Pyramid find reopens lost chapter of history

Alison Abbott, Cairo

The site of a lost pyramid that has eluded Egyptologists for over a century has been unearthed by German archaeologists. It belongs to Nub-Kheper-Re Intef, a Pharaoh from Egypt's seventeenth dynasty, and is the first from this era to have been found by archaeologists.

The pyramid, made of mud bricks, has collapsed, but decorations and pottery fragments in the underlying chamber will help archaeologists shed light on Egypt in the sixteenth century BC. The period preceded the golden age of the Pharaohs epitomized by Tutankhamen of the eighteenth dynasty and by the Ramesses kings of the nineteenth and twentieth dynasties. "It is very important that the pyramid has turned up," says John Taylor of the British Museum's Department of Ancient Egypt and Sudan. "It will help us to clarify the chronology of the royals and understand how they were related."

The location of seventeenth-dynasty pyramids has been pieced together over the past century from ancient documents and nineteenth-century reports from European travellers. One document, purchased by the British Museum in the 1850s, details an inspection of royal tombs carried out during the twentieth dynasty in 1115 BC after rumours of tomb raids. The papyrus records that Nub-Kheper-Re's pyramid was subject to an unsuccessful break-in attempt.

The chamber was briefly explored in 1827

The site of Nub-Kheper-Re Intef's ruined pyramid, and (inset) an older bust from his burial chamber.

but was not studied in detail. At the time, European diplomats routinely had permission from the Egyptian government to search for treasure, and paid locals to strip tombs.

Daniel Polz, a director of the German Institute of Archaeology in Cairo and head of the excavation team, relocated the site, which is on the west bank of the Luxor at the entrance to the Valley of the Kings, with the help of locals who are skilled in recognizing man-made disturbances in a desert landscape. One of the first tombs to be opened was a small chapel of a top official of the king, called Teti. The walls of the chamber are decorated and bear the name of the king in large hieroglyphs.

Nub-Kheper-Re's neighbouring burial chamber is much larger and undecorated, and its deep sarcophagus is formed from a bay cut

into the rock — an unusual feature as such sarcophagi are typically free-standing. The team also found evidence that two obelisks may have been mounted in front of the pyramid, a further unique feature. The king's chamber also contained a life-sized sandstone head of another king, probably belonging to a statue from an eleventh-dynasty temple but borrowed during the poorer seventeenth dynasty and placed in or near the pyramid.

Polz expects the complete excavation of the pyramid and its surroundings to take around five years, and is confident that traces of other seventeenth-dynasty pyramids will be unearthed. "For the first time we have information on the architecture of a seventeenth-dynasty tomb, and the combinations of features are unique," he says.

'Unusual forces' are pushing journal market off course

Sally Goodman

Libraries may be paying too high a price for scientific, technical and medical (STM) journals because the market lacks normal competitive forces, according to a report from the UK's Office of Fair Trading (OFT).

The OFT's consultation of libraries, publishers and scientific societies, published on 9 September, raised concerns that the prices of STM publications are rising faster than inflation. The large disparity in prices between commercial and non-profit journals was also noted. In 1995, the average price of a commercial STM journal was US\$485; that of scientific-society journals was US\$229.

The market is skewed, says the OFT, partly because STM journals tend to compete on quality rather than price. Cheaper journals are thus often sacrificed so that libraries with limited budgets can subscribe to well-regarded yet expensive rivals. 'Bundling',

whereby publishers give discounts to libraries that provide electronic access to all or most of their journals, also distorts the market. The practice favours publishers with large portfolios, as librarians say it is often uneconomical to cancel individual journals in the bundle and replace them with more popular ones from another publisher.

But the OFT says that intervention in the market is unnecessary at present, arguing that schemes such as the Public Library of Science, a group of academics who aim to publish free-to-access journals (see *Nature* 412, 469; 2001), could be a force for change in the future. "These emerging market forces are clear evidence that the market is already working," agrees Derk Haank, chairman of Elsevier Science, the largest STM publisher.

David Prosser, director of Oxford-based SPARC Europe, an alliance of European research libraries and institutions, says he is

glad the OFT has recognized the problem.

"But it would have been useful for them to say something a little stronger," he adds.

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Stacking up: concern is mounting over the rate at which journal publishers' prices are rising.