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'Brown-Clay' Amphorae from Gonio (Apsaros)[1]

Abstract

This paper presents the first study of the so-called 'brown-clay' amphorae discovered by the Gonio-Apsaros Polish-Georgian Expedition in the Roman fort of Apsaros (modern Gonio, Georgia) between 2014 and 2018. In the course of five excavation seasons, 157 diagnostic fragments of these containers were attested, all belonging to variants Ch 1B2 and Ch 1C dated to between *c.* 50 BC and the 3rd century AD. Thus, they confirm the existence of the Apsaros fortress during the first three centuries of the present era. Both Colchian and south-eastern Pontic containers were found in Apsaros, the latter produced probably in Trapezus. This suggests the south-eastern Pontic provenance of some of the imports in Apsaros, especially until the end of the 1st century AD. On the other hand, local production of containers indicates that the area of the fortress might have produced food surpluses (probably wine), which during the late 1st and throughout the 2nd and 3rd centuries AD were exported to other areas neighbouring the Black Sea.

Keywords: 'brown-clay' amphorae, Colchis, Gonio, Apsaros, production, transport, Black Sea region

This paper investigates the so-called 'brown-clay' amphorae discovered by the Polish-Georgian archaeological mission in ancient Apsaros (modern Gonio) between the years 2014 and 2018. Apsaros was one of the principal Roman forts of the Pontus-Caucasian frontier during the first three centuries of the present era (Fig. 1).[2] During five excavation seasons in the fortress, 460 diagnostic fragments of transport containers were found, among which 157 belonged to the group labelled as 'brown-clay' amphorae. This term denotes containers produced in the eastern part of the Black Sea region, the main feature of which was the colour of the clay varying from almost red to blackish-brown. They are also known as 'Colchian' amphorae, but this term may be misleading, since these vessels were produced in numerous workshops in the eastern part of the Black Sea region, not only in Colchis. Their general unity suggests that they all belong to a single container type – Ch 1 – which can be divided into four variants (A–D). All variants are egg-shaped or elongated, with short, cylindrical neck and oval handles, while their capacity varies between 15 and 20 litres (Fig. 2).[3]

'Brown-clay' amphorae – the history of research

Since the 1950s and 1960s, the 'brown-clay' amphorae have been attested in numerous archaeological sites in the eastern but also in the northern part of the Black Sea area, in layers dated from the 4th century BC up to the Middle Ages. Their provenance was attributed to different regions around the Black Sea.[4] For example, I.B. Zeest proposed that they originated from the southern part,[5] while Y.G. Vinogradov and N.A. Onaiko linked some with Heraclea, and others with Colchis.[6] At the same time, B.Y. Mikhlin, who studied 'brown-clay' containers from Crimea, claimed that two types were produced in southern Pontus, whereas the third in Colchis.[7]

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[2] For more about the site, see Karasiewicz-Szczypiorski 2016; Mamuladze 2016.

[3] Vnukov 2003, 160–164, 191–192.

[4] Vnukov 2009, 29.

[5] Zeest 1951, 114–115; 1960, 108.

[6] Vinogradov, Onaiko 1975, 88–89.

[7] Mikhlin 1974, 60–67.

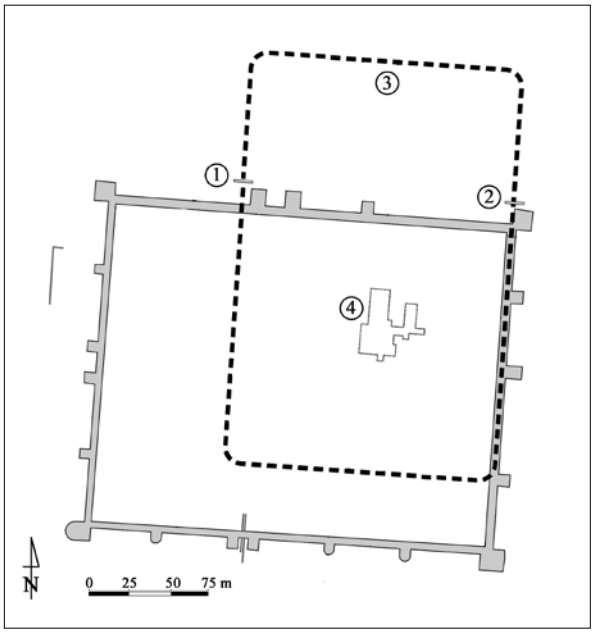

Fig. 1. Plan of the Gonio (Apsaros) fortress including the area of the ancient fort (3), trenches (1 and 2), and the main excavation area (4).

