

New Scientist

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**FIRST IMAGES**

**FROM GREAT PYRAMID'S**

**CHAMBER OF SECRETS**

by

**Rowan Hooper**

**25 May 2011**

<http://www.newscientist.com/articleimages/mg21028144.500/0-first-images-from-great-pyramids-chamber-of-secrets.html>

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**Graffiti or religious symbols?  
A robot has sent back the first images of ancient Egyptian markings  
in a tiny chamber that have not been seen for 4500 years**

THEY might be ancient graffiti tags left by a worker or symbols of religious significance. A robot has sent back the first images of markings on the wall of a tiny chamber in the Great Pyramid of Giza in Egypt that have not been seen for 4500 years. It has also helped settle the controversy about the only metal known to exist in the pyramid, and shows a "door" that could lead to another hidden chamber. The pyramid is thought to have been built as a tomb for the pharaoh Khufu, and is the last of the seven wonders of the ancient world still standing. It contains three main chambers: the Queen's Chamber, the Grand Gallery and the King's Chamber, which has two air shafts connecting it with the outside world. Strangely, though, there are two tunnels, about 20 centimetres by 20 centimetres, that extend from the north and south walls of the Queen's Chamber and stop at stone doors before they reach the outside of the pyramid (see diagram).

The function of these tunnels and doors is unknown, but some believe that one or both could lead to a secret chamber. Zahi Hawass, Egypt's Minister of State for Antiquities Affairs, describes the doors as the last great mystery of the pyramid.

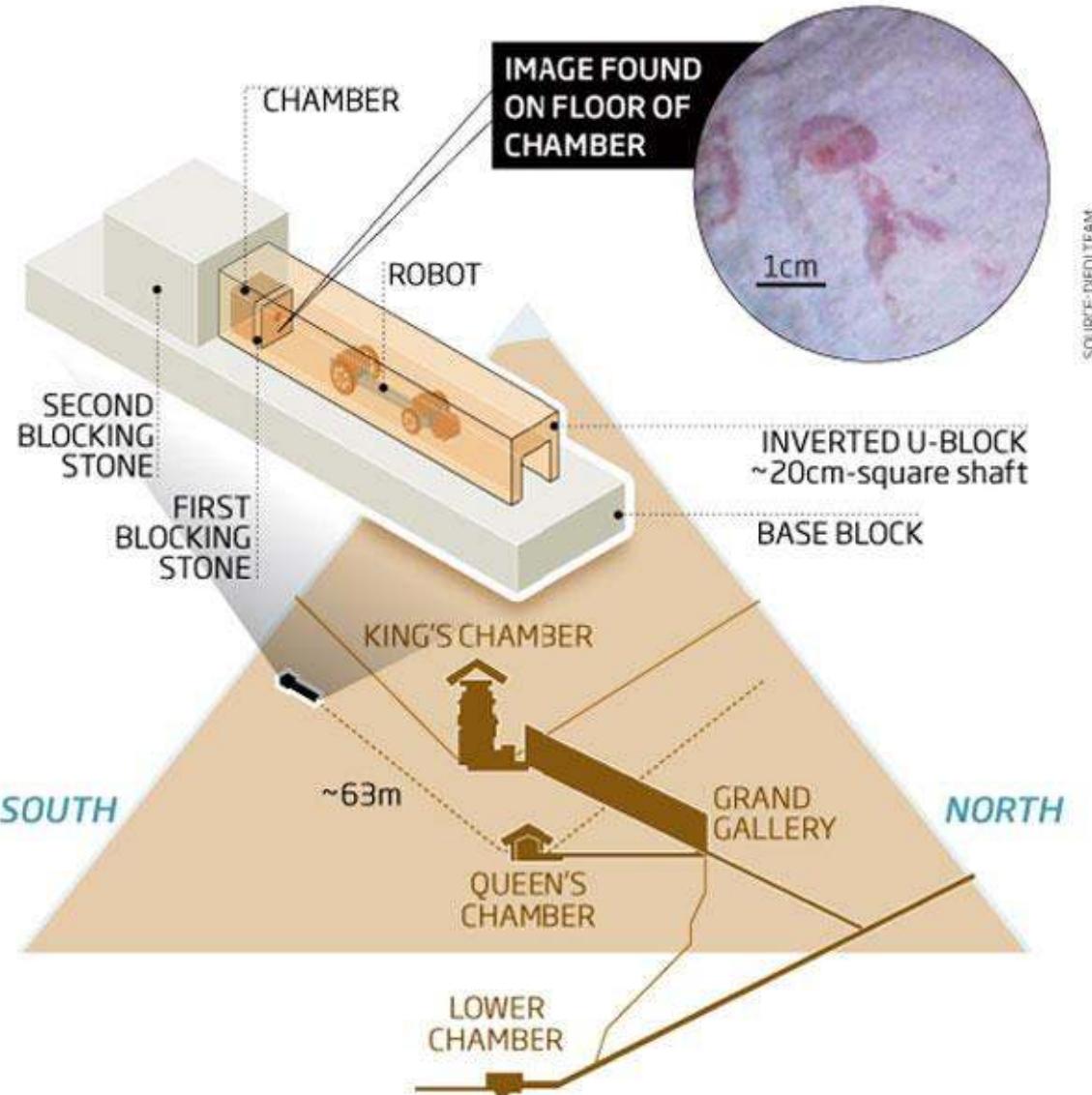
Several attempts have been made to explore the tunnels using robots. In 1993, a robot crawled some 63 metres up the tunnel in the south wall and discovered what appeared to be a small stone door set with metal pins. Metal is not part of any other known structure in the pyramid, and the discovery ignited speculation that the pins were door handles, keys or even parts of a power supply constructed by aliens.

