DOVECOTES AND CAVE DWELLINGS OF GESI – KAYSERI (TURKEY)

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Abstract
Gesi Village is a neighbourhood of Melikgazi district 18 km away from Kayseri city centre in Central Anatolia. At its outskirts, the Derevenk Valley carries much importance for the history of the region. The valley, split by a branch of Kızılırmak and formed in the magmatic rocks from the surrounding volcanoes, is hosting many rock-cut settlements, churches and dovecotes. These structures reflect the cultural properties daily life rituals of dwellers and provide vital information about the Christian people around Kayseri and vicinity during pre-Ottoman and Ottoman times. Dove manure was invaluable for the local public dealing with agriculture during the 18th and 19th centuries in Kayseri which had been an important trade and agricultural centre in Central Anatolia. Despite losing their popularity with time, these structures in Derevenk Valley, built to obtain dove manure, are still being used today. Furthermore, Derevenk Valley rock churches, with wall decorations and frescoes quite common in rock churches of Cappadocia, had been also used as dovecotes after abandonment. In addition to two underground cities, there are numerous rock dwellings in the valley. There are two types of dwellings: the first group was built as a settlement, and, after the village was abandoned, part of it was converted into dovecote. The second part was built directly as a dovecote. Together with the clear differences observed between these two types, it is also possible to distinguish three types in the architecture of dovecot chimneys. These types reflect different settlement periods, and also are of great importance for analysing the development of stonemasonry. In the valley, where overall 142 dovecotes are present, 46 artificial cavities have been mapped, 11 being rock-cut settlements without dovecote features, whilst 33 are converted or original dovecotes.
Keywords: Gesi, Kayseri, dovecote, pigeon house.

Riassunto
Il villaggio di Gesi si trova nelle vicinanze del distretto di Melikgazi a 18 km dal centro di Kayseri in Anatolia centrale. Ai suoi margini la Valle Derevenk riveste molta importanza per la storia della regione. La valle, divisa da un ramo del Kızılırmak e formata nelle rocce magmatiche dei vulcani circostanti, ospita molti insediamenti rupestri, chiese e colombaie. Queste strutture riflettono la cultura e i rituali della vita quotidiana degli abitanti e forniscono importantissime informazioni sui popoli Cristiani intorno a Kayseri e nelle sue vicinanze durante i periodi pre-ottomano e ottomani. Il letame di colombo è stato prezioso per l'agricoltura nel corso dei secoli 18 e 19 a Kayseri, che era un importante centro commerciale e agricolo dell'Anatolia centrale. Nonostante abbia perso con il tempo il suo ruolo centrale, le strutture di Derevenk Valley, costruite per ottenere letame di colombo, sono ancora oggi utilizzate. Inoltre le chiese rupestri della Derevenk Valley, con decorazioni murali e affreschi molto comuni nelle chiese rupestri della Cappadocia, sono state utilizzate anche come piccionaie dopo l'abbandono. Oltre alle due città sotterranee ci sono numerosi insediamenti rupestri nella valle e vi si trovano due tipi di abitazioni: il primo fu costruito come un insediamento e dopo l'abbandono del villaggio fu trasformato in piccionaia. Il secondo fu realizzato direttamente come colombaia. Insieme alle chiare differenze che si osservano fra i due tipi di strutture è anche possibile distinguere tre tipi nell'architettura delle piccionaie. Questi tipi riflettono diversi periodi insediativi e sono di grande importanza per analizzare lo sviluppo nella lavorazione della pietra. Nella valle, dove sono presenti complessivamente 142 colombaie, sono stati mappate 46 cavità artificiali, 11 sono insediamenti rupestri senza le caratteristiche colombaie, mentre 33 sono stati convertiti o erano originiariamente piccionaie.
Parole chiave: *Gesi, Kayseri, la colombaia, piccionaia.*

Short Information About Gesi

Kayseri is one of the most attractive cities of Turkey, due to its historical and cultural assets along with the ethnographic values coming from the past; it is the capital of ancient Cappadocia, even though Nevşehir is the first place that comes up to mind when Cappadocia is mentioned, due to the tourism policies. Gesi is located near to this city, of which the ancient name was Caesarea, and represents one of the locations with ancient city ruins, therefore emphasizing the historical identity of the city. Gesi cave dwellings, established in valley sides, are different from the similar examples of Efkere, Gürpınar, Kayabağ (Darsiyak) and Güzelköy (Nize), and also presents dovecotes which are unique to the region.

