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ANIMALS IN MAGIC AND MEDICINE

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Did the ancient Egyptians' veterinary knowledge lead to human medical practice? There may be a very good reason that some hieroglyphs depict the internal organs of animals rather than humans.



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RAMESSES III

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Ramesses III is sometimes described as the last great Egyptian pharaoh. But if he was so good, why did his reign end in a coup attempt? **Vanessa Foott** investigates.



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THE BENT PYRAMID

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It's one of Egypt's oldest pyramids, and still one of the least understood. Why the bend? Why the two entrances? **Colin Reader** seeks to find some answers.

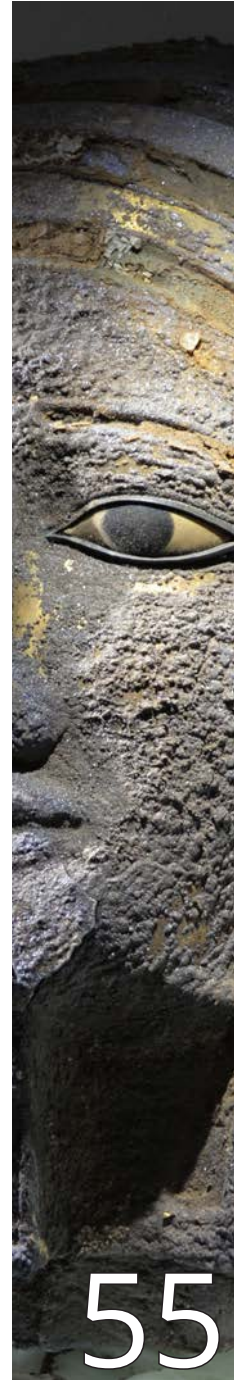


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PTOLEMY I

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The Ptolemaic Dynasty is famed for its last ruler, Queen Cleopatra VII. But what about the man who created it? **Diana T. Nikolova** looks at the life and reign of Ptolemy I.



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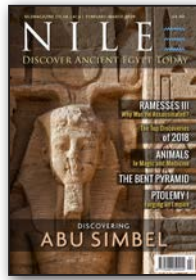
Jeff Burzacott

Throughout 2018, **NILE** Magazine has enjoyed bringing you the most exciting discoveries. Now it's time to look back and select the best of the best.

NILE



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THE COVER

DISCOVERING ABU SIMBEL

Nigel Fletcher-Jones

"No other temple in Egypt produces so unexpectedly grand an effect as the great rock temple of Ramses II... By itself it would repay the trouble of the ascent from Philae, both by the dignity of its sculptures and by the gorgeously coloured representations in the interior."
—*Baedeker's Egypt: Handbook for Travellers* (1898).

Over 120 years later, Abu Simbel is just as captivating. Enjoy a modern, illustrated guided tour from page 47.

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FROM THE EDITOR

I have a sneaking suspicion that someone has leaked the NILE Magazine publishing schedule to the Egyptian Ministry of Antiquities. It seems to happen with alarming regularity that, just as we are about to roll the presses, the Ministry announces a fresh discovery. And we can't not report on it, right?

On Saturday February 2, the Minister of Antiquities, Khaled el-Anany, announced the first discovery of 2019: a large, catacomb-like, rock-cut tomb in Tuna el-Gebel, near Minya in Middle Egypt.

Egyptian archaeologists from the Ministry of Antiquities and the Research Center for Archaeological Studies of Minya University had uncovered dozens of burials of different ages and sexes, including, sadly, small children. El-Anany revealed that "the newly discovered tombs are a familial grave, which was probably for a family from the upper middle class." They are dated from the Ptolemaic Period (332–30 B.C.), through to the early Roman era.

Some of the mummies lay in stone or wooden coffins, such as the one pictured here; others were simply laid out on the floor of the chambers or in niches.

Thankfully, the tomb was undisturbed and the mummies in a good state of preservation. Some of them still bear fragments of painted cartonnage coffin showing faint demotic characters, which may be able to tell us more about who these people were.



PHOTO: NEVINE EL-AREF, © EGYPTIAN MINISTRY OF ANTIQUITIES

The Minister of Tourism, Rania al-Mashat (left) and the Minister of Antiquities, Khaled el-Anany, take a look at a stone coffin containing one of the 40-plus mummies that were discovered at Tuna el-Gebel.

As an aside, I plan to get the next issue (April–May) out a little earlier—don't tell the Ministry of Antiquities.

Welcome to issue #18. As always, I hope you enjoy your NILE time!

Jeff Burzacott ☰
editor@nilemagazine.com.au



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All magic “wands” discovered thus far were produced during a short time in the late Middle Kingdom (ca. 1880–1700 B.C.). The curve of this wand follows that of the hippopotamus tusk from which it was made. Powerful protective deities, such as Taweret and Bes, are depicted together with protective

uraeus serpents and other mythical creatures. Many of the figures brandish knives to dispel evil spirits. A wand such as this was thought to have been used to scrape a protective circle in the sand around a woman in labour or a sleeping child suffering from illness or ailment.

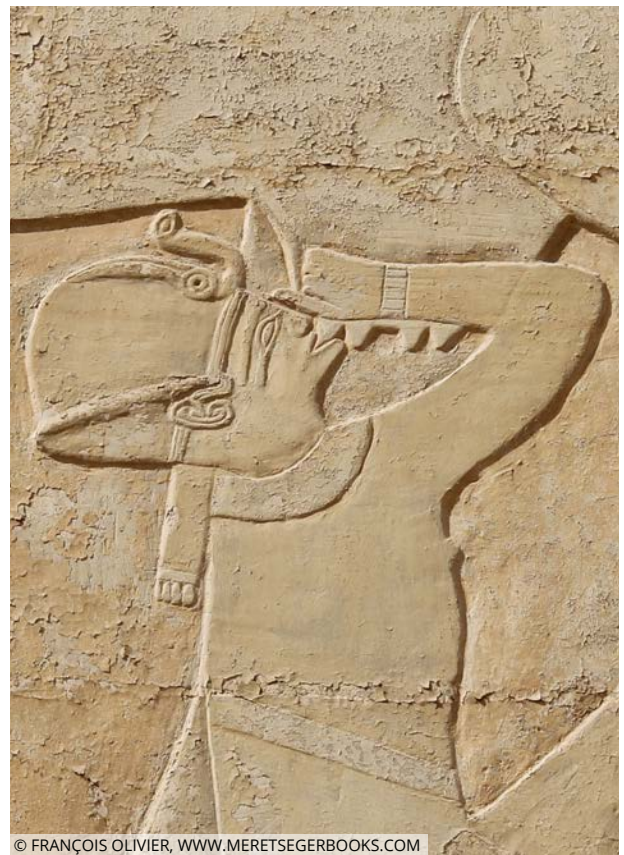
are intelligent, loving animals that remarkably self medicate by choosing particular plants to eat when unwell. They also actively seek out clay for its medicinal purposes. Clay can protect the gut lining, act as an antacid and absorb excess fluids, thereby curbing scouring in cattle. It has a fascinating history of being used as a detoxifying substance in traditional medicine as well as in food preparations. The oldest known medical manuscript, the Ebers Papyrus, lists “clay of the bricklayer” (𓆎𓆏𓆐𓆑𓆒) as part of the remedy for “when you examine a man who has pain in his stomach” 𓆓𓆔𓆕𓆖𓆗𓆘𓆙𓆚𓆛𓆜𓆝𓆞𓆟𓆠𓆡𓆢𓆣𓆤.

Hathor remained a popular deity and was invoked to help with problems related to conception, childbirth and women’s health. Gordon and Schwabe tell us that long before cattle domestication Egyptians enjoyed a special relationship with female cows. Pyramid Text 554 in the Pyramid of Pepi I describes how the king was born of the great celestial goddess:

𓆎𓆏𓆐𓆑𓆒 𓆓𓆔𓆕𓆖𓆗𓆘𓆙𓆚𓆛𓆜𓆝𓆞𓆟𓆠𓆡𓆢𓆣𓆤
“To say: It is this Pepi who is the son of the
great wild cow,
𓆎𓆏𓆐𓆑𓆒 𓆓𓆔𓆕𓆖𓆗𓆘𓆙𓆚𓆛𓆜𓆝𓆞𓆟𓆠𓆡𓆢𓆣𓆤
she conceived him and gave birth to him.”

Hathor also appears in the Egyptian Book of the Dead to protect the deceased. Chapter 42 in the Book identified each part of the body with a protective deity, for example:

𓆎𓆏𓆐𓆑𓆒 𓆓𓆔𓆕𓆖𓆗𓆘𓆙𓆚𓆛𓆜𓆝𓆞𓆟𓆠𓆡𓆢𓆣𓆤
“My face is of Re. My two eyes are of Hathor.”



