

#### EDITED BY ZAHI HAWASS

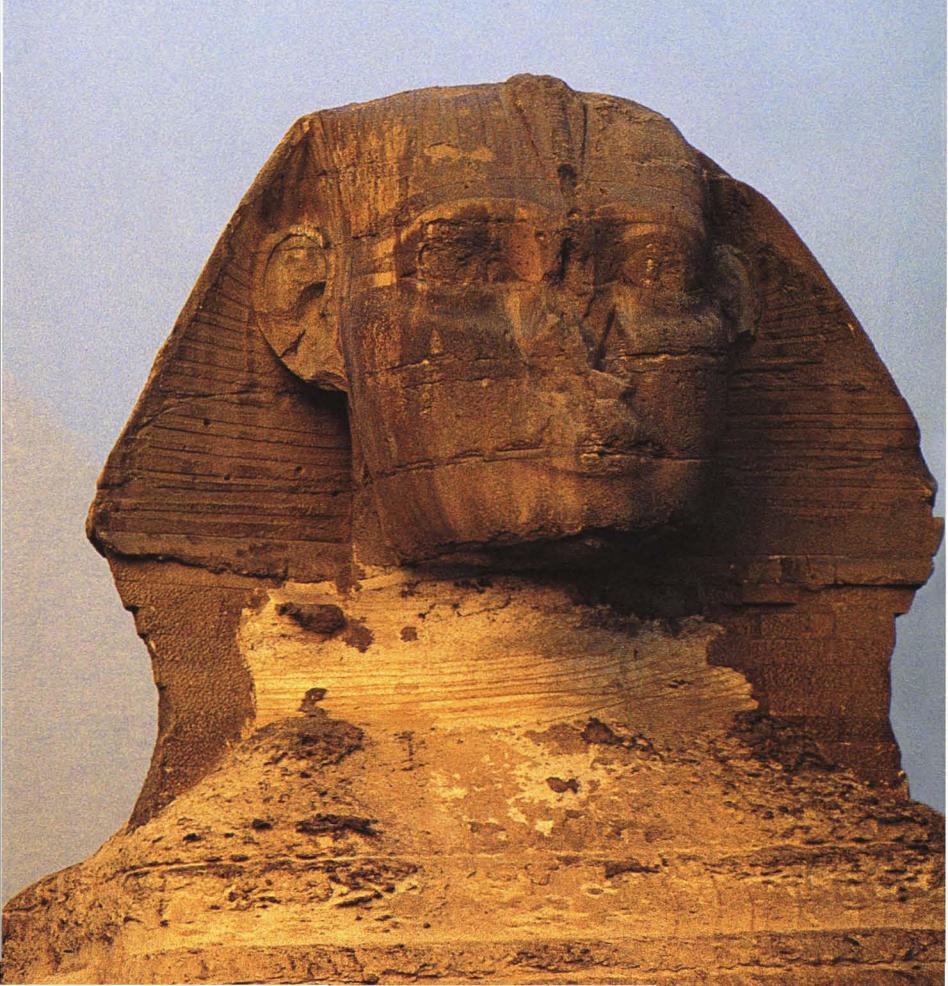
Secretary General of the Supreme Council of Antiquities and Director of the Giza Pyramids Excavations

> PROJECT EDITORS Laura Accomazzo Valeria Manferto De Fabianis

> > GRAPHIC DESIGN Paola Piacco

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# THE TREASURES OF THE PYRAMIDS





# Contents

INTRODUCTION	Page	5	CHAPTER 8		
by H.E. Mrs. Suzanne Mubarak			THE ROYAL MORTUARY ENCLOSURES OF ABYDOS AND HIER	RAKONPO	OLIS
THE PYRAMIDS	Page	12	by Matthew Adams and David O'Connor	Page	78
by Zahi Hawass	rage	12	CHAPTER 9		
			THE STEP PYRAMIDS		
CHRONOLOGY	Page	18	by Ali Radwan	Page	86
CHAPTER 1			CHAPTER 10		
WHY A PYRAMID? PYRAMID RELIGION			THE PYRAMIDS OF THE FOURTH DYNASTY		
by James P. Allen	Page	22	by Rainer Stadelmann	Page	112
CHAPTER 2			CHAPTER 11		
THE ADMINISTRATION OF THE PYRAMID			THE QUEENS' PYRAMIDS OF THE FOURTH DYNASTY AT GO	ZA	
by Vassil Dobrev	Page	28	by Zahi Hawass	Page	138
by vassii Dobiev	rage	20	CHAPTER 12		
CHAPTER 3			THE SATELLITE PYRAMID OF KHUFU		
BUILDING AN OLD KINGDOM PYRAMID			by Zahi Hawass	Page	150
by Mark Lehner	Page	32			
CHARTER			CHAPTER 13		
CHAPTER 4			THE MYSTERY OF HETEPHERES	n	
THE ARCHITECTURAL DEVELOPMENT OF THE EGYPTIAN R	ROYAL TO	OMB	by Zahi Hawass	Page	152
by Zahi Hawass	Page	46	CHAPTER 14		
CHAPTER 5			THE SECRET DOORS INSIDE THE GREAT PYRAMID		
THE ARCHITECTURAL COMPONENTS OF THE PYRAMID CO	OMPLEY		by Zahi Hawass	Page	156
by Zahi Hawass	Page	50	CHAPTER 15		
by Zuin Fill Huss			THE PYRAMIDION		
CHAPTER 6			by Zahi Hawass	Page	160
THE PREDYNASTIC PERIOD			CHAPTER 16		
by Renee Friedman	Page	54	THE ROYAL BOATS AT GIZA		
CHAPTER 7			by Zahi Hawass	Page	164
THE TOMBS OF THE FIRST AND SECOND DYNASTIES			CHAPTER 17		
AT ABYDOS AND SAQQARA			THE SPHINX		
by Günter Dreyer	Page	62	by Mark Lehner	Page	172



#### CHAPTER 18 THE TOMBS OF THE HIGH OFFICIALS AT GIZA by Peter Der Manuelian Page 190 CHAPTER 19 THE 'UNFINISHED' PYRAMIDS OF THE FOURTH DYNASTY by Michel Valloggia 224 Pag. CHAPTER 20 THE PYRAMIDS OF THE FIFTH DYNASTY by Miroslav Verner 236 CHAPTER 21 THE SURPRISING ABUSIR BLOCKS by Zahi Hawass and Miroslav Verner 260 CHAPTER 22 THE PYRAMIDS OF THE SIXTH DYNASTY by Audran Labrousse 264 CHAPTER 23 THE DECORATIVE PROGRAM OF THE OLD KINGDOM PYRAMID COMPLEXES by Zahi Hawass Page 282 CHAPTER 24 THE TOMBS OF THE FIFTH AND SIXTH DYNASTIES AT SAQQARA by Karol Myśliwiec Page 286 CHAPTER 25 THE PYRAMIDS OF THE MIDDLE KINGDOM by Dieter Arnold Page 326 CHAPTER 26 THE TOMBS OF THE NOBLES IN THE MIDDLE KINGDOM by David P. Silverman Page 348 CHAPTER 27 ROYAL AND PRIVATE STATUES OF THE OLD AND MIDDLE KINGDOMS by Hourig Sourouzian Page 366

INDEX AND BIBLIOGRAPHY

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10-11 Scene showing the 'Meidum geese, Egyptian Museum Cairo, Old Kingdom.

