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THE BOSTON GLOBE MONDAY, JUNE 18, 2007

Virtual explorers comb Egypt's ruins

By Pamela Ferdinand

GLOBE CORRESPONDENT

With a click of his computer mouse, Peter Janosi, a lecturer at the Institute of Egyptology in Vienna, analyzes ancient statues and decodes hieroglyphs unearthed in the distant Giza Necropolis.

From the comfort of his study in Norwich, England, Colin Newton, a retired television repairman, explores rare Giza maps and expedition diaries in an effort to catalog all Old Kingdom tombs.

Meanwhile, Laurel Flentye, an Egyptologist who specializes in art and archaeology, downloads excavation photos and roams inside subterranean chambers, zooming in on relief decorations in tombs around the Sphinx and Great Pyramid from her Cairo home.

They are virtual explorers, traveling through time and space

via an online, interactive collection of one of the most famous archaeological sites in the world — the Old Kingdom Giza Necropolis, with its royal tombs, pyramids, temples, and other Egyptian monuments circa 2500 BC.

The Giza Archives Project, established by Boston's Museum of Fine Arts in January 2005, aims to become the world's central online repository for all archaeological activity at the necropolis, beginning with the major 20th-century excavations that were jointly funded by the museum and Harvard University.

The free site is helping scholars decipher clues to Egyptian culture during the Pyramid Age, said project director Peter Der Manuelian. And it is becoming even more valuable as the monuments and artifacts themselves crumble — victims of pollution, vandalism, tourism, and time, he

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PETER DER MANUELIAN

The ruins of the pyramid temple of King Menkaure (foreground) and the second pyramid of King Khafre are among the Giza sites that users can view online.



PETER DER MANUELIAN

The Great Pyramid of King Khufu (right) and the second pyramid of King Khafre are located behind a field of rock-cut tombs of such high officials of the Old Kingdom as Queen Khentkaus. A modern Muslim cemetery is situated in the foreground.

Via Web, explorers comb ruins

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said.

"In many ways, the only way to study Giza is from our material and not to study the monuments themselves anymore," said Manuelian, who is also a lecturer at Tufts University. "The real goal is to bring everything online from Giza past, Giza present, and Giza future."

The website, created with \$1.6 million in funding from the Andrew W. Mellon Foundation and the assistance of hundreds of volunteers, allows users to research monuments and artifacts from the time of the original discovery and excavation through today. The MFA recently forged formal agreements with several museums and universities in Europe to add their Giza archives and artifacts to the website.

The MFA has been a leader in Egyptology ever since its late archaeologist George A. Reisner supervised the longest single-running excavation at Giza between 1902 and 1947. Reisner, also on the faculty of Harvard, helped uncover thousands of items, from utilitarian objects to artistic masterpieces, and amassed the largest documentary archive of any expedition at the site. As a result, the MFA is second only to Cairo in its collection of Old Kingdom artifacts.

Until the site was developed, scholars and students were thwarted in their ability to piece together information scattered in museum and university archives

across Egypt, Europe, and the United States. Much of the information is unpublished, and the sheer volume of materials so overwhelming that they could not achieve a clear overview of Giza's development.

Now, by examining evidence and jumping back and forth in time, scholars can generate questions about one of the most important eras in Egyptian civilization and perhaps find answers, Manuelian said.

The online archives reveal a previously undocumented lower-class cemetery that will revise scholars' understanding of the early history of Giza before the construction of the Great Pyramid. Other material on the site shows additional examples of what was thought to be a very small group of surviving carved stone slabs on certain tombs, altering thinking among modern scholars about the date of their construction.

A limestone relief with the carved figure of a tomb occupant, now in a European museum, was thought to come from a particular tomb. But a small note card sketch made by one of the expedition staff in 1946 and now available online shows the very same relief in its original place in Giza — but in a different tomb about 1,000 yards away.

"You can study a certain tomb and realize what you thought came from that tomb actually comes from somewhere else, something unique is actually very common, or something that you

never paid very much attention to . . . is absolutely unique or special," Manuelian said.

Texts have been converted to digital form, along with more than 20,000 glass-plate photographic negatives. More than 10,000 maps and plans have been scanned and posted online, as well as aerial and satellite photos. The site also offers 360-degree interactive panoramas.

Of particular interest to Egyptologists, Reisner's extensive excavation records from 1909 to 1940 are available online, soon to be joined by 5,000 unpublished manuscript pages. Manuelian also recently acquired 42 diaries in Arabic detailing Reisner's excavation work.

In Cairo, Flentye said she supplemented her field work at Giza with the online archives to make certain she had the most accurate information. By computer, she saw features such as figures and hieroglyphs on tomb relief decorations that are now eroded or missing, and she discovered staircases that once led into offering chambers. The data that she added to her dissertation will contribute to how scholars and the public perceive Giza and its art over time, she said.

"It is wonderful to see Reisner's original photos because they show features that are now, in most cases, covered by sand. The original excavation photos provided many surprises for me!" she wrote in an e-mail. "The archives provide essential data that may not be retrievable in the field."