

UNWRAPPING THE PAST

by Natalie Smith



Dr. Bob Brier and Dr. Angelique Corthals in the lab extracting samples for DNA analysis.

Ancient Egyptian civilization began about 5,100 years ago. Millions of mummies were produced. We have learned a lot from these mummies, but they have also been a puzzle to scientists. Now, with the help of high-tech tools, scientists are unraveling more secrets from these ancient remains. The details of their lives are coming to light, but experts say they are not only learning interesting information about the past. Mummies may also help experts someday solve modern medical mysteries.

A mummy is a dead body that has been preserved with special chemicals and wrapped in cloth. When a person died, Egyptians would remove the person's organs, such as the heart. Then they would put chemicals on the body and wrap it in cloth. This would prevent the body from decomposing. Artists and carpenters would create detailed coffins, or cases, for the mummy. The Egyptians did this to protect their loved ones after death. They believed

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that a person's spirit lived on and still needed a body in the next world. Egyptians honored their pets in similar ways. Many Egyptians mummified birds, cats, and other animals.

TALES OF THE DEAD

In the past when scientists studied mummies, they had to slice through the body, or unwrap the body. Today, they can explore inside a mummy while it is whole. Using x-ray scanners, researchers can produce 3-D images of a mummy's insides. They can take DNA from a mummy's bones and do DNA testing. DNA is a chemical code that gives living things their special characteristics, such as hair color and height. Researchers study DNA to learn important facts about Egyptians who lived long ago. "By using new high-tech techniques ... we're going to be able to tell all kinds of things about mummies," said Bob Brier, a mummy expert. "We can even tell if they ate meat, vegetables, and fish!"

ROYAL MYSTERY SOLVED

Scientists have used these new tools to solve a mummy mystery more than 100 years old! They identified the remains of a powerful female ruler in ancient Egypt named Queen Hatshepsut (pronounced hat-shep-soot). Hatshepsut reigned more than 3,500 years ago—as both queen and king. She first served as queen until



A scientist with an ancient Egyptian mummy.



X-Ray image of a mummy in Swansea Museum

her husband died. Her stepson was then set to become a pharaoh, or Egyptian king. Instead, she stole the throne and declared herself a pharaoh. She even dressed as a man. After Hatshepsut's death, her mummy mysteriously disappeared from its tomb.

Scientists thought she might be one of two unidentified mummies in another tomb. Experts ran DNA and other tests. They now say one is Hatshepsut.



Queen Hatshepsut's mummy was found in the valley of the Kings, the area in Egypt where most Egyptian pharaohs were buried.

MUMMY MEDICINE

Researchers also hope that what they learn about mummies will help them make progress in modern medicine. Scientists say mummy remains may someday help them make really sick people better. These researchers are learning what diseases infected ancient people to understand how diseases have changed over time. That information could one day help scientists cure people of diseases.

"Mummies are crucial to medical science," said Brier. "If you know how to 'read' a mummy, it's a little bit like an encyclopedia."