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## **Analysis, Typology, and Chronology of Stuccos in the Palace of Kuh-e Khvājeh**

**Keywords:** Oshida, Palace of Kuh-e Khvājeh, Typological Comparison, Stucco Art

### **Introduction**

Mount Oshida, located 30 km southwest of the town of Zābol, is one of the most important archaeological centers of the historical sites of Iran. This small mountain rises 120 meters above the Hāmūn lakebed and is 2-2.5 kilometers in diameter, so that it appears as an island when the water level of Lake Hāmūn rises.

In many religions, mountains have had a sacred status. According to Mircea Eliade, mountains are often the meeting points of the heavens and the earth; therefore, the center of a point through which the universe axis passes is certainly a place full of sanctity<sup>1</sup>. Since Sistān territory is an extensive plain, the existence of a promontory (Oshida) on this extensive and wide plain adds to its significance.

The changes in the government and central power are among the most important factors in the transformation and booming of science, especially architecture and the related decorations; and thus, history of science and art should not be considered separately, away from the history of social, economic and cultural developments<sup>2</sup>. In spite of this, in marginalized and remote areas such as Sistān, changes in the central government did not significantly change the lifestyle, architectural approaches, and industries such as bricklaying, pottery, metallurgy, stucco and tile-work, and therefore, architects, craftsmen and artists of such regions have usually continued their work despite such changes and transformations.

One of the forms/types/kind of architectural decorations used in the buildings of Parthian and Sasanid periods is stucco. The artistic features of stucco patterns and the manner in which plaster was employed, during these periods, were highly developed and flourished, and special features were introduced at each period. This kind of ornament came to Iran as a Parthian tradition through Greece and Rome, and over time, it regained its eastern qualities. This art was applied very cautiously

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<sup>1</sup> ELIADE 1993: 106.

<sup>2</sup> FATTAHI, LOLUYE 2008: 151.

in the early Sasanid period and culminated at the end of this period. Some scholars consider the economic advantage of using plaster as the main cause to increase the application of stucco in the late Sasanid and Islamic periods.

In the archaeological studies and excavations at Kuh-e Khvājeh, some outstanding examples of art such as painting and stucco have been discovered, which were gracefully and gorgeously intermixed, and the geometric patterns were repeated very skillfully. Since there is no definite and accepted date for these stuccos, and on the other hand, no comprehensive comparative study has been carried out on them, the following question is posed: “Were the stuccos of Kuh-e Khvājeh Palace created contemporaneous with the construction of the first mansion in this place or were they incorporated into the building during the second construction phase?” In order to answer this question, more than hundreds of stuccos obtained from different sites of the historical period - especially Parthian and Sasanid sites - were studied, reviewed and then typologically compared, which will be later referred to in detail.

### **Literature Review of the Historical and Archaeological Studies of Kuh-e Khvājeh**

The first studies conducted on Oshida were mostly geological surveys which were conducted by a British military officer, Major-General Frederic John Goldsmidin the second half of the 19<sup>th</sup> century<sup>3</sup>. But the first serious step in identifying this work was taken by the Hungarian-English archaeologist Aurel Stein in 1915. He included the results of his studies and excavations in his well-known work, *Innermost Asia*<sup>4</sup>. After that, Ernst Herzfeld continued to explore the Kuh-e Khvājeh. In 1925, he visited the site and, four years later, returned with a board to study and survey this place. His final work was published in 1941 in the book *Iran in the Ancient East*<sup>5</sup>. The third scientific work, after Herzfeld’s works at Kuh-e Khvājeh, was conducted by an Italian board supervised by Giorgio Gullini in 1961, whose results were published in a book *Kuh-Khwajeh*<sup>6</sup>.

The fourth scientific archaeological work was undertaken by an Iranian team, and since then, Iranians have been able to bring the explorations on Oshida under their own control. Initially, three short-term exploratory excavations (1372-1377/1982-1987) under the supervision of Seyyed Mahmoud Mousavi were conducted with the aim of training students in archaeology<sup>7</sup>. In 1997, the archaeological team of Šahr-e Suxta and Dahan-e Gōlāmān, led by Seyyed Mansour Seyyed Sejjadi, worked on this complex but unfortunately the related reports have not been published yet. Then, Sorur Ghanimati studied and researched the ancient palace of this mountain<sup>8</sup>.

Oshida was systematically investigated during an archaeological survey in 2007 by Seyyed Rasoul Mousavi Haji and Reza Mehrafarin, during which 17 sites from the historical periods were identified<sup>9</sup>. Leila Bani Jamali studied the pottery obtained from Kuh-e Khvājeh complex aiming at the relative chronology of these

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<sup>3</sup> GOLDSMIDIN 1863.

<sup>4</sup> STEIN 1928.

<sup>5</sup> HERZFELD 1941.

<sup>6</sup> GULLINI 1964.

<sup>7</sup> MOUSAVI 1374.

<sup>8</sup> GHANIMATI 2001.

<sup>9</sup> MEHRAFARIN ET AL., 2011: 44; MEHRAFARIN, MOUSAVI HAJJI 2007.

potsherds<sup>10</sup>, and afterwards, in 2009, a board headed by Kurosh Muhammad Khani precisely examined the site in order to create a database for the mentioned site<sup>11</sup>.

### **The Importance of Kuh-e Khvājeh and the Proposed Dating**

Like other ancient Iranian lands, the foundation of Sistān is also rooted in myth and history. Sistān is the birthplace of Rostam, Kay Kāvus and Kay Kobād, and its first building block is attributed to Garšāsp<sup>12</sup>. Kuh-e Khvājeh, as the only mountain on the extensive plain of Sistān, has had a special sanctity for at least three religions, i.e. Zoroastrianism Christianity, and Islam. The geopolitical position of this mountain since the ancient times has led this place to be viewed as a safe and defenseless shelter, in addition to being a sanctity agent. On the other hand, the natural attractions of Hāmūn Lake, with its green grass, favorable weather and the possibility of hunting different kinds of birds and aquatic animals has attracted the attention of rulers and powerful people<sup>13</sup>.