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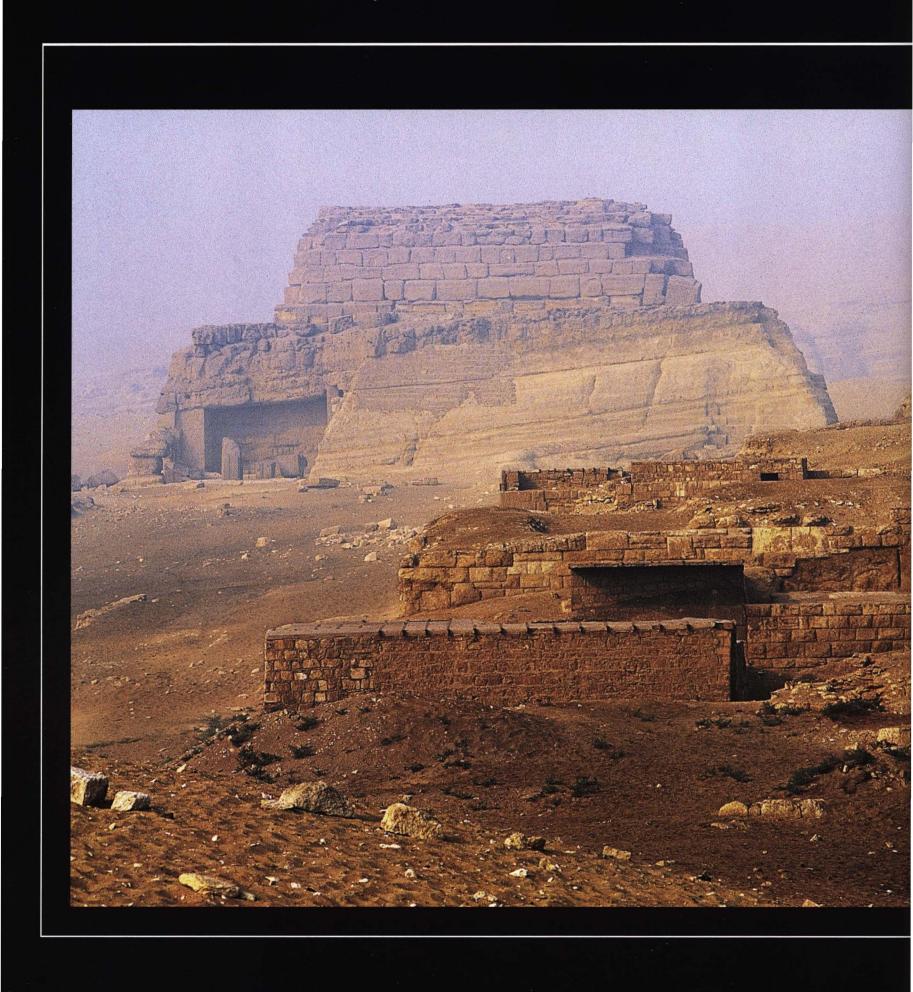
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Page 392



# The 'Unfinished' Pyramids of the Fourth Dynasty

by Michel Valloggia



itness to a secular past, archaeological remains invariably preserve the imprint of history that has shaped its present aspect. Consequently, certain sites reveal the existence of outlined then abandoned projects. The reasons for such disinterest vary considerably. Sometimes they are bound to natural, hydrological, or geological phenomena, although they also result from the early disappearance of their initiator. At other sites, it is not unusual that the vision of an edifice, apparently unfinished, proceeds from a later pulling down. The disappearance of antique monuments can find its explanation either in the will of reemploying the construction stone for new buildings, or in a favorable or adverse ideology toward the memory of a predecessor. It should be remembered that Amenemhet I (Twelfth Dynasty), being anxious to be officially recognized, inserted in his pyramid of Lisht inscribed blocks bearing the names of his remote predecessors, Khufu, Khafre, Unas, and Pepy II (Fourth-Sixth Dynasties). Later on, at the end of the Amarna Period, the Amonian orthodoxy worked unceasingly to destroy all traces of Akhenaten's city, which had been founded by Amenhotep IV/ Akhenaten (Eighteenth Dynasty) at Tell al-Amarna. Not to mention the lime-burners and the quarrymen who from Roman times up to the nineteenth century, intensively exploited all the archaeological sites of Egypt! The huge Memphite necropolis was not saved: for over a thousand years it supplied the large medieval and modern building sites of the Cairo metropolis. In 1882, W.M.F. Petrie, while he was working on the pyramid of Abu Rawash, complained

in his journal of the progressive disappearance of the monument: the stones were taken away at a rate of 300 camel-loads per day.

Nowadays, the situation is, fortunately, improved and it is up to the archaeologists who explore a site to protect and restore this universal heritage, and it is imperative that it is transmitted to the generations of the future. Within this context, it falls on the specialists to estimate the original state of a construction at its completion and to determine its condition prior to the injuries of time or human depredations. This being settled, the incomplete state of or the ancient demolition of a building offers excellent analysis opportunities: in both cases, the abandonment of a project or its destruction makes it strangely comparable to a building site. Thus, it is very easy to study the construction procedures that prevailed in times past in the building of these

In this respect, the numerous 'unfinished' pyramids of the Memphite cemetery shed new light on our knowledge of the Fourth Dynasty. It is a great paradox, that this 'Age of Builders,' dazzling in its command of the arts and the virtuosity of its techniques, used writing very parsimoniously in order to spread the originality of its message. Therefore, the historian, who is anxious to closely examine the remote past, is forced to meticulously examine the archaeological remnants. In that way, the 'unfinished' monuments of Abu Rawash, Zawyet al-Aryan, Giza, and Saqqara South, notwithstanding the modesty of their remains, have sometimes led to overinterpretation, despite the lack of information.

224-225
The Central Field of Giza Cemetery
and the superstructure of the tomb
of Queen Khentkaus I.



## THE PYRAMID OF DJEDEFRE AT ABU RAWASH

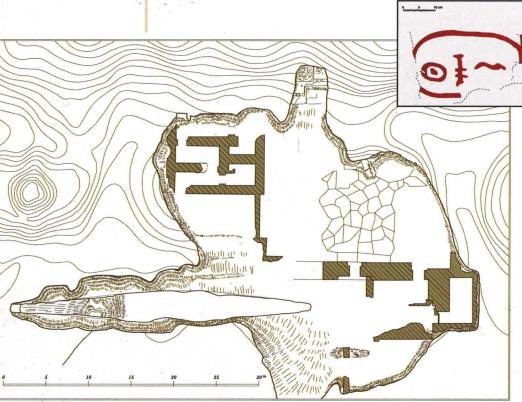
The archaeological area of Abu Rawash, at the northern end of the Memphite necropolis, is overlooked by an escarpment eight kilometers north of the pyramids of Giza and 15 kilometers west of Cairo. The mortuary complex of Djedefre, third ruler of the Fourth Dynasty, was built at its top. Excavations were undertaken on the site of this pyramid by the French Institute of Oriental Archaeology from 1900 to 1902. Emile Chassinat discovered remains of a worship settlement, a boat pit, and a great number of statuary fragments, with the name of the king, thus allowing the identification of the owner of the monument. This funerary complex has been mishandled since the Roman period and was in fact used as a quarry up to modern times. This explains why the attempts at historical reconstitutions of the

Fourth Dynasty intentionally put the site of Abu Rawash and its owner aside—lack of information. The discovery of royal statues broken in small fragments led Chassinat to suspect a damnatio memoriae, connected with the illegitimacy of power of Djedefre. From this point of view, the transfer of the site of the royal pyramid from Giza to Abu Rawash would have in some way been the expression of a desire for rupture as wished by an usurping pharaoh. Djedefre, whose mother was of Libyan origin, is even supposed to have killed his eldest brother in order to accede to the throne. This royal pyramid has raised numerous questions. Its height, preserved up to 10-12 m, has been compared to the short-lived reign of Djedefre, which according to the Turin Papyrus, lasted only eight years. It was always thought that this pyramid remained unfinished, like the whole mortuary complex, the chapel of which would have been quickly built in mud brick.

