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NILE STYLE

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The Divine **FALCON**

AHMOSE

Father of a Dynasty

HIEROGLYPHS

Who translated them first?

QUEEN FOR ETERNITY

MERESANKH III



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NILE

IN 1931, GERMAN ARCHAEOLOGIST Uvo Hölscher, digging for the University of Chicago's Oriental Institute, was excavating the ruins of the funerary temple of King Ay, just north of Ramesses III's temple at Medinet Habu. Foundation deposits at the site revealed that the temple was begun by Ay during his short reign following the early death of Tutankhamun. Above ground, however, the next in line, Horemheb, had done a thorough job of usurping the temple and its fine statuary—rubbing out Ay's cartouches and engraving his own.

Discovered in the dusty rubble were two colossal, striding red quartzite statues, originally thought to have flanked a temple doorway. While they had sustained damage, the faces were, thankfully, largely intact. At the time, Uvo Hölscher made it fairly clear as to who he thought the two statues belonged:

“Everywhere the names of Harmhab [Horemheb] appear over an erasure, where the name of Eye [Ay] had been carved originally and can be read with certainty in places. The face is, however, not that of Eye.... Our statues were apparently made for Tutankhamon but completed, inscribed and set up under Eye and finally usurped by Harmhab.”

The statue shown here went to the Egyptian Museum in Cairo (Inv. Cairo JE 59869), while its mate was gifted to the Oriental Institute in the division of finds (No. 14088).

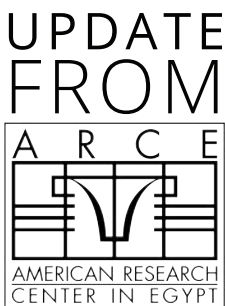
For a long time, it was accepted that the two statues originally belonged to young king Tutankhamun on account of their budding faces and Amarna-style bulging bellies. It was figured that the statues (and the funerary temple in which they were found) had been appropriated firstly by Ay, and then Horemheb. Hölscher's excavations, however, found no evidence at all of a funerary temple of Tutankhamun at Medinet Habu, and Ay's inscriptions on the statues, reworked by Horemheb, contain no trace of Tutankhamun. Today, many believe that the statues were original creations made for Ay before being usurped by Horemheb.

This colossal statue of Ay/Tutankhamun is part of the touring Tutankhamun exhibition now showing in Los Angeles—the largest collection of Tutankhamun artefacts to ever tour the globe. *King Tut: Treasures of the Golden Pharaoh* is showing at the California Science Center until 6 January 2019. You can find out more at californiasciencecenter.org, and also check out other exhibitions and events near you from page 62 in this issue of *NILE Magazine*.





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Jeff Burzacott

The American Research Center in Egypt (ARCE) has been fostering knowledge of Egyptian cultural heritage and preserving its monuments and archaeological wonders for almost 70 years. In this issue we look at the remarkable results of some of their conservation field schools around Luxor.



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TOMBOS

Jeff Burzacott

Near the Nile's Third Cataract, a small community of Nubian traders and Egyptian colonists met and mingled, forging a new society and a new identity. Surprising discoveries at Tombos suggest that this blended culture may have eventually led to the rise of the largest empire ancient Egypt had ever known.



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AHMOSE

Sharon Hague

Around 1550 B.C. a Theban prince was born in the midst of battle. This was, no less, a battle for Egypt itself. The war against the Hyksos had cost Ahmose's family dearly, and, bizarrely, may have started with some bellowing hippos.



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ARAB TRANSLATORS OF EGYPT'S HIEROGLYPHS

Tom Verde

Jean-François Champollion and Thomas Young were locked in a battle to unlock the meaning of Egyptian hieroglyphs. Yet the two linguists were competing in a race that had already been run by medieval Arab scholars centuries before.



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THE DIVINE FALCON

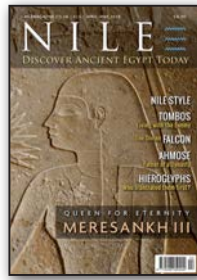
Lesley Jackson

What is the most frequently-depicted deity in the entire history of ancient Egypt? Is it Osiris? Amun? No—it's a falcon god. **Lesley Jackson** looks at ancient Egypt's raptor gods and, in particular, the different aspects of the divine symbol of kingship, the Horus falcon.

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THE COVER

MERESANKH III: QUEEN FOR ETERNITY

Rachel Aronin

Digital Archaeology and the (After)life of Meresankh III at Giza.

The *Giza Project* at Harvard University is building a 3D virtual reconstruction of the Giza Plateau as it may have looked when first built. One of the tombs that have been digitally recreated (and preserved for future generations) is that of Meresankh III, the granddaughter of Khufu.