Fig. 2. 'Brown-clay' amphora of type Ch 1C from the Gonio-Apsaros Museum (photo by P. Komar).

However, as early as *c*. 1950, Georgian archaeologists proposed that 'brown-clay' containers originated in Colchis. According to M. Khoshtaria, O. Lortkipanidze, and A. Khakhidze, their shape and clay composition point to the Caucasus region and the date between the 3rd and 1st centuries BC, while I. Kruglikova proposed that the examples from the 1st and 2nd centuries found in Gorgippia (modern Anapa) imitated 'brown-clay' containers dated to the 1st century BC and the 1st century AD.[8] O. Lordkipanidze developed a hypothesis about the Colchian origin of the 'black-clay' amphorae. He noticed not only that they are attested in numerous quantities in Georgia but also that local pottery is made of similar clay. In addition, he noted that marks which were incised on the amphorae before firing are similar to those upon Georgian *pithoi*.[9] During the 1990s, the 'brown-clay' containers found in the northern Black Sea region as well as in Georgia were studied together, not as separate groups, which was an important step forward in their investigation. Now, it has been established that 'brown-clay' containers were produced in two areas, that is in the eastern and south-eastern part of the Black Sea region, and their typology has been established.[10] S.Y. Vnukov was the main contributor in this regard.[11]

Classification and chronology

The earliest forms of these amphorae, *i.e.* those dated to the 4th and 3rd centuries BC, were attested, among others, in Vani and Tsikhizdziri (Variant A) and resemble containers from Sinope. They have ovoid bodies, short necks, cylindrical rims, and handles that are flattened ovals in section. Their walls are rather thick (up to 1 cm) and smooth. In the late 3rd through 2nd centuries BC, however, they developed their own typical features, such as a 'waist' in the lower third of the body (Variant B). This 'waist' (Fig 2) is a characteristic technological element, which results from separate shaping of the upper and lower parts of the amphorae.

Two groups of Variant B (Figs 3–4) may be distinguished, namely B1, dated to between the late 3rd and mid-1st centuries BC, and B2, dated to the mid-1st century BC through the late 1st century AD. These containers have rather short necks, their handles are oval in section, while the toes are short and conical with flourishes inside (Fig. 5). All their parameters, such as height, diameter, toe height, and thickness, are smaller than the former variant. After some time, a new type of toe (flat-based) appeared.

[8] Khalvashi 2002, 10–21. Vinogradov and Onaiko disagree with the hypothesis of Kruglikova.
[9] Lordkipanidze 1966, 137–140.
[10] Vnukov 2009, 29; 2013, 33.
[11] Tsetskhladze, Vnukov 1992; 1993; Vnukov 2003; 2009; 2011.

Fig. 3. Fragment of a 'brown-clay' amphora of type Ch 1B (no. GA 2016/104) (photo by an unknown author).

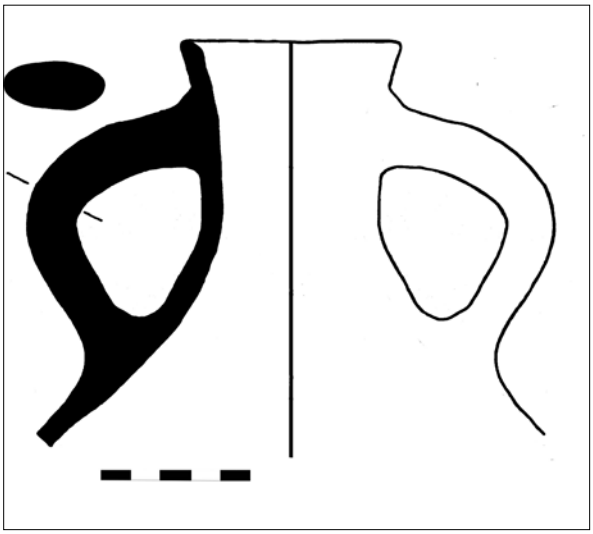

Fig. 4. 'Brown-clay' amphora of type Ch 1B (no. GA 2016/104) (drawing by P. Komar).

