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INVESTIGATION OF THE DETERIORATION TYPES OBSERVED AT THE KANUNİ SULTAN SÜLEYMAN MOSQUE IN HATAY BELEN DISTRICT

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ABSTRACT

One of the oldest cities in Anatolia and the meeting place of cultures and religions, Hatay was home to a variety of cultures. It is understood that historical life discoveries in the area date back to approximately 100.000 BC. In addition, Hatay and its surroundings have hosted many civilizations such as Akkadian Empire, Hittite, Assyrian, Babylonian, Persian, Seleucid Empire, Roman Empire, Umayyad, Abbasid, Seljuk, Byzantine Empire. This region, which remained under the rule of the Ottoman Empire for 4 centuries, was ruled by the French for a while after the First World War. The region joined the Republic of Türkiye in 1939. One of the significant Ottoman Empire structures in Hatay are Kanuni Süleyman Mosque and Caravanserai in Belen District. This cultural complex, which comprises of a mosque, han, hammam, madrasah and castle, essentially has the characteristics of a social complex in many ways. The central mosque of Belen, this temple, is still standing and available for prayer. In this study, in-situ visual analysis was used to examine the different types of deterioration that have developed in the Kanuni Sultan Süleyman Central Mosque and Complex The mosque, which is located in this ancient and holy temple, stands out as the structure where the effects of atmospheric deteriorations are most frequently noticed. It is anticipated that the study's data on deterioration will serve as a crucial foundation for the conservation planning studies that will be created in order to pass possession of the monument to subsequent generations.

Keywords: Kanuni Sultan Süleyman Mosque, Deterioration, Atmospheric Effect, Hatay.

INTRODUCTION

Hatay, which is in Anatolia and serves as a crossroads for numerous religions and civilizations, has a very rich historical and cultural heritages. The kulliyes (social complexes) within this cultural texture contain important cultural heritage. Cultural heritages are in danger of losing their integrity due to many deterioration processes such as biological, antropologic and atmospheric effects (Fener and İnce, 2015; Bozdağ et al, 2016, 2020; Özşen et al, 2017). In this study, the deterioration types (lichen, crack, contour scaling, blistering and differential erosion) observed in Kanuni Süleyman Mosque in Belen district of Hatay province were determined by considering their densities. For this purpose, probable causes of de were investigated by conducting an in-situ investigation in the mosque. Observational data in this study are thought to constitute an important data archive for the conservation and sustainability of cultural monuments in Hatay.

DESCRIPTION OF THE KANUNİ SULTAN SÜLEYMAN CAMİ

Kanuni Süleyman Mosque, which is among the cultural heritages of Hatay, is located in the town of Belen, approximately 47 km north of the city center of Hatay. The monument was built using building stone on the bedrock. A relatively recent extension to the mosque was constructed on its east side, parallel to Belen's growing population. There is a cemetery to the south of the mosque. The monument stands out with its thuluth inscription and its single minaret above the door that provides the entrance to the place of worship from the northern part of the mosque (Figure 1). The building consists of the harim surrounded by iwans on three sides of a central main dome on the south. To the north, there is a two-chambered part thought to have been added later. Between these two parts is the minaret and the newly added part in the east. There is a hazire to the south of the monument.

Figure 1. General view of Kanuni Sultan Süleyman Mosque

MATERIAL AND METHOD

In this research, visual examination and photographing studies were carried out in order to determine the variety and types of in-situ deterioration. The deterioration types in the monument were made according to the definitions proposed in ICOMOS-ICSC (2008).

RESULTS AND DISCUSSIONS

In the Belen district of Hatay, summers are warm and hot, and winters are cold and rainy. Temperatures throughout the year range from 3°C to 29°C (MGM, 2023). This situation causes wetting-drying and salt crystallization processes, which are deterioration processes, to be effective in the region. These processes were identified as the main cause of deterioration developments in the monument. These processes led to the development of contour scaling-type deterioration in building blocks, ranging from mm to cm (Figure 2).

Figure 2. Contour scaling type observed in the monument

In addition, blistering and differential erosion type deterioration were determined in different parts of the monument. (Figures 3, and 4).

Figure 3. Blistering type anomaly

Figure 4 Differential erosion part anomaly

In relation to the structural problems of the mosque, cracks developed in the building stones (Figure 5). In addition, biodegradation types were determined in different parts of the monument (Figure 6).