Oshidarn<sup>14</sup> is the name of a mountain which has been first mentioned in the *Avesta* among the geographical features (rivers, mountains, etc.) and even lands, so that Alborz, with such a high glory and importance that has in the Mazdyasna religion, is seen at least seven times after mentioning the name of Oshidarin in the *Avesta*. On the other hand, after Alborz, the name of this mountain has been repeated more than the other mountains<sup>15</sup> in the *Avesta*<sup>16</sup>. This mountain is among the 2244 mountains that have been mentioned in the *Yasna* and has become a sanctuary, because Saošyant, who is a savior of humankind in Mazdyasna religion, will emerge from there<sup>17</sup>.

The ruins of ancient monuments are seen in different parts of this mountain, but undoubtedly the most significant and most important of these works is Kuh-e Khvājeh Palace, or Qal'a-ye Kāferān<sup>18</sup> "Fort of Infidels", located on the southeast slope of the mountain (Fig. 1). No documents and written texts have been obtained from Kuh-e Khvājeh Palace to determine the exact date of its remains<sup>19</sup>. For this reason, there is much disagreement on the chronology of this building<sup>20</sup>. In addition to the absolute dating, which can be carried out by laboratory measurements, archaeologists can achieve a relative date for the ancient works based on comparative

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<sup>10</sup> BANI-JAMALI 2008.

<sup>11</sup> MOHAMMAD KHANI 2009.

<sup>12</sup> RAHIMI 2002: 21.

<sup>13</sup> MEHRAFRIN 2012: 167-168.

<sup>14</sup> Oshida that today is mistakenly known as Kuh-e Khvājeh, had various names (MEHRAFRIN 2012:167). The meaning of this mountain's name in modern Persian has been God's mountain and in the local tradition, it is known as "Ibrahim's House"; apparently, during the pre-Islamic time, the prophet Ibrahim was considered to be identical with Zoroaster (HERZFELD 2002: 297).

<sup>15</sup> The name of this mountain is traced 15 times in *Avesta* (MEHRAFRIN 2000: 15).

<sup>16</sup> MEHRAFRIN 2000: 38.

<sup>17</sup> MEHRAFRIN et al., 2012: 54.

<sup>18</sup> This palace is also known under different names such as Qal'a-ye Kāferān, Qal'a-ye Rostam, Qal'a-ye Sām, Ġāgā Šahr and Three Magus Castle (ALAEI MOGHADAM 2015: 4356).

<sup>19</sup> MOHAMMADIFAR 2008: 91.

<sup>20</sup> MEHRAFRIN 2012: 168.

studies, comparing the plan with similar buildings and type of materials applied, studying the scattered pottery shreds (pottery chronology) and also through analyzing the stuccos and murals<sup>21</sup>.

Some scholars have introduced the Qal'a-ye Kāferān as a palace<sup>22</sup>, however, considering its strategic location, the gates and fences, this structure can be assumed to have functioned as a fortress as well. The building of the place or the citadel is located on the high part of the castle and due to environmental conditions and the slope of the mountain, it was constructed as a story in the citadel section (Fig. 2).

According to architectural evidence, Herzfeld assumes that Kuh-e Khvājeh Palace at least two had two construction phases. He argues that the first stage relates to in the 1<sup>st</sup> century CE, and the second phase relates to the 3<sup>rd</sup> century CE, the early Sasanid dynasty<sup>23</sup>. After more than three decades, Gullini started to work in this complex and introduced six consecutive layers of settlements from the Achaemenian period to the Islamic era<sup>24</sup>. Of course, Gullini's dating was not accepted by archaeologists and he was faced with a wave of criticism.

Based on C<sup>14</sup> tests, Sorur Ghanimati attempted to provide an absolute date for the entire site. She collected the samples from two distinct areas; the first sample was obtained from mortar and other structural materials belonging to the ceiling of the gallery, and the second sample was taken from a wooden nail used in a bas-relief in the southern façade of the fire abattoir. These samples determined the dates of 50 ± 240-80 CE and 50-450-550 CE, respectively<sup>25</sup>.

In the last decade and after the systematic study of Sistān and, consequently, the Kuh-e Khvājeh site, based on extensive studies on pottery data, Seyyedeh Laila Banijamali dealt with the classification and typology of the collected pottery samples. According to the obtained results, Kuh-e Khvājeh Palace has three different settlement periods. The first period includes the Parthian era, the second period is related to the Sasanid period, and the third period is attributed to the 6<sup>th</sup>-8<sup>th</sup> centuries CE which are related to the Islamic era<sup>26</sup>.

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<sup>21</sup> MOHAMMADIFAR 2008: 91.

<sup>22</sup> KAWAMI 1987: 153.

<sup>23</sup> HERZFELD 2002: 299.

<sup>24</sup> GULLINI 1964.

<sup>25</sup> GHANIMATI 2000: 145.

<sup>26</sup> BANIJAMALI ET AL., 2016: 43.



Fig. 1. The Aerial View of the Kuh-e Khvājeh in Sistan, September 2017 (source: the Authors).

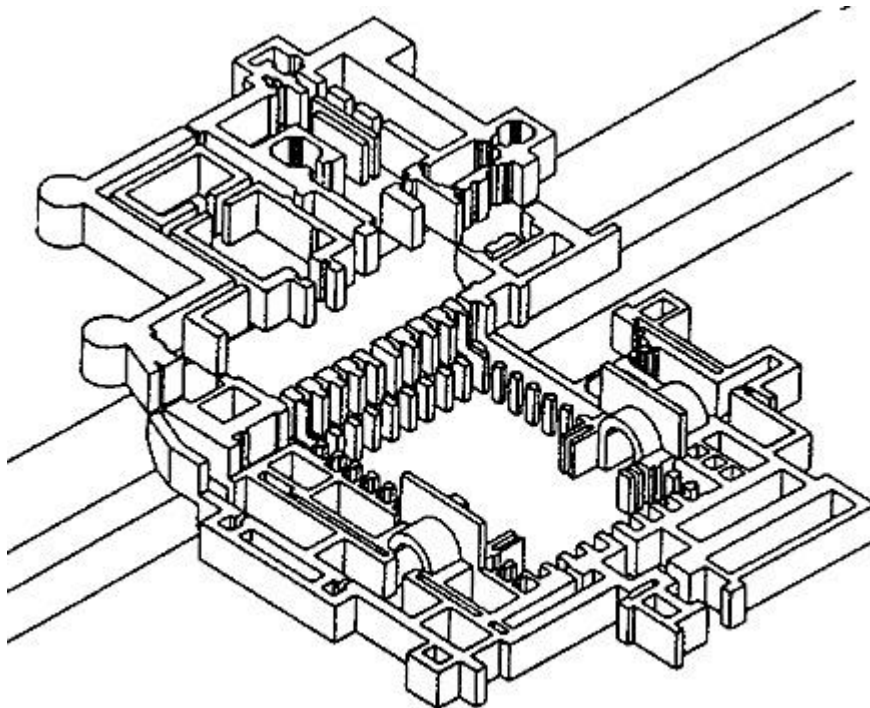


Fig. 2. Isometric map of Citadel building of the Kuh-e Khvājeh Palace (after Zarei 2013: 127).

