA 1996: 169-73, Fig. 1.7, 171; PUZDROVSKIY, SOLOMONENKO 2007: 209, Fig. 3.1-2.

and Mirmekion⁸¹. However, it would be a mistake to consider that this vessel was confined strictly to Greek cities since it occurs not only in other areas of Moesia Inferior at Troesmis⁸², Ibida territory⁸³, and Tropaeum Traiani⁸⁴, but also in the countryside at Enisala⁸⁵, Sarichioi⁸⁶, and Niculițel⁸⁷. It is worth pointing out that at Niculițel the presence of table pitchers is extremely modest in comparison with the table amphorae. Also remarkable is the presence of table pitchers north of the Danube, most likely in the territory that continued to be inhabited by the Getian population⁸⁸. Their rim diameters vary between 10 and 11 and base diameters between 8 and 9.6. The variety of their fabrics also points to the existence of many local or other Pontic workshops. The fabric is fine with well-sorted inclusions, irregular or sub conchoidal breaks, in some cases with abundant, rounded yellowish or grayish quartz and brownish inclusions. The color varies between reddish brown (SYR 5/4), sometimes having a core of gray (GLEYS 5) to reddish yellow (SYR 6/6).

Catalogue:

Callatis	M. Basarab Street.	Pl. IX/48
inv. 391.	Completely preserved. RD 7.4; H 24.3; HD 2.9/1.3; MD 20.6; BD 7.4. Capacity c. 3 l.	
Callatis	Completely preserved. RD 4.8; H 16.5; HD 2/0.9; MD 13; BD 5.2.	Pl. IX/49
inv. 1027	Capacity c. 0.800 l	
KT 16	Preserved only the mouth, the neck and the upper handle attachment. RD 10. It has good parallels with the complete example inv. 391	Pl. IX/50
KT 31	Preserved only part of the mouth. RD 11.	Pl. IX/51
KT 32	Preserved only part of the mouth and the upper handle attachment. RD 10	Pl. X/52
KT 35	Preserved only part of the mouth. RD 11.	Pl. X/53
KT 36	Rim fragment. RD 11.	Pl. X/54
KT 38.	Base fragment. Traces of pitch inside the wall. BD 8.6.	Pl. X/55
KT 40.	Preserved only part of the mouth and the upper handle attachment. RD 11.	Pl. X/56
KT 41.	Base fragment. BD 10.	Pl. X1/57
KT 47.	Base fragment. BD 9.5	Pl. X/58
KT 52.	Preserved only part of the mouth and the upper handle. RD 11.6; HD 5.8/1.6.	Pl. X1/59
KT 53.	Preserved only part of the mouth. RD 10; HD 5.2/2.	Pl. X1/60
KT 62.	Preserved only a tiny part of the rim and the upper handle attachment. RD 11; HD 5.2/2.1.	Pl. X1/61
KT 63.	Preserved only part of the mouth. RD 11.4.	Pl. X1/62
KT 64.	Preserved only a tiny part of the rim and the upper handle attachment. RD ?; HD 5.7/1.7.	Pl. X1/63
KT 112.	Preserved only the mouth and the upper handle attachment. RD 11; HD 5/1.6.	Pl. X1/64

⁸¹ GAIDUKEVICH 1952: 169, Fig. 61.

⁸² Unpublished material.

⁸³ OPAIȚ, PARASCHIV 2013: 320.

⁸⁴ BOGDAN-CĂTĂNICIU, BARNEA 1979: 181, N II 3(7), Fig. 146.

⁸⁵ BABEȘ, 1971: 29, Fig. 8/1; MĂNUCU-ADAMEȘTEANU 1984: 32-33, Pl. III.

⁸⁶ BAUMANN 1995: 204, no. 33, Pl. XI.12, XII.11, XVIIb.1.

⁸⁷ NUȚU, STANC, PARASCHIV 2014: 61, Pl. 15.101-103.

⁸⁸ CROITORU 2011: map 46.

KT 168. Preserved part of the mouth and the handle. RD 11; HD 5/1.5. Pl. XI/65

EARLY ROMAN OLIVE OIL AMPHORAE

Peloponnesian/Aegean centres

1. Lower amphora base ending in a spike with a mushroom tip. This is a well-known Peloponnesian amphora of late Hellenistic times, well-known at Athens⁸⁹, but less so in the Pontic area⁹⁰. Most likely it represents a survival in KT context.

Catalogue:

KT 66. Preserved only the base. BD 5. Pl. XII/66

2. Lower part of an ovoid or globular amphora that ends in a cylindrical peg with a massive ring. The shape of this base is quite similar to that of a Peloponnesian Dr 25 type discovered in the Athenian Agora and dated to the late 1st and early 2nd c. AD⁹¹. However, the peg of our example is longer and the fabric is very fine and micaceous; the color is reddish yellow (5YR 6/8-7/8). This fabric suggests production in western Asia Minor.

Catalogue:

KP 50. Preserved only the base. BD 3. Pl. XII/67

Aegean/Asia Minor centres

These centres manufactured amphorae of type Dr 24 and Dr 24 similis⁹². If the centres of Dr 24 type productions are not known, at least two centres for Dr 24 similis type have been identified at Chios and Erythrai. A good fabric description has been published for both amphora types⁹³.

Dr 24 type

Only two rims and three bases can be included in this type. The rim shows a strong internal concavity while the bases are in the shape of a long spike, both morphological features suggesting a date in the 2nd century AD. At least two fabrics can be identified. One is hard, compact, with a sub conchoidal break, inclusions not visible to the naked eye, common sub-rounded and rounded grayish and yellowish quartz, with a reddish yellow color (7.5YR 6/6-7/6) (**KT 7 & 21**). The second is also hard, compact with an irregular or sub conchoidal break, inclusions not visible to the naked eye, and common white (calcareous material, shells?) inclusions that left elongated streaks. The color is light red (2.5YR 6/6-6/8) to reddish yellow (7.5YR 6/-7/6) (**KT 8, 20 & 34**).

Catalogue:

KP 21. Preserved only part of the mouth. RD 16. Pl. XII/68

KT 34. Preserved only part of the mouth. RD 20. Pl. XII/69

KT 7. Preserved only the base. BD 2. Pl. XII/70

KT 8. Preserved only the base. BD 2. Pl. XII/71

KT 20. Preserved only the base. BD 2. Pl. XIII/71

Dr 24 similis

This type is well-represented by one lid, nine rims, and three bases. Some of these examples belong to Chian production (**KT 5, 6, 15, 58**), others to different centres: **KT 19 & 106** have a sub conchoidal break with

⁸⁹ GRACE 1961: Fig. 38; OPAIT 2010: Pl. 87.1.

⁹⁰ Olbia: LEJPUNSKAJA 2010: 68, Pl. 36.6,9; Vani: OPAIT 2010: Pl. IX.1.1-2; Kara Tobe, pers. comm. VNUKOV.

⁹¹ OPAIT 2010b: 156, Pl. 88.3.

⁹² For the distinction between Dr 24 and Dr 24 similis see OPAIT 2007b.

⁹³ OPAIT 2007; OPAIT, TSARAVOPOULOS 2010; OPAIT, TSARAVOPOULOS 2011.

sparse to common white inclusions, sparse grayish-yellowish large inclusions (1mm) and a light red color (2.5YR 6/6-6/8); **K 24** has a sub conchoidal break and is rich in silver mica with a pink colour (5YR 7/4), while **KT 25** is rich in whitish inclusions (foraminifera and shells?) and has a very pale brown (10YR 7/4) color. The variety of fabrics clearly suggests a large area of production for this type.

Catalogue:

KP 12.	Lid fragment	Pl. XIII/73
KT 5.	Preserved only the base. BD 2.4.	Pl. XIII/74
KT 6.	Preserved only the base. BD 1.7.	Pl. XIII/75
KT 6-bis-	Preserved only part of the mouth. RD 14.	Pl. XIII/76
KT 10.	Preserved only part of the mouth. RD 17.6.	Pl. XIII/77
KT 58.	Preserved only the base. BD 1.6.	Pl. XIII/78
KT 19.	Preserved only part of the mouth. RD 16.	Pl. XIII/79
KT 24.	Preserved only part of the mouth. RD 16.	Pl. XIV/80
KT 25.	Preserved only part of the mouth. RD 16.2.	Pl. XIV/81
KT 26.	Preserved only part of the mouth. RD 17.	Pl. XIV/82
KP 48.	Preserved only part of the mouth. RD 14.	Pl. XIV/83
KT 106.	Preserved only part of the mouth. RD 14. The fabric of this fragment is very similar to that of a Kapitän 2 subtype, which suggests that a Chian workshop may have manufactured both amphora types.	Pl. XIV/84

Benghazi 298-299/San Lorenzo 7

This amphora type occurs in modest but relatively consistent quantities in both urban and rural areas in Roman Dobrudja⁹⁴. Two subtypes are known, one egg-shaped, the other more slender. Both subtypes are present at Callatis. It was manufactured from the 2nd century to the 5th century, becoming smaller during late Roman times. There are at least four fabrics, all of them being compact and hard with an irregular break. The first is very fine, compact, inclusions not visible to the naked eye, sub conchoidal break, tiny back inclusions (pyroxene?), and brownish-reddish particles. The color is creamish, very pale brown (10YR 8/3-8/4) (**KT 1**). The second is rich in foraminifera and shells while the core has a very pale brown color (10YR 7/3-7/4) and a pinkish exterior (7.5YR 7/4) (**KT 4**). The third is rich in angular and sub-angular grayish-yellowish quartz, abundant white inclusions, common brownish particles with a light red (2.5YR 6/6-6/8) color (**KT 3**). Finally, the fourth is rich in white and brownish inclusions and many tiny voids with a creamish buff, reddish yellow (7.5YR 7/6) color (**KT 29**).

Catalogue:

KT 1.	Preserved the mouth, neck and upper part of the handles. RD 15; HD 5/2.7.	Pl. XIV/85
KT 2.	Preserved only part of the mouth and handle, RD 15; HD 5/2.7.	Pl. XV/86
KT 3.	Preserved only part of the mouth. RD 16.	Pl. XV/87
KT 4.	Preserved only one handle fragment. HD 5/2.7.	Pl. XV/88
KT 29.	Preserved only part of the mouth. RD 15.	Pl. XV/89

⁹⁴ Noviodunum and Tomis: OPAIȚ 1987: 251-253, Figs. 7.3; 8.2.; Nufăru: OPAIȚ 1987: Fig. 7.4-5; Murighiol: OPAIȚ 1991: 141, Pl. 10.66; Telița: BAUMANN 2003: 204, no. 103.

EARLY ROMAN FISH PRODUCTS AMPHORAE

Piscatorial activity, as literary, epigraphic and archaeological sources inform us, was one of the main sources of income for the Pontic population⁹⁵. The industry thrived during the early Roman period, as attested on the northern shore of the Black Sea by the numerous discoveries of salting factories and amphorae for fish products. Unfortunately, there is as yet no comprehensive typology of these amphorae. As a general rule, they are large, sturdy vessels with ovoid bodies and massive handles⁹⁶. The frequent occurrence of amphorae for fish products at Callatis confirms not only the appetite of this market for a large variety of fish products but also the close commercial relations of this polis with the northern and possibly southern centres that manufactured these fish products.

North Pontic fish products amphorae**Zeest 75-variants (Chersonesan area?)**

A complete amphora of this type has already been found at Callatis⁹⁷. Our examples come only to attest to the popularity of this amphora in this city. The rim is almost triangular in section. The frequency of these discoveries suggests perhaps a strong connection with this production centre. The complete amphora has a capacity of c. 114 litres. The fabric of these examples suggests an origin in the Balaklava area. It is hard, compact with irregular break, few whitish, well-sorted inclusions barely visible to the naked eye, and brownish-grayish spots (iron minerals) usually under 0.3 mm. The color is light red (2.5YR 6/8) to reddish yellow (SYR 6/8).

Catalogue:

- | | | |
|-----------------|--|-----------|
| KT 86 A. | Preserved only part of the mouth. RD 20. | Pl. XV/90 |
| KT 86 B. | Preserved only part of the mouth. RD 22. | Pl. XV/91 |

Bosporan area

The first example (**KT 87**) has been assigned to the Bosporan area due to its fabric that exhibits a hackly break and rich calcareous lumps disposed in long streaks combined with small brownish spots. The color varies between light red (2.5YR 6/6) and red (2.5YR 5/6). The fabric of the second (**KT 13**) is also typical of the Bosporan area: irregular break, abundant tiny quartz-like grits, common foraminifera, red-brownish tiny spots (ferruginous quartz sand?), and sparse flecks of gold mica. The color is dark red (2.5YR 5/6).

Catalogue:

- | | | |
|---------------|---|-----------|
| KT 87. | Preserved only part of the mouth. RD 24. | Pl. XV/92 |
| KT 13. | Preserved only part of the mouth, neck and handle attachment.
RD 17; HD 4.6/4. | Pl. XV/93 |

South Pontic, Propontis area (?)

We have grouped these amphorae together mainly because their fabrics are well-sorted, with an irregular break, and abundant blackish (iron ore?), tiny inclusions (**KT 88, 94**), or abundant quartz-like grits (**KT 109-110**), or ill-sorted whitish and grayish angular quartz. Their color is usually light red (2.5YR 6/8), but **KT 97** is brownish, yellowish red (SYR 4/6-5/6).

Catalogue:

- | | | |
|---------------|--|------------|
| KT 88. | Preserved only part of the mouth. RD 22.
The fabric is abundant in small brownish inclusions, which suggests a south Pontic origin. | Pl. XVI/94 |
| KT 94. | Preserved only part of the mouth. RD 13. | Pl. XVI/95 |

⁹⁵ CURTIS 1991; CURTIS 2001; CURTIS 2005; WILKINS2005; LUND, GABRIELSEN 2005; OPAIT 2007a.

⁹⁶ OPAIT 2007a.

⁹⁷ ICONOMU 1968: 247, 250; Figs. 12-13.

KT 97.	Preserved only part of the mouth. RD 17.2.	Pl. XVI/96
KT 109.	Preserved only part of the mouth. RD 19.	Pl. XVI/97
KT 110.	Preserved only part of the mouth. RD 19.	Pl. XVI/98
KP inv. 3073.	Missing the mouth, one handle and the base. HD 2.6/2. MD 12.5	Pl. XVI/99

Table fish amphora

This vessel is characterized by hanging rim, and large mouth, a tall and large neck, ovoid in cross section handle, a with a central sharp groove, short, sloppy shoulders, an ovoid body with flaring ring base. It is well-known at Chersonesos⁹⁸, Tanais⁹⁹, Gorgippija¹⁰⁰, and Mirmekion¹⁰¹.

Catalogue:

KP 51.	RD 12, HD 5.5/1.2. The fabric is similar to KP 24.	Pl. XVI/100
---------------	--	-------------

LATE ROMAN WINE AMPHORAE

The fact that only few centres are represented is due to the inadequate collection of pottery fragments, as all fragments belong to the “passim” category.

South Pontic centres

These amphorae may have a south Pontic origin as evidenced by their fabrics, which is iron rich, and also by their distribution pattern; they have been frequently found not only on the northern and western Pontic shores but also in the interior of the Anatolian plateau at Pompeiopolis.

Böttger II-4/Opaiț D-II

This amphora is well distributed not only in the Pontic and Lower Danube area but also far inland of Anatolia at Pompeiopolis. It represents a south Pontic imitation of the famous LRA 1 amphora¹⁰². The fabric is hard with irregular break, with common nuclei of iron oxides and sparse to common white inclusions, which may leave elongated streaks; the color is red (10R 5/6-5/8). A whitish wash is a common occurrence on the exterior.

Catalogue:

KP 1.	Preserved the upper part. RD 4.4; HD 1.9/1.7	Pl. XVII/101
KP 38.	Preserved mouth, neck and the upper attachment of one handle. RD 10.	Pl. XVII/102
Callatis inv. 243	Preserved the upper part. RD 7.8; HD 2.5/1.7.	Pl. XVII/103
Opaț type BV KT 107.	Preserved only the mouth and the upper handle attachments. RD 4.3.	Pl. XVII/104

Uncertain types

Most likely these vessels belong to some south Pontic centres.

Catalogue:

KP 17.	Preserved a fragment of the lower part. BD 3.	Pl. XVII/105
KP 37.	Preserved a fragment of the lower part. BD 3.5.	Pl. XVII/106

West Pontic types

⁹⁸ Personal observations in the Chersonesos archaeological museum.

⁹⁹ ARSEN'EVA, NAUMENKO 1992: 157.

¹⁰⁰ ALEXEEVA 1997: Pl. 131.2.

¹⁰¹ GAJDUKEVICH 1987: 171, Fig. 191.

¹⁰² OPAIȚ 2004:29.

Kuzmanov XV/ Böttger III-1

It is a common amphora on the western shores of the Black Sea and it has been well defined by some scholars¹⁰³. Its main characteristics are a cylindrical, deeply wheel-ridged body ending in a massive knob or empty conical base. Recent discoveries suggest Noviodunum as one of the manufacturing centres. The fabric is dominated by large, brownish-black nuclei and spots of iron minerals (?), and tiny whitish (calcareous?) inclusions, which left voids and elongated streaks. The color varies between red (7.SYR 5/8) and light red (2.SYR 5/8).

Catalogue:

Callatis inv. 1711.	Completely preserved. RD 9.6; H 45.2; HD 3/2.	Pl. XVIII/107
KP 9.	Preserved only the conical, empty base. BD 4.	Pl. XVIII/108
KP 15.	Preserved neck, shoulder and one handle. HD 2.5/1.5	Pl. XVIII/109

Aegean centres**Cilicia/Cyprus- LRA 1**

This is one of the well-distributed wine amphorae of the eastern Mediterranean and Black Sea. Its production started in the second half of the 4th century¹⁰⁴ and reached a canonical shape already in the 5th and the 6th centuries, being imitated in many other areas with old traditions of wine production, such as Cyprus, Kos, and Rhodes¹⁰⁵. It is one of best defined amphora types being included in many amphora typologies¹⁰⁶. A large variety of fabrics is mostly hard with a hackly break and harsh surface. The inclusions are composed of well-sorted limestone, sometimes foraminifera, red-brown and red rocks. The colors vary between pinkish-cream (7.SYR 8/2-8/4), pale orange-brown (5YR 6/6), red-brown (2.SYR 6/6), and yellow (10YR 8/3)¹⁰⁷. All the fragmentary examples discovered at Callatis are dated to the 5th (**KP 7, KP 8**) and 6th century (**KP 2, KP 19, KP 26**).

