



Underground cities of ancient Turkey

The Göreme Valley in Cappadocia sits on a high volcanic plateau in central Turkey and is home to at least 200 underground cities, churches and other rock-cut structures. At the crossroads of numerous ancient empires, this area witnessed many invasions, from Persians to Mongols and Seljuk Turks, forcing the inhabitants to build underground refuges while their surface towns were being plundered. The soft, volcanic rock made tunnelling easy with simple tools, enabling some underground cities like Derinkuyu and Kaymaklı to descend to eight levels.

The origins of the oldest subterranean structures are shrouded in mystery, but are believed to have been dug by either the Hittites in the 2nd millennium BCE, or the Phrygians in the 1st millennium BCE. From early Christian times, persecuted Greek-speaking religious communities were forced to periodically hide underground from the pagan Romans and later from the Muslim Seljuk and Ottoman Turks. They were responsible for the beautifully illustrated cave churches as well as some of the underground cities.

By Karen Mutton © 2019

Derinkuyu Underground City

The famous Derinkuyu Underground City was first discovered in 1963, when a surface house was renovated and a wall caved in to reveal an underground room that led to a subterranean passage. The workers found that it led further into a deep labyrinth which was 18 storeys deep, carved from soft tufa stone to a depth of up to 260 feet (~80 m). Researchers found kitchens, bedrooms, food storage rooms, oil and wine presses, wells, armouries, schools, tombs and domestic animal stables. More than fifty ventilation shafts brought in air from above, while thousands of smaller ducts distributed that air throughout the entire city.

Because it is stone and non-organic, it is difficult to accurately date the underground city but it possibly

originated during the Hittite period from 1600 to 1200 BCE. Some experts theorise that the Phrygians built the city when they occupied Anatolia from 1200 to 800 BCE.

The earliest mention of underground cities in Cappadocia came from the Greek historian Xenophon in 370 BCE. In his work, *Anabasis*, he wrote:

"The houses here were underground, with a mouth like that of a well, but spacious below; and while entrances were tunnelled down for the beasts of burden, the human inhabitants descended by a ladder. In the houses were goats, sheep, cattle, fowls, and their young; and all the animals were reared and took their fodder there in the houses."

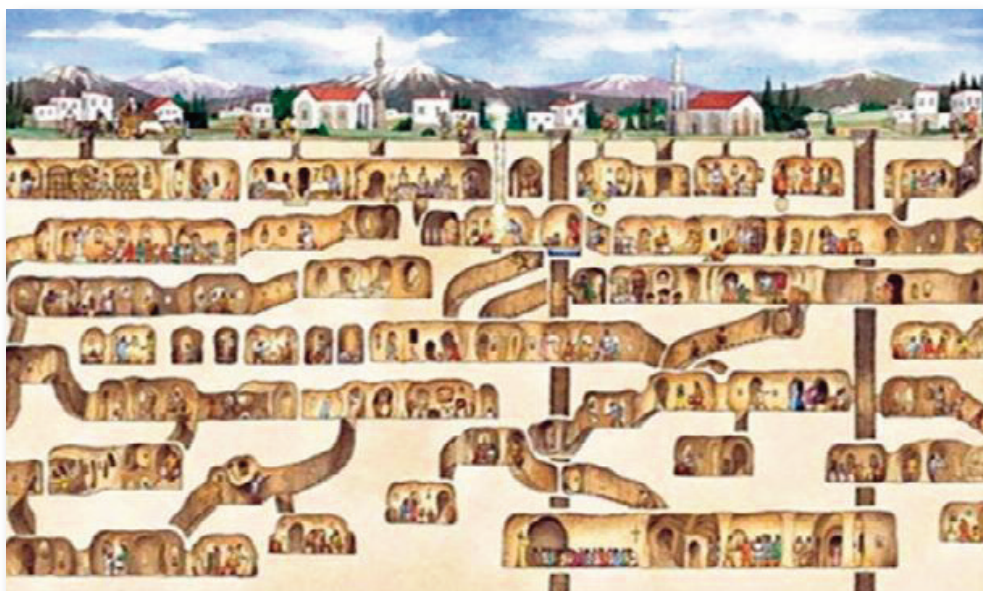
Anatolia has long been a major trade hub between Asia and Europe, and has been invaded and conquered repeatedly by different groups for thousands of years. The Romans conquered the lands of Cappadocia in 17 BCE and made it into a Roman province under Tiberius. In the early days of Christianity, Christian colonies used the underground cities as refuge from Roman persecutions.

