

Plasterwork Ornamentation Finds of Hoşap Castle Archeological Excavation (2007-2015)

M. Top, H. Telli

Abstract—Plaster material has been a preferred material especially in the Middle East geography in terms of economy, easy process and thermal insulation since very old times. However, due to the unstable nature of the material, very little has been reached today. For this reason, both finds and studies about stucco ornamentation are very few. In this study, the excavated plasterwork finds used in the architectural ornamentation in the Hosap Castle (Van/Turkey) were considered worth examining since they are rare examples. The stucco relief finds that were found in the castle is discussed. The finds of engraved artifacts on the plasterworks were not addressed. Only the pieces found in Area II and Area III (harem) and surrounding during the cleaning and excavation work carried out at Hosap Kalesi between 2007-2015, will be discussed. This is a general assessment about the finds. It is unknown where many of the pieces found. For this reason, only general appraisal was able to done. Most of the parts are made of mold technique. The motifs on the fragments are similar to the motifs of Ottoman period tiles. Parallel to the settlement history of the castle, thought that these plaster pieces belong to the 16th-17th centuries.

Keywords—Stucco decoration, Eastern Anatolia, Ottoman motifs, ornamentation, plasterwork.

I. HISTORICAL BACKGROUND

THE Mahmudies (According to Serefname they have two controversial origins; the first one is that they came from Cizre and settled in the region after living in Mosul and Damascus According to other rumors, they are descendants of Mervani.) [1] where they came from is not known exactly, have established a principality named "Mahmudi Principality" in Hosap. Evliya Çelebi has written that Mahmudies came here in H. 800 / AD. 1397 [2]. But he didn't mention about where they came from. Principality governed Hosap and its surroundings under the sway of Karakoyunlu, Akkoyunlu, Safevi and Ottoman Empire, respectively.

Yılmaz Öztuna gave the following information about the Mahmudi Beys: they are Yezidi until the 16th century, then the Sunni-Shafii Muslim Kurds. They ruled the territories from the southern part of Van to Hakkari. Their city center was Hosap. The first known ruler is Sheikh Mahmut, the Hosap and Ashut Bey of the Karakoyunlus. During the Akkoyunlus period, Huseyin Bey was the ruler. Hamid Bey and his sons Ivaz and Emire Beys were under the suzerainty of Shah Ismail. Then Khan Mehmet Bey separated from Iran and was subjected to Ottoman sovereignty. Henceforth Mahmudi Beys continued to obey Ottomans [3].

The unity Yavuz Sultan Selim tried to establish in Eastern and Southeastern Anatolia after the Çaldıran Victory in 1514,

was achieved by Sultan Suleiman the Magnificent in 1548 during the 2nd Iranian campaign. At the same time, regional principalities based on the tribes, who were under the suzerainty of the Ottoman Empire, were linked to the newly established Van and Diyarbakır provinces and continued to govern their locations as a flag center. These artifacts were built during the second half of the 16th century and in the 17th century as a result of the Ottoman Empire giving these beys political, economic and administrative interest and privileges [4]. For this reason, it is not a coincidence that the castle be repaired and extended thoroughly by Süleyman Bey in the middle of the 17th century.

II. THE CASTLE

Today's castle has reached the present day as built by Mahmud Beys of the Ottoman Empire (Fig. 12). In the inscription added to the gate of the castle in this period, it was written that the castle was built by Mahmudi Süleyman Bey in H.1052 (AD.1643). However, Matrakçı Nasuh's citation about the castle among the visited places as "Mahmudiye Castle" [5] while returning from the second Iranian campaign of Sultan Suleiman the Magnificent proves that there was also a castle structure even before 1643. Besides, it is also important that Evliya Çelebi mentioned about the castle noting that Suleiman Bey was enhanced the castle and was built new structures [6]. Presumably the Mahmudi Beys chose this castle as the first built-up area, but in the existing excavations, preexisting sections before 1643 and the later added sections were not identified (Fig. 1).

