TYPES AND FORMS OF «POLYCHROME MARBLE WARE» FROM THE OTTOMAN FORTRESS OF AZAK IN SOUTHERN RUSSIA (CERAMOLOGICAL STUDY)

By

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ABSTRACT

This ceramological research is devoted to a very rare type of marble-like decorated glazed pottery – «Polychrome Marble Ware» - that was discovered during archaeological excavations between 1961 and 2015 in the Ottoman fortress of Azak in the North-East Azov region, Southern Russia. It was a first-ever possibility to identify and study fragments of this tableware, which are stored in the stock collections of Azov History, Archaeology and Palaeontology Museum-Reserve. The authors of this ceramological research set themselves the following tasks: to study the history of the origin of the Ottoman «Polychrome Marble Ware», to determine the centers of its production and the time of its existence, as well as to define and classify the types and forms of these potteries, which were encountered during excavations in the Turkish fortress of Azak, to find analogies in other archaeological sites of the Ottoman time. The research results are reflected in four chapters of this article. In our opinion, most of the «Polychrome Marble Ware» was brought to the Turkish fortress Azak from Anatolia, where it was produced in the 17th-18th centuries. Among this pottery, obviously, there are also pottery from the coast of Marmara Sea and the South-East Crimea. Crimean potters, apparently, imitated Italian and Malaysian tableware with marble decor that was then fashionable.

KEYWORDS: Southern Russia, Ottoman fortress of Azak, «Polychrome Marble Ware», 17th-18th centuries.
I. INTRODUCTION

The study of ceramic complexe of the most remote Ottoman military fortress of Great Porte-Azak (for the Russians - Azov), which was collected more than half a century (from 1961 to 2015) archaeological research on the territory of this historic site of late Middle Ages-New Time in North-East Azov region (Southern Russia) [FIGURE 1], showed that the group of imported polychrome tableware had a small fraction of the remains of «Polychrome Marble Ware». Due to their small number and poor safety, these artefacts had not been in the sight of researchers for a long time, who in the late 20th - early 21st centuries were studying the archaeological collections stored in the Azov History, Archaeology and Paleontology Museum-Reserve (Azov city, Rostov region). However, a detailed review of the composition of archaeological collections from excavations in the former Turkish fortress Azak in the 1960s and 1970s showed that the inhabitants of these fortifications used such utensils in their daily lives. In the Azov collections of archaeological findings of the 1960s and 1970s, we found 22 fragments of earthenware with marble decoration (17-open-shaped vessels, 3 - closed-shaped vessels, 2 - jug lids) [FIGURES 2/2-5; 3/ 8; 4/2, 6-8].

In the 1980s and 1990s, the process of archaeological research into the territory of former Ottoman fortress of Azak was almost stopped. Excavations of this historical site and its surroundings at this time were rare and insignificant in scale. The ceramic collection of Azov Museum-Reserve during this period was enriched, as it turned out, by only one fragment of a plate with a marble ornament, which was discovered in 1994 in the vicinity of the fortress [FIGURES 2/1].

A noticeable inflow of new ceramics of the Ottoman period into the funds of Azov Museum-Reserve took place in the first two decades of the 21st century, when archaeological research in the territory of Turkish Azak and its districts intensified again. Thanks to the 2004-2015 excavations in Azov, the number of «Polychrome Marble Ware» increased by another 56 copies [FIGURES 2/6-9; 3/1-7; 4/1, 3-5].

We firstly discovered the «Polychrome Marble Ware» in 79 fragments at archaeological sites of the Ottoman period in the North-East Azov region. It has been studied, attributed and dated based on an analysis of the results of archaeological excavations in the Turkish fortress of Azak, as well as a search for analogies at archaeological sites in the Black Sea and the Mediterranean. A particular concern at this stage of the study is an identification of the «Polychrome Marble Ware» production centers found in the

1 КАЗАКОВА 1962; 1963.
northernmost military fortifications of the Ottoman Empire. This requires a sufficient series of special analyses (primarily concerning the chemical composition of the glazes and the molding mass of the clay products under the research). It also requires the collection of a databank on this issue from a vast territory that was once part of the Ottoman Empire.

II. HISTORY OF THE «POLYCHROME MARBLE WARE»

Before we proceed to the description of the findings from the archaeological excavations on the territory of former Ottoman fortresses in the North-East Azov region, it is necessary to give a general description of the whole group of «Polychrome Marble Ware», which is differently called in the literature by researchers: «Ceramics with marble-like paintings»4, «Marmurova ceramics»5, «B5 Ware»6, «Marbled Ware(s)»7, «Marble ceramics»8 and «Ebrulu seramikler»9. After the publication of J. Vroom on Aegean ceramics from the 7th to the 20th centuries, many researchers began to use the term «Polychrome Marble Ware» suggested by her in their articles10.

The «Polychrome Marble Ware» is a pottery tableware (plates, bowls and jugs) decorated with a certain type of under glaze decoration, which is generally considered to imitate natural «stains» or «veins» on marble and is, therefore, called «marble décor» or «marble painting». A technique of applying this type of ornament to a surface of the vessel is quite original: a master applies large drops of liquid dye (coloured engobe) of one or more colours to a wet layer of white engobe primer and sets in motion the potter’s wheel, on which the vessel is located, changing a direction of its rotation at times. As a result, the dyes (coloured engobes) are randomly spread (slide) on the surface of the pottery, forming bizarre «stains» that look like «veins» on marble. This «marble» effect is often enhanced by the additional colouring of green dye (copper oxide) in a form of «blurring» spots or stripes under a layer of transparent lead glaze with a salad or yellowish tint. A Turkish name for this tableware ornamentation technique obviously comes from a similar paper painting technique «ebru».

