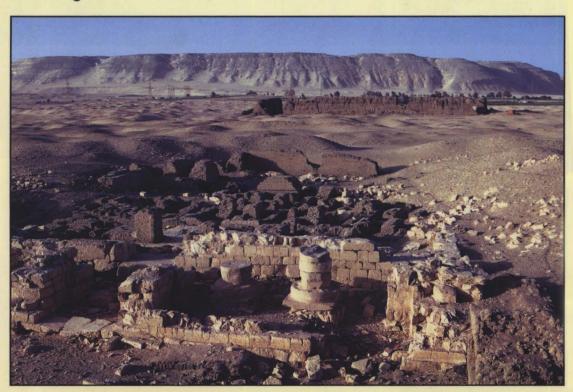
The

Archaeology and Art of Ancient Egypt

Essays in Honor of David B. O'Connor



Volume I

Edited by Zahi A. Hawass and Janet Richards



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Volume I

Edited by
Zahi A. Hawass
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The Discovery of the Osiris Shaft at Giza

Zahi A. Hawass

Supreme Council of Antiquities

I am very happy to write this article about one of my most important discoveries at Giza in honor of Dr. David O'Connor. I learned much from this great scholar about the field of Egyptology when I earned my doctorate at the University of Pennsylvania. He gave generously of his time and knowledge, and helped me build a strong foundation as an Egyptologist, which has helped me considerably in my career. I always say that if I am a good Egyptologist, it is due to David O'Connor.

As students, we always valued David O'Connor's interpretation of Egyptian history and his analysis of artifacts as well as his contribution to the dating of Pharaonic cemeteries. David O'Connor was able to gain the love of his students because of his honesty and scholarship. The help that he gave to all his students during our own studies and subsequent careers also makes us love him. The knowledge and discipline he has given to those of us fortunate to be his students has helped many to get jobs in the field. David O'Connor is one of the few people that I respect completely. I still seek his advice in matters that concern my work, now that I serve as the Secretary General of the Supreme Council of Antiquities. It is to David O'Connor that I dedicate this article.

Introduction

In 1945, Abdel Moneim Abu Bakr learned that guides at Giza were swimming in and drinking from the water of an underground shaft. He discovered this shaft, and its attached chambers, under the causeway of Khafre (Fig. 1). However, he never excavated or published it. In subsequent years, the rising water table in the shaft prevented scholars from studying it further and interpreting its function. Workmen responsible for the resthouse of Cairo University, which is located south of Khafre's causeway and in the shadow of his pyramid, used the shaft as a water source, running a pipeline from the shaft to the resthouse. The shaft also continued to provide a summer swimming hole for the guides on the Giza Plateau. This shaft also became the center of attention

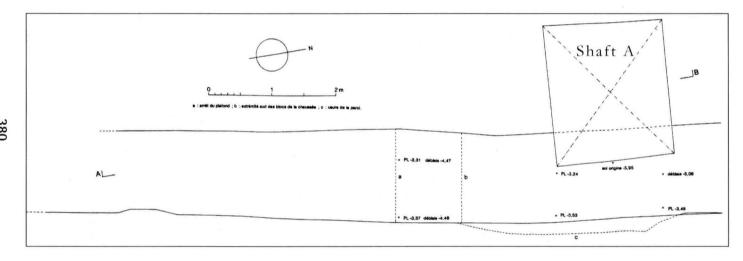


Fig. 1: Plan of passage under the causeway of Khafre and shaft A with access to the substructure of the tomb.

for New Age people, and they spread rumors that there were tunnels leading from the shaft that connected with the Great Pyramid and the Sphinx.

In the summer of 1999, I decided to excavate this shaft to see if we could determine its function. We discovered three distinct shafts: the first leading to a single chamber; the second leading to one large chamber surrounded by six smaller chambers; and the third leading to a single large chamber with a sarcophagus in its center.