© FRANÇOIS OLIVIER, WWW.MERETSEGERBOOKS.COM

The Hathor Chapel on the middle terrace of Hatshepsut’s temple at Deir el-Bahari is the earliest known structure dedicated to Hathor on the Theban west bank. In one scene on the southern side of the chapel, Hatshepsut is suckled by the divine cow and so receives the goddess’s gifts of life and strength.




The Book of the Dead of Ani, the “Scribe of the Sacred Revenues of All the Gods” was created during Egypt’s 19th Dynasty (ca. 1250 B.C.), and is today in the collection of the British Museum (Inv. EA 10470,37).

In this section, the composite god Sokar-Osiris stands within a shrine, worshipped by Ani and his wife Tutu (out of frame). Behind the shrine is the protective goddess Ipet (“the

Nurse”) shown in a form identical to that of Taweret: a combination of crocodile, lion, human, and pregnant hippopotamus. Both Ipet and Taweret are sometimes connected with another goddess associated with birth and motherhood, Hathor. Here Hathor is shown in her cow form, emerging from the Theban mountains—the realm of the dead—to welcome Ani to the afterlife.

The *Hereret*-worm could possibly be the adult parasitic worm of schistosomiasis. Balanites feature in many remedies, including those related to diseases of the belly and to actually expel worms. Ebers Spell 79 even includes using the “feather of Thoth” as part of the remedy.

Others, however, have disputed this claim, since Schistosomiasis would have been extremely difficult to detect with the naked eye—even during the preparation of the dead for mummification. Passages in the Ebers Papyrus (such as Ebers 168, below) have given rise to the suggestion that *aaa* may instead describe a magical “influence” being caused by a supernatural being, which could be either a god or someone who is deceased:


 “Another (remedy) to expel magic and *aaa*


 (caused) by a god or dead man in the belly of a man.”

What cannot be disputed, however, is the overwhelming palaeopathological evidence of the presence of the disease in mummies. It is therefore difficult to conclude that the ancients were completely oblivious to this disease.

TAWERET

Another animal deity who had a special role in medicine and magic was the formidable Taweret. She was a strange-looking deity, with the head of a hippopotamus, limbs of a lion, tail of a crocodile and pendulous human breasts. She was initially conceptualised as a dangerous, malignant force before evolving into a favourable deity associated with childbirth and warding off evil spirits.

Remarkably, all of the animals that comprise Taweret are known to self medicate. She even has human breasts, which corresponds with breast milk being used in some remedies in the medical papyri. Remedy 408, for example, includes the following ingredient for the relief of red, inflamed eyes:


 “The milk of one who has borne a son.”

The hippo is also an interesting choice. As discussed in detail in *NILE Magazine* #9 (August–September 2017), this amazing animal produces a slime which resembles blood and sweat but is actually a specialised secretion that turns red in sunlight and protects the hippopotamus’ skin from the sun’s rays. Hippopotamuses can thus self medicate by producing a natural sunscreen that is waterproof, moisturising and antibacterial.

After the death of Ramesses II, Egypt was ruled by his son Merenptah who was already elderly by the time he came to the throne. His son, Seti II, was beset with problems caused by a southern usurper, Amenmesse, and Sety ruled for only a year after he regained control. His son, Siptah, was young and likely not in good health leading to Seti's wife Tausret ruling with the help of a chancellor of foreign extraction who was eventually executed.

In the Great Harris Papyrus (drawn up by King Ramesses IV to record his father's endowments to various temples, and which also included a brief summary of recent history), we learn that under the rule of Tausret and Siptah the empire had been neglected and the years are described as "empty years" which may possibly indicate that Egypt was suffering from famine and internal unrest:



"The land of Egypt



was in a state of flux...



Another time came after it,



consisting of empty years."

(Harris Papyrus, British Museum, EA 9999.)

The years of political in-fighting and rapid power changes had taken their toll on Egypt, and shortly after the early death of Siptah, power was taken from Tausret by Sethnakht who may have been a grandson of Ramesses II. Papyrus Harris makes it clear that Ramesses III was Sethnakht's son, and if he were indeed a great-grandson of Ramesses II this may be one of the reasons that he tried to emulate so much of the reign of the latter.

Ramesses III seems strangely reticent to name his wives and offspring on his, or indeed, their own monuments. The figures are carved, but the spaces for the names were often left blank. It is certain that he had a great royal wife named Isis as she is named as king's mother in her Queens Valley tomb QV 51 which was decorated by her son Ramesses VI. We also know from this tomb that her mother was a non-royal lady named Hemdjert. This wasn't an Egyptian name, and implies that she may have been of Canaanite extraction.

RIGHT

In the First Court of Ramesses III's memorial temple at Medinet Habu stand seven colossal statues of the king, arms crossed like Osiris.

The statues were badly defaced during the Coptic period, so to create this image, 19th-century French artist Emile Prisse d'Avennes collected surviving parts from the seven statues and assembled them to form one whole.



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Ramesses III greets Imsety (not shown), a son of Horus, in the tomb of his son Amenherkhopshuf (QV 55) in the Valley of the Queens. Although Amenherkhopshuf was only around

15 years old when he died, he was given the title "Great Commander of the Cavalry". QV 55 was discovered in 1903, and the decorations are still in fabulous condition.

8, when the Sea Peoples attacked Egypt by both land and sea. Ramesses had seen the need to protect his coastline and had commissioned ships to form a navy. When the time came, he was ready. The outside north wall of Medinet Habu depicts the Pharaoh shooting arrows into the middle of the naval battle (above). This is the first known instance of a naval battle being pictured. Papyrus Harris tells us,


 "They were made as those that exist not."

Ramesses managed to defeat the Sea Peoples when many of the contemporary Mediterranean power bases had succumbed. He lost, however, his northern territories, save for the southern parts of Syria and Palestine. In Nubia, the boundaries seem to have been stable, although there is perhaps some evidence from a battle scene at Medinet Habu that military action was required.

International trade with Palestine was severely disrupted due to the ports on the coast being in the hands of the Sea Peoples. A shipwreck off the coast of Anatolia, dated from inscribed scarabs to the end of the reign of Ramesses III, was on its way to Egypt with ingots of copper, tin and bronze from the islands in the Aegean. These were commodities that Egypt could not do without, and is evidence of trade recovering with this region. In addition, there was a re-emergence of trade with Punt. Closer to home, expeditions were sent to Sinai for turquoise and to Atika (near modern day Aqaba in Jordan) to find copper.

The domestic economy was already in decline when Ramesses III came to the throne. The constant infiltration of nomadic groups with large numbers of grazing animals

put pressure on the arable land of the Nile Delta, and there may have been a decline in the heights of the inundation, further damaging Egypt's agrarian economy. This was exacerbated by the large numbers of captives taken during the various conflicts which were settled in permanent, guarded villages. Describing the Libyan wars, Papyrus Harris says that Ramesses carried away as captives,


 "... their wives and their children by the ten thousand."

The loss of the northern part of the empire meant that income from taxation and tribute payments had fallen, and the silver and copper traditionally obtained from Anatolia was no longer accessible. Harvests were poor, and towards the end of Ramesses III's reign, grain was in short supply. The price of grain was expressed in copper and the cost rose considerably, continuing to do so until the reign of Ramesses VII.

From Year 26, there are reports of unrest, and in Year 28 there appear to be serious difficulties emerging with the payments made to the workmen at Deir El Medina. Only two instances of full payment were recorded between day 28 of the fourth month of *shemu* (harvest season), and day 29 of the 2nd month of *akhet* (inundation)—a gap of around two months. The workers' pay comprised of grain and other comestibles and a shortage like this would have caused severe hardship to their families.

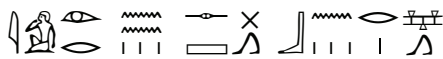
The unthinkable happened in Year 29 when, fed up with the constant ration shortages, the workers downed tools and went on strike. It is an indication of the morale of the people that not only were they prepared to refuse to work,



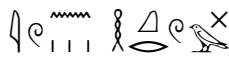
*The First Pylon (ceremonial gateway) of Ramesses III's Memorial Temple at Medinet Habu.
The pharaohs of Egypt's New Kingdom were buried in the Valley of the Kings for the apparent security that the*

secluded location offered their mummies and grave goods for the next life. On the west bank at Thebes, they built elaborate memorial temples designed to honour their memory and perpetuate their deified spirit.

but that the situation was documented on papyrus and ostraca from the village:



"We have walked out



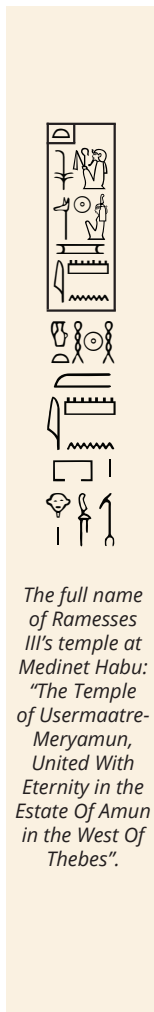
because we are hungry..."