226 bottom

This relief map of the area in front of the pyramid of Djedefre was done at the end of March 1901. From the archaeological mission of E. Chassinat.

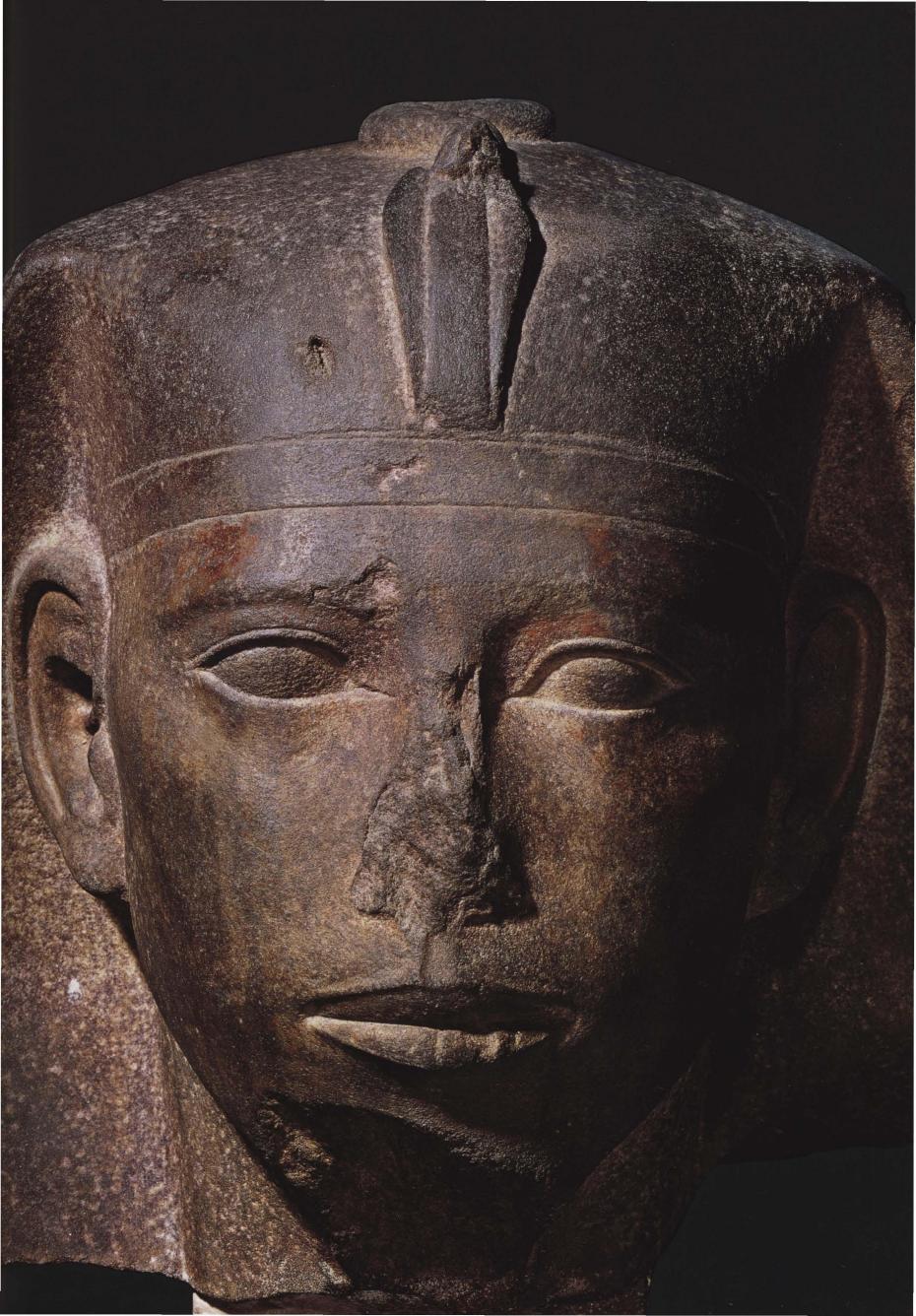
226-227
This head of Djedefre in quartzite, 26.5
cm high and 28.8 long, was found in
the boat-shaped cavity at Abu Rawash.
Now in the Musée du
Louvre, Paris.



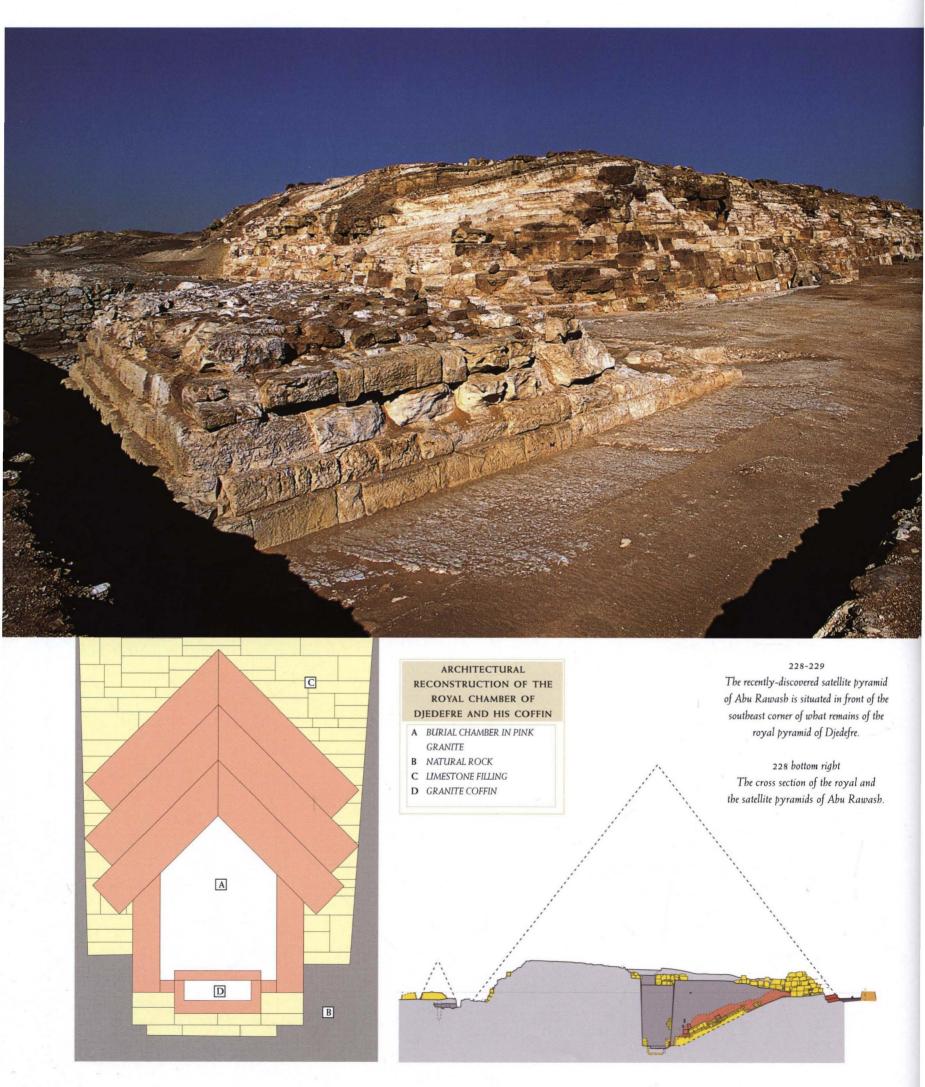
226 top

This fragment a quartzite statuette of King Djedefre and his wife, Queen Khentetenkai is 28 cm high and 19.5 long. Now in Musée du Louvre, Paris.