## Stucco Art in the Parthian and Sasanian Periods

Plaster decoration flourished throughout the Parthian territory in the 1<sup>st</sup> century CE. These stuccos were used in courtyards, verandahs and entrances, especially on arches, ceilings and columns<sup>27</sup>. The best examples of such decorations are the plaster bas-reliefs in Seleucia, Assyria, Uruk and Qal'a-ye Yazdgerd. In the Sasanid period, stuccos were also used extensively to cover and decorate the surfaces, and various types of geometric, plant, animal and human patterns were used individually and in combination with each other<sup>28</sup>.

A large number of moulded stucco panels have been obtained from different buildings, which can be classified into three groups of squares, circulars, and indentations according to their forms<sup>29</sup>. The economic prosperity of the Sasanid era and the construction of palaces and aristocratic buildings, as well as the artistic features of stucco patterns and the manner of working with plaster, led to the flourishing and its application in the buildings<sup>30</sup>.

Tappa Hešār, Bīšāpūr, Keš, Bandiān, Tepe Mīl, Taxt-e Solaymān, Čāl Tarxān, Nizamabad, Hājiābād, Qal'a-ye Zahhāk<sup>31</sup> and Qal'a-ye Yazdgerd are among the most important historical sites from which some stuccos have been obtained. One of the important features of these motifs include the symmetry of patterns, repetition of motifs, the presence of square-shape pieces in which there is a circle in the form of a depicted string of pearls and the use of bi-conceptual designs such as the life tree<sup>32</sup>.

In the palace of Kuh-e Khvājeh, painting were very beautifully intertwined with stucco, and geometric patterns were continuously repeated in a very skillful way. Herzfeld believes that "the origin of decorative stucco was in the eastern Iran"<sup>33</sup>. While Schlumberger and Azarnoush consider the Mesopotamia as the origin of stucco art<sup>34</sup>. with regard to the stucco works discovered in some sites such as Seleucia, Assyria, Qal'a-ye Zahhāk and Qal'a-ye Yazdgerd<sup>35</sup>. Malcolm Colledge believes that in Seleucia, plaster was shaped after being rubbed onto the surface. Examples of this type of stucco are also observed in Assyria and Kuh-e Khvājeh<sup>36</sup>. According to the available evidence, the art of stucco painting was cautiously performed in the early Sasanid period and culminated at the end of this period<sup>37</sup>. Thompson, of course, believes that increased use of stucco in the late Sasanid period is due to its economic advantage<sup>38</sup>.

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<sup>27</sup> COLLEDGE 2006: 121.

<sup>28</sup> MOHAMMADIFAR, AMINI 2015: 143.

<sup>29</sup> MOHAMMADIFAR, AMINI 2015: 143.

<sup>30</sup> POPE 1938: 631.

<sup>31</sup> In the local dialect, they say Zohak or Zohang.

<sup>32</sup> SAJJADI 1995: 196.

<sup>33</sup> HERZFELD 2002: 299.

<sup>34</sup> KHANMORADI 2006: 10-11.

<sup>35</sup> KHANMORADI 2006: 10-11.

<sup>36</sup> COLLEDGE 2006: 121.

<sup>37</sup> SCHIPPMANN 2004: 160.

<sup>38</sup> THOMPSON 1976: 64.

## Forms and Types of Stuccos in Kuh-e Khvājeh Palace

Decorative art with plaster can be introduced as one of the characteristics of the Iranian architecture. In this building, the architect first used plaster to cover, preserve and beautify the mud-brick walls and also to smooth the surface of the rough walls, and then he has used it as a decoration. To create these designs, molding techniques were used, while working with hands and fine tools was combined to create them; these designs are seen in large plaque with small decorative motifs, including combined motifs- geometric and plant and stylized ones which decorated most of the margins and cadres<sup>39</sup>.

Apart from Herzfeld's comment on the similarity between the stuccos in the Kuh-e Khvājeh palace and the stuccos in Parthian monuments in the 1<sup>st</sup> century CE in Babylonia and Assyria<sup>40</sup>, there has not been any comparative studies on the stuccos obtained from this palace. The necessity to do this is felt more than any other time since after passing almost more than a century of Herzfeld's field activities in the palace of the Kuh-e Khvājeh, many sites all around the vast Iranian plateau have been studied and discovered and lots of stuccos have been obtained as a result. In the present study, three samples of the Kuh-e Khvājeh palace were evaluated in terms of their form and pattern. These plaques were obtained from Stein's and Herzfeld's visits, and Mousavi's excavations, respectively:

### Stucco No. 1

This sample was obtained in 1915 during Stein's excavations (Fig. 3). This circular plaque consists of combined patterns- plant and geometric motifs- and is divided into two internal and external parts. The central circle is separated from the outer one by a white strip form. Inside the center of the inner circle a hexagram flower is seen, and between its leaves, a pattern resembling a palm tree or palm leaves is noticed. In the outer circle of this plaque, there are 20 squares along each other, in each white diamonds can be seen.



Fig. 3. Stein's Stucco Design from the Kuh-e Khvājeh Palace (after Mosalla 2006: 10; source: authors).

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<sup>39</sup> MOSALLA 2006: 9.

<sup>40</sup> HERZFELD 2002: 299.

The hexagonal and octagonal patterns in a rounded frame are the symbols of Anāhitā<sup>41</sup>. An important feature of this motif is symmetry in all its forms. The combination of plant and geometric motifs in Sasanid stuccos has been commonplace, which is frequently observed in stuccos from different sites.