("Sydney Ostrakon", Nicholson Museum, NM R97.)

The lack of state resources also manifested itself in the building works of Ramesses III. Sarcophagi were reused, which could have been for expediency but was also a way of saving money. The kingly sarcophagus of Tauseret was used by Prince Montuherkopeshef (son of Ramesses VI), and her earlier sarcophagus, produced when she was Seti II's queen, was recarved for Amenherkhopesh. Even Ramesses III's own sarcophagus appears to be reworked from another king—most likely Amenmesse or possibly Seti II—and many statues were usurped rather than using new stone.

MEDINET HABU

Although resources were limited, Ramesses III was keen to build and refurbish at many sites. What resources he could muster seem to have been used mostly within Egypt itself, with the main concentration being around Thebes, Memphis and Heliopolis. There is mention within Papyri Harris and Wilbour (Brooklyn Museum) of around 40 sites in Middle Egypt where Ramesses III built or re-



The full name of Ramesses III's temple at Medinet Habu: "The Temple of Usermaatre-Meryamun, United With Eternity in the Estate Of Amun in the West Of Thebes".

stored monuments. Sadly, these are now mostly destroyed. This proliferation may have been an attempt to prove to the people that all was well with the state.

At Karnak, Ramesses built a temple for the Theban triad (Amun, Mut and Khonsu), and while he used new stone, it was of substandard quality and the construction is poorly done, with plaster used to hide problems with the masonry. He also erected a temple in the precinct of Mut, saving costs by using blocks salvaged from older buildings (although this was a common resource-saving practice throughout Egyptian history).

In Year 5, work began on the mortuary temple of Ramesses III (above) at Medinet Habu. This giant undertaking was a seven-year-long project, and must have taken up a large percentage of the resources available.

The sandstone came from Gebel el Silsila (see page 56) and a hieratic inscription from one of the quarries there by the official Setemhab tells us that 2,000 soldiers, 500 quarrymen, 500 other workers and 44 ships were under his command there.

Medinet Habu's large pylons and walls provided plenty of space to proclaim stories of Ramesses III's heroism and success. An unusual feature were two high gateways to the east and west incorporating "migdol" towers (see page 22).

The eastern tower housed apartments whose internal decorations show the king being entertained by ladies of the harem, and both featured large windows which may have allowed the king

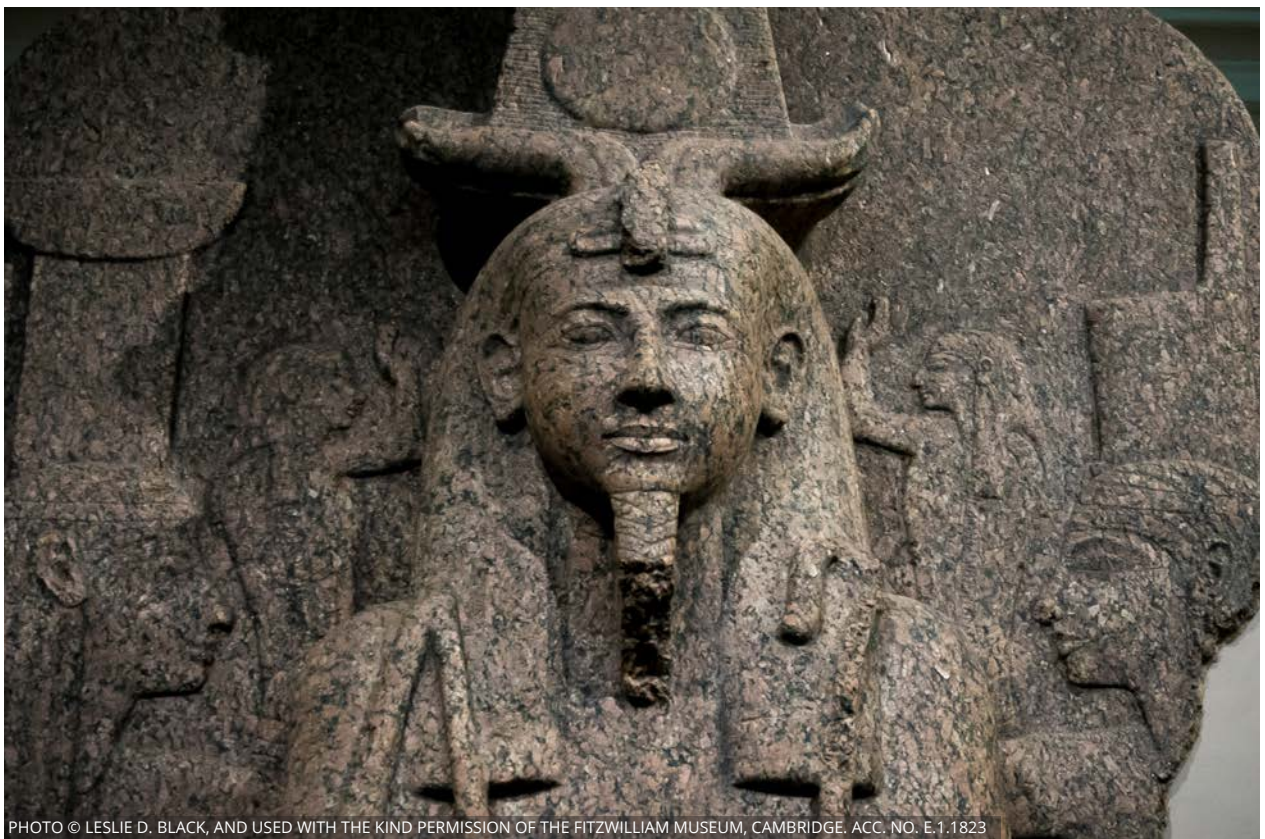









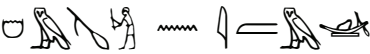

PHOTO © LESLIE D. BLACK, AND USED WITH THE KIND PERMISSION OF THE FITZWILLIAM MUSEUM, CAMBRIDGE. ACC. NO. E.1.1823

The granite sarcophagus lid of Ramesses III in the Fitzwilliam Museum, Cambridge. The king is flanked by protective goddesses: Nephthys (left side of photo) and her sister Isis (on the right). Closer still to Ramesses are twin effigies of

Meretseger, the cobra goddess who dwelt in the pyramid-shaped mountain that overlooked the Valley of the Kings. The Egyptians had no problem with giving the serpent some arms with which to adore the king.


 "Do not lie down in

 fear of tomorrow,

 'Comes the day, how will tomorrow be?'

 Man ignores how tomorrow will be;

 God is ever in his perfection,

 Man is ever in his failure."

As well as:


 "If a man's tongue

 is the boat's rudder,

 The Lord of All is yet its pilot".

This realignment of beliefs possibly contributed to peoples' willingness to participate in the dark events that followed.

THE CONSPIRACY

The Great Harris Papyrus makes it clear that Ramesses III ruled for 32 years. The evidence for a conspiracy comes from The Judicial Papyrus of Turin, which is written as if the king is still alive, and other papyri including Lee and Rollin, in which he is referred to as *netjer aa* (𓏏𓏏) ("the great god"), indicating that he was, in fact, already dead.

There are some schools of thought that the king was initially poisoned, perhaps by snake venom, but that he survived this first assassination attempt leading to the need for more decisive action. This writer deems this unlikely, because had he survived the attack, it would have been extremely difficult to launch another assault.

It is curious that a statue of Ramesses III found at Almaza (an archaeological site near Heliopolis) is inscribed with magical formulae to protect against the poison of snakes and scorpions; and this could perhaps hint that he was looked to for protection as he had survived the bite of a snake. In addition, his sarcophagus also features snakes on it and although this does not appear to be unique, as all royal sarcophagi from Siptah to Ramesses IV include this iconography, it does seem to be unusual outside of this period, and makes this writer wonder if this was part of the reason that this particular one was chosen for him.

However, modern technology, including CT imaging, have provided some possible answers—not only to the manner of Ramesses III's death, but also point to the possibility of more than one assassin. The fatal wound was a



UPDATE FROM ARCE

CURRENT RESEARCH, EXCAVATION AND CONSERVATION PROJECTS IN EGYPT



PHOTO: RICHARD KNISELY-MARPOLE. © AANC, NORTH KHARGA OASIS SURVEY

It's hard to imagine that this is an oasis. Yet 1,600 years ago this area was buzzing with Roman soldiers and heavily-laden camel caravans coming and going from Kharga Oasis, as well as pausing here for water.