Then in 2002 another robot drilled through the stone block and filmed a small chamber backed by a large blocking stone, but little else. Now a robot designed by engineer Rob Richardson from the University of Leeds, UK, and colleagues, and named Djedi after the magician that Khufu consulted when he planned his tomb, has crawled up the tunnel carrying a bendy "micro snake" camera that can see around corners.

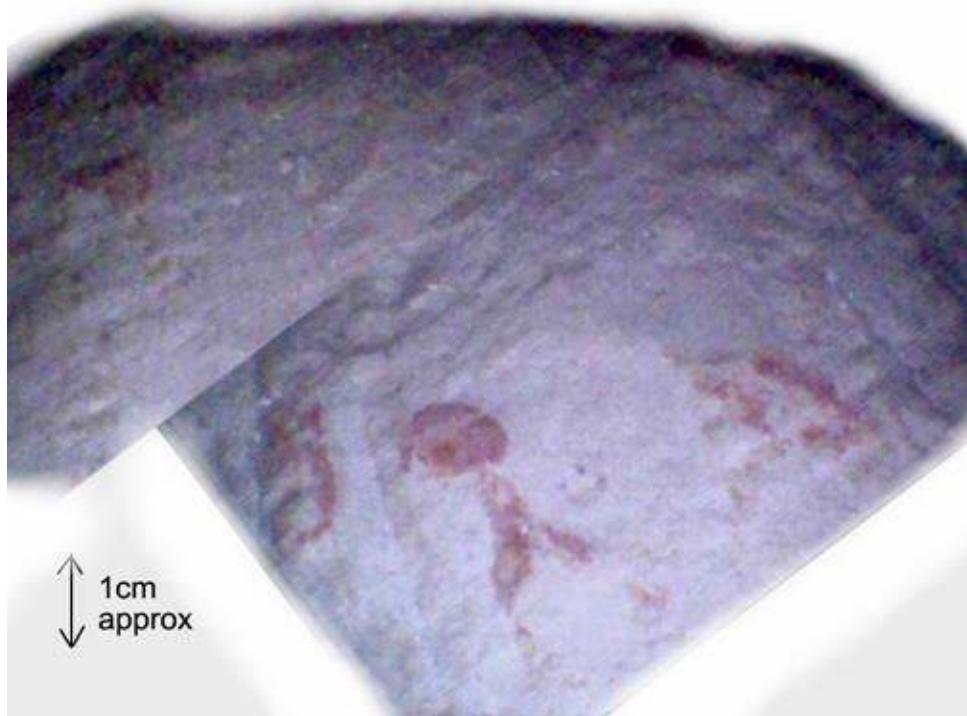
# Hidden hieroglyphs

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A robot has peered through a stone door into a chamber in the Great Pyramid of Giza and sent back images not seen for 4500 years



Graffiti or religious symbols? A robot has sent back the first images of ancient Egyptian markings in a tiny chamber that have not been seen for 4500 years