Gesi Valley has the typical characteristics of the geology and morphology of the Cappadocia, formed by the dominance of the volcanoes, where one of the tiny streams of Kızılırmak passes (Imamoğlu *et al.*, 2005). These soft rocks have played an important role in the formation of rock-cut dwellings, as in Cappadocia.

History of Dovecotes and Cave Dwellings

Early examples of bird houses as a part of Turkish culture date back to the 15th century. On the other hand, it had taken three centuries to gain perfection,



Fig. 1: location map.
Fig. 1: inquadramento dell'area.

and master pieces of these traditional structures have built in 18th and 19th centuries (Erman, 2014). The basic aim of these structures was to protect the birds from attacks by people and animals, and also from bad weather conditions (Özen, 2012). These structures generally reflect the stonemasonry culture of that period; they have stone carved small bird houses placed into the wall textures, and are very different from the structures built as dovecotes, both as for architecture and purpose of building (Erman, 2014). Dovecotes in several regions of Turkey such as Kayseri, Nevşehir and Diyarbakır are built as independent structures with the aim of using the doves, not protecting them (Özen, 2012). The first time they appeared in Cappadocia is not known exactly, but it is certainly known that the main income source for the people in Kayseri was the trade of local agricultural products in 19th century, and that the dovecotes were used to provide the important element named *koğa* (dove fertilizer) in the cultivation of these products (Iscen, 2007). These structures shed light to the socio-economic and cultural structure of the people in that period.
Some resources indicate that both Seljuk and Ottoman states used doves, along with *koğa* production, for sending messages as they can pass long distances and be loyal to their owners (Özen, 2012). Other sources argue that some doves were eaten and their feathers used as filling material in home textile products, as



Fig. 2: general view of Gesi cave dwellings and of a dovecote on top of the hill (photo: A. Yamac).
Fig. 2: vista generale delle abitazioni rupestri di Gesi e di una piccionaia sulla cima della collina (foto: A. Yamac).



Fig. 3: frescoes in a church of Gesi (photo: A. Yamac).
Fig. 3: affreschi in una chiesa di Gesi (foto: A. Yamac).

they are strong insulators (Imamoğlu *et al.*, 2005). In addition, dove fertilizers were used in the production of gunpowder. Dove cultivation still continues nowadays.
Beside dovecotes, there is another important cultural heritage in Anatolia. The older dwellers of this land started a tradition to continue for centuries, by digging the rock and living in it. The date of first appearance is not known exactly, but it is assumed that the date of cave dwellings goes back to the 11th century. With Cappadocia as the forerunner, these structures can also be seen in Marmara region and Eastern Anatolia, and have been used for religious rituals, shelter and hiding, to keep the cheese, and to store vegetables and fruits. Cave dwellings in Frigian Valley have generally been used as churches, mosques and graves, whilst those in Cappadocia have also been used as shelters and for settlement. On the other hand, some of these structures are today used as lemon storages or as sheepfolds.
It is obvious that these structures carved on the valley walls in Kayseri are used for settlement, as well as those in the Gesi Valley.

Structural Properties of Dovecotes and Cave Dwellings

Different cave dwellings can be found in different regions of Turkey, as products of different civilizations and cultures. Cave dwellings are generally very similar,

except for some differences in architectural details. They can be classified into a few groups in terms of the way they are used and the general design. Cave dwellings are usually dug on the walls of valleys or on the slopes, as a single room or several rooms, with connections expanded into the main rock. They can be seen as a single layer, and sometimes as two or three storeys connected to each other. The difference of these structures from the underground cities is that they have windows facing outside, generally placed at the surface.