The bailey is arcuately enclosed with fortifications eastward, northward and westward. Partially existing walls in the east and north are completely destroyed in the west. Three bastions on the walls have reached the present day. An observation tower was placed at the northeast corner of the castle. The citadel is shaped according to the position of the rocky hill it is on and its almost rectangular plan in the direction of east-west narrows westwardly. The main walls of the castle, fortified with bastions from the northern, eastern and western directions, surround the citadel. The western face of the bastion where the entrance gate of the citadel is placed is arranged in the form of a main gate. In the southern part of the castle buildings belonging to the Mahmud Palac aligns. At the highest point of the castle, in other words in the direction of southeast there is an observation mansion. This building has a 12-sided plan in the east-west direction and has three floors. The harem was built in two parts on the high walls from the north and west.

M. Top is with the Art History Department , Faculty of Literature, Yüzüncü Yıl University, Van, Turkey. (e-mail: hosap1643@gmail.com).

H. Telli is with the Art History Department, Bitlis Eren University Faculty of Arts and Science, Bitlis, Turkey. (e-mail: haletelli@hotmail.com).

Factions and rooms of the first section are ruined and the second section, which seems to have two floors, consists of a hall in the middle and two rooms on both sides of this. The rooms' windows and cabinet niches are remarkable. In the third and the bottom section, selamlık (the portion of a house reserved for men) that can be reached by following the main walls of the castle and the small mosque beside it are located in. The cover coat of the small mosque is completely destroyed and appears to be square planned and domed. Selamlık is composed of two parts, one of which is a hall and the other is a room. Except this, there is a two-parted dungeon and a cistern for water demand in the citadel [7]. Many of the stucco finds were found in the Harem, in the observation mansion and around these structures.

III. HISTORY OF THE GYPSERY

Even if the use of gypsum began as of the Neolithic period, its proliferation happened during the period of Akamenishes. Unlike decorative gypsum, regular plaster has a long history in the Middle East and Anatolia. Fine lime solution has been used to cover the interior walls since 3000 BC. In the Assyria, for the background of the wall paintings, a thick plasterwork was used on the columns [8]. The use of gypsum material on the walls and columns continued during the Hellenistic and Part periods. Despite the fact that the stucco are different in the Sasani period in terms of motif and technique, the Sasani stuccos are definitely related to their previous ancestors [9].

Stucco is also an important ornament material in Islamic art. The Abbasi period plastering style that developed in the city of Samarra continued its influence over a widespread area for centuries. In the Seljuk architecture of 11-13th century Iranian region, plaster reaches a very advanced level. In Iranian Seljuk art, the plaster workmanship, which is the main decor as well as brick and terra cotta press labour decreased in Anatolia [10]. During the Anatolian Seljuk period, the tradition of gypserı, which is mostly confronted in palaces and mansions, show its face usually on the mihrabs in the mosques [11]. When it comes to the 14th and 15th centuries, namely Beyliks and Early Ottoman Periods, it is observed that stucco materials were used especially in the mihrabs and furnaces. It has been widely used in the mosque domes, in the transitional components of the domes, in the stalactites of the door arch, in the ceiling and wall decorations of the mansions and palaces. The gypserı, which became rarely seen in the Classical Ottoman Architecture afterwards, have started to be used extensively in the religious and civil architecture as a result of building pleasant relations with the West as of 18th century, which is called the Westernization Period in Anatolia. The gypserı, the baroque of West, rococo and imperial arts blended with with the regional characters of Anatolia and continued to be used together with a new style called the Turkish Rococo, which survived until the end of the 19th century. Realistic herbal ornaments in this period's decorations took the place of classical period's other motifs such as rumi and hatayi. Frequently encountered S and C curves complete the ornaments sometimes overshooting the mark. Nature-styled, light-shaded flowers, leaves and fruits are often tied with a bowtie or in a vase. In addition to be used as a decoration and plaster material at present, currently used stucco

material also be used as a divider wall element after being produced as plates [12] The excavated stuccos in the Hosap Castle Excavation were mostly decorated with motifs of the classical style.

