

SAINT GEORGE ON MEDIEVAL STOVE TILES FROM TRANSYLVANIA, MOLDAVIA AND WALLACHIA. AN ICONOGRAPHICAL APPROACH

If there is one preferred hero on medieval stove tiles, than that is definitely Saint George. Out of all the hundreds images depicted on stove tiles throughout Central and Eastern Europe, George is the most popular character. No great wonder, considering the dimensions of his cult in the late middle ages, in both western and eastern traditions. What is interesting is that the military saint is only represented on stove tiles in the episode of slaying the dragon, although in other artistic fields he is also represented during the lengthy narrative of his martyrdom, in an iconic manner, as a standing or mounted saint or in the context of his miracles. As everywhere else, in Transylvania, Moldavia and Wallachia of the late Middle Ages, the stove tiles depict George as dragon-slayer. The tiles with this iconography form a consistent group, allowing the researcher to address complex questions of iconography, social, religious and ethnic distributions, or of economic aspects related to the production and copying of stove tiles.

I will concentrate on those tiles decorated with St. George found on the present territory of Romania¹. I have restricted the topic in this way since this allows a fruitful comparative approach of items found in three different medieval states: Transylvania (province of the Kingdom of Hungary), Moldavia and Wallachia (as autonomous states), each with its own peculiarities, different religious and ethnical composition, different artistic traditions and political rule. The most important difference for the present research lies though in the distinct artistic traditions meeting and often blending here.

All main studies on stove tiles from the Romanian lands address the question of the origin, style and use of such items. Although they are taken over from the (Catholic) Western Europe, some are clearly used in Orthodox contexts. How is such an adoption visible at an iconographical level? How do Catholic and Orthodox traditions merge in the decoration of utilitarian objects such as stove tiles? Is any of the styles more popular in any of the three regions? Did the different ethnic groups from these areas (Hungarians, Szeklers, Saxons, and Romanians) prefer certain images of St. George? And how did the motifs circulate geographically and socially? These are some of the question I will try to answer, or at least I will argue whether there is enough evidence for answering them.

Gathering the primary material for this research implied a selection. I left out those fragments too small for a positive identification, even if they have been published as depicting (probably) Saint George. Some tiles I rejected since more recent research² showed they did not depict the military saint but just a rider (one tile from Sibiu and a similar

* I thank Mrs. Rodica Gaciu for helping with the drawings.

¹ Part of my MA thesis *The Holy Heat. Knightly Saints on Transylvanian and Moldavian Stove Tiles* defended at Central European University, Budapest, Department of Medieval Studies, in June 2004.

² Daniela Marcu Istrate, „O nouă variantă de cavaler în iconografia cahlelor din Transilvania” (A New Variant of the Knight in Tournament Scene on Transylvanian Stove Tiles) presented during the conference on Transylvanian Tiles organized by the ASTRA Museum in Sibiu, May 2006.

fragment from Gusu³). For the tiles included in the analysis, I kept the dating of the authors. And as a general rule I included all those tiles and fragments which depicted St. George with certainty or at least with a higher degree of probability. I ended up with 64 entries (counting as one even fragments from more tiles but depicting the same iconography found on the same site)⁴. All data on each entry, including the bibliography, is indicated in the annexed table. It would be too long to list and give the bibliographic indications for all the fragments I rejected.

The cult of Saint George is attested in Asia Minor already in the fourth century, in Western Europe in the sixth century, and until the middle ages he was worshiped only as martyr. Sometime in the eleventh century a Byzantine hagiographer added to the legend the dragon-slaying episode so typical for George throughout the middle ages. Dragon-slayer George appears in Byzantine art in the twelfth century, both in the East and in Italy, from where it spread throughout Western Europe. In the west the episode was made very popular by its inclusion in the thirteenth-century *Legenda Aurea*.⁵

In most cases the iconography indicates the belonging of an image to one or the other artistic traditions. In the west, St. George is represented either suffering the different tortures of his martyrdom or as a knight in contemporary armor, slaying the dragon with a spear or a sword, in the presence of the princess. In the east, the saint is more often depicted with halo, in Roman armor and a rowing mantle, either as standing martyr or slaying the dragon with a cross-ended spear (*crux hastata*) and crowned by angels or blessed by the Divine Hand.⁶ But such details are more interchangeable than it seems at the first look. One may find Saint George with halo and rowing mantle in western pieces of art, even blessed by the *dextera Domini*, presumably the western iconography being influenced by the Byzantine one which produced it in the first place. But influences went both ways, so it is hard to decide upon the precise eastern or western character of certain elements. What makes the difference in the end is the accumulation of such details more characteristic of one tradition than of the other and also the general style of the image. In the Byzantine tradition there is less movement and more stylization while in the west saint George is more of a contemporary knightly figure, depicted in more complicated postures, with more realistic details of arms, armor and horse tack. The existence of inscriptions in a certain alphabet or language is of course an important clue, at least for the identity of the owner.

³ Sibiu: Daniela Marcu Istrate, *Cahle din Transilvania și Banat de la începuturi până la 1700* (Stove Tiles from Transylvania and Banat from the Beginnings to 1700), Cluj-Napoca: Accent, 2004 (henceforth Marcu Istrate, 2004) 270, cat. Sibiu 7.5, 474, fig. 5. Gusu: Marcu Istrate, 2004, 236, cat. Gusu 1.

⁴ The reason for this simplification is due to the fact that in most cases the archaeological publication does not mention from how many individual tiles the fragments came from and so a quantitative analysis would be unbalanced. On the base of published information, these images decorated a minimum number of 178 stove tiles in Transylvania, Moldavia and Wallachia. I refer to my entries simply as tiles but one has to bear in mind that there might be more stove tiles decorated with the same image and found in the same place. When such information is available, it is mentioned in the annexed table.

⁵ *Lexikon der christlichen Ikonographie, Ikonographie der Heiligen*, vol. 2, Rom, Freiburg, Basel, Wien: Herder, 1974: 366–390 (henceforth: LCI); John L. Flood, “Sankt Georg”, *Herrscher, Helden, Heilige*, Ulrich Müller, Werner Wunderlich eds., vol.1, St. Gallen: UVK, 1996: 589–605; Karl Künstle, *Ikonographie der christlichen Kunst*, vol. 2, Freiburg im Breisgau, 1926: 263–279; George Kaftal, *Iconography of the Saints in the Painting of North East Italy*, Florence: Sansoni, 1978: 348–374; Christopher Walter, *The Warrior Saints in Byzantine Art and Tradition*, Aldershot: Ashgate, 2003 (henceforth, Walter, 2003): 109–144.

⁶ I shall not enter the question of color symbolism (white horse- symbol of the saint's purity and virginity, red cloak – symbol of martyrdom, etc.) since on stove tiles polychromy is not so frequent and colors depend more on technical aspects than on symbolical ones. On collections of medieval images of St. George on the net see <http://www.imareal.oew.ac.at/realonline>, the databases accessible through Iconclass <http://www.iconclass.nl>, code 11H(GEORGE), or the website of David Woods on military saints at: www.ucc.ie/milmart/grgwstart.html.

My method is that of identifying all the elements that appear on these tiles and then applying a quantitative analysis, relating such details to the province or state of discovery, the dating, the social and the religious contexts.

The number of depicted elements proved to be quite impressive. From details of arms, armor and horse tack, to the depiction of the princess and her parents, architecture, halos and crosses to stranger depictions such as birds, stars, rosettes and even demons and unicorns. I will discuss them all in detail later on. What was more difficult was to decide which of these elements belong more to the western iconography and which more to the eastern one. I have selected as "western": details of arms and armor (except for the spear which is the usual attribute of St. George in this scene everywhere), of knightly fashion (such as the feathered diadem or headpiece) and details of horse tack (except for the reins which are equally ubiquitous). I hold as Eastern (post-Byzantine): saintly elements such as crosses, halos, cross-ended weapons, the *dextera Domini*, Cyrillic inscriptions, mantles and a general decorative or stylized outlook. Counting how many of these appear on each tile, and noticing which are predominant, I will group the tiles into western and eastern looking ones. Then, I will proceed to more sensitive observations related to how the other elements are associated to each, and to the spatial, social, religious and ethnical distributions.

I am of course aware that the sample is too small for any kind of statistics, and even in my attempt of quantitative analysis I will nuance and put in context my observations as much as possible. Another problem is caused by the state of publication of the material, sometimes incomplete or providing low quality reproductions. The fragmentary state of some pieces and the general provincial and sometimes naïve style of the representations will force me to take into consideration some "unknown" entries in different fields. The issue of subjectivity and interpretation intervenes of course in my accepting or rejecting tiles and in identifying sometimes hardly visible details. Nevertheless, I do believe that an overall analysis of these tiles as a group is possible and a quantitative approach, no matter how cautious, will shed new light on the matter.

As previously stated, there have been discovered and published 64 medieval stove tiles decorated with Saint George on the present territory of Romania, all depicting the saint slaying the dragon, most often on horseback. This is the only way of depicting the saint on stove tiles everywhere, and the image seems taken out of the narrative and becoming an iconic image, with the dragon as a typical attribute of St. George.⁷ Out of our group, only 5 tiles depict George on foot, 3 in Transylvania and 2 in Moldavia. In three Moldavian cases, the type of depiction is not known. All the rest 56 are representations of George on horseback.

All the tiles in the present analysis are dated between the fifteenth and the seventeenth centuries, with some differences between the three regions. The earliest and most numerous are the St. George tiles from Moldavia: 27 tiles, out of which one dated in the first half of the fifteenth century, most of them in the second half of the same century, and some of them in the seventeenth. Next come, as numbers, the tiles from Wallachia: 21, dated in the fifteenth and sixteenth centuries, mostly in the latter. The 16 Transylvanian tiles are dated vaguely to the fifteenth-sixteenth centuries, with two in the first half of the fifteenth century. It is somehow strange to notice that there are no Moldavian tiles with St. George from the sixteenth century and that over all, the tiles from Moldavia are earlier than the ones from Transylvania although it is generally presumed that they were adopted outside the Carpathians via Hungary, through the Saxon *hospites* there. I will just have to notice that in the Romanian historiography stove tiles are not dated very precisely; sometimes being

⁷ Konrad Strauss, *Die Kachelkunst des 15. bis 17. Jahrhunderts in Europäischen Ländern*, München: 1983: "Kachelreliefs mit der Darstellung des Ritters Sankt Georg": 17–23; Iránsné Katalin Melis, "Szent György alakos budai kályhacsempék" (Depictions of Saint George on Stove Tiles from Buda), *Művelődéstörténeti tanulmányok a magyar közepkorról*, Fügedi E. ed., Budapest: Gondolat, 254–358.

even used to date the archaeological contexts and not the other way around. Also it might be the case that the Moldavian historiography has a tendency to date tiles earlier while the Transylvanian specialists seem more cautious. On the other hand there is no wonder to see several seventeenth century religious tiles in Moldavia and none in Transylvania where one can suspect that the Reformation had some effect on religious imagery even on functional objects such as tiles. But these issues have to be more thoroughly analyzed on larger samples of tiles and through a critical review of previous dating.