Fig. 5. Foot of the 'brown-clay' amphora with a flourish inside (no. GA 2014/236) (photo by P. Komar).

It seems that vessels attributed to Variant B were still produced in the 1st century BC and the 1st century AD, but *c.* the turn of the eras Variant C appeared. The main characteristic of this type, which dominated during the 1st and 2nd centuries AD (C1 dated to the 1st and 2nd centuries AD, whereas C2 to the late 2nd century AD), was a sharp rib under the rim, at the level of the upper handle attachment (Figs 6–7). An indentation corresponding to the rib may be observed inside the neck, while some specimens possess also a groove on the inner surface of the neck corresponding to the rib on the outer surface (Fig. 8). Moreover, some containers have two or three circular bulges (*c.* 1 cm in diameter), sometimes two rows of them, on the inner surface of the neck, exactly where the upper part of the handle was attached (Fig. 9). Their function, however, remains obscure. Variant C amphorae are around 80–90 cm high, and the diameters of their bodies amount to 25–30 cm. Compared to the former type, their body is more proportional: the upper part is smaller, while the lower more 'swollen'. Waist is preserved but not always so clearly visible. Rims curve outwards, and their diameter varies between 8.5 and 11.0 cm, whereas toes are simple and conical. The flourish inside is less marked, and in some examples it disappeared completely at the end of the 1st century AD (Fig. 10). Handles are wider (*c.* 4 cm), and two shallow incisions on their inner and outer surfaces are more visible. Variant C co-existed together with Variant B during the 1st and probably in the 2nd century AD. A detailed chronological evolution of the amphorae of Variant C has not been established so far, but it seems that Variant Ch 1C1 developed between the second half of the 1st and the first half of the 2nd century AD, while Ch 1C2 dates to the 3rd century AD.[12]

In the first half or *c.* the mid-4th century AD, the size of the amphorae decreased. The small container with a narrower waist is labelled as Variant D and is typical for the Late Roman Period.[13] Late Roman 'brown-clay' amphorae are dated to between the 4th and 7th centuries AD,

[12] Tsetskhladze 1992, 91–104; Tsetskhladze, Vnukov 1993, 83–88; Tsetskhladze 1999, 109–113; Vnukov 2003, 166, 170; 2009, 30.

[13] Vnukov 2011, 276–277.

Fig. 6. Neck of an amphora of type Ch 1C with a rib under the rim (photo by an unknown author).

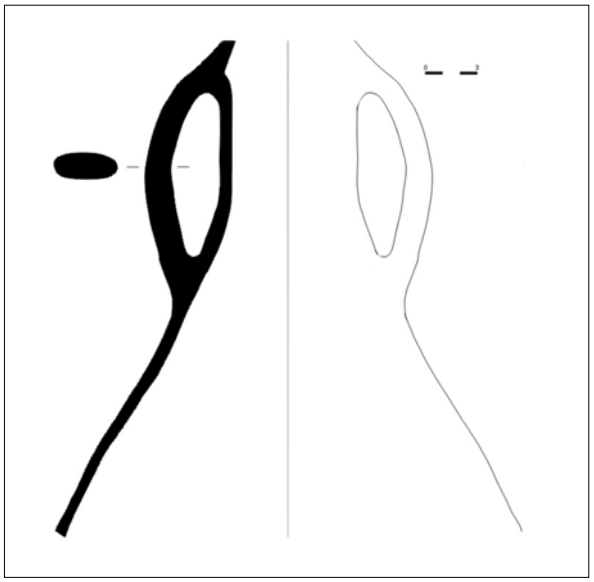

Fig. 7. Neck of an amphora with a rib under the rim (drawing by P. Komar and M. Marciniak).

