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NEW DATA ON THE JEWISH COMMUNITY IN LATE BYZANTINE CHERSONESE (CRIMEA)

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In 2010 a fragment of a flanged tile with menorah graffiti was found during the excavations of block 45 of medieval Chersonese (Crimea). It dates back to the 2nd half of the 13th – 1st half of the 14th centuries. This archaeological finding gives grounds for a new discussion about the existence of the Jewish community in Chersonese in Byzantine times. The aim of our research is to determine a connection between the manufacture of tiles with Jewish symbols and Jewish community in Chersonese. We have proposed a methodology for the research, carried out a semantic and iconographic analysis of graffiti, localized tile production center where the flanged tile with menorah had been made, and identified other Jewish symbols on the tiles. The ceramic analysis ascertained that flanged tile with the menorah had been made in Chersonese workshops. The technology of tile production (argillous raw material processing) was unchangeable during the entire medieval period. However, Chersonese workshops introduced some shifting changes and variations in the technology of clay processing in the 2nd half of the 13th – 1st half of the 14th centuries. The study of the Mountainous Crimea tile production centers showed that the variability and instability of clay formula in Chersonese was not connected with the relocation of tile makers within the South-Western Crimea in the 2nd half of the 13th – 1st half of the 14th centuries. The analysis of the iconography of the graffiti and organization of the tile-making process showed that graffiti of menorah had an apotropaic meaning. Other relief marks that had been found on chronologically synchronous flanged tiles of the same tile production center had other Jewish symbols. This confirmed our conclusion that representatives of the Jewish community were involved in the tile production.

Keywords: Chersonese; Crimea; Jewish community; craft; graffiti; menorah; roof tile

Introduction

The history of Chersonese (**Fig. 1**), an important town in Crimea in the 13th–14th centuries, could seem to be clear and well-studied. Large-scale archaeological excavations make

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it possible to discover and describe a significant number of archaeological finds each excavation season. Most of them represent ordinary archaeological material, which can only insignificantly improve existing historical reconstructions. At the same time, it is occasionally possible to discover artifacts of a special nature, which give us the chance to put questions and revise our ideas about the past, review the trends of the development of medieval Chersonese and Crimea as a region. Such key artifacts may be ordinary objects, but they prove that Crimea has had an authentic culture and historical heritage that are not yet known.

The fragment of the base of flanged tile with graffiti and two relief rollers¹ on upper surface (**Fig. 2**) was found during archaeological excavations in Chersonese in the western part of the block 45 (**Fig. 1**). Elena Klenina and Andrzej B. Biernacki were work coordinators, excavations were carried out by Polish-Ukrainian research project “The Topography of Chersonesos Taurica”, 2010. The fragment originated from the layer of destruction (-5.70 – (-6.03)) on I Longitudinal Street, which was formed during the desolation of the block in the 1st half of the 14th century [Klenina et al. 2018, 147–148]. The information about the artifact has already been published, and its graffiti was identified as “menorah”, however, no special analysis of semantics and historical context of the image has been carried out [Klenina et al. 2018, 153].

The aim of this work is a comprehensive analysis of the graffiti “menorah” from Chersonese and other Jewish symbols on the late Byzantine tiles of the South-Western Crimea. We believe that the research may provide a basis for reconstruction of ethno-cultural relationships in the Crimean region based on an analysis of the connection between the symbols and the Jewish community. However, we need to make a few assumptions: first, in Chersonese in the 2nd half of the 13th – 1st half of the 14th centuries a Jewish family could live that ordered a flanged tile with a menorah; second, there was one random Jew among Chersonese tiles makers, who scratched the Jewish symbols on his products as a blessing to work and its successful completion; third, there was a number of representatives of Jewish community (perhaps, entire families) in tiles production craft. For the realization of the aim we set the following tasks: 1.- to describe the methodology of the research; 2.- to analyze the historiography; 3.- to describe investigated graffiti and give motivated interpretation of it as a menorah; 4.- to characterize semantics of menorah as a symbol and its depiction in art; 5.- to give interpretation of the menorah graffiti as a “mark” of the customer or another sign in the production process; 6.- to localize tile production center of flanged tile with menorah graffiti; 7.- to search, describe and give interpretation of Jewish symbols on other roof tiles of localized production center; 8.- to determine connection between the manufacture of roof tiles with Jewish symbols and the Jewish community of Chersonese.

Methodology. An important **methodological** aspect of the work was the focusing both on the flanged tile and the graffiti on it *per se*. The newest and the most complete generalizing typology of medieval building ceramics of the South-Western Crimea (technological and morphological typology) [Moisieiev 2021] was used in this research. All typological designations of roof tiles were given according to it. The typology was developed based on analyzing materials from excavations of sites in the South-Western Crimea dated between the 5th and 15th centuries [Moisieiev 2021, 58, 80–84, Fig. 1, supplement]. The following hierarchy of material description categories is used in the typology: group – subgroup – class – variant [Моисеев 2014, 282; Moisieiev 2021, 58–59]. It was assumed in the typology that roof tiles of one subgroup, sometimes a group, were products of one tile production center, wherever (on which site) they were found. There were no special petrographic studies confirming this. All conclusions are based on the results of the study of tile production center Ilka [Моисеев 2014, 282–284] and excavations in the block 45 of Chersonese [Klenina et al. 2018, 149]. Subsequently, a theory that the analysis of chips of roof tiles could determine the identity of building ceramics raw materials was confirmed by an independent petrographic study of roof tiles from excavations in the medieval city of Eski-Kermen [Завадская 2017, 147; Терещенко и др. 2020, 323].

The basic theoretical idea is that the analysis of general (group) and particular (sub-group) technological features of building ceramics helps determine where they were manufactured (whether the individual tile production centers or regions with similar traditions of clay processing), and how they should be dated. It should be noted that dividing groups into subgroups is a highly specialized archaeological (ceramic) task.

The variant, as a definition of the typology, is used in this paper in order to search for other Jewish images on contemporaneous flanged tiles (craft-marks and graffiti) made by the same tile production center. Craft-marks were made by imprinting in matrices. The latter could be damaged during the production process. Thus, typologically identical images with same location on upper surface of a tile could have some differences in the quality of elements of the picture and ornament. Nevertheless, they were grouped into variants with this complex of minor differences.

Due to the breakdown of building ceramics by the localization of production sites (implied by technological and morphological typology) the method of ceramic comparative analysis of the development level of ideas about clay as a raw material (by A. A. Bobrinsky) was applied. It should be noted that the compilation of molding masses and the idea about clay as a raw material is a substrate feature [Бобринский 1978, 73]. It was the most stable element of technology and an important marker of cultural changes [Бобринский 1978, 94, 97–98].

