

Underground Cities of Kayseri (Turkey)

Ali Yamaç[1], Ezgi Tok[1,2], Betul Filikci[1,2]

1) OBRUK Cave Research Group, ayamac@gmail.com, 2) ITU, Istanbul Technical University, EURASIA Earth Sciences Institute

Introduction

Almost all the underground cities in Anatolia are very unique to antique Cappadocia region, which includes the provinces of Nevsehir, Aksaray and Kayseri. These defensive settlements dug into soft tuff rocks contain long tunnels and living areas protected by mill stone doors to defend the local people in case of attack. Approximately 200 underground cities have been found in Anatolia so far, 90 % of them in Cappadocia. The academic articles about these structures are very limited and only a few inventory works had been done (BIXIO, 2002; BIXIO et al, 2012; AYHAN, 2004). We have started to investigate the underground settlements and rock dwellings around Kayseri (Fig. 1) according to a protocol we have signed with Kayseri Municipality and CEKUL Trust in January 2014. Within the following months, eight underground cities and three underground structures with uncertain usage were found, explored and surveyed in the region.



Fig. 1. Location map

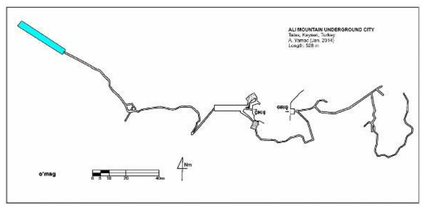


Fig. 2. Ali Dagi Underground City map

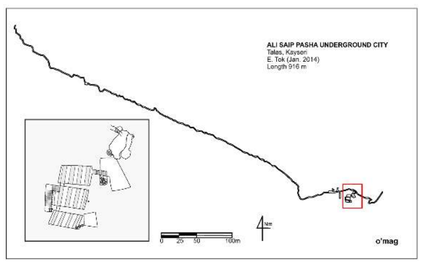


Fig. 3. Ali Saip Pasha Underground City map



Fig. 4. Google Earth view of Degirmenderesi Valley and 2 underground cities

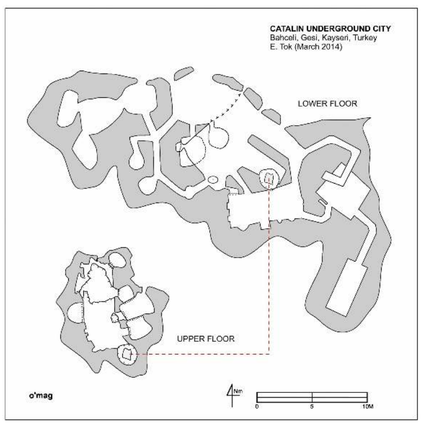


Fig. 5. Catalin Underground City map

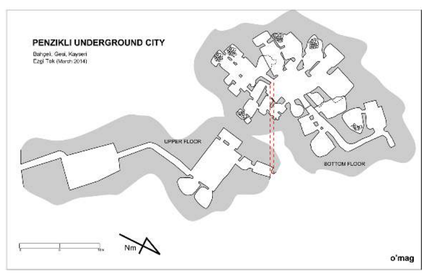


Fig. 6. Penzikli Underground City map

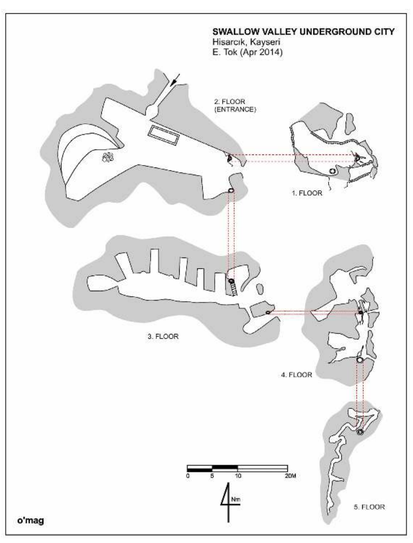


Fig. 7. Swallow ValleyUnderground City map

Ali Dagi Underground City

This structure is located in Talas province of Kayseri, is 528 m-long and, when compared with the others known, does not show the features of an "underground city". Even if we accept that the stone mill door behind the entrance of the gallery was used to defend that passage, there is a single chamber after this gallery and a large cistern reached after a 180 m-long tunnel (Fig. 2).

Ali Saip Pasha Underground City

This underground structure is also in Talas province and, as the previous one, whether it is an underground city or not is controversial. This structure can be reached through the basement of a 19. century house, connects to two separate and very small residential areas to E and W, and consists of a single tunnel. Total length of the tunnel is 916 meters, width changes between 60–85 cm. and height between 150-210 cm (Fig. 3).