Medieval fashion for «Polychrome Marble Ware» originated in Northern Italy, where it was called «Ceramica Marmorizzata» and was produced for sale in many famous Italian

4 КОВАЛЬ 1998.
5 БИЯЄВА 2012: 230.
6 RICE 1930: 48-49.
8 KAMADADZE 2016: 246-251.
9 БАРИЩА 1998: 70.
10 VROOM 2005: 165.
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cities (Faenza, Savona, Pisa and Florence), according to some data from the 2nd half of the 16th century\(^{11}\), according to the other data - from the end of the 15th century\(^{12}\).

The prosperity of production took place at the end of the 16th-17th centuries. The popular forms of Italian pottery of this type were: hemispherical bowls, plates, dishes, bowls, one-handed jugs with a whisk in the form of a trefoil and «flasks»\(^{13}\) [FIGURES 5/1-2].

All «Marmorizzata ceramics» were red clay and belonged to a «Slyp ware» category. There were three schemes of ornamentation of Italian vessels with coloured engobes: two-colour (red-white; black-white), three-colour (white-red-black; brown-green-black; white-brown-green; white-brown-black) and four-colour (red-white-brown-green)\(^{14}\). Normally marble decoration was applied only to an inner surface of open-shape vessels and to an outer surface of closed-shape vessels. Northern Italy remained a major exporter of «Marmorizzata ceramics» to international markets until the 18th century.

Italian traditions of «Polychrome Marble Ware» production spread throughout the Mediterranean and Black Sea regions, including a vast territory of the Ottoman Empire in the 17th and 18th centuries. Imitations of this tableware could be found on the Aegean and Marmara Sea coasts, as well as in Europe\(^{15}\). In tribute to European fashion at the turn of the 17th-18th centuries, the production of «Polychrome Marble Ware» in Russia (in particular, in Moscow) and Ukraine (in Kiev and other pottery centers of the Middle Dnieper) began to be established, which existed until the 19th century\(^{16}\).

On the territory of the Ottoman Empire, the production of polychrome ware imitating Italian ceramics «Marmorizzata» appeared in the 17th century and existed until the 19th century\(^{17}\). But Ottoman samples of this tableware were externally different from the original Italian «Marmorizzata» ceramic products: the shape of the vessels, the composition and colour of the clay mass, the glazed coating and the very appearance of «marble» decoration. This can be well traced back to the remains of the dishes, which, together with the Ottomans, entered the territory of North-East Azov region in the 17th - first third of the 18th centuries and was discovered during archaeological research of Turkish fortress Azak [FIGURES 2-4].

\(^{11}\) VROOM 2005: 165; MOORE VALERI 2012: 11
\(^{12}\) RICE 1930: 48; BAKIRTZIS 1980: 151.
\(^{14}\) MOORE VALERI 2012: 17.
\(^{15}\) VROOM 2005: 165.
\(^{16}\) КОВАЛЬ 1998: 227-228; БИЛЯЄВА 2012: 231; ЧМИЛЬ 2013: 258.
\(^{17}\) VROOM 2005: 165.
III. CLASSIFICATION «POLYCHROME MARBLE WARE» FROM THE OTTOMAN FORTRESS OF AZAK

The bulk of the findings of the studied group of glazed ceramics from the territory of the former Ottoman fortress Azak in The North-East Azov region (today’s Azov district of Rostov region) relate to dinnerware, where the vast majority are fragments (no integer forms) of open-shape vessels (93.7% of the total number of ceramics fragments).

Open-Shape Vessels:

1. Plates.

Among open-shape vessels, the largest number of fragments refers to plates (small and deep) on a ring-shaped pallet (more than 44 fragments), which in turn are morphologically divided into four subgroups:

A. Small Plates with Wide Border.

A height of the plates is about 4.0 cm. They have a rounded, semi-oval in profiled rim with 18.0-19.0 cm diameter, which merges with a wide, slightly bevelled inward border (width of the rim is 3.0-4.0 cm). The body is flattened and half-shaped. The ring-shaped pallet - low, narrow, truncated-conical or cylindrical, with a flat base (pallet diameter - 7.0 to 12.0 cm; pallet height - 0.5 to 0.6 cm; width - 0.6 to 0.8 cm). Seven of the Azov findings fragments belong to this subgroup. All plates are made of pliant brown clay (except one plate of beige clay) on potter’s wheel [FIGURES 2/1-2]. Only an inner surface of the items is decorated using two simple ornamental schemes:

Scheme N°. 1. Marble «stains» occupying an entire inner surface of the vessel [FIGURES 2/2]; Scheme N°.2. Vertical wide strips of underflow on the border and sides of the body, turning into marble «stains» at the bottom of the vessel [FIGURES 2/1].

The pattern is done with brown dye (engobe) on white engobe primer, in four cases with green dye in the form of amorphous spots and «stains». Both surfaces of the plates are covered with semi-transparent lead glaze in salad, yellow or yellow-salad colors, the outer surface is directly on the shard. As a rule, the glaze is applied to the entire outer surface of the product, except for the bottom and inner side of the ring-shaped pallet. The only exception is a single fragment of the plate found during excavations in 1978 on the territory of the former Azak fortress. The entire outer surface of this plate was covered with a salad-coloured glaze, including the bottom with a ring pallet, which is very rare for vessels of this type [FIGURES 2/2].

There are some traces of the use of a clay tripod stand at the bottom of two plates when kiln firing the product. The peculiarity of one of the plates is the presence of two small, concentric, roller-shaped circles on the inner surface of its bottom [FIGURES 2/1].
B. Small Plates with a Narrow Border.

The size of these vessels is noticeably smaller than the others (height - about 3.5 cm, diameter of the rim - 15.0-16.0 cm), so in our opinion it is appropriate to call them «small plates». They have a rectangular aureole that merges with a narrow (1.4-1.5 cm), bevelled inward border. The plate body is flattened with a hemispherical shape. Pallet - ring-shaped, low, narrow, truncated-conical or subcylindrical, with a flat base (pallet height 0.6-0.7 cm; width 0.5-0.7 cm; diameter 6.0-8.0 cm). The plate sides are gradually thickening from top to bottom (0.2 cm to 0.9 cm). According to the fairly large number of fragments found (26 pieces), it was a very common type of dinnerware with marble decoration in Azak. Of these, 8 fragments were light clay plates [FIGURES 2/8] and 18 fragments were brown clay plates [FIGURES 2/6-7, 9] made on a potter's wheel.