The presence of Jews in Chersonese in the Roman – Late Roman – Early Byzantine periods has been fixed archaeologically. Apparently, Greek-speaking Jewish community lived in the city at that time. The Jews had a synagogue [Ušakov, Žubarev 2014, 287–289] dated in different ways: the 4th century [Золотарев, Коробков 1998, 111–115; Ушаков 2022, 230; Ušakov, Žubarev 2014, 291] or the last quarter of the 4th – the end of the 5th centuries [Завадская 1996, 99–104].

Excavations at the synagogue discovered Hebrew and Greek inscriptions with mentioning Jewish names (Judas and Enoch) [Соломоник 1979, 123; Илан 2002, 98, 112–125, 449], a limestone block with a menorah, lamps with Jewish relief scenes on their shields [Ušakov, Žubarev 2014, 287–289, 294–295]. Similar lamps were also found in other blocks of the ancient city. Two building slabs of Roman times mentioned Jewish names Joseph (a find from excavations of five-apse temple) [Gocheva, Namoylik 2016, 107–108, 112] and Sanbation (non-inventory find, 1883) [Соломоник 1979, 119–120]. A fragment of a tombstone with a seven-branched menorah from excavations in the southern part of the necropolis on the ceramic workshop sites dated back to the Late Roman – Early Byzantine times [Соломоник 1979, 121, 123, *рис. 1*].

Historical context. Researchers of the “Basilica of the 1935 year” M. I. Zolotarev and D. Yu. Korobkov believed that Late Roman Jewish community of Chersonese was baptized or abandoned the city in another way [Ušakov, Žubarev 2014, 287–289, 294–295]. E. I. Solomonic was the only one who stated that the Jews lived in the city in early Byzantine times [Соломоник 1979, 122]. M. B. Kizilov paid attention to the information from Kyivan Rus hagiographic sources of the 13th century that the Jews were present in Chersonese at the end of the 11th century [Кизилов 2011, 86]. In fact, his works don't contain any material evidence of this theory. Eventually the theory about Jews disappearance from Chersonese in the 4th century without proper justification became usual in the historiography [Ушаков 2022, 229–230]. However, this situation has developed only due to limited source base.

Three other Jewish artifacts were discovered in the South-Western Crimea: a tombstone with a menorah in an unknown settlement in the vicinity of Burluk-Vilino village [Соломоник 1995, 55] (it was found among the finds of the 2nd – 3rd centuries) [Соломоник 1995, 55]; non-inventory tombstone with a menorah from funds of the Bakhchysarai Museum-Reserve [Соломоник 1995, 56]; tombstone with a menorah from Eski-Kermen area, which was mentioned in the report on excavations of this medieval fortress in 1937

Соломониќ 1995, 56]. Another indirect evidence of the presence of the Jews in the South-Western Crimea during the Late Middle Ages was the surname Qarsun (“Харсун”), common among Crimean Karaites in the 19th – 20th centuries. This surname was presumably connected with the placename “Cherson” (variant of Chersonese name in Middle Ages) and probably had an early origin [Ušakov, Žubarev 2014, 291].

In our opinion, the analysis of the historiography of the Jewish history in medieval Chersonese and territories of the South-Western Crimea showed some simplification of the historical process. Reconstruction of ethnic history of the city in the Late Roman – Early Byzantine period has made it possible to transform the hypothesis about the disappearance of the Jews from Chersonese at the end of the 4th century to the established scientific fact without proper argumentation. In this case, the publication of the graffiti with a menorah on flanged tile of the 2nd half of the 13th – 1st half of the 14th centuries is an important and key event in the historiography of the history of the Crimean Jewish community.

The Technology of Flanged Tile with Graffiti “Menorah”

The fragment of roof tile with a menorah technologically belongs to Ich/2 subgroup. The chip of Ich/2 subgroup (**Fig. 3**) has a compact, well mixed structure, apparently made of clay from Miocene deposits. The finished tiles are red (2.5YR7/6; 2.5YR6/4; 5YR7/6; 5YR7/8²). The material contains a notable admixture of lime, the body of flanged tiles has cracks of irregular shape formed during firing. Tiles of Ich/2 are delaminated. The surface is coated with white and sometimes light green (2.5YR6/1; 5Y8/1) engobe. It covers the facial side but not the rear side. Products are rough due to the use of coarse backfill. Production of such roof tiles dates back to the middle of the 13th – the first half of the 14th centuries [Moisieiev 2021, 73].

Products of one subgroup are associated with products that the same tile production center made. The researchers suppose that the subgroup Ich/2 characterizes local Chersonese production (in the city itself or somewhere in its neighborhood). The main difference of roof tiles of the subgroup is their especially massive usage in building technique in medieval Chersonese [Завадская 2017, 152; Moisieiev 2021, 73].

Iconography of the graffiti. A menorah was depicted on a flanged tile using a method of scratching out on wet clay (graffiti) (**Fig. 2**). To the left from the central shaft (**Fig. 2, a**) there are clearly visible 3 arms (**Fig. 2, b1-3**) that extend from it, and a short line that, presumably, is an upper fourth arm (**Fig. 2, b4**). That part of the graffiti could also be a cup on the central shaft of the menorah. Three partially preserved arms can be traced to the right of the central shaft (**Fig. 2, b5-7**). The base of the menorah and cups of arms did not preserve. Thus, we can state that this menorah had definitely 6 arms and a central shaft. It can be assumed that a poorly preserved image of the arm is on the left side (**Fig. 2, b4**) but not a cup of central shaft. Thus, there should be symmetrical image on the right. Therefore, we could have the menorah with 9 arms. This is somewhat more than classical perception of a menorah as candelabrum with 7 arms. Let’s consider semantic meaning of a menorah in Judaism for understanding whether this one is unique or traditional.

The graffiti hasn’t preserved in full. We could interpret the image in this case like a “babylon” or “solar symbol”³. Nonetheless, we believe that the interpretation of the graffiti like the menorah is highly objective. The scheme of the graffiti drawing shows this (**Fig. 2**). The artisan drew each arm of menorah by three lines. It looks like he wanted to make the menorah arms with “trapeze-shape” form. He failed at the bottom of the right arm – the line became smooth. But the artisan drew another one to correct it.

Classic menorah is the seven-armed candelabrum, which consists of the central shaft and 6 arms that extend from it to the right and left. In addition, it has a stable base of various configurations. Similar menorah was described in biblical texts, Aramaic and Syrian

sources [Hachlili 2018, 2]. According to them, menorah was one of the two holy vessels that were in the Jerusalem temple [Hachlili 2018, 5]. We could find the first images of menorah on bronze coins of the last Hasmonean king, Mattathias Antigonus (40–37 BC) [Hachlili 2001, *ISI–3, DI.1, Fig. II-1, 2*; 2018, 6, *Fig. 1.1*]. The first menorah-graffiti were found on fragments of a gypsum (1st century AD, excavations in one of Jerusalem blocks) [Hachlili 2018, 6]. As a rule, graffiti with menorah were scratched out on stones: walls of buildings, tombstones, sarcophagi, while the pottery depictions are made by imprints, dipinti, and, more rarely, graffiti.