Catalin Underground City

This underground city is located on the Gesi province, at the western wall of Degirmenderesi Valley, built as three floors in a narrow area. The total structural area of the three floors of the underground city is 621 m^2, with 18 rooms in the structure. A millstone door used to close the tunnel on the W side of second chamber is at the entrance. On the eastern section, a branch tunnel was left incompleted, apparently reaching the upper floor. Within the same section, at the lower floor, two grand chambers which can be reached after a millstone door are interesting structural features of this underground city. The main structure was probably established to protect a small number of people against local raids (Fig's. 4 and 5).

Penzikli Underground City

This underground city is located on the opposite of Catalin Underground City, at the E slope of the same valley; it has a narrow entrance which has been opened later. Penzikli Underground City is different from its neighbor underground city, and from all others surveyed in Kayseri. Following the 14 m-long corridor after the entrance, we found 22 rooms on two storeys. Most rooms are facing two separate large chambers and some sidewalls were broken to extend the rooms but never used later. With broken sidewalls and new connections established, this underground city has a maze-like plan, with a total area of 725 m^2 (Fig 6).

Swallow Valley Underground City

This underground city, named as Asarkaya in YORUKOGLU 1990 and BIXIO et al 2012, is located on the road from Kayseri to Mount Argeus. It is a five-storey rock settlement with a total length of 505 m and -56 m deep. The deepest gallery after the fifth storey, which is assumed to reach the valley floor, is clogged.

The lack of defensive doors and the existence of windows directly opening to the valley let us assume that the structure was not built for defensive purposes, but for settlement. However; structural characteristics like an entrance reachable through a steep slope, a very large chamber at the first storey, the existence of several rooms in the chamber of the second storey, show that this structure is quite different from the many rock settlements around Kayseri (Fig. 7).

Otedere Valley Underground City no. 1

This structure is probably one of the most interesting underground structures of Kayseri. It has many windowed chambers on its steep rock side which frontages Otedere Valley, and shows a 4-5 m-high stone wall on both sides

