Underground Settlements and Cave Dwellings of Agirnas Village, Kayseri (Southeast Turkey)

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Abstract

Central Anatolia had been affected by the intensive volcanic activities which began 10 million years ago. That eruption phase, which continued even until historical times, piled up more than 100 m of tuff and ignimbrite around Cappadocia. The volcanic rocks were dug by the local people and a great variety of underground settlements were built into the rocks. Antique Caesarea which is known as Kayseri today was the capital of ancient Cappadocia; its underground structures, churches, cave dwellings of Kayseri have not been extensively investigated yet. Around Caesarea, which had been the cradle of Christianity in Anatolia, there is an immense amount of cave dwellings and underground structures. Agirnas is a small village, 15 km east of Caesarea. Establishment date of the village, which is the birthplace of Sinan, the most important architect of the Ottoman Empire during the 16 century, is unknown. Underground of this village is like a cobweb, nearly all the underground shelters below the old houses are interconnected to each other. In addition to this gigantic underground structural system of Agirnas Village, there are tens of cave dwellings in Akbin Valley, 700 meters west of the village. It is thought that some of these structures, dug in the walls of the valley which continues from Agirnas to Dimitri Village for 3 km, were built as Roman rock graves. It is not possible to determine the date and aim of the original dwellings due to their continuous usage for centuries by re-designing, and the destruction caused by the erosions on the valley walls.

As OBRUK Cave Research Group, our research within the framework of "Kayseri Underground Structures Inventory Project" started with the underground settlements in the village. Even though it is not possible to determine the first construction date, it is obvious that this structural complex is more than 500 years old and it shows us that the village has a gigantic underground structure dug below the houses with a purpose of defense. Then we continue with Akbin Valley Cave Dwellings survey. We present here a brief conclusion about the hypogea of this village, describing the underground sites and cave dwellings of Agirnas Village and their historical transformation of usage during the centuries.

Keywords: Kayseri, Agirnas Village, underground settlements, cave dwellings.

1. INTRODUCTION

Following the signing of the protocol concerning the surveying, mapping and inventorying of the underground structures of Kayseri between the Kayseri Municipality, ÇEKUL Foundation and OBRUK Cave Research Group, we have started our study in this region in January 2014. The results of the first six studies conducted until June 2014 were announced through the "First Preliminary Report", which included 14 different underground sites and cave dwelling settlements that were identified, investigated and mapped in Kayseri. Many underground settlements that were never mentioned in any sources and some old rock dwellings located in the valleys near Kayseri that were not previously investigated were discovered, investigated and mapped during these studies. The other five studies in June 2014 completely focused on the Agirnas Village (Fig. 1). There was a veritable underground complex under this settlement. In addition to these underground structures located under and near Agirnas Village, the walls of the Akbin Valley that reached from 500 m southeast of this settlement to the Turan Village were full of rock dwellings.

Figure 1: Location map showing the general area of exploration

Figure 2: Surveying in the second underground structure of Mimar Sinan Underground City

The results of these five studies were published as the "Second Preliminary Report". In this study that only includes Agirnas Village and its surroundings, we describe the four underground settlements and the cave dwelling village.

2. AGIRNAS VILLAGE EXPLORATIONS:

2.1 Mimar Sinan Underground City

In Agirnas, a very large underground structure exists under the house in which Sinan, the most important architect of the Ottoman Empire, was born, and which serves as a museum today [Necipoglu, 2010].

The restoration of the house was conducted between 2006 and 2008 [Sozen, 2004]. Some of the underground structures under the house were also cleaned, organized and opened to visitors during these works. This organization work showed that the underground city did not only encompass the space below Mimar Sinan's (Sinan the Architect) house, but all the houses in Agirnas were connected through an underground network of structures. In time, many homeowners nearby have walled the connection tunnels with stones, to prevent access to their houses from underground.