As with the plates of the first subgroup, two ornamental patterns in the decoration (N°. 1 and N°. 2) can be traced, with some advantage of the second pattern [FIGURES 2/7-8]. Only the inner surface of the plates is decorated. The ornament is applied with a brown dye (engobe) on a white engobe under a translucent lead glaze of green, salad and yellow salad, sometimes with a green tint in the form of amorphous spots and «stains». Brown-clay plates have glaze on both sides, while the outer one is glazed directly on the ceramic body (except the base and inner part of the ring-shaped pallet with the bottom). For light clay plates, the glaze is applied to the inner side and only to the upper part of the outer side. There are traces of a clay tripod stand at the bottom of one of the plates.

C. Deep Plates with a Narrow Border.

Only 3 fragments of a single plate were found to belong to this subgroup. The corolla of the plate is rectangular in cross-section, with a flattened edge (the diameter of the rim is 21.0-22.0 cm). The rim merges with a narrow (1.5 cm), strongly bent outward and bevelled inward border. The plate body had a hemispherical shape. The plate is made of pinkish brown soft clay on a potter’s wheel with no visible inclusions. The whole inner surface of the vessel is decorated with marble. The ornament is a brown «stains» on white primer with a green tint in the form of amorphous spots. Both surfaces of the plate are covered with translucent yellow-salad lead glaze, the outer surface is directly on the shard [FIGURES 2/3-5].

D. Deep Plates with No Border.

The feature of this not very numerous (8 fragments) subgroup of plates is the lack of a border. The rim is straight, semi-oval in cross-section, with a rounded edge (the rim diameter is 19.0-20.0 cm), merging with the flattened half-spherical body walls [FIGURES 3/1-3]. The plates had bottoms on a low, narrow ring pallet that have not survived to this day. The plates had thick sides (0.5-0.8 cm). They are made of light beige (5 pcs.) and brown (3 pcs.) clay on a circle.
Scheme N°. 2 has been used for plate ornament. The glaze is semi-transparent, lead, salad and yellow-salad colors. In brown-clay plates it is applied on both surfaces (on the outer surface - directly on the shingle), in beige plates - on the inner and upper parts of the outer surface on white engobe.

2. Bowls.

This is a very small group called «Polychrome Marble Ware» in Azak. We were able to track only 8 rim fragments and body shards (there are no whole items) that belong to it [FIGURES 4/ 1-4]. All identified samples of bowls are brown-clay, made on a potter’s wheel. The shape of the vessels is identical: a straight, semi-oval crown (15.0-16.0 cm in diameter) merging with a hemispherical body, and a low, narrow ring-shaped base. The ornament is applied to one of the surfaces – internal [FIGURES 4/2] or external [FIGURES 4/1, 3-4]. Two patterns of ornamentation can be seen on the inner surface: N°. 1 and N°. 2.

Some of the bowls are decorated with marble «stains» on the outside. The ornament is applied with a brown dye (engobe) on a white engobe primer, sometimes with green spots under the transparent lead glaze of salad, lettuce yellow and green. Vessels with ornaments on the inner surface of the vessel have a decor-free outer surface in four cases without white primer, in two cases (in bowls with striped sides) white engobe is applied only to the top of the vessel.

3. Unidentified Fragments.

Fragments of bottoms on ring-shaped bases and the sides of open-shaped vessels decorated with marble ornaments (22 fragments in total) found during excavations on the territory of the former Turkish fortress of Azak are worth of a separate description. It is difficult to determine what kind of dishes (plates or bowls) they belong to. Of these, 6 fragments (5 – bottoms and 1 - body shard) belong to light clay vessels made of beige-coloured soft clay [FIGURES 3/4-5]. The remaining 16 fragments (9-bottoms and 7 body shards) belong to brown clay vessels [FIGURES 3/6-8].

Fragments of light clay ceramics (6 pcs.) obviously belong to thick-walled plates on a low, narrow cylindrical ring-shaped pallet (pallet height 0.7-0.9 cm; width 0.7-0.8 cm; diameter 8.0-10.5 cm; wall thickness 0.5-0.8 cm). The marble decor is applied to the interior surface with a brown dye (engobe) on a white primer (sometimes with green spots) under a translucent lead glaze of green, salad or yellow-salad. The external surface of the vessels was covered with glaze, apparently only at the upper part. The inner side of the bottom of the three fragments is decorated with a small roller-shaped circle, in one case with a dot-shaped convexity in the center [FIGURES 3/4]. On the outer side of the bottom of one of the plates there is graffiti in the form of a sign resembling the letter «A» [FIGURES 3/4]. Technological features of the production can
be seen from the remaining tripod fastening points on the inner side of the vessel bottom.

Brown-clay crockery is represented by 9 fragments of donuts on similar ring pallets and 7 fragments of body walls. Judging by the shape, size and wall thickness, most of the fragments also belong to the plates (pallet height 0.7-0.8 cm; width 0.6-0.8 cm; diameter 8.0-10.0 cm). Three patterns of ornamentation can be traced: to the two patterns described above (scheme N°. 1-2) ([FIGURES 3/4-7] a third scheme (scheme N°. 3) with «stains» and «splashes» was added [FIGURES 3/8]. The surface of one plate is completed with a relief flower rosette inscribed inside two roller-shaped concentric circles at the bottom of the vessel [FIGURES 3/8].

There is such a medallion with a five-petal flower rosette at the bottom of a «red-clay» plate, found in the 17th-18th centuries during archaeological research of the medieval fortress Funa in the Crimea. The inner side of the plate is decorated with wide vertical stripes that turn into marble «stains» (scheme N°. 2). The ornament is made of brown engobe on white primer under a layer of yellow-green glaze.