The tiles come from very diverse social contexts, from castles and fortifications, to urban and town houses, from orthodox monasteries to rural houses (see figure 1). Most (22) come from urban contexts, and they amount, surprisingly, to 12 in Wallachia, 8 in Moldavia and only 2 in Transylvania. 4 tiles, dated no later than the others, were excavated in rural contexts in Transylvania and Wallachia. The second most numerous group can be related to upper-class contexts, such as castles, princely courts, *curia*, boyar residences or a princely council house. There are 15 such tiles, 9 from Moldavia, 6 from Transylvania and none from south of the Carpathians. Another 9 tiles come from military contexts, such as different types of fortifications, 6 in Moldavia and 3 in Transylvania. A very important group of 6 tiles come from orthodox monasteries: 2 in Moldavia and 4 in Wallachia. One tile was excavated in the workshop where it was produced and other 6 come from unknown contexts. Considering the glazing of tiles, the great majority of them are found in Moldavia (11 out of 17). While in Transylvania and Wallachia one may find green tiles (in each 3), the Moldavian tiles display also more rare glazes such as brown, yellow and transparent glaze with green lines. Glazing is indeed associated more with upper-social contexts, most of them in courts, but they also figure in urban houses. An interesting fact is that in several cases, glazed and unglazed variants of the same tiles were found together, indicating that the alternation of the two types was a decorative device, maybe due to the not so great variety of depictions. Still, this seems to be the case only on stoves heating richer interiors, such as the castle of George Martinuzzi in Vințu de Jos, the princely court in Bacău, the council house, and the princely fortification in Suceava. The presence of the same association of glazed and unglazed tiles could have spread also down the social scale, since one finds it in several urban houses in Suceava.

	Transylvania	Moldavia	Walachia
Castle	5	0	0
Princely court	0	6	1
Council house	0	1	0
Boyar Country residence	0	1	0
Curia	1	0	0
Fortification	3	6	0
Orthodox monastery	0	1	4
Princely house in orthodox monastery	0	1	1
Urban house	0	7	0
Town	0	1	10
Town house	2	0	2
Workshop	1	0	0
Village	1	0	0
Rural house	1	0	2
Unknown	2	2	2

1. Social distribution of stove tiles with St. George according to province/state.

QUANTITATIVE ANALYSIS OF ICONOGRAPHICAL ELEMENTS. At the first look, the present group of tiles with St. George seems provincial and not of the best quality. Although these images were not created by great artists and they cannot rival with contemporary royal

workshops from Hungary for example, at a closer inspection they reveal an unexpected richness of details.

Most of these are of a knightly nature, showing arms, armor and horse tack. The basic depiction of St. George on horse would require no more than a man on a horse, slaying the dragon with a spear and holding the reins. But the creators of these tiles felt the need to add more, showing us the armor of the knight, his exact weapons, detailed tack elements of his horse⁸. Looking first at the weapons, the spear is almost always the one used by the saint (on 51 tiles), on one tile represented with a pennon (W1). Sabres are depicted on 12 tiles, swords on 3 tiles, one being a clearly identifiable two-hand sword with curved guard (T11). Shields are also depicted on 5 tiles.

The greatest details belong to the saint's armor. He might wear a *helmet* (on 7 tiles: a *sallet* helmet with mobile visor on T11, a helmet with *lambrequin* on M14 or a helmet with visor type *bourguignotte* on W2), an iron hat (2: M11, T13), or a parade feathered headpiece (5). As for the body armor, he is wearing a *cuirass* or, for what is visible, at least a *breastplate*, on 7 tiles, maybe combined with *pauldrons* (the shoulder protection plates, visible on 3 tiles), *cubitieres* (the elbow protection plates, in 2 cases), and *haute pieces* or *neck protection plates* (on 5). His hands are protected by *gauntlets*, also called iron fists, on 5 of the tiles. One of the frequent defensive pieces is the *coat of mail*, protecting the lower body and the thighs (on 13). The same function is taken in foot combat by the skirt, called *tonlet*, and on one tile George is shown as wearing one (M27). Another piece for the protection of the hips are the *tassets*, depicted on 6 tiles. On 4 tiles one can see *knee protection plates*, as protective elements for the lower legs. Very popular on our tiles are the *sabbatons à la poulaine*, pointed armed footwear, depicted in 14 instances. Spurs appear mostly associated with the sabbatons, but not only. In 3 of the 10 cases, one can even identify the spur rowels and their number of spokes.

Another well represented group of details refer to horse tack and harness⁹. The saint's horse is depicted in many cases as wearing the *bridle* (the head tack, on 11 tiles). The *reins* are almost always present, being the essential tack piece (33). The *saddle* is many times visible (15), with its higher front and hinder parts designed to better hold the rider at impact: the *saddle pommel* (9) and the *saddle cantle* (10). Once even an adjacent piece such as the *saddle blanket* is depicted (T14). On 3 tiles one can see depictions of the *girth* (strap encircling the animal's body in order to better secure the saddle, visible on T6, T14, W2). The *stirrups* are depicted on 9 tiles and *open-type bards* on 21. The latter are parade straps consisting of either breast collars or cruppets, or both. Some of the straps are even showed as decorated, mostly the girths and the collars. In one exceptional case the horse is wearing a *feathered headpiece* (T14), and on two tiles its head is protected by a *shaffron* or *chauffron* (T6 and T12). These latter items are part of the tournament tack showing clearly St. George as a medieval knight.

Sometimes these knightly elements are combined on the same tile, presenting a very realistic and detailed knightly figure. Probably the most representative is T14, a sixteenth century tile from Vințu de Jos, where one may see a very impressive display of arms and armor. Although not wearing a helmet, the young and fashionable George is wearing a breast plate with an engraved (or maybe painted) cross on it's left hand side, a short coat of mail underneath and pointy sabbatons à la poulaine with spurs. His shoulders are protected by pauldrons and his hands with gauntlets holding the spear. Equally fashionable is his horse with its richly feathered headpiece, literally looking down on the dragon. The bridle and the

⁸ The problem of dating such arms and armor elements is that they generally fit that of the tiles and can only provide a *post quem* dating for the stove tiles which depict them, therefore not helping much with accurate chronological information.

⁹ *The Medieval Horse and Its Equipment, 1150–1450, Medieval Finds from Excavations in London*, John Clark ed., London: 1995; Ortwin Gamber, *Schutzwaffen*, series *Glossarium armorum*, Gratz: Akademische Druck/u. Verlagsanstalt, 1972.

reins are visible but they do not play any role in the action. What is very detailed is the saddle and its stirrups, its spiraled pommel, the decorated saddle blanket and the decorated girth.

The other group of details one has to take into consideration refers to the saintly attributes of George: the halo (on 13 tiles), crosses (on 8), the cross-ended spear (*crux hastata*¹⁰) (on 2), and the *dextera Domini* (on 1). The best example of this very saintly mode of representations is a seventeenth century tile from the princely fortification in Suceava (M18). Here the mounted saint with halo and rowing mantle, holding a *crux hastata* as he prepares to slay the dragon (unfortunately looking more like a dog), is being crowned by the right hand of God the Father emerging from the upper right corner of the image. The presence of the *dextera Domini* is usually interpreted as a manifestation of God the Father and a sign of divine approval.¹¹

Comparing the two examples, one may hastily conclude that the two groups of details are somehow exclusive, in the sense that if the image is „knightly” the saintly details are not present and the other way around. In fact, the average cases do mix these types, therefore it is not as easy to decide on the western or eastern character of the images as in these two examples. Another observation is that there is a series of other elements not necessarily belonging to any of the two groups. In this third category I have placed the secondary characters of the legend: the rescued princess (on 17), with the lamb in 4 cases, her parents the king and the queen, who appear quite frequently (on 13). Among other elements one may notice George’s mantle (8), crowns (8), purely decorative elements like dots, lines, and squares (8), different vegetal elements – trees, bushes, grass (10) – and architectural details – arches, arcades, buildings (10) – which help articulate the background and the context of the symbolic confrontation.

If so far the elements described fit the scene and their presence is easily understandable, not the same can be said about the last group of elements. Certainly rarely appearing in comparison with the others, they are rather puzzling in this context. Above St. George there are sometimes birds (on 6 tiles), other times stars (on 6), or a rosette can find its way in the picture (4). The strangest thing though is a large pot or a flower vase (T1), St. George riding what seems to be more of a unicorn than a horse (W19), the saint presumably braking an arrow that has pierced his neck from behind (W5) or a witch/demon-like creature flying on a stick (W2). Such things occur mostly on tiles of a more schematic, popular or worn-out character, such as the ones from Wallachia. They might therefore be the result of a master’s lack of artistic skill or of a misunderstood detail worn out in the technical process of copying. It is equally possible that they belong to now lost popular variants or additions to the George story, as the unglazed sixteenth century tile from the village of Cechești seems to indicate (T1).¹² Here a standing character with claws (?) and a clown or fool-like hat is trampling and slaying a dragon with a spear. A very large acorn branch, a pot and a bird form the mysterious background. In lack of a corresponding textual source, we might never know what this actually meant. Nevertheless, we might have some hypotheses about some of the other strange details. For example, the dogs appearing in the image (W9, M18) and the birds can be due to a combination of the image of the saint with that of hunting scenes depicted on tiles, when one or more riders accompanied by dogs and birds and holding banners or spears with pennons are off to hunt.¹³ The stars might indicate

¹⁰ A symbolic weapon usually used by Christ in the Harrowing of Hell scene, against the open Mouth of Hell depicted as a monster.

¹¹ *LCI, Allgemeine Ikonographie*, vol. 2, Herder: 1970: 212–214.