After the 7th century CE, Muslims forced Christians once again into hiding, including many Greek Christians who expanded Derinkuyu further during the invasions.

The city was designed with defensive features such as heavy disc-shaped stone doors with a small hole in the centre that rolled across entrances and passages during raids. Because these heavy doors only opened and closed from the inside, it was impossible for invaders to breach the city through them. Each level connected to the next level by a hallway with a similar stone door. Additionally, narrow passages forced people to travel in single file, a deterrent against incoming soldiers.

Derinkuyu had a smart water containment system with wells that did not go to the surface, nor did they link together, which protected inhabitants from invaders who planned to poison the water from outside. One of the main ventilation shafts also served as a large well.

Derinkuyu was once capable of housing as many as 20,000 residents for long periods of time, with 600 entrances and many miles of tunnels connecting it to other underground cities.



Above: Derinkuyu plan. This city contained not only stables, cellars, storage rooms, refectories, churches, wineries etc., but also a large room with a barrel vaulted ceiling on the second floor used as a missionary school. (Image: ancient-origins.net)

Below: Carefully balanced moving stone doors, resembling mill stones, were devised to quickly block the corridors in the event of an attack. (Photo: goreme.com)



Kaymaklı Underground City

Located about eight miles away from Derinkuyu and connected by a tunnel is Kaymaklı Underground City.

The ancient name of this city was Eneğüp and it is likely that it was first built by the Phrygians in the 8th to 7th centuries BCE. Like Derinkuyu, it was primarily used for defence against the same invaders and enemies over the millennia.



A large room in the Kaymaklı Underground City
(Photo: MusikAnimal)

The houses in the village are constructed around nearly one hundred tunnels which are still used today as storage areas and cellars. A stable is located on the first floor as well as a church and living apartments. The second floor has a church with a nave and two apses as well as a baptismal font and living spaces.

Storage, kitchens and wine/olive presses dominate the third floor. A large andesite rock with relief textures was used for cold-forming copper. The 56 holes carved into the stone were created to put copper into each one in order to hammer the ore into place.

Like Derinkuyu, the city was greatly expanded and deepened in the Byzantine era by Greek-speaking Christians who were hiding from both Muslim and Mongol raids. As late as the early 20th century CE, Cappadocian Greeks were still using the cities to escape periodic waves of Ottoman persecution. The tunnels were finally abandoned after 1923 when the Christian inhabitants of Turkey were expelled in the population exchange between Greece and Turkey.

Özkonak Underground City

Özkonak underground city was built into Mt Idis, 14 kilometres (8.7 miles) from Avanos in Nevşehir Province, Central Anatolia.

This city was discovered in 1972 by a local farmer named Latif Acar who uncovered an underground room while trying to figure out where his water was going. Researchers who excavated it discovered a large subterranean city with ten floors at a depth of 40 metres (131 feet). Apparently, this city could house 60,000 people for up to three months.

Özkonak has some unique features such as a pipe communication system reaching each of its levels and a piped ventilation system for every carved room. There were also defensive features such as holes above the tunnels used for dumping hot oil on any enemy who could breach the system.

The city had a water well, winery, ventilation system and moving stone doors.

Belağası Underground City

Belağası underground city was only recently discovered in the Kayseri region by local residents and shepherds. Researchers are examining the site in collaboration with the Kayseri Metropolitan Municipality, Obruk Cave Research Staff and the Foundation for the Protection and Promotion of the Environment and Cultural Heritage (ÇEKÜL) groups which began a project in 2014 to search for and document forgotten underground settlements in Cappadocia.

Unlike other underground cities, Belağası was built horizontally rather than vertically. It has more than 50 chambers and measures 80 metres (262 ft) long. On the surface around the subterranean city, ruins of a church and other structures first alerted researchers to the possibility of underground structures.



Openings to Belağası Underground City in Gesi district, Kayseri Province, Turkey (Photo: Daily Sabah)

Melikgazi Underground City

Melikgazi Underground City in Kayseri was discovered in 2014 when a resident of Melikgazi was cleaning out his basement for renovation.

According to Nüvit Bayar, the Project Director of Guntas, the company responsible for the renovation:

"We thought that there might be storage space for food or a stable beneath the house. But had no idea that it was part of an underground city. The underground city that we found by accident during restoration begins a few meters under the ground and has two levels. There are parts resembling underground remains of settlements in Cappadocia. Wonderful structures emerged everywhere, like an iron workshop and a loft."

The Kayseri Governor's Office and the Culture and Tourism Directorate were notified and gave permission for excavations to continue in order to completely excavate the underground city. They also contributed US\$420,000 towards the excavation.