The underground structure complex under Sinan's house is spread over a total area of 1.850 m^2. It is definite that this whole structure was a single underground settlement but, due to recent blockings, it becomes four separate structures (Fig. 2). On the other hand, the fact that even today, the first and fourth of these structures continues under the neighboring houses and have many exit points to the surface is almost the proof of the very complicated underground network that existed in Agirnas many centuries ago.

The presence of four millstone doors, three of them *in situ* (Fig. 3) in the fourth underground structure suggests that the structure was built, at least for some time, for defensive purposes. However, these underground structures have lost their defensive purposes in time, and underwent major structural changes.

The first underground structure adjacent to the museum-house is reached through a large room supported by stone arches. This underground room with a barrel vault roof, frequently encountered in many places of this structure and under some houses nearby, is probably one of the oldest structures of this part of the village. These first underground settlements continue to the east through different rooms and some of them reach the neighboring houses through tunnels, partly closed by stones.

The largest and most important of the underground structures located under Mimar Sinan's house is the fourth structure. South of this entrance, in a chamber with a barrel vault roof, there are furnaces which are thought to be an iron foundry.

The structure continues eastward behind the foundry and reaches the front street, through another house. The structure was built in two stories up to this point, and opened up for tourism. Beyond this point, it continues below the houses nearby through a small connection. These parts of the underground city are not cleaned, and more interestingly, some underground structures are still being used by those living in nearby houses. The last gallery to the east is filled with mortar and another millstone door here emphasizes the initial purpose of this structure (Fig. 4).