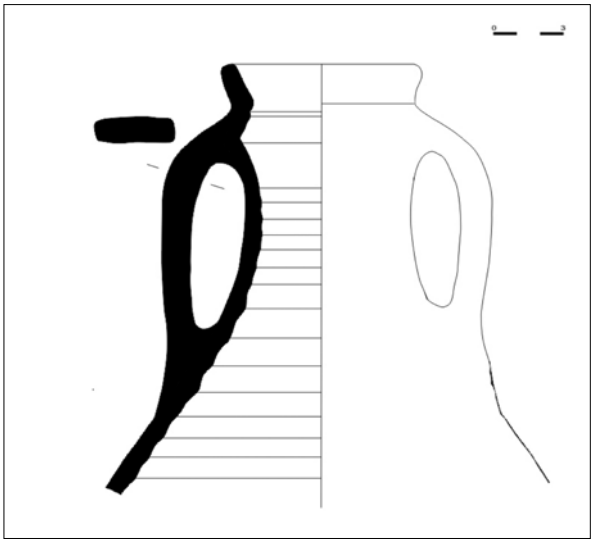

Fig. 8. Neck of a Ch 1C amphora with a rib and a groove on the inner surface of the neck corresponding to the rib on the outer surface (drawing by P. Komar and M. Marciniak).

and they are probably represented by the so-called 'pseudo-Colchian' containers from the Samsun Museum in Turkey.[14] Transformations between different types occurred gradually, without any sharp changes, which on the one hand shows a clear direction in their evolution, but on the other hampers distinguishing between the variants. For example, it is impossible to determine typical features of different parts of these containers which would be characteristic for a given variant. It seems that their evolution may have been independent from the development of the general shape of the containers. Nevertheless, S.Y. Vnukov made an attempt to present a statistical correlation between the forms of profile sherds and the variants of the amphorae.[15]

Petrological studies have revealed that the clay of the 'brown-clay' amphorae is easily distinguishable from fabrics of other containers due to it being hydromicaceous and having high iron content. This suggests that the containers were produced in one particular region, which means Colchis, probably along with the neighbouring areas (*e.g.* Trapezus).[16] Generally, all 'brown-clay' amphorae contain pyroxene, but its quantity varies between 4 and 90% of total grain inclusions. Similarly, the quantity of plagioclase fluctuated between 3 and 35%. Quartz might have also been present (rather small quantities of isolated grains) and sometimes also amphibole (up to 12% of inclusions), iron (up to 14%), epidote (up to 10%), and micaceous minerals (up to 5%). Fragments of acidic rocks as well as basalt were present in all the samples, whereas plutonic rocks of normal alkalinity were attested in half of them. At the same time, sandstone and other sedimentary rocks were not typically present (substantial quantities of sandstone were attested only in the amphorae from NW Colchis). Generally speaking, the characteristics

[14] Kassab Tezgör, Akkaya 2000; Kassab Tezgör 2002, 205–207.
[15] Vnukov 2003, 166–192; 2009, 30.
[16] Tsetskhladze, Vnukov 1992, 378.

Fig. 9. Circular bulges on the inner surface of a neck of a Ch 1C amphora (no. GA 2017/483) (photo P. Komar).

Fig. 10. Foot of a 'brown-clay' amphora with a flourish inside (no. GA 2014/166) (photo by P. Komar).

of the clay of these amphorae remained unchanged, but considerable fluctuations in mineral composition of inclusions can be observed.[17] It should also be noted that their morphological variability increased during the 2nd century AD.[18]

On the basis of the temper, at least two variants of clay can be distinguished, but a third, intermediary variant is sometimes also mentioned.[19] The first one (Fabric 1) is similar to the Sinopean pottery and has an admixture of pyroxene and basaltic sand, whereas the second (Fabric 2), typical for Ajaria and Abkhazia, is more diversified, containing plutonic, basaltic, and sedimentary rocks and minerals.[20] Moreover, the second variant has a similar fabric to the Colchian *pithoi*.[21] Given that the clay of the Fabric 1 amphorae was Colchian and that the Greek name 'Τιμαρχος' was preserved on a few of them, one may suppose that these amphorae were made by potters from Sinope who worked in Colchis but used their 'Sinopean' recipe.[22] Such a conclusion seems to be confirmed by the fact that the Fabric 1 containers date from the 4th century BC through the 1st century AD and were distributed mostly in the northern Black Sea region. Conversely, vessels of the second variant were found mostly in Colchis.[23] However, it is not possible to find any correlations between the different forms of amphorae (Ch 1A, B, and C) and the fabrics.[24]