Menorahs were placed in all synagogues and occupied an honorable central place in them. According to ancient sources, for example, Josephus Flavius and in Rabbinic literature, menorah was a symbol of God himself, his light. Moreover, Josephus Flavius and Philo of Alexandria interpreted it in cosmic sense and identified it with the Sun or the sky and planets of Solar system [Josephus 1737, 217; Philo]. There are ongoing discussions in scientific literature about the meaning and interpretation of menorah as a symbol.

Researchers who investigated symbolism and meaning of menorah based on analyzing written and archaeological sources came to different but not contradictory conclusions. It could be clearly stated that menorah had a polysemantic interpretation. First of all, it was a symbol of God, his law and light, Judaism in general, a tree of life, messianic symbol, a symbol of eternal life after death, a symbol of Israeli freedom [Fine 2016, 39–41; Hachlili 2001, 204–206; 2018, 130–131; Ovadiah, Mucznik 2014, 603–614]. In addition, menorah was a symbol of Jewish identity among Greco-Roman population. Next, it was an apotropaic symbol that the Jews depicted on graves to protect them against robbers [Fine 2005, 155].

The interpretation of menorah as a tree of life and its cosmic meaning determined its appearance and image. However, menorah in art, as well as image-graffiti, did not always have 7 arms. Dr. Rachel Hachlili, a researcher and author of books about menorah, described variations of images of menorah with 5, 7, 9, 11 arms. There were some menorah-graffiti with different numbers of arms on the left and right sides of central shaft. In this case, a number of arms was even (for example, 6 or 8) [Hachlili 2001, 201–202; 2018, 115–117]. This was based on the prohibition of making a menorah with 7 arms in Babylonian Talmud [Hachlili 2018, 117]. However, there was no such taboo in Jerusalem Talmud. Archaeological evidence has shown that both schemes had tradition of usage.

If the menorah from Chersonese had a symmetrical branch on the right, then it was one with 9 branches and was not unique. Moreover, Dr. Hachlili identified 33 examples of images of 9-armed menorahs. 2 were found in Crimea⁴ [Hachlili 2018, 115].

Therefore, there is no doubt that it is indeed a menorah depicted on the flanged tile from Chersonese.

The Semantics of Graffiti

First, we should answer the question: “Who and why put the menorah-graffiti on a flanged tile?” In the first part of our investigation, we mentioned three actors of the graffiti drawing: an artisan on the order of the Jew-client; occasional Jew-artisan in the non-Jewish workshop; Jew-artisan in the Jewish workshop. All the versions are based on two hypotheses: this was the client’s order to draw menorah; or this was artisan’s own decision. There is no doubt that the graffiti were scratched out during production process and almost immediately after the molding of a flanged tile. It was before the moment when the clay began to dry because the base of the tile around the graffiti hasn’t any cracks. Such conditions existed within the first 7–10 days after molding (in summer drying conditions). This data was taken from conclusions of an archaeological experiment of the tile production process reconstruction [Moisieiev 2022, 175–176]. Then the flanged tiles acquired sufficient strength for passing them to the next drying stage. At that moment the upper layer of the base was too dry to make scratches on it without causing mini-cracks⁵.

This isn't a rare example of the drawing graffiti on the wet tile after molding. Graffiti on the roof tiles are well-known on the building ceramics of subgroup Ich/2; they were manufactured by the tile production center in Chersonese. All of them were discovered during excavations in Chersonese: 5 finds – from the block 60 [Klenina et al. 2018, 176, 178, Fig. 3, 46/2009, 5, 26/09, 27/09, 50/09, 56/09], 2 finds – from the Port area [Романчук 2004, *п.с.* 19, 3, 54, 1]. Graffiti on flanged tiles contain the following images: “Babylon” or “Solar symbol”⁶ [Романчук 2004, *п.с.* 54, 1], “Rider” [Романчук 2004, *п.с.* 19: 3], “tree” [Klenina et al. 2018, 176, Fig. 3, 46/2009], “ship” [Klenina et al. 2018, 178, Fig. 5, 50/09], “face” [Klenina et al. 2018, 178, Fig. 5, 56/09], and an unreadable set of lines [Klenina et al. 2018, 178, Fig. 5, 26/09, 27/09].

Graffiti are known on Crimean ceramics from the Modern age. They are known on the Roman tiles in different parts of the Roman Empire⁷ (for example, tile production of the Legio I Italica in Nowae [Duch 2021; Sarnowski 1983, 27, 29, Fig. 12, *taf.* 1]). The drawings of the graffiti on the Roman building ceramics are directly connected with the manufacturers. They are about the different quality control teams (names and personal signs of soldiers and officers), time and grammar lessons [Sarnowski 1983, 27–28, 39]. It should be noted that client's graffiti wasn't found in any of the tile production centers of South-Western Crimea. In addition, there is no sound evidence that building ceramics was manufactured on the special order: roof tiles of one variant (from the one matrix or from several identical matrices) were found on the different sites of South-Western Crimea. Therefore, these evidences show the minimum chance that menorah was drawn on client's order.

The next should be the question whether the graffiti drawer was a random Jew-workman in the “Christian” workshop or the late Byzantine Chersonese tile production workshop was the Jewish one. The first and main evidence of the presence of the Jewish community in the tile production is the fact that there are no discovered Christian symbols among Ich/2 tiles up to now (Christian population was a religious majority in Chersonese) [Moisieiev 2021, 68–69, Fig. 8–9]. On the other hand, we should note that on the tiles of other tile production centers there are a lot of relief signes with crosses. Thus, we believe that more authentic reason for drawing the graffiti was that the person who had made the graffiti was an artisan who manufactured the flanged tile. Menorah was the main Jewish apotropaic symbol, which had turned into a kind of “talisman”, “charm” for success, “obviation of evil influences, failure”. We can accept that it was useful for the tile-maker and the customer (owner of a house) alike.

It should be noted that the tradition of marking roof tiles with finger-drawings was known in Crimea in the 17th – 19th centuries. Among these later analogies we can note plots: “su” (Crimean Tatar, “water”) [Абдураманова, Акчурина-Муфтиева 2015, 80], “yilan” (Crimean Tatar, “snake”)⁸, “carnation” [Абдураманова, Акчурина-Муфтиева 2015, 26, 79], inscriptions. Close and similar ornaments were found in Qırımlar embroidery. For example, the motif “su” was the first one (the start) during embroidery and it was a symbol of “foundation of everything”. In addition, in ethnographic descriptions of the 19th century Crimea, there was a tradition of ceremonial prayer before the start of a great work among artisans and performance of ritual actions with the first manufactured items.