226 center
This graffito of the name of Djedefre
painted with hematite is in the
corridor of the king's pyramid
at Abu Rawash.



# Unfinished Pyramids





Since 1995, a joint mission of the University of Geneva and the French Institute, with the cooperation of the Supreme Council of Antiquities, has undertaken new investigations on the site, with the objective of reevaluating the reign of Djedefre. During the first season, thanks to stratigraphicallycut trenches, it was proven that the destruction of the statues traced back to the Roman period, in the second century, a time when the site was occupied. As a matter of fact, the eastern part shows remains testifying a long Roman occupation. This is explained by the strategic position of the site which overlooks a crossroads and offers recovery of construction material. As for the historical point of view, it can now be established that the assumption of a usurpation of the royal power and of a posthumous revenge has to be brushed aside.

The first examination of the pyramid itself shows that its dimensions were near those of Menkaure: 106.20 meters square, with a height of 66.0 m (with a slope of 51°57′). The base of the pyramid of Djedefre revealed a foundation bed with a slope of 12°, becoming horizontal little by little on the angles of the tetrahedron. This apparatus, running around the whole pyramid, prevented it from sliding toward the outermost of the backing stones and of

the cloak of the *inselberg*, which forms the nucleus of the pyramid (44 percent of the total volume of the tetrahedron).

The inside of this 'open pyramid' offered a Tshaped plan, including a north to south slope and a large pit designated for the royal tomb. The destruction of the superstructure of the pyramid caused huge monoliths to fall, thus the reason why the excavators at the beginning of the twentieth century were unable to clear the substructures and to proceed to the burial chamber. In order to remove these huge blocks it was recently necessary to build a causeway allowing access and room for the work of a mobile crane operating from the top of the funerary pit. Hematite-painted graffiti by quarrymen, with the name of the king as well as a mention of the first year of his reign, were found in situ in the descending corridor. This should be the evidence that work on the royal pyramid started right away after the accession to the throne of a new pharaoh. In the central pit, only the solid platform of the foundation escaped the stone-hewers of later ages. Nevertheless, the discovery of numerous architectonic fragments bearing the name of a wabet ('tomb') allowed the location of the mortuary tomb and its theoretical reconstruction.





229 bottom

General map of the archaeological

area of the funerary complex of

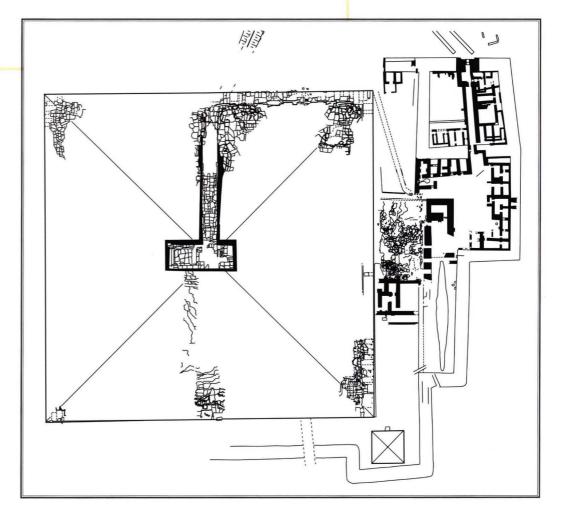
Djedefre in Abu Rawash, completed

in summer 2002.

229 top
The northeast corner of the royal
pyramid of Djedefre.

229 center, top
This entrance leads to the descending
corridor of the pyramid of Djedefre in
Abu Rawash.

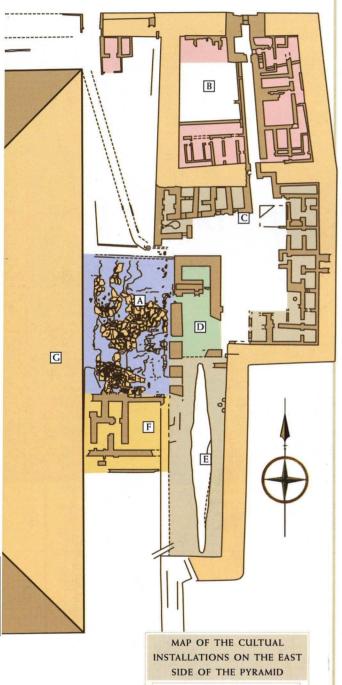
229 center, bottom
The enclosures of the royal pyramid
with the satellite pyramid, in the
background are the Pyramids of Giza



230 top
Objects found during the 2002
excavations close to the new satellite
pyramid at Abu Rawash.

230 bottom left
The boat-shaped pit in front of the
royal pyramid at Abu Rawash,
during the excavation works.

230 bottom right
Workers cleaning the descending
ramp to the royal pyramid
of Abu Rawash.



- A COURTYARD OF THE HIGH TEMPLE
- B SERVICE AREAS (BAKERY AND BREWERY)
- C AREAS FOR THE PRIESTS
  DEDICATED TO THE
  FUNERARY CUIT
- D EAST CHAPEL OF THE TEMPLE
- E BOAT-SHAPED PIT
- F MAIN CHAPEL OF THE HIGH TEMPLE
- G MAIN PYRAMID



Within the perspective of completing the information resulting from the exploration of the surroundings of the pyramid, clearing on the east and south sides of the tetrahedron has been undertaken. These investigations already show that the five interdependent structures can be put into connection with the mortuary temple. On the northeast side, an access opened on a dry-stone inner enclosure assigned to workshops and habitations. Here the keeping in stock of goods and places for light shelters suggest bakery and brewery fittings. On the southern side, an esplanade was surrounded by buildings on each of its three sides. Their function has not yet been defined. On the west side of this courtyard, there was a chapel intended for the near relations of the king. This building was next to another construction that had a boat-pit in its basement. It has been observed that this boat was quite similar to that of Khufu, which was discovered in 1954 and is now exhibited in Giza. At Abu Rawash the cutting of the rock clearly shows that the boat had its prow to the south, in accordance with the antique tradition of the Egyptians who oriented themselves to the source of the Nile. Close by to the west, there was the mortuary chapel of the king with a clay seal impression. This seal, which belonged to an official attached to the royal cult, contains the mention of the name of the pyramid in the phrase, "The Director of the Firmament of Djedefre." Finally, the interior court of the upper temple, built right next to the east side of the pyramid, was in close connection with each of these constructions.

Continuing excavations in April 2002, to the south of the royal pyramid, led to the clearing of a small, square satellite pyramid, measuring 10.5 m on

each side. This new tetrahedron was equally aligned with the cardinal points and the axis of the mortuary temple, and in its substructures there was a tomb dug in hypogeum style. Its shaft contained a broken sarcophagus, in front of which was a niche prepared for canopic vessels. This tomb has been plundered since antiquity, nevertheless it surrendered a large deep bowl in alabaster with the name of *Horus Medjedu* ('the good shooter')—*King Khufu* (Khufu), a canopic vessel with its sealing, and a lot of ceramics. The whole lot of this material is typologically close to the furniture discovered in the past at Giza in the tomb of Queen Hetepheres I, mother of Khufu.

Previously, this new satellite structure could first have suggested the presence of a cult pyramid, however its substructure ordering speaks rather for a queen's pyramid. Last but not least, the name of Khufu on an alabaster vessel suggests a direct relationship with the owner of the monument, namely one of the daughters of the constructor of the Great Pyramid, Hetepheres II or Khentetenkai. The monument itself seems finally to translate the evolution of a project imagined as a cult pyramid and later on transformed into a feminine burial.

