Dovetails or Lashings in Middle Kingdom Ship Construction?

Case Study: 4,000-Year-Old Boats from Ancient Egypt

In AD 1894, while excavating the pyramid complex of Senwosret III, archaeologist Louis de Morgan unearthed the world’s oldest collection of contemporaneous boats available for study. Senwosret III ruled Egypt from 1870-1831 BC. The most powerful ruler of the Twelfth Dynasty, and one of the most excelled from ancient Egypt, he led his people through a renaissance. The inception of boats in the burial arrangements of such a powerful king underscores the importance of watercraft in their culture. Today, four out of five of the boat collections can be located; two are in the United States, one in the Carnegie Museum of Natural History in Pittsburgh and one in the Field Museum of Natural History in Chicago. The remaining two are on display in The Egyptian Museum, Cairo. The comparison of these boats provides a unique opportunity in archaeology, since their excavation in Egypt. Both have remained relatively intact, and largely unpublished. Here, we present a summary of the interpretations of the (De Morgan boats, 2005) and discuss suggestions for further research. I employed personal recording of the Cairo Dahshur boats to reveal the unique characteristics of the hulls and to better understand the philosophy employed by those who built the boats.

The Pharaoh

The pharaoh Senwosret III, later known to the Greeks as the deity Se- men, reigned for thirty-nine years, 1870 to 1831 BC. This was the golden age of the Middle Kingdom. As pharaoh he led his people to great military victories that reconquered the Upper Nile. Under his guidance Egypt expanded its borders further than ever before.

According to ancient custom, by ensuring that the pharaoh repeated his life in the afterworld, the people would repent any repetition of their own lives as well. So, it should come as no surprise that when their beloved pharaoh died, no expenses were spared.

Unfortunately, Senwosret’s pyramid at Dahshur was a target for looting and grave robbing over the millennia. Yet, the excavations in AD 1894 revealed great finds, including five small boats: transportation for the afterlife.

The Excavation

In 1894-1895 J.E. de Morgan, Director-General of Antiquities in Egypt, excavated Senwosret III’s pyramid at Dahshur.

The complex yielded one of the most valuable treasure hoards ever found in Egypt, including several caches of jewels and golden grave goods.

De Morgan’s publication of the excavations, (Fouilles à Dahchour, 1939) examined, in detail, when archaeology was still developing as a science.

In December 2001, I wrote to the Director of the Cairo Museum, and requested permission to record the boats in their care.

Over the last four years, five Texas A&M graduate students have accompanied me to Egypt. We have explored over 5,000 hours in recording and reconstructing these long-forgotten boats.

In the report de Morgan provided, he noted that he sent two to the museum in Cairo, where the boats remained on display as they have for over 100 years.

De Morgan also recognized the importance of the artifacts in the museum and was grateful for the contribution.

Each season proved more successful than the previous. The first season educated us on the proper method of conducting research in Egypt while the second was incredibly productive and resulted in detailed drawings, complete scanning lists, 3-D reconstructions. The experience of working in the Egyptian Museum was great and memorable for all of us.

Interpretations

In the 1890s, the two Dahshur boats in the US were thoroughly studied, while the two in Cairo remained obscure. Consequently, for the last 25 years all interpretations and conclusions regarding ancient Egyptian shipbuilding traditions were developed accordingly, neglecting critical evidence. Information from my research in Cairo supports a reinterpretation of ship construction methods during ancient Egypt’s Middle Kingdom.

The “lashing-theory” is congruent with earlier Egyptian construction practices, however is neglected today in favor of the “dovetailing” interpretation. The “dovetailing” is more practical and practical to build and repair a vessel.

How To Prove It

Measurements taken (as off-sets) from the Cairo boats were transferred into a 3-D construction program and then subjected to a number of simulations without further lashings or dovetails present. The experiments indicated that neither dovetailing nor lashings existed, and the boats could withstand the stress of use on the Nile. However, the experiments were purely hypothetical and abstract, cannot be interpreted as fact.

Find the Missing Boat

De Morgan’s 19th century excavations recorded five boats, only four of which can be accounted for today. Several scholars have pointed that the missing fifth boat remains in the sands at Dahshur. If this boat to be located and excavated, it would likely resolve the question of lashings, dovetails, or neither (or both).

After consultation with several geophysicists, I believe that a remote sensing survey including Ground Penetrating Radar, Magnetometry, Gravimetric, and Cone- density would be the most practical, efficient, and useful method to investigate the assumptions that the missing boat remains at Dahshur.

For updates visit: http://cairodahshur.mrd.org

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