It should be noted that some of the 'brown-clay' amphorae bear epigraphic marks in the form of stamps with Greek names which resemble amphorae and tile stamps attested in Sinope.[25] S.Y. Vnukov noted that marked containers have temper of Fabric 1 only. On the other hand, Fabric 2 vessels had only unepigraphic stamps (circles or crosses) or marks engraved prior to firing, which resembled those on local Colchian pottery (*e.g. pithoi*). This observation, as well as the similarity in the fabric and shape of the earliest 'brown-clay' amphorae and the Sinopean ware, led him to the conclusion that their production was first established by potters from Sinope. Trapezus, which was a Sinopean colony according to Xenophon,[26] might have been the first centre of their manufacture. Pottery made in this town is similar to Sinopean in temper and to Colchian in clay matrix. Trapezus exported wine to the northern Black Sea region during the Hellenistic and Early Roman periods. The production of 'brown-clay' amphorae soon spread out to several Greek and barbarian workshops in Colchis. This manufacture may have been associated with the increase in wine export that started after the appearance of the Roman army in this territory in the late 1st century AD (although Colchian amphorae were transported mostly within Colchis).[27] Colchian 'black-clay' amphorae had the same shape and clay matrix as their prototypes from Trapezus, but they varied in temper, which was more complex (Fabric 2) and resembled the Colchian pottery. According to Tsetskhladze, the fabric of these amphorae resembled the so-called sub-group B2.[28] Its main

[17] Tsetskhladze, Vnukov 1992, 378–383.
[18] Vnukov 2009, 30.
[19] Tsetskhladze, Vnukov 1993, 91.
[20] Tsetskhladze, Vnukov 1992, 359; Vnukov 2009, 30, pls 6.1, 6.2; 2011, 271–272. Vnukov (2013, 33) claims that the Abkhazian type has very little pyroxene.
[21] Tsetskhladze, Vnukov 1993, 91.
[22] Tsetskhladze 1992, 105–107; Tsetskhladze, Vnukov 1992, 383; 1993, 91.
[23] Tsetskhladze, Vnukov 1992, 383; 1993, 90–91; Vnukov 2009, 31.
[24] Vnukov 2009, 30.
[25] Tsetskhladze, Vnukov 1992, 383.
[26] Xen. *Anab.* 4, 8, 22.
[27] Vnukov 2009, 30–31.
[28] Tsetskhladze 1999, 111.

characteristic is sand used as a thinner typical of 'brown-clay' amphorae found in Colchis, as well as of local *pithoi* and kitchen ware. According to Tsetskhladze, they were produced in workshops operated only by local (non-Greek) craftsmen. Unlike amphorae with other fabrics, which were produced in workshops of Greek potters, they were manufactured for local markets rather than for export.[29] Fragments of containers of this type were found in Eshera, Gvandra, Krasny Mayak, Gyenos, Kepi (Cepi), Rokhshi, Vani and its neighbourhood (Dablagomi, Dapnari, and Sakanchia), Ureki, Pichvnari, Tsikhizdziri, Namcheduri, Zemo-Partskhma, Tsebelda, as well as maybe in Sukumi and Vardcikhe.[30]

'Brown-clay' amphorae in Apsaros

In a publication of transport containers from Gonio by M. Khalvashi, the 'brown-clay' amphorae were referred to as the type Gonio I.[31] According to him, they may have been produced in a Gonio workshop which probably existed in the 2nd through 3rd centuries AD in the south-western corner of the inner fort – the remains of an amphora kiln were attested there in 1997.[32] Apart from Gonio, kilns producing 'brown clay' containers were attested in Nokalakevi (amphorae of the Early Byzantine Period)[33] and Vardtsikhe-Rhodopolis,[34] but to the best of my knowledge, these hypotheses have not been so far confirmed by advanced petrological studies performed on samples of pottery from the kilns and amphorae.