IV. HOSAP CASTLE EXCAVATION FINDS

Hosap Castle Excavation was started in 2007 but no stucco find was encountered in 2007. In the excavations up to the excavation season of 2015, the place where insitu gypserı were found was northwest room of the harem. This site was revealed in the 2009 excavation works (Fig. 13). It can be observed from the current remnants that the room was covered with these stucco boards at least to the window's top level (Fig. 14). In the inner parts of the window niches, hand-drawn ornaments are placed on a flat plaster. If all the plasterworks of the whole room are considered to have been made in the same composition, there are very few parts recovered. The other two possibilities were that the other walls were either empty or covered with stucco decoration boards consisting of another design. Since the finds revealed from the room during the excavation are not recorded, to express an opinion is not possible about the other parts revealed from here.

The stuccos founded here are mounted to the wall after molded as panels in order. The composition consists of plant motifs is limited to twisted pillars. Around the centered stylized herbal motif, there are reed leaves double binding the motif and opium cocoons that come out of the apex. From another bough comes out tulips with reed leaf so that the herbal motifs moving in two directions form the composition (Figs. 2 and 15). In addition to this motif, there is another flower motif that resembles hyacinth and lily in the decoration of the panel underneath the furnace niche. These motifs and composition are very similar to the classical era Ottoman tile compositions. For example, we see motifs and compositions of similar style in the tile decorations of the Istanbul Rüstem Paşa Mosque (1563).

Large scale kerb pieces with a composition composed of herbal motifs reminding of the Ottoman classical period capital style are an important group among the investigated finds. The Composition consists of tulips, carnations and leaves. The central part where the motifs are processed is principal curvature and is limited with the twisted pillars on both sides. Again made of formwork technique. Resembles the previous group in terms of motif and composition. Only two pieces of stucco boards made of this composition were found (Figs. 3, 4 and 16).

Among the finds, the find which consists of two parts made of malacary technique is important in terms of our research. However, it is thought-provoking that only two small pieces of this group have been found. In terms of composition and motif, it resembles with the samples found insitu in the northwest room of the harem. At the center of the large piece is a hatayi motif, surrounded by reed leaves and poppy motif (Fig. 18) In the small piece, half hatayi motif different from the other is seen (Fig. 17). But the making techniques are different. While the previous examples were made in the formwork technique, it is thought that in this finds large piece is made of plain malacary technique and the small piece of muzeyyen malacary technique

(inside the motifs are also carved). The largest part was found during the 2008 excavation season. Aforementioned one of the stucco found in the AI-26 excavation in the declaration of the 2008 excavation season could be this piece.

Another group with a different ornamentation composition consists of an eight-leaf rosace motif placed in an octagonal star and a tulip-like floral motif located between this repeating motif and boughs emerging from it (Fig. 19). The pores are filled with small spots. These pieces are the ones found in the harem in 2009. These spots also surrender the octagonal star's sides. A gypser design composed of an eight-leaf rosace motif placed in an octagonal star was also used in the plasterings of Bursa Green Mosque (1421) and Edirne Gazi Mihal Mosque (1422).

Another group consists of no octagonal star, only the middle stylized tulip or palmette-like flowers, and the branches coming out of them that have decorative strips which line up vertically around the palmette and flower motifs (Figs. 20, 21 and 5). These are the pieces found in different excavation seasons. Ornament strips made with similar motifs and similar composition have been encountered from the Seljuk period. For example, similar compositions were used in stone ornaments of the Çifte Minareli Medrese (1265) of Erzurum and in Ottoman plate tiles.

Another ornamental strip has a composition consisting of a quadrivial leaf arrangement placing at the core of an oval layout which is both curvaceous and angled, and a six-leaf rosace placing in the small section. There are slight differences between the finds belonging to this group. However, because the pieces are small in size and in number, a complete distinction can not be made (Figs. 22 and 23).