More than a hundred truckloads of soil have been removed from the underground structure, revealing multiple rooms across several levels.

Nevşehir Underground City

In December 2014, another subterranean city was discovered beneath Nevşehir Fortress and the surrounding area during an urban transformation project carried out by Turkey's Housing Development Administration.

This city is unique in numerous ways. Consisting of seven kilometres (4.3 miles) of tunnels, hidden churches and escape galleries, it is the first known underground city in which people lived permanently.

According to the Hurriyet Daily News:

"Hasan Ünver, the mayor of Nevşehir, where Cappadocia is located, said the new findings at the ancient underground city in the province would rewrite history.

"'When the works are finalized the history of Cappadocia will be rewritten,' said Ünver, adding the findings found during the excavations dated back as [far as] the Hittite era.

"'We have reached significant discoveries; new long tunnels and spaces where people lived all together. Places where linseed oil was produced, chapels and tunnels combining various living spaces in the underground city were found,' said Ünver."

The excavations are under guidance of archaeologist Semih İstanbulluoğlu who believes the city to be over 5,000 years old, making it pre-Hittite. It is also possibly

the largest subterranean settlement in the world with 11 neighbourhoods clustered honeycomb style around the Nevşehir Fortress. High tech geo-radar equipment is now being used to map the exact locations of passageways and chambers, in order to accurately excavate the dwellings.

A church, possibly dating from the 5th century CE, was uncovered from the site in 2016 with unique frescoes of Jesus rising up into the sky and bad souls being killed. The church was in poor condition and filled with dirt, and some frescoes had detached from the walls, while others were intact.

Other underground cities are much smaller and more like large chambers with interconnected rooms. Compared to the more famous cities of Derinkuyu or Kaymaklı, they are not so well known or documented. However, they have been studied by the OBRUK Cave Research Group, ITU (Istanbul Technical University) and EURASIA Earth Sciences Institute.



The following information is from a conference paper, "Underground Cities of Kayseri, Turkey", by Ali Yamaç of OBRUK and Ezgi Tok and Betül Filikci, both of Istanbul Technical University; written in March 2015.

"**Catalin Underground City** in Gesa province was built as three floors in a narrow area with 18 rooms built into the rock with dimensions of 621m² [6,684 ft²]. A rolling millstone closes the tunnel on the west side of the second chamber at the entrance.

"**Penzikli Underground City** is located near Catalin and has as many as 22 rooms which were built facing two separate, large chambers. It was built as a narrow entrance which opens up to a larger space. Total area of this maze-like structure is 725m² [7,803 ft²].

"**Ali Saip Pasha** is small and features two 'residential areas' with a tunnel of 916 metres [.6 mile].



"**Doganli Underground City** is named after 40 steps that were carved into rocks at the main entrance of the city in Kayseri. It has a large chamber that is supported by 15 pillars and has a cistern. The total area of the chamber is 510m² [5,490 ft²] and is flanked by two tunnels, one which is 74 metres [243 feet] long and clogged. The southern chamber features a small church.

"Underground City of Guzeloz has two tunnels leading into the city. One tunnel is protected by a large rolling stone, similar to the ones found in other underground cities. Seven rooms have been found in the upper storey of the city, five of which were probably used for storage.

"Swallow Valley Underground City is a five-storey settlement with a total length of 505m [1,657 ft] and 56m [184 ft] deep. Its main features are five floors vertically carved on a rock wall, with its opening towards the valley. This structure has no defensive doors, with an entrance reached through a very steep slope. With a very large public chamber on the first storey and six different rooms in the chamber of the second storey, it is different from many rock settlements in Kayseri.

"Otedere Valley Underground City 1 has many windowed chambers which look over the valley. Along with tunnels and millstone doors, high stone walls on the slope indicate that the structure was transformed into a cliff dwelling from an underground settlement. There are two tunnels from the entrance room and a large

subterranean chamber supported by pillars.

"Otedere Valley Underground City 2 is reached by a tunnel located at the wall of a rock dwelling house. At the end of the tunnel is a chamber with a millstone door beyond which there are carved stairs. On the lower level 6m [20 ft] below the entrance are three tunnels leading to three chambers. Some of the tunnels and chambers are full of debris."