The excavation proved to be very challenging mainly due to the dangerous nature of the work caused by the high water table. The chamber at the lowest level of the shaft was filled with water, and only the lid of a large, granite sarcophagus was visible. This water needed to be drained before we could excavate properly. Esmail Osman, formerly the head of Osman Contractors, provided the machines to do this job. Pipes were run down the shaft to bring the water from the lowest level up to the plateau. The noise from the pumping created extremely difficult working conditions. There was also concern that the drainage of the water might increase the size of the cracks in the walls of the shaft. For this reason, plaster was applied to the cracks to stabilize them and act as warning signs if any shifting took place.

In order to determine the date of the shaft, it was decided to send young divers down into the water of the shaft before draining it, to collect any extant artifacts. These divers were securely attached to safety ropes to avoid any risk of injury.

We made a number of interesting discoveries during our excavations. As a result, we have been able to link the shaft complex with the god Osiris; we are now referring to this as the Osiris Shaft.

Location and Description of the Shaft Complex

The entrance to the Osiris Shaft lies in the floor of a shallow tunnel that runs from north to south under the causeway of Khafre, approximately halfway between the Great Sphinx and Khafre's funerary temple (Hawass 1987: 124). Access is through Shaft A near the western wall of the tunnel (see Fig. 1). The complex consists of three vertical shafts (Shafts A, B, and C) leading to three levels (Levels 1, 2, and 3) (Fig. 2). There are additional chambers on Levels 2 and 3.

Detailed Description of the Architectural Components of the Tomb

The architectural components of the complex can be outlined as follows:

- 1. Shaft A
- 2. Level 1 with Chamber A
- Shaft B
- 4. Level 2 with Chambers B through H
- Shaft C
- 6. Level 3 with Chamber I

Shaft A

Dimensions:

Shaft entrance: $2.60 \times 3.00 \text{ m}$

Depth: 9.62 m

The first vertical shaft (Shaft A) is the main entrance to the Osiris Complex. It lies directly below Khafre's causeway, descending vertically from an opening 10.30 m from the south entrance and 0.60 m from the western wall of the tunnel that runs from north to south beneath the causeway.

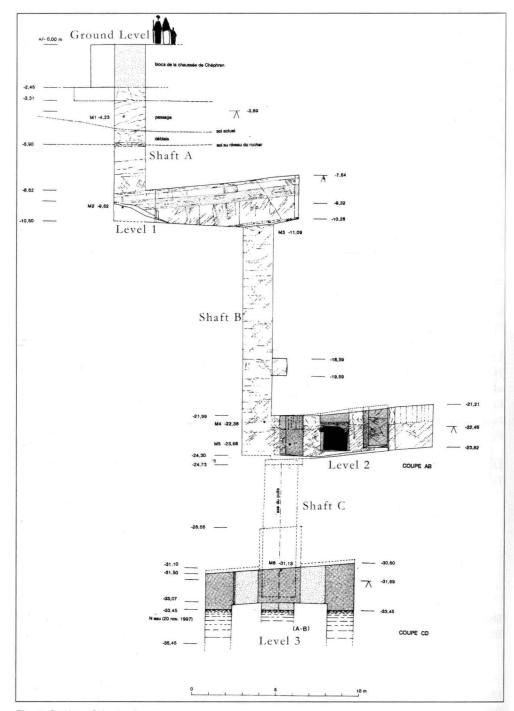


Fig. 2: Section of the tomb.

The shaft adjoins the floor of the tunnel for a distance of c. 1.90 m from north to south and c. 0.60 m from east to west. Shaft A, which is approximately square in cross-section, descends for 9.62 m, ending in a rectangular chamber (Chamber A) at level 1 (Fig. 3). The walls of Shaft A are roughly hewn.

Level 1 and Chamber A (see Fig. 3)

Dimensions:

Maximum height: 2.70 m (not level throughout)

Length: 8.60 m

Maximum width: 3.85 m (not level throughout)

Level 1 consists of a rectangular chamber (Chamber A) extending north from the floor of Shaft A. The entrance measures 2.35×2.50 m, and the chamber itself varies in height and width due to the uneven wall surfaces. The roof slopes upward from its meeting with the shaft; the chamber measures c. 2.65 high at the southern end and 2.62 m at the northern end, with a maximum height of 2.70 m. No artifacts were found at this level.