### Stucco No. 2

This stucco was discovered in 1925-1929 during Herzfeld's excavations in the entrance gate. Herzfeld has published only part of this stucco; according to his detailed drawings and a photograph that was reserved, the following figure could be reconstructed (Fig. 4). According to his studies, the gateway was definitely equipped with a symmetric wall base in both sides which had been composed of vertical stripes beside each other<sup>42</sup>. This piece of plaque also includes combined motifs like sample no. 1. This piece is considered as one of the masterpieces of the Iranian historical period, due to the continuity and intermixing of the forms.

From left to right, a combined motif consisting of battlement leaves is identifiable which consists of a set of single elements, the full-blown palm leaves sitting on scroll-shaped mazes, encompass an intermediate motif made up of battlement leaves. Till now, no direct analogy has been found for this motif. Following this Meander pattern chain<sup>43</sup>, are the battlements, as well as the intertwined circles<sup>44</sup>. The circles are seen in a tangent and intersecting manner while their sides intersect each other so that they produce quatrefoil flowers.

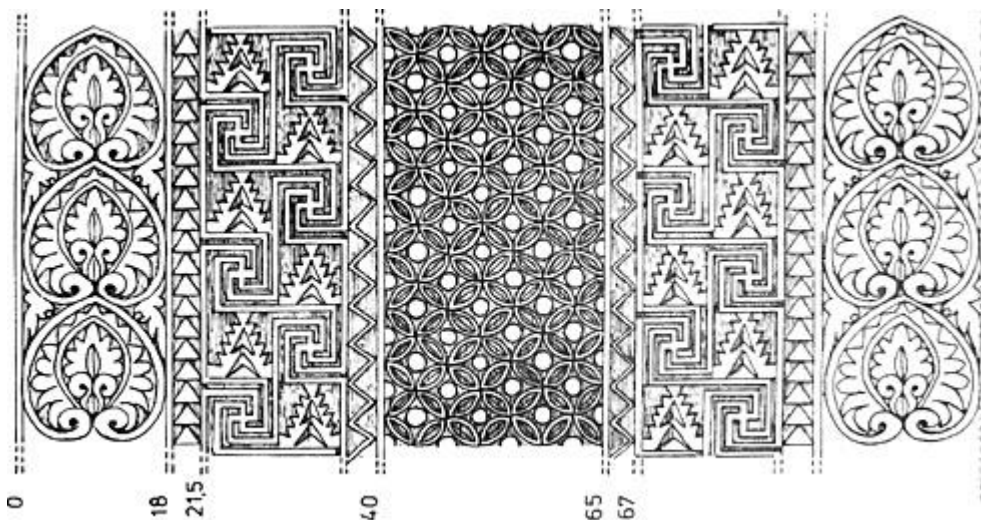


Fig. 4. The Stucco Design of the Kuh-e Khvājeh, Herzfeld's archive in Washington (after Kröger 2017: 344).

<sup>41</sup> BALTRUŠAITIS, POP 2008: 803.

<sup>42</sup> KRÖGER 1396: 344.

<sup>43</sup> The motifs of Meander pattern chain are usually depicted with two parallel lines determining the limits of the figure. This ornament was widely applied as a decorative margin and in various types such as: single line, two-line and multiple-line (SAMANIAN, HASSANZADE 2013: 57).

<sup>44</sup> SAMANIAN, HASSANZADE 2013: 344.



### Stucco No. 3

As mentioned before, from 1991 to 1993, the courtyard of the Kuh-e Khvājeh Palace was excavated and explored in three seasons, aiming at training of archeology students at the Higher Education Center for Cultural Heritage. During these excavations supervised by Mahmoud Mousavi, two stucco blocks were found at the stand of the northern front in the central courtyard of the Kuh-e Khvājeh Palace. These stucco plaques were obtained from the distance between the staircase and the lateral porches at the plinth of the piers in both sides of the staircase, in a narrow and long form which were 2.5 meters in height and 20 cm wide. The pattern of the right-side stucco includes the repetition of palm trees and the left side motif includes flowers and leaves in a rectangular framing (Fig. 5), which is repeated throughout the stucco surface<sup>45</sup>. These motifs are so disorganized that cannot be described accurately. We also consider it enough to cite the excavator's descriptions. For a comparative study, it should be noted that plant motifs are seen within a rectangular framing and have very limited width.

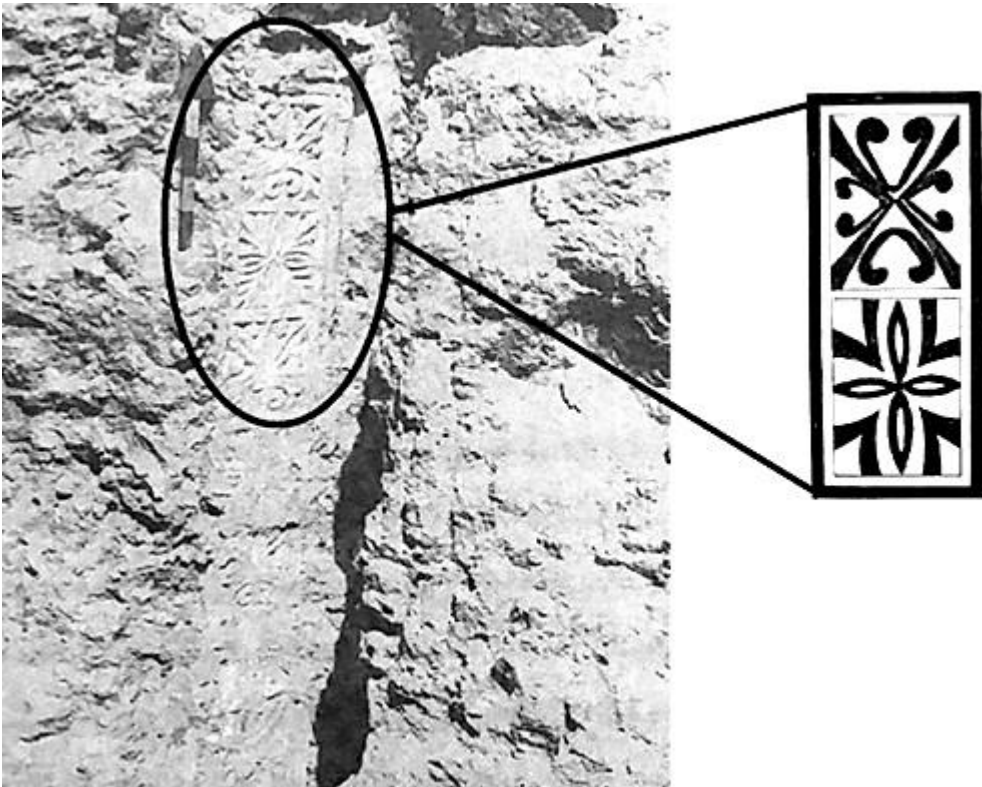


Fig. 5. The design of a stucco discovered by Mousavi from the Kuh-e Khvājeh Palace (after Mousavi 1995; source: authors).