Palmette, which is the most confronted motif in decorative arts, is also frequently appeared in the gypser of the Hosap Castle (Figs. 6, 7, 24 and 25). In some parts, there is also a lily, a kind of palmette motif which has been used since ancient period but entered to the Ottoman decorative arts by westernization influences. There are four pieces possess the same composition, consisting of the Lily motif in a folded frame like beads-on-a-string (Figs. 8, 9, 26 and 27). In addition to the friezes having this composition, a total of five fragments belonging to a fine frieze were found, which were formed by inverted use of a bough-extended Lily motif. The gypser similar to the design in this westernization-influenced composition, is in parallel with some of the stucco finds revealed during the Iznik Tile Furnaces Excavation in 1968 under the presidency of Oktay Aslanapa [13].

The group with different compositions and motifs among the stucco finds was formed by the arrangement of palmet motifs called "athemion" in ancient period. Although this palmet motif is a motif widely used in the Ancient period, it entered into the Ottoman art with the influence of westernization period. During the 2009 and 2011 excavation seasons, many fragments of this composition were found (Figs. 10 and 28) [14].

The only group encountered as a geometric composition is the squares formed by the intersecting double-lined axes and the perforated or effervesced circles in their center (Figs. 11, 29, 30 and 32). There is a only rectangle shape raised from its edge on the other stucco fragment (Fig. 31). They are the only

fragments with a geometric ornament among the stucco finds of the Hosap Castle except the guilloche friezes. This style of ornamentation is an ornamental composition that has been used since the Seljuks and later on the Sasanians.

The piece of plasterwork ornament that we think of as the peak of a range hood, is unique among the finds, and is an important find. It is understood that the hole in the back is opened to fasten it up (Fig. 33). During the Early and Classical Ottoman period, a hillier chain, which usually composed of side by side palmette motifs, is seen on both gypser and tile plated walls. In the late Ottoman period, however, we see this as a single hillier in the peaks of the range hoods. The best examples to this are Tokat and Divrigi houses [15]. It is known that such a tradition is made of stucco material in the late period. However, this hillier is unique among the finds and in which room of the harem it is located is not documented. A similar ornamentation is also found on the hobnail located in the drop-shaped stone relief which is on the main entrance gate partaking on the entrance bastion of the Hosap Castle.

Most fragments among the finds are the niche arches and window guards. It is known that during both the Seljuk and Ottoman periods, the niches inside the rooms were plasterworks. In the early period of the Ottomans, stucco material was preferred in the interior decoration, while the same tradition was maintained with the tiles in the classical period. The classical tradition has been maintained, probably because of the territory being a country and high cost of tile laying, and only the niches are decorated with stucco material. As understood from the finds (Figs. 34-39), some sort of compositions have been used. In some examples, flabellate geometric motifs styled as lancet arch are used. On the others, ogive and gaps are brisked by the lines parallel to the ogive. In another example, the gaps are filled with plant motifs and the edges are bordered by twisted pillars.

It is also known that window guards are made of stucco in the Ottoman and Middle East geographies, although they are non-durable materials, and they are created by various compositions. However, there are not enough finds to produce a complete composition or to be integrated (Fig. 40). When the Cachet's windows was considered, more fragment finding could be expected. If all the pieces collected more carefully, these pieces could be integrated by a work done by the restorators.

On the other hand, in the Ottoman period, usually stucco and glass were used together in the windows. But, during the excavations, whether stucco window pieces and glass fragments were found is not known. However, in a Van geography with a cold winter climate, the chances of the windows being used without glasses are low. Or these stucco window parts can be made only for decorative purposes in some places without a function. The actual window components may be different.

Apart from these, different pieces in small sizes were also found which are understood to belong to different compositions (Figs. 41-46). Among them, short column bodies, column headings, muqarnas fragments were also found (Figs. 47-49). However, a composition data could not be obtained.