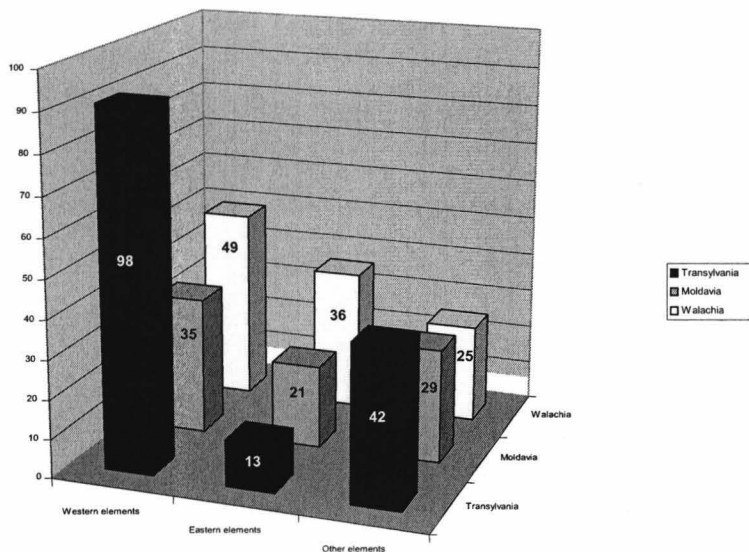
¹² As the author suggests, the image is probably a popular story or fable somehow connected to St. George. Elek Benkő, Ughy István, *Székelykeresztúri Kályacsempék 15–17. század* (Stove Tiles from Cristurul Secuiesc, from the fifteenth to the seventeenth century), Bukarest: Kriterion, 1984, 17.

¹³ Marcu Istrate, 2004, 384, plate 46.D.1 (Dejuțiu), 385, plate 47.3 (Densuș); Maria-Venera Rădulescu, *Cahlele medievale din Țara Românească, secolele XIV–XVII* (Medieval Stove Tiles from Wallachia, from the fourteenth to the seventeenth century). PhD Thesis, Bucharest, 2002, fig. 96.

the cosmic dimensions of George's fight while the demon might indicate that the saint stands against all evil (and pagan). He might be paralleled to other knightly saints that fight demons, such as Archangel Michael or even riders, such as, on Byzantine amulets, St. Sissinios (or Solomon) fighting a female demon¹⁴.

EASTERN AND WESTERN ELEMENTS. To return now to the issue of Byzantine versus Western iconography, let us take a step further with the quantitative attempt. I created two groups of details, each indicative of one of the styles. It does not mean that each element triggers a qualification of western or eastern, but they do belong to one more than to the other and their accumulation is meant to ease the decision. All the details of arms, armor and tack (except for the ubiquitous spear and reins) are in the western group. All the saintly elements, plus the mantle, the decorative elements and the schematic character of images, are in the eastern group. (see figure 2).

Observing first the distribution of the two groups according to province, one sees that the greatest difference between the two occurs in Transylvania: on these tiles, one may find 98 Western elements, compared to merely 13 Eastern ones. As a group therefore, the tiles from Transylvania look much more western. In Moldavia and Wallachia, the proportions are not so differentiated, meaning that they display elements from both traditions, but still more from the western one. Another observation is that the tiles from Transylvania are "realistic" and detailed, since they contain the highest proportion of elements: 153 on 16 tiles, that is, an average of 10 elements per each tile. The proportion is lower in Wallachia: 110 elements on 21 tiles (on average 5 on each). The most schematic, but also the most fragmentary, are the tiles from Moldavia, containing 85 elements on 27 tiles (on average 3 on each).



2. Distribution of western and eastern elements according to province/state

¹⁴ Jeffrey Spier, "Medieval Byzantine Magical Amulets and Their Tradition", *Journal of the Warburg and Courtauld Institutes*, 56(1993): 33–39; Christopher Walter, "The Intaglio of Solomon in the Benaki Museum and the origins of the Iconography of Warrior Saints" and "Some Unpublished Itaglios of Solomon in the British Museum, London", both in *Pictures as Language. How the Byzantines Exploited Them*, London: The Pindar Press, 2000, 397–414 and 415–423 respectively. Strangely enough these IVth to XIth century representations depict stars around the rider and the *crux hastata*.

But the point of the counting was not to make general statements, in fact rather visible from the start, but to help decide in each case. Comparing thus the number of each group of elements in the case of each entry, I have assigned the tiles either a western or a eastern appearance, admitting in a number of cases that it is impossible to draw a line, since not enough information was available or since there occurred the same number of elements from the two groups. (see figure 3). It results that in Transylvania there are no ambiguous cases, 14 western looking tiles and 2 eastern. In Moldavia one finds the most numerous undecided cases (10), 12 western tiles and 5 eastern ones. In Wallachia there are 3 unclear, 7 western and 11 eastern tiles. Overall, there are more western (33) than eastern tiles (18), but also a significant number of undecided cases (13). There is a slight ambiguity about some of the eastern-looking tiles, due to the extreme schematization of the images which might just as well indicate a popular production. T1 for example turned out as eastern according to the counting of elements, but this is rather due to the absence of any knightly elements. Tiles like W1, W2 or W9 turned out as western, although the western elements here are rather just suggested through decorative lines, unlike their realistic depictions of Transylvania. But such ambiguities are unavoidable in the case of items of rather artisan than artistic quality, worn out through transmission and not always available in the best quality reproductions.

Tile id	Western vs eastern elements	Type of the image
T1	0-1	Eastern
T2	6-1	Western
T3	8-0	Western
T4	9-0	Western
T5	4-0	Western
T6	9-1	Western
T7	6-0	Western
T8	5-1	Western
T9	2-4	Eastern
T11	7-1	Western
T10	7-1	Western
T12	5-2	Western
T13	9-1	Western
T14	11-1	Western
T15	5-0	Western
T16	5-0	Western
M1	0-0	Impossible to decide
M2	Image unpublished	Impossible to decide
M3	2-0	Western
M4	1-0	Western
M5	Image unpublished	Impossible to decide
M6	0-2	Eastern
M7	0-0	Impossible to decide
M8	5-0	Western
M9	1-2	Eastern
M10	Image unpublished	Impossible to decide
M11	2-1	Western
M12	4-0	Western
M13	0-0	Impossible to decide
M14	3-1	Western
M15	1-0	Western
M16	1-0	Western
M17	1-1	Impossible to decide
M18	1-5	Eastern
M19	0-3	Eastern
M20	2-1	Western

M21	2-1	Western
M22	1-0	Western
M23	0-2	Eastern
M24	0-0	Impossible to decide
M25	8-1	Western
M26	0-0	Impossible to decide
M27	1-1	Impossible to decide
W1	6-1	Western
W2	8-1	Western
W3	1-1	Impossible to decide
W4	2-3	Eastern
W5	5-1	Western
W6	2-3	Eastern
W7	0-1	Eastern
W8	1-2	Eastern
W9	4-2	Western
W10	2-2	Impossible to decide
W11	2-3	Eastern
W12	1-3	Eastern
W13	0-0	Impossible to decide
W14	3-2	Western
W15	1-2	Eastern
W16	1-2	Eastern
W17	1-2	Eastern
W18	2-0	Western
W19	0-2	Eastern
W20	1-3	Eastern
W21	6-0	Western

3. Western versus Eastern elements on each tile

Does it mean that the eastern-looking tiles were used in Orthodox contexts? The question cannot be answered directly, but one can examine those tiles which do come from such Orthodox contexts. There are 11 tiles excavated in Orthodox monasteries (including here adjacent buildings and princely houses located within the precinct) or containing Cyrillic inscriptions. 3 of these tiles come from Moldavia and 8 from Wallachia. According to the previous results, 5 of these tiles look eastern, 4 look western and 2 are ambiguous. What about tiles from non-orthodox contexts? Considering as such a Hungarian suburb, a Szekler market-town, the castle of a Hungarian family and a house near a Catholic church, then we can talk of 6 tiles used probably by Catholics or Protestants (5 in Transylvania, 1 in Moldavia). 5 of them belong indeed to the western type, while one of the Transylvanian ones is eastern. This suggests that the iconography is not necessarily related to the religion of the user or the province of the find, since one can find Western-looking tiles in Orthodox contexts in Wallachia and eastern-looking tiles in non-orthodox contexts in Transylvania. Put differently, there are in Transylvania 5 tiles used in non-orthodox contexts, out of which 4 look western and 1 looks eastern. In Moldavia, one western-looking tile was excavated from a Catholic context. In Wallachia there are 8 tiles from Orthodox contexts, mostly monastic, but 3 of them look western, 4 eastern and one is ambiguous. This suggests that it was not the iconographical aspect dictating the choice and use of certain types in certain religious contexts, but rather other factors, most probably, the sheer availability.

Comparing the relation between the type of iconography and the representation of George on foot or on horse, one notices that there is no such correlation, in the sense that in both types George is depicted in both ways.

The architectural elements though appear in most of the cases in the western type images (7 to 2) and so do most of the vegetal details (7 to 3). This can, on the one hand confirm that the western images imply a greater attention to details and background. In the case of architecture, these elements sometimes reflect fortified architecture. On tile T11, the walls of the buildings are pierced by reversed key loopholes¹⁵, for shooting with fire arms, on T15 the upper part of the towers is formed by merlons and crenels. This can be interpreted as indicating a greater concern on Transylvanian tiles for realism and the creation of space and background, with accent on those military elements. The architectural details depicted on Moldavian tiles are just roofs (on M13) or buildings (a church on M11).

The princess appears in all iconographical groups, western (14), eastern (2), and ambiguous (1), but she is clearly preferred in the first. So do her parents, the king and the queen, although in fewer cases (9, 1, and 3 respectively).

COPY AND TRANSMISSION OF MOTIFS ON STOVE TILES. Several of the images in our group look similar or even identical. This shows that some of the tiles were created using the same mold or they are one copies of the others or of a common model. Borrowing the terminology of Judit Tamási¹⁶, there are three types of related tiles: *originals* (created all with the same mold), *copies* (one copied after another or two copies referring to a common prototype. There might be small differences between such copies, when details were added to the raw clay after molding. These are the so-called imitations) and *indirectly connected tiles* (all inspired by some common image but not related through copying but through the imagination of the masters).

Still, it is difficult to say which is the copy of which, in lack of detailed information on dimensions and without a close inspection of the quality of the details of the originals and not on the base of drawings which imply a certain degree of subjectivity.

T3, T4 and T7 can be defined as copies. Only the dimensions of the first two have been published, and even then, it is not clear if they refer to the preserved fragments or the reconstructable total dimensions of the tiles. The only clue in this case is the social context of the discoveries. The presence of the copy of a tile depicting strong knightly elements, originally found in fortifications, in a wooden house of a market town, indicates the direction of the social transmission of motifs, from upper to lower.

Another couple of related tiles are T6 and T13, one excavated from a fortification and the other from a curia. T6 is dated half a century earlier and is larger in dimensions, so in this case it seems that T6 was the original and T13 a copy made after it.