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<sup>45</sup> MOUSAVI 1995: 89.

## Typological Comparison of the Stuccos of Kuh-e Khvājeh Palace

### Stucco no. 1

Among the most important features of Sasanian stucco motifs are symmetry, circular framing and eclectic mixture of plant and geometric motifs. According to previous studies, the circle had a special role in the Sasanid art and stucco. In terms of the general form, the stuccos found around Ctesiphon, the Sasanian capital city, are most closely related to the stucco plaques discovered by Stein at Kuh-e Khvājeh (Fig. 6). As it can be seen, instead of the hexafoil (6-petalled flower) and palm leaf motifs, a rosette ornaments were used, which includes 24-spokes surrounded by a frame of rosary beading (ors with pearls) of almost circular shape placed at equal intervals<sup>46</sup>.

Two pieces of stuccos from Zaḥḥāk Castle show a hexafoil flower enclosed within a circular frame that reminds the stucco of the Kuh-e Khvājeh Palace (Fig. 7, A-B). However, the plaque of the Kuh-e Khvājeh Palace is more detailed, indicating the development of stucco in the eastern Iran. Qal'a-ye Zaḥḥāk has been identified and its remnants belong to the Sasanid period<sup>47</sup>.

In addition to Ctesiphon and Qal'a-ye Zaḥḥāk, in Keš (Fig. 8), Bīšāpūr and Tappa Ḥešār (Fig. 7, C), there are also some stuccos which are comparable with the stuccos of the Kuh-e Khvājeh Palace, in which round shapes are evident, but they differ in their details. The samples obtained from Tappa Ḥešār include a 24-spoke flower whose 12 petals are complete and the other 12 petals are seen at its back appearing as a medallion. Samples similar to this medallion can also be observed in Keš and Čāl Tarxān sites<sup>48</sup>.

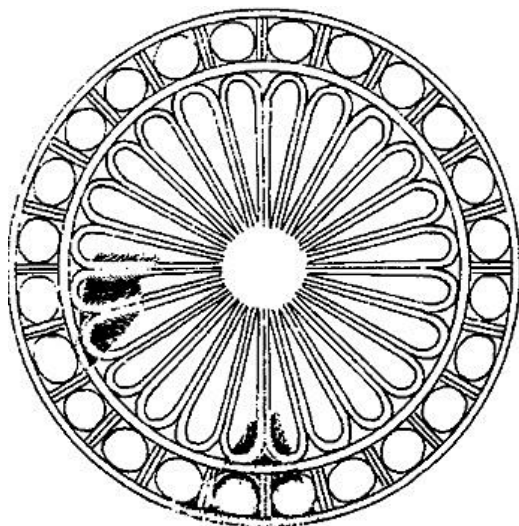


Fig. 6. A circular plaque with a rosette ornament from Ctesiphon (after Kröger 2017: 199).

<sup>46</sup> KRÖGER 2017: 199.

<sup>47</sup> QANDEHAR et al., 2004: 194.

<sup>48</sup> CHEHRI 2007: 104.

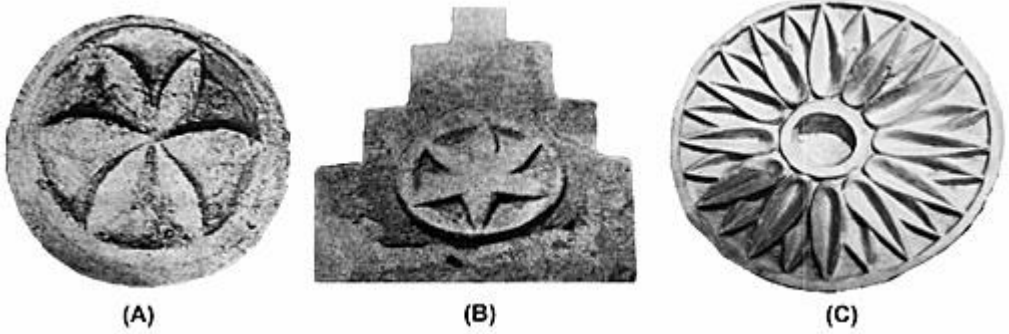


Fig. 7. A- Qal'a-ye Zahhāk. B- Qal'a-ye Zahhāk. C- The Medallion from Tappa Hešār (after Rostami 2011: 212-213).