Catalogue:

KP 7.	Preserved the upper part with the upper handle attachment; traces of <i>dipinti</i> on shoulder. RD 8. The fabric suggests a Cilician origin	Pl. XVIII/110
KP 8.	Preserved the upper part with the upper handle attachment; painted cross and traces of <i>dipinti</i> on shoulder. RD 8.5. The fabric suggests a Cypriot origin	Pl. XIX/111
KP 2.	Preserved the mouth and the part of one handle. RD 9; HD 3.3/2.2. The fabric suggests a Cilician origin	Pl. XIX/112
KP 26.	Preserved only a fragment of the lower part mended from two pieces. The fabric might be Cilician	Pl. XIX/113
Calatis passim.	RD 8.2; HD 3.5/2.5; MD 35; H 55	Pl. XIX/114

Ephesus

1. A complete amphora found at Callatis has recently been assigned to Ephesus¹⁰⁸. It belongs to a larger group of so-called bag-shaped amphorae. Our example has good parallels in the Athenian Agora¹⁰⁹ and at

¹⁰³ KUZMANOV 1985: 20-21, Pl. 10-11; BOTTGER 1982: 50, Pl. 12.d; OPAIT 2004: 28, Pl. 17.2, 7.

¹⁰⁴ REYNOLDS 2008: 72; OPAIT 2010a.

¹⁰⁵ DEMESTICHA 2000: 549; DIAMANTI 2010: 202-205, Pls. 1-83.

¹⁰⁶ Among the most well-known typologies we can mention: EGLOFF 1977; RILEY 1979; 1981; PEACOCK, WILLIAMS 1986; PIERI 2005.

¹⁰⁷ TOMBER, DORE 1998: 108.

¹⁰⁸ BEZECZKY 2013: 167-170, type Ephesos 56; GASSNER 1997: 108, 111, No. 413, Pl. 36.

¹⁰⁹ P 12695.

Torone¹¹⁰. The rim is small, separated by an undercut from the slightly bulged neck, small, ear-shaped handle ovoid in cross section, steep shoulder, and bag-shaped body ending in a cylindrical spike. Wheel-turned traces at the exterior. Fine, micaceous, yellow fabric (10YR 7/6) covered by a very pale brown slip (10YR 7/3-7/4). On the upper part of the body is a *dipinto* in red, *IE*. These letters do not indicate the capacity because the volume of this vessel is *c.*16 litres. Maybe the illegible *dipinti*, also in red, on the opposite side of the vessel indicates the capacity.

Catalogue:

Callatis Completely preserved, mended from many pieces and partially completed Pl. XX/115
inv. 2744. with plaster. RD 7.7; H 57; MD 28; BD 2.6;
 Capacity *c.* 16.3 l.

2. A second complete amphora also of Ephesian origin is the 4th century predecessor of LRA 3. The large variety of fabrics seems to support the idea that this type was manufactured in a large geographic area perhaps located mainly in western Asia Minor between Ephesus, Aphrodisias, and Sardis¹¹¹. Two different fabrics have recently been identified at Ephesus¹¹². The usual fabric is highly micaceous reddish brown to brown (2.5YR 4/4 to 5YR 4/4), but it can be buff micaceous (7.5YR 5/6-6/6), or dark buff non-micaceous, calcareous (5YR 5/6). Our vessel is fractionary and has a capacity of only *c.* 0.82 litres. It has good parallels at Salona¹¹³, Bezmyannaya (Chersonesan territory)¹¹⁴, and Athens¹¹⁵, where it is dated to the end of the 4th century AD.

Catalogue:

Callatis inv. 2035. RD 3.3; H 30.5; MD 9.4; BD 3.2. Capacity 0.83 l. Pl. XX/116

Cretan centres

Cretan amphorae appear to have had a vivid presence in this area, especially after the second half of the 6th century as is shown by recent discoveries made in Dobrudja¹¹⁶, Chersonesus, and Panticapaeum¹¹⁷. We have identified just one fragmentary upper amphora part that places Callatis on the map of Cretan wine distribution. The fabric is sedimentary, very fine, compact, and calcareous; the color is reddish yellow (5YR 6/8-7/8).

Catalogue:

KP 16. PH 8, HD 2.3/1.7 Pl. XX/117

Bag-shaped amphora centres

The evolution of some Aegean amphorae from barrel-shaped to bag-shaped body in late Roman times has been recently presented¹¹⁸. These amphorae, although not very numerous, compensate with their volumes of 30-35 litres on average, occasionally even nearly 60 litres¹¹⁹. The examples at Callatis are closer to amphorae of Torone III/Opaïț CII-2 type¹²⁰. The two amphora fragments from Callatis have quite a similar fabric although one (**KP 3**) is finer with inclusions less visible to the naked eye; sparse gold mica and grayish-brownish large inclusions (ferruginous quartz sand?), small lamellar brownish inclusions (iron minerals?), sparse to common large white particles, sparse foraminifera. The color is reddish yellow 7.5YR 6/6-7/6. A yellow-whitish

¹¹⁰ PAPADOPOULOS 1989: 98-100, Fig. 17; PAPADOPOULOS 2001: 558-68, Fig. 155.14439.

¹¹¹ PIERI 1998: 101.

¹¹² BEZECZKY 2013: 163, 166.

¹¹³ MARDESIC 1994: 295, No. 5.

¹¹⁴ Unpublished example.

¹¹⁵ ROBINSON 1959: 110, M 275, M 276, Pl. 29.

¹¹⁶ OPAIȚ 2004: 24; PARASCHIV 2006: 102, Pl. 28.78-80.

¹¹⁷ SMOKOTINA 2008: 107-108, Fig. 2-6; GOLOFAST 2001: 110, Fig. 29.5-6; GOLOFAST 2007: Fig. 13.4; SAZANOV 2014.

¹¹⁸ OPAIȚ 2004: 17-18; OPAIȚ 2014; ŞENOL2009: 251-56.

¹¹⁹ ŞENOL2009: 251-53.

¹²⁰ OPAIȚ 2004: 17.

slip covers the exterior of the body. The beginning of a *dipinto* in red is visible on the shoulder of **KP 14**. These vessels are dated especially to the 4th and 5th centuries AD.

Catalogue:

KP 3.	RD 10.	Pl. XX/118
KP 14.	RD 12, PH 8, HD 2.8/1.6.	Pl. XXI/119

Palestinian centres

LRA 4

This amphora type enjoyed increased popularity in the 5th and 6th centuries in the Lower Danube area¹²¹. The fact that we present only one example from Callatis is due to the current stage of research at this site. The fabric has already been well defined¹²². It is hard, sandy, varying from irregular to hackly break, well-to ill-sorted quartz and sparse to common limestone. The color is drab brown (5YR 5/6).

Catalogue:

KP 32.	BD 3	Pl. XXI/120
---------------	------	-------------

LATE ROMAN OLIVE OIL AMPHORAE

During late Roman times, the typical containers for carrying olive oil were amphorae of type LRA 2. Its production in the Argolid (Kounoupi)¹²³ and Cnidos¹²⁴ seems to be attested by some kiln discoveries. Certainly, it is one of the most frequently found amphorae in the border provinces of the Lower Danube area¹²⁵. Its presence is connected with the controlled trade exercised by the government in order to keep a constant supply for these garrisons¹²⁶. The fabric is very hard, well- to ill-sorted with common limestone that occurs as large grains in Peloponnesian examples and as a groundmass of small limestone on the western coasts of Asia Minor, and mica¹²⁷. Occasionally some examples have sparse brownish lenses. The color varies from very pale brown (10YR 8/4), to brownish yellow (10YR 6/6), to light red (2.5YR 6/6).

This type is represented by only a few lids, one rim fragment, and a fragmentary upper part. The latter (inv. 2801) is important for it bears a *dipinto* indicating the amphora capacity, ΝΔ (53 *sextarii*=29.494 l), which is a typical capacity of LRA 2 at this time¹²⁸.

Catalogue

Callatis	RD 11.7; HD 4/2.6.	Pl. XXI/121
inv. 2801.		
KP 47.	RD 12, PH 7.	Pl. XXI/122
KP 10.	RD 8.4.	Pl. XXI/123
KP 11.	RD 7.6.	Pl. XXI/124
KP 13.	RD 8.6.	Pl. XXII/125
KP 32.	RD 8.	Pl. XXII/126

¹²¹ OPAIȚ 2004: 20-22.

¹²² TOMBER, DORE 1998: 96; PEACOCK, WILLIAMS 1998: 199.

¹²³ ZIMMERMANNMUNN 1985: 342-343.

¹²⁴ TUNNA, EMPEREUR, PICON, DÖGER 1987: 49.

¹²⁵ OPAIȚ 2004: 11-12.

¹²⁶ KARAGIORGOU 2001; OPAIȚ 2004: 97.

¹²⁷ PEACOCK, WILLIAMS 1986: 184.

¹²⁸ See for ex. POPESCU 1976: 101-118.

Storage ware

Very few storage vessels were found in the edifice with a hypocaust. Many of them belong to Opaiț type I (**KT 158, 159, 161**), which are characterized by a large mouth, an almond-shaped rim, and two massive strap handles attached directly to the rim. It is well known in Roman Dobroudja¹²⁹. Another vessel with a “hammer-headed” rim, to borrow a term coined by Riley, is nicely decorated on top with ovoid impressions (**KT 102**).

Catalogue:

KT 159.	RD 14; HD 4.5	Pl. XXII/127
KT 102.	RD 32.	Pl. XXII/128

Kitchen ware

This entire ceramic category, which includes pots, casseroles, and bowls, comes from the edifice with a hypocaust and thus can be dated mostly to the 2nd and the 3rd centuries AD. It sheds light not only on the domestic activities that took place in this city but also on the intensity of linkages with the Aegean world in terms of both diet and trade connections.

Pots

Type I

Type I is characterized by a flaring, thickened rim with an internal concavity to support the lid. The body is ovoid and covered by wheel traces. The base is flat, and one or two small handles are attached under the rim and shoulder. It was manufactured in different centres as shown by its differing fabrics, either red-brownish or whitish kaolin. This is one of the most represented types found not only at Callatis but also at Histria¹³⁰, Tomis¹³¹, Ibida¹³², Troesmis¹³³, and in Oltenia¹³⁴. Some minor morphological differences and the different fabrics compel us to distinguish at least two variants: **A** with a red-brownish fabric and **B** with a whitish fabric, kaolin fabric, perhaps imported from Durostorum.

Type IA

Catalogue:

KT 17.	Complete profile, missing one third. RD 10.4; HD 1.5/0.9; MD 12.4; BD 5.2; H 11.5.	Pl. XXII/129
KT 150.	Rim, handle, and body fragment. RD 20.	Pl. XXIII/130
KT 151.	Rim, handle, and body fragment. RD 13.	Pl. XXIII/131

Type IB

Catalogue:

KT 152.	Rim and body fragment. RD 19.	Pl. XXIII/132
KT 153.	Rim and body fragment. RD 17. Kaolin rich fabric.	Pl. XXIII/133
KT 154.	Rim and body fragment. RD 14. Kaolin rich fabric.	Pl. XXIII/134
KT 189.	Rim and body fragment. RD 15.	Pl. XXIII/135

¹²⁹ SUCEVEANU 2000: 122-123, type XXXVIII, Pl. 55; OPAIȚ 2004: 3, type 1, Pl. 2.1.

¹³⁰ SUCEVEANU 2000: 113-117, type 35, Pls. 48-50.

¹³¹ BĂJENARU 2013: 65, Pl. 10.80.

¹³² Personal observations in the excavation's store room.

¹³³ OPAIȚ 1980: 330, Pl. I.1-2.

¹³⁴ POPILIAN 1976: 87, type 2, Pl. XXXIII.325-329.

Type II

Type II is represented by two examples, both with a horizontal rim; one has a shallow concavity on top. The body seems to be less “round-bellied,” but more sack-shaped. It shares similarities with some pots discovered at Tomi¹³⁵ and Tanais¹³⁶. It might represent a local imitation of an Aegean type¹³⁷.

Catalogue:

- | | | |
|----------------|--|---------------|
| KT 148. | Rim, handle, and body fragment. RD 11. | Pl. XXIII/136 |
| KT 147. | Rim and body fragment | Pl. XXIV/137 |

Type III

This type is characterized by a flaring rim, rectangular in section, and a wheel-ridged globular body. It has good parallels at Tomi¹³⁸, Histria¹³⁹, Tejița-Amza¹⁴⁰, and Olbia¹⁴¹.

Catalogue:

- | | | |
|----------------|--|--------------|
| KT 143. | Rim, handle, and body fragment. RD 17.5; HD 2.7/1. | Pl. XXIV/138 |
| KT 188. | Rim and body fragment. RD 9. | Pl. XXIV/139 |
| KT 173. | Rim, handle, and body fragment. RD 9; HD 1.2/08. | Pl. XXIV/140 |

Varia

Some pots of differing shapes and represented by unique examples could not be included in a precise typology. We, therefore, decided to present them individually.

A. The rim is thickened with an internal ledge close to the top of the internal side of the rim. Handles are attached under the rim.

- | | | |
|----------------|---|--------------|
| KT 142. | Rim, upper handle attachment, and body fragment. RD 18. | Pl. XXIV/141 |
|----------------|---|--------------|

B. The rim is flaring, separated by a pronounced offset from the bag-shaped body.

- | | | |
|----------------|---------------------------------|--------------|
| KT 181. | Rim and body fragment. RD 17.6. | Pl. XXIV/142 |
|----------------|---------------------------------|--------------|

C. The rim is flaring, triangular in section while the body seems to be globular. The fabric is rich in kaolin. It has good parallels at Tomis¹⁴² and Histria¹⁴³.

- | | | |
|----------------|-------------------------------|--------------|
| KT 144. | Rim and body fragment. RD 15. | Pl. XXIV/143 |
|----------------|-------------------------------|--------------|

D. Heavy rim, beveled externally, and with shallow internal concavity; globular body with large grooves. It has good parallels at Murighiol, Tomis, Beroe, and Argamum¹⁴⁴. It is dated to the second half of the 6th c. AD.

- | | | |
|----------------|---|--------------|
| KT 145. | Rim and body fragment. | Pl. XXIV/144 |
| KT 155. | Rim and body fragment of a handmade pot. RD 20. | Pl. XXV/145 |

¹³⁵ BĂJENARU 2013: 63, Nos. 60-61, Pl. 8.60-61.

¹³⁶ ARSEN'EVA, NAUMENKO 1992: Fig. 61.4, 6.

¹³⁷ HAYES 1983: 105, 122, Nos. 56-57, Fig. 5.56-57; WILLIAMS, ZERVOS 1983: 16, Fig. 6; SACKETT 1992: 233, D13, Pl. 174.13 (Hadrianic times); LADSTÄTTER 2005: 251, Fig. 44.K 795 (third quarter of the 3rd century AD).

¹³⁸ BĂJENARU 2013: 64-65, Nos. 75-78, Pl. 10.75-78.

¹³⁹ SUCEVEANU 2000: 129-133, Pl. 60-62.

¹⁴⁰ BAUMANN 1995: Pl. LXIII.1.

¹⁴¹ KRAPIVINA 1993: 102, Fig. 34.7-8.

¹⁴² BĂJENARU 2013: 65, Pl. 10.79.

¹⁴³ SUCEVEANU 2000: 130-133, Pls. 61.18; 62.21, 27.

¹⁴⁴ OPAIȚ 2004: 47-48, type IX 2, Pl. 36.4-10.

Lids

- | | | |
|----------------|---------------------------------|-------------|
| KT 165. | Handle and body fragment. PH 4. | Pl. XXV/146 |
| KT 166. | Body fragment. RD 28. | Pl. XXV/147 |

Casserole

A large variety of casseroles has been found in the same context with the pots and is largely dated between the 2nd and 3rd centuries AD. All of them bear traces of soot. We have identified four types.

Type I

The main characteristic of this type, well-represented by KT 130, is its horizontal rim with a piecrust handle and hemispherical, ribbed body. This type of handle is usually met in the Greek milieu since Hellenistic times¹⁴⁵. It seems to enjoy the same popularity in the western Pontic Greek cities as it is found not only at Callatis but also at Histria¹⁴⁶ and Tomis¹⁴⁷.

Two other examples have been included in this type, although they can be considered variants of this main type. However, the shape of the rim and body were close enough to unite them into one type. One example, KT 123, has only small indentations on the exterior of the rim and shallow grooves on the exterior of the body. Its coarser fabric indicates that it is the product of a different workshop. The second example is KT 124, which has a similar shape but the horizontal rim is slightly raised on the interior and separated from the body by a small undercut, while the body is plain. It also has parallels at Histria¹⁴⁸ and Tomis¹⁴⁹. It is possible that these variants represent either a gradual simplification of the form from the 2nd to mid/second half of the 3rd century, or that KT 123 and 124 were manufactured under the strong influence of KT 130. In the 4th century, this type continued to be manufactured, but the piecrust handles were replaced by two real handles¹⁵⁰.

Catalogue:

- | | | |
|----------------|---------------------------------|--------------|
| KT 129. | Rim and body fragment. RD 40.8. | Pl. XXV/148 |
| KT 130. | Rim and body fragment. RD 25. | Pl. XXV/149 |
| KT 123. | Rim and body fragment. RD 41. | Pl. XXV/150 |
| KT 124. | Rim and body fragment. RD 24. | Pl. XXVI/151 |

Type II

The second type has an everted rim and hemispherical body, but it is shallow in comparison with the first type. One of our fragmentary examples (KT 132) has a lug handle. This form has good parallels not only in the west Pontic Greek cities such as Tomis¹⁵¹ and Histria¹⁵², but also at Athens¹⁵³.