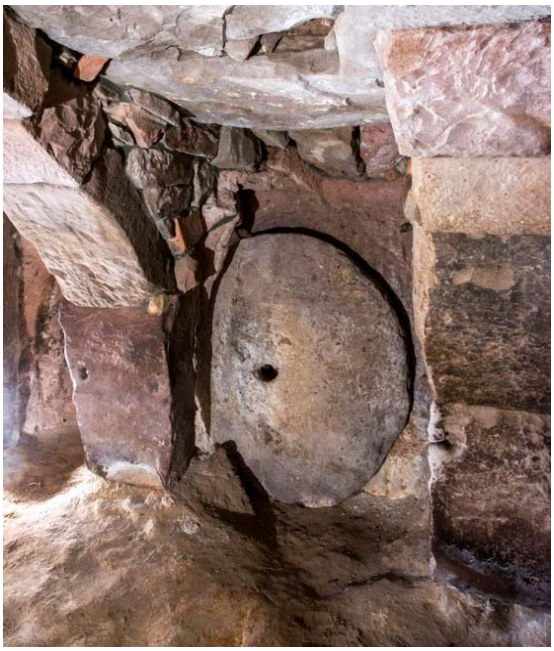

Figure 3: One of the *in situ* stone mill doors of Mimar Sinan Underground City

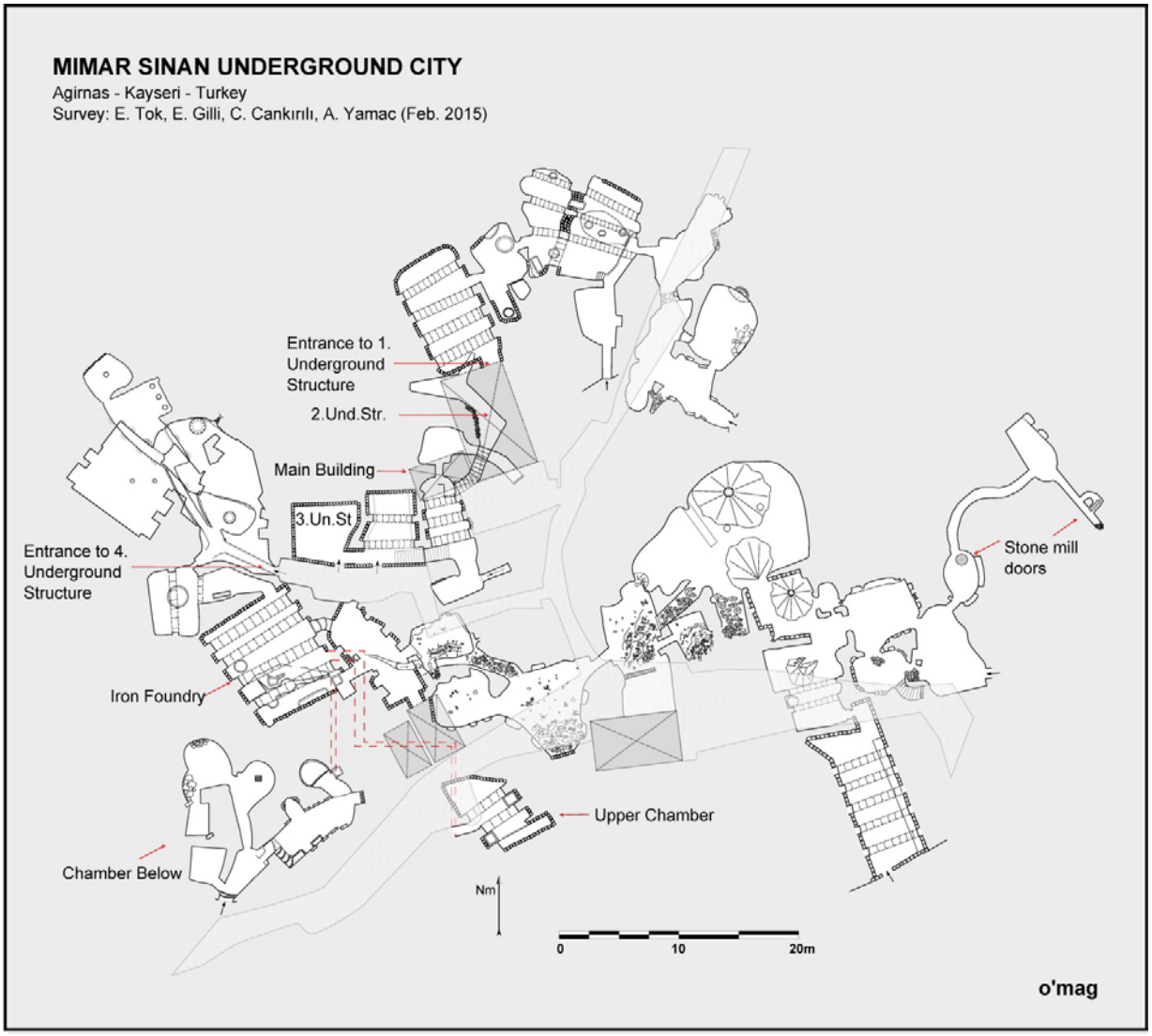

Figure 4: Mimar Sinan Underground site Complex. Note four different underground structures

Figure 5: One of the large chambers in the southernmost part of Agirnas Underground site

2.2 Agirnas Underground Site

We have conducted the detailed survey and mapping of this structure, which is located on the eastern cliff, at the entry to Agirnas, and that is open to tourism.

Agirnas Underground Site is carved in a rocky cliff located about 200 m to the south of Agirnas. It has the typical Cappadocian-style defense structure architecture, complete with its small church at the entrance, its supply stores, millstone doors and living quarters [Yorukoglu, 1990].

The millstone doors in the tunnels right behind the church show that the church was also being used in normal times. The 24 meters long and sometimes 4 meters high large hall reached from the eastern side of the church, exhibits very impressive craftsmanship.

Another entry to the northeast of the hall was closed, but the millstone used to defend the entrance is still in place. The main tunnel that continues for 60 meters toward the southeast of the hall contains a total of 11 living quarters / storage rooms. All of these rooms are so large and spacious that they cannot be compared to other Cappadocian underground sites (Fig. 5).

Another door located almost in the middle of the tunnel and that opened to the surface, is closed by a stone wall. Although the millstone door used to defend the entrance, 5 meters inside this entrance is not in place, the operation room containing the door is evident. Another entry/exit point and millstone door is present in the southeast of the underground site (Fig. 6).