Darb Ain Amur is the name of the caravan trail that heads west from Kharga towards the next major oasis: Dakhla, around four days' walk. Positioned to guard the entrance to Darb Ain Amur, and collect the necessary

taxes, was an imposing Roman fort, known today as Ain el-Lebekha. This photo was taken from the wall of the fort, looking down at the small settlement that housed the soldiers stationed there.

Supported by ARCE, the North Kharga Oasis Survey has found that the settlement was made possible by underground aqueducts. These watered extensive fields of crops and made the surrounding area green and fertile.

THE NORTH KHARGA OASIS DARB AIN AMUR SURVEY

IN THE 16TH CENTURY B.C., Thebes was in trouble. Both Lower and Middle Egypt were under the control of the Hyksos monarchy: foreigners who had settled first in the Delta and then slowly extended their influence. Crucially, the Hyksos also controlled the desert routes through the western oases, and so had unhindered access to the Nubian gold mines and the trade routes that crisscrossed the eastern Sahara.

The territory south of Elephantine (Aswan) was held by the Kushite rulers. With control limited to a small patch

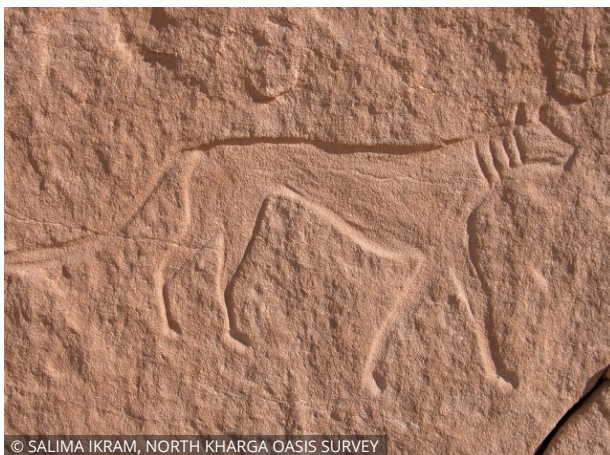
between Abydos and Elephantine, the Thebans were hemmed in. As a final insult, they had to pay a tax to venture into what was now Hyksos and Nubian territory.

After close to a century of Hyksos presence, the Thebans clearly decided enough was enough; they were going to rid themselves of who they regarded as trespassers, and Egypt descended into a protracted and bloody civil war.

Around 1555 B.C., the 17th Dynasty's King Kamose took up the fight that had already cost his father's life, and began making inroads against the occupying Hyksos forces.



© SALIMA IKRAM, NORTH KHARGA OASIS SURVEY



© SALIMA IKRAM, NORTH KHARGA OASIS SURVEY



© SALIMA IKRAM, NORTH KHARGA OASIS SURVEY

Some of the ancient rock art discovered by the NKODAAS.

(Top) A donkey that demonstrates the urgency to document the North Kharga rock art, as natural forces (as well as human ones) continually take their toll. When first discovered by the Survey, this donkey was intact. Within a year the brittle sandstone had fractured and the donkey's lower half had fallen to the ground.

(Bottom-right) Ancient artists chipped away the dark desert varnish coating the rocks to expose lighter rock beneath, in the shape of an elephant. The oldest of the petroglyphs are estimated to be up to 12,000 years old,

carved by seasonal herders or hunters. This may be a case of "sympathetic magic": portraying the desired outcome, which, in this case, might mean a successful hunt.

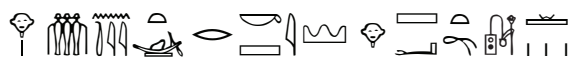
(Bottom-left) The style of this lioness wearing a collar suggests that it was created during the Old Kingdom (ca. 2686–2181 B.C.). The presence of the collar may mean that this big cat was a pet, having been traded or captured. This would have been a powerful status symbol for the wealthy Egyptian who could afford to keep her. The controlling nature of the collar may also be, as Salima Ikram suggests, "an allusion to maat".

Sensing a turning tide, the Hyksos king, Apepi, tried to open a second front in the war. He dispatched a messenger south, carrying an appeal to Nubia to muster an army and join forces with the Hyksos against Thebes.

Avoiding the Nile, the messenger oasis-hopped along the caravan routes of the western desert. However, in a blow to Apepi's strategic genius, the messenger was intercepted by Kamose's troops:



"I captured his messenger in the oasis upland,



as he was going south to Kush with a written dispatch."

Embarrassingly, the messenger was sent back to Apepi, and Kamose documented his success in the oasis on a large victory stela erected at Karnak Temple.

Almost 2,000 years later, another empire sought to exert control over Egypt's western desert and its lucrative oases. During the 3rd century A.D. the Roman empire was battered by repeated attacks from nomads and barbarian hordes. When Roman Emperor Diocletian came to power in A.D. 284, one of his first acts was to enforce the empire's frontiers with a chain of forts. Kharga Oasis—the largest and most southern of all of Egypt's oases—was prized for its agriculture, and as a stop on the long trade route that connected sub-Saharan Africa to the Nile Valley. It was thus marked for a series of army outposts to protect and control Egypt's desert border.

The difference that a year can make.
The Temple of Umm el-Dabadib in 2003 (top) and 2004 (bottom).

Located along the ancient caravan route of Darb Ain Amur is Umm el-Dabadib, one of the sites chosen by the Romans as part of a network of forts, temples and fortified settlements at the beginning of the 4th century A.D.

Thanks to their remote location and the dry environment, these mud-brick forts and their associated temples have survived relatively well. Unfortunately, while motor vehicles have made the Oasis much more accessible for Egyptologists, it has equally improved the ease with which those with greedier intentions can reach these fragile areas.

In 2004 looters arrived at Umm el-Dabadib with a front loader, looking for gold. They ploughed into the mud-brick temple and dug down to the foundations. Tragically, large sections of the temple were reduced to powder and rubble.

The looters may have been encouraged by the “Dush Treasure”, discovered by a French mission in 1989 at the Temple of Serapis at Dush; the southernmost Roman outpost of Kharga Oasis. The hoard, hidden during the 4th or 5th century A.D., included a golden crown depicting Serapis, the Graeco-Egyptian god created for Ptolemy I (see page 45).



In Arabic, Kharga means “outside”. To the Egyptians, the area was *wehat resyt* , “Southern Oasis”. For the North Kharga Oasis Darb Ain Amur Survey, it means examining 10,000 years of history, spread over 1245 square kilometres—from studying Neolithic eggshell fragments to measuring Roman fort buttresses. In between, there’s an awful lot of surveying, mapping, drawing, photographing, kite-flying and identifying archaeological material. And walking. Lots and lots of walking.

When **NILE Magazine** caught up with Salima Ikram, she, on behalf of the NKOS co-director, Corinna Rossi, expressed her deep gratitude to the Friends of the Kharga Oasis, without whom much of the survey would not have been possible. The NKOS is also appreciative of the support from the Ministry of Antiquities, the Kharga Inspectorate, the American University in Cairo, and, particularly for the explorations of the Darb Ain Amur, ARCE’s Antiquities Endowment Fund.

Rossi and Ikram have recently published their monograph of the first seven years of explorations. *North Kharga Oasis Survey: Explorations in Egypt’s Western Desert* is available from Peeters Publishers. This edition is volume one; we look forward to learning what other “hidden history” the Kharga Oasis has in store.

You can discover more about the main sites of North Kharga and the work of the NKOS at www1.aucegypt.edu/academic/northkhargaoasissurvey/home.htm.

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THE BENT PYRAMID

The Bent Pyramid at Dahshur is one of Egypt's oldest pyramids, and still one of the least understood. Why the bend? Why the two entrances? Colin Reader seeks to find some answers.



© HOSSAM ABBAS PHOTOGRAPHY

Local lads enjoy the water's edge of Lake Dahshur, one of a series of sacred lakes that once allowed quarried stone to be carried by boat to the edge of the pyramid precincts. In the background is the Bent Pyramid and its subsidiary pyramid.

THE BENT PYRAMID AT DAHSHUR was built for King Sneferu, the founder of the 4th Dynasty, around 2600 B.C. Its name comes from the marked change in angle of the superstructure, with the lower half of the pyramid built at about 54° and the upper half built at 44°. This change in angle, however, is not the Bent Pyramid's only unusual feature.

In addition to a conventional entrance near the centre

of the northern face, some 12 m above ground level, the Bent Pyramid has a second entrance high on the western face, more than 30 m above the surrounding desert. These two entrances connect to quite distinct elements of the internal chambers. Some researchers have taken this (together with evidence for movement of the structure that may have occurred during the building works) to conclude that difficulties were experienced during construction.