With the exception of those cave dwellings that were dug for special purposes, they have typically no frescos or stonemasonry, but are plain and designed very similar to modern houses. These structures are generally established from one or interconnected two rooms with windows; sometimes, a few small rooms were added to those. These rooms may also contain little holes on the ground used as storage or stoves, shelves carved on the walls and suspension handles. Some types of these cave dwellings were built as storage rooms or stables.

The cave dwellings at Gesi are settled on the slopes as two or three sets, and some of them have steps reaching to the door (Fig. 2). This rock settlement has a church of which the frescoes are protected up to date (Figs. 3 and 4). The church has a dome ceiling and an altar (Fig. 5); through a corridor, a second building with wider and higher ceiling is reached. This church has at least two graves carved on the ground. There is another building which looks like church from its architecture. These structures are the only relatively ornate ones. Common characteristic of all these rock settlements are the niches carved as quarter squares on their walls for the doves. Another common characteristic is represented by the later realization of dove chimneys.

Gesi dovecotes have a unique and different architectural structure when compared with the dovecotes architecture in Turkey and neighbouring countries. For instance, the dovecotes in Esfahan, Iran are towers with their internal walls covered by niches, and opened at the top (Amirkhani *et al.*, 2009); in Diyarbakir region, Turkey, they are buildings with four squares named as *"boranhane"* and with several holes close to the roof to help doves enter easily (Bekleyen, 2007). In the nearby town of Kayseri, Nevşehir, the structure is completely different: buildings with niches or small holes carved on the walls of chambers built in the rocks or directly on the surfaces of the rocks, and decorated by designs made with a paint a kind of mixture of soil and mud named *yoşa* and a handmade gypsum plaster made mixing egg's white and plant extracts (Gülyaz, 1995).

Apart from these different structural examples, Gesi dovecotes, numbered as 142 in some resources, have a mixed structure with some of them carved into the rock and some built at the surface (Büyükmihçı, 2006). The dovecotes can be examined in two sections.

The first section is the part at the surface, built as stone woven chimneys, 2-3 m high and 1-2 m wide. They can be grouped in three categories such as four squares, half circle, and circle shaped ones. The cornered ones are squares or rectangles. In all three types, the opening of the chimneys are built as horizontal and sometimes



Fig. 4: another piece of fresco in the same church (photo: A. Yamac).

Fig. 4: un altro frammento di affresco nella stessa chiesa (foto: A. Yamac).

dip in the same direction as the slope, through steps or, in other cases, by cutting the stones directly. The construction techniques of the aforementioned chimneys are also different: some are built by putting stones one on top the other without any cement as some of them are bounded stone walls. Some of the walling stones have decoration on chimneys or vaults for doves, but some of them do not (Fig. 6). These architectural differences give the impression that the buildings were built in different periods. The second section consists of the rooms covered by niches with quarter circles, with 20-25 cm height and 15-20 cm diameters, and located underground. The architecture of these rooms is grouped in two types: the first one is the simple room built as a dovecote. These structures have horizontal and short corridors going inside through the slope. The corridors allow the owner of the dovecote to enter in, at the same time protecting the doves and their fertilizers from the external factors (Fig. 7). The second group covers the cave dwellings which have been modified and turned into the underground room of a dovecote (Fig. 8).

What makes this valley interesting is the architecture of the dovecotes having this second type underground section. Dovecotes with the first type of underground sections can be see in a few valleys in Kayseri; the



Fig. 5: church of Gesi – Degirmendere Valley (photo: A. Yamac).
Fig. 5: chiesa di Gesi - Valle di Degirmendere (Foto: A. Yamac).

ones in the second group, established on an older cave dwelling by building a chimney on top of it later, are unique to this valley, as far as it is known. Even though the architectural forms are different, two buildings have similarities in basic elements and functions. While the size of the single rooms as dovecote structure vary between 6-13 square meters and 4-6 m of height, those built as a cave vary a lot. The heights of the second group change between 2,5 and 6 m, and their area cannot be generalized. The first type is usually established from one or two interconnected rooms, whilst the second type has one, two, three or even more interconnected rooms. In both examples we see a chimney section for the doves to enter in and go out, an underground section with walls covered by high-ceiling roosts, probably where the doves could fly and the fertilizers be collected, and a corridor through which the underground section can be accessed. In modified rooms, there is a door instead of this corridor.