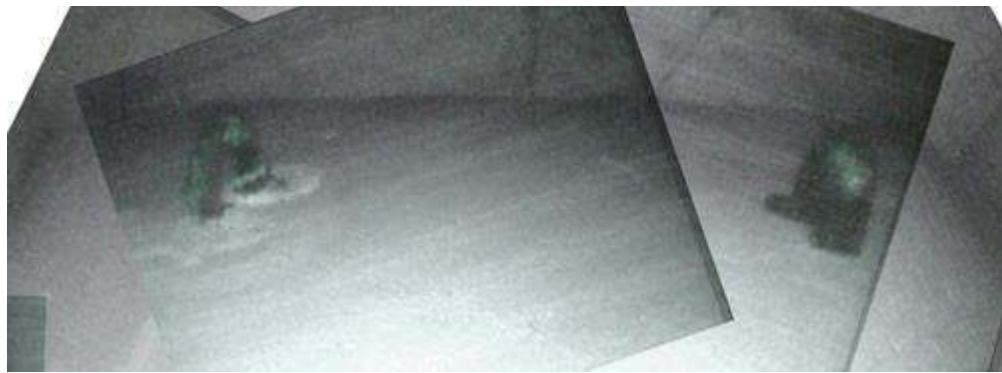


A close-up view of the red figures on the floor behind the first blocking stone (Image: Djedi Team)



A composite image of the chamber floor behind the first blocking stone showing red figures to the right of a mason's line (Image: Djedi Team)

Images sent back by the camera have revealed hieroglyphs written in red paint and lines in the stone that could be marks left by stone masons when the chamber was being carved (*Annales Du Service des Antiquités De L'Égypte*, vol 84, ISBN: 978-977-704-184-3). "If these hieroglyphs could be deciphered they could help



*A composite image of the rear of the first blocking stone showing the back of the metal pins embedded in the first blocking stone*

Egyptologists work out why these mysterious shafts were built," says Richardson. "Red-painted numbers and graffiti are very common around Giza," says Peter Der Manuelian, an Egyptologist at Harvard University and director of the Giza Archives at the Museum of Fine Arts, Boston. "They are often masons' or work-gangs' marks, denoting numbers, dates or even the names of the gangs."

As the camera can see around corners, the back of the stone door has been observed for the first time, scotching the more fanciful theories about the metal pins, says camera-designer Shaun Whitehead of the exploration company Scoutek, based in Melton Mowbray, UK. "Our new pictures from behind the pins show that they end in small, beautifully made loops, indicating that they were more likely ornamental rather than electrical connections."



*What lies beneath? (Image: Sindre Ellingsen/Getty)*

Whitehead, who worked in collaboration with Dassault Systèmes in Vélizy-Villacoublay, France, adds: "Also, the back of the 'door' is polished so it must have been important. It doesn't look like it was a rough piece of stone used to stop debris getting into the shaft."

Kate Spence, an Egyptologist at the University of Cambridge who was not involved in the study, suspects that since the narrow tunnels can serve no practical purpose, they are almost certainly symbolic. "The metal pins look like symbolic door handles, and the shafts from the Queen's Chamber are oriented north-south, not east-west, so I strongly suspect that their function is symbolic and relates to the stars, not the sun," she says.

While the King's Chamber originally contained Khufu's sarcophagus and possibly his mummy, the Queen's Chamber probably didn't contain the remains of a queen: Khufu's wives were interred in three smaller pyramids of their own. Instead, Spence speculates that the Queen's Chamber may have contained a "ka" statue of the pharaoh. In this interpretation the shafts were built to allow Khufu's ka, or spirit, to cross to the afterlife.

As for the second "door" at the rear of the chamber, which is rough and unfinished, Spence thinks it is simply the end of the shaft. "It's most likely to be a backing stone - there won't be another chamber behind it, it makes no sense," she says. "However, it's fascinating from a symbolic point of view, and this sort of work will allow us to get at the intention behind the construction of the pyramid."

Hawass, director of the Djedi project, says that no other pyramid is known to have a tunnel and doorway like this, which, he says, suggests there could be a hidden room. "The King's Chamber may have been a dummy room, since the most important thing in the mind of the ancient Egyptians was to hide the burial chamber," he says. "We have a story that the magician Djedi met Khufu, who was searching for the god Thoth so he could find the secret of hiding his pyramid. Based on that maybe there is something hidden in the pyramid."