Figure 2. The pyramid at Abu Rawash was built for the 4th Dynasty's King Djedefre around 2560 B.C.—some 40 years after Sneferu's Bent Pyramid at Dahshur. After centuries of quarrying, the rock cut trench that formed the pyramid's substructure is now exposed. In the

background is the sloping Northern Passage. The foreground shows the widened section for the underground chambers. Also visible are the lower sections of core masonry for the pyramid superstructure that were placed around the open trench (arrowed).

unusually tall and narrow First Antechamber (B), which is no wider than the Northern Passage itself. Beyond the First Antechamber, rather than the horizontal passage we see at Meidum and the Red Pyramid, all we find is a short section of rough excavation (c) which appears to project towards a vertical shaft (d), the base of which has not been located. Both the vertical shaft (d) and particularly the short, rough excavation (c) look very much like exploratory works. Were these excavations abandoned because they encountered difficult ground conditions, perhaps a lens of sand and gravel such as that implied by the geological map? If so, this may explain why the layout of the underground chambers in the Bent Pyramid differs from what we see at Meidum and the Red Pyramid.

When the inside of the Bent Pyramid was first documented in the 1830s, it was found that oddly, ancient masonry steps had been added retrospectively to accommodate the different floor levels between the First and Second Antechambers (Fig. 3, B and E). I believe that the need for these steps was a consequence of the first major change to the design of the Bent Pyramid that was introduced by the Construction Manager.

In the original plan, it is likely that the low horizontal passage (A) had been longer and had perhaps extended as far as c, where the abandoned excavation suggests adverse ground conditions had been encountered. If additional exploratory work at d had confirmed that the difficult ground conditions were not localised, one of the few options available to the Construction Manager was to raise the floor of the Second Antechamber (E) to avoid the difficult ground. The masonry steps were therefore introduced to accommodate the unplanned 6.75 m high difference in floor levels between the two antechambers.

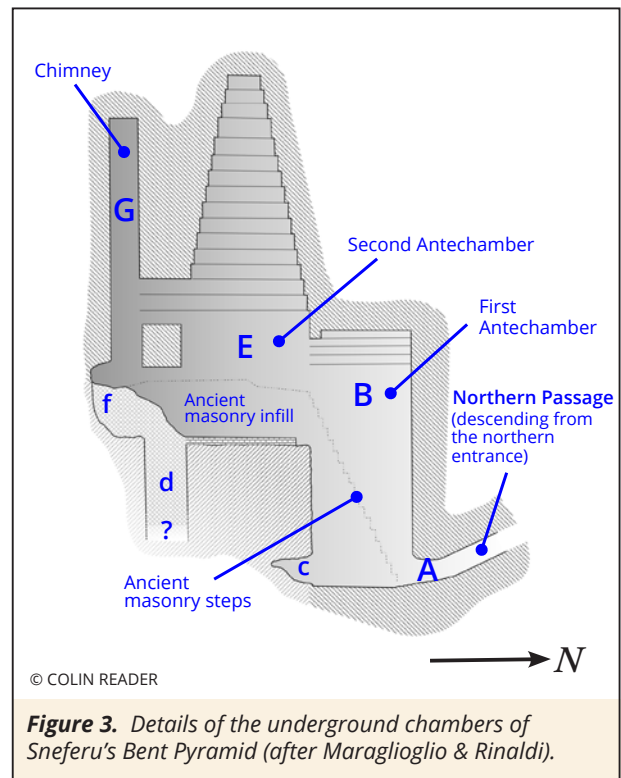


Figure 3. Details of the underground chambers of Sneferu's Bent Pyramid (after Maraglioglio & Rinaldi).

In order to construct the steps however, it was necessary to raise the ceiling of the horizontal passage between A and c to provide the necessary headroom, hence the unusually high and narrow First Antechamber (B). Although not what had been intended, the mismatching antechambers that resulted from these enforced design changes satisfied at least one of the requirements of the 'standard' pyramid

layout that we see at Meidum and the Red Pyramid—a pair of antechambers that preceded the Burial Chamber. Although it is not clear whether the Burial Chamber was also intended to form part of the Bent Pyramid substructure, another length of abandoned excavation (Fig 3., f) suggests that perhaps these plans were changed in favour of a Burial Chamber in the pyramid's superstructure which was to be reached via a vertical shaft known as the chimney (G).

The Burial Chamber: Lessons from Meidum?

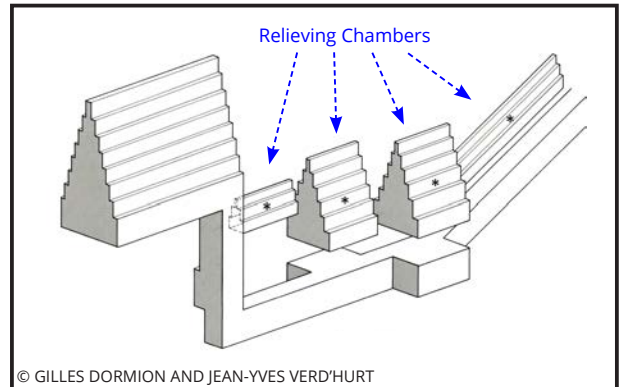
I have always felt that the chimney that connects the inner antechamber at Meidum to the space referred to as the Burial Chamber, was odd (see Fig. 4, right). Even if we assume that the Meidum sarcophagus was placed in the Burial Chamber before the ceiling was complete, the mummy and coffin still had to be introduced (with difficulty) via the narrow vertical chimney.

In a paper published a few years ago, I argued that the corbelled ceiling of the inner chamber at Meidum indicates that this was intended to be a relieving chamber and that the original intention had been to excavate a Burial Chamber in the underlying bedrock. Although probably never built, the original plan would have placed the Burial Chamber at the same floor level as the passage and antechambers, making the chimney unnecessary and the introduction of the funerary equipment far easier.

We may never fully understand the reasons that led the ancient builders to change the internal arrangement at Meidum, however given that this was the first pyramid with internal passages and chambers that lay partly below ground

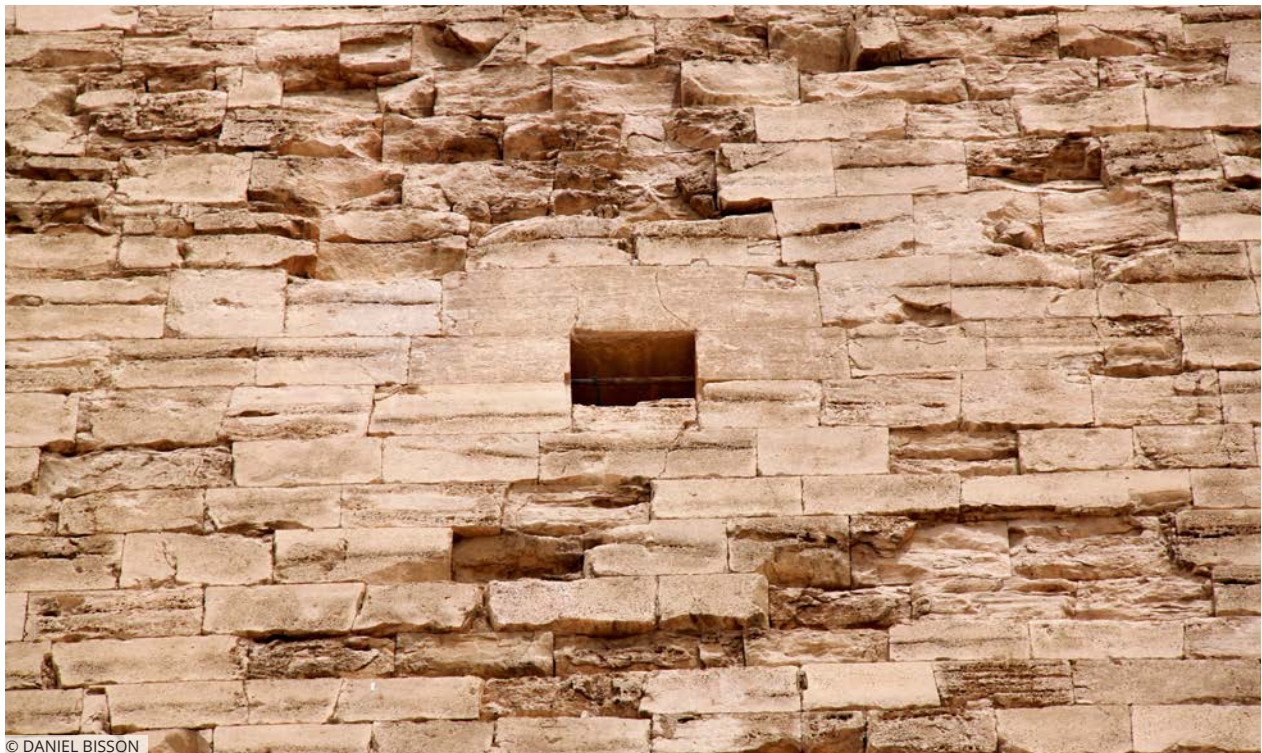


The Pyramid of Meidum viewed from the southwest.