Shaft B (see Figs. 2, 3)

Dimensions:

Mouth of the shaft: 1.90 x 1.90 m

Depth of shaft: 13.25 m

Shaft B descends from a point c. 1.10 m from the northern wall, 0.80 m from the western wall, and 1.75 m from the eastern wall of Chamber A. It descends for 13.25 m before ending at Level 2. The walls of the shaft are roughly hewn. At a depth of approximately 8.33 m, a niche, 1.10 m high, 1.80 m. wide, and 0.70 m deep, opens from the northern wall of the shaft.

Level 2 with Chambers B-H (Figs. 4, 5)

Dimensions of Chamber B:

Height of the entrance into Chamber B: 2.25 m

Width of entrance: 1.73 m Length from north-south: 6.80 m Width from east-west: 3.65 m

Height: 2.60 m

Chamber B extends north from a level 0.28 m lower than the floor of Shaft B. Six chambers (Chambers C to H) were carved off of Chamber B: three to the west (C, D, and E), one to the north (F), and two to the east (G and H). Four of these chambers contained sarcophagi and artifacts dating primarily to the 26th Dynasty.

Description of the Side Chambers

Western Chambers

Chamber C

Dimensions of Chamber C:

Height: 1.58 m Width: 2.40 m Depth: 3.20 m

Chamber C is located 0.40 m northwest of the exit from the second shaft. The floor of this

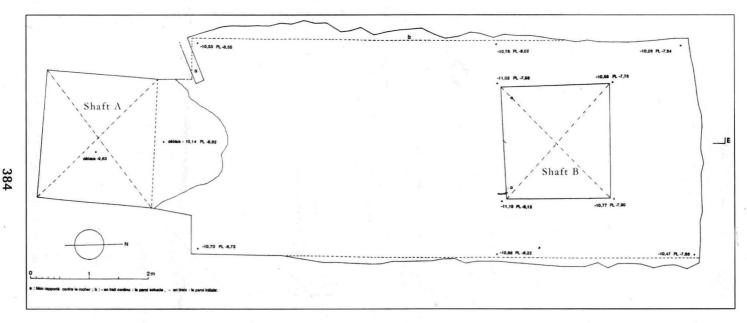


Fig. 3: Plan of Level 1 and Chamber A.

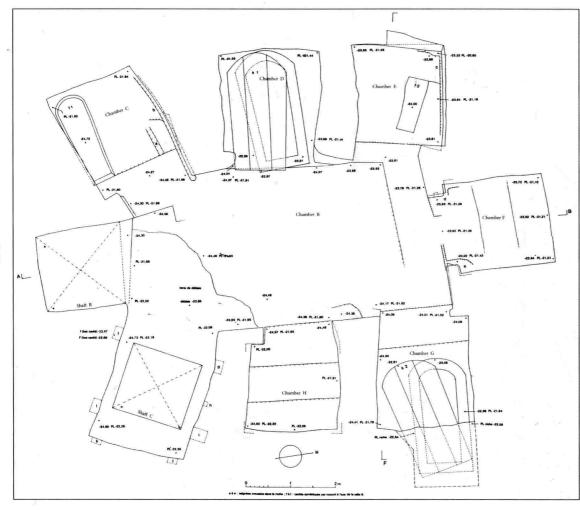


Fig. 4: Plan of Level 2 and Chambers B to H.

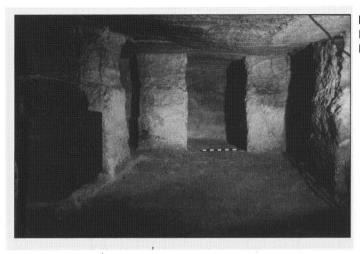


Fig. 5: Photograph of Level 2 looking north towards Chamber F.

chamber was excavated from the south side. An anthropoid sarcophagus of granite was discovered, set into a pit that had been cut into the floor.