T2 and T12 are (one can say rather rare) cases of indirectly connected tiles whose common model has been identified. The two tiles, one from a suburb and the other from a village, share the same model but are clearly not directly related since several elements differ: George's helmet, his halo, the vegetal elements, the borders etc. But the models for both are a manuscript illumination from a Flemish book of hours dated back to the beginning of the fifteenth century and a fifteenth century relief.¹⁷

The tile from Feldioara, T5, discovered in a pottery workshop, was clearly produced locally since some of its elements, like the conic shape of the trees, bear resemblance to reliefs from inside (altar console depicting also St. George slaying the dragon but on horseback) and outside the local church (The Prayer on the Mountain of Olives) (see figure 4).

¹⁵ Characteristic for the period 1450–1525. *Dicționar de artă* (Art Dictionary), vol. I, București: Meridiane, 1995, 179.

¹⁶ Judit Tamási, *Verwandte Typen im schweizerischen und ungarischen Kachelfundmaterial in der zweiten Hälfte des 15. Jahrhunderts*. Budapest: Ungarisches Landesdenkmalamt, 1995, 15–16.

¹⁷ Elek Benkő, *Kolozsvár magyar külvárosa a középkorban. A Kolozsvárba olvadt Szentpéter falu emlékei* (The Hungarian Suburb of Cluj in the Middle Ages. Saint Peter Village merged into Cluj), Kolozsvár: Az Erdély Múzeum-Egyesület Kiadása, 2004, 65–68, fig. 13.1 and 13.2; Kémenes Mónika, *Kályhacsempék Csik-, Gyergyó- és Kászonszékből 14.–18. század.* (Stove Tiles from the Seats of Ciuc, Gheorgheni and Casin from the fourteenth to the eighteenth century), Kolozsvár: Entz Géza Alapítvány, 2005, 45.

Four groups of copies are found in Moldavia. M4, M8, M12 and M13 come from two city houses, an orthodox monastery and a princely fortification. The existence of workshops producing for the court and workshops producing for urban needs, imitating the models of the first, was already explained by P.V. Batariuc.¹⁸ All the tiles in this related group are dated in the second half of the fifteenth century, only one is glazed, and no exact dimensions are known. One may only notice how the same motif was used in upper-class military, religious and urban contexts.



4. Relief with the prayer on the Mount Olive on the southern outside wall and console depicting Saint George fighting the dragon in the sanctuary of the church in Feldioara. Photos taken by the author, 5.04.2004.

The largest group of copies, carrying the most popular image of St. George on tiles in this area, is formed by tiles M1, M6, M14, M15, M16, and M 17, all dated in the second half of the fifteenth century (around 1480). These tiles come from upper-class and urban contexts, such as a princely council house, a princely fortification, a rural boyar residence and several urban houses in Suceava and Iași. Some tiles show a warning out of details (on M17) and the same mold was used to decorate different shapes of tiles – flat, corner and bowl-shaped, decorated in relief or with open-work. M14 is one of the high quality tiles, produced for the court, and the image is nicely cut, forming an open-work that covers the opening of the tiles. Fragments from 36 tiles of M14 type have been used in the reconstruction of the stove in the council house in Suceava, showing indeed how popular the image was.¹⁹ This extensive use of an image, glazed and unglazed, for different tile shapes and for different context indicates both a fashion and a shortage of original molds.

¹⁸ Paraschiva Victoria Batariuc, „Ateliere pentru producerea cahlilor în Moldova medievală” (Workshops producing Stove Tiles in Medieval Moldavia), *Studii și Cercetări de Istorie Veche și Arheologie* 43/2 (1992): 207–224.

¹⁹ Popa, Radu, and Monica Mărgineanu-Cârstoiu. *Mărturii de civilizație medievală românească. O casă a domniei și o sobă monumentală de la Suceava din vremea lui Ștefan cel Mare* (Testimonies of Romanian Medieval Civilization. A Princely House and a Monumental Stove from Suceava from the time of Stephen the Great). Bucharest: Editura Academiei Republicii Socialiste România, 1979, 46, 47, fig. II.A.3, 50, fig. 29, 51, 53, 88, 89, fig. 73.

M7 and M22, although too small to allow positive conclusions, look like copies. So do tiles M19, M23 and M24, all from Suceava, certainly produced locally.²⁰

Several groups of copies come from Wallachia: W14, W16, W17 and W20, all from the town of Târgoviște, unglazed, dated in to the sixteenth century and having the same dimensions. W14 and W17 must have been created with the same mold since the image of the saint is identical, but W17 has two added elements, the bird and the star. The identical dimensions make one believe that either W14 had the same elements in the missing or unclear upper corners or that the drawing of W17 is not very accurate. W16 and W20 are very similar in aspect and they have poorer and slightly different details than the other two, so they might be imitations of a common prototype.

W4, W8, and W11, another group of directly related tiles, bear a clear eastern depiction of Saint George, whose name is probably spelled by the unclear Cyrillic inscription. The group nicely illustrates just how wide a social distribution could one tile image have: from the princely court to a town house and even a village dwelling.

W3 and W6 make the same point, being uncovered in rural house and in a town.

CONCLUSIONS AND INTERPRETATIONS. Several things can be concluded from the above analysis. First, the degree of popularity of St. George on stove tiles from all social strata, from princely down to rural level. Then, the fact that they adorned the stoves of both Catholics/Protestants and Orthodox, of Romanians, Hungarians and Szeklers (certainly also of the Saxons, although there is no strong evidence from this group of tiles). Tiles with St. George were certainly produced locally, data being very strong in the case of tiles from Feldioara and Suceava. Also the fact that these tiles have no counterparts on tiles outside the "Romanian" territories, not even in the neighboring Hungarian Kingdom or in Poland, indicates their local production. Looking at the groups of directly related tiles (copies and imitations), one may see that they all come from the same province or state, actually from very close locations, testimony of a restricted geographical circulation.

Regarding the iconography, I have determined that western or eastern looking images cannot necessarily be connected to their use in orthodox or non-orthodox contexts. It shows just how intricate the question of cultural and artistic contacts and borrowings in medieval Transylvania, Moldavia and Wallachia is. What is obvious is that over all there are much more western elements on these tiles. Even more, there are no typical Byzantine iconographical scenes in the depiction of St. George on tiles. In all of the cases there is St. George slaying the dragon, but none depict him as a standing martyr, a sitting saint or rescuing from captivity a young man.²¹ This might be due to the Western origin of stove tiles themselves, from the Alpine regions throughout Central Europe. Although there is no evidence that these tiles with St. George have prototypes elsewhere, there is one indication of western influence. It is the Flemish model of tiles T2 and T12,²² not surprisingly a western image making its way in Transylvania, the most western connected of the there areas discussed here. An element previously identified as western²³ is an episode from the Golden Legend, referred to on two tiles: the collection mentions that after the defeat of the

²⁰ They might even form a single entry, but it is not very clear from the state of publication. M23 was reportedly from the princely fortification and M24 from the princely court.

²¹ Piotr Grotowski, "The Legend of St. George Saving a Youth from Captivity and Its Depiction in Art" at: <http://archaeology.kiev.ua/byzantine/art/grotowski.html>; Robin Cormack, Stavros Mihalarias. "A Crusader Painting of St. George: "maniera greca" or "lingua franca"?", *The Burlington Magazine* 972 (1984): 132–139 + 141. The latter is also interesting for addressing the question of western/eastern elements; Walter, 2003, 123–144.

²² See above note 16.

²³ Paraschiva Victoria Batariuc, "Cahle cu Sfântul Gheorghe descoperite la Suceava" (Stove Tiles with Saint George Discovered in Suceava). *Studii și Cercetări de Istoria Arte, Seria Artă Plastică* 39 (1992): 33–40.

dragon, the princess put her girdle around the beast's neck which followed her obediently.²⁴ On T13 the princess has put her girdle around the neck of the lamb and on M18 she holds the girdle in her hand, presumably anticipating the episode narrated by the legend. The detail in fact is also eastern in its origin, appearing already in the eleventh century in a Georgian manuscript and on several icons.²⁵

But the presence and proportion of western looking elements on stove tiles can be a further indicator on the type and quality of a knightly culture in this area. There is no study yet comparing the degree and form in which the knightly culture was adopted in Transylvania, Moldavia and Wallachia. The concept of knightly culture in itself and its diffusion in Central and Eastern Europe is a debated issue.²⁶ I will use the term to denote the representation elements making reference to the knightly common places, ideals and way of life. Not to say necessarily that the arms depicted reflect the arms used in the same time and place, but the images do reflect what was fashionable and familiar to the public.

In the fourteenth century, the cults of knightly saints (and saintly kings) in Central and Eastern Europe had already incorporated the ideals of the flourishing Western chivalric culture. The new accent in their legends, begun in the twelfth century and completed by the fourteenth, had several causes: the influence of the crusades, the popularity of the theory of just war, the entire courtly and knightly European fashion.²⁷ These elements spread slowly in Transylvania as part of the medieval kingdom of Hungary. Moldavia was more open to Polish, Russian, and Byzantine influences and it is debated to what degree it adopted the Western knightly culture. Wallachia was also closer to the Byzantine sphere although it cultivated various contacts to the western world, mainly through Transylvania.

The fact that more than half of all the knightly elements are to be found on tiles from Transylvania, indicate that the western type of knightly culture permeated more this province, which is understandable due to its integration in the Kingdom of Hungary where a knightly culture of western type promoted by the Angevins is strongly attested by the fourteenth century.²⁸ It also indicates that in Transylvania the western arms, armor and tack were more present on an every-day level, since potters were depicting them on their products, bringing the religious scene closer to their contemporaries. Weapon production and trade have been extensively documented for the province, Sibiu and Braşov being the big centers.²⁹ Even more, city laws forced the citizens to possess at least the basic weapons for defensive reasons.³⁰ The presence of Western knights and even mercenaries in Transylvania should not be forgotten.

²⁴ Jacobus de Voragine, *The Golden Legend: readings on the saints. I-II*. Ed. William Granger, Ryan. Princeton, New York: Princeton University Press, 1993 (henceforth, *The Golden Legend*). Available online in Caxton's modernized translation at: www.fordham.edu/halsall/basis7goldenlegend/GL-vol3-george.html

²⁵ Walter, 2003, 140.

²⁶ Ágnes Kurcz concludes that in Hungary there was indeed a culture of knightly type, not so rich and to a certain extent chronologically delayed from the Western one. Ágnes Kurcz, *Lovagi kultúra Magyarországon a 13-14. században* (Knightly Culture in Hungary in the thirteenth and fourteenth centuries), Budapest: Akadémiai Kiadó, 1988 (henceforth Kurcz, 1988).