© GILLES DORMION AND JEAN-YVES VERD'HURT

Figure 4. The internal layout of the Meidum Pyramid. The relieving chambers (marked with an asterisk) were discovered by amateur archaeologists Gilles Dormion and Jean-Yves Verd'hurt between 1998 and 2000.



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Figure 5. The western entrance to the Bent Pyramid. When the interior was first explored in 1839, this western

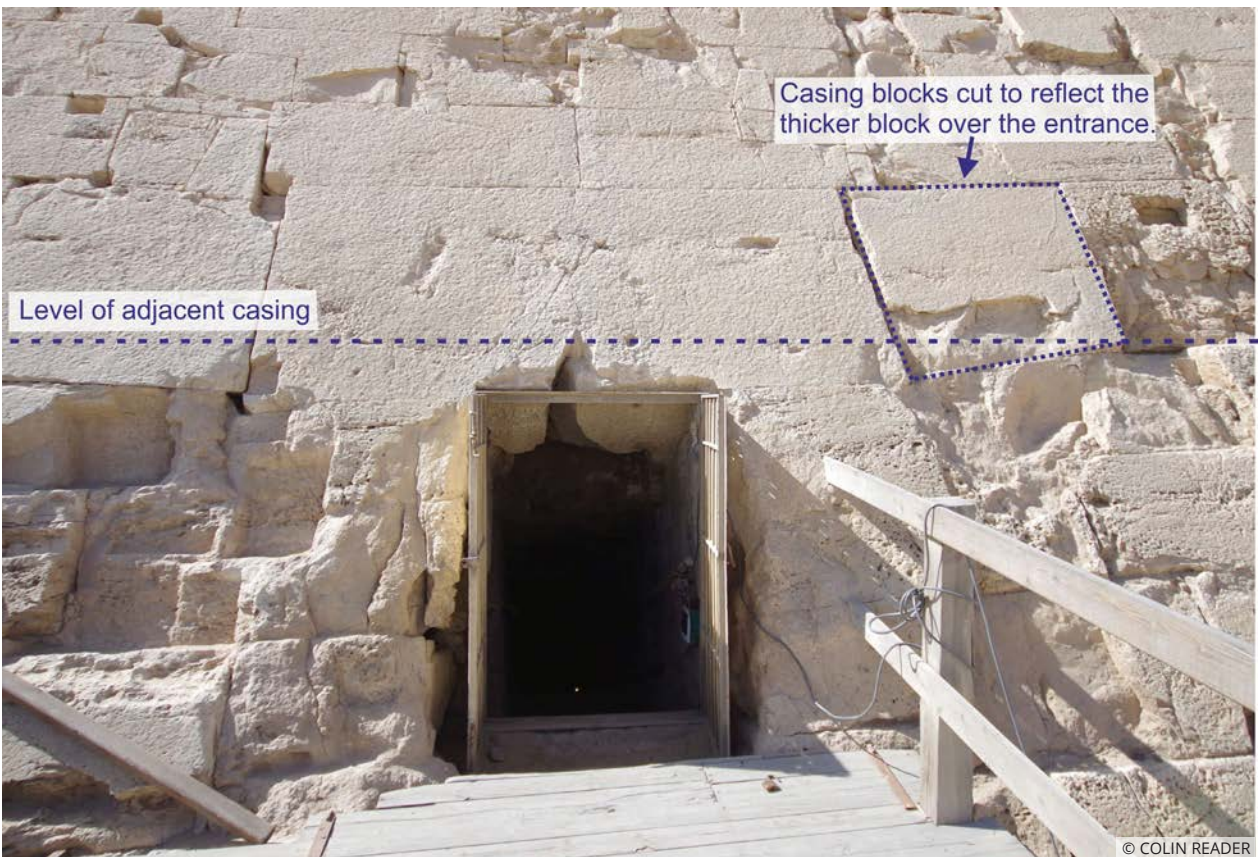
entrance was deliberately blocked. At some 30 m above the desert surface, it would have been very difficult to access.



© COLIN READER

Figure 9. The major dislocation in the Northern Passage, showing the 23 cm step in the ceiling, and (to the right) the

initial 3 cm cutting that was made in an attempt to correct movement in the ceiling by the ancient builders.



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Figure 10. The thicker casing block over the northern entrance (and the adjacent blocks), all appear to have been

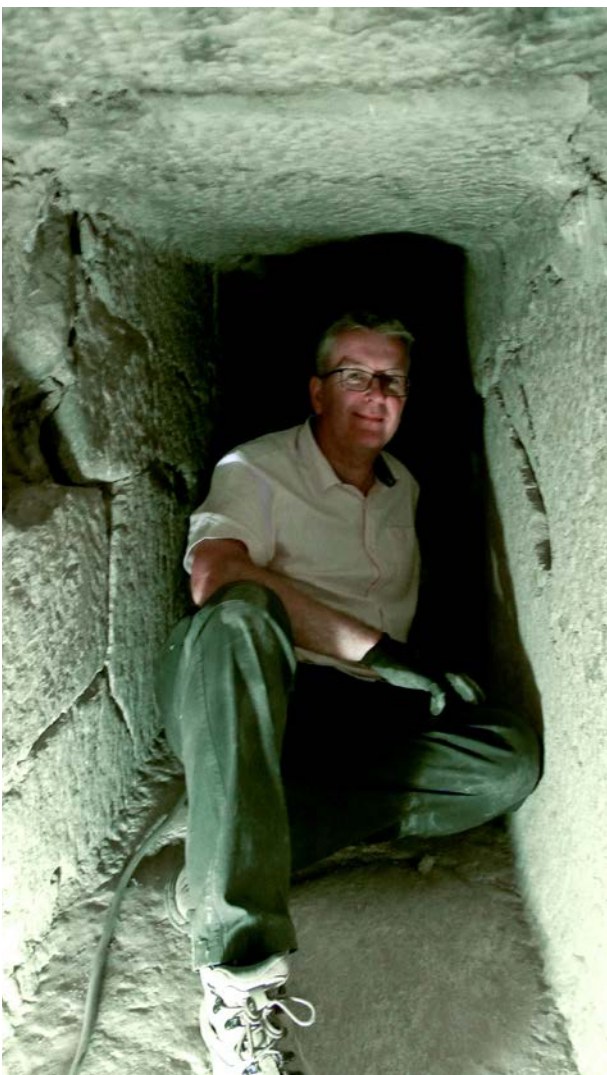
cut to accommodate the dropped outer ceiling of the northern entrance (see also Figure 9).



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Figure 14. The Bent Pyramid, as viewed from the Red Pyramid at Dahshur. Built for King Sneferu, around 2600 B.C., the king had his workers finish it off with a gentler

slope. Seemingly having learned a lesson, Sneferu commissioned another massive pyramid nearby—the Red Pyramid: the world's first colossal true, smooth-sided pyramid.



response to the decision to infill the Western Passage with masonry, was to provide a new route into the Burial Chamber. I believe that the tiny Construction Passage between the Second Antechamber and the horizontal section of the Western Passage (Fig. 15, left) represents the first phase of this new access. Having used this small passage to identify a route through the core of the pyramid, the intention would have been to widen this Construction Passage into a more formal internal space. The heartbreaking decision to abandon the Bent Pyramid however, was taken before this work could be completed.

The Bent Pyramid is still closely guarding its secrets and until a modern survey can be undertaken, is likely to continue to do so for many years to come.

Further Reading:

Howard Vyse: *Operations Carried on at the Pyramids of Gizeh in 1837*, Volume 3: Appendix.

Colin Reader: *The Meidum Pyramid*, Journal of the American Research Center in Egypt, Vol. 51.

Maraglioglio and Rinaldi: *L'architettura delle Piramidi Menfite*, Part 3.

Keith Hamilton: *The Bent Pyramid, the curious case of the 60 degree pyramid*. https://www.academia.edu/33288308/The_Bent_Pyramid_the_curious_case_of_the_60_degree_pyramid.