The decoration on fragments of the bottoms of open-shape vessels from Azak is made in the standard way described above: brown dye (engobe) on white engobe primer, often with coloured green stripes and stains under a layer of translucent lead glaze in green, salad, yellow or yellow-salad. In almost all cases (except three), the entire outer surface of the vessels (except for the bottom and inner side of the ring pallet) is covered with the same glaze directly on shard. The bottoms of the three plate fragments are decorated with a small roller-shaped circle (diameter of circles - 3.0-4.0 cm) with a point-shaped convexity in the center. Two concentric roll-shaped circles decorate the bottom of two more plates, which were obviously made in one ceramic center.

Close-Shape Vessels:

1. Jugs.

Only 3 fragments of the closed vessels decorated with marble ornaments were identified, 2 of which belong to one jug found on the territory of the Azak fortress in 1978. The jug had a low, narrow, cylindrical neck merging with a straight, semi-oval profiled rim (rim diameter is 7.0 cm). The shoulders of the jug are short and smoothly rounded into a sub-shaped body. The lower part of the vessel has not been preserved. Handle - arched, vertical, narrow, oval in cross-section. The pitcher is made of brown pliant clay with a high lime content on a potter's wheel. The marble decoration, made of brown dye (engobe) on a white engobe primer, was obviously decorated with its entire surface.

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18 МыЦ 1985: 7-9, fig.82.
outer surface. The glaze is translucent, lead and yellow salad-coloured, applied to both surfaces of the vessel, on the inside - on shard [FIGURES 4/6].

In 1962, a similar jug body fragment with a marble decoration was found in Azov, made of brown dye on white primer with green spots under semi-transparent salad glaze (on the inner side it is applied to the shard)\(^{19}\). The upper part of the body is additionally decorated with several thin cutting lines in the technique under-engobe engraving. Moulding mass is pliant, brown in colour, with rare lime dot inclusions [FIGURES 4/8].

2. Jug Lids.

The jugs had lids. A total of 3 lids of the same style were found on the territory of the Azak fortress: with a flat-hemispherical dome that goes into a disc and a button-like handle-holder. The two lids have almost identical dimensions (the height of the lids with a handle is 4.5 cm, the diameter of the lids is 7.0-8.0 cm and the diameter of the handles is 1.2-1.5 cm). They are made in the same ceramic center as the jug found at Azak in 1978. The pattern of lids ornamentation is similar to that of jars - marble «stains» on the outer surface [FIGURES 4/5, 7].

IV. OTTOMAN CENTERS OF «POLYCHROME MARBLE WARE» PRODUCTION

The biggest difficulty in this study is the question of identifying the ceramic centers that produced the «Polychrome Marble Ware», which came with the Ottomans in the 17th and 18th centuries into the fortress of Azak and the North-East Azov region. Visual observations allow us to identify at least 4 centers that produced this ceramics from light, predominantly beige, clay, and approximately 5 centers that produced the same «red clay» dishes. Of the total number of «Polychrome Marble Ware» fragments from Azak fortress, the vast majority (61 fragments) belong to «red clay» or, more precisely, brown clay vessels. A significantly smaller number (18 fragments) refers to light clay vessels.

After studying the morphology, the peculiarities of ornamentation and glazing, and the composition of the moulding mass of the Ottoman «Polychrome Marble Ware» from the archaeological collections of Azov Museum-Reserve, we were able to draw some preliminary conclusions about the ceramic centers where they were manufactured. In our opinion, open-shape light clay vessels (plates and small plates) were produced in the Ottoman Empire, roughly four ceramic centers:

**Center №. 1** It produced «Polychrome Marble Ware» made of light beige clay with a high lime content. There are 9 such fragments. They belong to the plates and small plates of

\(^{19}\) КАЗАКОВА 1963.
subgroup 1.2 and 1.4 according to our classification [FIGURES 3/1-2, 4]. A distinctive feature of the products of this center is the presence of a small roller-shaped circle on the inner surface of the bottom with a dotted bulge in the center. There is graffiti at the bottom of one of these plates, but this is a single case [FIGURES 3/4]. The glaze is translucent, green and salad-coloured and is applied to the inside of the vessels over vertical stripes and marble dressings made with brown dye on white primer. Apparently, the outer side of the decor and glaze were applied only in the upper part of the plates.

Center N°. 2 Presented by 3 fragments of plates and small plates of subgroups: 1.2 and 1.4. The dishes were made of similar clay, but with less lime in them. The small and deep plates of this center are decorated with vertical stripes on the inside of the rim and the body, which turn into marble «stains» at the bottom. The translucent salad or yellow-salad glaze covers the entire inner and upper part of the outer surface of the vessel [FIGURES 2/8; 3/3].

Center N°. 3 The masters of center N°. 3 produced their products from light beige-coloured pliant clay, which contains a small amount of lime and chamotte (dotted inclusions). There are 5 such fragments. They belong to the small plates of subgroup 1.2. The ornament is similar to that described above. The glaze is semi-transparent, yellow-salad, applied to the inner and upper parts of the outer surface of the vessel.

Center N°. 4 It made plates with a marble decoration of light beige pliant clay, which contained organic material, but burned out after firing, as evidenced by the remaining long, narrow pores on the outer surface. Only one fragment of the bottom has been preserved on a low, narrow, circular tray of such an Azak plate decorated with marble «stains» and covered with a layer of semi-transparent salad glaze on the inside and the same glaze on the outside, only on the top of the vessel [FIGURES 3/5].

Publications by Turkish researchers show that unglazed and glazed tableware (including marble decorations) made of light «white» clay, along with pottery made of «red» clay, were produced in two well-known ceramic centers in Istanbul during the Ottoman period-Eyüp Sultan (Eyüpsultan) and The Tekfur Palace (Tekfur Sarayı). Scientists have found that «white» cookware has been produced here since Byzantine times²⁰. Eyüpsultan, the famous 17th century traveller Evliya Chelebi, mentioned the pottery district of Istanbul in his notes. According to his information, «white» clay was brought to Eyüpsultan from such areas of Istanbul as Kışthane and Sarıyer, and «red»

clay from the Golden Horn (Haliç) and Kemerburgaz\textsuperscript{21}. Researchers at the CNRS Ceramology Laboratory in Lyon, France, discovered through a series of chemical analyses that the «white» clay used in Eyüpsultan workshops also used potters from Tekfur Sarayı and other ceramic workshops in Istanbul. This clay is very similar to Byzantine clay and was brought from Bakırköy-Avcılar in Istanbul\textsuperscript{22}.