Other Jewish Symbols on Flanged Tiles of the Ich/2 Subgroup

Large number of relief craft-marks are known on flanged tiles of Ich/2 subgroup.

The fragment of the tile with a menorah also belongs to Ich/2 subgroup. This fact has determined two things: chronology and analogies among flanged tiles of Ich/2 subgroup. There are 41 variants defined in the subgroup up until now [Moisieiev 2021, 69, Fig. 9]. Among the marks of certain variants there are letters, symbols and drawings. Their meaning and role in tile production process, and what they exactly marked (matrix or a roof

tile), remain questions and there is no consensus among researchers on this scientific problem [Завадская 2015; Романчук 2004, 103–110; Сидоренко 1985, 95–96, 98–99; Симонова 1980, 119–120; Якобсон 1950, 122–123, 152–153; 1970, 150–153; Moisieiev 2022, 170]. At the same time, it is obvious that mark-drawings had deep roots in beliefs, traditions, and ethnographic rituals of medieval ceramists from Chersonese in their everyday life. For example, images of a heavily branched Rider are present in various plots of the “heroic deeds” of a cultural hero, and there is no doubt that they are related to a calendar cycle [Моисеев 2020, 449; Моисеев 2016, 131].

Therefore, we analyzed a complex of 41 variants with marks of Ich/2 subgroup. As a result, we were able to identify two plots (5 variants of flanged tiles) with signs of the Jewish connotation (**Fig. 4–6**).

A Lion, a Lulav, an Etrog and Menorah with Three Arms and a Tripod – Variant Ich/2/1 (fig. 4)

Flanged tiles of the variant Ich/2/1 with a craft-mark were discovered during excavations in Chersonese [Романчук 2004, табл. 41, УР57/39, рис. 53, УР57/39; Якобсон 1979, 149, рис. 96, 39; Klenina et al. 2018, 152–153, 175, 177, Fig. 2, 4] and Eski-Kermen [Моисеев 2018, 170, 208, рис. 33, III]. This variant is the earliest in Ich/2 subgroup [Moisieiev 2021, 73] and can be associated with the renovation of the block 45 of Chersonese⁹ after the destruction in the middle of the 13th century [Klenina et al. 2018, 152–153]. The craft-mark of the variant Ich/2/1 was reconstructed by analyzing 18 fragments, discovered during excavations on these sites in different years [Моисеев 2018, 170; 2021, 82].

We have used only 6 most revealing flanged tiles fragments of the variant Ich/2/1 in this work. Its craft-mark consists of two parts and contains symbols that could be interpreted as Jewish¹⁰ (**Fig. 4, 1**). In our opinion, the mark is not oriented to the top edge of the flanged tile – on the contrary, its top is directed to the bottom edge of the product. The first (upper) part of the craft-mark (**Fig. 4, 1-a**) is an image of an animal (we will go back to it later). The second (lower) part of the mark (**Fig. 4, 1-b**) is an image of something with three branches (one central and two on the sides) on a tripod-shaped base. There is a “rounded element” with a stem in the bottom part of central “leg” of the tripod. It should be noted that elements to the left and right sides of the central “leg” of the tripod are imprinted in low relief, and researchers who published fragments of flanged tiles of Ich/2/1 variant often ignored them [Романчук 2004, рис. 53, 4; Якобсон 1979, 151, рис. 98, 85].

The lower part of the craft-mark of the variant Ich/2/1 (**Fig. 4, 1-b**), in our opinion, is a menorah with three, instead of classic seven arms. Three-armed menorahs are extremely rare, but there are analogies. For example, one of them can be found on the Ionic style semi-column in Kanaf (Golan) [Hachlili 2001, 201]. Moreover, menorah on flanged tiles of the variant Ich/2/1 has a base in the form of a tripod. This feature is typical for the depiction of the menorah in art and on various objects because a candelabrum should have a strong base for its balance. There are some common forms of bases of menorah: tripod, tripod round, two-legged, square, miscellaneous [Hachlili 2018, 85–87]. A classic tripod was depicted on craft-mark of the variant Ich/2/1 and its analogies are well known on the territory of the Land of Israel and Diaspora. Now let’s focus on the objects at the bottom of the tripod: a branch and a round element with a stem. Menorahs are quite often accomplished with other ritual objects such as etrog, lulav, shofar, incense shovel, vase, scroll [Hachlili 2018, 133–134]. The branch at the bottom of the tripod could be a lulav, while the round object with a stem – an etrog.

The first images of lulav (palm branch) were present on coins from the time of the First Jewish war (66–73). But some objects with palm branch were found on earlier coins of Herod the Great (1st century BC). Lulav got popularity in Jewish art from the 3rd century AD. According to statistics lulav was the second most common ritual object on the

Land of Israel after a menorah and, usually, accompanied it [Hachlili 2018, 137–138]. Palm branch was a symbol of victory in classical pagan cults [Sussman 2019, 397]. In Jewish tradition, a lulav was a symbol of God's Temple protection. The similarity of lulav with a dagger in many early depictions allowed the researchers to suggest that it was a symbol of a weapon and associated with war and victory [Sussman 2019, 396, 398].

Citrus fruit etrog is another ritual element on craft-mark of the variant Ich/2/1. Etrog with lulav near a menorah is a classic combination scheme. Etrog was often depicted as an oval or round object with a stem. It wasn't used for food, but as an element of the weekly celebration of Sukkot. Etrog was taken in hands together with lulav, hadassah and arawa and held or waved during certain parts of Sukkot prayers [Moster 2018, 100–101]. In art, an etrog with lulav and shofar was usually located next to the menorah and forms a single composition [Hachlili 2018, 138–140].

Thus, there is no doubt that the lower part of craft-mark on the variant Ich/2/1 is a composition of the three-armed menorah with the lulav and the etrog.

On the second (upper) part of the craft-mark of variant Ich/2/1 a “fantastic” beast is depicted. A schematic style of animal image makes it hard to determine which animal species it is. The outline of the animal with four legs, elongated muzzle and a long neck framed by a “mane” (rays extending from the neck in different directions) resembles a horse. However, in Crimean medieval tradition, a depiction of a horse on craft-marks without mane is more common because a blanket hides it. Next, the tail goes down and rounds up at the end. This type of tail is not typical for a horse. In the art of Jewish synagogue and funerary traditions a menorah is sometimes (pretty seldom) accompanied by living creatures. As a rule, they are birds (doves, peacocks), a deer or a ram, lions [Hachlili 2001, 98–100; 2018, 66, 145–146; Israeli 1999, 9]. In our opinion, there is a lion on the craft-mark of variant Ich/2/1. It is an animal with a mane and snaky tail. Moreover, lions are often depicted together with menorah. In addition to the decorative function, lions protect and defend menorah and mean the personification of power [Hachlili 2001, 232].