Dimensions of sarcophagus:

Length: 210 cm Width: 50 cm Depth: 45 cm

The badly-decayed remains of a skeleton were discovered inside the sarcophagus, along with the remains of shabtis and pottery sherds from the 26th Dynasty. The shape of the sarcophagus dates it to the 26th Dynasty.

Chamber D

Dimensions of Chamber D:

Height: 2.20 m Width: 1.85 m Depth: 2.90 m

Chamber D is located c. 1 m north of Chamber C and had not been explored prior to our expedition. A basalt sarcophagus in the style of the 26th Dynasty was discovered inside this chamber (see Fig. 5).

Dimensions of sarcophagus:

Length: 240 cm Width: 123 cm Depth: 95 cm

Depth of hollow: 67 cm Thickness of edges: 25 cm

Lid of sarcophagus:

Length: 265 cm Width: 114 cm Height: c. 30 cm

A large number of 26th Dynasty shabtis and pottery sherds were discovered on the south side of the sarcophagus.

Chamber E

Entrance:

Height: 2.40 m Width: 1.50 m Depth: 2.35 m

Chamber E is located c. 0.85 m north of Chamber D. On the north side of the floor, 0.80 m from the northern wall, is a small rectangular pit carved into the living rock.

Dimensions of pit:

Length: 125 cm Width: 45 cm Depth: 25 cm

No other artifacts were discovered in this chamber.

Northern Chamber

Chamber F

Dimensions of Chamber F:

Height: 2.45 m Width: 2.10 m Depth: 2.55 m

Chamber F was cut directly from the north wall of Chamber B, with its western wall c. 1.20 m from the western wall of Chamber B.

Eastern Chambers

Chamber G

Dimensions of Chamber G:

Height: 2.43 m Width: 2.40 m

Depth: 2.00 m from west to east

Chamber G is cut into the east wall of Chamber B. This chamber has a niche, 1.75 m in width, 1.38 m in depth, and 1.41 m in height, cut into the eastern wall. This contains a basalt sarcophagus, rectangular in shape with a curved front, which fills it completely and extends into the chamber.

The remains of human bones, shabtis of blue faience, and pottery sherds, all dating to the Late Period, were found near the sarcophagus.

Dimensions of sarcophagus:

Length: 250 cm Width: 120 cm Height: 105 cm Lid of sarcophagus: Height: 26 cm

Chamber H

Dimensions:

Height: 2.50 m Width: 1.60 m Depth: 2.40 m

Chamber H is located c. 1 m south of Chamber G.

Shaft C. The entrance to the third level is from the floor of a rectangular niche cut into the rock, similar in size and shape to the burial chambers, on the second level. This niche is located c. 0.90 m south of Chamber H and is oriented southeast to northwest.

Dimensions of niche:

Height: 2.60 m Width: 2.30 m Depth: 3.20 m

Into the walls of this niche were carved seven rectangular niches: four large ones, two each in the northeast and southwest walls; and three small, one in the northeast and two in the southeast walls. These holes might have been used for lowering a large basalt sarcophagus down the shaft by using wooden beams.

Dimensions of shaft:

North to south: 1.65 m East to west: 1.90 m Depth: 7.50 m

Level 3 with Chamber I (Figs. 6, 7, 8). This is the main level of the complex. It consists of a large square chamber that extends to the west of Shaft C. A large basalt sarcophagus stands in a water-filled emplacement in the center of this chamber.

Dimensions:

Length of eastern wall: 8.84 m Length of southern wall: 8.60 m Length of western wall: 9.08 m Length of northern wall: 9.20 m

Description:

Chamber I is a squarish chamber extending to the west of the floor of Shaft C. A narrow ledge runs partially around the interior of the walls of the chamber. In the center of the chamber is a rectangular emplacement, carved from the living rock, with the remains of square pillars at each of its four corners (see Fig. 6). This emplacement is at a distance of approximately 1.5 m from the walls of the chamber, with the maximum distance almost 2 meters and the minimum distance about 1.3 meters; the presence of this emplacement creates the effect of a trench running between it and the chamber walls. The walls of the emplacement are approximately 2 meters thick, and the remnants of the pillars or pillar bases, also carved into the living rock, are approximately 1.5 meters square. The walls of the emplacement are uneven.