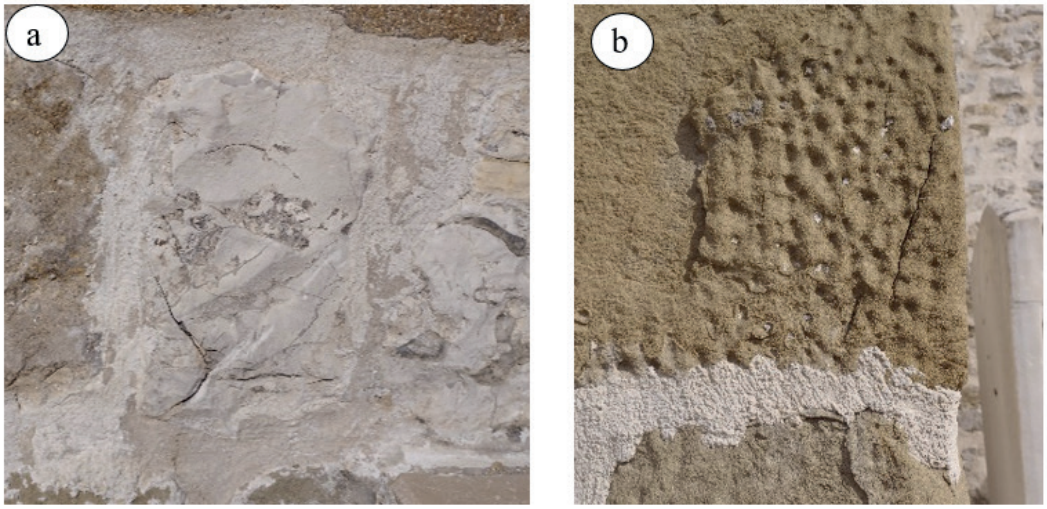

Figure 5 Crack observed in the building stone of the monument

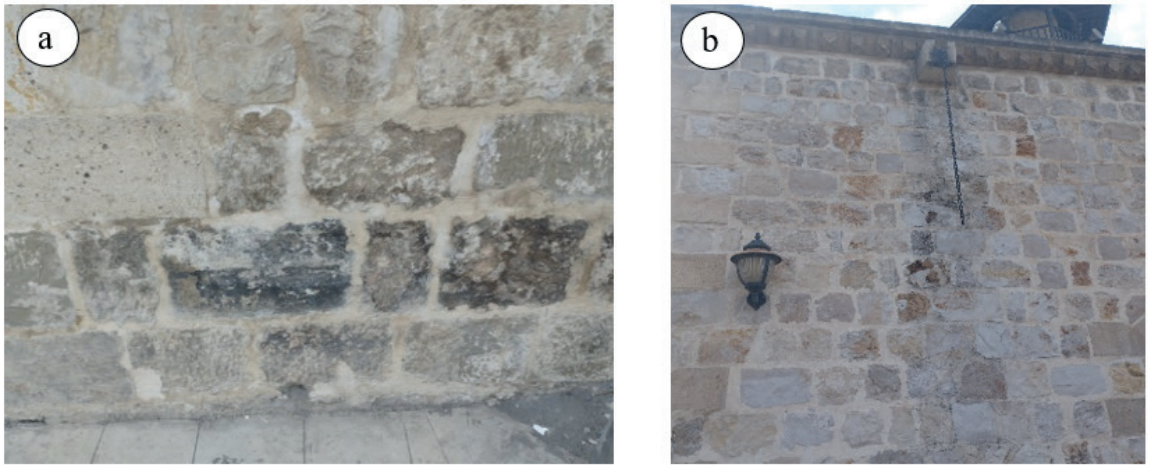

Figure 6. Lichen observed at the monument (a, b)

CONCLUSION

The types of deterioration that developed in relation to atmospheric processes and destroyed this heritage in Kanuni Süleyman Mosque in Belen district of Hatay province were investigated. It has been determined that the types of deterioration observed in the monument are generally related to the climatic properties of the region. It was found that the types of deterioration developed in the mosque were contour scaling and crack formed in the building stone blocks that developed in different dimensions. In addition, blistering and differential erosion deterioration types were also observed in the monument. The lichen formed in the building stone as a result of atmospheric and biological effects disrupts the aesthetic integrity of this unique heritage. It is advised to conduct out restoration work on the monument because all of these types of deterioration in the building have progressed to the point where they will compromise the monument's structural integrity.

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