Filiz Yenişehirlioğlu believes that bowls and plates with marble decoration «ebru» began to be produced in Eyüpsultan in the 17\textsuperscript{th} century. She found the products of this Ottoman ceramic center among the findings of archaeologists in Georgia and in the Sudak fortress in Crimea\textsuperscript{23}. A more detailed review of her published findings from Sudak revealed that they have similarities in Azak fortress, which we attribute to two different centers that produced light clay ceramics with a small content of lime (center N°. 2) and organic inclusions (center N°. 4) in the molding mass. This fact may indicate that Eyüpsultan’s potters produced their dishes (including plates with marble decoration) from «white» clay, which they were supplied with from various clays in Istanbul (Kığıthane, Sarıyer, Bakırköy-Avcılar and others). In addition, the products of different masters from the same large centre could differ both morphologically (e.g. the shape and size of the pallet) and with special inclusions (e.g. organic) artificially added to the dough by individual potters.

Another decoration element characteristic of the Eyüpsultan light clay plates found in Sudak is the presence of 2 concentric roll-shaped circles at the bottom of one of them and 1 roll-shaped circle with a convex point at the center - at the bottom of the other. A similar roller-shaped circle with no dot inside is present at the bottom of a plate from Azak (center N° 4). The same circle with a point-shaped convexity in the center is found at the bottom of other light clay plates (center N°. 1 and center N°. 2) [FIGURES 3/4]. This means that the vessels we categorised as centers N° 1, 2 and 4 may have been manufactured in the same ceramic center – Eyüpsultan.

Örcün Başıta, which conducted excavations in the Eyüpsultan district of Istanbul in 1996-1998, in her article on the «marble» ceramics of this center, among others, provides an image of 3 fragments of light clay plate bottoms with roller-shaped circles. The inner surface of these plates is decorated with white-brown «stains» under a layer of translucent yellow-salad glaze\textsuperscript{24}.

These publications by Turkish archaeologists allow us to conclude that Eyüpsultan potters made plates of «white» clay decorated with marble ornaments «ebru», which were often decorated with one of three types of roller circles on the inside of the bottom:

\textsuperscript{21} YENİŞEHİRLIOĞLU 2007: 359; YENİŞEHİRLIOĞLU 2012: 79.
\textsuperscript{22} YENİŞEHİRLIOĞLU 2009: 630.
\textsuperscript{23} YENİŞEHİRLIOĞLU 2007: 361, fot.8.
\textsuperscript{24} BARIŞTA 2002: 157, FIG. 1, 2.
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1) Two concentric circles;
2) One circle with a dotted bulge in the center;
3) One circle without a «dotted» in the center.

Potters and many other ceramic centers, including Tekfur Sarayı, have obviously successfully used a similar scheme for the bottom of glazed plates. Unfortunately, we do not have samples of pottery produced in the workshops of Tekfur Sarayı to draw conclusions about the presence of remnants of this centre’s pottery among archaeological findings from the former Ottoman fortress of Azak. The well-known publications of Turkish researchers on excavations at Tekfur Sarayı do not yet clarify this issue.

These findings are also confirmed by the findings of the remnants of «red clay tableware» with marble decoration from the Turkish fortress of Azak, which in the 17th-18th centuries came to North-East Azov region in much larger volumes than the light clay «marble» tableware. According to our observations, this tableware was produced, approximately, in 5 ceramic centers:

Center No. 1 It produced ceramic vessels of closed (jugs with lids) and open (plates, bowls) shape (15 fragments) from well-treated, pliant, dark brown and red-brown clay with a large admixture of lime (numerous dotted lime inclusions). The glaze is translucent, lettuce, yellow-salad and green, and was applied to both surfaces of the vessels. The white-brown striped marble and marble ornament is sometimes coloured with a green dye. Single-handed jugs are small in size, with a relatively narrow cylindrical throat and undergarment torso [FIGURES 4/6]. The lids of the jugs are of the same type, small in size, with a flattened hemispherical dome going into the disc and a button-shaped handle-holder [FIGURES 4/5]. Hemispherical bowls in some cases are decorated from the outside [FIGURES 4/1, 4], in others - from the inside [FIGURES 4/2]. Some of the plates belong to subgroups 1.1 [FIGURES 2/2], 1.2 and 1.4, as well as several indeterminate bottoms on a low, narrow circumferential, truncated-conical tray with an inner margin at the base. The inner side of the bottom of some of them is decorated with a roller-shaped circle with a dotted bulge in the center [FIGURES 3/7].

Center No. 2 Products (19 fragments) are made of soft clay of orange-brown or pink-brown colors with a small admixture of lime. The glaze is translucent, salad, yellow and green in colors and is present on both surfaces. The striped marble white-brown decor is in some cases coloured with green dye. All open-shape vessels are plates of subgroup 1.1 [FIGURES 2/1], 1.2 [FIGURES 2/7] and 1.4, as well as several indeterminate bottoms on a low, narrow ring-shaped cylindrical and truncated-conical pallet with an inner
margin at the base [FIGURES 3/8] and one wall of the ceramic body. The fragments of the plate bottoms show 2 concentric roller circles and the traces of a tripod stand [FIGURES 2/1]. The bottom of one of the plates is decorated with two concentric circles and a relief image of a floral rosette [FIGURES 3/8].