Catalogue:

- | | | |
|----------------|---------------------------------|--------------|
| KT 131. | Rim and body fragment. RD 22.6. | Pl. XXVI/152 |
| KT 132. | Rim and body fragment. RD 30. | Pl. XXVI/153 |
| KT 179. | Rim and body fragment. RD 35. | Pl. XXVI/154 |

¹⁴⁵ ROTROFF 2006: 100-102.

¹⁴⁶ SUCEVEANU 2000: 50-52, type XIII, Pl. 16-17.

¹⁴⁷ BĂJENARU 2013: 66, Pl. 11.82-86.

¹⁴⁸ SUCEVEANU 2000: 95, Pl. 38.XXVIII.4.

¹⁴⁹ BĂJENARU 2013: 66-67, Pl. 11.87.

¹⁵⁰ OPAIȚ 2004: 55, Casseroles type II, Pl. 42.8-9.

¹⁵¹ BĂJENARU 2013: 67, Pl. 11.88.

¹⁵² SUCEVEANU 2000: 93, type XXVII, Pl. 37.2.

¹⁵³ ROBINSON 1959: 67, K 89, Pl. 72 (dated middle of the 3rd century AD).

Type III

This type has a gentle everted rim and hemispherical grooved body. It shares some similarities with a vessel discovered at Troesmis¹⁵⁴, which also has a fabric rich in kaolin (?) similar to our example. Therefore we do not exclude an import from a Danubian workshop, either Durostorum or Troesmis.

Catalogue:

KT 136. Rim and body fragment. RD 23. Kaolin rich fabric. Pl. XXVI/155

Type IV

It has a flat, horizontal rim and slightly carinated body, slightly concave at its upper part. Two flat handles are attached under the rim and above the carination of the body. A smaller variant, maybe of the 3rd century AD, is represented by KT 172. The fabric is gritty, gray with red core. This type is common in the Aegean¹⁵⁵ but, if the rim of the examples found at Knossos is sloping, our examples do not have such inclined rims. In the Lower Danube and Pontic areas, it occurs not only in an urban milieu at Tomis¹⁵⁶, Histria¹⁵⁷, and Troesmis¹⁵⁸, but also at Niculițel¹⁵⁹ and Sarichioi¹⁶⁰. In the northern Pontic area, it is present at Olbia¹⁶¹, Chersonesos (territory)¹⁶², and Tanais¹⁶³. Most likely it was imported from Phocaea and travelled together with the well-known Phocaeen tableware¹⁶⁴. It enjoyed an especially massive presence on the western coast of Asia Minor at Ephesus¹⁶⁵ and Ilion (Troia)¹⁶⁶.

Catalogue:

KT 117. Rim, handle, and body fragment. RD 21; HD 2.8/0.7. Pl. XXVI/156

KT 118. Rim and body fragment. RD 26.2. Pl. XXVI/157

KT 119. Rim and body fragment. RD 31; HD 2.5/0.7. Pl. XXVII/158

KT 122. Rim and body fragment. RD 20; HD 1.8/0.8. Pl. XXVII/159

KT 172. Rim and body fragment. RD 24; HD 2.6/1.2. Pl. XXVII/160

Frying pans**Type I**

The main characteristic of this type is its tronconic, straight-sided body. However, the rim is different and serves to divide it into two variants.

- A. The rim is pulled inside and slightly beveled at a high angle. Most likely it represents the late variant of an earlier vessel dated at Knossos during the early-mid 2nd century AD¹⁶⁷. Our example may be later

¹⁵⁴ OPAIȚ 1980: 330, Pl.II.1.

¹⁵⁵ ROBINSON 1959: 42; G 194, 195, Pl. 7, 56; J 57, Pl. 11; 67; K 93, Pl. 14; HAYES 1983: 106, Casseroles type 2, Fig. 7; SACKETT 1992: 233, D3/12, Pl. 174.12 (Hadrianic times); 243, R1/4, Pl. 184; 245; R2/16, Pl. 185 (late 2nd c. AD); 248, S1/14, Pl. 188 (Severan times); PÜLZ 1985: 91, 98; No. 68; Fig. 16.68; GASSNER 1997: 178, Pl. 59, 742; LADSTÄTTER 2010: 274, A-K 903-908, Pl. 114; HEATH, TEKKÖK 2006-2009b: Nos. 4-5.

¹⁵⁶ BĂJENARU 2013: 62-63, Nos. 64-65.

¹⁵⁷ ALEXANDRESCU 1966: 208, T XXIV.8, Pl. 99; SUCEVEANU 2000: 89, type XXIV, Pl. 35 (some of them might be imitation of the Aegean products).

¹⁵⁸ OPAIȚ 1980: 330, 351; No. 15; Pl. III.2.

¹⁵⁹ BAUMANN 1983: 169, No. 2, Pl. XXXIV.5.

¹⁶⁰ BAUMANN 1995: 202, No. 29, Pl. XI.3.

¹⁶¹ KRPIVINA 1993: 101, Fig. 32.

¹⁶² KLENINA 2004: 75-76, Nos. 258-271, Fig. 28.

¹⁶³ ARSEN'EVA, NAUMENKO 1992: Fig. 61.3.

¹⁶⁴ ÖZYIGIT 1991: Fig. 13.

¹⁶⁵ GASSNER 1997: Pls. 58-59.740-742; LADSTÄTTER 2010: 258, A-K 710, Taf. 103.

¹⁶⁶ HEATH, TEKKÖK 2006-2009b: cat. nos. 4-5.

¹⁶⁷ SACKETT 1992: 238, Pl. 179.43.

(3rd–4th century AD?) as it has similarities with a casserole discovered at Cogealac¹⁶⁸. A similar casserole occurs at Ivai'lovgrad¹⁶⁹.

Catalogue:

KT 127. Rim and body fragment. RD 21. Pl. XXVII/161

B. The rim is horizontal and slightly grooved on top. It continued to enjoy certain popularity also during late Roman times¹⁷⁰.

Catalogue:

KT 125. Rim and body fragment. RD 25. Pl. XXVII/162

Type II

The rim is thickened and the body is tronconic with a flat base; wheel marks are evident on the upper part of the body. It is possible that this vessel was equipped with one handle necessary for sautéing or gently "shaking food over the fire."¹⁷¹ This form has good parallels at Histria¹⁷², Ephesus¹⁷³, and in Hellenistic and Roman Gerasia (Laconia)¹⁷⁴.

Catalogue:

KT 128. Rim and body fragment. RD 20.4. Pl. XXVII/163

KT 126. Rim and body fragment Pl. XXVII/164

All-purpose bowl (?)

It has a shallow body and a slightly thickened, inturned rim. The fragment still preserves one flat, flanged lug-handle, but certainly, it had two handles. It is so far a unique example in Moesia Inferior. The best parallel is in Corinth, but the example has a horizontal rim with a convex top surface¹⁷⁵. Quite similar vessels have been found at Berenice but in a local fabric and dated to late Roman times¹⁷⁶. A well-preserved example found off Skerki Bank might also belong to this type, although it has two wide and thick lug handles; there are patches of slip on the interior of the rim, and traces of fire-blackening on the exterior. According to the authors, this vessel resembles Pompeian Red Ware¹⁷⁷. Our example also lacks evidence of secondary firing and soot; this suggests that it was used in the oven, perhaps for roasting legumes. According to some ethnographic studies, such vessels are used today in Cyprus, Sardis and Crete for roasting chickpeas¹⁷⁸.

Catalogue:

KT 133. Rim, handle, and body fragment. RD 24. Pl. XXVIII/165

The fabric is coarse, rich in grayish coarse, and the color is pale red (10R 6/4) to light red (10R 6/6).

Bowls

Two types of bowls have been identified in the edifice with hypocaust. Unfortunately, the fragmentary preservations of these pieces prevent a complete morphological description. They may have had a domestic utility.

¹⁶⁸ OPAIȚ 2004:Pl. 42.4.

¹⁶⁹ KABAKČIEVA 1986: 94, Pl. 41.460.

¹⁷⁰ OPAIȚ 2004: Pl. 42.1-3; GASSNER 1997: Pl. 59.743-745.

¹⁷¹ LANGRIDGE-NOTI 2015: 152-53.

¹⁷² SUCEVEANU 2000: 90, type XXV, Pl. 36.4-5.

¹⁷³ LADSTTÄTER 2005: Pl. 206, K 907.

¹⁷⁴ LANGRIDGE-NOTI 2015: 152, Fig. 13.4.a.

¹⁷⁵ WILLIAMS AND ZERVOS 1983: 16, Fig. 7.

¹⁷⁶ RILEY 1979: 269, Fig. 106.540, 543.

¹⁷⁷ MCCANN, OLESON 2004: 146-147, Figs. 7.33-7.34.

¹⁷⁸ KYRIAKOPOULOS 2015: 258, Fig. 23.5.c.

Type I

The upper part is vertical and its lower part becomes hemispherical with a small carination at the joining point. According to a Tomitan discovery, it ends in a flaring ring foot¹⁷⁹. Massive wheel marks are present on the upper part of the body. There are two types of fabrics: the first is fine with common brownish and black inclusions (iron minerals?), some of them quite large (c. 0.5mm), while the second fabric has sparse to common foraminifera, sparse quartz, and large black nodules. These differences in fabrics point to two different workshops. This type of bowl is known at Troesmis, where it is locally made¹⁸⁰, as well as at Histria¹⁸¹, Tomis¹⁸², and probably also Ephesus¹⁸³.

Catalogue:

KT 137.	Rim and body fragment. RD 21.	Pl. XXVIII/166
KT 138.	Rim and body fragment. RD 20.	Pl. XXVIII/167
KT 139.	Rim and body fragment. RD 22.	Pl. XXVIII/168

Type II

The hemispherical body with a slightly incurving rim suggests a use for eating but the coarse fabric and some traces of secondary firing and soot may point toward its use in the kitchen. The fabric is compact, with common, well-sorted, grayish quartz and sparse brownish inclusions; the color is red (2.5YR 4/8-5/8). It is similar to a bowl found at Ilion (Troia)¹⁸⁴.

Catalogue:

KT 140.	Rim and body fragment. RD 27.	Pl. XXVIII/169
----------------	-------------------------------	----------------

Greek caccabé

The presence of this fragment in an early Roman context is certainly residual. This bi-conical shape with flaring rim and internal flange is known at Athens in contexts of 425-400 BC¹⁸⁵. Bats considers these vessels to be caccabai and not chytrai¹⁸⁶.

Catalogue:

KT 116.	Fragment of rim, handle and body. RD 15; HD 2.6/0.9.	Pl. XXVIII/170
----------------	--	----------------

CONCLUDING REMARKS

This brief presentation of a very fragmentary ceramic collection was intended not only to give an indication of the trade connections or dietary and cooking preferences of the Callatians during Roman times, but also to prove that even tiny, stray sherds can become useful if they are correctly published. It is now up to the next generation of scholars to publish the enormous quantity of pottery deposited in the museum's and institutes' storerooms.

The large variety of wine, olive oil, and fish product amphorae suggested by this modest pottery collection confirms the extensive trade network established by this city not only with Pontic centres, but also with many eastern Mediterranean areas during early and late Roman times.

¹⁷⁹ BĂJENARU 2013: Pl. 12.92.

¹⁸⁰ OPAIȚ 1980: 336, 358; No. 63; Pl. XIII.7.

¹⁸¹ SUCEVEANU 2000: 42-43, type X, Nos. 7-15, Pl. 12.

¹⁸² BĂJENARU 2013: 67-68, Nos. 91-92, Pl. 12.91-92.

¹⁸³ LADSTÄTTER 2005: 325, K 594, Taf. 185.

¹⁸⁴ HEATH, TEKKÖK 2006-2009b: No. 2.

¹⁸⁵ SPARKES, TALCOTT 1970: 373, No. 1953, Pl. 94, Fig. 18.

¹⁸⁶ BATS 1988: 46-48.

If the presence of Chersonesan, Sinopean and Heracleian wines were not a novelty for Callatians, as they were accustomed to these wines since the Classical and Hellenistic periods, the variety of Aegean wines that arrived in small amphorae (Cretan, Pergamene, Kapitän 2/Chian (?)) or larger vessels (Dr 2-4, Troesmis X) shows not only the sophisticated taste of the local elite, but also its financial possibilities and network connections. The imported wine seems to be successfully supplemented by local or provincial wine, as the table amphorae but mainly the large number and variety of table pitchers suggest. To these vessels, which were customarily used for table wine, we should add other vessels made of perishable materials, such as barrels and skins. The presence of imported and local wine also suggests social differences and financial resources existent in the local market.

Large quantities of olive oil reached Callatis in large vessels of c. 50-75 litres from Aegean centres (Dr 24 similis) and from the Cilician area (Dr 24 and Bengazi 298-299/San Lorenzo 7 types). If we consider that c. 20 olive oil amphorae have been identified, with an average capacity of c. 60 litres, we reach an amount of c. 1200 olive oil litres. It is worth noting that this olive oil reached Callatis from numerous areas, such as the Peloponnese, the Aegean, the western coast of Asia Minor, and Cilicia. In quantitative terms, the olive oil containers that predominate in the archaeological context found at School no. 5 suggest a specific function of this area (*thermae?*).

The fish products are also well represented by many large Crimean and south Pontic vessels. Their presence in a maritime city such as Callatis demonstrates the local interest in having a large array of fish products able to satisfy the palate of a sophisticated elite through an “haute cuisine.”

For late Roman times, the reduced size of the ceramic collection precludes us from making general conclusions. However, the situation seems to be changed in comparison with the early Roman period. The variety of imported wine and olive oil is diminished in the analyzed pottery lot. The north Pontic wine is out of the market by this time, but it seems to be replaced by an unknown south Pontic centre. The Aegean centres (Böttger II-4/Opaiț D-II, LRA 1-Cilicia/Cyprus, LRA 1-Ephesus, Cretan, Bag-shaped) continue on the market, but another Levantine area amphora (LRA 4) arrived in the Callatian market. The local, provincial wine is represented by amphorae of Kuzmanov XV type. The olive oil arrived only in amphorae of LRA 2 type originating in the Aegean and the Peloponnese.

The kitchen ware also displays a large variety of pots (three types), casseroles (four types), and frying pans (three types). Callatian society boasted not only an advanced level in cookery, but also diversified trade connections that allowed it to import Aegean and west Anatolian cooking vessels, while others were locally or provincially made. Of course, one can assume the existence of an advanced level of gastronomy in a city such as Callatis, which presumably inherited the old tradition of Greek cuisine, but only now can we begin to quantify it. The presence of similar, locally made kitchen tools at Callatis, Histria and Tomis suggests common foodways and cuisine that defined a cultural identity. The presence of imported and highly efficient kitchen ware emphasizes the close connections of this koine with the Greek communities of the Aegean and western Asia Minor. They attest to a purposeful access to food and networks of supplying pottery as well as to the presence of the same dietary habits, thinking toward food, as well as preparing and consuming these foodstuffs.

The presence of some type of pottery, such as those pots of type I or bowls with ridged body, also suggests the attachment of this city to the west Pontic area in terms of diet, food preparation, and consumption. Also, some rare vessels, such as the frying pan (**KT 128**) and the “all-purpose” vessel (**KT 133**), represent an important addition to the kitchen inventory in use during early Roman times in the Greek milieu of the province of Moesia Inferior.

As a final remark, we can say that many of these conclusions were to be expected. After all, the literary, epigraphic, and archaeological evidence indicates that Callatis was a cosmopolitan maritime city with a flourishing countryside and a large trade network. However, the ceramic discoveries serve as important factual elements that were missing heretofore. We can only hope that it will be possible to have more, regular and well-planned excavations in this important city of the western Black Sea. If so, then further and more detailed information will be available for reconstructing the ancient history of Callatis.