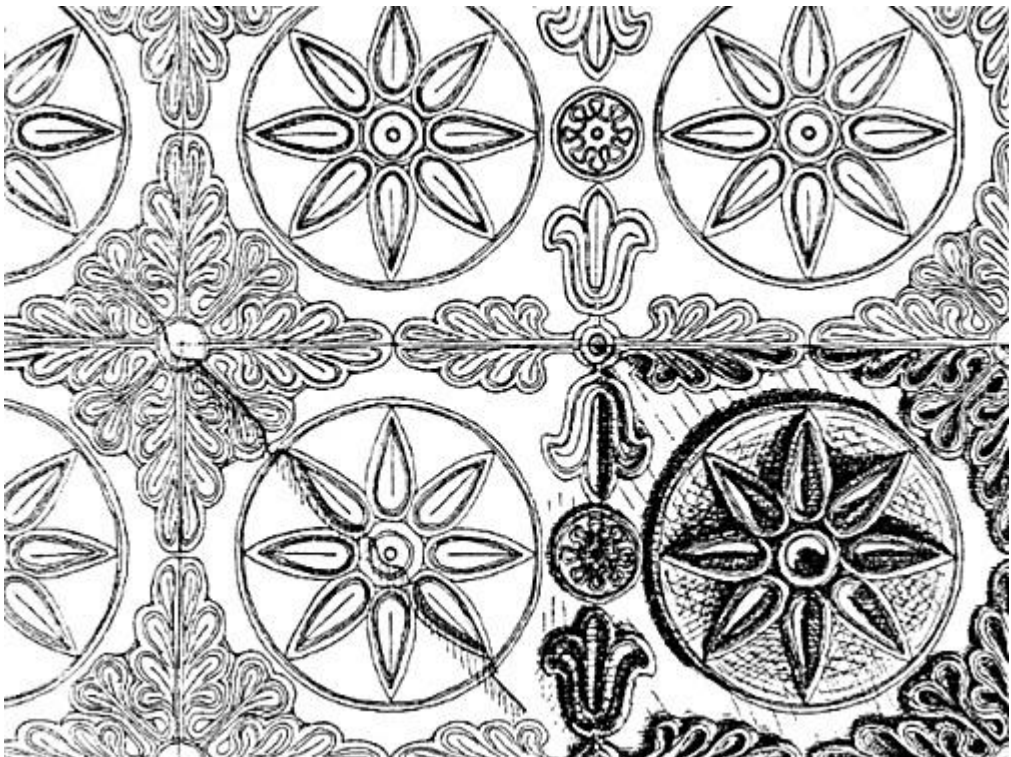


Fig. 8. Reconstruction of quadrilateral plates with star motifs (after Kröger 2017: 291).

#### Stucco no. 2:

This plaque is very similar to the stuccos obtained from Keš site (Fig. 9). The stucco decorations of Kish sites are generally obtained from the courtyard of the palace no. 1, and the torso of Šāpūr II, along with a number of engaged-columns were discovered from the palace no. 2. The walls and the arches are decorated with various geometric motifs, zigzags, circles, crossover shapes (swastika), plant motifs,

such as grapes and leaves, palm and acanthus leaves<sup>49</sup>. Researchers conceive these stuccos to be related to the 5<sup>th</sup> and 6<sup>th</sup> centuries CE<sup>50</sup>. The high similarity of these stuccos to the plaque found by Herzfeld's from the Kuh-e Khvājeh Palace suggests that these plaques relate to the same period of time.

The swastika or broken cross was abundantly used in stuccos of Sasanid era, and it was attained from Hājiābād<sup>51</sup>, Qal'a-ye Yazdgerd<sup>52</sup> and the Xārag, which belongs to the fifth and 6<sup>th</sup> century CE<sup>53</sup>.

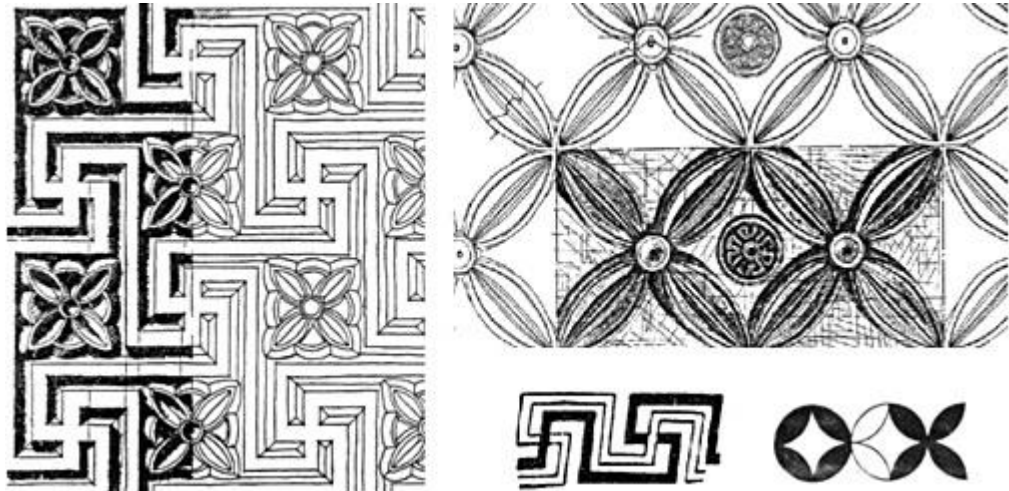


Fig. 9. The stucco obtained from Keš (after Pope, Ackerman 2008).

On the plaque obtained from the Kuh-e Khvājeh Palace, battlements replace the quatrefoil flowers and create a single image with the swastika. In the Bīšāpūr and Qal'a-ye Zahhāk sites, we can also find battlement stuccos which are different in their shapes. A plaque was obtained from Bīšāpūr, exactly from the mosaic hall including a battlement stucco, in which there is a decorative palm tree<sup>54</sup>. The battlement stucco of Qal'a-ye Zahhāk is composed of four morphological and in the middle of which the figure of the hexagram is visible in the circle-shaped box (see Fig. 7B). Prada believes that the origins of these battlements should be sought in Assyrian battlement shelters, perhaps the use of this design had a concept other than decorating<sup>55</sup>. The battlements can represent mountains and valleys. There are many sacred mountains around the world that are considered to be the residing place of gods and the linking point of the heavens and the earth, and height is something that access is restricted to the divine beings superior to humans<sup>56</sup>.

In addition to the swastika and battlement, tangent circles are observed, representing and creating a quatrefoil flowers. In fact, this pattern consists of crossing

<sup>49</sup> HARPER 1978: 101-104.

<sup>50</sup> MOOREY, 1976: 65-66.

<sup>51</sup> AZARNOUSH, 1994.

<sup>52</sup> KHANMORADI, 2006.

<sup>53</sup> GHIRSHMAN 1960: 12-13.

<sup>54</sup> GHIRSHMAN 1999: 2. 209.

<sup>55</sup> PRADA 2004: 308-309.

<sup>56</sup> ELIADEH 1993: 102.

circles, each of which is intersected by the arc of the other four circles and there is a circular point in the middle of it<sup>57</sup>. Similar pictures have been also obtained from Nizamabad (Fig. 10A), Keš (see Fig. 9), Assyria, Čāl Tarxān and Seleucia (Fig. 10, B-C).