²⁷ Béla Zsolt Szakács, „Saints of the Knights – Knights of the Saints: Patterns of Patronage at the Court of Sigismund”, in *Sigismund von Luxemburg, Ein Kaiser in Europa*, Mainz am Rhein: Philipp von Zabern, 2006: 319–330; Gábor Klaniczay, “L'image chevaleresque du saint roi au XIIe siècle”. In *La Royauté Sacrée dans le Monde Chrétien. Bilan et Perspectives* Colloque de Royaumont, mars 1989, ed. Alain Boureau and Claudio Sergio Ingerflom (Paris: Editions de l'Ecole Hautes Etudes en Sciences Sociales, 1992), 53–62; Gábor Klaniczay, *Holy Rulers and Blessed Princesses. Dynastic Cults in Medieval Central Europe* (Cambridge: Cambridge University Press, 2002).

²⁸ Kurcz, 1988, 260.

²⁹ Ioan Marian Țiplic, *Breslele producătorilor de arme din Sibiu, Braşov şi Cluj, secolele XIV-XVI* (Arm-producing Guilds from Sibiu, Braşov and Cluj, from the fourteenth to the sixteenth century), Sibiu: Editura Universităţii „Lucian Blaga”, 2001. (henceforth: Țiplic, 2001).

³⁰ Roland Rösler, *Beitrag zur Geschichte des Zunfswesen. Altes Zunfswesen in Hermannstadt bis zum Jahre 1526* (Hermannstadt [Sibiu]: 1912), 54.

Still, recognizable types of helmets and armor pieces, such as neck protection plates, *sabbatons à la poulaine*, etc, are depicted also on Moldavian tiles produced locally. This shows that at least to some degree, the same western knightly elements made their way through to Moldavia. One might think of the weapons imported from Transylvanian production centers³¹ and the other numerous contact of Moldavia to the Western world. Another explanation takes into consideration the fact that it is the time when knightly culture became fashionable for individuals in all social strata with a certain desire of display. It can be the case that some people chose knightly images not because they were knights themselves but because the knightly culture looked appealing.

The least permeated by this type of culture, from the evidence of the tiles, is Wallachia, where one may very rarely find identifiable western types of arms or armor. Here are produced the most schematic depictions of the saint and what is rather fashionable are feathered diadems and mantles. Although there is evidence of weapon imports from Transylvania, they might have been less significant.³²

One can also note the character of weapons depicted. Sabers appear on the tiles with St. George mostly in Wallachia (9), while there are only 2 from Moldavia and 1 in Transylvania. Unlike the sword, the sabre was hardly known in the medieval west. It was a more oriental type of weapon, re-introduced in South-Eastern Europe during the fifteenth century due to the conflicts with the Turks.³³ This indicates that in Wallachia such oriental weapons were much more familiar in those times than in Moldavia or Transylvania.

There are therefore Byzantine elements on tiles in Transylvania and western elements on the ones from Moldavia and Wallachia. Especially notable is the interest of depicting elements of arms and armor in these latter areas, bypassing the Byzantine standard representations of the saint in classical military equipment and depicting contemporary weapons³⁴, either of western or of oriental origin (as for example neckplates and sabbatons but also sabres).

Taking a final look at the tiles, it becomes obvious that the difference among the three areas lays not in the attention played to St. George but in a different accent and perspective of it. While in Transylvania he is depicted as a knight, in Moldavia and Wallachia, more in the latter, the accent is placed on his sainthood. This can be paralleled to the distinction between the western knightly saint and the eastern military saint, visible for example in the representations of George on Transylvanian polyptic altars³⁵ and on icons.³⁶ It is beyond doubt that in all the three regions there was a flourishing cult of Saint George in the fifteenth and sixteenth centuries, in some even in the seventeenth. Although there is no detailed study on the topic, one can think of the knightly Order of Saint George established in Hungary by Charles Robert in 1326, of the numerous representations of the saint in all artistic media (mentioning the famous equestrian statue of the saint created by Martin and

³¹ Țiplic, 2001, chapter IV.

³² Țiplic, 2001, chapter IV.

³³ Zeno-Karl Pinter, *Spada și sabie medievală în Transilvania și Banat (secolele IX–XIV)* (Medieval Swords and Sabres in Transylvania, from the ninth to the fourteenth century), Reșița: Banatica, 2001, 77.

³⁴ Piotr Grotowski, „Military Attire of Warrior Saints – Between Iconography and Written Sources”, paper presented at the 21st International Congress of Byzantine Studies, London, August 2006, available at: www.byzantinecongress.org.uk/comms/Grotowski_paper.pdf. The author notes several earlier periods when Byzantine art turned from standard depictions to more realistic observation of reality, and how such interest was stronger in the periphery of the empire.

³⁵ Anca Nițoi, „Observații privind evoluția armamentului și echipamentului militar reflectat în pictura altarelor transilvănene (sec. XV–XVI)” (Notes on the Evolution of Arms and Armor as Depicted on Transylvanian Painted Altars from the fifteenth and the sixteenth centuries), *Acta Terrae Septemcastrensis II* (2003): 177–191.

³⁶ Alexandru Efremov, *Icoane Românești*, București: Meridiane, 2003, 36, 44, 59, 85, 69, 76, 84, 100, 108, 125, 128, 148.

George brothers of Cluj in 1373), of all the churches dedicated to the saint or depicting him in Moldavia by Stephen the Great³⁷ and the embroidered flag of George dedicated to mount Athos, and the fervent devotion to the saint in Byzantium, where he was patron saint of the armies and of Constantinople.³⁸ The cult seems to have faded in Transylvania with the troubles of the Reformation, but it continued openly across the Carpathians.³⁹ A further study should place the evidence of stove tiles, besides those in other artistic genres, in the context of the detailed cult of the Saint in these regions since tiles as source material allow intricate and sensitive insights on social, religious, economic and even military aspects of Transylvania, Moldavia and Wallachia in the late Middle Ages.

BIBLIOGRAPHY

- ASTRA, 2006 Roșca, Karla ed. *Mărturii ale civilizației transilvănene. Colecția de cahle a Muzeului "ASTRA" (Testimonies of Transylvanian Civilization The Stove Tile Collection of the ASTRA Museum)*. Sibiu: ASTRA Museum, 2006.
- Andronic, M., 1986–7 Andronic, Mugur. "Repertoriul arheologic al comunei Grămești (jud. Suceava)" (The Archaeological Index of the Village of Grămești, Suceava County). *Suceava* 13–14 (1986–7): 75–83.
- Andronic, Popescu, 1980 Andronic, Alexandru, and Rica Popescu. "Cercetările arheologice de la Vaslui-Curțile Domnești" (Archaeological Research from the Princely Court of Vaslui). *Materiale și cercetări arheologice* (1980): 558–565.
- Andronic, Popescu, 1983–4 Andronic, Alexandru, and Rica Popescu. "Șantierul arheologic Vaslui. Principalele rezultate ale săpăturilor din anii 1980–1981 de la Curtea Domnească" (The Archaeological Site of Vaslui. Main Results of the 1980 and 1981 Excavations in the Princely Court). *Acta Moldaviae Meridionalis* 5–6 (1983–1984): 214–221.
- Artimon, 1986–7 Artimon, Alexandru. „Noi contribuții arheologice privind curtea domnească din Bacău” (New Archaeological Contributions to the Princely Court in Bacău). *Carpica* 18–19 (1986–1987): 285–292.
- Batariuc, 1992a Batariuc, Paraschiva Victoria. "Ateliere pentru producerea cahlilor în Moldova medievală" (Stove Tile Workshops from Medieval Moldavia). *Studii și Cercetări de Istorie Veche și Arheologie* 43 (1992): 207–224.
- Batariuc, 1992b _____. "Cahle cu Sfântul Gheorghe descoperite la Suceava" (Stove Tiles with Saint George Discovered in Suceava). *Studii și Cercetări de Istoria Artei Seria Artă Plastică* 39 (1992): 33–40.
- Batariuc, 1994a _____. "Cahle decorate cu subiecte religioase descoperite în Moldova" (Stove Tiles with Religious Representations Discovered in Moldavia). *Ars Transilvaniae* 4 (1994): 115–134.
- Batariuc, 1994b _____. "Ceramică monumentală descoperită la curți boierești din județul Suceava" (Stove Tiles Discovered in Boyar Residences in Suceava County). *Studii și Cercetări de Istorie Veche și Arheologie* 45 (1994): 71–83.

³⁷ Noting especially the ample fresco cycle dedicated to St. George at Voroneț. Petru Comarnesco, *Voroneț*, București: Meridiane, 1965.

³⁸ Walter, 2003, 131–136.

³⁹ Corina Popa, „Military and Local Saints in the Art of Seventeenth Century Wallachia”, *Colloquia* 1–2 (2005): 66–90.

- Batariuc, 1996 _____, "Cahle descoperite în locuințe de orașeni la Suceava" (Stove Tiles Discovered in City Houses in Suceava). *Arheologia Medievală* 1 (1996): 69–124.
- Batariuc, 1999 _____, *Cahle din Moldova medievală. Secolele XIV–XVII*. (Stove Tiles from Medieval Moldavia, from the fourteenth to the seventeenth century). Suceava: Editura Istros, 1999.
- Bătrâna, Bătrâna, 1975 Bătrâna, Adrian, and Lia Bătrâna. "O locuință domnească din vremea lui Alexandru cel Bun" (A Princely House from the Time of Alexander the Good). *Revista Muzeelor și Monumentelor. Monumente Istorice și de Artă* 2 (1975): 72–80.
- Bătrâna, Bătrâna, 1984–5 Bătrâna, Adrian, and Lia Bătrâna. "Elemente decorative în ceramica monumentală de la Baia (jud. Suceava)" (Decorative Elements on Monumental Ceramics from Baia, Suceava County). *Suceava* 11–12 (1984–1985): 147–172.
- Benkő, Ughy, 1984 Benkő, Elek, Ughy, István. *Székelykeresztúri Kályacsempék 15–17. század* (Stove Tiles from Cristurul Secuiesc, from the fifteenth to the seventeenth century). Bukarest: Kriterion, 1984.
- Benkő, 1997 Benkő, Elek, Demeter, István, Székely, Attila. *Középkori mezőváros a Székelyföldön* (Medieval Market Towns from the Szekler Land). Kolozsvár: Az Erdély Múzeum-Egyesület Kiadása, 1997.
- Benkő, 2004 Benkő, Elek. *Kolozsvár magyar külövárosa a középkorban. A Kolozsvárba olvadt Szentpéter falu emlékei* (The Hungarian Suburb of Cluj in the Middle Ages. Saint Peter Village merged into Cluj), Kolozsvár: Az Erdély Múzeum-Egyesület Kiadása, 2004.
- Fügedi, 1986 Fügedi, Erik, Köpeczi, Béla eds. *Muvelodéstörténeti tanulmányok a magyar középkorról*. (Art Historical Treatise of Hungarian Middle Ages). Budapest: Gondolat, 1986.
- Gassauer, 1935 Gassauer, Rudolf. "Teracote sucevene" (Stove Tiles from Suceava). *Buletinul Comisiei Monumentelor Istorice* 28 (1935), fasc. 86: 145–164.
- Golescu, 1945 Golescu, M. "Alte icoane de lut" (Other Clay Icons). *Revista Fundațiilor Regale* 12/4 (1945): 197–204.
- Göllner, 1961 Göllner, Karl. Über die Beziehungen sibenbürgisch-sächsisher Töpfermeister mit der Moldau (14.–16.) Jahrhundert. *Forschungen zur Volks- und Landeskunde* (1961): 83–89.
- Gruia, 2004 Gruia, Ana Maria. *The Holy Heat. Knightly Saints on Transylvanian and Moldavian Stove Tiles*. MA Thesis, Central European University, Budapest, Department of Medieval Studies, 2004.
- Kémenes, 2005 Kémenes Mónika. *Kályacsempék Csik-, Gyergyó- és Kászsónszékből 14.–18. század*. (Stove Tiles from the Seats of Ciuc, Gheorgheni and Casin from the fourteenth to the eighteenth century). Kolozsvár: Entz Géza Alapítvány, 2005.
- Klusch, 1990 Klusch, Horst. „Die Entstehung des Kachelofens und seine Frühformen in Rumänien”. *Forschungen zur Volks- und Landeskunde* 33/1–2 (1990): 60–81.
- Klusch, 1999 Klusch, Horst. *Zauber alter Kacheln aus Rumänien*. Sibiu: 1999.