Conclusions

Within the scope of the Project executed by OBRUK Cave Research Group in partnership with Kayseri Municipality and CEKUL Foundation, the first mapping of the Gesi dovecotes was put into practice. Data collected during the mapping, covering all the dovecotes in the valley and also other independent cave dwellings, are presented in this article. Recognition of the structures unique to this region, and protection of those from possible outcomes such as downfall or ravage, as it was witnessed during this research, can only be possible with this type of studies. This approach should not be limited to Kayseri, but rather it should become widespread in Turkey, aimed at transferring the many cultural heritages like Gesi to the future generations.

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Fig. 6: general view of dovecotes on the slopes of Gesi – Degirmendere Valley (photo: A. Yamac).
Fig. 6: vista generale delle piccionaie sulle pendici di Gesi - Valle di Degirmendere (foto: A. Yamac).

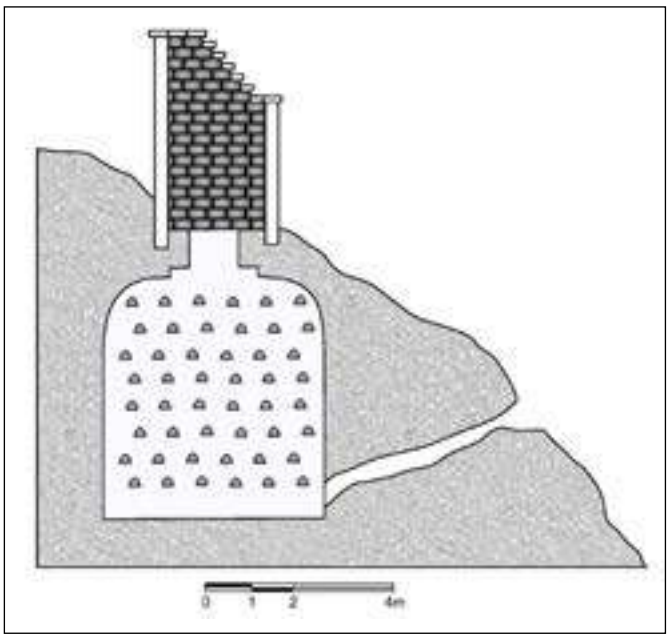


Fig. 7: sketch profile of a dovecote (drawing: E. Tok).
Fig. 7: schizzo della sezione di una piccionaia (elaborazione: E. Tok).

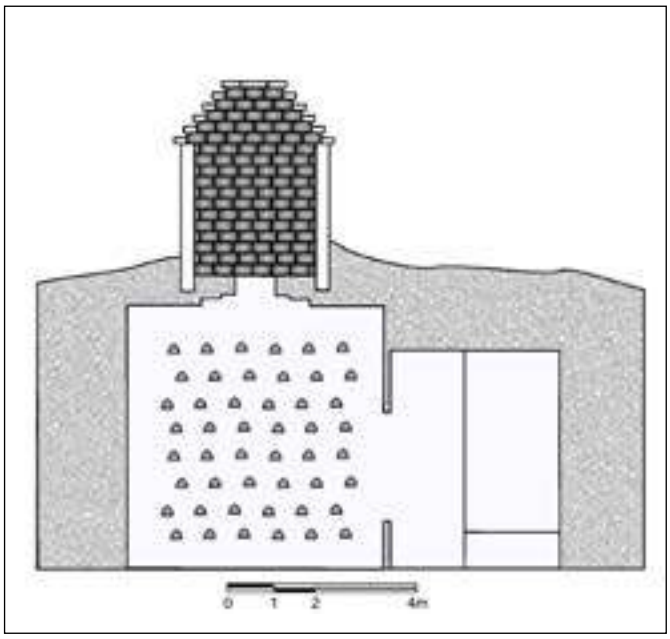


Fig. 8: sketch profile of a cave dwelling transformed to a dovecote (drawing: E. Tok).
Fig. 8: schizzo della sezione di una abitazione rupestre trasformata in una piccionaia (elaborazione: E. Tok).

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