<http://www.newscientist.com/articleimages/mg21028144.500/0-first-images-from-great-pyramids-chamber-of-secrets.html>

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**CNN**

**MYSTERIOUS MARKINGS DISCOVERED**

**AT GREAT PYRAMID OF GIZA**

by

**Nuala Calvi**

for CNN

19 June 2011

<http://edition.cnn.com/2011/WORLD/africa/05/28/pyramid.markings/index.html>

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**STORY HIGHLIGHTS**

- *Marks found in tiny chamber at the end of a passage date from 4,500 years ago*
- *The painted hieroglyphs and stone markings were filmed using a robot camera*
- *Scholars hope they will explain why the mysterious shafts were built*

**London, England (CNN)** -- A robot explorer has revealed ancient markings inside a secret chamber at Egypt's Great Pyramid of Giza.

The markings, which have lain unseen for 4,500 years, were filmed using a bendy camera small enough to fit through a hole in a stone door at the end of a narrow tunnel.

It is hoped they could shed light on why the tiny chamber and the tunnel -- one of several mysterious passages leading from the larger King's and Queen's chambers -- were originally built.

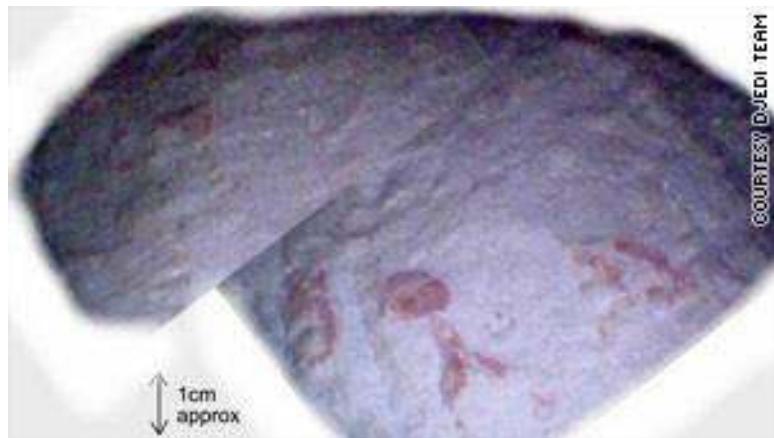
The markings take the form of hieroglyphic symbols in red paint as well as lines in the stone that may have been made by masons when the chamber was being built.

*According to Peter Der Manuelian, Philip J. King Professor of Egyptology at Harvard University, similar lines have been found elsewhere in Giza. "Sometimes they identify the work gang (who built the room), sometimes they give a date and sometimes they give guidelines to mark cuttings or directional symbols about the beginning or end of a block," he said.*

"The big question is the purpose of these tunnels," he added. "There are architectural explanations, symbolic explanations, religious explanations -- even ones relating to the alignment of the stars -- but the final word on them is yet to be written. The challenge is that no human can fit inside these channels so the only way to do this exploration is with robots."

Pictures of the markings have been published in the Annales du Service Des Antiquités de l'Egypte, the official publication of Egypt's Supreme Council of Antiquities, following an international mission led by the Minister for Antiquities.

The robot explorer that took the images is named Djedi, after the magician whom Pharaoh Khufu consulted when planning the layout of the Great Pyramid. It was designed and built by engineers at the University of Leeds, in collaboration with Scoutek UK and Dassault Systemes, France.



*A close-up view of the red marks on the floor in the pyramid*

Although robots have previously sent back pictures from within the pyramid's tunnels, Djedi's creators say it is the first to be able to explore the walls and floors in detail, rather than just take pictures looking straight ahead, thanks to a "micro snake" camera.

The camera also scrutinized two copper pins embedded in the door to the chamber at the end of the tunnel. In a statement, Shaun Whitehead, of Scoutek UK, said: "People have been wondering about the purpose of these pins for over 20 years. It had been suggested that they were handles, keys or even parts of an electrical power plant, but our new pictures from behind the pins cast doubt on these theories

"We now know that these pins end in small, beautifully made loops, indicating that they were more likely ornamental rather than electrical connections or structural features. Also, the back of the door is polished so it must have been important. It doesn't look like it was a rough piece of stone used to stop debris getting into the shaft."

The team's next task is to look at the chamber's far wall to check whether it is a solid block of stone or another door.

"We are keeping an open mind and will carry out whatever investigations are needed to work out what these shafts and doors are for," said Whitehead. "It is like a detective story, we are using the Djedi robot and its tools to piece the evidence together."