With regard to the royal mortuary complex, considered globally, the clearing of the inner enclosures surrounding both pyramids and the presence of this satellite building clearly prove that the king's pyramid had been completed *prior* to the setting of these adventitious elements. Consequently, the conclusion presents itself: this new inquiry on the site establishes that the pyramid of Djedefre at Abu Rawash should no longer be considered an unfinished monument that has been abandoned in the course of its construction.





### THE PYRAMID OF BAKA AT ZAWYET AL-ARYAN

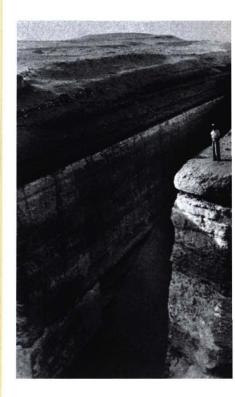
The unfinished pyramid of Zawyet al-Aryan, known as the 'Great Pit,' belonging to the successor of Djedefre, King Baka, is located six kilometers south of Giza. The site was excavated by A. Barsanti between 1905 and 1912 but the First World War and the death of the excavator put an untimely end to this exploration. Subsequently, sand re-covered these remains which were uncovered for the last time in 1954 for the occasion of a full-length film by Howard Hawks, Land of the Pharaobs.

On the surface, Barsanti found the remains of a huge rectangular enclosure of 465 x 420 m; and in the middle of it, there was probably a pyramid of a square of 210 m. However, only a few foundation blocks, dug out of the substructure, seem to have been put against the nucleus of the pyramid. Inside the pyramid, from the center of the north side, a long sloping passage of 106 x 6 m leads down into the rock with two slopes separated by a horizontal landing, down to 24.5 m. As in the substructure of Abu Rawash, this descending passage leads to a deep pit (27.0 x 11.7 m). In the west part of its approximately 4.5 m thick foundation, which is paved with granite and limestone blocks, an oval sarcophagus with its cover in red granite was found. This tub, hidden in antiquity by a thick clay layer, was entirely covered by a limestone pavement. The sarcophagus was empty and it obviously never held the intended owner.

This funerary complex is short in documentation and therefore remains enigmatic, as much as for the historian as for the archaeologist. The traces of painted inscriptions on the blocks show the mark of a royal cartouche variously assigned to several kings of the Third Dynasty. However, a few archaeological indices speak in favor of a Fourth Dynasty construction. The size of the blocks used, unknown previous to Khufu; the embedding of the sarcophagus within the pavement, which reminds one of the pyramid of Khafre; and finally the similarity of the plan with the substructure of Abu Rawash, are in accordance with the habit of inscribing the royal names within a cartouche from the Fourth Dynasty onwards. Furthermore, the discovery by Barsanti of a schist tablet with the name of King Djedefre in a workers settlement of the 'Great Pit' establishes a likely historical link. In these conditions, the discovery of the name of Baka, eldest son of Djedefre, seems to be a possible identification with the owner of the pyramid of Zawyet al-Aryan. Thus the incomplete state of the superstructure work is confirmed by the clay protection and the pavement put on top of the sarcophagus in the substructure. This could well indicate the completion of a stage in the work or the renunciation of the final project.

Be that as it may, new investigations in the field are absolutely necessary, especially as this archaeological area is now threatened by the extension of the southwest Ring Road of Cairo and the unavoidable urbanization which will follow in this region.

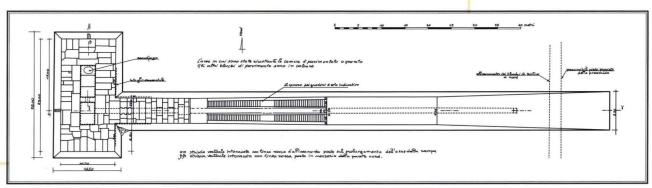
231 top
This archival photograph focuses on
the Great Pit of the pyramid of Baka,
at Zawyet al-Aryan.

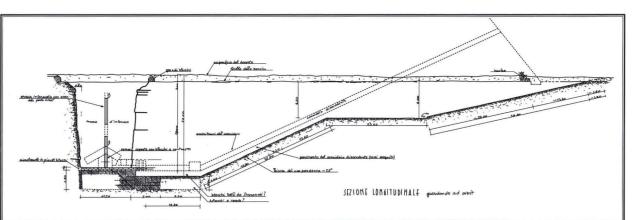


231 center

General plan of the infrastructures of the pyramid of Baka, in Zawyet al-Aryan: in particular notice the descending ramp and the funerary pits.

(Drawing by V. Maragioglio and C. Rinaldi.)



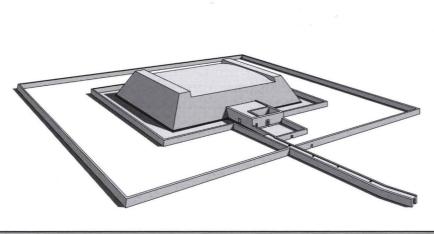


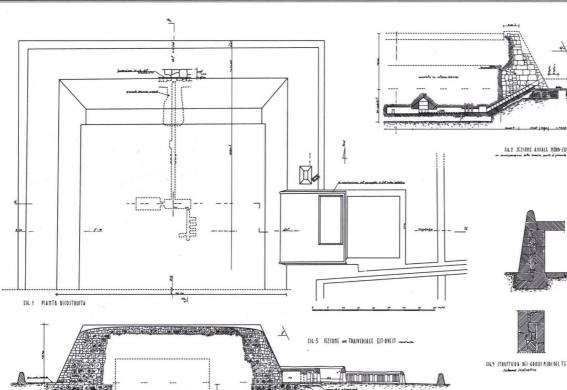
231 bottom

General section of the infrastructures of the pyramid of Baka, in Zawyet al-Aryan, the descending ramp and the funerary pits are shown clearly.

(Drawing by V. Maragioglio and C. Rinaldi).

# Unfinished Pyramids









232 top

Reconstruction of the funerary complex of Shepseskaf (Mastabat Faraun) in South Saqqara by H. Ricke.

232 center left Plan and section of the funerary complex of Shepseskaf (Mastabat Faraun) by V. Maragioglio and C. Rinaldi.

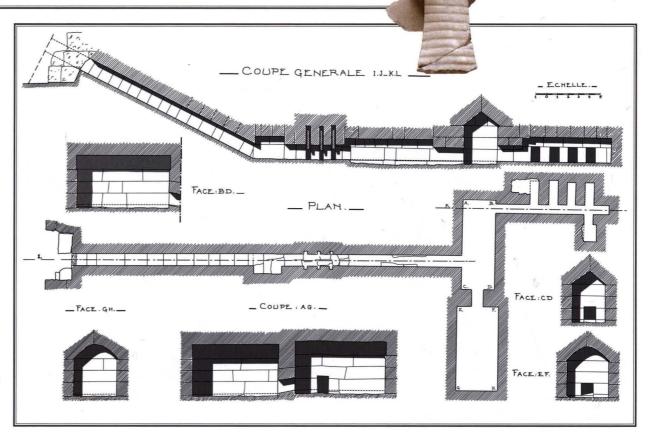
232 center right Calcite head of king Shepseskaf, 28.5 cm high, now in the Museum of Fine Arts of Boston.

232 bottom

Plan and sections of the infrastructures of Mastabat Faraun by G. Jéquier, after the work of J.-Ph. Lauer.

232-233

This aerial view of Mastabat Faraun gives evidence to the rounded shape of the structure, typical of coffins covers.