Craft-Marks on Flanged Tiles of the Subgroup Ich/2 with Images of Birds

Among roof tiles that may contain Jewish symbols there is a series of flanged tiles variants (Ich/2/9, Ich/2/10, Ich/2/11, Ich/2/25) with craft-marks that include schematic pictures of birds. We understand that images of the birds themselves can be connected with Jewish community given certain objection. Anyway, we think that the presence of birds (eventually, doves) on the relief marks of roof tiles gives important context of this study.

Similar craft-marks are well known from excavations of the 2nd half of the 13th – 14th century layers in Chersonese [Романчук 2004, 50, 54, 161, табл. 4, УР36/48, УР37/49, 37, УР36/48, УР37/49]. It should be noted that they also were found during excavations in blocks 45 and 60 in Chersonese. Some of them are discovered in destruction layers of the 1st half of the 14th century [Klenina et al. 2018, 147–148, 151, 177, Fig. 4, 99/10, 103/10, 106/10].

The depictions of doves and peacocks in Jewish art are common. Sometimes birds were a flank motif accompanying a menorah [Israeli 1999, 13]. However, they were often depicted as independent central element of the composition. Doves were traditionally depicted on funerary monuments, in art of Jewish synagogue and less often as a decor of ritual and utilitarian things. Researchers suggest that dove images are associated with the soul of deceased persons [Hachlili 2018, 145–146]. On some images, a “dove” held an olive branch in its beak. This went back to the biblical text about Noah's ark and a dove that brought to Noah an olive leaf as a sign that water had gone (Genesis 8/11).

It is most likely that a dove is depicted on variant Ich/2/10. It holds a branch in its beak.

However, a motif of a dove was used not only in Jewish, but also in Christian, Islamic and even pagan art. As soon as other Jewish elements were not found on flanged tiles of the variant Ich/2/10 we won't make a categorical conclusion but a careful suggestion that craft-marks on roof tiles with a dove were made by Jewish craftsmen.

Flanged Tile with Jewish Symbols Production Site

Special ceramic analysis can determine the subgroup Ich/2 by secondary technological features without any difficulty. At the same time, there is some confusion in the historiography with determination of early and late Byzantine tiles of Chersonese tile production center due to its similarity. Typologies of medieval ceramics of the South-Western Crimea often combine materials from subgroups Ich/1 and Ich/2 – i.e. flanged tiles from the 11th to the 1st half of the 14th centuries¹¹.

In other words, there could be two hypotheses. According to the first hypothesis, after the 4th century Chersonese Jews were Christianized or, as a religious group, left the city in another way¹². Then in the 2nd half of the 13th century (maybe earlier) a new wave of Jewish settlers migrated to Chersonese. Some of them worked in tile production. As a result, the technology of tile production (fabric) should have obtained new technological features. A specialized ceramic analysis of subgroups of the group Ich helps discover these changes.

According to the second hypothesis, a Jewish community existed in Chersonese from the 4th to the 13th centuries without any pauses. Consequently, tile production technology (fabric) should have an obvious continuity. It should be noted that we understand the invalidity of any conclusions about the presence of Jewish community in Chersonese between the 4th and 13th centuries based only on ceramic evidence. Rather, we can only begin the discussion about such possibility and about the history of the Jewish community in medieval Chersonese.

Without petrographic tests (this is impossible now), the macroscopical ceramological analysis is the only possibility to investigate differences between the Chersonese building ceramics of the 11th c. – 1st half of the 14th c. The modern methodology of investigation of building ceramics shows that the special qualification of ceramist could give the opportunity to outline different ceramic traditions in different subgroups of building ceramics.

Ceramic Analysis of the Group Ich Fabric

Let's make a ceramic analysis in order to answer the fundamental question about the existence of technological continuity in tile production technology in the group Ich.

Medieval fabrics of the group Ich (**Fig. 3**) show significant stability of mix formulation. We can make this conclusion basing on the ceramic analysis (**Table 1**). Fabric is characterized by the use of pure clay without any specially mixed additives of mineral or biological origin. Only subgroup Ich/2 shows some differences. The subgroup uses a mixture of two sorts of clay (**Fig. 3, 2-a, d-e, g-h**) and an artificial admixture of chamotte (**Fig. 3, 2-f**). This admixture is not homogeneous, the size of fractions fluctuates from large to small. The only stable sign of chamotte admixture is its extremely low quantity. In the context of the development of a level of ideas about clay, the group Ich has signs of the third level according to Bobrinsky (use of pure clay without special mineral and biological admixtures) [Бобринский 1978, 79]. Therefore, the subgroup Ich/2 is an example of a combined recipe [Бобринский 1978, 94] that has signs of instability.

The analysis of data in Table 1 doesn't give evidence of significant changes in mix formula or interruption of continuity in tile makers community from the 9th–10th to the 1st half of the 13th centuries. But, from the 2nd half of the 13th century and to the 1st half of the 14th century there is evidence of the variability and instability of the mix formula. We should remind that at this time a flanged tile with menorah graffiti was manufactured. However, these technological changes are too small and there is no evidence that significant changing or replacement of artisans took place. Moreover, there are no special changes in the morphology of products of subgroups Ich/1 and Ich/2. Let's investigate

traditions of fabric processing by other tile production centers which are synchronous to the subgroup Ich/2. This analysis can show the changes in the mixture formula.

The use of fabric with signs of the third level development of ideas about the clay in tile production process in medieval Crimea is rather an exception. All currently known tile production centers on the Southern coast of Crimea and one center in Crimean Mountains had a well-defined second level of development of ideas about the clay according to Bobrinsky. Their fabric consists of clay and chamotte admixtures [Moisieiev 2021, 74, 76–78]. Concentration of chamotte could vary significantly from one tile production center to another. In addition, there are options of adding other non-plastic admixtures. The second level of development of ideas about the clay is less present in products of tile production centers Ilka and Suatkan (Mountain Crimea) [Moisieiev 2021, 62–65, 78–79]. They are situated in Gothia, the closest historical and cultural region to Chersonese. We analyzed materials of groups I (Ilka) and III (Suatkan) (**Table 2**) in order to make suggestions about the source of cultural effect on the tradition of fabric (mix formula) compiling of “Chersonese” tile production center (group Ich)¹³.

The analysis of data in Table 2 gives evidences that fabrics of group I flanged tiles represent the second (subgroups I/1–I/2, I/5–I/6; mid 6th century – mid 13th centuries) [Moisieiev 2021, 62–65] and the third (subgroups I/3– I/4; 2nd half of the 13th – 3rd quarter of the 15th centuries) [Moisieiev 2021, 64–65] levels of development of ideas about the clay. The chronology of subgroups indicates that tile production centers crossed over to a higher level of development of ideas about the clay around the middle of the 13th century.