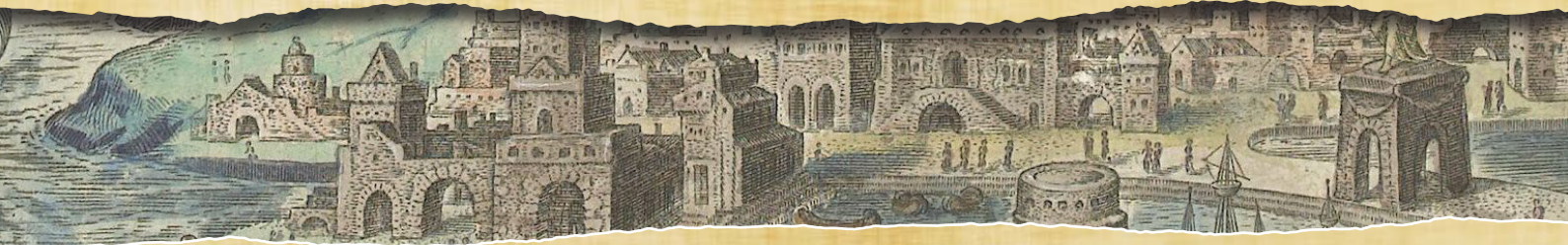
COLIN READER is an geotechnical engineer with a degree in Engineering Geology. He works in the construction industry advising clients on issues related to foundations and earthworks. For the last 20 or so years he has applied his professional experience to issues associated with the construction of Ancient Egyptian monuments.

Figure 15. The author, Colin Reader, in the Construction Passage of the Bent Pyramid, showing the “cosy” size of this unfinished feature.



FORGING AN EMPIRE:

PTOLEMY I



DIANA T. NIKOLOVA



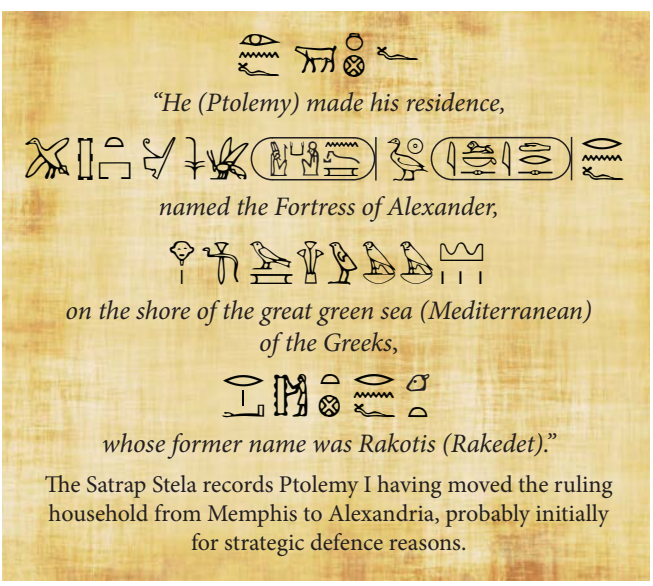
The Ptolemaic Dynasty is famed for its last ruler, Queen Cleopatra VII. The scene of her dramatic death and the idea of the star-crossed lovers—of which she and Mark Antony have become a symbol—have gripped the imagination of both ancient and modern people alike. However, the start of this fascinating dynasty, and the man who created it, are often overlooked.



*Later in his reign, Ptolemy I boldly replaced the image of Alexander on his coins with his own; thus being one of the first ancient rulers to put his likeness on a coin in his lifetime. (This solid gold pentadrachm, however, featuring Ptolemy I, was minted in Alexandria by his son, Ptolemy II, around 273 B.C.)
The coins of the Ptolemaic Dynasty adopted a lifelike “warts and all” approach, with Ptolemy I sporting a hooked nose and prominent chin.*

coastal fishing village, building a brand new city: Alexandria.
Just before he left the country, Alexander appointed a local ruler, Kleomenes of Naucratis, as satrap, and made him responsible for the finances of Egypt, as well as the continuation of the building work in Alexandria.
In the autumn of 330 B.C., General Ptolemy received more opportunities to distinguish himself, starting when he obtained his first independent command, aimed at capturing the rebel Bessus. Following Alexander the Great's defeat of the Persian army, Bessus proclaimed himself king of the Persian Empire and killed his predecessor, a relative of Darius III. Returning to his formal satrapy of Bactria, Bessus attempted to mount a resistance within the eastern satrapies of the now crumbling Persian Empire.
In 329 B.C., Alexander

entered Bactria to suppress the uprising. Bessus, in turn, fled east. The chieftains that were part of Bessus' resistance decided, however, that they did not want to abandon their homeland. They seized Bessus and surrendered him to the Macedonian detachment lead by Ptolemy, whereby the self-proclaimed king of Persia was placed in a wooden collar. Bessus was stripped naked and tied to a stake beside a road on which the Macedonian army was marching. The exact manner of Bessus' execution is unknown, with various descriptions ranging from crucifixion to torture and decapitation.
By 327 B.C., Ptolemy commanded approximately a third of Alexander's army, and within a year was commanding the advance guard at Aoronos, the site of Alexander the Great's last siege. Aoronos is a natural stronghold in





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In this image, Ptolemy II consults plans for the Lighthouse of Alexandria, shown by his architect, Sostratus of Knidos. The grand project, however, was most likely begun by his father, Ptolemy I, a little after his official coronation in 304 B.C.

This 1572 engraving is by Dutch publisher Philips Galle, after a painting by compatriot Maarten van Heemskerck. Less than a century earlier, the ruined lighthouse was demolished and its stone used to build the Citadel of Qaitbay on the same site.

present-day Pakistan, and was a serious threat to the supply lines of the Macedonian army as they proceeded towards India. Alexander was not able to capture Aornos, so he seized the opposite hill, where he placed his catapults. The stronghold fell and the Indians fled, although many were caught and killed.

In 324 B.C., in the Persian city of Susa, as part of a mass wedding ceremony, Ptolemy married Artakama, who belonged to a noble Persian family. This mass wedding was organised by Alexander himself, and was aimed at symbolically uniting the Persian and Greek cultures through his marriage to Stateira, the oldest daughter of Darius—as well as the marriages of his officers to other prominent Persian women. However, the attitude of the Macedonians towards this unification is evident from their actions following Alexander's death. Only two of the Macedonian officers kept their Persian brides; the rest, including Ptolemy, promptly divorced them.

Alexander the Great died on the 10th or 11th of June,

223 B.C., in the palace of Nebuchadnezzar II in Babylon. First-century Greek historians, Plutarch and Diodorus, present two different accounts of the king's death, but in both scenarios, one thing is clear: Alexander's death was sudden and unexpected.

Alexander did, however, manage to give one final order with regards to the location of his burial: it was to be in the Siwa Oasis in Egypt. Following Alexander's death, the empire he created found itself without a leader. As Alexander's first wife, Roxanne, was expecting a child, Arrhidaeus (Alexander's half-brother) was recognised as the new king and was to take the name Philip. If Roxanne's unborn child was male, the two would rule together.

However, before this decision was reached, Ptolemy, as one of Alexander's closest and loyal friends, presented a different solution to the leadership problem: divide the empire into loosely united satrap-states governed by a council of satraps. As this suggestion was in serious break with tradition it was rejected.

DISCOVERING



ABU SIMBEL

NIGEL FLETCHER-JONES



"Exterior View of the Two Temples at Ybsambul". This scene was drawn by Giovanni Belzoni in 1817, just four years after the great temple of Abu Simbel was discovered. While the small temple on the right had been known since antiquity,

the larger temple had remarkably gone without notice.

This scene comes from Belzoni's Plates Illustrative of the Researches and Operations in Egypt and Nubia, published on his return to England in 1820.

WHEN GIOVANNI BATTISTA BELZONI entered the Great Temple at Abu Simbel on 1 August, 1817—as recorded in a carved graffito which can still be seen in the sanctuary—he quickly realized that much of the decoration was centered on the same ancient hero he had seen the year before at the “Memnonium” (now known as the Ramesseum), and at the temples of Luxor and Karnak.

While he immediately recognized the quality of the reliefs inside, both Belzoni and the Nubian villagers were disappointed to find that there was little inside the temple. Belzoni recorded only decayed wood and some copper work

from long-vanished doors, plus “two lions with hawk’s heads,” and other small statuary.

Adding to their great discomfort, the temperature in the newly opened temple was around 54° Celsius (almost 130° Fahrenheit), which made a preliminary survey and drawing of the reliefs difficult. Perspiration made the expedition sketch-books so wet that Belzoni simply had to give up and return to Cairo.

Two years later, Henry Salt, the British Consul, led a second expedition to Abu Simbel, and did more careful work on the inscriptions and paintings. The temple was lit this time by small wax candles and, perched on ladders, the



Belzoni's expedition graffito recording the entry of the Great Temple on 1 August 1817. He had worked hard to get inside; with the doorway covered by sand, Belzoni expected that trying to clear the sand “would have been like making a hole in the water.”



Beyond the first pillared hall, with its colossal statues of Ramesses in Osirian form, is the second pillared hall. Only priests and senior attendants would have crossed the threshold into this second hall.

This is considerably smaller than the first pillared hall and is divided into only three parts by four square pillars. These pillars are surrounded on all sides by images of the king being greeted by the gods—including himself!

