



Model of a woodworking workshop and now in the Cairo Museum. Made of painted wood, 93 cm (36") long, 52 cm (20") wide and 26 cm (10") high, the model was found in the tomb of the chancellor Meketra at Deir el Bahari and dates from the late 11th or early 12th Dynasty.

WOODWORKING IN ANCIENT EGYPT

Part 1: Workshops and the Palace by Art Burrows

THERE'S A POPULAR belief, supported by a host of Internet websites, that the Ancient Egyptians could not have built the pyramids. They had to have been made by someone else—aliens perhaps, or maybe the people of Atlantis... These statements are all the easier to make because no one knows the exact methods employed in pyramid construction.

An examination of the furniture made by the Ancient Egyptians might

have led to the same kind of speculation, were it not for the information concerning its construction that has been gleaned from tomb paintings, several models of woodworking workshops and the letters and reports found (principally) at Deir el Medina and Amarna.

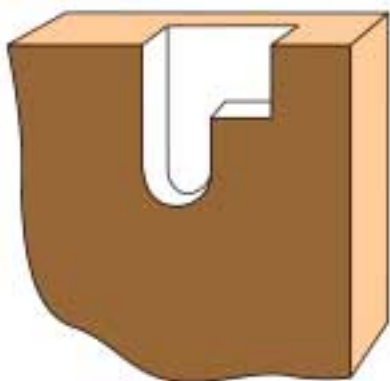
The most significant fact that has been learned about the craft in those distant times is that woodworking—as we know it today—almost certainly had its origins in Egypt. Lucas and Harris, in *Ancient Egyptian Materials and*

Industries, say that “even as early as the First Dynasty, the Egyptians were able to carve wooden statues of near life-size and during the Old Kingdom, woodworking reached a high degree of skill, as is proved... by the carved wooden panels with relief decoration from the tomb of Hesire and the six-ply wooden coffin from Saqqara.”

Although the country had few trees that would yield cabinet-grade wood, the native timbers were enough for the Ancient Egyptians' earliest attempts at woodworking. But it was not long

before the need for better materials led to importation. This topic will be discussed at greater length in the next issue. Meantime, it may be remarked that the very lack of large quantities of suitable wood was probably the motivation for the development of some of the ingenious techniques used by these early woodworkers. Jointing is one of the four essentials of woodworking—the others are cutting, shaping and finishing—and the woodworkers of this period developed virtually all of the jointing methods in use today. Lap joints, mortice and tenon, dovetails, saddle joints—there is hardly a joint that cannot be found even among work dated to the Old Kingdom.

The furniture found in the tomb of the Fourth Dynasty Queen, Hetepheres (wife of Sneferu, mother of Khufu) was made of imported cedar and offers one of the first demonstrations we have of the extraordinary knowledge and skills that were evolving at that time.



The drawing above shows the morticed housing for the top rail of the canopy for Queen Hetepheres' bed. (The original canopy had collapsed but enough was found to make an accurate reconstruction). As can be seen, the mortise is an unusual shape—a formidable illustration of the Ancient Egyptian woodworker's understanding of joint construction and his consummate skill in the use of the copper chisels of the day.

There is, however, another aspect of Ancient Egyptian woodworking that is easily overlooked. This is the manner in which it was organised in order to obtain a desired result. The model carpenter's shop shown in the photo on



A wooden bed found in the tomb of Yuya and Tuya, the parents of Tiy who became the wife of Amenhotep III. Their tomb, KV 46, was in the Valley of the Kings at Luxor.

the opposite page does more than illustrate the way in which certain tasks were performed. It shows that areas were set aside for specific crafts and that within those workshops, there was a division of labour. Note that one man in the workshop is rip-sawing a log (ie. cutting along its length to convert it into boards); another (behind and immediately to the sawyer's right), is cutting a mortice with a chisel and mallet and there are several other woodworkers on the far right, and another two almost out of sight in front, each of whom has an adze. They appear to be cooperating in the shaping or surfacing of wooden beams.

THE WORKMEN OF DEIR-EL-MEDINA

While they pertain more to masons than carpenters, the letters and reports found in the ruins of Deir-el-Medina extend this view of a highly organised workforce. There are reports, for instance, that contain information about the rosters for the various gangs, their idle time and absences. One records that the vizier (*PA-Ra-m-Hb*) arrived to instruct the gang and that draughtsmen and chisellers also joined them. The keeping of records doesn't seem much different from that which might be undertaken in a modern workshop and the methods of

completing major tasks are also the same. We still group specialist workers under sectional leaders who report up through a chain of command to the people who are ultimately managing the project.

But what of the tools used by the Ancient Egyptian tradesmen? Did they have their own? Or were they supplied—and if so, by whom?

Another report from the same source speaks of "commissioning coppersmiths to cast tools" as well as noting the delivery of supplies of copper; in addition, there are frequent references to tools being given to the "left-hand" or "right-hand" gang—a further illustration of the organisation of the workforce and a hint that the encouragement of competition between groups doing similar work was a management technique, even in those times.