# THE GIANT MASTABA OF SHEPSESKAF (THE MASTABAT FARAUN)

The funerary complex of Shepseskaf, penultimate king of the Fourth Dynasty, is set up in the southern part of Saggara, halfway between the Step Pyramid of Djoser and the site of Dahshur, and is known by the name of Mastabat Faraun ('bench of the pharaoh') due to its present aspect. The monument was partly explored by A. Mariette in 1858, and investigations were left unpublished until the work of G. Jéquier in 1924-25. Previously, J. Perring had noticed the huge dimensions, 95.0 m long by 67.0 m broad, with a height of 18.0 m. The peculiar shape of its superstructure has been identified by R. Lepsius: he thought of a huge sarcophagus with a vaulted top between vertical ends. The clearing undertaken by Jéquier confirmed this identification and revealed the presence of a huge foundation platform on which this edifice has been built. At the beginning, its shape was that of sloped faces encased with fine limestone and granite for a bottom course

In the substructure, the plan of the burial chamber is in the form of a T, like the pyramid of

Abu Rawash. After the descending corridor there is a horizontal corridor, followed by three portcullis slots and a passage to an antechamber opening west on the burial chamber. However, the architect added a series of five small rooms opening onto the antechamber in a southeast direction. They were obviously magazines for the royal mortuary furniture.

The general organization of this plan shows an important innovation in the general concept of the plan of the burial chamber of the pyramids, this was systematically taken over and applied to the pyramids of the Fifth and Sixth Dynasties, from the time of Diedkare Isesi.

In the construction of the substructure, Jéquier observed that the burial chamber, which had been entirely built in granite, had been built in the open air. At the end of his work, the architect covered the whole underground building with a first limestone masonry envelope. As for the final shape in form of a huge sarcophagus, it was realized in a second phase covering the first one. This style of construction, from its origin, clearly shows that this project differed entirely from the traditionally applied system of building pyramids.

The incompleteness of the rough-casting and

buffing work in the burial chamber, in association with the total lack of furniture pieces, led Jéquier to admit that Shepseskaf had never been buried in the tomb he had ordered for himself.

One of the major problems that remains unexplained is the shape of this amazing superstructure in form of a sarcophagus. For what reasons was the choice of a pyramid left aside here? According to Jéquier, this new architectural choice proceeded from an opposition to the Heliopolitan dogma. The adoption of a tetrahedron, as well as the insertion of the name of Re within the royal cartouches of this dynasty, actually emphasized the great influence of the solar cult on the royalty. The new shape of this superstructure would thus have indicated a reservation of the king with respect to the Heliopolitan priesthood. However, it could as well have shown some ties to Lower Egypt and to the archaic sanctuaries of Buto, the hieroglyphic writing of which keeps up the symbolic form that can be seen in the royal sarcophagi of the Middle Kingdom. Finally, let us underline the fact that the incompleteness of the archaeological excavation, namely that of the valley temple and of the causeway, does not, at the present time, allow a complete assessment of this mortuary complex.



### THE TOMB OF KHENTKAUS AT GIZA

Queen Mother Khentkaus, a relative of Khufu through her father, Prince Hordjedef, is an enigmatic character from the end of the Fourth Dynasty. Thanks to the Westcar papyrus, she is considered to be the mother of the first rulers of the Fifth Dynasty; however, up to now, the name of her royal husband is unknown. Furthermore, contrary to the customs of this ancient period, the location of Khentkaus's tomb, within the central field of Giza, is not associated to any royal pyramid.

Nevertheless, this monument, in the past considered by R. Vyse and J. Perring to be an unfinished pyramid, was also called 'the fourth pyramid of Giza.' Selim Hassan, the excavator of the site, proved that this atypical building did not show a pyramidal shape. More recently, V. Maragioglio and C. Rinaldi, in their architectural study of the Memphite pyramids, came to the conclusion that the superstructure of this tomb had been executed in two distinct stages. In the first phase, there was work on the limestone core resembling a mastaba (43.7 x 45.8 m), which was cleared and its south side ornamented by a niched decoration. Around this core, the quarrymen had lowered the soil level by about 10 meters. Later on, it could be that a constructed

FIG. 2 PIANTA DELLA SOVDA/TDUTTUDA

TOTAL SO

volume about eight meters high had been added onto the first structure. This new shape built on the aforesaid plateau looked like a huge sarcophagus, like Mastabat Faraun. It is precisely because of the similarity of these superstructures that a great number of historians suggested that Khentkaus could well have been Shepseskaf's wife.

During the second phase of construction the whole volume was encased in limestone. A chapel was constructed to the east and was found to be cut within the rock above the burial itself. There are three chambers which were decorated in the past according to the wall fragments discovered by the excavator. A short sloping passage leads down from the offering room to the burial chamber constructed in granite.

On the outside, an enclosure surrounded the funerary complex; in its southwest corner was a boat pit and on the opposite side was a rectangular basin with a flight of steps.

In this monument, the causeway with its exceptional right angle doesn't seem to have been associated with a valley temple, as is the case of the royal complexes of that period. On the other hand, quite early, a series of houses, arranged in a linear settlement and meant for the funerary priests of Khentkaus were built on the basis of an extremely precise town-planning scheme.

This monument, in its conception and most original setting, seems to illustrate the final stage of development of the Fourth Dynasty cemetery at Giza. Actually, the funerary complexes of the following dynasty, including in their layout a solar temple, were set south, in the Abusir necropolis.

Having reached the end of this short presentation of the 'unfinished' pyramids of the Fourth Dynasty, it can be shown that despite the huge amount of archaeological work already accomplished, our present knowledge of the royal monuments of that time is limited. If ups and downs have shaped the picture of buildings abandoned in the course of their carrying out or partly demolished over time, it is now up to the archaeologists to re-examine these ancient files in the light of actual progress. The development of the methods of investigation in the field, comparison with preserved monuments, and, last but not least, analysis of new historical data allow unquestionable progress as shown by the recent excavations on the funerary complex of King Djedefre at Abu Rawash. In the future, new surveys of the sites of Zawyet al-Aryan, of Mastabat Faraun, and of Giza should open the way to innovative interpretations, thus allowing a historical reevaluation of a period which incurred the admiration of the ancient Egyptians and still fascinates, owing to its perfection, the specialists as much as the modern visitors to the Nile Valley.

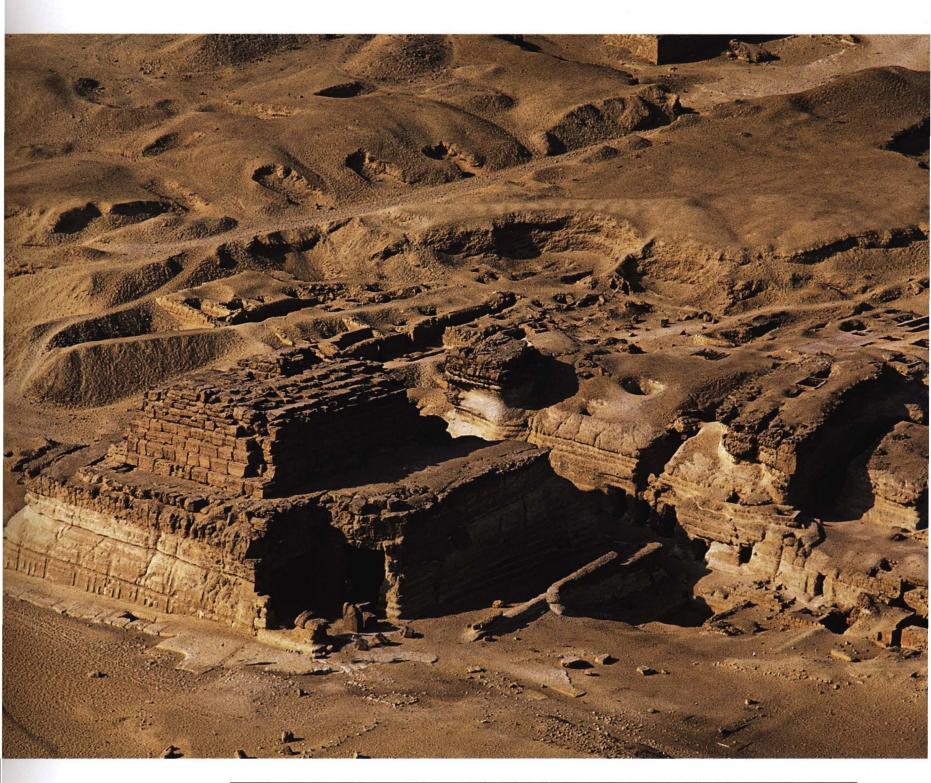


234 top
Detail of a granite pillar at the entrance
to the chapel of the superstructure of the
tomb, in the central cemetery at Giza,
showing the inscription of the name of
Oueen Khentkaus I.