BIBLIOGRAPHY

- ALEXANDRESCU 1966 Alexandrescu, P., *Necropola tumulară. Săpături 1955–1961*, in: Condurachi, E. (ed.), *Histria II*, Ed. Academiei R.S.R., București, 133–294.
- ALEXEEVA 1997 Alekseeva, E. M., *Antichnyiy gorod Gorgippij*, Moscow. Antičnyj
- ARDEȚ 2006 Ardeț, A., *Amforele din Dacia Romană*, Ed. Mirton, Timișoara.
- ARSEN'EVA, NAUMENKO 1992 Arsen'eva, T. M., Naumenko, S. A., *Usad'by Tanaisa*, Moscow.
- AVRAM 2015 Avram, A., *Callatis*, in: Avram, A., Hanscam, E., Rogers, G., Durand, N., Zahariade, M. (eds.), *Lexicon of the Greek and Roman Cities and Place Names in Antiquity ca. 1500 B.C.–Ca. A. D. 500*, fasc. 15, *Caesarodunum – Cannabiaca*, Amsterdam, col. 2209-2239.
- AVRAM 2007 Avram, A., *Kallatis*, in: Grammenos, D. V., Petropoulos, E. K. (eds.), *Ancient Greek Colonies in the Black Sea 2*, vol. I, *British Archaeological Reports, International Series*, 1675 (I), Oxford, 239-286.
- AURIEMA, QUIRI 2004 Auriemma, R., Quiri, E., *Importazioni di anfore orientali nell'Adriatico tra primo e medio impero*, in: Eiring, J., Lund, J. (eds.), *Transport Amphorae and Trade in the Eastern Mediterranean. Acts of the International Colloquium at the Danish Institute at Athens, September 26–29, 2002*, The Danish Institute at Athens, Athens, 43-55.
- BABEȘ 1971 Babeș, M., *Necropola daco-romană de la Enisala*, in: SCIV, 22, 1, 19–46.
- BARNEA 1991 Barnea, A., *La Dobroudja aux IV^e – VII^e siècles n.è.*, in: Suceveanu, A., Barnea, A., *La Dobroudja Romaine*, Ed. Enciclopedică, Bucarest, 154-317.
- BAUMANN 2003 Bauman, V. H., *Noi săpături de salvare în așezarea rurală antică de la Telița-Amza, jud. Tulcea*, in: *Peuce*, I (XIV), 155-232.
- BAUMANN 1995 Baumann, V. H., *Așezări rurale antice în zona Gurilor Dunării*, Institutul de Cercetări Eco-muzeale, Tulcea.
- BĂJENARU 2013 Băjenaru, C., *Contextes ceramiques de Tomis. (I). Un ensemble de le fin du II^e–debut du III^e s. ap.J.-C.*, in: *Pontica*, XLVI, 41-110.
- BĂRBULESCU, BUZOIANU, GEORGESCU 1986 Bărbulescu, M., Buzoianu, L., Georgescu, N. C., *Importuri amforice la Albești, jud. Constanța: Thasos*, in: *Pontica*, XIX, 61-74.
- BOGDAN-CĂTĂNICIU, BARNEA 1979 Bogdan-Cătănicu, M., Barnea, A., *Ceramica și descoperiri mărunte*, in: Barnea, I., Bogdan-Cătănicu, M., Barnea, A., Papuc, Gh. (eds.), *Tropaeum Traiani, I. Cetatea*, Biblioteca de arheologie XXV, București, 177-226.
- BJELAJAC 1996 Bjelajac, L., *Amfore gornjo mezijskog Podunavlja*, (col. "Posebna Izdanja", 30), Belgrade.
- BÎRZESCU 2012 Bîrzescu, I., *Histria XV. Die archaischen und frühklassischen Transportamphoren*, Ed. Enciclopedică, București.
- BONDOC 2014 Bondoc, D., *Roman amphorae from Cioroiul Nou (Romania)*, in: RCRF, Acta 43, 105-12.
- BOUNEGRU 2005 Bounegru, O., *Ceramică sigilată pergameniană de la Callatis*, in: *Pontica XXXVII-XXXVIII (2004-2005)*, 169-174.
- BURAKOV 1976 Burakov, A. V., *Kozyrskoe gorodishche rubezha i pervyh stoletiiy nashey ery*, "Naukova Domka", Kiev.
- BAUMANN 1983 Baumann, V. H., *Ferma romană din Dobrogea*, Muzeul "Deltei Dunării", Tulcea.
- CARANDINI, PANELLA 1981 Carandini, A., Panella, C., *The trading connections of Rome and Central Italy in the late second and third centuries: the evidence of the terme del Nuotatore excavations, Ostia*, in: King, A., Henig, M (eds.), *The Roman west in the Third century: Contributions from Archaeology and History*, 1, *British Archaeological Reports International Series*, 109, 487-503.
- COJA, DUPONT 1979 Coja, M., Dupont, P., *Histria V. Ateliers céramiques*, Ed. Academiei R.S.R., Paris-București.
- CONOVICI, AVRAM, POENARU-BORDEA 1989 Conovici, N., Avram, A., Poenaru-Bordea, Gh., *Nouveaux timbres amphoriques sinopéens de Callatis*, in: *Dacia*, N.S., 33, 111-123.

- CROITORU 2011 Croitoru, C., *Roman Discoveries in the East Carpathian Barbaricum (1st century B.C. – 5th century A.D.)*, Ed. Istros, Brăila.
- GAIDUKEVICH 1952 Gaidukevich, V. F., *Raskopki Mirmekii v 1935–1938 gg.*, in: *MLA*, 25, 135–220.
- GRACE 1961 Grace, V. R., *Amphorae and the Ancient Wine Trade*, Picture Book no.6, American School of Classical Studies at Athens, Princeton.
- GUDEA 1980 Gudea, N., *Castrul roman de la Brețcu. Încercare de monografie*, in: *Acta Musei Porolissensis*, 4, 255-365.
- GUŠČINA, ŽURAVLEV 1999 Gushchina, I. I., Zhuravlev, D. V., *Pogrebeniya s bronzovoiy posudoiy iz mogil' nika Bel'bek IV v Yugo-Zapadnom Krymu*, in: *Rossijskaja Arheologija*, 2, 157–171.
- IONESCU, GEORGESCU 1997 Ionescu, M., Georgescu V., *Cercetări periegetice în teritoriul callatian*, in: *SCIVA*, 48, 2, 155-175.
- KASSAB TEZGÖR 2010 Kassab Tezgör, D. (ed.), *Les fouilles et le matériel de l'atelier amphorique de Demirci près de Sinope*, in col. "Varia Anatolica" XXII, De Boccard, Paris.
- KELEMEN 1990 Kelemen, M. H., *Roman amphorae in Pannonia III*, in: *ActaArchHung*, 42, 147–193.
- KLENINA 2004 Klenina, E. Yu., *Keramicheskie sosudy II–III v. n. e. iz usad'by „Bliznetsy“ (Hora Hersonesa Tavrisheskogo)*, Institutul Historii Uniwersytetu im. A. Mickiewicza, Poznań.
- KOGĂLNICEANU, MORINTZ 2013 Kogalniceanu, R., Morintz, Al. (ed.), *Cercetări arheologice în comuna Gogoșari. Situl de la Rălești-Raul Parapanca*, Ed. Istros, Brăila.
- KOVALEVSKAYA 1998 Kovalevskaya, L. A., *Keramicheskii kompleks kontsa II–pervoj poloviny III vv. n.e. iz raskopok villy 34I*, in: *KhS*, 9, 89–99.
- KRAPIVINA 1993 Krapivina, V. V., *Ol'biya. Material'naya kul'tura I–IV vv. n.e.*, Naukova Dumka, Kiev.
- ICONOMU 1968 Iconomu, C., *Cercetări arheologice la Mangalia și Neptun*, in: *Pontica*, I, 235-268.
- HAYES 1983 Hayes, J. W., *The Villa Dionysos Excavations, Knossos: the Pottery*, in: *The Annual of the British School of Archaeology at Athens*, 78, 97–170.
- HONCU, MUNTEANU 2015 Honcu, Ș., Munteanu, L., *Cercetări arheologice de suprafață la Buda (com. Corbița, jud. Vrancea)*, in: Croitoru, C., Hânceanu, G. D. (eds), *Miscellanea Historica et Archaeologica in honorem Vasile Ursachi octogenarii*, Ed. Istros, Brăila, 317-326.
- HONCU 2014 Honcu, Ș., *Kitchenware*, in: Nuțu, G., Stanc, S. M., Paraschiv, D. (eds.), *Niculițel. A Roman rural settlement in north-east Moesia Inferior. Archaeological and Archaeozoological research*, Parthenon Verlag, Kaiserslautern, 88-102.
- LEJPUNSKAJA 2010 Lejpunskaja, N. A., *Hellenistic amphorae from Olbia Pontica*, in: Kassab Tezgör, D., Inaishvili, N. (eds.), *Production and trade of amphorae in the Black Sea, Actes de la Table-Ronde PATABS I, Batumi-Trabzon avril 2006, Varia Anatolica, Batumi-Trabzon*, 63-68.
- MĂNUCU-ADAMEȘTEANU 1984 Mănucu-Adameșteanu, M., *Necropola daco-romană de la Enisala, comuna Sarichioi, jud. Tulcea*, in: *Peuce*, IX, 31-39.
- MARTIN-KILCHNER 1994 Martin-Kilcher, S., *Die römischen Amphoren aus Augst und Kaiseraugst. Ein Beitrag zur römischen Handels- und Kulturgeschichte II: Die Amphoren für Wein, Fischsauce, Südfrüchte (Gruppen 2-24) und Gesamtauswertung*, in *Augst. Forschungen in Augst*.
- NAUMENKO 2012 Naumenko, S. A., *Sostav amfor v zakrytyh kompleksah Tanaisa knotsa I – serediny III v.n.e.*, in: *Vestnik Tanaisa*, 3, 63-88.
- NEGRU *et al.* 2003 Negru, M., Bădescu, Al., Avram, R., *Kapitan II amphorae in Roman Dacia*, in: *RCRFACTA*, 38, 209-14.
- NUȚU, STANC, PARASCHIV 2014 Nuțu, G., Stanc, S. M., Paraschiv D. (eds.), *Niculițel. A Roman rural settlement in north-east Moesia Inferior. Archaeological and Archaeozoological research*, Parthenon Verlag, Kaiserslautern.
- OPAȚ 2015 Opaț, A., *Noi considerații despre amfora de tip Aegyssus I/Troesmis X*, in: Croitoru, C., Hânceanu, G. D. (eds.), *Miscellanea Historica et Archaeologica in Honorem Vasile Ursachi octogenarii*, Ed. Istros, Brăila, 327-345.

- OPAIȚ 2014 Opaïț, A., *Defining more Roman amphora types from the Athenian Agora: too much history, too little typology (I)*, in: RCRF Acta, 43, 43-54.
- OPAIȚ 2010a Opaïț, A., *On the origin of Carthage LR Amphora 1*, in: Santoro, S., Pasquinucci, M., Menchelli, S., LRCW 3. IIIrd International Conference on Late Roman Coarse Wares and Amphorae in the Mediterranean: Archaeology and Archaeometry. Comparison between Western and Eastern Mediterranean, Parma–Pisa, 26 – 30 march 2008, BAR I.S. 2185 (II), Oxford, 1015-1022.
- OPAIȚ 2010b Opaïț, A., *Aspects of the provisioning of the Pontic settlements with olive oil in the Hellenistic and early Roman periods*, in: Kassab Tezgör, D., Inaishvili, N. (eds.), *Production and trade of amphorae in the Black Sea, Actes de la Table-Ronde PATABS I, Batumi-Trabzon avril 2006*, Varia Anatolica, 153-158.
- OPAIȚ 2007 Opaïț, A., *From DR 24 to LR 2?*, in: Bonifay, M., Trégliã, J.-C. (eds.), LRCW 2. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean: Archaeology and Archaeometry, BAR-IS 1662 (II), Oxford, Archaeopress, 627–642.
- OPAIȚ 2003 Opaïț, A., *'Table' Amphora Versus 'Table' Pitcher in Roman Dobruđja*, in: RCRF Acta, 38, 215–218.
- OPAIȚ 1991 Opaïț, A., *Ceramica din așezarea și cetatea de la Independența (Murighiol), sec. V î.e.n.–VII e.n.*, in: Peuce, 10, 133–182.
- OPAIȚ 1987 Opaïț, A., *Amfore romane de mare capacitate. Considerații tipologice*, in: SCIV, 38, 1-2, 245–258.
- OPAIȚ, PARASCHIV 2013 Opaïț, A., Paraschiv, D., *On the wine, olive oil and fish supply of the countryside in Roman Dobruđja (1st – 3rd centuries AD)*, in: Buzoianu, L., Dupont, P., Lungu, V. (eds.), PATABS III. Production and trade of amphorae in the Black Sea. Actes de la table ronde internationale de Constanța, 6-10 octobre 2009, Constanța, 317-33.
- OPAIȚ, TSARAVOPOULOS 2011 Opaïț, A., Tsaravopoulos, A., *Amphorae of Dressel 24 similis type in the central Aegean area (Chios Erythrai Kyme)*, in: *The Annual of the British School at Athens*, 106, 275-323.
- OPRIȘ 2003 Opriș, I., *Ceramica romană târzie și paleobizantină de la Capidava în contextul descoperirilor de la Dunărea de Jos (sec. IV–VI p. Chr.)*, Ed. Enciclopedică, București.
- ÖZYIGIT 1992 Özyigit, Ö., *1990 yılı Phokaia kazı calismalari. XII Sanuclan Toplantisi I*, in: *Kazı Sonuçları Toplantısı (KST) XIII.II, Cankale*, 27-31 Mayıs 1991 (Ankara 1992), Ankara, 99-122.
- ÖZYIGIT 1991 Özyigit, Ö., *1989 yılı Phokaia kazı calismalari*, in: *Kazı Sonuçları Toplantısı (KST) XIII.I (Ankara, 28 Mayıs – 1 Haziran 1990)*, Ankara, 127-153.
- PANELLA 1986 Panella, C., *Oriente e Occidente: considerazioni su alcune anfore egee di età imperiale a Ostia*, in: Empereur, J.-Y., Garlan, Y. (eds.), *Recherches sur les amphores grecques*, Bulletin de Correspondance Hellénique Supplément 13, Athens, École Française d'Athènes, 609–636.
- PANELLA 1973 Panella, C., *Appunti su un gruppo di anfore della prima, media e tarda età Imperiale*, in: *Ostia III: Le terme del Nuotatore: scavo dell'ambiente V et di un saggio dell'area. Studi miscellanei*, 21, Rome, 460.
- PARASCHIV 2014 Paraschiv, D., *Roman-Byzantine Pontic amphorae discovered at (L)ibida, in the province of Scythia*, in: Poulou-Papadimitriou, S., Nodarou, E., Kilikoglou, V., LRCW 4. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean. Archaeology and archaeometry. The Mediterranean: a market without frontiers, BAR International Series 2616, Oxford, 425-432 (633-plate).
- PARASCHIV 2006 Paraschiv, D., *Amfore romane și romano-bizantine în zona Dunării de Jos (sec. I–VII p. Chr.)*, Fundația Axis, Iași.
- PEACOCK, WILLIAMS 1986 Peacock, D. P. S., Williams, D. F., *Amphorae and the Roman Economy*, Longman, London.
- POENARU-BORDEA 1986 Poenaru-Bordea, Gh., *Les timbres amphoriques de Thasos á Callatis*, in: Empereur, J.-Y., Garlan, Y. (eds.), *Recherches sur les amphores grecques*, Athenes-Paris, BCH, Suppl. XIII, 335-351.
- POPILIAN 1976 Popilian, G., *Ceramica romană din Oltenia*, Scrisul Românesc, Craiova.

- PREDA 1980 Preda, C., *Callatis. Necropola romano-bizantină*, Ed. R.S.R. Române, București.
- PÜLZ 1985 Pülz, St., *Kaiserzeitliche Keramik aus dem Heroon III*, in: *Istanbuler Mitteilungen*, 35, 77-115.
- PUZDROVSKIY, SOLOMONENKO 2007 Puzdrovskiy, A. E., Solomonenko, A. E., *Gruntovyyi sklep 1-2 vv n. e. s predmetami iz dereva iz Ust'-Al'minskogo nekropolya*, in: *Derevnya Tavrika*, 207-228.
- RADU, IONESCU 2014 Radu, L., Ionescu, M., *Callatis. Cercetări arheologice în necropola romano-bizantină Callatis*, in: *Pontica*, XLVII, 221-232.
- RĂDULESCU, BĂRBULESCU, BUZOIANU 1987 Rădulescu, A., Bărbulescu, M., Buzoianu, L., *Importuri amforice la Albești, jud. Constanța: Rhodos*, in: *Pontica*, XX, 53-78.
- RĂDULESCU, BĂRBULESCU, BUZOIANU 1986 Rădulescu, A., Bărbulescu, M., Buzoianu, L., *Importuri amforice la Albești, jud. Constanța: Heraclea Pontica*, in: *Pontica*, XX, 53-78.
- RILEY 1979 Riley, J. A., *The Coarse Pottery from Benghazi*, in: Lloyd, J. A. (ed.), *Excavations at Sidi Khrebish Benghazi (Berenice) II*, in: *Libya Antiqua*, Supplement 5.2, 91-467, Tripoli.
- ROBINSON 1959 Robinson, H. S., *The Athenian Agora V. Pottery of the Roman Period*, American School of Classical Studies at Athens, Princeton.
- SUCEVEANU 2000 Suceveanu, A., *Histria X. La céramique romaine des I^{er}-III^e siècles ap. J.-C.*, Académie Roumaine, Institut d'archéologie "Vasile Pârvan" de Bucarest, Bucarest.
- TOPOLEANU 2000 Topoleanu, F., *Ceramica romană și romano-bizantină de la Halmyris (sec.I-VII d. Ch.)*, Tulcea.
- RUSU-BOLINDEȚ 2007 Rusu-Bolindet, V., *Ceramica romană de la Napoca. Contribuții la studiul ceramicii din Dacia romană*, in: *Bibliotheca Musei Napocensis*, XXV, Cluj-Napoca.
- SAMOILOVA 1978 Samoilova, T. L., *Osnovnye tipy amfor I-IV vv. n.e. iz Tiry*, in: *Archeologicheskije issledovanija Severo-Zapadnogo Prichernomor'ja. Sbornik nauchnykh trudov*, Kiev, 254-266.
- SANIE 1981 Sanie, S., *Civilizația romană la est de Carpați și romanitatea pe teritoriul Moldovei (sec. II î.e.n. – III e.n.)*, Ed. Junimea, Iași.
- SĂVEANU 1945 Săveanu, Th. S., *Callatis*, in: *Dacia*, IX-X (1941-1944), 243-247.
- SĂVEANU 1941 Săveanu, Th. S., *Callatis, VII-e rapport préliminaire. Fouilles des années 1932-1936*, in: *Dacia*, VII-VIII (1937-1940), 254-279.
- SĂVEANU 1938 Săveanu, Th. S., *Callatis*, in: *Dacia*, V-VI (1935-1936), 247-319.
- SĂVEANU 1933 Săveanu, Th. S., *Callatis*, in: *Dacia*, III-IV (1927-1932), 411-482.
- SĂVEANU 1925 Săveanu, Th. S., *Callatis*, in: *Dacia*, II, 104-147.
- SĂVEANU 1924 Săveanu, Th. S., *Callatis*, in: *Dacia*, I, 105-165.
- STRYJELETSKIY *et al.* 2005 Strjeletskiy, S. F., Vysotskaya, T. N., Ryzhova, L. A., Jestkova, G. I., *Naselenie okrugi hersonesa v pervoiy polovine I tsysacheletiya novoiy ery (po materialam nekropolya "Sovhoz No. 10)*, in: *Stratum*, 4 (2003-2004), 27-277.
- TAFRALI 1927 Tafrali, O., *La cité pontique de Callatis, Recherches et fouilles*, in: *Arta și Arheologia*, 11, 17-55.
- TAFRALI 1925 Tafrali, O., *La cité pontique de Callatis*, in: *Revue Archéologique*, 21, 238-292.
- URSACHI 1995 Ursachi, V., *Zargidava. Cetatea dacică de la Brad*, Biblioteca Thracologica 10, București.
- VNUKOV 2006 Vnukov, S. Yu., *Prichernomorskie amfory I v. do n.e.-II v. n.e. (petrografiya, hronologiya, problemy trgovli)*, vol. II, Saint Petersburg.
- VNUKOV 2003 Vnukov, S. Yu., *Prichernomorskie amfory I v. do n.e.-II v. n.e. (morphologiya)*, vol. I, Moscow.
- VULPE, TEODOR 2003 Vulpe, R., Teodor, S., *Piroboridava. Așezarea geto-dacică de la Poiana*, București.
- VYSOTSKAYA 1994 Vysotskaya, T. N., *Ust'-Al'minskoe gorodische I nekropol*, Kiev.
- VYSOTSKAYA 1996 Vysotskaya, T. N., *K voprosu o goncharnom remesle u pozdnih skifov*, in: *HS*, VII, 169-73.
- WHITBREAD 1995 Whitbread, I. K., *Greek Transport Amphorae. A Petrological and Archaeological Study*, in: *British School at Athens Fitch Laboratory Occasional Paper 4*, British School at Athens.
- WILLIAMS, ZERVOS 1983 Williams, C. K., Zervos, O. H., *Corinth 1982: East of the Theater*, in: *Hesperia*, 52, 1-47.
- ZEEST 1960 Zeest, I. B., *Keramicheskaya tara Bospora*, Moscow.