Clearly, the bureaucracy not only assigned the work, but also allocated the necessary tools and materials. At least, this was the case in the workshops that served the Pharaoh who was therefore not only the ultimate manager of every royal workshop, but also the ultimate owner of all the tools used in them.

Of course, the arrangements didn't always work as well as they should. One report tells of a worker giving his tools back to the chief workman. It isn't clear which of them thought the tools were



Chest with domed lid and marquetry panels, 18th Dynasty, Cairo Museum.

too small, but the obviously undesirable result was that the tools were not returned to the workman for 10 days. Another report complains about hunger due to the delay of grain rations from the granary of the Ma'at temple, then goes on to record the delivery and distribution of those rations. So the workers were employed, fed, and, since Deir el Medina was a walled and secure village remote from Thebes, it is reasonable to deduce they were also housed by their king.

Another insight into how the system worked is given in an enquiry by the gang about “copper tools which

were in the possession” of one named 2Awy. Even the stilted phrasing that results from translation of the original hieroglyphs cannot disguise the implication that “the gang” could get a mite peevish if one among their fellows didn't do the right thing with the tools allocated to him.

The locations of the workshops would have depended upon the kind of work being done. Ancient Egyptian furniture can be broadly divided into four groups. At the very top of the list was royal furniture. This was made for the Pharaoh and had to be fit for, not merely a king, but for a god. The chest

Small painted chest, Cairo Museum



shown above (found in the tomb of Tutankhamen) is typical. Howard Carter estimated that there are some 47,000 individual pieces of inlay on its four sides and vaulted top. Some royal furniture was made for the express purpose of accompanying the Pharaoh to his tomb. Other pieces that made the same journey, were possibly favourites in life and came to the burial showing evidence of wear and repair.

Perhaps we should be surprised that we have even the relatively small amount of royal furniture now scattered throughout the world's museums. While the Ancient Egyptians knew how to gild a surface with very thinly beaten gold, much of the gold applied to royal furniture was quite thick. It was therefore all the more attractive to a tomb robber.

FINE PALACE FURNITURE

The second standard of furniture was made for the palace. This was the furniture in daily use by the Pharaoh's wider family and the members of his court. Much of this was also “fine furniture,” but it was intended for mundane purposes like the storage of linen. Again, some palace furniture—from the superb down to the ordinary—made its way into the tombs of one or other of those to whom it was relevant. The small chest shown below left is an example of this furniture. Well proportioned and made, it has no gold decoration; instead, it is painted, perhaps in rough imitation of inlay.

The third standard of furniture was that made for and used in the houses of the nobles and other leaders in the community—scribes perhaps, certainly the merchants, and probably the operators of business enterprises such as breweries or bakeries (at least some of which appear to have been privately owned). This furniture was similar to that used for ordinary living in the palace though it may have occasionally been embellished with gold.

The fourth and final standard was for furniture that hardly fits the modern description, for it might have been anything that could be pressed into service to perform a desired function.

The workshops that made the highest standard of furniture must have dealt with a substantial amount of gold. They would have to have been secure establishments, probably within the precincts of the palace or so far removed from the rest of the community as to diminish the threat of robbery. We may therefore assume that there were woodworking workshops in the Valley of the Kings and, at least around the time of the 18th Dynasty, the woodworkers would have lived in the workers' village of Deir-el-Medina.

The ruins of this village of some 68 dwellings is now popular with tourists; (it is generally included on the itinerary of *Diggings* tours to Egypt). Situated several kilometres (a couple of miles) from the worksite, it is on the other side of one of the ridges that forms the Valley. Given the distance, the nature of the terrain over which they had to travel and the fact that they probably worked from dawn to dusk, the workmen would have stayed at or near the worksite. Lynn Meskell comments on this in her book *Private Life in New Kingdom Egypt*, where she says: "The men left their households for days at a time..."

It appears likely that while their household establishments, comprising wives, servants and possibly slaves, were located at Deir-el-Medina, when the workmen went into the Valley, they would have been housed close to their workshops under the ever-watchful eyes of the Pharaoh's guards.

Even today, the Egyptians make use of reeds and palm fronds for shade and it is no great leap of imagination to suggest that the workers would have spent their off duty hours in rough dwellings made from these impermanent materials.

This roadside stand shows palm fronds still used for shade



Looking into the excavated houses of the workmen who lived at the village now called Deir el Medina

Other woodworking workshops, those that made pieces for general use, were probably located in the main city area. The furniture produced in them would have been less pretentious and certainly would not have included the lavish gold decoration reserved for pieces made for the Pharaoh or his Palace. But the scarcity of wood and the modest use of gold would

nevertheless have made the furniture far too expensive for the common people to purchase.

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Next Issue: Timber & Tools

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Some of the furniture items found in the tomb of Tutankhamen included various stools and chairs. Of particular value was the wooden throne that was gilded and decorated with golden lions' heads. The back of the throne contained the famous picture showing the young king being anointed with sweet smelling oils by his wife, Ankhesamun.