V. EVALUATION AND CONCLUSION

During the excavations, many ornamental and undecorated stucco fragments were found. However, they are not exactly numbered and are not made an inventory. Inventory and survey fragments are not separated. Most of the finds were excavated from the Harem in 2009. It was seen that there were stucco groups consisting of very different compositions. On which room's wall surfaces and how they are located has not been determined. Because which group excavated from which room, on which level is not known. For this reason, express an opinion about gypsery locations of the room is not possible. Only stuccos in the northwestern room of the harem are visible as insitu. Apart from that, it was not known whether there was any stuccos found as insitu. In accordance with these data, classification of the stuccos finds are made only according to the compositions on the fragments.

As mentioned by Gonul Oney, with the influence of Samarra and Iran stuccos ornament elements, a traditional flow is discussed in the Seljuk ornamentation art. Despite century and region differences, traces of these effects can be followed [16] However, we encounter a completely different understanding of stuccos ornamentation in the Ottoman Period gypsery. In the early Ottoman period, while the geometrical and herbal ornaments were seen together in gypsery, this tradition gradually left its place entirely to herbal ornamentation. When examining historical geography and usage areas of the gypsery, preferring the decoration made with this material in the Hosap Castle is not surprising. But, what is surprising is that there are no similar examples of this period in the region.

We have many unanswered questions about these finds. It is aimed to find answers to many questions with the researches to be continued.

The stuccos finds are definitely adornments belonging to the Ottoman Period. In the Ottoman decorative arts motifs are seen that are used in early, classical and westernization periods. For example, the classical tulip motif, the opium cocoons, the carnation, the palmette used in the antique period, and the classic palmet motif were used together in the same castle's decorations. For this reason the motifs and the compositions vary widely. Predominately herbal ornamentation was used, geometrical motifs were rarely encountered when there was no figurative or written ornamentation. But the similarity between the motifs with the tile motifs recalled that the stuccos may have been chosen due to the cost of tile making to mind.

Although gypsery was used extensively in Iran that has border on the region, the order is very different from Iran. Despite the fact that Hosap Castle is very far from the capital, located in the country, there is a capital-style decoration order in the finds rather than country-style. When the Ottoman lands of the period considered, the nearest place where the stuccos finds are found is Van Grand Mosque. However, there are no order associations between the Van Grand Mosque and the Hosap Castle stuccos finds. Similar instances can be seen in the new excavations to be made in the area.

Plaster masters matter also remained as one of the biggest questions during the research. Was the master (s) native or brought from the outside? Where could they be come from if

they came from outside? If the masters were native, how did they be acquainted with the capital order? Even though the stuccos material was used in the early period of the Ottoman Era, later on their use has diminished. How did they become masters of plaster in a period when the stuccos was so underused? The works are of high quality workmanship. For this reason it is possible that the plasterworks are off the professional masters' hands. The finds have a capital order as well as showing westernization influences. For this reason, plaster masters can be considered to have been brought from the capital. Even if a master from the capital is brought to such a distant geography, it is not seen that the stuccos material has taken such a place in the adornment of Istanbul art at that time. We can also consider the possibility that the ornaments could not survive until the present day because of the instability of the material, bad repairs and uses.

It is obvious that the Baroque and Rococo style plasterworks, emerged with the westernization influence in the Ottoman art in the late period, and the finds until the year 2015 in the Hosap Castle are very different in order. However, during the research period, this kind of gypsery is not encountered in Istanbul in the 17th century. The motif and composition richness made of such stuccos material was never found anywhere else.

The lack of research on the area and the castle has been another challenge during the research. If the period's trade and political relations are examined, archival files are studied, then some questions can be answered.

Another question mark is the source of the stuccos. The ornaments made with stuccos material must be done on site. On the other hand, it is obvious that the production is done on-site, when examining the bad pieces out of the mould or broken fragments of the finds used to fill the stalactites. For this reason, where the stucco material is brought from can be establishable also by means of archaeometric analysis. Detection and analysis of period's stucco removal centers in the vicinity of the site will be a study itself in the future.