Dimensions of emplacement:

North wall: 5.24 m East wall: 5.56 m South wall: 5.76 m West wall: 6.04 m

The floor at the entrance to the chamber, stretching from the exit of the pit to the central emplacement, has been left at the level of the emplacement. Thus the trench created by the emplacement, takes the shape of a house plan, the hierogyph pr. This trench is generally filled with water. The burial chamber is thus similar to an island with the sarcophagus in the middle surrounded by water in the shape of the pr sign. (see Figs. 7, 8)

In the center of the emplacement is a rectangular pit.

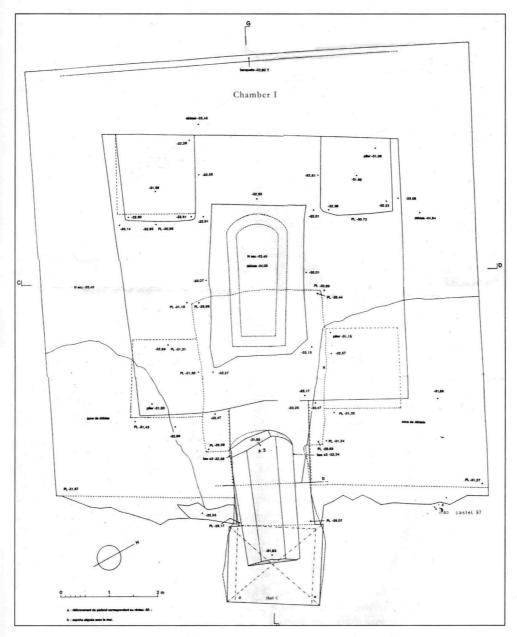


Fig. 6: Plan of Level 3.

Dimensions of rectangular pit:

North wall: 2.72 m East wall: 1.12 m South wall: 3.32 m West wall 1.92 m

Inside this pit lies a pseudo-anthropoid sarcophagus of black basalt. Its lid was discovered on the floor of Shaft C; our team moved it to a place over the sarcophagus, supported with wooden beams (see Fig. 7).

Dimensions of the sarcophagus:

Exterior Length: 228 cm Exterior Width: 108 cm Interior Length: 200 cm Interior Width: 72 cm

Dimensions of lid: Length: 268 cm Width: 108 cm Thickness: 35 cm

The remains of a skeleton were discovered in the sarcophagus. Two schist amulets in the form of Osiris were also found in the tomb. Scarabs, primarily heart scarabs, and amulets in the shape of *djed* pillars date the tomb to the Late Period. The amulets and scarabs were discovered on the north side of the chamber. An unusual find was red polished pottery with traces of white paint, which can be dated stylistically to the Old Kingdom, specifically to the 6th Dynasty.

Discussion

The Osiris Shaft, in my opinion, can be identified with the underground tomb surrounded by water brought by a canal that was mentioned by the Greek historian Herodotus, who visited Egypt in the 5th century BCE (RAWLINSON 1996: Book II, paragraph 124). Herodotus believed that this was the tomb of Khufu. His description of this structure is not very clear, and it is probable that he did not enter the shaft himself, but instead depended on the information given to him by the local guides.

The earliest artifacts from the Osiris Shaft are 6th Dynasty potsherds, discovered in Shaft C. This suggests that the shaft was first constructed at that time. The additional chambers at Level 2 may have been added in the Late Period, when Giza received renewed interest. The sarcophagus that is currently in the burial chamber at the lowest level also can be dated stylistically to the 26th Dynasty (for the style of 26th Dynasty sarcophagi, see Brovarski 1984: cols. 478–479; Lapp and Niwiński 2001: 286). The tunnel beneath the causeway of Khafre, like the similar tunnel beneath the causeway of Khufu, had most likely been dug by this time, as it would have made construction and servicing of the elite tombs from this era on the Giza Plateau possible (Hawass 1987: 124, 189–190).