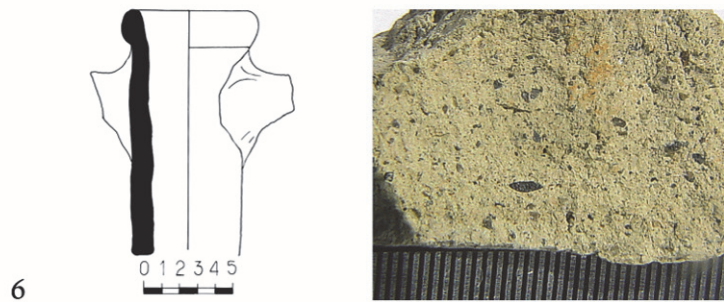
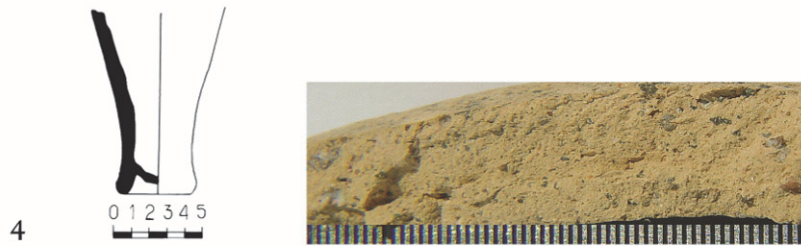
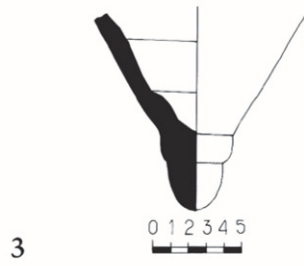


Plate I

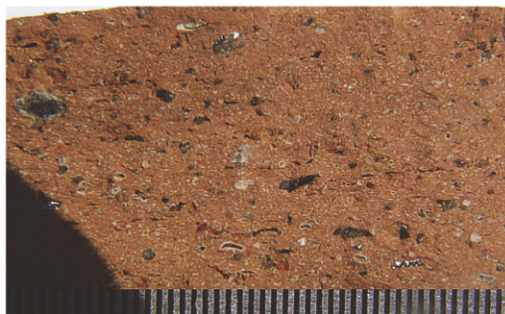
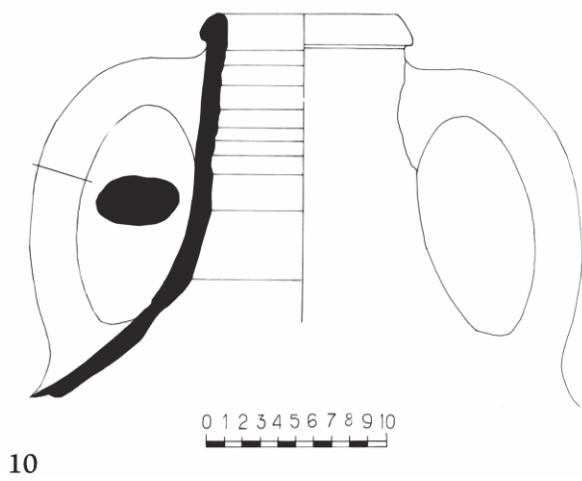
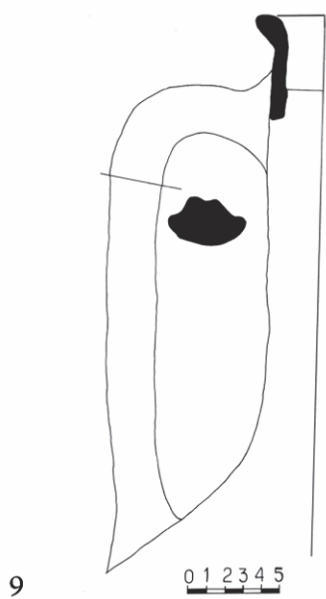
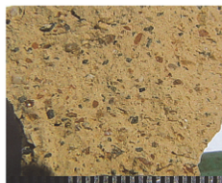
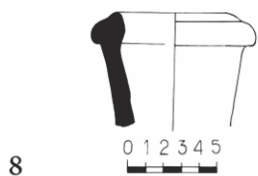
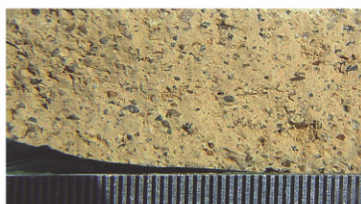
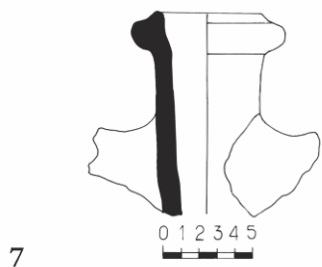


Plate II

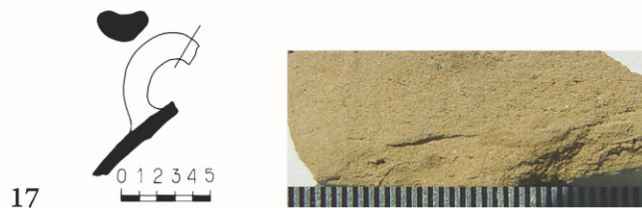
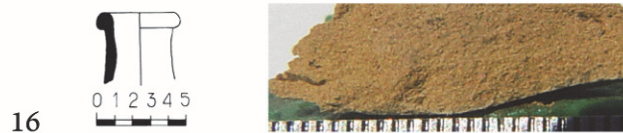
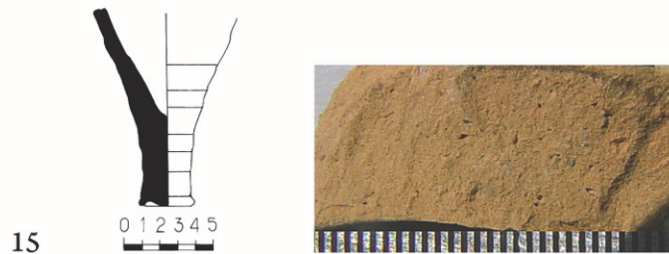
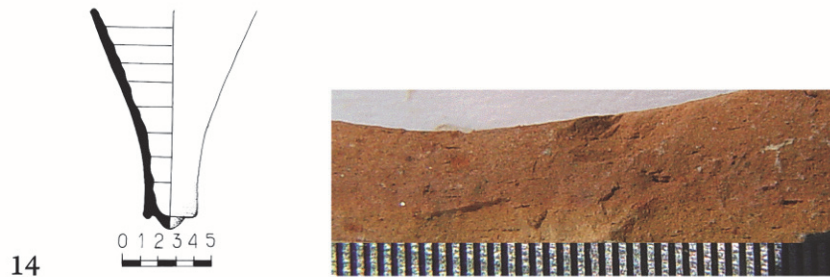
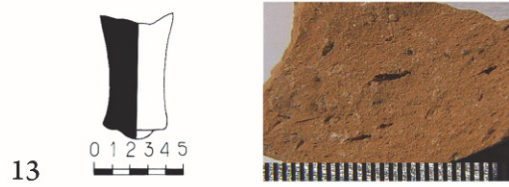
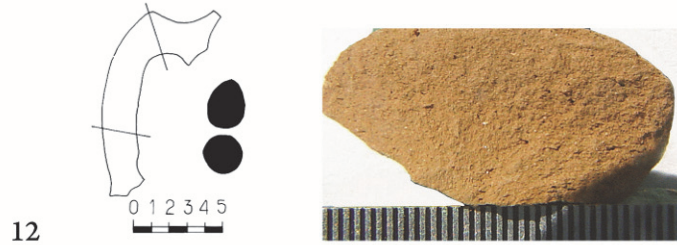


Plate III

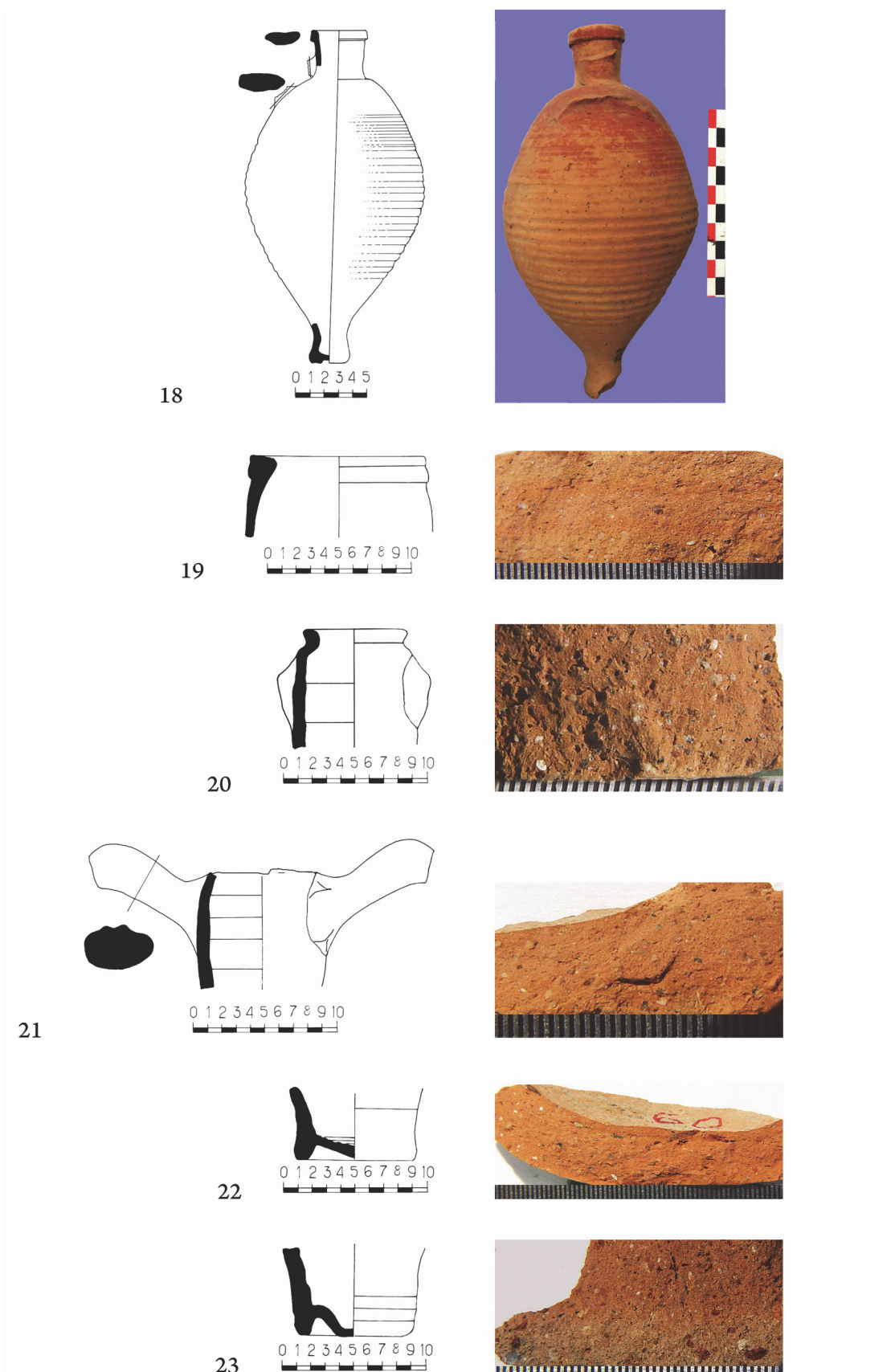


Plate IV

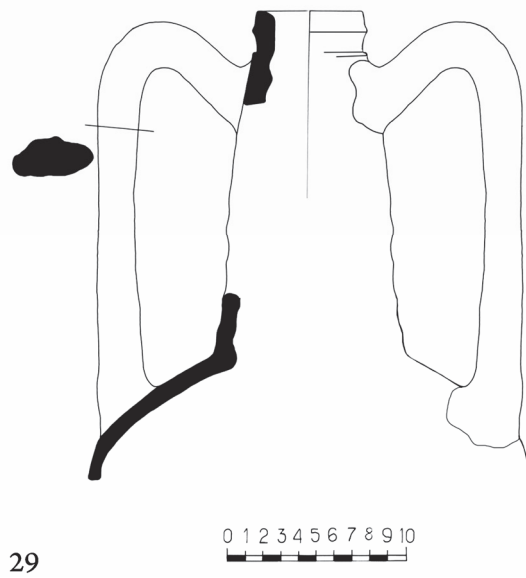
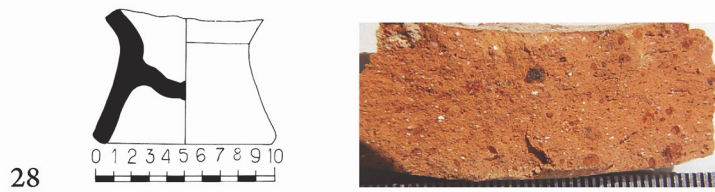
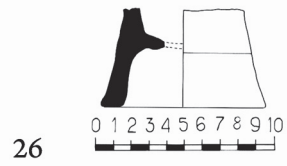
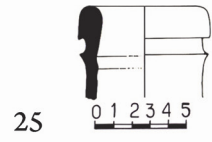
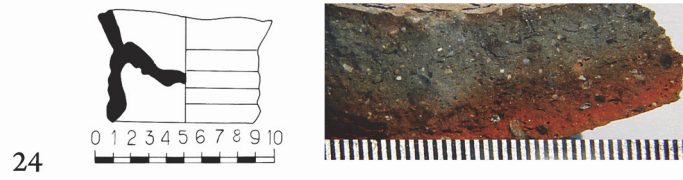


Plate V

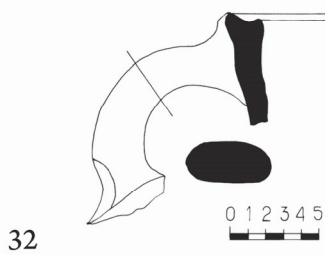
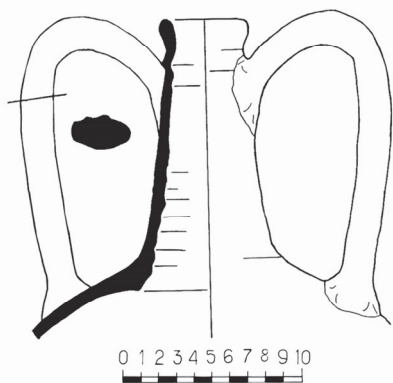
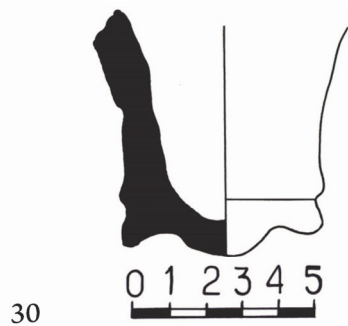


Plate VI

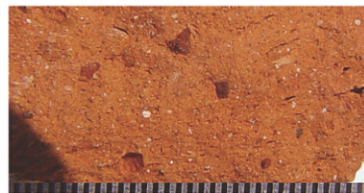
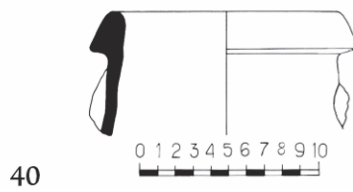
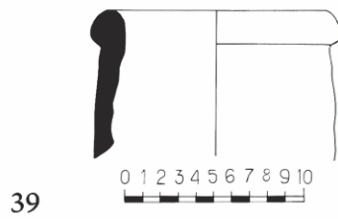
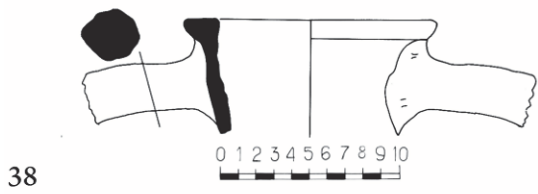
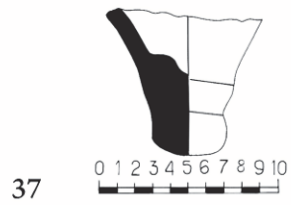
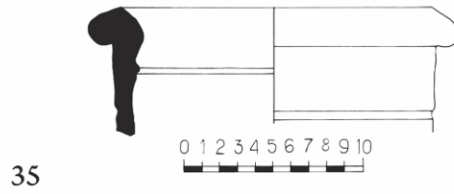
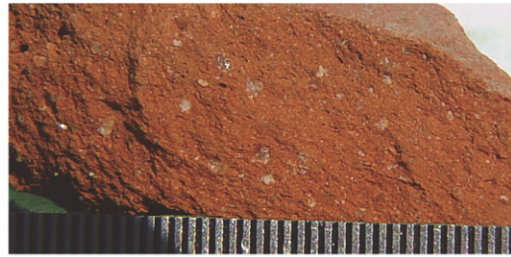
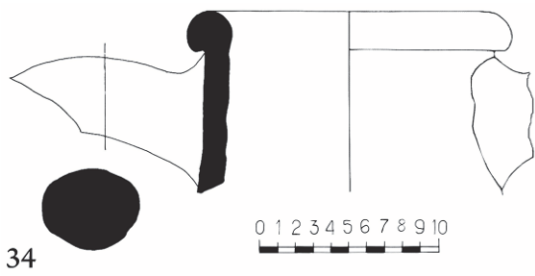