- Marcu, 1992 Marcu, Daniela. "Cahle săsești din secolele XVI–XVII descoperite la Feldioara, jud. Brașov" (Sixteen and Seventeen-century Saxon Stove Tiles from Feldioara, Brașov County). *Revista Monumentelor Istorice* 1992: 27–39.
- Marcu Istrate, 2003 Marcu Istrate, Daniela. "Feldioara/Marienburg, in the last middle age. Archaeological contributions to the history of the settlement in the 15th–16th centuries". *In memoriam Radu Popa. Temeiuri ale civilizației românești în context european*. Cluj, 2003: 305–328.
- Marcu Istrate, 2004 Marcu Istrate, Daniela. *Cahle din Transilvania și Banat de la începuturi până la 1700* (Stove Tiles from Transylvania and Banat from the Beginnings to 1700). Cluj-Napoca: Editura Accent, 2004.
- Matasă, 1955 Matasă, C. "Șantierul arheologic Piatra Neamț" (The Archaeological Excavations in Piatra Neamț). *Studii și Cercetări de Istorie Veche* 6 (1955): 819–842.
- Păunescu, Rența, Matei, 1997 Păunescu, Anca, Rența, Elena, Matei, Gheorghe. "Cercetările arheologice de la Piuș Pietrei-Orașul de Floci, comuna Giurgeni, județul Ialomița" (The Archaeological Excavations at Piuș Pietrei-Orașul de Floci, Giurgeni Village, Ialomița County). *Cercetări Arheologice* 10 (1955): 255–261.
- Popa, Cârstoiu, 1979 Popa, Radu, and Monica Mărgineanu-Cârstoiu. *Mărturii de civilizație medievală românească. O casă a domniei și o sobă monumentală de la Suceava din vremea lui Ștefan cel Mare* (Testimonies of Romanian Medieval Civilization. A Princely House and a Monumental Stove from Suceava from the time of Stephen the Great). Bucharest: Editura Academiei Republicii Socialiste România, 1979.
- Popescu, 1981 Popescu, Rica. „Câteva elemente de factură gotică descoperite la curțile domnești de la Vaslui" (Some Gothic Elements Discovered at the Princely Court of Valsui). *Revista Monumentelor Istorice-Monumente Istorice și de Artă* 1 (1981): 50–55.
- Pușcașu, Pușcașu, 1983 Pușcașu, Voica Maria, and Nicolae Pușcașu. "Mărturii de civilizație și urbanizare medievală descoperite în vatra istorică a Iașilor" (Testimonies of Medieval Civilization and Urbanization from the Historical Center of Iași). *Revista Muzeelor și Monumentelor, Monumente Istorice și de Artă* 2 (1983): 29–62.
- Rădulescu, 2002 Rădulescu, Maria-Venera. *Cahlele medievale din Țara Românească, secolele XIV–XVII* (Medieval Stove Tiles from Wallachia, from the fourteenth to the seventeenth century). PhD Dissertation, Bucharest, 2002.
- Slătineanu, 1958 Slătineanu, Barbu. *Ceramica feudală românească și originile ei* (Romanian Feudal Ceramics and its Beginnings), Bucharest: Editura de Stat pentru Literatură și Artă, 1958.

Transylvania

No	Site	Site/ building status	Date	Technical (glaze and no of tiles)	Iconography	Iconographic elements and inscriptions	Bibliography
T1	Cechești (Harghita County)	rural house	XVI	-unglazed -at least 3 tiles	-on foot	-crosses, spear, bird, vase, lamb, vegetal elements, hat	Benkő 1984, 53–54, plate 12 Marcu, 2004, 186, plate 16.16
T2	Cluj-Sf. Petru (Cluj County)	Hungarian suburb	XV–XVI	-unglazed -2 tiles	-on horse	-halo, sabre, shield, helmet, cuirass, saddle, saddle pommel, princess, vegetal elements	Benkő 2004, 59, 65–68, 100– 101, fig. 10, 11.
T3	Cristurul Secuiesc (Harghita County)	Szekler market town, wooden house	XVI	-unglazed -at least 4 tiles	-on horse	-spear, cuirass, coat of mail, sabbatons a la poulaine, haute pieces, bridle, reins, saddle, stirrups, open-type bards, architectural elements	Benkő 1997, 138, fig. 1, 139, plate 45.2. Marcu Istrate, 2004, 207.
T4	Drăușeni, (Brașov County)	peasant fortification	1 ½ XVI	-unglazed -at least 4 tiles	-on horse	-spear, cuirass, cubitiere, knee protection plates, pauldrons, coat of mail, gauntlet, haute pieces, bridle, reins, open-type bards, architectural elements	Marcu Istrate, 2004, 214, 389, fig. B6.
T5	Feldioara (Brașov County)	ceramic workshop	end of XV – beginning of XVI	-unglazed -10–12 tiles	-on foot	-spear, cuirass, tassets, knee protection plates, sabbatons a la poulaine, vegetal elements	Marcu Istrate, 2004, 232, 420, fig 6. Marcu, 1992, 28, 29, fig 6, 34, 35. Marcu Istrate, 2003, 325, fig. 8.1.
T6	Făgăraș (Brașov County)	fortification	1 ½ XV	-unglazed	-on horse	-cross, spear, shield, tassets, sabbatons a la poulaine, gauntlet, saddle, stirrups, open-type bards, girth, shaffron, king and queen, rosette, vegetal elements	Marcu Istrate, 2004, 217, 397, fig.32.
T7	Făgăraș (Brașov County)	fortification	1 ½ XVI	-unglazed	-on horse	-cuirass, cubitiere, pauldrons, coat of mail, haute pieces, bridle, reins, architectural elements	Marcu Istrate, 2004, 218, 398, fig.35 a,b.
T8	Lăzarea (Harghita County)	castle of Lázár family	XVI	-unglazed	-on horse -stylized	-spear, hat, battle knife (?), bridle, reins, saddle pommel, stirrups, open-type bards, architectural elements	Kémenes, 2005, 146, plate 26.1.

T9	Lăzarea (Harghita County)	castle of Lázár family	XV–XVI	-unglazed	-on foot -stylized	-cross-ended spear, mantle, decorative elements, sword, coat of mail	Kémenes, 2005, 139, plate 8.1.
T10	Lăzarea (Harghita County)	castle of Lázár family	XV	-unglazed	-on horse	-decorative dots, spear, helmet, neck- protection plate, tassets, reins, saddle, saddle pommel, stirrups, open-type bards	Kémenes, 2005, 44–45, 139, plate 8.4.
T11	Târnava (previous Proștea Mare) (Sibiu County)	?	XV–XVI	-unglazed	-on horse	-crosses, spear, two-hand sword with curved guard, shield, sallet helmet with mobile visor, tassets, sabbatons a la poulaine, reins, saddle, saddle cantle, princess, king and queen, crowns, rosette, lamb, architectural elements, vegetal elements	Gollner, 1961, 85, fig.1. Fügedi, 1986, fig.17. Klusck, 1990, fig.4. Klusck, 1999, 34, fig. 40 Marcu Istrate, 2004, 478, fig. B1. ASTRA, 2006, 67, 211, 212, cat. 3.
T12	Mihăileni (Harghita County)	-village (deserted in the XVth century)	XV–XVI	-unglazed	-on horse	-halo, decorative elements, shield, cuirass, sabbatons a la poulaine, reins, open-type bards, shaffron, princess	Kémenes, 2005, 114, plate 8.3.
T13	Racoșul de Jos (Brașov County)	-curia	end of XV- beginning of XVI	-unglazed -16 tiles	-on horse	-decorative elements, spear, shield, iron hat, tassets, knee protection plates, gauntlet, bridle, saddle, stirrups, open- type bards, princess, king and queen, crowns, rosette, lamb, vegetal elements	Marcu Istrate, 2004, 252, 447, fig 3.
T14	Vințu de Jos (Alba County)	-castle of George Martinuzzi	XVI	-green glazed (7- 8tiles) and unglazed (6–7)	-on horse	-cross, spear, cuirass, pauldron, coat of mail, sabbatons a la poulaine, bridle, reins, saddle pommel, saddle blanket, stirrups, spurs, girth, horse feathered headpiece, architectural elements	Marcu Istrate, 2004, 285, 494, fig. 57.
T15	Vințu de Jos (Alba County)	-castle of George Martinuzzi	end of XV- beginning of XVI	-green glazed and unglazed -3–4 tiles	-on horse	-sword, tassets, gauntlet, George feathered headpiece, reins, saddle, pommel, open-type bards, princess, crown, lamb, architectural elements, vegetal elements	Marcu Istrate, 2004, 285, 494, fig. 58.
T16	Zalău (Sălaj County)	? (on the territory of present-day city)	1 ½ XV	-green glaze	-on horse	-spear, sabbatons a la poulaine, bridle, saddle, spurs, open-type bards, princess, king and queen, crown, vegetal elements	Marcu Istrate, 2004, 294, 511, fig. B2.

