

Ancient Egypt

There are days when the sand blows ceaselessly, blanketing the remains of a powerful dynasty that ruled Egypt 5,000 years ago.⁽¹⁾ When the wind dies down and the sands are still, a long



shadow casts a wedge of darkness across the Sahara, creeping ever longer as the north African sun sinks beyond the horizon.⁽²⁾



Five thousand years ago, the fourth dynasty of Egypt's Old Kingdom was a highly advanced civilization where the kings, known as pharaohs, were believed to be gods.⁽³⁾ They lived amidst palaces and temples built to honor



them and their deified ancestors.⁽⁴⁾ "Pharaoh" originally meant "great house," but later came to mean king.⁽⁵⁾ This web site will show you

science in action -- bringing you face to face with the evidence archaeologists use to understand the meaning of Giza's pyramids, and to the process of evaluating the finds they will uncover beneath the sands of the plateau.⁽⁶⁾

Before looking closely at pharaonic society and the beginning of the Pyramid Age, one first has to step into Egypt's landscape and take a look around.⁽⁷⁾ Ancient Egyptians called their land "Kemet," which meant "black," after the black fertile silt-layered soil that was left behind each year during the annual inundation, when the Nile flooded the fields.⁽⁸⁾ The most prevalent color of the desert, however, is a decidedly reddish-yellow ochre.⁽⁹⁾ The Egyptians called the desert "deshret," meaning "red," and this endless carpet of sand covers an estimated 95 % of Egypt, interrupted only by the narrow band of green carved by the waters of the Nile.⁽¹⁰⁾

It was at this time that hieroglyphic writing made its first appearance, in the tombs and treasures of the pharaohs.⁽¹¹⁾ To seal the unification of Upper and Lower Egypt, Menes founded the capital city of the kingdom at the place where the two met: at the apex of the Nile, where it fans out onto the fertile silt plain.⁽¹²⁾ The fortress city was named "White Walls" by Menes, but it is known today by its Greek name, Memphis.⁽¹³⁾ For much of the 3,000 years of ancient Egypt, it remained the capital seat of the pharaohs.⁽¹⁴⁾ Only 20 miles to the north of Memphis is the modern capitol, Cairo, still situated near the juncture of the Nile valley and the delta.⁽¹⁵⁾

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How does the pyramid fit into early Egyptian life?⁽¹⁶⁾ In this society, each individual's eternal life was dependent on the continued existence of their king, a belief that made the pharaoh's tomb the concern of the entire kingdom.⁽¹⁷⁾

Pictures on the walls of tombs tell us about the lives of the Kings and their families.⁽¹⁸⁾ We know

pyramids were built during a king's lifetime because hieroglyphs on tomb walls have been found depicting the names of the gangs who built the pyramids for their kings.⁽¹⁹⁾ Furniture and riches were buried with the king so he would have the familiar comforts of his lifetime buried near him.⁽²⁰⁾ Whole subdivisions of tombs of those in high positions in the court of a king can be found surrounding the pyramids of Giza.⁽²¹⁾ These are primarily mastabas, or covered rectangular tombs that consist of a deep burial shaft, made of mud brick and half-buried by the drifts of sand on the plateau.⁽²²⁾



The first pyramid was the Step Pyramid at Saqqara, built for King Zoser in 2750 BC.⁽²³⁾ This first application of large scale technology, however, is often attributed to Imhotep, the architect of the Step Pyramid.⁽²⁴⁾ He was not a pharaoh, but was the Director of Works of Upper and Lower Egypt.⁽²⁵⁾ The superstructure of the pyramid was made of small limestone blocks and desert clay.⁽²⁶⁾ Inside, the burial chamber and storage spaces for Zoser's grave goods were carved out of the earth and rock beneath the structure.⁽²⁷⁾ Imhotep's intent was to mimic the basic structure of King Zoser's palatial home in the burial chamber.⁽²⁸⁾ The tomb, like those that followed, was meant to be a replica of the royal palace.⁽²⁹⁾ In early tombs, the central area was always the burial place.⁽³⁰⁾



It is thought that in 816 AD Caliph al-Mamun first ordered workers to blast through the blocked stone entrance in order to explore within Khufu's pyramid.⁽³¹⁾ But looters, probably from dynastic Egyptian times, had already absconded with King Khufu's burial treasures and his body.⁽³²⁾ This is true of all of the pyramids at Giza, so very little is known about Khufu or any of his successors who were buried at Giza.⁽³³⁾

Archaeologists, nonetheless, continue to look for pieces of this puzzle to further our understanding of the Pyramid Age and the pharaohs that ruled Egypt.⁽³⁴⁾

History of Giza

Standing at the base of the Great Pyramid, it is hard to imagine that this monument -- which remained the tallest building in the world until early in this century -- was built in just under 30 years.⁽³⁵⁾ It presides over the plateau of Giza, on the outskirts of Cairo, and is the last survivor of the Seven Wonders of the World.⁽³⁶⁾ Today, Giza is a suburb of rapidly growing Cairo, the largest city in Africa and the fifth largest in the world.⁽³⁷⁾



About 2,550 B.C., King Khufu, the second pharaoh of the fourth dynasty, commissioned the building of his tomb at Giza.⁽³⁸⁾

Some Egyptologists believe it took 10 years just to build the ramp that leads from the Nile valley floor to the pyramid, and 20 years to construct the pyramid itself.⁽³⁹⁾ On average, the over two million blocks of stone used to build Khufu's pyramid weigh 2.5 tons, and the heaviest blocks, used as the ceiling of Khufu's burial chamber, weigh in at an estimated 40 to 60 tons.⁽⁴⁰⁾

This question has long been debated, but many Egyptologists agree the stones were hauled up ramps using ropes of papyrus twine.⁽⁴¹⁾ The popular belief is that the gradually sloping ramps, built out of mud, stone, and wood were used as transportation causeways for moving the large stones to their positions up and around the four sides of the pyramids.⁽⁴²⁾



Giza, however, is more than just three pyramids and the Sphinx.⁽⁴³⁾ Each pyramid has a mortuary temple and a valley temple linked by long causeways that were roofed and walled.⁽⁴⁴⁾