Until 2009, two complete examples of 'brown-clay' amphorae and approximately 300 amphorae feet were discovered by a Georgian expedition. Some of the amphorae with a ridge in the neck, *i.e.* Variant C, were accompanied by a copper coin of Emperor Nero dated to the 1st or 2nd centuries AD. The Gonio-Apsaros Polish-Georgian Expedition working annually between 2014 and 2018 have not so far found any complete vessels, but 157 diagnostic fragments were attested, including 40 well-preserved rims and necks, 68 feet, and 49 handles. They were examined with the naked eye and with a 10x magnifying glass in daylight, which allowed to distinguish three macroscopic groups:

1. Dark brown, coarse-grained clay with bigger inclusions of pyroxene and black basaltic sand, as well as numerous voids;
2. Finer-grained orange or light or dark brown clay with small inclusions of black basaltic sand, small round white inclusions, less pyroxene, occasional silver mica and other indefinite inclusions, as well as small round voids;
3. Similar to number 2 but with less pyroxene and more sand.

Macroscopic groups 1 and 2 roughly correspond to Vnukov's Fabrics 1 ('Sinopean recipe') and 2 ('local recipe') respectively.[35] Most of the fragments, namely 86 pieces, belong to Fabric 2 ('local recipe'). Fabric 1 ('Sinopean recipe') was considerably less numerous, being represented by 47 diagnostic fragments. In 18 cases, sand admixture was clearly visible, especially on the surfaces of the vessels, and the clay was lighter in colour, which suggested that they belonged to Fabric 3. In nine cases, the fabric could not be precisely defined with the naked eye, though it seems more similar to coarse-grained Fabric 2 in seven cases and fine-grained Fabric 1 in one case, with one example remaining indefinite. Tab. 1 shows the numbers of diagnostic sherds per fabric.

Only two variants of 'brown-clay' amphorae were attested in Gonio, namely Ch 1B (most probably Ch 1B2) and Ch 1C, which is perfectly understandable, given that Variant A stopped being produced before the

Tab. 1. Number of diagnostic fragments per fabric.

	Fabric 1	Fabric 2	Fabric 2 with sand	Fabric 1/2	Total
Rim	6 (each Ch 1B)	16	6	4	32
Neck	0	8	0	0	8
Foot	29	37	0	2	68
Handle	12	23	11	3	49
Total	47	84	17	9	157

[29] Tsetskhladze 1999, 110–112.
[30] Tsetskhladze, Vnukov 1992, 360, Fig. 1; Khalvasi 2002, 12–15.
[31] Khalvashi 2002.
[32] Kakhidze 2003, 319, 324, Fig. 32.
[33] Lomitashvili, Colvin 2009.
[34] Japaridze 1989, 134–135.
[35] Japaridze 1989, 134–135.

Tab. 2. Dimensions of rims, necks, and handles.

	Ch 1B	Ch 1C
Rim diameter	7.2 to 8.0 cm	7.8 to 10.7 cm
Neck diameter (internal)	4.5 to 5.0 cm	5.0 to 7.0 cm
Handle width	3.0 to 3.3 cm	3.5 to 4.17 cm
Handle thickness	1.3 to 1.6 cm	1.3 to 1.6 cm
Body thickness	0.5 to 0.7 cm	0.6 to 0.9 cm

fortress was founded. It is possible that also late Roman or medieval 'black-clay' amphorae were found, but the form has not yet been thoroughly described, while fragments of containers found by the Gonio-Apsaros Polish-Georgian Expedition were too fragmentary to allow for such a conclusion. Nevertheless, it cannot be excluded that the late form is represented by Fabric 3, because the shapes of rims and handles, as well as their colour, differed slightly from the typical Roman material. The colour of the Early Roman 'brown-clay' containers varies between orange-brown through bright-brown (Munsell 2.5YR 5/8), red (Munsell 7.5YR 4/6 and 10R 5/6), and dark reddish-brown (Munsell 10R 4/6 or 10R 4/8), while the supposed late Roman containers (Fabric 3) had rather different shades of red (Munsell 10R 5/8) or reddish-orange (Munsell 10R 6/6 or 10R 6/8) in fresh breakages but more orange on the surface (Munsell 2.5 YR 6/6, 2.5 YR 7/4, or 10 R 6/8).