It should be noted that the subgroups of the second level of ideas about the clay of the Ilka pottery center differ significantly from each other in terms of technological characteristics. This center used and combined various mineral admixtures in different times. They used chamotte (subgroup I/5 – **Table 2**), lime gravel, atomized dry clay, quartz gravel & argillite (subgroups I/1, I/2, I/6 – **Table 2**). The number of admixtures was medium. This was the main feature of tile production center Ilka which distinguished it from some subgroups in the southern coast of Crimea. Thus, tile production center Ilka couldn't influence the mix formula of fabric of the subgroup Ich/2 as in the time of its production this tile production center crossed over to the third level of development of ideas about the clay (subgroup I/3). In other words, possibly, the tile production center “Chersonese” influenced Ilka rather than vice versa.

Tile production center Suatkan (group III) [Moisieiev 2021, 78–79] used more stable mix formula (**Table 2**) and it was combined [Бобринский 1978, 94]. An important stage of development of Suatkan technology was the temporary change of mix formula to the 2nd level of development of ideas about the clay on early stages of its history. There was a temporary refusal from mixing two types of clay at that moment (subgroup III/2, the turn of the 8/9 centuries – **Table 2**). The tradition of mixing two types of clay was completely restored in the 2nd half of the 9th century with changing the subgroup III/3 by subgroup III/1. Suatkan tile production center manufactured subgroup III/5 at the same time as the subgroup Ich/2 [Moisieiev 2021, 78–79]. Suatkan's subgroup was characterized by the usage of mix formula with two types of clay, mineral and organic admixtures (Table 2). Obviously, we have the closest technological analogy to the subgroup Ich/2 of tile production center “Chersonese”. Though, cultural and historical context and relations between Chersonese and inner parts of Gothia couldn't lead to the impact of subgroup III/3 on subgroup Ich/2. It is more realistic that khersaks potters (Chersonese potters) had impact on their neighbors. Besides, it is difficult to link the change in mix formula of the subgroup Ich/2 with the relocation of Jewish population from Suatkan to Chersonese due to the fact that this tile production center is situated in close proximity to the Christian monastery on the Babulgan mountain and could have ties with it [Герцен, Манаев 2013, 409–410]. In any case, the chronology of these subgroups of roof tiles still needs to be clarified, provided that it will be possible to go back to this problem. In the meantime, we couldn't find a clear source of impact on tile production center Chersonese in the South-

Western Crimea. At the same time, it is obvious that processes of technological development of tile production craft took place in Gothia. They connected tile production traditions of this region with Chersonese.

Thus, the variability and instability of mix formula of tile production center “Chersonese” wasn’t related to the relocation of tile makers inside the South-Western Crimea in the 2nd half of the 13th – 1st half of the 14th centuries. We believe that the significant change or interruption in the continuity in tile makers’ community really took place, therefore it should have been caused by an external influence.

Conclusion

Archaeological excavations of the block 45 in Chersonese in 2010 made it possible to discover a new artifact that was associated with Jewish community of medieval Chersonese in the 2nd half of the 13th – 1st half of the 14th centuries. This was a menorah graffiti on upper surface of flanged tile base of the subgroup Ich/2. The image was drawn by the artisan. Probably it was a sacred symbol. It could have been inscribed to ensure successful completion of the work. Besides, flanged tiles of the subgroup Ich/2 have relief marks which are interpreted by the authors like a three-branched menorah in composition with lulav and etrog, accompanied by a lion. Some tiles have relief marks of birds, including doves with a branch in the beak that also may be Jewish signs. In authors’ opinion, graffiti and relief marks indicate that a significant number of representatives (possibly entire families) of Jewish community were involved into the tile production in Chersonese in the 2nd half of the 13th – 1st half of the 14th centuries.

We can’t say whether this community was associated with tile production center “Chersonese” (Ich group) in the 2nd half of the 5th – 1st half of the 6th centuries and in the 8th – 1st half of the 14th centuries or worked on the manufacturing roof tiles only in the 2nd half of the 13th – 1st half of the 14th centuries. The technology of working with fabric was stable during the entire time of the production of the group Ich and was the third level of development of ideas about the clay according to Bobrinsky. It had differences with production technology for the rest of the South-Western Crimea. However, in the 2nd half of the 13th – 1st half of the 14th centuries the technology of tile production center “Chersonese” (subgroup Ich/2) underwent unstable changes and variations of the third level of development of ideas about the clay.

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¹ These might be part of a relief craft-mark. It is impossible to reconstruct it. The orientation of the graffiti and the relief mark isn’t the same. Other graffiti on tiles from Chersonese could have both the same orientation and not.

² Hereinafter the definition of color is made according to Munsell Soil Color Charts, 2009.

³ “Babylon” signs are well known on the bricks from the Khazar Kaganate [Флёрова 1997, 45, таб. VI:11–30]. Nevertheless, we couldn’t take them as analogies due to the differences in the chronology and the absence of archaeological evidence of the strong infiltration of Khazars into the city culture of Chersonese (in contrast to the synchronic and well-presented culture of the Cumans in the city).

⁴ Kerch and unknown settlement near the vil. Burliuk-Vilino [Соломоник 1995, 55].

⁵ Now there are small cracks and indents around of graffiti lines.

⁶ There are two fragments of tiles with “Babylon” graffiti produced by tile production center Chersonese. We can determine only one of them as subgroup Ich/2 and date by the 2nd half of the 13th – 1st half of the 14th c. In addition, graffiti has round form, and we can interpret it as the “Solar symbol”.

⁷ Crimean medieval building ceramics had been produced by “back side cut” technology. This technology is Roman and used by Roman military in Petra [Hamari 2017, 92, Fig. 6.3]. Therefore, the usage of analogies from Roman sites and extrapolation of the reality of Roman production is methodically correct and informal.

⁸ Definition by S. Abduramanova.

⁹ The variant Ich/2/1 was labeled as “variant 13 subgroup A group 1” when it was publicized for the first time [Klenina et al. 2018, 175, Fig. 2: group 1 subgroup A v. 13].

¹⁰ The image on the relief mark also can be interpreted like a “ship” or Golden Horde “tamga”. Authors think that after the discovering of the roof tile with menorah graffiti, the Jewish version of the interpretation of the image on the relief mark has priority in validation and historical contextualization. The “ship” interpretation had been made by one of the authors earlier [Моисеев 2019, 493] and isn’t actual now. In addition, we think that the image on the relief mark cannot be a “tamga” due to the differences in chronology between the roof tiles of subgroup Ich/2 and the presence of Golden Horde material culture in the South-Western Crimea [Айбабин, Хайретдинова 2011, 429; Мыц 2009, 232; Романчук 2008, 433–437].

