

Mummy Mystery: Multiple Tombs Hidden in Egypt's Valley of Kings



Multiple tombs lay hidden in Egypt's Valley of the Kings, where royalty were buried more than 3,000 years ago, awaiting discovery, say researchers working on the most extensive exploration of the area in nearly a century.

The hidden treasure may include several small tombs, with the possibility of a big-time tomb holding a royal individual, the archaeologists say.

Egyptian archaeologists excavated the valley, where royalty were buried during the New Kingdom (1550–1070 B.C.), between 2007 and 2010 and worked with the Glen Dash Foundation for Archaeological Research to conduct ground-penetrating radar studies.

The team has already made a number of discoveries in the valley, including a flood control system that the ancient Egyptians created but, mysteriously, failed to maintain. The system was falling apart by the time of King TutAnkhAmun, which damaged many tombs but

appears to have helped protect the famous boy-king's treasures from robbers by sealing his tomb.

The team collected a huge amount of data that will take a long time to analyze properly, wrote Afifi Ghonim, who was the field director of the project, in an email to LiveScience. "The corpus was so extensive it will take years, maybe decades, to fully study and report on," wrote Ghonim, an archaeologist with the Ministry of State for Antiquities in Egypt who is now chief inspector of Giza.

The project is part of "the most extensive exploration in the Valley of the Kings since Howard Carter's time," he said, referring to the Egyptologist whose team discovered King Tut's tomb in 1922.

The search for undiscovered tombs

"The consensus is that there are probably several smaller tombs like the recently found KV 63 and 64 yet to be found. But there is still the possibility of finding a royal tomb," wrote Ghonim in the email.

"The queens of the late Eighteenth Dynasty are missing, as are some pharaohs of the New Kingdom, such as Ramesses VIII."

That sentiment was echoed by the famous, and at times controversial, "The tomb of Thutmose II, not found yet, the tomb of Ramesses VIII is not found yet, all the queens of dynasty 18 [1550-1292 B.C.] were buried in the valley and their tombs not found yet," said Hawass, former minister for antiquities, during the lecture. "This could be another era for archaeology," he added in an interview.

Ghonim said that it is hard to say how many tombs remain undiscovered but it is "more than just a couple."

Locating tombs in the Valley of the



Kings is difficult to do even with ground-penetrating radar, a non-destructive technique in which scientists bounce high-frequency radio waves off the ground and measure the reflected signals to find buried structures. [10 Modern Tools for Indiana Jones]

Radar instruments and related computing power have vastly improved in the last couple of decades, scientists say. Even so, it "is difficult to avoid false positives in a place like the Valley of the Kings. There (are) many faults and natural features

Egyptologist Zahi Hawass at a lecture in Toronto this past summer. Hawass was the leader of the Valley of the Kings team.

that can look like walls and tombs. Our work did help refine the technology for use here and it does have a place."

In one instance, radar work carried out by a previous team suggested that tombs dating from the Amarna period (the period within the New Kingdom in which TutAnkhAmun lived) could be found in a certain area of the main valley. The team excavated the spot but didn't find any tombs.

When the undiscovered tombs — those that do exist — are unearthed, they may not hold their original occupants. For instance, KV 64, a small tomb discovered in 2011 by a University of Basel team, was found to hold a female singer named Nehmes Bastet who lived around 2,800 years ago. She apparently re-used a tomb that was created for an earlier, unknown, occupant.

Still, Ghonim said they could indeed find a tomb whose original occupants are buried within. "It is not impossible however for one or more to be intact," he said. And if they do find such pharaohs, they may also find their brains, as work by Hawass and Dr. Sahar Saleem of Cairo University suggests the Egyptians didn't remove the brains of their dead pharaohs in the mummification process.

An ancient flood control system

While the prospect of new tombs is tantalizing, they are but one of many things the researchers looked for in the valley. Last spring, the researchers gave a taste of what was to come at the Current Research in Egyptology conference at the University of Cambridge.

We "made a number of finds, which we believe will change our understanding of how the ancient Egyptians managed and utilized the site," Ghonim wrote in the email.

The researchers discovered, for instance, the ancient Egyptians created a flood control system in the valley that, for a time, prevented the tombs from being damaged by water and debris.

They detected a deep channel that would have run through the valley about 32 feet (10 meters) below the modern-day surface. As part of their anti-flood measures the Egyptians would have emptied this channel of debris and built side channels that diverted water into it, allowing water and debris to pass through the valley without causing damage. Strangely enough, the ancient Egyptians "for some reason after building it, they let it fall into disrepair rather quickly. By (the) time TutAnkhAmun was buried, flooding events had become a problem again," Ghonim said.

"That was bad for most tombs, but good for TutAnkhAmun since, at least according to one theory, flooding events effectively sealed the tomb and made it inaccessible to later tomb robbers."

Today flood control is still a problem in the Valley of the Kings, and scientists

are looking at ways to protect the tombs.

"There have been many studies recommending what to do, but the need to keep the valley open and the costs involved remain a problem. There's also the need to develop a consensus on such an important thing," Ghonim said.

More discoveries and challenges

Many more finds will be detailed in scientific publications in the future, including the excavation of huts used by the workers who built the tombs and the documentation of graffiti left throughout the valley's history.

One important challenge that Egyptian antiquities in general face is the need to bring tourists back to Egypt. In June, at a lecture at Toronto's Royal Ontario Museum, Hawass explained such tourist money not only helps Egypt's economy but also provides much needed funds for excavation and conservation.

The flow of tourists has been disrupted at times since the 2011 revolution as the political turmoil has kept many foreign visitors away. The lecture by Hawass was given a few weeks before the ouster of Egyptian president Mohamed Morsi.

**By Owen Jarus, LiveScience
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