Center № 3. It produced jugs with lids [FIGURES 4/7-8] and plates of subgroup 1.3 [FIGURES 2/3-5] from pliant clay of orange-brown and pink-brown colors with insignificant content of lime and single inclusions of small grains of black quartz (5 fragments). The glaze is salad and is applied to both surfaces of vessels. Decor - white-brown marble «stains» with green dye undertone. If the impurity of quartz is accidental, then we can assume that this ware was made in the center № 2.

Center № 4. The potters at this center produced plates with a marble decoration (17 fragments) of light brown pliant clay with little lime and sand admixture (mica glitter). The glaze is translucent, yellow, salad and green in colors and is applied to both surfaces of the vessels. The decor includes white-brown stripes and marble «stains», sometimes with a green dye under colouring. Among the centre’s products are only fragments of open-shape vessels: bowls and plates of subgroup 1.2 and 1.4. Several fragments are undefined. At the bottom of the two plates there are roller-shaped circles, one of which has a «dot» in the center.

Center № 5. Its products are very small - only 5 fragments from 4 plates, 2 of which belongs to subgroup 1.2 [FIGURES 2/6, 9]. The dishes are made of light brown and orange-brown pliant clay with rare inclusions of lime and chamotte. The glaze is translucent, yellow-salad, applied to both surfaces, in one case obviously only to the inner surface. Decor - white-brown marble «stains» with a green tint. The visually shaped mass of the plates is similar to that used for mass glazed dishes in Crimea ceramic workshops. But the morphology and ornamentation of the vessels are similar to the products of the Ottoman workshops described above. Therefore, there was a suggestion that Crimean potters imitated fashionable Ottoman «marble» tableware brought to the Crimea and North-Eastern Azov region from Anatolia and the coast of Marmara Sea in the 17th -18th centuries.

In addition to Eyüpsultan and Tekfur Sarayı’s «Polychrome Marble Ware» ceramic workshops in Istanbul, «red» clay was used in the 17th and 18th centuries to produce pottery from Çanakkale, Ganos (Hoşköy), Didymoteichon (Dimetoka) and obviously other Ottoman settlements25. Before excavations at Eyüpsultan, it was believed that the

«Polychrome Marble Ware» was only produced at Didymoteichon. Archaeological research in Ganos confirmed the presence of the local «red» clay «Polychrome Marble Ware». These excavations have revealed that the clay of Ganos and Didymoteichon products is very similar - red-brown, with a small admixture of lime, which, according to scientists, indicates one place of its extraction in the clays on the coast of the Sea of Marmara. For this reason, Ganos and Didymoteichon products are often confused. For example, in the opinion of P. Armstrong and N. Güsenin, the remnants of Ganos dishes originating from archaeological research at Sarachane in Istanbul were mistakenly attributed to J.W. Hayes to the Didymoteichon ceramics (Ware P).

Greek researcher Ch. Bakirtzis noticed the relief rings at the bottom of glazed plates from Didymoteichon. Similar concentric circles are found at the bottom of glazed plates (including those with marble decor) produced in the 17th -19th centuries at the Çanakkale ceramic center. According to J.W. Hayes, this center's products are very similar to Didymoteichon pottery, but differ in a darker, richer red clay colour. The similarity between Çanakkale and Didymoteichon ceramics is also indicated by G. Öney, assuming that Didymoteichon produced dishes very similar to Çanakkale (or vice versa). The ceramic centers of Eyüpsultan and Tekfur Sarayi in Istanbul, as we mentioned earlier, produced «red clay tableware» from the raw materials extracted from the Golden Horn and Kemerburgaz clays. However, we do not yet have more detailed information about the composition of this raw material.

Thus, based on data from foreign researchers, it is possible to make assumptions concerning the definition of production centers for Ottoman «marble» ceramics, which entered the 17th-18th centuries together with the military contingent in the Turkish fortress of Azak. The findings of light clay plates with marble decoration from Sudak fortress in Crimea, which were found by Turkish explorer F. Yenişehirlioğlu, are a reference point. F. Yenişehirlioğlu referred to the products of the Eyüpsultan ceramic center in Istanbul, while the remnants of similar plates made of light beige clay with a slight admixture of lime (center N°. 2 according to our classification) and organic admixture (center N°. 4) from the excavations in Azak most likely come from the same center. There are the same embossed circles (in different variants: double and single) at

26 YENİŞEHIRLIOĞLU 2012: 84.
29 BAKIRTZIS 1980, FIG.26, 27, 29b.
30 DOĞER 2009: 32-33, 45, TAB. 3.
33 YENİŞEHIRLIOĞLU 2007: 361, fot. 8.
the bottom of the plates as on the plates found during archaeological research at Eyüpsultan\textsuperscript{34}.

Since potters of Eyüpsultan and Tekfur Sarayı used the same clay from Istanbul, as well as similar surface design techniques for their ceramics, the products of these centers must be very similar. It is possible that among the fragments of marble decor crockery from Turkish fortress of Azak in North-East Azov region there are products from the Tekfur Sarayı workshops.

In our opinion, the «marble» plates of Azak are made of pliant clay in orange-brown and pink-brown with a small amount of lime, which have double embossed rings on the bottom (center N°. 2) [FIGURES 2/1, 3/8], probably come from the Didymoteichon or Ganos ceramic workshops, or both, which had the same raw material base on the coast of the Sea of Marmara and similar clay products. The low, narrow circular pallet of these plates has an inner margin on its base similar to those of Didymoteichon, which J.W. Hayes described in his study\textsuperscript{35}.

The fragments of the plate and the jug we assigned to center N°. 3 [FIGURES 2/3- 5; 4/7-8] were presumably also made by Didymoteichon or Ganos potters. However, the presence of single quartz inclusions in the moulding mass of these vessels may also indicate that they may have been produced in Çanakkale. And finally, the products of center N°. 5, in our opinion, are an imitation of the Ottoman «Polychrome Marble Ware» by the Crimean pottery workshops [FIGURES 2/6, 9]. Defining the remaining centers is still very problematic.