¹¹ In the group Ich A. I. Romanchuk combined (“the group 1” by A. I. Romanchuk [Романчук 2004, 42–43] products of the subgroup Ich/1 [Романчук 2004, 147, табл. VI, N5, 158, VI, E37, 160, VI, UP20, 162, VI, UP59], the subgroup Ich/2 [Романчук 2004, 141, табл. VI, Г11, 142, VI, E18, 143, VI, E26, E27, E29, E31, E32, E35, E40, 144, VI, E53, 148, VI, K7, 149, VI, K48, 150, VI, K53, 155, VI, Y318, Y319, Y322, Y323, Y324, Y325, 156, VI, Y326, Y327, Y329, Y331, 157, VI, Y378, 160, VI, UP15, UP22, UP23, 161, VI, UP36, UP37, UP40, UP56/40, UP57] and the subgroup Ich/3 [Романчук 2004, 153, табл. VI, P4, 162, VI, UP63]) – i.e. tiles of the 11th – 1st half of the 14th centuries [Moisieiev 2021, 73]. The group Ich is designated by I. A. Zavadskaia as “1st group of Chersonese fabric” or “1st group by Chersonese classification”. Materials of the subgroup Ich/1 [Завадская 2017, 159, Fig. 4] and subgroup Ich/2 [Завадская 2017, 157, 163, Fig. 2, 8] are combined in it – i.e. roof tile from the 12th to the 1st half of the 14th centuries [Moisieiev 2021, 73].

¹² Note that it is this interpretation that is currently accepted by the majority of the scientific community [Ušakov, Žubarev 2014, 287–289, 294–295].

¹³ We knowingly exclude at this stage of the study territories outside the South-Western Crimea.

¹⁴ The paper was written by O. Yashna during the internship at Ben-Gurion university of Negev (Israel).

TABLES

Subgroup	Mix formula with 2 sorts of clay / concentration	Admixtures		Physical characteristics
		natural admixtures	artificial admixtures	
Ich/1	–	oolite lime	–	–
Ich/2	ferruginized clay + kaolinite / low – significant	oolite lime, salt (sea water)	chamotte (few, small and medium fraction)	significant stratification
Ich/3	–	oolite lime	–	low stratification
Ich/4	–	oolite lime, salt (sea water)	–	low stratification
Ich/5	–	oolite lime, salt (sea water), sandstone, quartz grit, ferrous compounds	–	–

Table 1. Ceramological analysis of fabric of the group Ich

Group / Tiles production center	Subgroup	Mix formula with 2 sorts of clay / concentration of the 2 nd sort of clay	Admixtures		Physical characteristics
			natural admixtures	artificial admixtures	
I / Ilka	I/1	–	fragments of lime, ironstone	fragments of lime, dark and red chamotte	–
	I/2	–	fragments of lime	adust dry clay	–
	I/3	–	fragments of lime (form structure of break), ferrous compounds	–	–
	I/4	–	sand (form structure of break), ferrous compounds	–	–
	I/5	–	fragments of lime, ferrous compounds	chamotte (small and medium fraction)	–
	I/6	–	fragments of lime, lime gravel, ferrous compounds, small particles of another black mineral	quartz gravel, argillite (0.02–0.5 cm)	–
III / Suatkan	III/1	ferruginized clay + ferruginized clay / low	fragments of lime, micas, sandstone, quartz grit few dark sand	–	low stratification
	III/2	ferruginized clay + kaolinite / significant	fragments of lime	dark chamotte	significant stratification
	III/3	–	–	red chamotte (few)	significant stratification
	III/4	ferruginized clay + ferruginized clay / significant	–	–	–
	III/5	ferruginized clay + ferruginized clay / low	sand (form structure of break), fragments of lime, ironstone	chamotte (few, big fraction), chaff	highly low stratification
	III/6	ferruginized clay + ferruginized clay / significant low	fragments of lime, ferrous compounds, ironstone	–	low stratification

Table 2. Ceramic analysis of molding materials of groups I and III

FIGURES

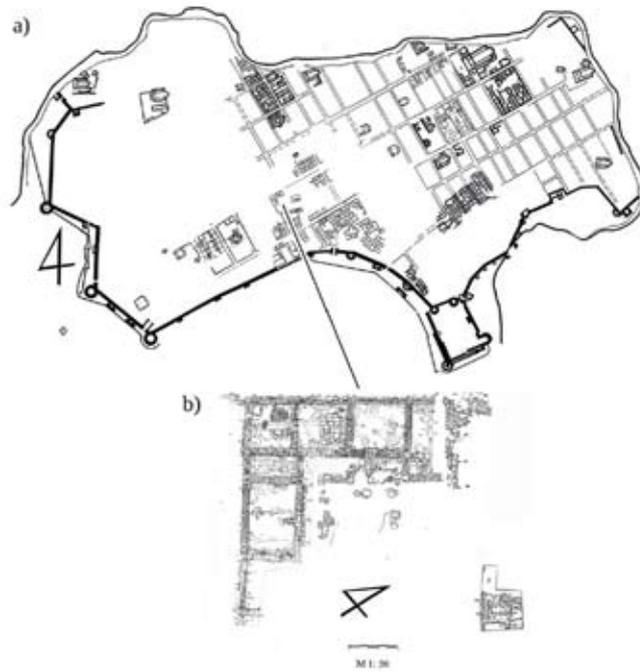


Fig. 1. Chersonese and block 45 (a – designed by Elena Klenina; b – drawn by M. Markgraf and M. Gazda)

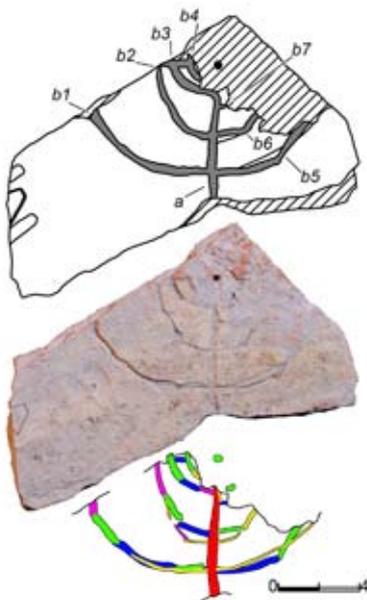


Fig. 2. Flanged tile of the group Ich subgroup 2 with graffiti “menorah” from excavations of the block 45 in Chersonese. Letters indicate parts of the image of the menorah: a) central shaft; b) arms (1–7). Different colors indicate the stages of the graffiti drawing (drawn by D. Moisieiev, photo by A. B. Biernacki, reconstruction of the stages of the drawing by D. Moisieiev)