The dimensions taken from the fragments of amphorae enable a conclusion that the rim and neck diameter of Variant Ch 1B varied between 7.2 and 8.0 cm, while in the case of Variant 1C rims were wider, measuring between 7.8 and 10.7 cm. Handles were always oval, 3.0 to 3.3 cm wide and 1.3 to 1.6 cm thick in Variant Ch 1B, whereas in Variant Ch 1C they were 3.5 to 4.17 cm wide and 1.3 to 1.6 cm thick. Body thickness varied between 0.5 and 0.7 cm in Ch 1B and between 0.6 and 0.9 cm in Variant Ch 1C (Tab. 2). The feet varied greatly, as some of them exhibited a more or less pronounced flourish inside, while others were smooth. Overall, it is worth mentioning that the Ch 1C forms were bigger than their predecessors. Unfortunately, no specimen of either form has so far been found in its entirety by the Gonio-Apsaros Polish-Georgian Expedition, which is why the total body shapes and height were not given.

It was not possible to establish any certain correlation between the form and the fabric because most of the fragments could not be attributed to any of the forms. However, it seems that the form Ch 1B appeared mostly in Fabric 1 (six out of eight discernible fragments), while the form Ch 1C was made exclusively according to the local recipe (Fabric 2).

If S.Y. Vnukov is right in attributing Fabric 1 to the kilns in Trapezus,[36] it seems that a certain part of 'brown-clay' amphorae (*c.* 36%) were produced there, and that this production continued until the end of the 1st century AD. The rest of the 'brown-clay' containers would be made somewhere in Colchis, but petrographic analyses of the local pottery and ceramic fragments preserved in the kilns are necessary to find out the exact centres of their manufacture. What may be significant here is the fact that type Ch 1C presumably postdates the mid-1st century AD, *i.e.* the time when Apsaros fort was probably founded. Therefore, it seems possible that they may have been indeed made in the kiln that was attested in the south-western part of the Gonio fortress, as Khalvashi suggested.[37] We may, however, ask what was the point of making transport containers in, or rather next to, the Roman fort (the then Roman fortress looked differently than the later Turkish walls suggest, and the kiln was in fact outside of it).[38] There is no archaeological evidence for olive oil, fish sauce, or wine production within the area of Gonio, but nowadays wine is made around Keda, which lies *c.* 40 km from Gonio. Even though Ajaria is not among the main wine-making districts in Georgia, such as Kakheti, Kartli, or Imereti, wine production on a considerable scale is currently noted in this area.[39] Since conditions for viticulture are favourable in the region, it cannot be excluded that wine production occurred there in the Roman times as well. Thus, for the time being, the only possible commodity which may have been transported in the 'black-clay' amphorae is wine. It could have been brought from the interior in wineskins, then transvased into amphorae produced in Apsaros,

[36] Vnukov 2009, 31.
[37] Vnukov 2009, 31.
[38] Karasiewicz-Szczypiorski personal communication.
[39] Robinson 2006, 303.

and subsequently exported by the sea. It is almost certain that a harbour or at least a pier existed next to the fort because it was necessary to supply the soldiers.[40] Given that most of the identifiable Fabric 2 amphorae belonged to type Ch 1C, produced since the end of the 1st century AD, it seems that the presence of the Roman soldiers and their demand for food supply encouraged intensified agricultural production in the region. The development of wine and amphora production and export was probably a consequence of this.

Conclusions

The study of 'brown-clay' amphorae from Apsaros showed that these containers were found in the fortress in considerable quantities – 157 out of 460 diagnostic fragments (34%). It was possible to distinguish two variants of 'brown-clay' amphorae upon the basis of rims and necks, namely Ch 1B2 and Ch 1C, which confirms the dating of Apsaros to the first three centuries of the current era. Two fabrics were noted, *i.e.* the 'Sinopean' (Fabric 1) and 'local' (Fabric 2), with a considerable preponderance of the latter. Amphorae of Variant Ch 1C, presumably postdating the late 1st century AD, were made exclusively in the second fabric. Assuming that S.Y. Vnukov is right with his attribution of Fabric 1 to the production of Trapezus, we may suppose that the Apsaros fort was mostly supplied with products imported from the south Pontic region until the end of the 1st century AD. Later on, it could probably rely on local Colchian agricultural production, which was developed as a response to the Roman demand (possibly for wine). The production of the local amphorae, which were distributed across Colchis, suggests that surpluses of local products were so high that also other regions of Colchis may have profited from agricultural development of the region.

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