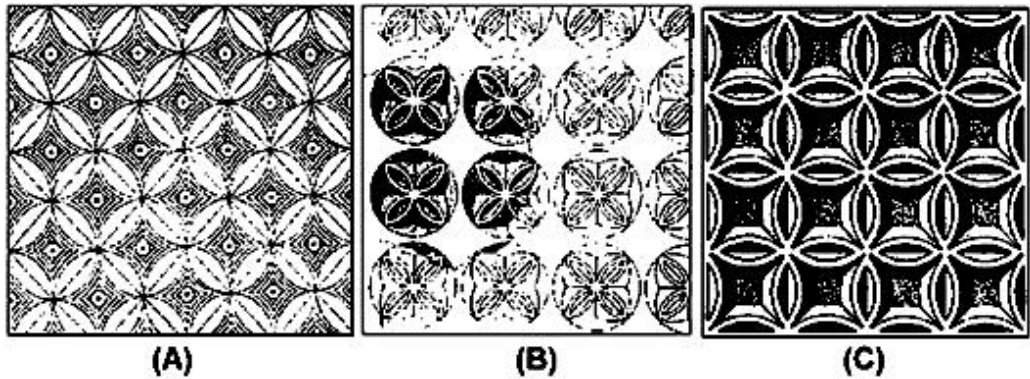


Fig. 10-A Nizamabad, Herzfeld’s design (after Kröger 2017: 236) B- Seleucia C- Seleucia (Muhammadifar 2008: 231).

### Stucco no. 3:

In spite of the excessive destruction and the lack of clarity of this stucco, these designs can be studied in terms of their overall shape and form. It should be noted that the same flowers, leaves and framings were attained from the Čāl Tarxān and Yazdgerd Castle (Fig. 11). Like the sample no. 3 from the Kuh-e Khvājeh Palace, the Čāl Tarxān sample, is narrow and long, the only difference is that the flowers and leaves are replaced with nesting squares inside the boxes. Čāl Tarxān site consists of works which belongs to the architecture of the late Sasanid and early Islamic periods<sup>58</sup>. Also another stucco was obtained from Ctesiphon, the Sasanian capitol (Fig. 12), which is decorated with plant motifs (interconnected triangles) and is enclosed within square boxes<sup>59</sup>.

<sup>57</sup> SARFARAZ, FIROZMANDI 2007: 226.

<sup>58</sup> AYAZI, MIRI 2006: 11; THOMPSON 1976: 3-5.

<sup>59</sup> KRÖGER 2017: 202.

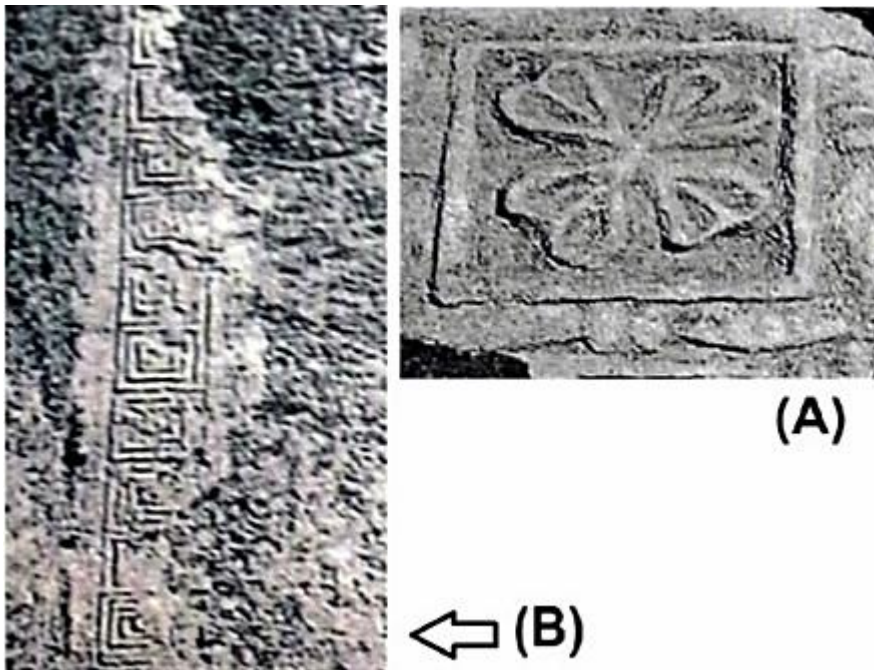


Fig. 11- A- Qal'a-ye Yazdgerd B- Čāl Tarxān.

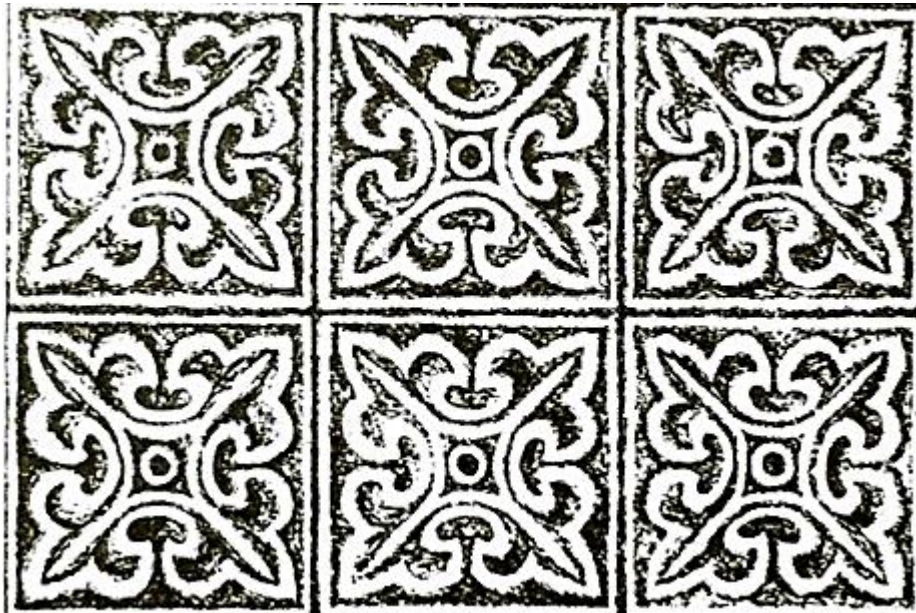


Fig. 12. A Wall Background with trifoliate motifs from Ctesiphon (after Kröger 2017: 202).