V. DATING «POLYCHROME MARBLE WARE» FROM THE OTTOMAN FORTRESS OF AZAK

Azak Ottoman fortress has a longer history. In 1475, the troops of the Turkish Sultan Mehmed II the Conqueror captured the stone castle of the Italian colony Tan at the mouth of the Don, turning it into the northernmost fortification of the Ottoman Empire - Azak fortress. Turkish domination lasted here until 1696, when the fortress was conquered by the army of the Russian Tsar Peter the Great. In 1712, the Ottomans returned to Azak, which again fell back to them under the terms of the peace treaty after the unsuccessful Prut campaign of Peter the Great in 1711. In 1736, the Turkish Azak was re-conquered by the Russian army of Tsarina Anna Ioannovna. The last period of the existence of the Ottoman Azak fortress dates back to 1712-1736.

Despite such a rich history, the findings of the «Polychrome Marble Ware» from the excavations of Azak fortress come from the cultural layer of the end of the 17th century

\textsuperscript{34} BARIŞTA 1998: 71, fot.103; BARIŞTA  2002: 157, fot.1, 3.
\textsuperscript{35} HAYES 1992: 276-277.
- the first third of the 18th century. This pottery is similar to the pottery from the fortress of Sed-Islam, built by the Ottomans on the neighboring branch of the Don River – the Dead Donets River in 1660. The year 1741 is known from written sources for the destruction of the Turkish Sed-Islam fortress under the Treaty of Belgrade (1739). Both «Turkish» (1660-1696; 1712-1736) and «Russian» (1669-1711; 1736-1741) periods of the fortress are known due to its transition from hand to hand during the three Russian-Turkish wars - 1686-1699, 1710-1713 and 1735-173936. Thus, the existence of «Polychrome Marble Ware» in Sed-Islam is divided into two narrow time periods, defined by two «Turkish» periods in its history - from 1660 to 1696 and from 1712 to 1736.

Unfortunately, large-scale fortification works in Azov, which unfolded by order of Peter the Great at the turn of the 17th-18th centuries, brought a lot of ambiguity to the stratigraphy of this archaeological monument. However, research by Azov archaeologists in recent years on the territory of Turkish Azak bring more and more new objects, which directly or indirectly confirm the correctness of the conclusions about the dating of the findings of the Ottoman «Polychrome Marble Ware» - not before the 17th century and not later than 173637.

Archaeological findings of the remains of the «Polychrome Marble Ware» in the territories that were formerly part of the vast Ottoman Empire, as well as in the adjacent lands, generally date back to the same time - the 17th-18th centuries. Fragments of the «Polychrome Marble Ware» were discovered during archaeological research of former Ottoman fortresses and their surroundings: Akkerman and Kamenets-Podolsky in Ukraine38 [FIGURES 5/5], Balaklava, Sudak, Mangup, Funa, Arabat in Crimea39, Gonio, Batumi and Narikala in Georgia40 [FIGURES 5/3-4]. These were found during excavations in Romania41, Hungary42, the Taman Peninsula in Russia43 [FIGURES 5/7]. There is information about the findings of «Polychrome Marble Ware» during excavations in Partenit44 and the Çufut Qale fortress in the Crimea, in Kiev in Ukraine45, etc.

41 VOINEA et AL. 2016, FIG.17/1-3, FIG.20/7-8).
42 ATILIA 2016: 291, TAB. 2, 3 а-с.
43 ГОРОШНИКОВ & КЛАДЧЕНКО 2015: 25, FIG.3, 14; ЗИЛИВИНСКАЯ 2016: 160-183, FIG.2730, 2798, 2936.
44 АЛЯДИНОВА 2015: 461, FIG.16, 49.
45 ЧМИЛЬ 2013: 258.
In addition to the aforementioned Istanbul findings, the remains of the «Polychrome Marble Ware» of the 17th and 18th centuries were found in modern Turkey during archaeological research on the Ottoman fortresses of Bitlis46, Sham47, Enes48, Izmir49, Tyre (Kutu Khan)50 and others [FIGURES 5/6, 8-9].

VI. CONCLUSION

Summing up our research, it should be noted that in the 17th - the first third of the 18th centuries, Turkish fortress of Azak together with the military contingent and through traders, along with the mass dining room ceramics mainly produced in Crimea, came in small quantities (a total of 79 fragments over fifty years of excavation) «Polychrome Marble Ware», produced in various ceramic centers of the Ottoman Empire. The small volumes of these tableware supplied to North-East Azov region testify to its high cost due to the great popularity associated with the medieval fashion for Italian ceramics «Marmorizzata» and its Ottoman imitations, as well as to the significant distance between Azak fortress and the ceramic centers where the Ottoman «Polychrome Marble Ware» was produced.

The main group of findings from fortress of Azak (93.7%) consists of fragments of open-shape vessels - bowls and plates, which we divided into 4 subgroups by morphological features. The remains of the closed-shaped vessels are isolated. These are fragments of small jugs (2.5%) with lids (3.8%).

There are much more «red-clay» products with marble ornaments as a percentage than light clay products (77.2% - red-clay; 22.8% - light-clay). Among light-clay tableware vessels, only open forms are present, mainly plates. One of these plates has graffiti on the outside of the bottom. The assortment of «red-clay« products by Ottoman potters is more diverse - bowls, plates, jugs and lids for them.

In the «Polychrome Marble Ware» ornamentation from the Turkish fortress of Azak and we can trace 3 main schemes:
1) marble «stains», which occupy the entire outer surface of the product (bowls, jugs, lids) or the entire inner surface of the product (bowls, plates);
2) wide vertical stripes passing into marble «stains» on the inner side of the vessel (only on plates and bowls).
3) decor in the form of splash marks with marble «stains».

46 BAŞ 2012: 117, kat.5.4.
47 FRANÇOIS 2012: 504, pl. 5/3.
48 BAŞARAN 2001: 382, res.5.
49 DOĞER 2009: 45, TAB. 3 b, d; GÖK 2015: 67, tab.2.
50 UÇAR 2018: 4-5.
In all cases, the decor is made with white and brown engobe, sometimes with a green dye. An additional element in plate decoration is often a roller-shaped circle in the centre of the inner surface of the bottom (twin and single, with a convex «dot» in the center). As it was discovered, masters of many Ottoman ceramic centers have designed their products with such relief rings.