As understood from the end results, the majority of the pieces are formed by formwork technique. Only two finds were thought to be made with malacary technique. However, the malacary technique is a less used technique in the Ottoman decorative arts. It is a common used technique in Iran decorative arts. However, when looked at the decoration concept of the period, the difference of order between the two countries is clearly observed. However, the possibility of a plaster master who might have come from Iran should also be considered. Paint traces have been observed from place to place. However, a more detailed, analysis-based study is needed to determine whether they are painted later or are originally painted.

When stucco finds are examined with the naked eye, differences are seen in the stucco qualities and in the die cast qualities. However, these differences can only be revealed after a detailed analysis of whether the finds penetrated into the stucco in the process in which they remained under the earth, or the difference came into question. The researches and the publications related to the subject are few. For this reason, artifacts found both in the museums' warehouses and in the

excavations must be examined. For this, launching an extensive research and investigation is required. Thus, stucco art, spreading areas and motif developments can be followed.

It is mentioned that the ceramic finds of Hosap Castle published previously may have been imported from Iran [17]. It is much more difficult to make this determination when it comes to stucco material. Only with a detailed 17th and 18th century Iranian gypser art study can be reached to a definite conclusion. Because, when the historical background of Hosap Castle and the stylistic and motivational characteristics of the gypser art are examined the characteristics of the 17th and 18th century Ottoman capital are seen. Nevertheless, a more extensive and detailed investigation is needed for more accurate conclusions and discourses.



Fig. 1 Plan of Hoşap Castle 2012 (excavation archive)



Fig. 2 Plaster plate that has been left in situ on the wall of northwest room of harem (S. Taş)



Fig. 3 Fragment has composition consists of tulips, carnations and leaves (excavation archive)



Fig. 4 Drawing of the full composition consists of tulips, carnations and leaves (S. Taş)



Fig. 5 Stylized tulip or palmette-like flowers (S. Taş)

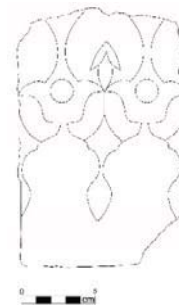


Fig. 6 Palmet series with a semisphere in their mid. (B. Koç)

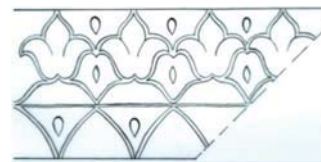


Fig. 7 Palmet serie with drops bewtween palmettes (S. Taş)



Fig. 8 Lily motif friezes (S. Taş)



Fig. 9 Formed by inverted use of a bough-extended Lily motif (S. Taş)



Fig. 10 Fragment with "athemion" (excavation archive)

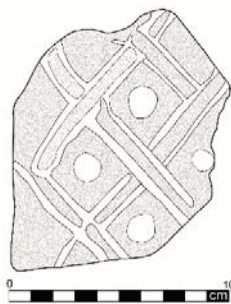


Fig. 11 Fragment with a geometrical pattern (Y. E. Karasu)



Fig. 12 Hoşap Castle from northeast in 2014 (excavation archive)



Fig. 13 Plaster fragments in 2009 (excavation archive)



Fig. 14 Northwest room of harem plaster-decorated (excavation archive)



Fig. 15 Plaster plate that has been left in situ, under the oven niche. in northwest room of harem (excavation archive)



Fig. 16 Fragment has composition consists of tulips, carnations and leaves



Fig. 17 Muzeyyen malacary technique (inside the motifs are also carved)



Fig. 18 Plain malacary technique



Fig. 19 Rosace motif placed in an octagonal star



Fig. 20 Composition consists of stylized tulips.