<http://edition.cnn.com/2011/WORLD/africa/05/28/pyramid.markings/index.html>

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Pakalert Press

**SECRET CHAMBER**

**FOUND BEHIND**

**GREAT PYRAMID SHAFTS**

by

Mitchey

16 October 2012

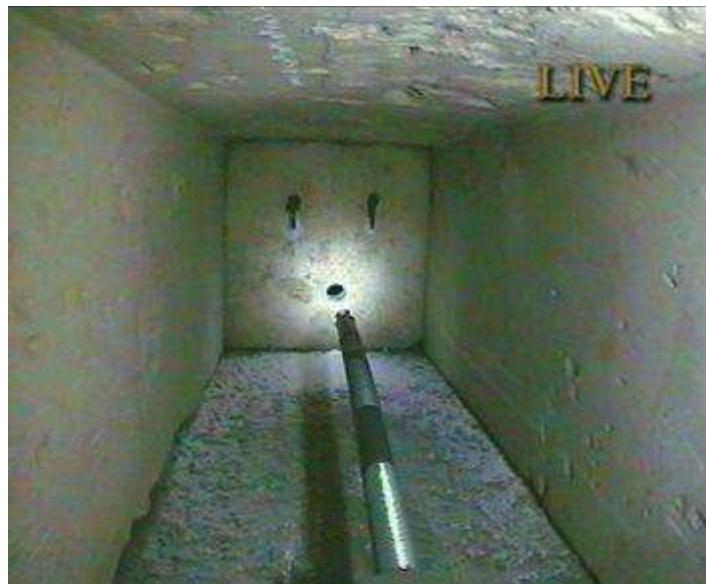
[http://www.pakalertpress.com/2012/10/15/secret-chamber-found-behind-great-pyramid-shafts/?utm\\_source=feedburner&utm\\_medium=email&utm\\_campaign=Feed%3A+pakalert+%28Pak+Alert+Press%29](http://www.pakalertpress.com/2012/10/15/secret-chamber-found-behind-great-pyramid-shafts/?utm_source=feedburner&utm_medium=email&utm_campaign=Feed%3A+pakalert+%28Pak+Alert+Press%29)

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A secret room or chamber has been reportedly discovered behind the 2nd sealed door inside the Southern shaft in the Queen's chamber in the Great Pyramid. And there are ancient artifacts inside of it.

It has been more than 10 years now and the question still remains unanswered as to what lies behind the 2nd door inside the shafts of the Great Pyramid. But this may be finally coming to a conclusion with recent rumors of an official announcement that is to happen later this year.





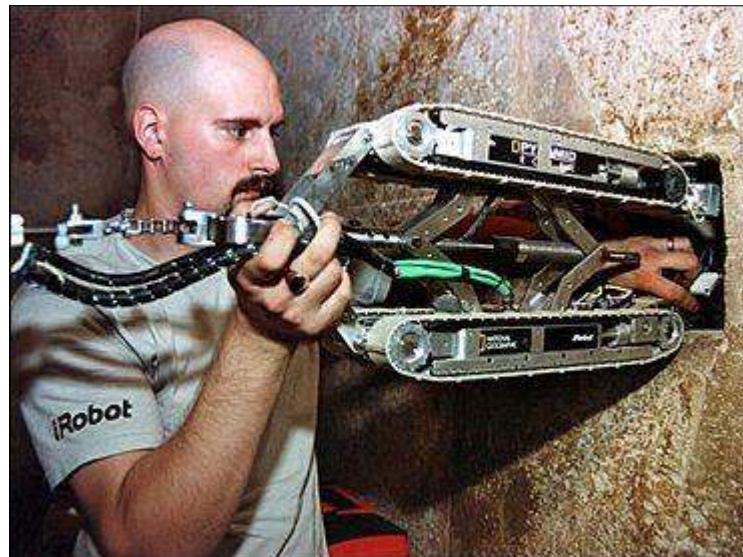
Investigative work began on the shafts leading upwards from the Queen's chamber in 1993 and robotic exploration was done in 2002 but since then work has been impeded by a number of factors including the civil unrest that has been occurring in the country. But the main challenge has been to modify the robotic instruments to be able to drill through the second sealed door and then be able to insert a small video camera. The researchers were successful in doing this with the first door inside the shafts back in 2002 but there are way more challenges with doing it through 2 doors.