Moldavia

M1	Bălinești (Suceava County)	residence of boyar Ioan Tăutu	2 ½ XV	-unglazed	-on horse		Andronic, M., 1986-7, 77 Batariuc, 1994b, 73 Batariuc, 1999, 129, 157
M2	Bacău (Bacău County)	princely court?	end XV- beginning XVI	?	-on horse -stylized	?	unpublished Batariuc, 1999, 154
M3	Bacău (Bacău County)	princely court	end of XV- beginning of XVI	-glazed & unglazed -at lest 5 tiles	-on horse	-spear, reins, stirrups, sabbatons a la poulaine, crown, princess	Artimon, 1986-7, fig.7 Artimon, 1987, fig.11 Batariuc, 1993, 75 Batariuc, 1994a, 124 Batariuc, 1999, 129
M4	Baia (Suceava County)	city house near Catholic church	1467-1476	-unglazed -at least 14 tiles -flat & corner tiles	-on horse	-spear, sabbatons a la poulaine, reins, princess, king and queen, crowns	Bătrâna, Bătrâna, 1984-5, 156, 161, fig. 8 Batariuc, 1994a, 124 Batariuc, 1999, 129
M5	Bistrița (Neamț County)	princely house in Orthodox monastery	1450-1476	?	?	?	Bătrâna, Bătrâna, 1975, 76 Batariuc, 1999, 158
M6	Iași (Iași County)	city house	1350-1408 (Batariuc: end. XV)	-unglazed	-on horse?	-cross, king and queen, -Cyrillic III E	Pușcașu, Pușcașu, 1983, 42, fig. 12 Batariuc, 1999, 130, 165
M7	Iași (Iași County)	city house	2 ½ XV	-brown glaze	-on foot?	-spear	Pușcașu, Pușcașu, 1983, fig. 22 Batariuc, 1999, 130, 165
M8	Moldovița (Suceava County)	Orthodox monastery, adjacent buildings	2 ½ XV	-green glaze	-on horse	-spear, sabbatons a la poulaine, reins, saddle, saddle cantle, stirrups, spurs, princess, crown	Batariuc, 1994a, 124 Batariuc, 1999, 168
M9	Piatra Neamț (Neamț County)	-princely court	XVII	-unglazed	-on horse -stylized	-decorative elements, coat of mail, reins	Matasă, 1955, fig. 7/4 Batariuc, 1999, 171

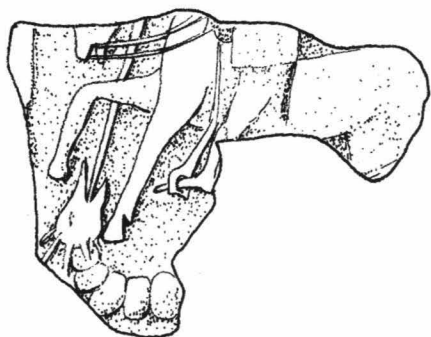
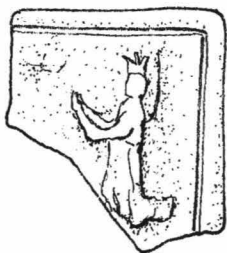
M10	Siret (Suceava County)	-town	XVII	?	?	?	unpublished Batariuc, 1999, 173
M11	Suceava (Suceava County)	-city house	XV (before 1476)	-unglazed	-on horse	-cross, spear, iron hat, coat of mail, princess, crown, architectural elements	Batariuc, 1992b, 35, fig. 1.1 Batariuc, 1994a, 124, fig. 6.1 Batariuc, 1996, 116, fig. 11.2. Batariuc, 1999, 128, 259, fig.62.4
M12	Suceava (Suceava County)	-city house	XV (before 1476)	-unglazed	-on horse	-spear, coat of mail, sabatons a la poulainc, reins, saddle, saddle cantle, princess, king and queen	Batariuc, 1992b, fig. 1.2. Batariuc, 1999, 129, 259, fig. 62.2
M13	Suceava (Suceava County)	-princely fortification	end XV	-unglazed	-on horse	-spear, king and queen, crown, architectural elements	Gassauer, 1935, 154, fig. 21. Batariuc, 1992b, 34. Batariuc, 1999, 129
M14	Suceava (Suceava County)	-council house	end XV (around 1480)	-unglazed & green glazed -36 tiles (8 bowl-shaped with open-work, 20 bowl-shaped with relief, 2 corner, 6 flat)	-on horse	-crosses, spear, helmet with lambrequin, coat of mail, neck plate, reins, princess, king and queen, crowns	Popa, Cârstoiu, 1979, 46, 47, fig. II.A.3, 50, fig. 29, 51, 53, 88, 89, fig. 73. Klusck, 1999, 34, fig. 41, plate 23 Batariuc, 1999, 263, fig. 66.4.
M15	Suceava (Suceava County)	-princely fortification	end XV	-unglazed, green & transparent glaze with green lines	-on horse	-spear, coat of mail, reins, princess, king and queen	Batariuc, 1992b, 34, fig. 1.3. Batariuc, 1996, 84, fig. 11.4.
M16	Suceava (Suceava County)	-several urban houses	end XV	-unglazed, green glaze & transparent glaze with green lines	-on horse	-spear, coat of mail, princess, king and queen	Batariuc, 1992b, 34 Batariuc, 1996, 84, fig. 11.4.
M17	Suceava (Suceava County)	-urban house	end XV	-unglazed	-on horse -stylized	-spear, coat of mail, princess, king and queen, architectural elements	Batariuc, 1992b, 36, fig. 2.1. Batariuc, 1996, 85 Batariuc, 1999, 61, fig. 63.4

M18	Suceava (Suceava County)	-princely fortification	XVII	-unglazed, green glaze -many fragments	-on horse -stylized	-halo, cross-ended spear, <i>dextera Domini</i> crowning the saint, mantle, reins, saddle, princess, architectural elements	Gassauer, 1935, 154, fig. 23. Batariuc, 1992b, 37, fig. 2.4. Batariuc, 1999, 130, 259, fig. 62.5.
M19	Suceava (Suceava County)	?	?	?	-on horse -stylized	-halo, spear(s?), reins, decorative elements	Batariuc, 1999, 260, fig. 63.2
M20	Suceava (Suceava County)	princely fortification	?	-yellow glaze	-on horse -stylized	-sabre, saddle	Batariuc, 1992b, 36, fig. 3.5. Batariuc, 1999, 129, 261, fig. 64.2.
M21	Suceava (Suceava County)	city house	XVII	-green glaze	-on horse -stylized	-sabre, coat of mail, star (?)	Batariuc, 1992b, 37, 38, fig. 2.2 Batariuc, 1996, 117, fig. 12.1. Batariuc, 1999, 130, fig. 64.4
M22	Suceava (Suceava County)	-princely fortification	XV	?	-on foot?	-spear, knee protection plate	Batariuc, 1992b, 36. Batariuc, 1999, 130, 261, fig. 64.1.
M23	Suceava (Suceava County)	-princely fortification	XVII	?	-on horse?	-halo, decorative elements, spear	Batariuc, 1992b, 39, fig. 3.6. Batariuc, 1999, 130, 261, fig. 64.3.
M24	Suceava (Suceava County)	-princely court	XVII	?	-on horse	-spear	Batariuc, 1992b, 38, fig. 3.4.
M25	Vaslui (Vaslui County)	-princely court of Stephen II	1 ½ XV	?	-on horse -stylized	-spear, helmet with feathers, sabbatons a la poulaine, bridle, reins, saddle, saddle cantle, stirrups, spurs, open-type bards	Andronic, 1985, 284, fig. 2. Batariuc, 1999, 128, 259, fig. 62.3
M26	Vaslui (Vaslui County)	-princely court	XV	-yellow glaze	-on horse	-spear, reins	Popescu, 1981, 52, fig.5.
M 27	Vaslui (Vaslui County)	-princely court	XV	-green glaze	-on foot -stylized	-spear, tonlet	Andronic, Popescu, 1980, 563, fig. 6.1. Popescu, 1981, 52, fig. 6 Andronic, Popescu, 1983-4, fig. 4. Batariuc, 1999, 130, 260, fig. 63.5.

Walachia

W1	Buda (Buzău County)	-monastery	2 ½ XVI	-unglazed -at least 2 tiles, slight differences	-on horse -stylized	-spear with pennon, bridle, reins, saddle, saddle pommel, saddle cantle, spurs, open-type bards, stars	Rădulescu, 2002, 142–3, cat. 224, 225, fig. 102.
W2	Cătina (Buzău County)	-monastery	XVI	-unglazed	-on horse -stylized	-spear, cimettere sabre, helmet with visor type bourguignotte, bridle, reins, saddle pommel, saddle cantle, spurs, open-type bards, girth, demon on a stick/witch (?)	Golescu, 1945, 201–202, fig. 6 Rădulescu, 2002, 145, cat. 229, fig. 104
W3	Ograda (Ialomița County)	-rural house			-on horse	-halo, spear, sabre	Golescu, 1945, fig. 5 Rădulescu, 2002, 145
W4	Orașul de Floci (Ialomița County)	-town	XV–XVI	-unglazed	-on horse -stylized	-halo, spear, sabre, reins, open-type bards -Cyrillic (un-decypthered)	Păunescu, Rența, Matei, 1997, 258, pl. IV/1 Rădulescu, 2002, 144, fig. 110/2
W5	Orașul de Floci (Ialomița County)	-town	XVI	-unglazed	-on horse -stylized	-spear, helmet, bridle, saddle pommel, saddle cantle, arrow (?)	Rădulescu, 2002, 145, cat. 247, fig. 113/1.
W6	Orașul de Floci (Ialomița County)	-town house	XVI	-green glaze -9 tiles	-on horse -stylized	-halo, mantle (?), spear, sabre, reins, open-type bards	Rădulescu, 2002, 145, cat. 248, fig. 112.
W7	Orașul de Floci (Ialomița County)	-town	XVII	-unglazed	-on horse -stylized	-spear, reins -incisions Z, N?	Păunescu, Rența, Matei, 1997, 258, pl. III Rădulescu, 2002, 145, cat. 249, fig. 113/2.
W8	Pribegi (Ialomița County)	-rural house	XV–XVI	-unglazed	-on horse	-halo, spear, sabre -Cyrillic (un-deciphred)	Slătineanu, 1958, 189, cat. 73 Rădulescu, 2002, 144
W9	Radu Vodă (Bucharest)	-monastery	XV–XVI	-unglazed	-on horse -stylized	-decorative elements, spear, sabre, reins, saddle pommel, saddle cantle, spurs, bird, rosette, dog, snake (?)	Slătineanu, 1958, 190, fig. 81 Rădulescu, 2002, 143, cat. 227, fig. 103.1,
W10	Radu Vodă (Bucharest)	-monastery	XV–XVI	-unglazed	-on horse -stylized	-halo, sabre, spurs, king and queen	Rădulescu, 2002, 143, cat. 228, fig. 103.2
W11	Târgoviște (Dâmbovița County)	-princely court	XV–XVI	-unglazed	-on horse -stylized	-halo, spear, sabre, reins, saddle cantle, crown -Cyrillic (un-decypthered)	Slătineanu, 1958, 189, fig. 73 Klusch, 1999, 35, fig. 42 Rădulescu, 144, cat. 244, fig. 110/1