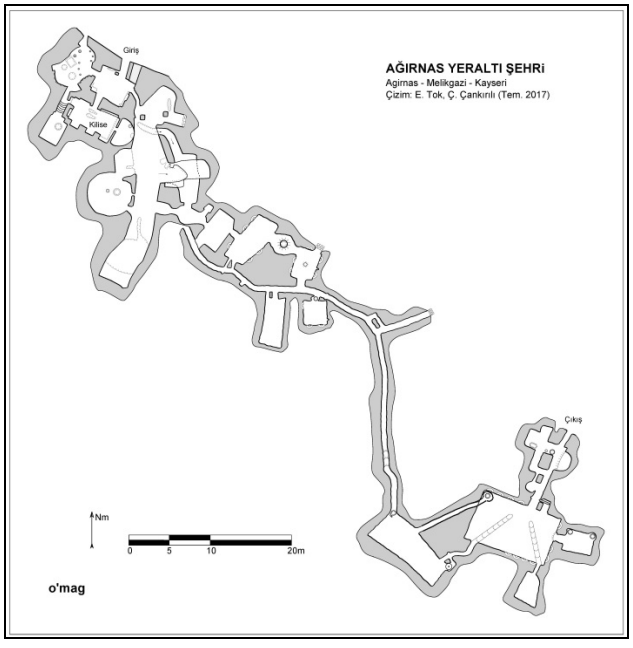

Figure 6: Agirnas Underground Site

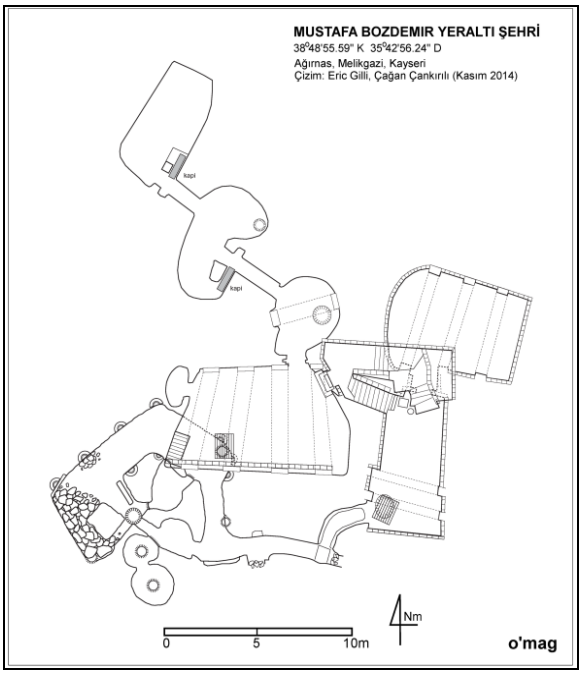

Figure 7: Mustafa Bozdemir Underground Site

2.3 Mustafa Bozdemir Underground Site

This structure which is located only 100 m from the Sinan the Architect's House in Agirnas, is located below Mustafa Bozdemir's house. This structure (Fig. 7), cleaned and opened for tourism by the house's owner, has been measured and mapped by our group. As explained above, Mustafa Bozdemir Underground Site is a small part of the defensive structures complex that extensively develops below Agirnas. This defensive structure probably lost its initial purpose after the 12th-13th centuries, and was used as a warehouse, barn, etc. in the following period.

During these re-adaptation works, the connection tunnels that reached under the neighboring houses were walled with stones. As we have seen in Sinan, the Architect's Underground Site, this structure also contains large halls that underwent serious architectural changes in time. The three-barrel vaulted, high ceiling halls at the main entrance and to the west of this entrance are very similar to those previously described. The large halls located over the defensive, stone-doored lower parts of the structure may be thought to be used for daily life.