Although not confirmed, there have been recent rumors being discussed that the team has actually been able to achieve this and a previously undiscovered room or chamber has been found with several artifacts inside. Details of the findings include:

- 1) An approximate 6 X 9 room or chamber lies directly behind the 2nd sealed doors in at least the South shaft.
- 2) Several small statues were spotted on the video camera but no details on what exactly they represent were able to be seen.

- 3) A gold or copper chain was spotted in the corner of the chamber
- 4) Small pottery and stone jars are spread throughout the floor of the chamber
- 5) In the center of the chamber lies a gold or copper box which is closed and its contents are unknown. The box is roughly the size of a one foot size shoe box.
- 6) No hieroglyphics or other writing were spotted anywhere in the chamber.



So, are these findings just rumors or a major finding? Of course, my hopes are on the latter but we will have to wait for an official announcement to really see what the researchers have found. As always, stay tuned.

[http://www.pakalertpress.com/2012/10/15/secret-chamber-found-behind-great-pyramid-shafts/?utm\\_source=feedburner&utm\\_medium=email&utm\\_campaign=Feed%3A+pakalert+%28Pak+Alert+Press%29](http://www.pakalertpress.com/2012/10/15/secret-chamber-found-behind-great-pyramid-shafts/?utm_source=feedburner&utm_medium=email&utm_campaign=Feed%3A+pakalert+%28Pak+Alert+Press%29)

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Fox News

## SECRET TREASURE IN GREAT PYRAMID

AWAITS DISCOVERY,

EGYPT'S 'INDIANA JONES' SAYS

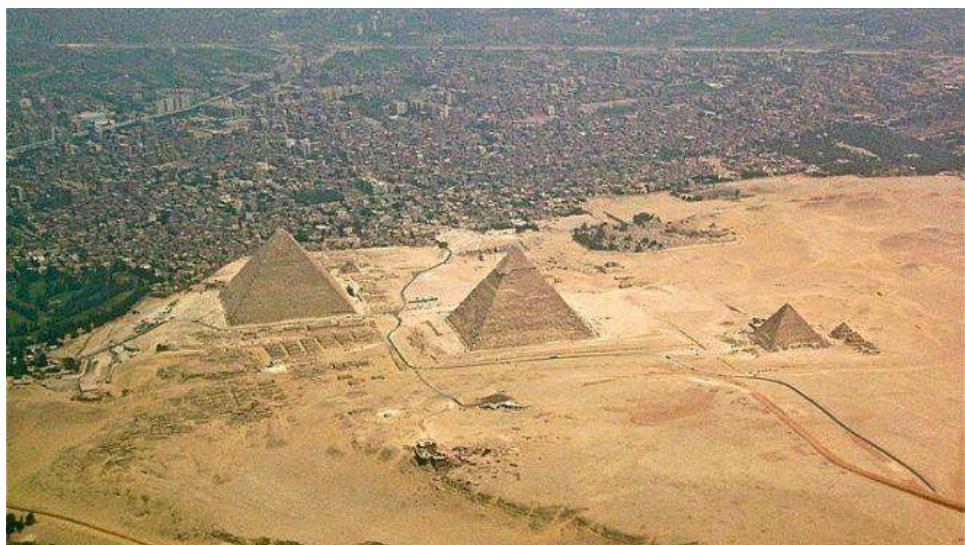
by

Owen Jarus

07 Jun 2013

<http://www.foxnews.com/science/2013/06/07/secret-treasure-in-great-pyramid-awaits-discovery-egypt-indiana-jones-says/>

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### TORONTO Zahi Hawass is back.

The famous, and at times controversial, Egyptologist is free of legal charges, free to travel and is launching a worldwide lecture tour with the aim of getting tourists back to Egypt, he told LiveScience in an interview.

Hawass also said that he believes there are some fantastic discoveries waiting to be made, including more tombs in the Valley of the Kings and a secret burial chamber, containing treasure, which he believes to be inside the Great Pyramid built by the pharaoh Khufu (also known as Cheops).

It's a turnaround for the archaeologist, who, just a few months ago, was under investigation and banned from traveling outside Egypt. At the time, there were a number of allegations related to his tenure as Egypt's antiquities chief in Hosni Mubarak's former government. These allegations reportedly included allowing antiquities to travel out of the country illegally, wasting public funds and using his position inappropriately to aid a charity run by Suzanne Mubarak (wife of the deposed Hosni Mubarak). He was banned from travelling outside Egypt while under investigation.