Fig. 21 Stylized tulip or palmette-like flowers



Fig. 22 Quadrivial leaf arrangement placing at the core of an oval layout



Fig. 23 Another quadrivial leaf arrangement placing at the core of an oval layout



Fig. 24 Palmet series with a semisphere in their mid



Fig. 25 Palmet serie with drops bewtween palmettes



Fig. 26 Lily motif friezes



Fig. 27 Formed by inverted use of a bough-extended Lily motif



Fig. 28 Fragment with "athemion"



Fig. 29 Fragment with a geometric ornament



Fig. 30 Fragment with a geometric ornament



Fig. 31 Fragment with rectangle shape



Fig. 32 Fragment with a geometric ornament (31-AL 2015)



Fig. 33 Peak of a hood



Fig. 34 Fragment of niche arches (2011)



Fig. 35 Fragment of niche arches



Fig. 36 Fragment of niche edges



Fig. 37 Fragment of niche edges 2010



Fig. 38 Fragment of niche edges (31-AL 2015)



Fig. 39 Fragment of niche edges



Fig. 40 Fragment of window



Fig. 41 Small piece with different ornamentation



Fig. 42 Small piece with different ornamentation



Fig. 43 Small piece with different ornamentation



Fig. 44 Geometrical chain frieze (2015)



Fig. 45 Palmette-like broken fragments (31-AL 2015)



Fig. 46 Palmette-like broken fragments (31-AL 2015)



Fig. 47 Column heading



Fig. 48 Column headings (2011)



Fig. 49 Fragment of column body

REFERENCES

- [1] Şeref Han, Şerefname, 1971, İstanbul, p. 138, 335.
- [2] S. A. Kahraman, Y. Dağlı, Evliya Çelebi, 4th book, vol. 1st, İstanbul, 2010, p. 376.
- [3] Y. Öztuna, Devletler ve Hanedanlar, vol: II, Ankara, 1996, p. 530.
- [4] M. Top, Hoşap'taki Mahmudî Beylerine Ait Mimari Eserler, Van, 1996, p. 1.
- [5] H. G. Yurtaydın, Nasuh'üs Silahi, (Matrakçı Nasuh), Menâzil-i Seferi İrakeyn, Ankara, 1976, p.103.
- [6] Mehmet Top, op.cit., p. 17.
- [7] Mehmet Top, "Hoşap Kalesi Kazısı-2008", XIII. Ortaçağ Ve Türk Dönemi Kazıları ve Sanat Tarihi Araştırmaları Sempozyumu Bildirileri, İstanbul, 2009, p. 623.
- [8] Neilson, C. Debevoise, "The Origin of Decorative Stucco", American Journal of Archeology, vol. 45, No. 1, 1941, p. 45.
- [9] Neilson, C. Debevoise, op.cit., p. 45.
- [10] G. Öney, Anadolu Selçuklu Mimari Süslemesi ve El Sanatları, Ankara, p. 71-72.
- [11] Karaçay, Beylikler Devri Mimarisinde Alçı Süsleme, (Ph.D. Dissertation, Selçuk University), 2002, Konya, p. 31.
- [12] E. Saka Akın, C. Hanoğlu, "Tokat Geleneksel Konut Mimarisi'nde İç Mekan Alçı Süslemeleri", Vakıflar Dergisi, P: 40, 2013, Ankara, p. 164-165.
- [13] G. Güressever, "Ağustos-1968, İznik Çini Fırınları Kazısı Sırasında Çıkarılan Stuko Buluntular", Sanat Tarihi Yıllığı, 1966-1968, p. 200-208.
- [14] M. Top, O. Basak, "Hoşap Kalesi Kazısı 2011", XV. Ortaçağ ve Türk Dönemi Kazıları ve Sanat Tarihi Araştırmaları Sempozyumu", vol. 1, Eskişehir, 2011, p. 758.
- [15] E. Saka Akın, C. Hanoglu, op.cit., p. 164-165.
- [16] G. Öney, "İran'da Erken İslam Devri Alçı İşçiliğinin Anadolu Selçuklu Sanatına Akisleri", Belleten, vol. XXXVII, P. 147, Ankara, 1973, p. 266.
- [17] Mehmet Top, Sevcan Türe Ölçer, "Hoşap Kalesi Kazısı Seramikleri Hakkında Bir Değerlendirme (2007-2015)", XIX. Ortaçağ ve Türk Dönemi Kazıları ve Sanat Tarihi Araştırmaları Sempozyumu, Manisa, 2015.