The conference paper concluded:

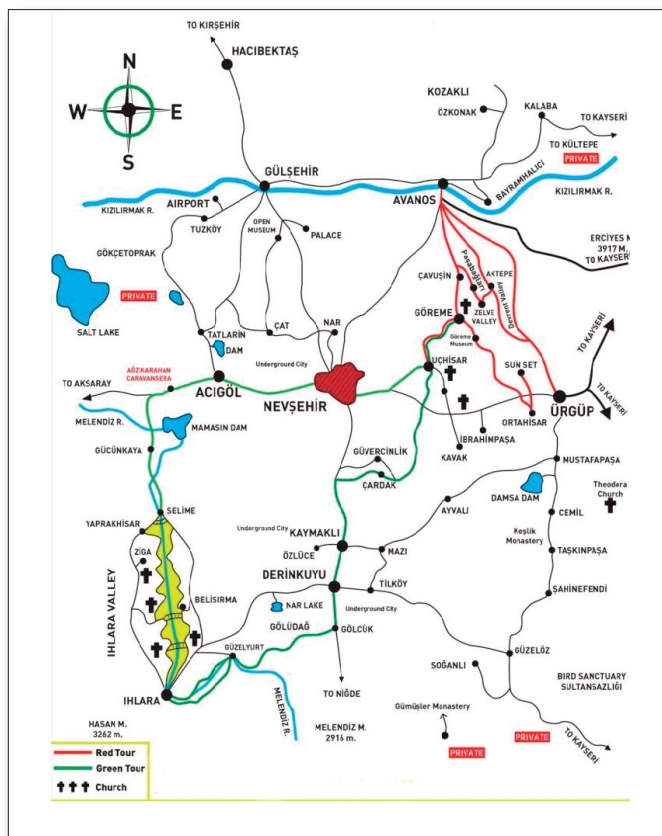
"In addition to the 11 underground cities, we have been informed that there are at least 19 more in the province. We hope that within this project, at least some of those historical heritages will be cleaned, excavated and protected."

Other cities the group has begun to explore are Kirkgöz Underground City and St Mercurius Underground City with a church in the Aksaray district.

St Mercurius is a large underground city which was designed for big groups to live together for extended periods. It has a church with a rock-carved mass graveyard, granaries, air-conditioning, toilet system and water well. A sliding millstone door system exists in each room in all corridors. St Mercurius, as well as Kırkgöz have been opened to tourism.

Trabzon Province Underground City

In January 2018, archaeologists announced the discovery of a 4,000-year-old underground city with strong links to a Byzantine dynasty. It was discovered



during urban transformation works in Turkey's northern Trabzon province.

The city was believed to belong to the Komnenian Dynasty, from 1081 to 1185 during the Byzantine empire.

Furthermore, a newly discovered Greek chapel with beautiful religious paintings has been discovered in a tunnel leading from the historic Sumela monastery in Trabzon.

Gir-Gör is an underground city 80 kilometres (50 miles) from Derinkuyu which was recently rediscovered after village houses suffered flooding. Municipal crews reopened a tunnel which had been closed for safety reasons decades ago and long forgotten by the locals. Inside the tunnel, they found an underground city partially covered in clear water with three floors stretching for five kilometres (three miles). It was comprised of homes, tunnels and places of worship and covered some 1.2 square kilometres (.46 square miles). Apparently the city was rediscovered 25 years ago when a child fell inside the tunnel, but its entrances were covered with soil to prevent further accidents.

About the Author:

Karen Mutton is a retired ancient history teacher and author. She has written books on various ancient history/human origins topics as well as finance (see NexusMagazine.com). Mutton has contributed

numerous articles on these topics to NEXUS over the years and appeared at several NEXUS Conferences. Mutton's current research is on underground archaeology and ancient water technologies. Her latest book, *Subterranean Realms: A Survey of Underground and Rock-Cut Structures in Ancient and Medieval Times* is available as an ebook via kazganymede@yahoo.com.au for USD13.95.

References:

- "Ancient underground city in Cappadocia will 'rewrite history'", Hurriyet Daily News, November 24, 2015 <https://tinyurl.com/y2tjfgpr>
- Ali Yamaç, Ezgi Tok, Betül Filikci, "Underground Cities of Kayseri (Turkey)", Hypogea 2015, Proceedings of international congress of speleology in artificial cavities, Rome, March 11–17, 2015, <https://tinyurl.com/y2hmt8a>
- Alicia McDermott, "Unique underground city adds new direction to the subterranean world of Ancient Turkey", Ancient Origins, June 3, 2017 <https://tinyurl.com/y6l24fky>
- April Holloway, "The ancient underground city discovered beneath a house in Anatolia", Ancient origins, August 25, 2014, <https://tinyurl.com/y4exgreq>
- Live Journal, <https://tinyurl.com/y4z9rmfm>
- Xenophon, *Anabasis*