#### 234 bottom

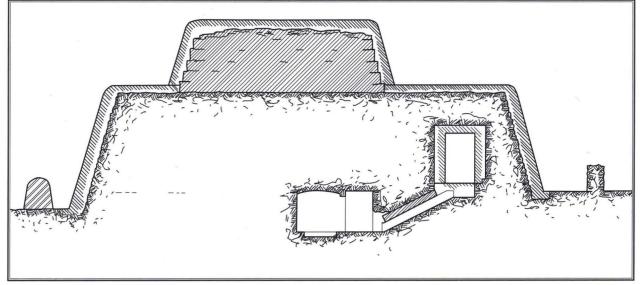
Plan of the superstructures of the tomb of Queen Khentkaus with a cross section of the buildings used by the funerary priests as a house, and the sacred lake, by V.

Maragioglio and C. Rinaldi.



234-235 This aerial view clearly shows the superstructure of the tomb of Queen Khentkaus, with its two levels.

# 235 bottom This section of the superstructure shows the inferior level dug into the local limestone, while the upper level has been built. The drawing also shows the room of the chapel for the offerings and the entrance.



- Seidel (eds.) Egypt: The World of the Pharaohs, Cologne, 1998, pp. 46-77.
- Siliotti, A., Guide to the Pyramids of Egypt, New York: Vercelli, 1997.
- Smith, W. S., "The Stela of Prince Wepennofret," Archaeology 16 (1963), pp. 2-13.
- --- The Art and Architecture of Ancient Egypt. Rev. and enlarged by William Kelly Simpson, New Haven: Yale University Press, 1998.
- Stadelmann, R., "Giza," in D. B. Redford (ed.), The Oxford Encyclopedia of Ancient Egypt, Oxford: Oxford University Press, 2001, pp. 25-30
- ---. "Der Strenge Stil der frühen Vierten Dynastie"
- ---, "Royal Tombs from the Age of the Pyramids," in R. Schulz and M.
- ---. "Builders of the Pyramids," in J. Sasson (ed.), Civilizations of the Ancient Near East II. New York. 1995, pp. 719-734.
- Stadelmann, R. and H. Sourouzian (eds.). Kunst des Alten Reiches (DAI Sonderschrift 28), Mainz am Rhein: Philipp von Zabern, 1995, pp. 155-166.
- Strudwick, N., The Administration of Egypt in the Old Kingdom: The Highest Titles and Their Holders, London and Boston, 1985.
- Tefnin, R., Art et Magie au Temps des Pyramides. L'énigme des tetes dites 'de remplacement,' (Monumenta Aegyptiaca 5). Brussels: Fondation Egyptologique Reine Elisabeth, 1991.
- Weeks, K., Mastabas of Cemetery G 6000, Giza Mastabas 5, Boston: Museum of Fine Arts, Boston, 1994.

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- 210-211, 211 left Giulio Veggi/Archivio White Star
- From 211 right to 223 Araldo De Luca/Archivio White Star
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#### THE 'UNFINISHED' PYRAMIDS OF THE FOURTH DYNASTY Text by Michel Valloggia

Michel Valloggia, Professor of Egyptology at the University of Geneva, Switzerland and field Director of the Archaeological Mission at Abu Rawash, Egypt, is former "Membre scientifique à titre étranger" of the French Institute of Oriental Archaeology in Cairo. He was in charge of the archaeological excavations between 1976 and 1993 in the Kharga Oasis (Douch) and the Dakhla Oasis (Balat). He is also Corresponding Member of the German Institute in Cairo and Consultant on behalf of UNESCO.

#### Bibliography:

- Hassan, S., Excavations at Giza IV, Cairo, 1943. Jequier, G., Le Mastabat Faraoun, Le Caire, 1928. Lehner, M., The Complete Pyramids, Cairo, 1997. Maragioglio, V. and C. Rinaldi, L'architettura delle Piramidi Memfite, 7 vols., Rapallo, 1963-77.
- Valloggia, M., Fouilles archéologiques à Abu Rawash, Rapports préliminaires des campagnes 1995-2002 in Genava, n.s. 43-50, Genève, 1995-2002.
- ---, Au cœur d'une pyramide. Une mission archéolodique en Egypte, Gollion, 2001

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#### THE PYRAMIDS OF THE FIFTH DINASTY Text by Miroslav Verner

Born in 1941; he graduated in Egyptology and prehistory at Charles University in Prague. He directed the Czech Institute of Egyptology for twenty five years and since 1976 has been leading the excavations by Czech archaeologists in Abusir, Egypt. He is professor at Charles University in Prague and also serves as guest professor at the universities of Vienna and Hamburg and at the American University in Cairo.

#### Bibliography:

- Borchardt, L., Das Re-Heiligtum des Königs Ne-woser-re, vol. I., Der Bau. Berlin, 1905.
- ---, Das Grabdenkmal des Königs Ne-user-re, Leipzig, 1907.
- ---, Das Grabdenkmal des Königs Nefer-ír-ke-re, Leipzig 1909.
- ---, Das Grabdenkmal des Königs Sa-bu-re, Leipzig, 1910-13 Edwards, I. E. S., The pyramids of Egypt, rev. ed., Harmondsworth, 1993.
- Fakhry, A., The Pyramids, Chicago, 1961. Jánosi, P., Die Pyramidenanlagen der Königinnen, Wien, 1995. Lehner, M., The Complete Pyramids, London-Cairo, 1997. Maragioglio, V. and C. Rinaldi, L'architettura delle piramidi menfite. VII, Rapallo-Torino, 1977. Stadelmann, R., Die ägyptischen Pyramiden. Vom Ziegelbau zum Weltwunder, 2nd ed., Mainz, 1985. Verner, M., The Pyramid Complex of Khentkaus, Prague, 1995. ---, The Pyramids: Their Archaeology and History, London
- ---, Abusir: The Realm of Osiris, Cairo, 2002.
- ---, "The Mysterious Sun Temples," KMT 14/1 (2003), pp. 44-57.