Plate VII

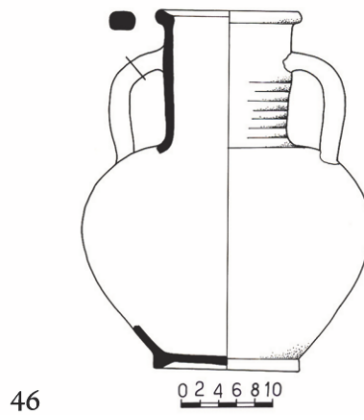
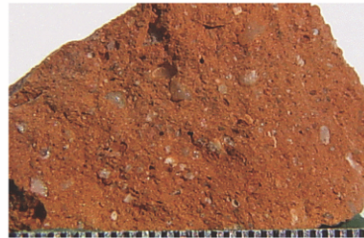
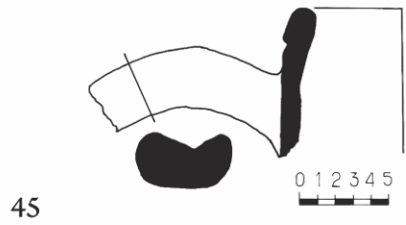
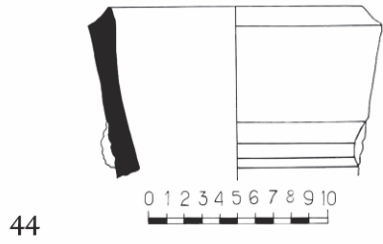
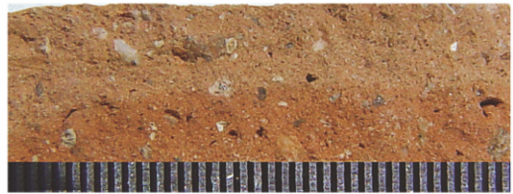
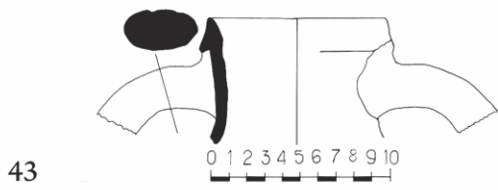
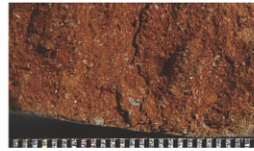
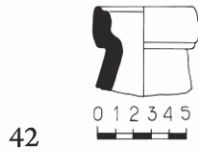
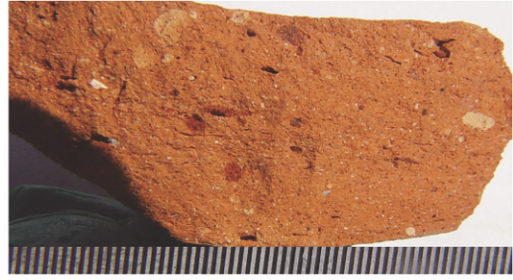
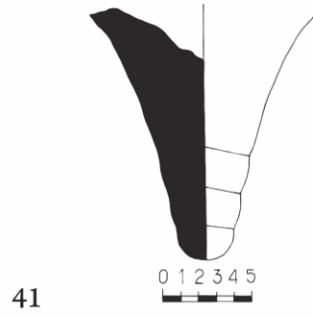


Plate VIII

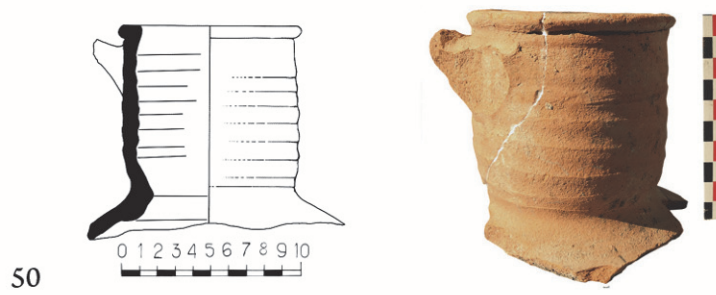
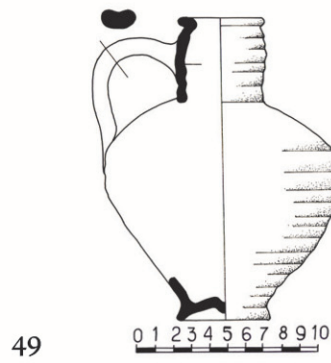
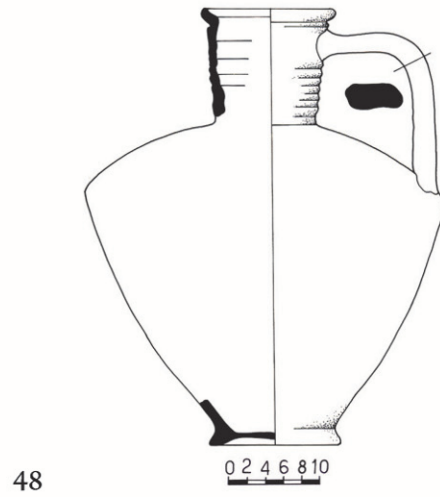
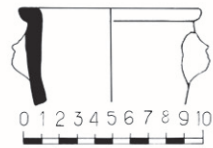


Plate XIX

52



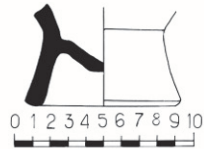
53



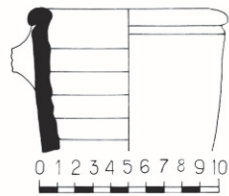
54



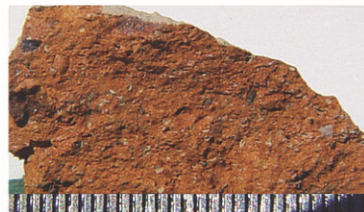
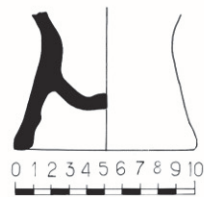
55



56



57



58

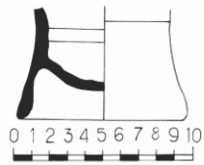


Plate X

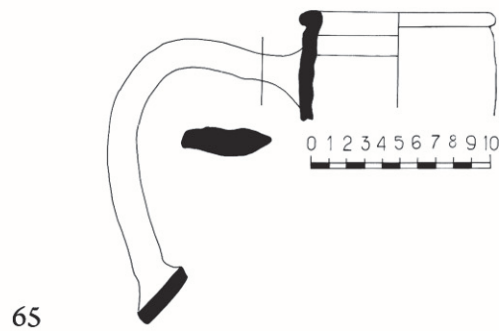
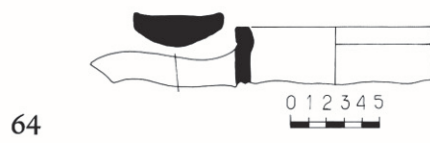
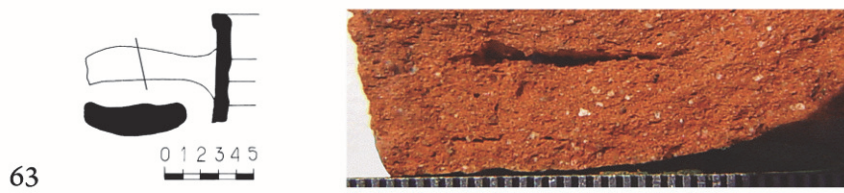
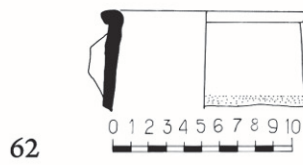
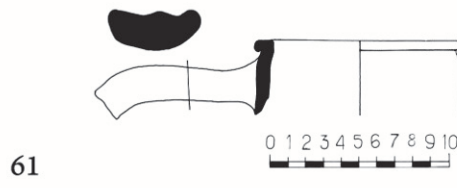
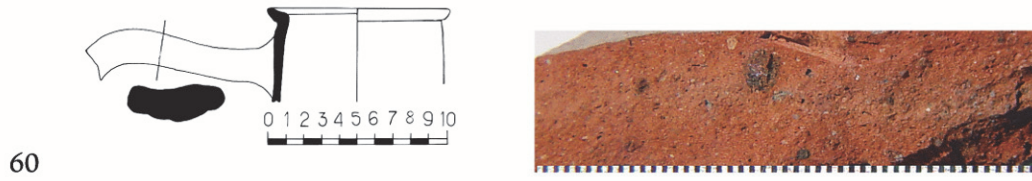
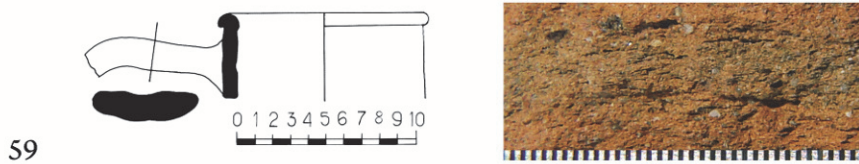


Plate XI

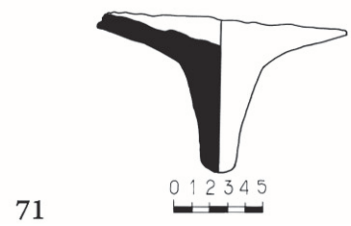
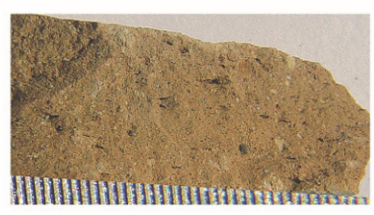
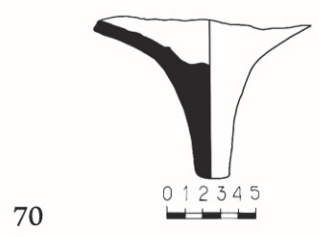
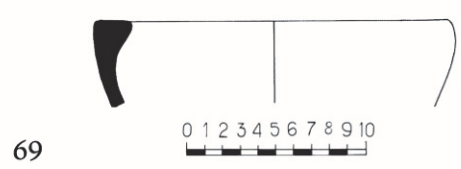
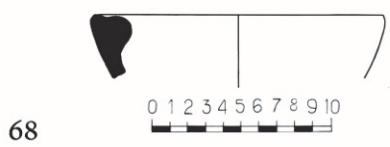
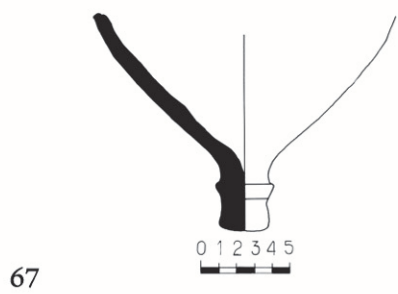
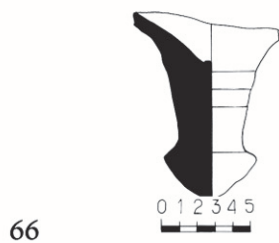


Plate XII

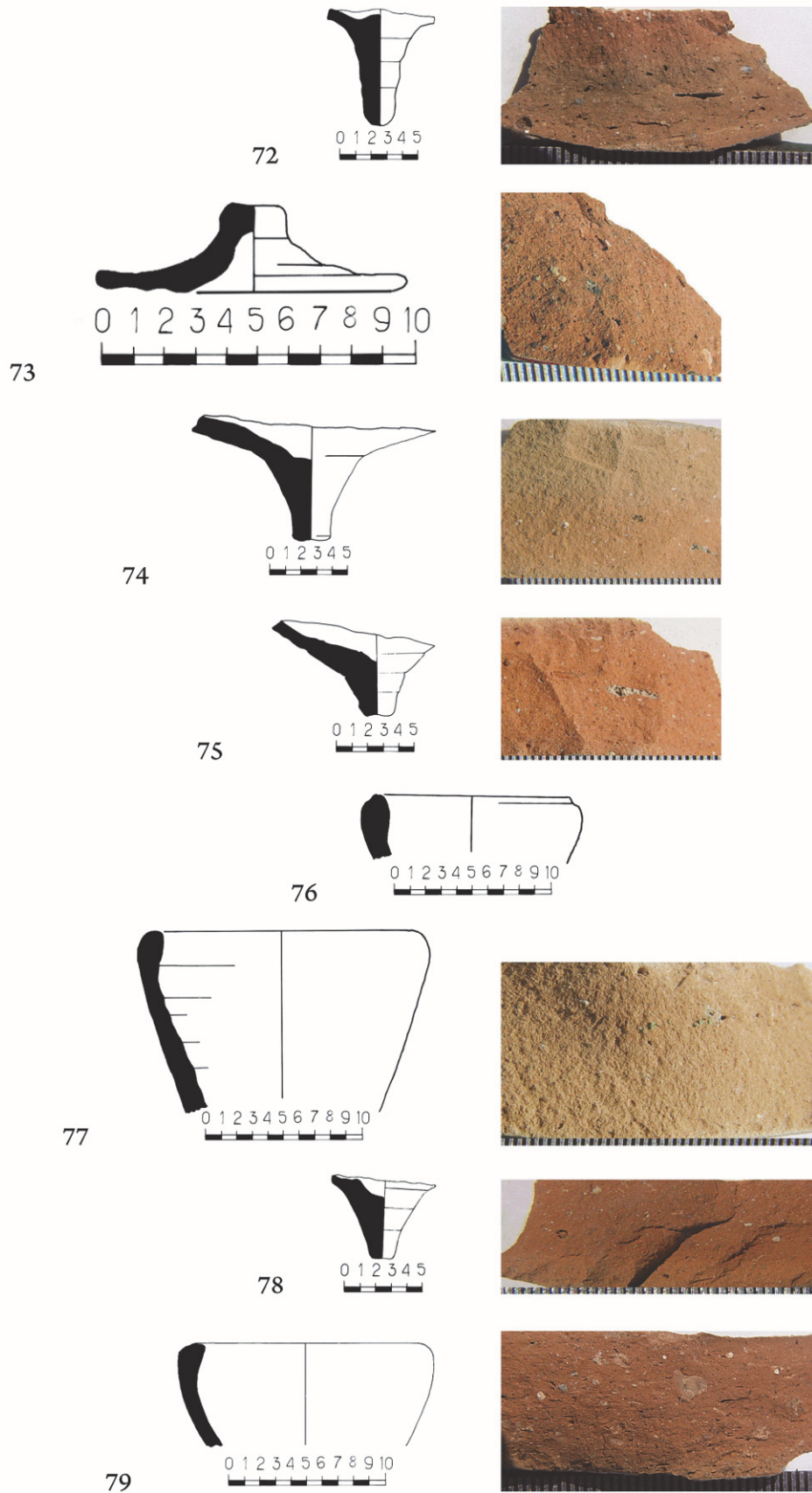


Plate XIII

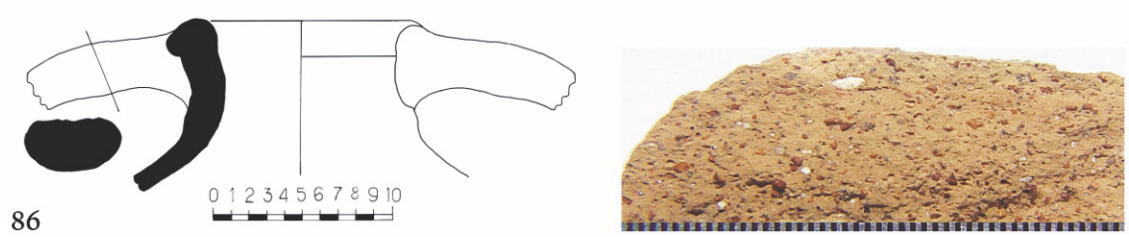
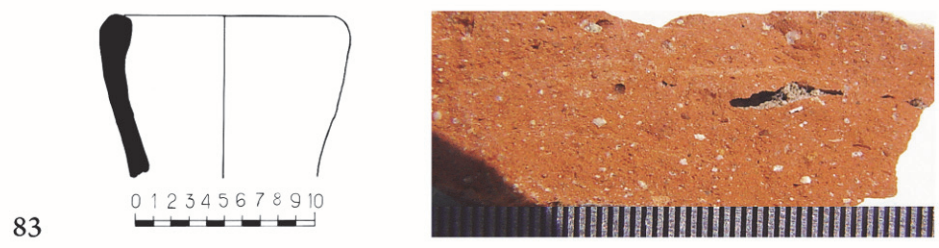
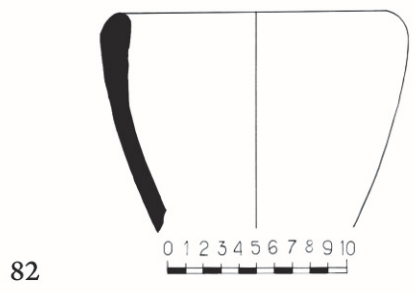
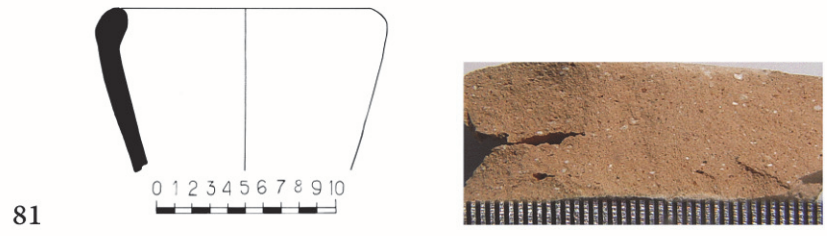
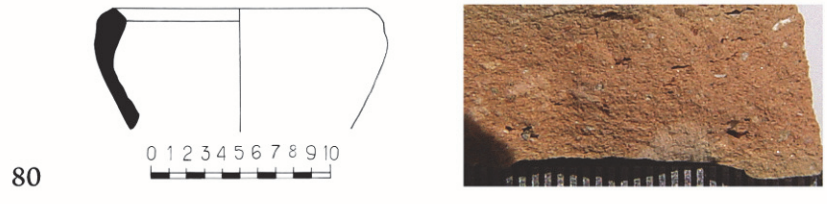