2.4 Subasi Underground Site

This structure is located in the Subasi Neighborhood of Agirnas, and is one of the most interesting and different underground settlements in the region. The structure is located in a desolate plain that rises towards the Koramaz Mountain, about 2 km to the northeast of Subasi Neighborhood. It can be stated that this defensive structure is very similar to the Doganli Underground Site, which is also located on a desolate plain 2 km outside the Doganli Village.

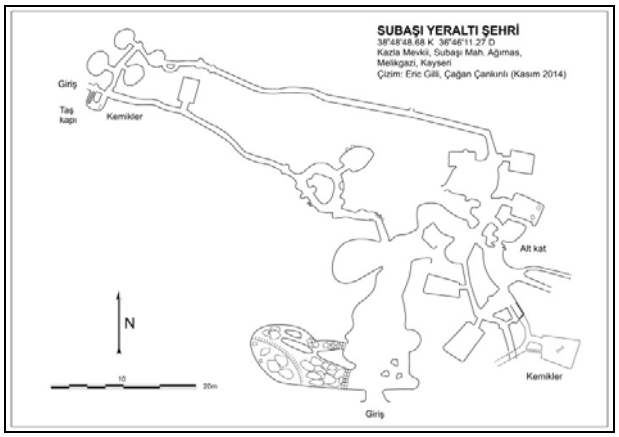

Figure 8: Subasi Underground Site

On the other hand, architecturally, the Subasi Underground Site is very different from the defensive underground structures that were investigated by our group until now. This underground settlement carved inside ignimbrite, and that is revealed as a small hill over ground, has three entrances, one of which was opened by a collapse.

Although the main entrance does not resemble the entrance of an underground settlement, but rather the entrance to a house or a barn, it might have been used to hide the defensive structure. Although it looks very simple on the map (Fig. 8), the low-ceiling, interconnected rooms give this structure the characteristics of a real labyrinth.

The underground site has a 4 room lower floor that is accessed by a short staircase in the eastern part, but all the tunnels in this lower floor are filled with earth. Although a defensive millstone door is in place at the northwest entrance, the millstone doors of the northern and southern tunnels are not, even though their shafts are apparent. It is possible that there was an old settlement, which has left no trace of its existence, near the Subasi Underground Site.

2.5 Akbin Cave Dwellings

Akbin Valley starts about 500 m to the west of Agirnas, and reaches the Turan (Dimitri) village [Comert, 2008]. It was formed as a result of the erosion of the Pliocene pyroclastic and tuffaeous deposits by the River Akbin. A very large settlement carved into the rocks of the western wall of this valley was investigated, measured and mapped by our group. Similar rock dwellings are encountered all over Cappadocia.

Such rock dwellings exist in valleys such as Degirmendere, Belagası, Erdemli, Derevenk, Turan and Güneşli near Kayseri. On the other hand, the rock dwellings of Agirnas/Akbin Valley are different from all the other structures mentioned above.

The first and most important difference is the date of these rock dwellings in Akbin Valley. All of the front row of houses that are under protection in Agirnas today are dated to 1500s, and even before.

The Kayseri Cadastral Records Book dated 1500, states that there are 56 houses in this village. In the Akbin Valley, 97 structures have been identified, 4 of them churches. We do not think that it is possible that two large settlements, 500 m apart were simultaneously settled. In this case, the rock dwellings in Akbin Valley should have been abandoned much earlier than the 15th, or even the 14th century.

However, it is known that the other rock dwellings in Kayseri, for example Belagasi or Turan, were in use until the 19th and 20th centuries. Another important difference that sets the Akbin Valley structures apart from the other rock structures in Kayseri, is the fact that there are Roman graves that are very obviously carved. Most of these structures are currently only identifiable through the carving style of their entrance doors (Fig. 9). While the internal structures of the tomb rooms were changed through time, some rooms still contain klines. Although most of the structures in Akbin Valley are residences or barns/cowsheds, at least 4 churches and 4 defensive tunnels/underground cities were identified.

Figure 9: One of the 97 cave dwellings of Akbin Valley, possibly a Roman grave previously

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