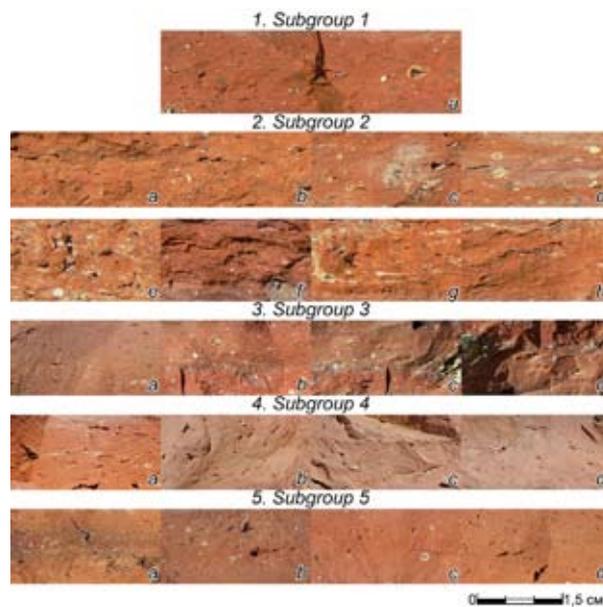


Fig. 3. Building ceramics of the South-Western Crimea. Typology-2021. Group Ich. Table of breaks of flanged tiles: 1 – subgroup Ich/1; 2 – subgroup Ich/2; 3 – subgroup Ich/3; 4 – subgroup Ich/4; 5 – subgroup Ich/5 (photo by D. Moisieiev)

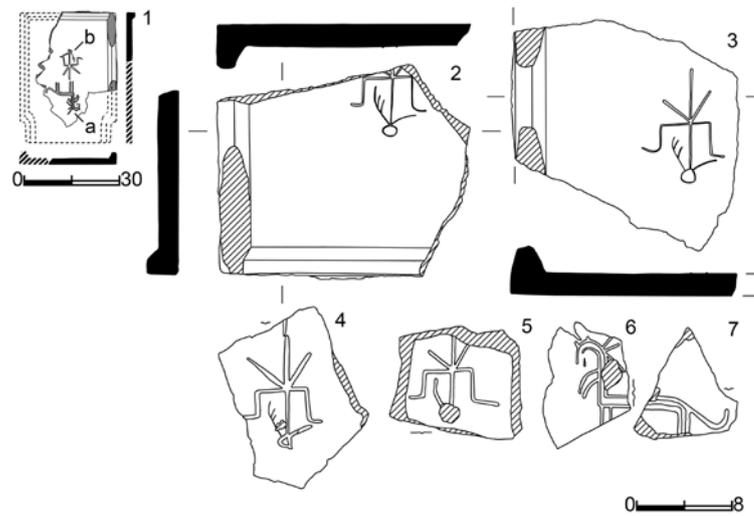


Fig. 4. Flanged tile of the variant Ich/2/1, Chersonese tile production center. Relief craft-mark in form of a lion, lulav, menorah with three branches and tripod: 1 – the reconstruction of form of flanged tile (a – upper part of the craft-mark; b – lower part of the craft-mark); 2 – Eski-Kermen, 1937, blocks on the eastern edge of the fortress and near “Small South Gate”; 3 – Eski-Kermen, 1937, blocks on the eastern edge of the fortress and near “Small South Gate”; 4 – Chersonese, 2010, block 45; 5 – Chersonese, 2009, block 60; 6 – Eski-Kermen, 1936, blocks on the eastern edge of the fortress and near “Small South Gate”; 7 – Chersonesos, 2010, block 45 (drawn by D. Moisieiev)

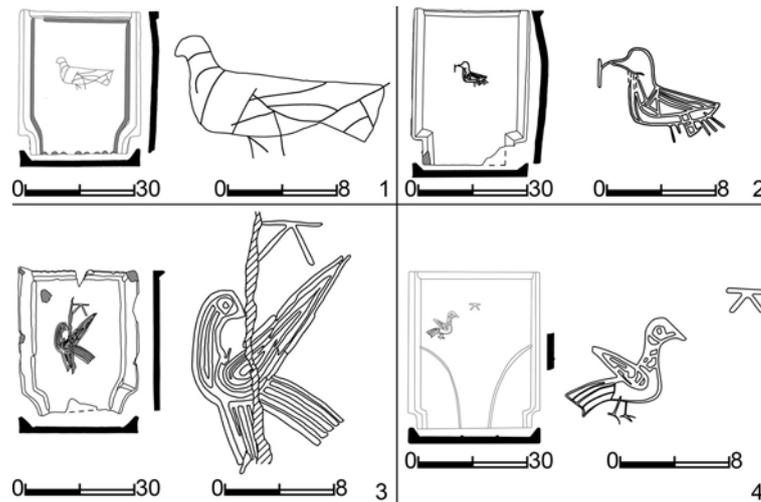


Fig. 5. Flanged tiles of the subgroup Ich/2 with craft-marks with images of birds: 1 – variant Ich/2/9; 2 – variant Ich/2/10; 3 – variant Ich/2/11; 4 – variant Ich/2/25 (drawn by D. Moisieiev)

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**Нові свідчення існування іудейської громади
в пізньовізантійському Херсонесі (Крим)**

У 2010 р. під час розкопок кварталу XLV середньовічного Херсонеса (Крим) було виявлено фрагмент черепиці з графіті менори. Датується артефакт 2-ю половиною XIII – 1-ю половиною XIV ст. Ця знахідка дає підстави розпочати нову дискусію про присутність єврейської громади в Херсонесі у візантійський час. Метою нашої статті стало дослідження зв'язку між виробництвом черепиці з юдейською символікою та єврейською громадою Херсонеса. Для виконання цієї цілі було розроблено спеціальну методику дослідження, здійснено семантико-іконографічний аналіз графіті, локалізовано гончарний центр, де була виготовлена черепиця, та ідентифіковано на іншій херсонеській будівельній кераміці інші юдейські символи. Керамологічний аналіз встановив, що черепиця з графіті з менорою виготовлялися в майстернях, що належали до міського херсонеського виробництва будівельної кераміки. Йому був притаманний континуїтет технологій роботи з глиною протягом всього середньовіччя. Разом з тим, деякі нестійкі зміни і варіації в рецептурі глини спостерігалися в той час, коли була виготовлена черепиця з менорою. Дослідження пізньовізантійських гончарних центрів Гірського Криму показало, що нестабільність і нововведення в рецептурі глиняної сировини херсонеських черепичників не могли бути пов'язані з переміщенням майстрів з Гірського Криму в Херсонес.

Аналіз іконографії графіті та організації процесу виготовлення черепиці довели, що зображення менори мало апотропічне значення. Інші ремісничі мітки, які було знайдено на хронологічно синхронних черепицях того ж гончарного центру, також мали юдейські символи, що ще раз підтвердило вірність нашого висновку про залучення до виготовлення черепиці представників єврейської громади.

Ключові слова: графіті; єврейська громада; Крим; менора; ремесло; черепиця; Херсонес

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