It is my contention that this shaft complex is a dummy tomb for the god Osiris (Mojsov 2005: 30–31).³ The reasons for identifying this tomb with Osiris are as follows.

The Osiris myth became important during the late Old Kingdom, as attested by the frequent references to this god in the Pyramid Texts (BAER 1960: 297; GRIFFITHS 1980: 44, 236–237, frontispiece; GRIFFITHS 2001: 615, 617; FAULKNER 1969). Thus the rise in the Osiris cult can be linked chronologically to the construction of the shaft complex in the 6th Dynasty: by digging deep beneath the plateau, the Egyptians of this era were descending into the realm of Osiris.



Fig. 7: Photograph of Chamber I showing the sarcophagus.

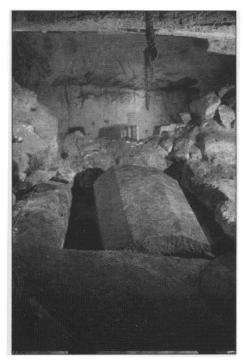


Fig. 8: Photograph of the sarcophagus in Chamber I.

Support for this theory can be found in New Kingdom texts, which suggest that underground shafts and chambers were closely linked with the Netherworld, the realm of the god Osiris (e.g., HORNUNG 1990: 115–134).⁵

The large sarcophagus in the Chamber I is surrounded by water and four pillars. This is similar to the layout of the Osireion at Abydos, also identified as a tomb for Osiris (PORTER AND MOSS 1991: 28; WEGNER 2001: 11). The water around the burial is mostly likely linked to Osiris's role as god of vegetation and resurrection, and his identification as creator god, appearing on the primeval mound surrounded by the Nµn. The submersion of the sarcophagus under water also provides evidence that the complex is linked with Osiris, because his kingdom can be located under the water (GRIFFITHS 2001: 616–617).

It is my belief that the four pillars, of which only the lower parts now remain, may represent the four sacred legs of the god, another important concept seen in later funerary texts linked with the Netherworld.

The Giza Plateau was known in the New Kingdom as *pr Wsir nb R3-st3w*, which means the "house of Osiris, Lord of Rostau" (for *pr-Wsir nb*

R3- $s\underline{r}3w$, meaning "the place of Osiris, Lord of R3- $s\underline{r}3w$ " or "Lord of the Underground Tunnels," see Coche-Zivie 1984: cols. 303–309; Yoyotte 1961: 59; Zivie 1976: 128).⁷ Rostau can be translated as cemetery or underground tunnels, and usually refers specifically to Giza (for r3- $s\underline{r}3w$, "Rastaw," see

FAULKNER 1962: 146). For this reason, it is logical that there should be a tomb at Giza for Osiris. The water-filled trench around the burial emplacement, which is in the shape of the hieroglyph for house, pr, reinforces this identification.

Symbolically, Osiris would have been buried inside the shaft to give power to the kings who were buried under the nearby pyramids. In this respect, the kings who were buried in their own "underground tunnels" would gain power like Osiris.

Further support for the identification of this shaft complex as the tomb/house of Osiris comes from the "Inventory Stele," found in the chapel of queen's pyramid G I-c, which was converted into a temple to Isis in the 21st Dynasty and enlarged in the 26th Dynasty (for the "Inventory Stele," see HASSAN 1953: 113, fig. 80, pls. LV, LVI; ZIVIE-COCHE 1991: 219, 240). The relevant portion of this text, which dates to the 26th Dynasty, says:

Khufu... found the house of Isis, Mistress of the Pyramid,... on the northwest of the house of Osiris, Lord of Rosta... (Breasted 1906: 85, \$180)

The Osiris Shaft is directly south of queen's pyramid G I–c. Graffiti on the surface of this pyramid, originally built for a queen of Khufu's named Henutsen (HAWASS 1987: 42; LEHNER 1997: 116), 9 refer to it as the burial place of Isis (see Wildung 1969: 177–178, 186–188 for the graffiti). Then, in the Late Period, pyramid GI–c was changed to the symbolic burial of Isis, which faced south towards the symbolic burial of Osiris.