Hawass was head of the Supreme Council of Antiquities for nearly 10 years and became Egypt's first-ever antiquities minister near the end of Mubarak's regime. A revolution succeeded in tossing out

Mubarak in February 2011 and Hawass was dismissed from his post a few months later. "All the accusations against me were dropped, were completely false, and this is why everything's finished, I can travel, I can do anything," he told LiveScience in an interview after a lecture held here on Monday at the Royal Ontario Museum.

The massive gallery where the lecture was held was filled to capacity, with a waiting list just as robust. The museum's director Janet Carding said that Egypt's ambassador to Canada, Wael Aboul-Magd, helped bring Hawass to Toronto and was in attendance.

*"The treasures of Khufu [are] still hidden inside the Great Pyramid, and these three doors could be the key to open this burial chamber."*

- Zahi Hawass, Egyptologist

Hawass said that Toronto is only the beginning. He'll be in Montreal on June 6 and will be launching a worldwide tour.

"I'm traveling the whole world. I'm going to Brazil, going to Argentina at the end of the month, going to Australia, New Zealand, everywhere to promote tourism to Egypt and to bring the tourists back because, I think, I'm the only one who can really bring the tourists back to Egypt," he told LiveScience.

Tourism plummeted after Egypt's revolution, resulting in lower ticket sales at ancient sites, a situation that has the antiquities ministry strapped for cash.

"We don't have any money at all for excavation or preservation," he told the audience.

### **A hidden chamber inside the Great Pyramid**

In the interview, and in his lecture, Hawass said that he is excited at the robot work that has been going on over the past two decades at the Great Pyramid. One chamber in the pyramid called the "Queen's Chamber" (although there is no evidence it was ever used for a queen's burial) contains two

Robots have been up these shafts and found that both contain doorways with copper handles. When a robot drilled through one of the doors, they found a small chamber with what might be a sealed door behind it.

Ultimately, these shafts may point the way to a secret burial chamber where Khufu (Cheops) was buried, Hawass said. While the pyramid already has three known chambers (one of which contains a sarcophagus), he said the true burial place of the pharaoh has yet to be found.

"I really believe that Cheops chamber is not discovered yet and all the three chambers were just to deceive the thieves, and the treasures of Khufu [are] still hidden inside the Great Pyramid, and these three doors could be the key to open this burial chamber," he said in the interview.

"There is no pyramid of the 123 pyramids in Egypt that have these type of doors with copper handles," he added. "Really, I believe they're hiding something."

### **Another era for archaeology**

Hawass is also very enthusiastic about finding new tombs in the Valley of the Kings. Within the past decade, two new tombs, KV 63 and 64, have been excavated and Hawass told LiveScience, and the Toronto audience, that he believes there are many more to be found.

"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," he said in his lecture. "This could be another era for archaeology," he added in the interview.

Finding these tombs will pose a challenge. Ground-penetrating radar tests conducted while Hawass was antiquities chief had difficulty locating tombs and he said he believes that radar will not be effective in finding them.

## **Pharaohs were buried with their brains**

If they find these pharaohs, they may also find their brains. Hawass and Dr. Sahar Saleem of Cairo University looked at CT scans of 12 royal mummies that date to between 1493-1156 B.C.

Based on their findings, detailed in the American Journal of Roentgenology, Hawass doesn't believe the Egyptians removed the brains of their dead pharaohs. "All these ideas about removing brains→ came from Herodotus," he said, referring to a Greek historian who lived more than 2,400 years ago. "It was wrong."

Hawass pointed out that "the brain of Tutankhamun was desiccated (dried) out but still it's there."

## **A return as antiquities minister?**

After a recent article in Smithsonian magazine, there was speculation that Hawass could be plotting his return as antiquities minister.

In the LiveScience interview, Hawass poured cold water over this idea, saying that it does not appeal to him at all.

"To become a minister, I don't like," he said.

"I only wear a suit and a tie when I come to give a lecture, but all my life, I'm in my jeans," Hawass said, adding he disagreed with the decision to make antiquities a cabinet-level position and hates the meetings required for a cabinet minister. "I can't stand being in the cabinet listening for nine hours of nonsense."

In terms of a future role in Egypt's antiquities ministry, Hawass said he plans to wait a year or two until the situation in Egypt improves. "In a year or two, after everything is relaxed, I would like to continue [building] the 24 museums" that are underway, he said. He also would like to help train young archaeologists and aid in repatriating Egyptian artifacts that are now abroad.