According to the similarities of the stuccos found by Mousavi to the previous stuccos, in terms of their method of work, the similar motifs<sup>60</sup> and the performed typology, all the stuccos were probably related to the same period of time and they may

<sup>60</sup> MOUSAVI 1995: 89.

have belonged to the second construction phase in this site. As noted earlier, Herzfeld, according to architectural evidence, believed that the Kuh-e Khvājeh Palace had at least two construction periods<sup>61</sup>. He assumes the first phase to be related to the 1<sup>st</sup> century CE, and the second phase to be related to the 3<sup>rd</sup> century CE, i.e. the early Sasanid rule. The most striking feature of these signs is the creation of porches on the northern side of the intermediate wall that adheres to the wall of the gallery without any fastening, and also the decorative engaged-columns which are buried beneath the porches and remained virtually intact. According to Herzfeld's theory and typology<sup>62</sup>, it is clear that these stuccos have been added to the building during the second construction phase and are probably related to the 3<sup>rd</sup> and 4<sup>th</sup> century CE.

## Conclusion

During the Sasanid era, the growth of stucco undermined, over time, the sculpture art which is the reminiscent of Hellenistic art (a greenish-blue color-Cyan). We are faced with many human and animal figurines in Qal'a-ye Yazdgerd, Zahhāk Castle, Tappa Heşār and even Čāl Tarxān. However, these figures are not seen in the palace of Kuh-e Khvājeh and they are replaced with paintings. In fact, the paintings of the Kuh-e Khvājeh Palace were better and more appropriate means for representing different people such as: gods, kings and queens, priests, bandits, ordinary people and animals; and probably the art of painting in this region could not achieve the perfection along with other arts due to certain reasons such as the lack of professionals at the art and the lack of facilities, as well.

The architectural decoration of the Kuh-e Khvājeh Palace consists of several elements: a/ Stucco panels, b/ Beautiful stone reliefs (mainly from the façade of the palace's Fire Temple), c/ the Doric engaged-columns, between which arched window with low-rise oval arches and edged and projected piers placed and the decoration of the frontal façade, d/ The Greek volute twists and the reliefs depicting two men holding a circle-shaped loop with ribbons, and the open closets with arched vaults.

Architectural decorations may have been added to or removed from different parts of the building in different construction phases or various settlement periods of a building. Hence, the construction date of a building cannot be accurately identified by dating the architectural decorations.

Until now, a relatively acceptable date has not been provided for the stuccos of the Kuh-e Khvājeh Palace. Herzfeld, according to the patterns such as the swastika, hexafoil flowers and the existing framings, believed that the obtained stuccos were related to the 1<sup>st</sup> century CE and correspond to the stuccos of Babylon and Assyria in every respect. This view initially seemed to be well-developed and weighted,

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<sup>61</sup> HERZFELD 2002: 299.

<sup>62</sup> Herzfeld believed that all the paintings were created during the first construction phase and he emphasized that in the antechamber not only there had been an illustrated carved arc, but also he noted that in the second period in order to fade these paintings, a thin mud-brick bulkhead had been used to cover them (HERZFELD 2002: 300).

but during the last century, with the expansion of archaeological excavations in different sites and the discovery of new stuccos, it was possible to re-examine the stuccos of the Kuh-e Khvājeh palace. For this purpose, the stucco plaques were individually compared and typologically studied.

During the present research, a few points have been made and mentioning of them can clarify the issue. First, the history of using the swastika or the Broken Cross dates back to the 4<sup>th</sup> millennium BC in the Iranian plateau the presence of this motif should not be considered to be influenced by the Greek culture. Secondly, if the swastika was seen in the Assyrian Parthian site, it is also observed in entirely Sasanid sites such as Hājīābād and Keš, and more interestingly, the stucco plaque of the Kuh-e Khvājeh Palace has more in common with the Keš stucco. Another point to consider is the discovery of the location of the stucco no. 3 and also the fact that the porches are an additive to the building. What is now important, is the stuccos that are currently placed on the plinths of the porches that, according to the performed typological and field studies, they were certainly added to the building during the second construction phase of the Kuh-e Khvājeh Palace, this is a strong piece of evidence to prove that these stuccos belong to the Sasanian period.

Among the important features of these figures are their symmetry and continuous repetition which are considered the most significant characteristics of the Sasanian art. In the stuccos of the Kuh-e Khvājeh Palace, we can notice more geometric and plant motifs, which can be divided into three groups in terms of their shape: circular, square and congressional. This is the same classification that was made by researchers for the Sasanid stuccos.

The experimental results and the existing architectural elements, along with the typology of the stuccos indicate that the stuccos could not have belonged to the Parthian period. Regarding the typological comparison of the stuccos of this site with the stuccos attained from other regions of Iran, the stuccos of Kuh-e Khvājeh can be attributed to the Sasanian era in terms of the general form of motifs and manner of work. Of course, it should not be forgotten that probable excavations in the future and the discovery of more remnants may change this dating.

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## Summary

### Analysis, Typology, and Chronology of Stuccos in the Palace of Kuh-e Khvājeh

Due to its strategic and unique location, Mount Oshida (Kuh-e Khvājeh) in the Sistān plain, has been alternatively used since a long time ago to this date. On the southern slope of this mountain, the ruins of a palace known as Qal' a-ye Kāferān appear after the Muslims' arrival and domination over the region. This castle was explored and excavated during the second and third decades of the twentieth century by scholars such as Stein and Herzfeld, and its decorations have been widely mentioned. However, its stuccos have not been analyzed in terms of their types, forms, and patterns up to this date. Hence, there are some disagreements about their construction date, as some scholars consider these architectural decorations to belong to the Parthian period while others connect them with the Sasanian period. In the present research, it has been attempted to study and evaluate the stuccos in the palace of Kuh-e Khvājeh in the framework of a typological comparison according to the archaeological evidence and historical documents, so that a clear understanding of the historical situation and construction date of these works can be obtained.

The research method of the current study has been based upon documentary sources and archaeological evidence. Reviewing the previously performed studies and excavations, along with the comparison and typology of stuccos obtained from other sites, leads us to the conclusion that the stuccos found on this site belong to the Sasanian period in terms of shape, form and decoration.

**Keywords:** Oshida, Palace of Kuh-e Khvājeh, Typological Comparison, Stucco Art