Plate XIV

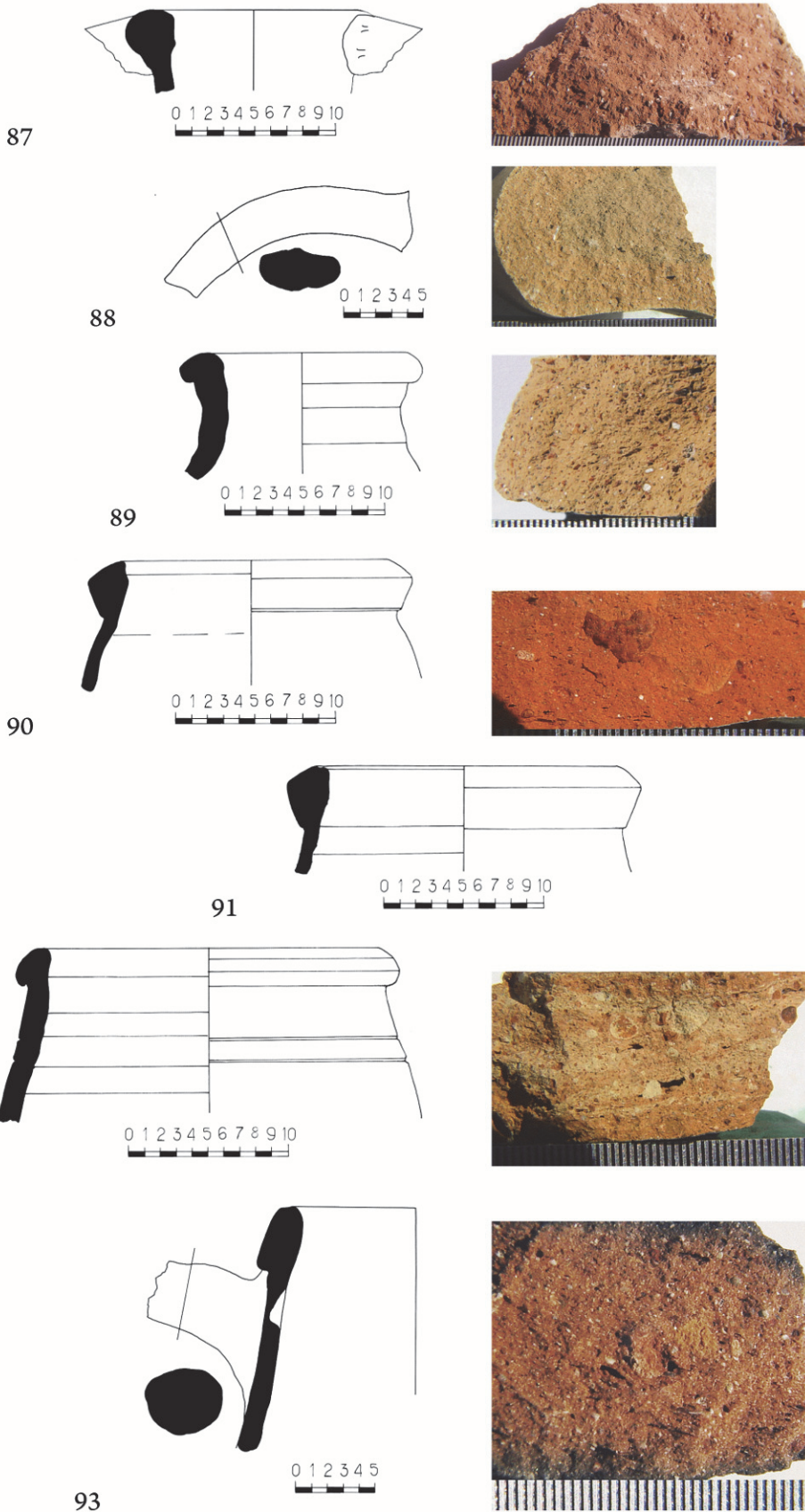


Plate XV

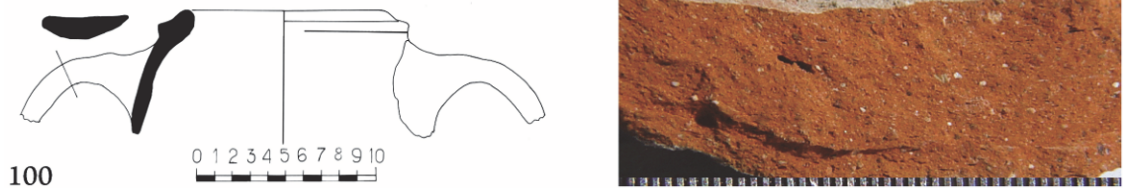
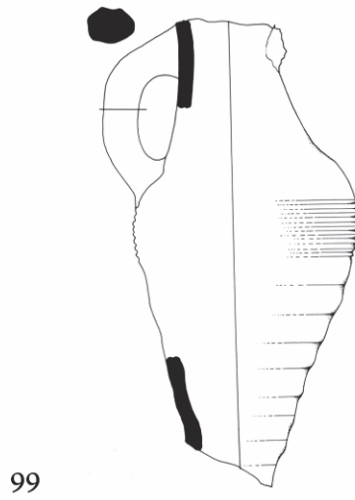
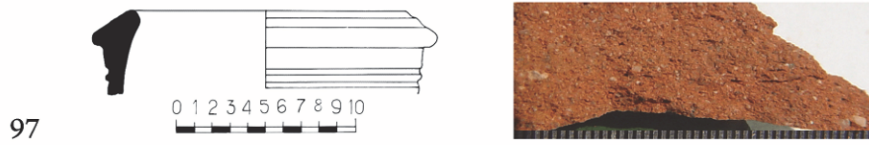
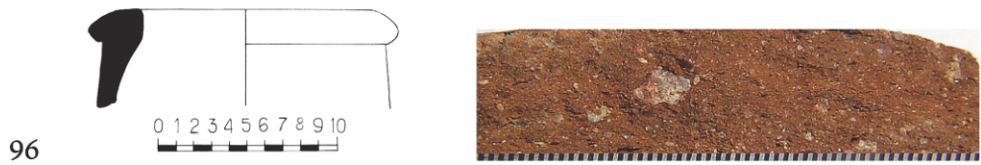
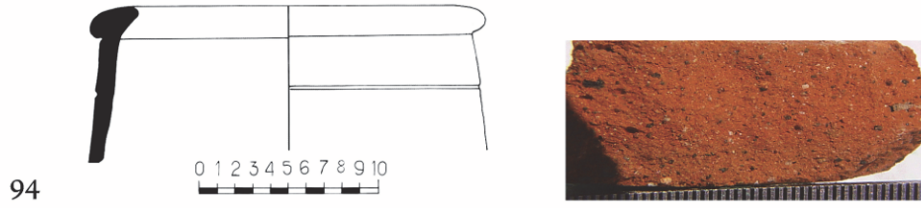


Plate XVI

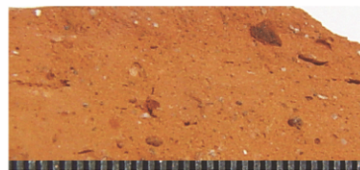
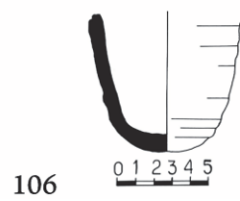
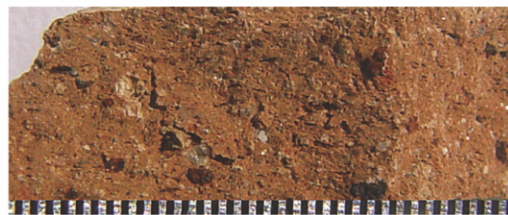
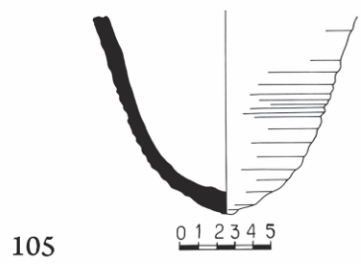
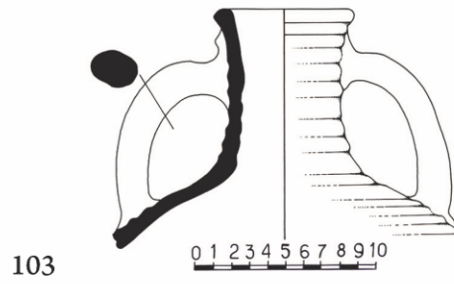
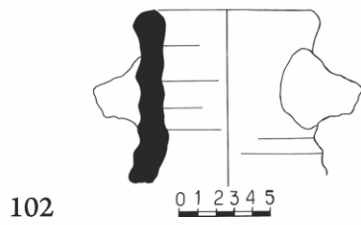
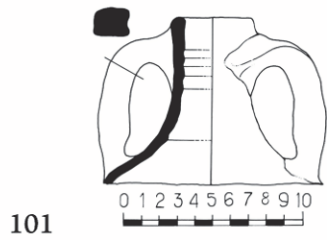
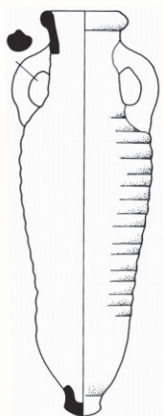
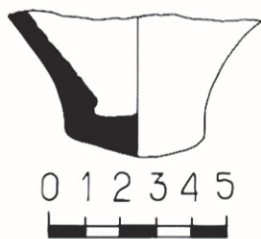


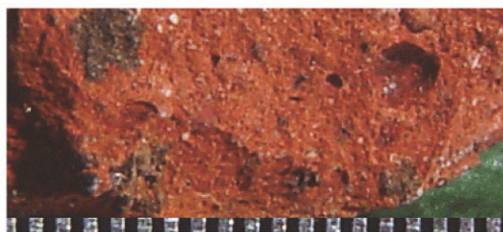
Plate XVII



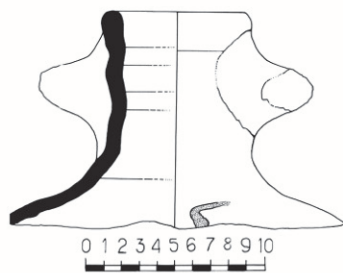
107 0 2 4 6 8 10



108



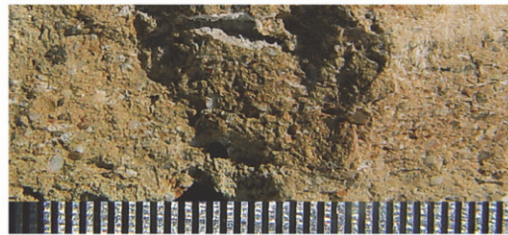
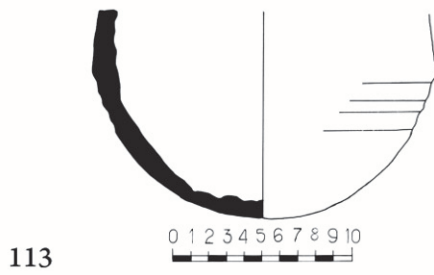
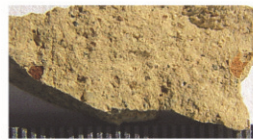
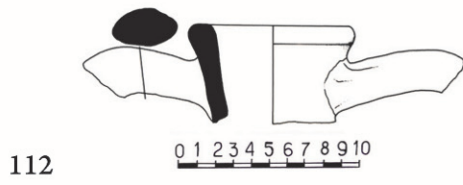
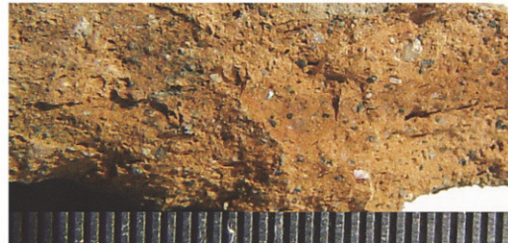
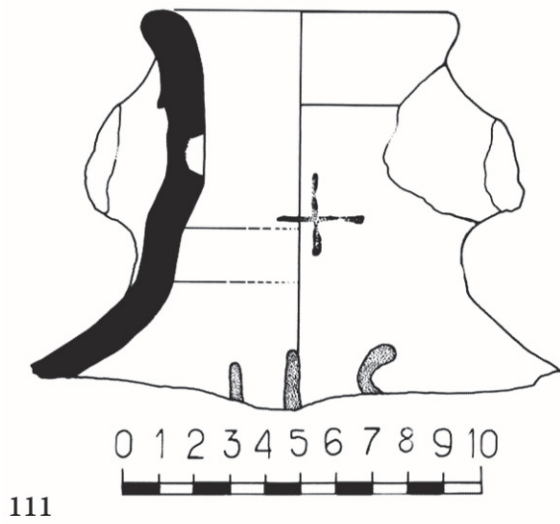
109



110



Plate XVIII



114



Plate XIX

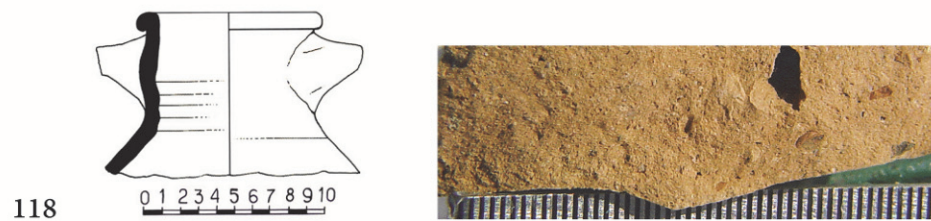
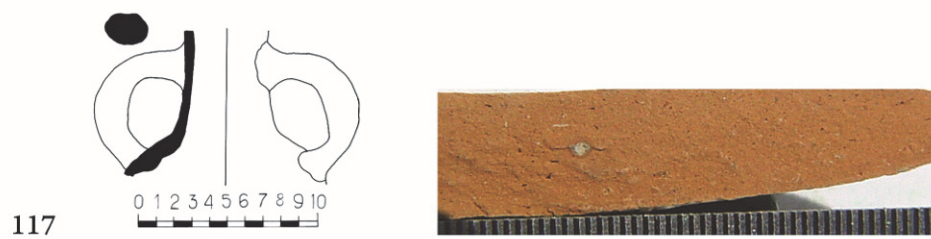
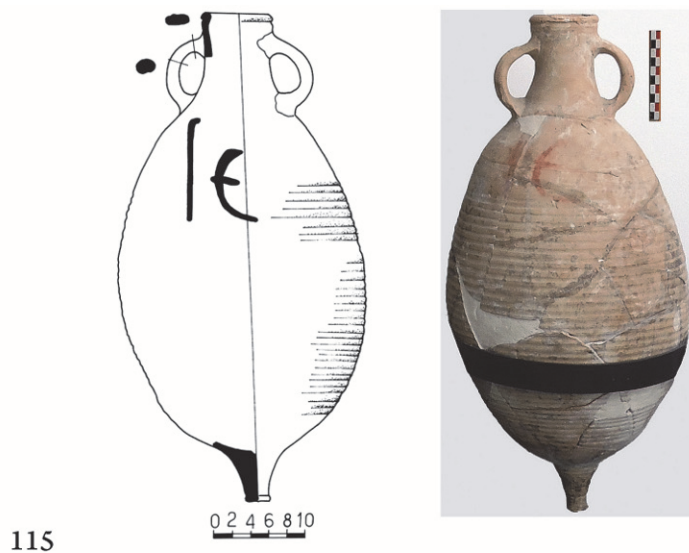