South of the Giza Pyramids and north of the proposed ring road (which the Egyptian Ministry of Construction wanted to build but was stopped in order to protect the pyramids) is a cemetery of Osiris united with Sokar as Sokar-Osiris, dating from the Ptolemaic and Roman periods. ¹⁰ The cemetery consists of a series of small pits in the ground. A statue of a mummified Sokar-Osiris with an erection was discovered in a wooden box in one of these pits. ¹¹ The erection is a direct reference to resurrection in the afterlife. Faience and symbolic vessels were also found near the tombs. This also attests to the importance of Osiris during the Late Period at Giza.

The Egyptians also used the area north of the Osiris Shaft for burial, where we have discovered many tombs that date to the Late Period (BAINES and MALEK 2005: 158). 12 One tomb has a second level located c. 8 m underground where 6 rooms were cut into the rock. In one of these rooms, a wooden box with 400 shabtis was discovered. 13

In conclusion, the Osiris Shaft was first cut in the Old Kingdom and then used again in the New Kingdom when Osiris became important at Giza, as evidenced by the use of the name *pr Wsir nb R^cs-t3w* for the site. The shaft was also used for burial in the 26th Dynasty, especially its second level.

Appendix: Finds

The amulets and bead were not discovered *in situ*. Most of the finds can be dated to the Late Period.

1. Amulet in the shape of two fingers (Giza Magazine, GZ.PA.509) (Fig. 9, left)

Material: obsidian Length: 10.8 cm Width below: 2.7 cm Width above: 2.2 cm Thickness below: 0.9 cm Thickness above: 0.7 cm

This amulet is in the shape of two fingers showing the index and middle finger. The nails are delineated by two incised round lines, and the joints are also defined. The fingers are well polished. The amulet was put in the opened area of the stomach during mummification.

2. Amulet in the shape of two fingers (Giza Magazine, GZ.PA.510)

Material: obsidian Length: 8 cm

Width along the top of the nails: 2 cm Width at the bottom of the fingers: .9 cm

Thickness at the bottom: 1.1 cm Similar to number 1 (GZ.PA.509)

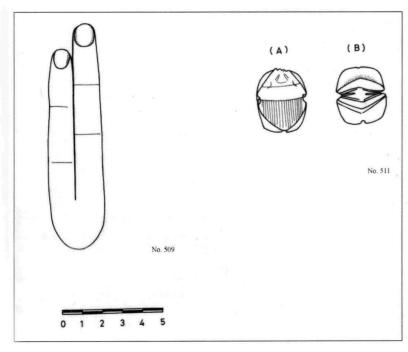


Fig. 9: Drawing of GZ.PA.509 (left) and GZ.PA.511 (right).

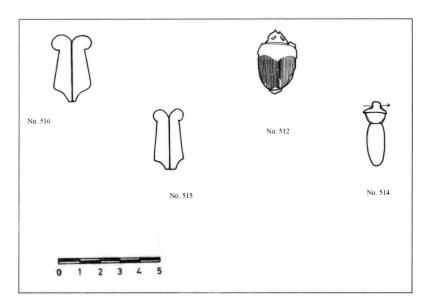


Fig. 10. Drawing of GZ.PA.516 (far left), GZ.PA.515 (center left), GZ.PA.512 (center right), and GZ.PA.514 (far right).

3. Scarab (Giza Magazine, GZ.PA.511) (Fig. 9, right)

Material: Diorite Length: 2.6 cm Width: 2 cm

Few details are evident. The scarab has an oval shape and is represented with a realistic underside. The scarab dates to the 26th Dynasty.

4. Şcarab (Giza Magazine, GZ.PA.512) (Fig. 10, center right)

Material: Schist? Length: 2.5 cm

Width of the stomach: 1.7 cm Thickness at the legs: 1.2 cm Thickness without legs: 0.9 cm

This scarab is partially broken but enough remains to show that it was beautifully carved. Its shape is an elongated oval.