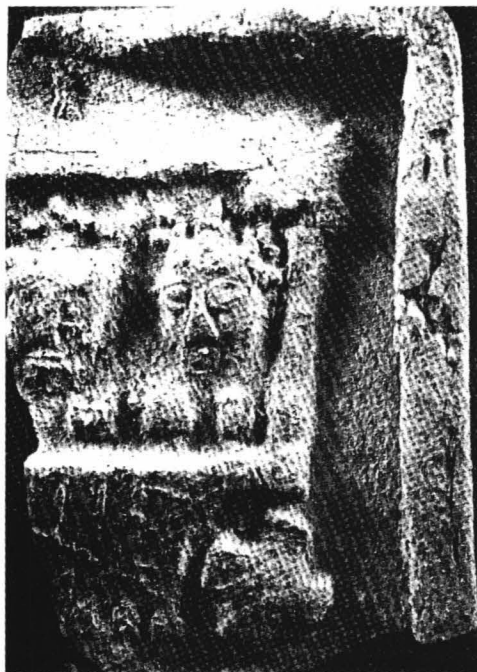
W12	Târgoviște (Dâmbovița County)	?	XV–XVI	-green glaze	-on horse -stylized	-halo, mantle, spear, reins, open-type bards, princess, stars, vegetal elements	Rădulescu, 2002, cat. 231, fig. 106/1
W13	Târgoviște (Dâmbovița County)	-town house with cellar	XVI	-unglazed	-on horse	-spear, bird, star	Rădulescu, 2002, 143–144, cat. 236
W14	Târgoviște (Dâmbovița County)	-town	XVI	-unglazed	-on horse -stylized	-mantle, spear, feathered headpiece George, reins, spurs, open-type bards	Rădulescu, 2002, 144, cat. 232, fig. 111/1
W15	Târgoviște (Dâmbovița County)	-town	XVI	-unglazed -2 tiles	-on horse -stylized	-spear, reins, open-type bards, birds, stars, hat -Cyrillic (un-deciphered)	Rădulescu, 2002, 144, cat. 233, fig. 111/2
W16	Târgoviște (Dâmbovița County)	-town	XVI	-unglazed	-on horse -stylized	-mantle, spear, feathered headpiece George, reins, open-type bards	Rădulescu, 2002, 144, cat. 234, fig. 111/3
W17	Târgoviște (Dâmbovița County)	-town	XVI	-unglazed	-on horse -stylized	-mantle, spear, feathered headpiece George, reins, open-type bards, bird, star	Klusch, 1999, 35, fig. 43, plate 28 Rădulescu, 144, cat. 235, fig. 111/4
W18	Târgoviște (Dâmbovița County)	-town	XVI	-unglazed	-on horse	-spear, sabbatons a la poulaine, spurs	Rădulescu, 2002, cat. 238, fig. 106/3
W19	Târgoviște (Dâmbovița County)	-town	XVI	-unglazed	-on horse -stylized	-halo, spear, reins	Rădulescu, 2002, cat. 239, 240, fig. 107
W20	Târgoviște (Dâmbovița County)	-town	XVI	-unglazed -more fragments	-on horse -stylized	-cross, mantle, spear, open-type bards, vegetal elements	Rădulescu, 2002, cat. 241, fig. 108/1
W21	Târgșor (Prahova County)	? casual find	XVI	-unglazed	-on horse	-spear, sabbatons a la poulaine, sabre, saddle, saddle cantle, saddle pommel, open-type bards, belt feathered headpiece George, bird	Rădulescu, 2002, 144, cat. 246, fig. 109/1



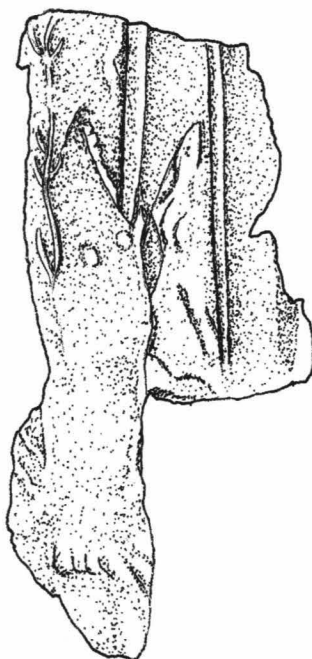
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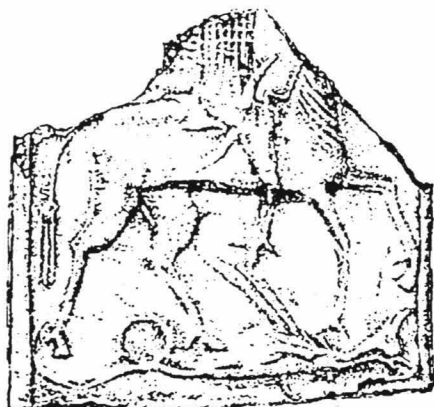
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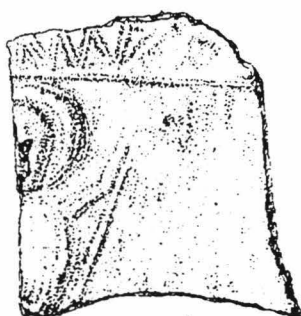
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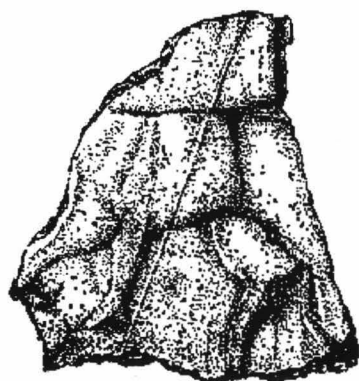
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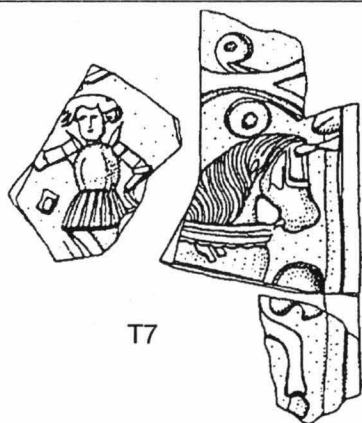
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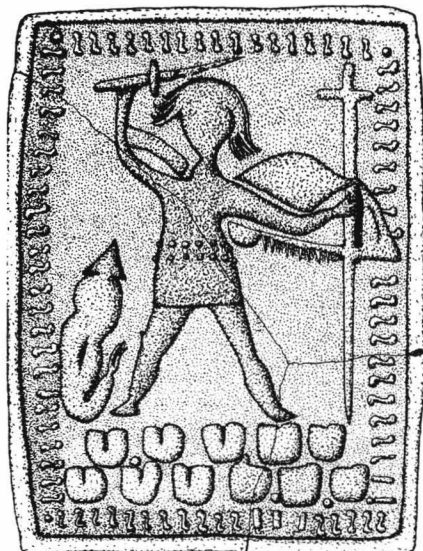
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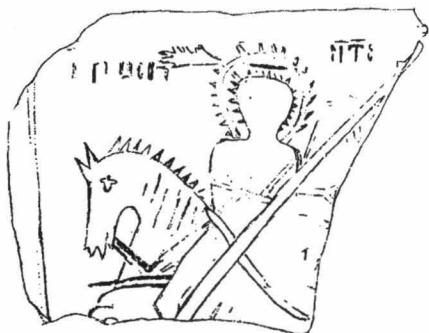
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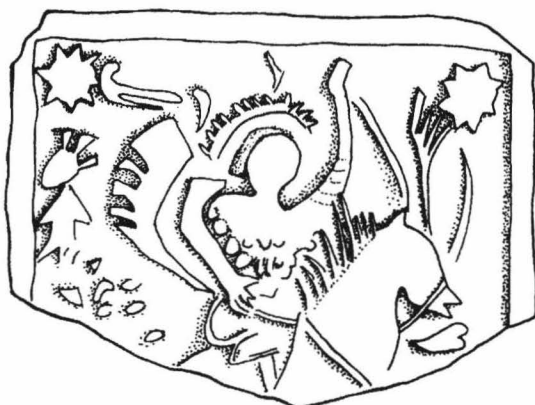
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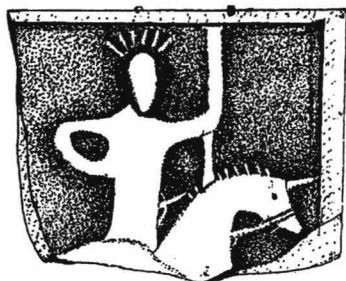
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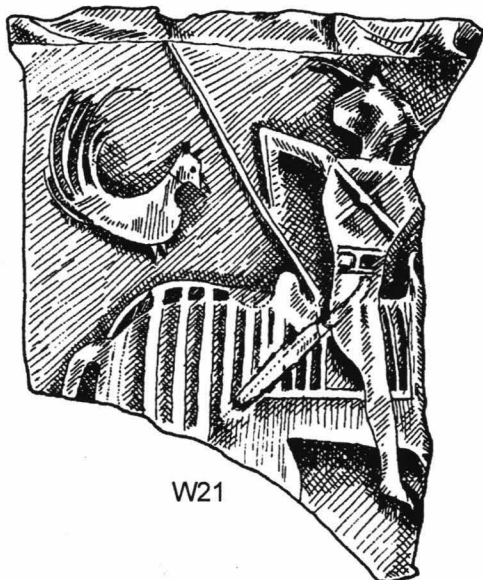
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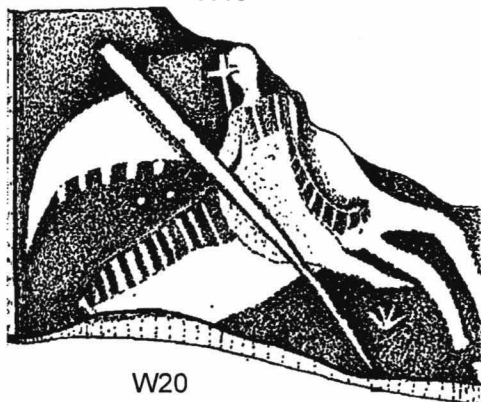
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