Plate XX

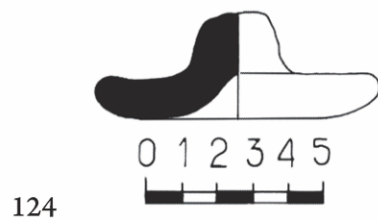
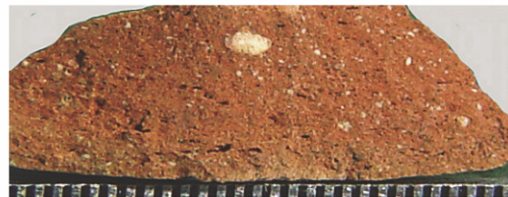
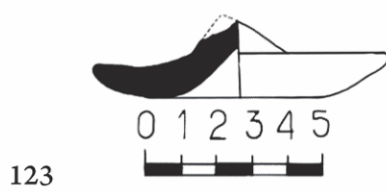
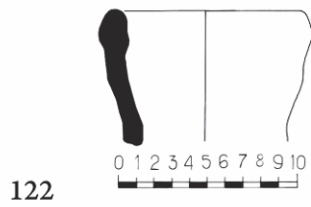
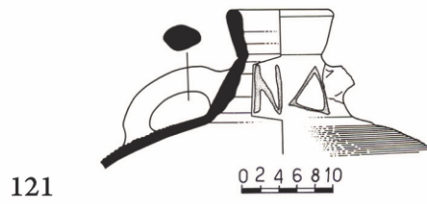
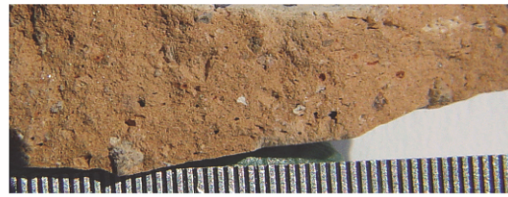
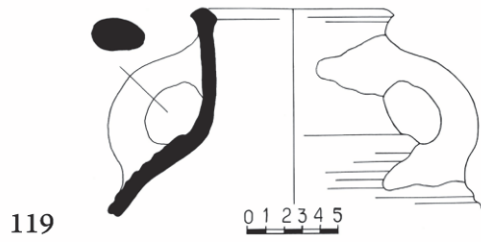
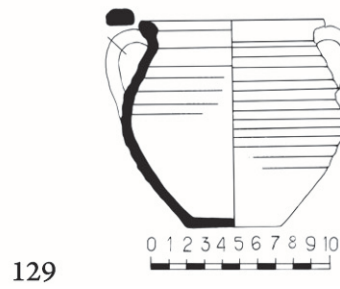
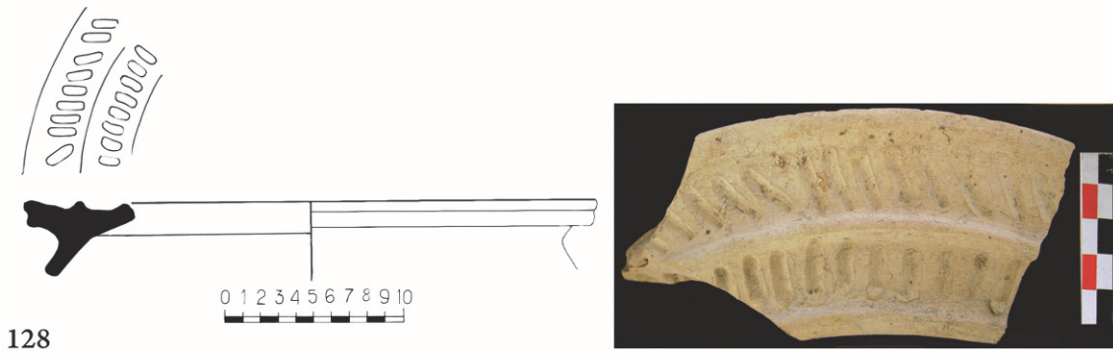
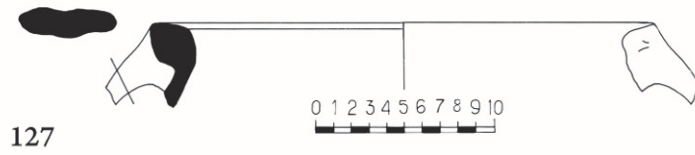
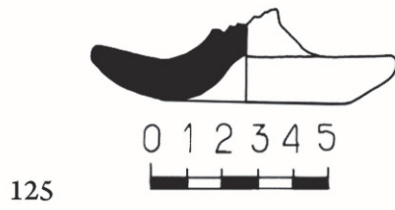
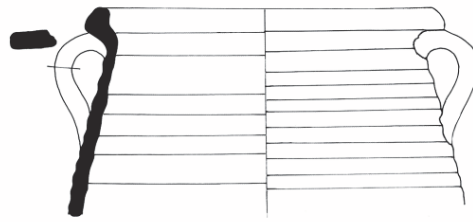
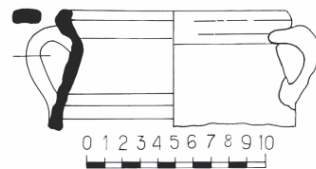


Plate XXI

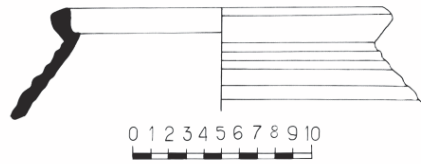




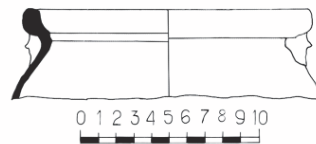
130



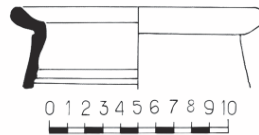
131



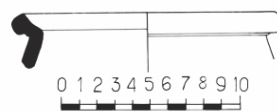
132



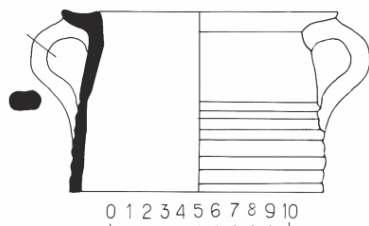
133



134



135



136

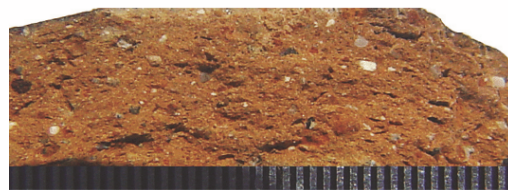


Plate XXIII

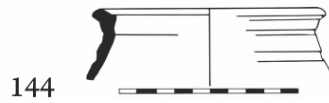
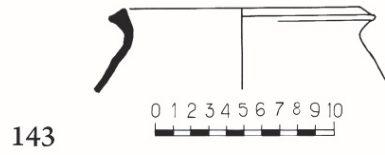
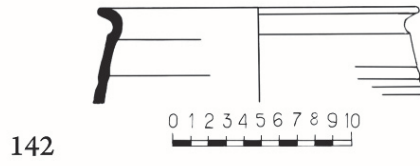
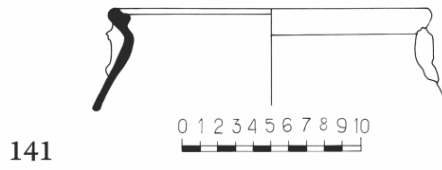
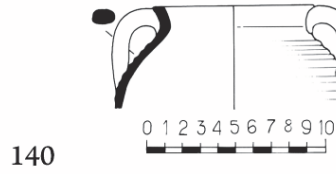
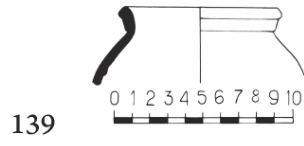
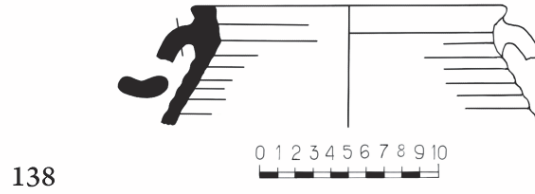
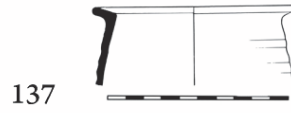


Plate XIV

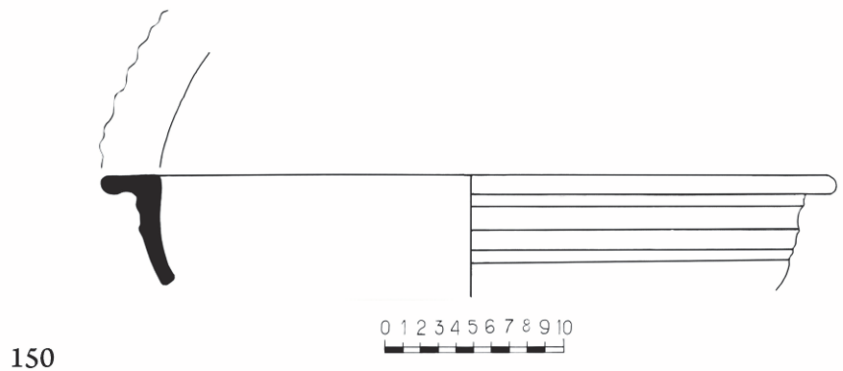
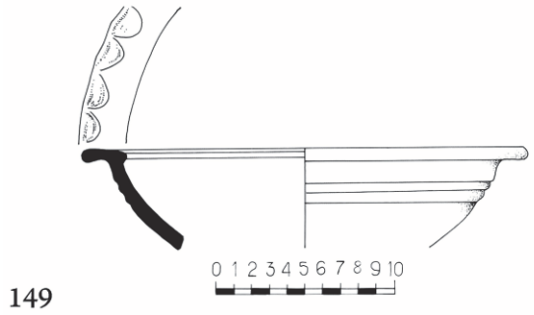
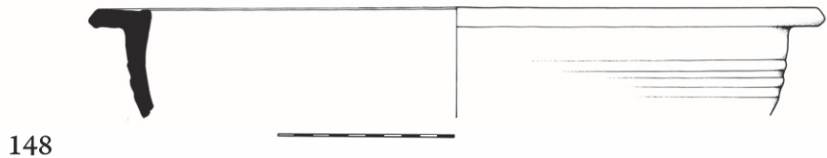
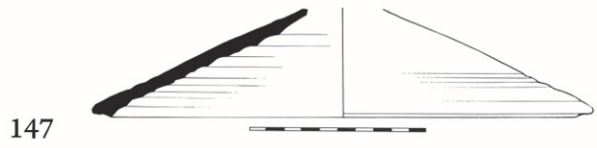
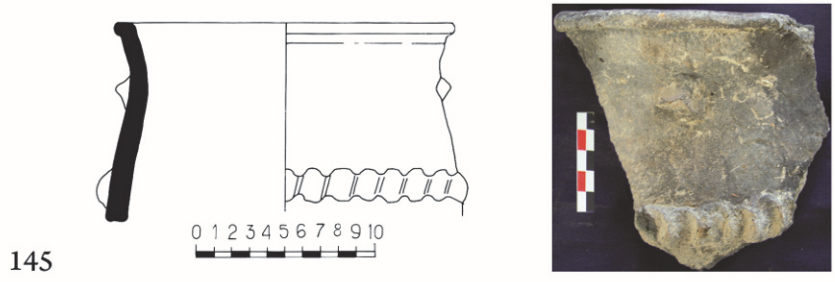


Plate XXV

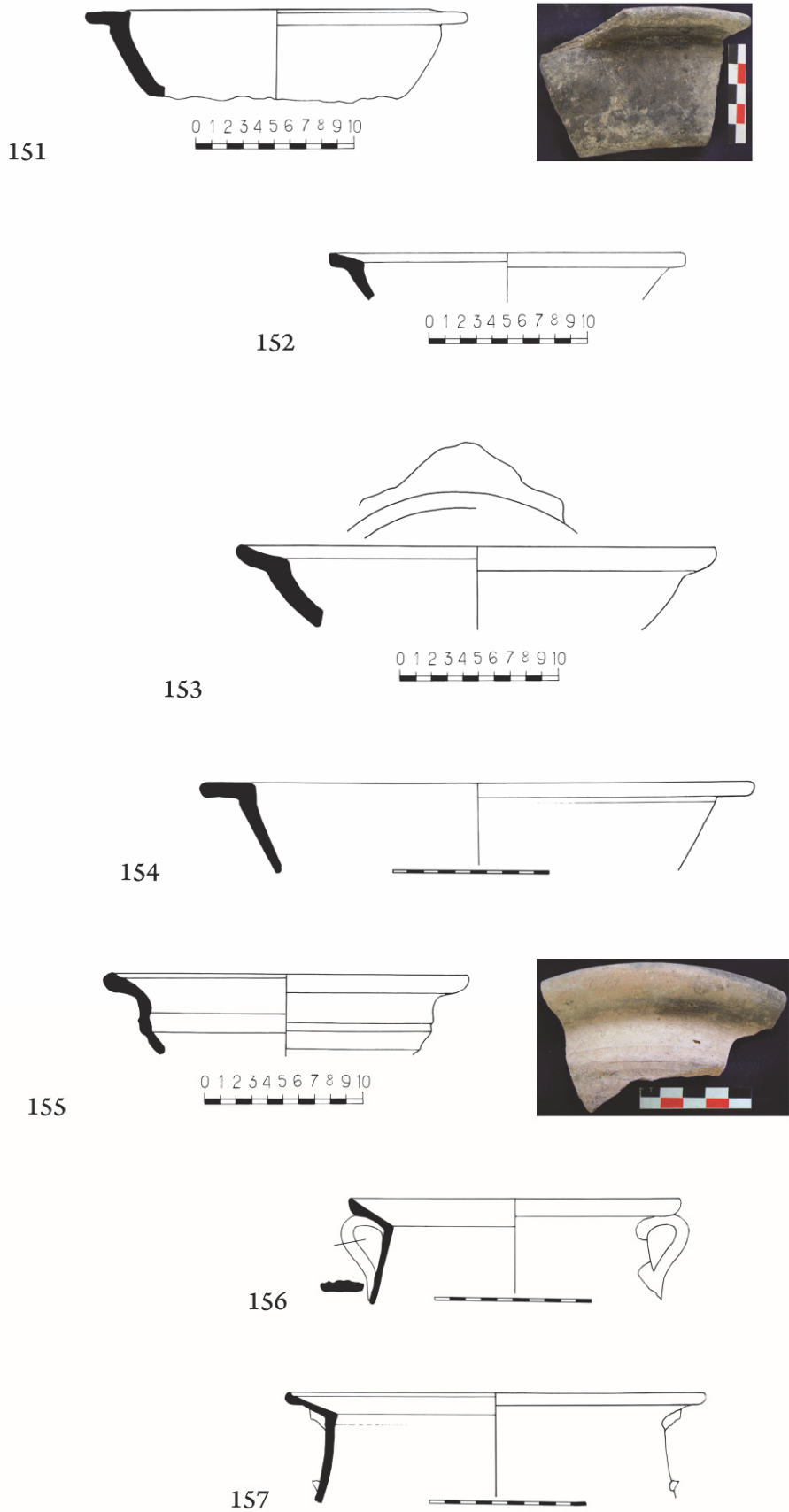


Plate XXVI

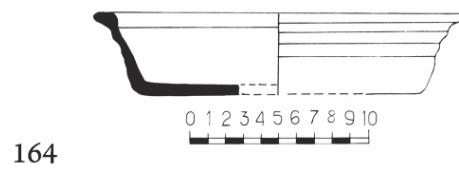
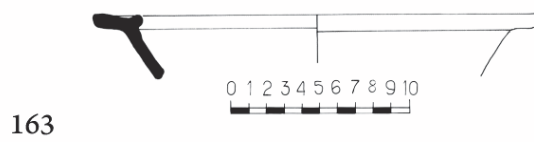
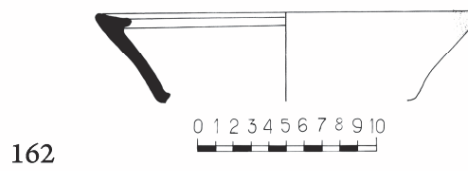
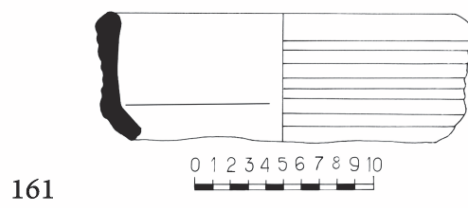
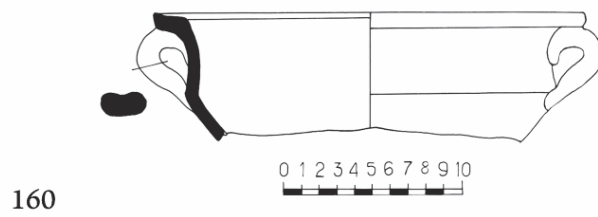
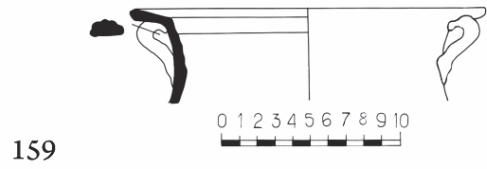
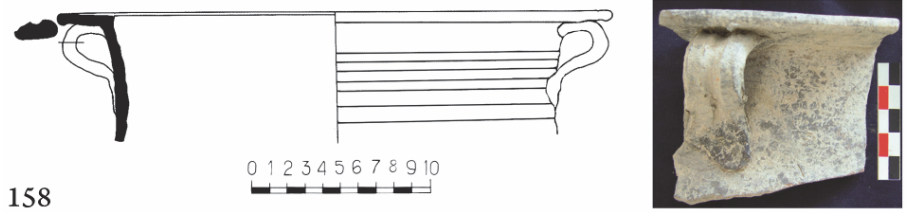


Plate XXVII

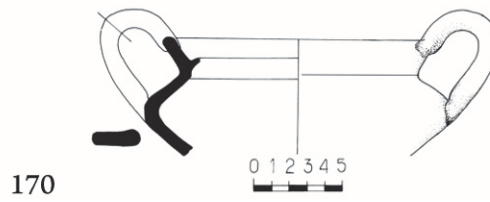
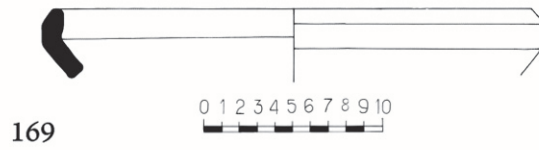
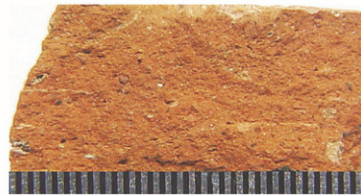
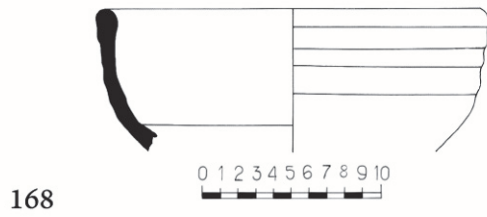
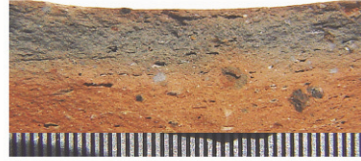
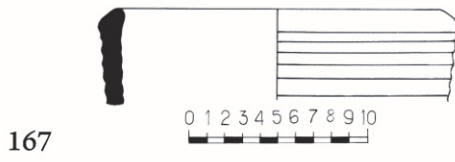
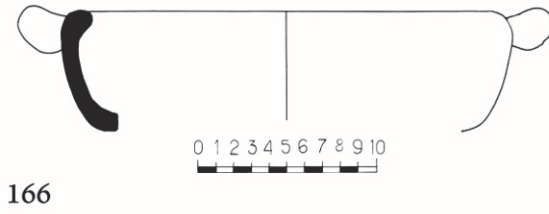
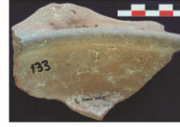


Plate XXVIII