"All of this I need to continue," he said. "I hope one day I'll be able to do that."

<http://www.foxnews.com/science/2013/06/07/secret-treasure-in-great-pyramid-awaits-discovery-egypt-indiana-jones-says/>

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**GREAT PYRAMID**

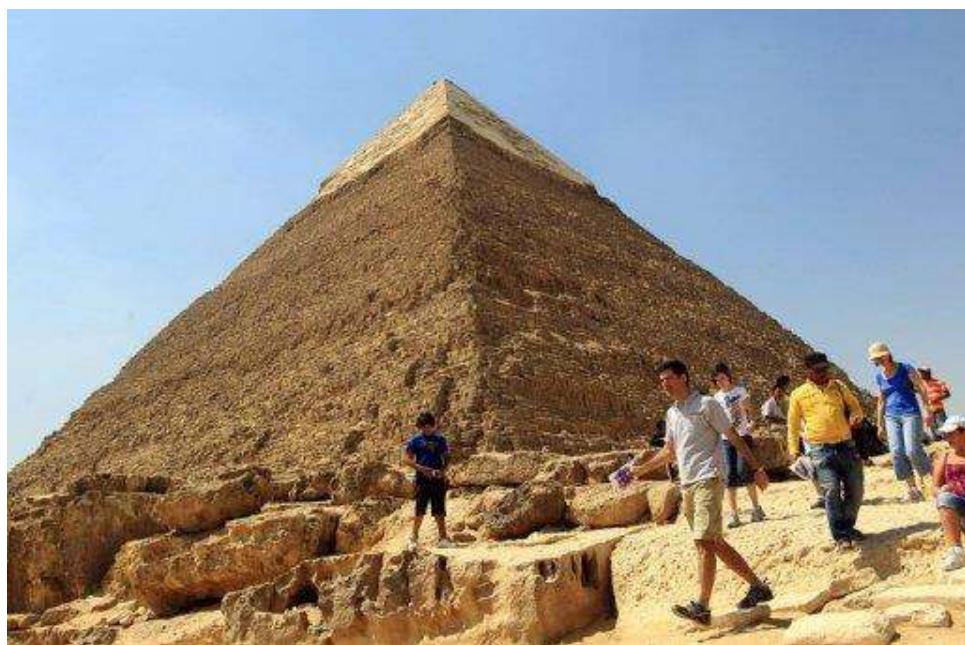
**HAS TWO SECRET CHAMBERS:**

**FRENCH ARCHITECT**

**27 January 2011**

<http://phys.org/news/2011-01-great-pyramid-secret-chambers-french.html>

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*A tourist walks in front the Great Pyramid of Khafre in Giza in 2010. A French architect campaigning for a new exploration of the 4,500-year-old Great Pyramid of Giza said on Thursday that the edifice may contain two chambers housing funereal furniture.*

A French architect campaigning for a new exploration of the 4,500-year-old Great Pyramid of Giza said on Thursday that the edifice may contain two chambers housing funereal furniture.

Jean-Pierre Houdin -- who was rebuffed three years ago by Egypt in his appeal for a probe into how the Pyramid was built -- said 3-D simulation and data from a US egyptologist, Bob Brier, pointed to two secret chambers in the heart of the structure.

The rooms would have housed furniture for use in the afterlife by the pharaoh Khufu, also known as Cheops in Greek, he told a press conference.

"I am convinced there are antechambers in this pyramid. What I want is to find them," he said.

In March 2007, Houdin advanced the theory that the Great Pyramid had been built inside-out using an internal spiral ramp, as opposed to an external ramp as had long been suggested.

He proposed mounting a joint expedition of Egyptian antiquities experts and French engineers, using infrared, radar and other non-invasive methods to check out the hypothesis.

The idea was nixed by Egypt's antiquities department. A Canadian team from Laval University in Quebec will seek permission this year to carry out thermal imaging from outside the Pyramid to explore the theory, Houdin said.

Houdin said a pointer to the antechambers came from the existence of such rooms in the pyramid of Snefru, Khufu's father. It was possible a similar design was retained for the Great Pyramid.

In addition, blocks in the northern wall of the king's chamber in the Great Pyramid indicate an overlooked passage which led to the hypothesised chambers and also enabled the funeral party to exit, he added.

<http://phys.org/news/2011-01-great-pyramid-secret-chambers-french.html>

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