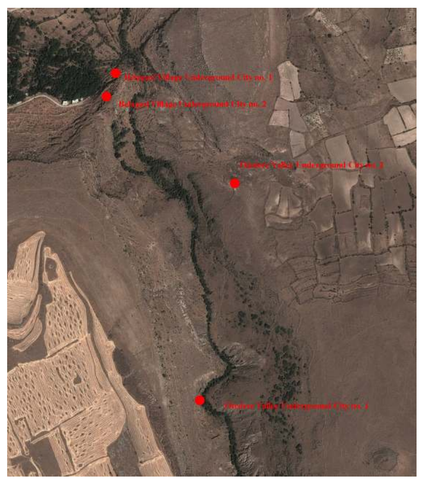


Fig. 8. Google Earth view of Otedere Valley

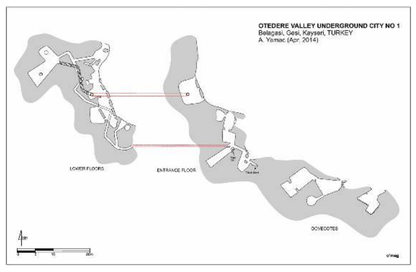


Fig. 9. Otedere Valley Underground City no 1 map

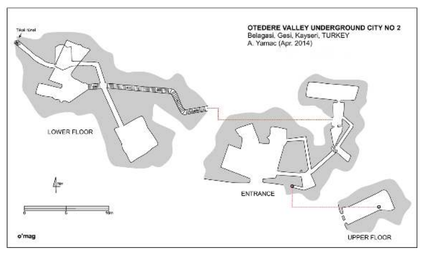


Fig. 10. Otedere Valley Underground City no 1 map

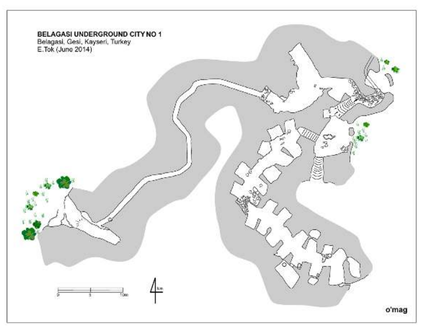


Fig. 11. Belagasi Village Underground City no 1 map

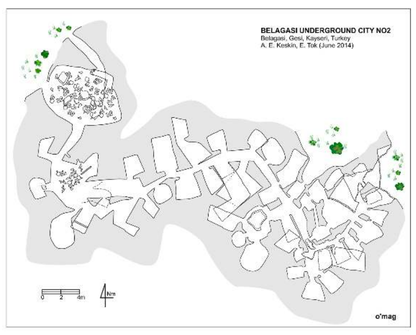


Fig. 12. Belagasi Village Underground City no 2 map

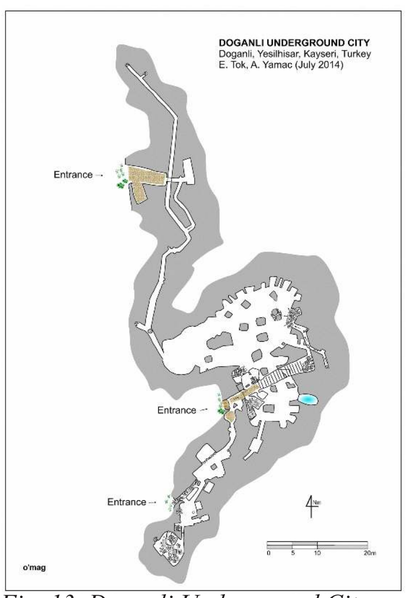


Fig. 13. Doganli Underground City map

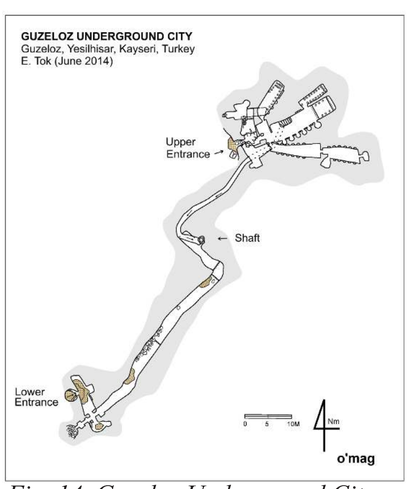


Fig. 14. Guzeloz Underground City map

towards the slope (Fig. 8). Along with the tunnels and millstone doors, those high stone walls on the slope make us assume that the structure was transformed into a cliff dwelling from an underground settlement. The frontage of this is completely open to Otedere Valley. With its interesting architecture this structure is different from all the underground cities known. Looking as a whole, we can think that this underground city began to be dug but was later left aside and then, some of its rooms were used as settlements. (Fig. 9)

Otedere Valley Underground City no. 2

Entrance to this underground city is through a tunnel located at the S wall of a rock dwelling house. At the end of the tunnel there is a 6x2 m size chamber, followed by an in situ millstone door. Before this chamber, the tunnel develops to the E by straight carved stairs for 13 meters. With this landing ending at a crossroads, three different tunnels bring to three chambers. The NW and the SE chambers have a plain architecture; the western side has a grand chamber reached by a short stair containing a clogged communication hole and a tunnel stuck by debris after 8 meters (Fig. 10).

Belagasi Village Underground cities no. 1 and 2

On the northern opening of the Otedere Valley, 10 km from Kayseri, there is an abandoned old Armenian cave dwelling village. Two of the rock settlements in the village are connected to two different underground cities. These two structures were built for defensive purposes, and they both have millstones at the entrances. Belagasi Underground City no. 1's main tunnel develops for 42 m, opening to a large chamber. After this room, there are two other chambers, both facing the Otedere Valley. The structure behind these chambers is astonishing: on both the sides of a 34 m-long corridor, there are 24 small rooms (Fig. 11).

The main tunnel of Belagasi Underground City no. 2 begins from the back wall of a rock house 40 m away from the first underground city. The entrance is protected by a stone door and connected to countless chambers. Structurally different from the first one, those chambers are carved on top of each other, located at both sides of the tunnel. Belagasi Underground City no. 2 has a total of 52 small chambers and living areas, the highest number for all the known underground cities of Turkey (Fig. 12).

Doganlı (40 Steps) Underground City

This underground city's name (40 Steps) comes from the stairs carved on the rocks at the main entrance with 38° of slope. The main chamber reached after the entrance is very impressive: supported with 15 pillars, is larger than all known underground chambers of Turkey, with a total area of 510 m^2. There are two tunnels on each side of this chamber, one of them separated into branches, is 74 m-long and then is clogged. All tunnel connections that reach the surface have been defended by millstone doors. There is also a small church inside the southern chamber (Fig. 13).

Guzeloz Underground City

The entrance of the underground city on the 80 m NE of the old settlement of Guzeloz Village. The double tunnel following lower entrance room is architecturally very interesting. One of the tunnels is protected by huge millstone doors; continuing to the SW, and most probably to the village below the slope, it is clogged after a short distance. The other large tunnel continues for 42 meters. Near to the end of this tunnel a shaft with a height of 9 meters reaches to upper storey. All storages and rooms of Guzeloz Underground City are located in the upper storey, where there are seven rooms of which five are possibly used as storages (Fig. 14).

Conclusions

There are tens of underground cities dug into the tuffaceus rock in Kayseri, the capital of antique Cappadocia. Different from its neighbor Urgup-Goreme, these underground cities are not well known and no research has ever been conducted so far. With this project, many cave dwellings and several underground cities were surveyed, and here described in a comprehensive way. In addition to the 11 underground cities, we had been informed that there are at least 19 more in the province. We hope that, within this project, at least some of those historical heritages will be cleaned, excavated and protected.