The glaze used in Ottoman tableware with marble decoration is lead, semi-transparent, yellow, lettuce, salad and green, often of rather poor quality (with undissolved dye particles). In «red-clay» vessels, both surfaces are covered with it, except for the inside of the pallet and bottom of the plates. However, there are rare instances of plates where both surfaces are completely glazed. In light-clay plates, the glaze is usually applied to the inside and top of the outer surface. The technological details of plate production are often traced as tripod marks on the inner side of the bottom.

Visual observations of the composition of the moulding mass, ornamentation and surface design of «Polychrome Marble Ware» from the Turkish fortress of Azak allowed us to conditionally divide them into several groups according to the proposed production centers (4 groups - for light-clay vessels, 5 groups - for «red-clay» vessels). Based on the research results of foreign scientists (and primarily Turkish archaeologists), we attempted to identify production centers for this ceramics. According to our version (which obviously requires laboratory testing), such centers could be Eyüpsultan and Tekfur Sarayı in Istanbul, as well as Didymoteichon (tour - Dimetoca) and Ganos (tour - Hosköy) on the coast of the Sea of Marmara. Çanakkale and other ceramic centers in the Ottoman Empire are likely to be among the Ottoman «marble» products. At this stage of scientific research, it is not yet possible to define them.

HOW TO CITE


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TYPES AND FORMS OF «POLYCHROME MARBLE WARE» FROM THE OTTOMAN FORTRESS OF AZAK IN SOUTHERN RUSSIA (CERAMOLOGICAL STUDY)


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[FIGURE 1]: Location of the Ottoman fortress of Azak in the North-Eastern Azov region, Southern Russia,Https://www.google.com/maps/@47.170804,39.4282221,11.54z
[FIGURE 2]: «Polychrome Marble Ware» (17th-18th centuries) from the Ottoman fortress of Azak (№s 1-9). Open-shape vessels: Group 1. Plates: №s 1, 2 – subgroup 1.1; №s. 3-5 – subgroup 1.3; №s. 6-9 – subgroup 1.2. From the collection of the Azov Museum-Reserve (Azov).

[FIGURE 3]: «Polychrome Marble Ware» (17th–18th centuries) from the Ottoman fortress of Azak (N°s. 1-8). Open-shape vessels: Group 1. Pls: N°s. 1-3 – subgroup 1.4; N°s. 4-8 – unidentified fragments. From the collection of the Azov Museum-Reserve (Azov, Russia).
[FIGURE 4]: «Polychrome Marble Ware» (17th-18th centuries) from the Ottoman fortress of Azak (N°s. 1-8). Open-shape vessels: Group 2. Bowls (N°s. 1-4). Close-shape vessels: Group 1. Jugs (N°s. 6, 8); Group 2. Jug lids (N°s. 5, 7). From the collection of the Azov Museum-Reserve (Azov).

[FIGURE 5]: «Marmorizzata» ceramics. Northern Italy (16th-17th centuries): 1 – Pisa (AMOURIC & AL. 1999: FIG. 212); 2 – Tuscany. (MOORE VALERI 2012: FIG. 22); «Polychrome Marble Ware» (17th-18th centuries): 3, 4 – Gonio, Georgia (photos by IRINA GUSACH); 5 – Kamentz-Podolsk, Ukraine (photo by PAUL NECHITAYLO); 6 – Izmir, Turkey. (FRANÇOIS & ERSOY 2011: FIG. 9); 7 – Kholmsky-25, Russia (photo by ALEX NECHIPORUK); 8, 9 – Istanbul (BARIŞTA 2002: fot.3, 10).
طرز وأنواع «الفخار المطمى ممتد الألوان على شكل رخام» من قلعة آزاك العثمانية بجنوب روسيا (دراسة أثرية)

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الملخص

«Polychrome Marble Ware» يهتم هذا البحث بدراسة نوع نادر جدًا من الفخار المطمى متعدد الألوان على شكل الرخام، والذي تم اكتشافه خلال أعمال الحفر والتنقيب الأثري في جنوب روسيا بين عامي 1911 و 2015 في قلعة آزاك العثمانية في منطقة شمال شرق أزوフ، وتغطي هذه الدراسة من الدراسات التابعة في روسيا التي تلقى الضوء على أهمية تلك الأوانى والأشكال الفخارية المحفوظة في مجموعات بمتحف أزوف للأثر والآثار وعلم الحفريات.

وقد اهتم الباحثين خلال الدراسة العلمية الأثرية بتاريخ وتأصيل شفافات الفخار المطمى متعدد الألوان، وتحديد مراكز الإنتاج وتاريخ الصناعة، وكذلك تحديد وتوصيف أنواع وأشكال هذه الأوانى الفخارية التي تم اكتشافها أثناء التنقيب في قلعة آزاك التركية، ومحاولة خلق نوع من المقارنة مع مكتشفات مواقع أثرية أخرى من العصر العثماني. تلك المحاولات التي تم التوصل من خلالها إلى أن معظم الأوانى الفخارية متعددة الألوان على شكل الرخام - موضوع الدراسة - تم جلبها إلى قلعة آزاك التركية من الأناضول حيث تم إنتاجها خلال القرنين (11-12 و 13-14 م). كما تم التوصل إلى وجود نوع جديد من الفخار المطمى مطبوخ من ساحل بحر دمرسة وجنوب شرق شبه جزيرة القرم، وعلى ما يبدو أن خزافى القرم قاموا بتقليد الأوانى الفخارية الإيطالية والماليزية ذات الزخارف الرخامية والتي كانت متاحة لديهم في ذلك الوقت.

الكلمات الدالة: جنوب روسيا، قلعة آزاك العثمانية، الفخار المطمى متعدد الألوان، القرنين السابع عشر والثامن عشر.