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#### THE SURPRISING ABUSIR BLOCKS Text by Zahi Hawass and Miroslav Verner

#### Bibliography:

- Borchardt, L., Das Grabdenkmal des Königs Ne-user-re', Leipzig, 1907.
- Fakhry, A., The Monuments of Snefru I: The Bent Pyramid, Cairo, 1959.
- Firth, C.M., J.E. Quibell, The Step Pyramid I, Le Caire, 1935. Ghoneim, Z., Hours Sekhem-Khet I, Le Caire, 1957. Grinsell, L., Egyptian Pyramids, Gloucester, 1947.
- Hawass. Z, "Newly Blocks from the Causeway of Sahure," MDAIK 32, (1996).
- Hölscher, U., Das Grabdenkmal das Königs Chepbren, Leipzig, 1912. Jéquier, G., Le Mastabat Faraoun, Le Caire, 1928.
- ---, G. La Pyramide d'Oudjebten, Le Caire, 1928.
- --- C. Le monument Funéraire de Peti II. Le Caire. 1940. Lauer, J. P., La Pyramide à degrees I, Le Caire, 1936. Maragioglio, V. and C. Rinaldi, L'architettura delle piramidi menfite II and VI, Rapallo, 1963-70.
- --, Notizie sulle piramidi di Zedefra, Zedkara Isesi, Teti, Turin, 1962. Petrie, W. M. F., Meidum, London, 1892.
- Posener-Kriéger, P. and J. L. Cenival, The Abusir Papyri: Hieratic Papyri in the British Museum. 5th Series, London, 1968. Reisner, G.A. W., S.T. Smith, A History of the Giza
- Necropolis, vol. II., Cambridge, 1955. Stadelmann, R., Die ägyptischen Pyramiden, Mainz, 1985. Verner, M., Forgotten Pharaohs, Lost Pyramids, Abusir,
- Praha, 1994

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#### THE PYRAMIDS OF THE SIXTH DYNASTY Text by Audran Labrousse

Architect and Doctor of, Literature and Human Sciences, he earned his Ph.D. at the University of Sorbonne in 1988 and is researcher at the CNRS. He carried out excavations in Iran between 1969 and 1973 and at Sedeinga, in the Sudan, from 1976 to 1994. He has worked in Egypt since 1973, where he is the Director of the French Archaeological Mission of Saqqara.

#### Bibliography:

- Berger-El Naggar, C., J. Leclant, B. Mathieu, and I. Pierre-Croisiau, Les Textes de la pyramide de Pépy Ier. 1 Description et analyse, sous la direction de J. Leclant, Le Caire Ifao 2001
- Jéquier, G., La pyramide d'Oudjebten, Le Caire, 1928.
- ---, Les pyramides des reines Neit et Apouit, Le Caire, 1933. ---, Le monument funéraire de Pepi II, t. I : Le tombeau royal, t. II : Le temple, t. III : Les approches du temple, Le Caire, 1936, 1938, 1940.
- Labrousse, A., L'architecture des pyramides à textes, 3 vol., Saggara Nord, 1 et 2, 1996, Saggara Sud, 2000, Le Caire, Ifao. --- Les pyramides des reines, une nouvelle nécropole à Saggâra, Paris. 1999.
- Piacntini, P., L'autobiografia di Uni, principe e governatore dell'Alto Egitto, Monographia di SEAP I, Series Minor, Pisa, 1990.

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- 280 left Brooklyn Museum of Art
- 280 right Audran Labrousse

#### THE DECORATIVE PROGRAM OF THE OLD KINGDOM PYRAMID COMPLEXES Text by Zahi Hawass

#### Bibliography:

- Arnold, D., "Rituale und Pyramidentempel," MDAIK 33 (1977).
- Bleeker, C.I., Eavitian Festivals: Enactments of Religious Renewal, Leiden, 1967.
- Bonnet. H. Reallexikon der Agyptischen Religionsgeschichte. Berlin, 1952.
- Borchardt, L., Das Grabdenkmal des Königs Sahure II, Leipzig, 1913.
- Brinks, J., Die Entwicklung der Königlichen Grabanlagen des Alten Reiches, Hildesheim, 1979
- Edwards, I.E.S., The Pyramids of Egypt, Harmondsworth, 1961. Fakhry, A., The Monuments of Sneferu at Dahshur II: The Valley Temple, 2 pts., Cairo, 1961.
- Goedicke, H., Re-used Blocks from the Pyramid of Amenembet Lat Lisht, New York, 1971
- Hawass, Z., The Funerary Establishments of Khufu, Khafra, and Menkaura During the Old Kingdom, Ph. D. Dissertation, University of Pennsylvanaia microfilm, Ann Arbor, MI, 1987
- Hornung, E. and E. Staehelin, Studien zum sedfest, Genf-Basel, 1974.
- Jéquier, G., Le Monument funéraire de Pepi II, vol. I: Le Temple funéraire, Cairo, 1936.
- Maragioglio, V. and C. A. Rinaldi, L'Architettura della Piramidi menfite. Vols. 2-8, Turin and Rapello, 1963-1977. Posener-Kriéger, P. Les Archives du temple funéraire de Neferirkare-Kakai: Les Papyrus d'Abousir, vol. I, II, Cairo, 1976.

- Reisner, G. A. and W. S. Smith, A History of Giza
- Necropolis, vol. II, 1955. Reisner, G. A., Mycerinus: The Temples of the Third
- Pyramid at Giza, Cambridge, MA, 1931. Smith, W. S., A History of Egyptian Sculpture and Painting in the Old Kingdom. Boston and London, 1946.
- Smith, W. S., The Art and Architecture of Ancient Eavet. Harmondsworth 1981
- Wilson, J., "The Artist of Egyptian Old Kingdom," INES 6 (1947).

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#### THE TOMBS OF THE FIFTH AND SIXTH DYNASTIES AT SAQQARA Text by Karl Myśliwiec

Karol Myśliwiec is the director of the Research Center for Mediterranean Archaeology at the Polish Academy of Sciences and professor of Ancient Egyptian Archaeology at the Warsaw University. He is also director of Polish-Egyptian excavations at Saqqara. Excavating in Egypt on various sites since 1969. K. Myśliwiec also directed the Polish-Egyptian rescue excavations at Tell Atrib (Nile Delta) in 1985-1995. He is the author of many books and articles on Egyptian archaeology, art, and religion.

#### Bibliography:

- Altenmüller H. Die Wanddarstellungen im Grah des Mehu in Saggara (Archäologische Veröffentlichungen DAIK 42), Mainz, 1998.
- Donovan L. and K. McCorquodale (eds.), Egyptian Art: Principles and Themes in Wall Scenes (Prism Archaeological Series 6), Cairo, 2000.
- Harpur, Y., Decoration in Egyptian Tombs of the Old Kingdom, Oxford, 1987.
- Jánosi, P., 'The Tombs of Officials: Houses of Eternity," in Egyptian Art in the Age of the Pyramids (exhibition catalogue). New York, 1999, pp. 27-39.
- Kanawati N. and A. Hassan. The Teti Cemetery at Saddara. vol. II: The Tomb of Ankhmahor (The Australian Centre for Egyptology Reports 9), Warminster, 1997.
- Kanawati N.and M. Abder-Raziq, The Teti Cemetery at Saqqara, vol. VI: The Tomb of Nikauisesi (The Australian Centre for Egyptology Report 14), Warminster, 2000.
- Moussa A. M. and H. Altenmüller, Das Grab des Nianchehnum und Chnumhotep (Archäologische Veröffentlichungen DAIK 21), Mainz, 1977.
- Myśliwiec, K., New Faces of Sakkara: Recent discoveries in West Sakkara, Tuchów, 1999.
- ---, "Saggara: una tomba piena di misteri," Le Scienze (edizione italiana di "Scientific American") 377, (2000), pp. 76-85.

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#### THE PYRAMIDS OF THE MIDDLE KINGDOM Text by Dieter Arnold

Dieter Arnold is Curator at the Metropolitan Museum of Art, New York, and has for forty years been conducting excavations in Egypt, at Thebes, El-Lisht, and Dahshur, among other sites. He is the author of numerous books on Egyptian architecture, including Building in Egypt: Pharaonic Stone Masonry (1991), Temples of the Last Pharaohs (1999), and The Pyramid Complex of Senwosret III at Dahshur (2000).

#### Bibliography: AMENEMHAT I

Gautier, J.-E. and G. Jèquier, Mèmoire sur les fouilles de