Halfway along the same wall is a dramatic image of the king spearing a Libyan chieftain (opposite page, bottom)—a copy of a relief created for Rameses' father Sethy I on the outer wall of the Great Hypostyle Hall at Karnak temple. To the right again, Rameses appears in his chariot accompanied by his pet lion—driving Nubians before him toward the gods on the next wall on the right.

The entire north wall of the great hall is taken up with a representation of the Battle of Qadesh against the Hittite empire, which was a defining event in the life of Rameses II and is widely represented in the temples that the pharaoh modified or had built.

Although claimed as a resounding victory by the Egyptian king, historians today suggest the outcome was closer to a draw, with the surviving Hittite forces retreating to their walled city, protected by the Orontes River, and Rameses' troops simply going home.

The rear of the first pillared hall connects to a smaller hall (see above), where three doors open to the vestibule—the central door being in line with the sanctuary. These lead to the most sacred area of the temple, entered only by the highest, most privileged ranks of the attendant priesthood.



Surrounded by the Orontes River, the fortified city of Qadesh (near the modern Lebanon-Syria border) provided a stronghold for the survivors of the epic battle between Rameses II and the Hittites.

While the Hittites sustained much heavier losses on the battlefield, Rameses' troops failed to take the city and claim the area for Egypt, so both sides have good reason to claim the battle as their victory.

Conflict ground on for another 16 years after the battle, and under pressure from other rivals, the Egyptians and Hittites opted for an alliance. The world's first documented peace treaty ended over two centuries of conflict. It included the return of each other's prisoners, as well as a pledge to resolve any future disputes amicably.

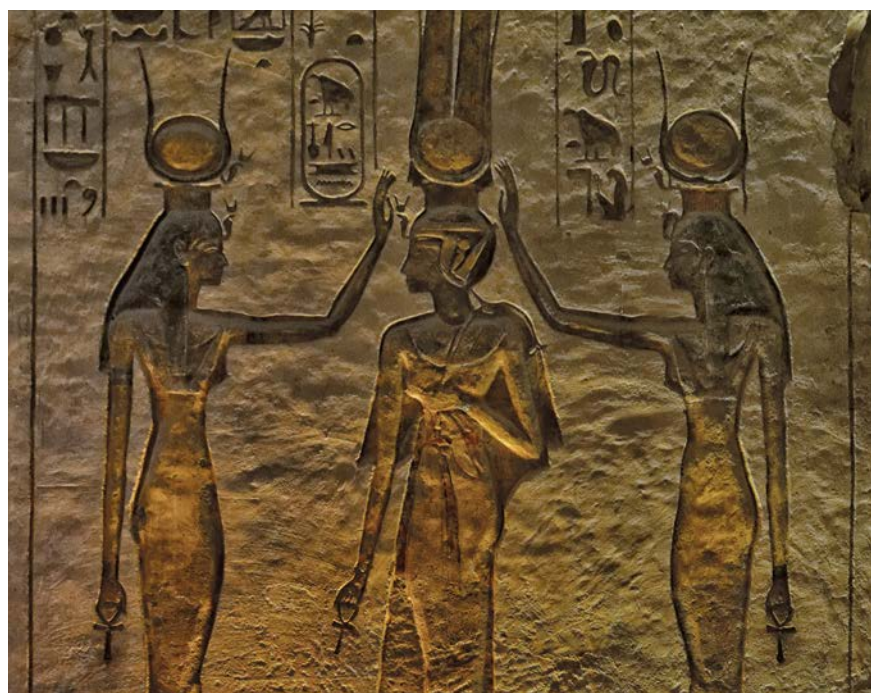


The pillared hall of the Small Temple. The god Thoth appears of the second column on the left, and Ramses II offers incense on the column to the right. Further to the rear, on

the left, the seated goddess Hathor of Abshek is presented with flowers, and, to the rear on the right, Mut can be seen in a similar scene.

Looking back from the sanctuary door toward the temple entrance, the Egyptian priests would face one of the most elegant images ever created in ancient Egypt. The graceful form of Nefertiry, wearing a Nubian wig, is "crowned" by the equally graceful forms of the goddesses Hathor of Abshek (in front of the queen) and Isis (behind the queen). All three wear the uraeus, flat-topped cylindrical headdress or crown (modius), solar disk, and cow horns (with the addition of twin plumes in the case of Nefertiry).

Nefertiry likely never saw her finished temple at Abu Simbel; she had probably already died when it was dedicated in the 24th year of Ramesses' reign. Nefertiry is noticeably absent from reliefs marking the dedication ceremonies. Instead, Ramesses is depicted with his daughter Meritamen, identified as queen.



2

GEBEL EL-SILSILA THE SUBMERGED MASS BURIAL

THREE HOURS A DAY. That's all the time the Gebel el-Silsila team can spend in their recently discovered tomb before the air becomes too stale to breathe. This tiny daily window partly explains the two-year gap between the discovery of the tomb and its announcement on December 13 last year. But it isn't just the

air that makes the task of clearing the tomb such slow going; it's the water. Each day, the tomb fills close to the ceiling with warm, salty water, and each day it needs to be pumped out. Only then can the co-directors of the Gebel el-Silsila Project, Dr. Maria Nilsson and John Ward, begin probing the waterlogged mud and silt left behind.



PHOTO: ANDERS ANDERSSON. © GEBEL EL-SILSILA PROJECT

That's a lot of water. Dr. Maria Nilsson and her husband John Ward, along with their Egyptian colleague Mohamed Ibrahim, in the first chamber of the recently discovered "wet"

tomb. Illuminated in the background is the portcullis slab which had kept the tomb sealed for some 3,400 years, until it was pulled aside by robbers in the late 20th century.

Their meticulous sifting has revealed that ST42: (Silsila Tomb 42) was utilised for a series of burials throughout the reigns of four New Kingdom pharaohs. So far they have uncovered the remains of around 60 individuals—a large proportion of which were children—and indications are that there are many more to come. Over 70 rock-cut tombs—many of them built as family crypts—have been discovered at Gebel el-Silsila, but nothing had ever been found on this kind of scale.

Remarkably, most of the bones were found by touch: carefully feeling through the mud with their hands. John

Ward describes it as a “soup of human remains”.

But it's not this somewhat icky scenario that has earned the Gebel el-Silsila Project the #2 position. Nor the number of bodies, or the fact that the team comes back to courageously wade through the “soup” each day. This discovery is worthy because it is helping change the way we think about ancient Egypt's quarries, and the men and women who lived and died there.

While we often talk about Egypt's grand building schemes, such as Karnak Temple, which was in a constant state of expansion and renovation over its ca. 2,000 years,



© GEBEL EL-SILSILA PROJECT

From up here, you can start to get a sense of the enormous extent of the Gebel el-Silsila quarries. Among these hewn rock faces are thousands of rock inscriptions, including graffiti and




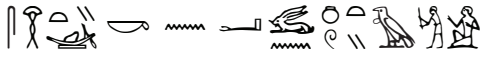

prehistoric pictographs. The team have also encountered scores of hieroglyphic, hieratic, demotic, Greek and Coptic inscriptions, with the earliest dated to the Old Kingdom.

It may have been some of the workers from this time who first discovered ST42.

Nilsson and Ward—the husband-and-wife team who are the driving force of the Gebel el-Silsila Project—first noted a rectangular, grave-shaped depression in the ground five years ago. As it was close to the Nile, they at first speculated that it might be a Nilometer, used to measure the height of the river during its annual flood. Because much of the country’s prosperity rested on the success of each year’s harvest, the height of the flood (which brought with it rich nutrients to replenish the fields on the Nile floodplain) became a handy way of forecasting the upcoming yield.

Two years ago they began to excavate. The lack of steps, however, gave them pause to think that this wasn’t a Nilometer after all, but a burial shaft. They also suspected that the tomb had been visited before: the great slabs of stone which would have covered the top of the shaft were missing.

Five metres down, water began seeping up through the Nile silt which quickly turned to mud. When their workers reached the bottom, they discovered the source of the water: a stone portcullis had been pulled aside by thieves who would have immediately discovered what it had been holding back: tonnes of water. The tomb was almost fully submerged. The would-be robbers must have wondered if perhaps they should have heeded the ancient warnings against such intrusions:


“Do not rejoice

in wealth from theft,

nor complain of being poor... .

the boat of the greedy

is abandoned [in] the mud.”

(“The Instructions of Amenemope”, Ramesside Period.)

While the rush of water sent the robbers into a hasty retreat, they left the tomb shaft open, which allowed wind-blown sand and silt to drift in. By the time Nilsson and Ward rediscovered the tomb, the chamber leading from the shaft was half full of dirt.

The tomb was designated ST42, and the team would spend the next two years (thus far) following a daily ritual: three hours of pumping water, followed by three hours of

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