5. Bead (Giza Magazine, GZ.PA.513)

Material: Diorite Height: 0.8 cm Outer Diameter: 1 cm

This small bead of diorite is well polished and has a hole for hanging.

6. w3d Pillar (Giza Magazine, GZ.PA.514) (Fig. 10, right)

Material: Faience Height: 2.9 cm

Width at the top: 0.9 cm Width of pillar at bottom: 5 cm This amulet in the shape of the hieroglyph $w3\underline{d}$ is made of green faience. It has a hole for hanging.

7. Amulet in the shape of Atef plumes (Giza Magazine, GZ.PA.515) (Fig. 10, center left)

Material: Faience

Measurements: (Giza Magazine, Giza register no. 515)

Length: 2.8 cm Width: 1.3 cm Thickness: 0.4 cm

This amulet is in the shape of the Atef plumes and is made of blue faience. The wearing of the amulet with Atef plumes identified the deceased with the gods.

8. Amulet in the shape of Atef plumes (Giza Magazine, GZ.PA.516) (Fig. 10, left)

Measurements: (Giza Magazine, Giza register no. 516)

Length: 0.3 cm Width: 1.6 cm Thickness: 0.3 cm See no. 7 (GZ.PA.515)

9. Amulet in the shape of Horus (Giza Magazine, GZ.PA.517)

Material: Basalt? Length: 2.5 cm Width: 0.5 cm

This small amulet represents Horus with the body of a man and a head of a

Hawk. A pillar supports the back of the amulet.

Notes:

- 1 There are many people who assisted me in the excavation of this shaft, in particular archaeologists Mahmoud Afifi, Mansour Boraik, and Tarek El Awady; architects Abdel Hamid Kotb and Nevine el Magrabi; and Noha Abdel Hafiz. Reis Ahmed and Talal El-Krity came from Saqqara to move heavy objects. I would also like to thank Georges Castel from the French Institute in Cairo, who did an excellent job mapping the architecture of the tomb.
- 2 This tunnel is similar to one that runs under the causeway of Khufu. These tunnels most likely served as access points for priests and other mortuary personnel, so that they would not need to go all the way around the causeway. Hawass discusses the tunnel under Khufu's causeway.
- 3 The identification of this tomb as the tomb of Osiris was announced by the author on many occasions through the press and also in publications. It is also published by Bojana Mojsov as the tomb of Osiris without giving credit to the discoverer or the person who identified the tomb as the tomb of Osiris.
- 4 The name of Osiris first appears in royal and private monuments in the 5th Dynasty. On royal monuments, it first occurs on a fragment from the pyramid temple of Djedkare Isesi at Saqqara. See BAER 1960: 297; GRIFFITHS 1980: 44, 236–237, frontispiece; GRIFFITHS 2001: 615. Osiris's name is first mentioned in private funerary texts of King Neuserre of the 5th Dynasty (GRIFFITHS 1980: 44). The name of Osiris also appears

- in the pyramid texts of Unas. See Faulkner 1969. In the private tombs, Osiris is mentioned in offering formulas towards the end of the 5th Dynasty. See Griffiths 2001: 617.
- 5 See for example HORNUNG 1990: 115-134.
- 6 Griffiths includes a discussion of Osiris's relationship to water.
- For pr-Wsir nb R3-st3w, meaning "the place of Osiris, Lord of R3-st3w" or "Lord of the Underground Tunnels," see Coche-Zivie 1984: cols. 303-309; YOYOTTE 1961: 59; Zivie 1976: 128.
- 8 For r3-st3w, "Rastaw," see FAULKNER 1962: 146.
- 9 Hawass and Lehner discuss the attribution of Queen's Pyramid GI-c to Henutsen and its conversion into the Temple of Isis.
- 10 This was a connection of the ring road that joined the highway to the Alexandria Road. This section was c. 31 m in length, and permission was previously given by the Antiquities authorities. However, we succeeded in stopping this road.
- 11 The statue is unpublished.
- 12 Baines and Málek provide a plan of this area.
- 13 Excavation is still continuing; and, in this last tomb, the burial chamber has not yet been reached.

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