



Photo.1: The boat is housed in a special building which makes it easy to see and photograph

Ancient Egyptian Boat Building

by Art Burrows



It is common to see bold statements concerning the tools used by the Ancient Egyptians. Yet for all that we know about their *culture*, we know much less about their *tools* and many of the statements are, at best, misleading and at worst, untrue.

When the opportunity arose recently for me to fulfil a lifetime ambition to visit Egypt, I went with the objective of seeing not only the usual tourist sites, but also of finding out as much as I could about the woodworking tools which were used in that country from 2000 to 4500 years ago.¹

To most archaeologists, a tool is an artefact, little different to a pot or a vase. Its value is in providing information about the culture that used it. Artisans and technologists, on the other hand (woodworkers among them), value a tool for what it does and see an intrinsic worth that may well be lost on the archaeologist. They are also more inclined to look at samples of completed work and use them to try to determine the nature of the tools used in their manufacture. While a great deal more work of this nature is now being done, there is a long, long way to go.

Far from coming home with answers, I now have more questions. *Cheops Solar Barque* is a case in point. As you are probably aware, *Cheops* (his Egyptian name was *Khufu*) was the Pharaoh who built the Great Pyramid.

Photo.2: The cabin of a *Solar Barque* apparently had no need of windows

Around it, there are a number of 'boat pits'. Three had long since been cleared of debris and all that had been found were a few fragments of wood and rope. Then, in 1954, Kamak el-Mallakh found another, this time containing the carefully broken down components of a boat some 43m long by 6m wide, with an estimated displacement of over 40 tonnes.

For 4600 years, the parts of this *Solar Barque* had lain in an air-tight, waterproof cavity covered with 41 limestone blocks, each weighing 16 tonnes.

The general shape shown in tomb paintings were all the 'plans' available to re-build the boat. Yet, by using models of the components, the boat was finally re-assembled, though the task took more than a decade. It is now housed in a purpose-built structure on the southern side of the Great Pyramid.²

The *Barque* is all the more interesting to modern woodworkers because tests have shown that it once floated on the Nile. It is an ungainly craft and its six pair of oars — two at the stern for steering — would be unlikely to have made it useful for anything more than ceremonial functions. Perhaps it was used just once in a procession of boats that took the Pharaoh's body on its short journey across the river to the west bank for burial. But simply knowing that it once floated, suggests that the techniques used in its construction would probably have been drawn from the common

Photo.4: A Bow Drill type device. Photo courtesy of Archaeological Diggings



boat-building practices of the day.

One of the most interesting of these is the way in which the planks of the hull are joined by rope. This can be seen in Photo.3. Bands made up of several individual ropes pass through slots in the planks and are secured at each end. When the ropes became wet, they pulled the well-jointed planks together making the boat watertight without the need for caulking.

The wood of the planks, some made from whole Cedar trees from Lebanon, is soft and easy to cut, but with what? The most likely answer is some sort of drill bit (note the rounded ends of the hole at the bottom of Photo.3) driven by a Bow Drill — a tool known to have been used since early in the Old Kingdom.

But what about the drill bit? The conventional answer is that it would have

Photo.3: When wet, the ropes would tighten, sealing the well-jointed boards without the need for caulking

been made from copper or bronze. Okay, say it was. How would it have been shaped? To my knowledge no one has found such a drill so the question can't be answered. But what has been found is evidence that the artisans of the same period were able to drill holes down to perhaps 6 or 8mm in diameter, not just in wood, but in granite.

To suggest these were drilled with copper or bronze tools is too far fetched for my imagination. One archaeologist (Petrie) has suggested that jewelled tipped drills must have been used. But none has yet been found. Some of what **has** been found is in the Cairo Museum where I spent a couple of hours photographing tools and furniture.

There are some surprises, as I hope to show in a future issue. W

Footnote 1: For those who may wish to explore these ancient lands for themselves, I'm happy to recommend the tours conducted each year by the local magazine, *Archaeological Diggings*. They are led by editor and archaeologist, David Coltheart, Ph: 02 4950 5603 — diggings@acay.com.au. The next tour of approximately 4 weeks is scheduled to leave on April 21, 2004.

Footnote 2: Another pit complete with disassembled boat has been found but no further work has yet been done.