#13

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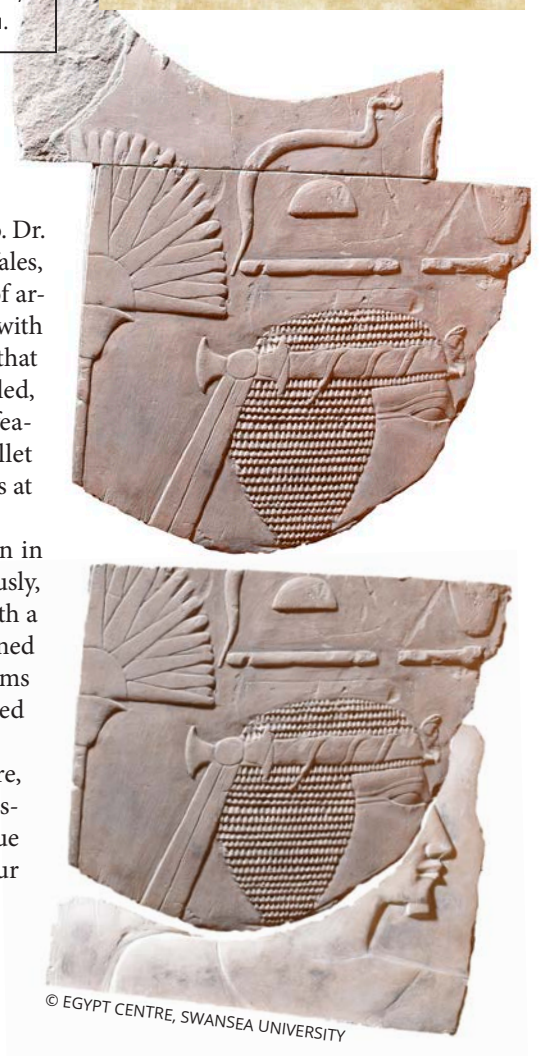
FROM THE EDITOR

WE LOVE SURPRISES. And I suspect Dr. Ken Griffin does too. Dr. Griffin is an Egyptology lecturer at Swansea University in Wales, and in late March, he was looking through photographs of artefacts in the University's Egypt Centre stores for a handling session with students. There was something about one particular limestone relief that caught his eye. "When we realised what it truly was," Dr. Griffin revealed, "our jaws hit the floor." What he had identified was a relief fragment featuring the 18th Dynasty's Queen Hatshepsut. The hairstyle and fillet headband with royal uraeus were a match with similarly-styled reliefs at her funerary temple at Deir el-Bahari in Luxor.

The two-part relief had arrived in Swansea in 1971 and had been in storage ever since. The bottom part of the face is missing, but curiously, the rear of the upper fragment was carved with the head of a man with a short beard (right, below). This appears to be a modern addition designed to enhance the relief's appearance to add value for a potential sale. It seems the instigators of the "enhancement" didn't realise that the piece featured a woman.

The Hatshepsut relief is now on display at Swansea's Egypt Centre, and you can look forward to a full report on Dr. Griffin's fabulous discovery—including the tiny details that tipped him off—in the next issue of *NILE Magazine*. In the meantime, welcome to issue #13. Enjoy your *NILE* time!

Jeff Burzacott 
editor@nilemagazine.com.au



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NILE

The NILE Quiz

by Jeff Burzacott

Hi Nile Quizzers,

Welcome to the latest fun brain teaser. Whether you have a passion for Predynastic Egypt or you are rapturous about the Roman Era, we've got you covered; this quiz spans the entire 3,000+ years of ancient Egyptian history. As usual, every question has been sourced from the current issue. Enjoy! (You can check your answers on page 14.)



JACQUES DESCLOITRES, MODIS RAPID RESPONSE TEAM, NASA/GSFC

1. The Nubian town of Tombos—a major centre of trade with the Egyptians—is near which cataract of the Nile?

2. What was the name of Ahmose's older brother, who was probably killed in battle against the Hyksos during the Second Intermediate Period?

3. For which king's first Jubilee (Sed) Festival was the calcite chapel—known today as the "White Chapel"—erected at Karnak Temple?

4. In 1927 American archaeologist George Reisner discovered the Giza mastaba tomb of Meresankh III, granddaughter of Khufu. Was the discovery made on the first or last day of the excavation season?

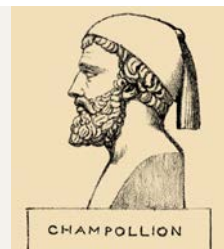
5. In which year was the now (in)famous bust of Nefertiti officially unveiled to the public in Berlin?



6. Which Predynastic ruler was the first to place the Horus falcon upon a palace façade (or serekh) which contained his name?

- a) Sekhen
- b) Scorpion I (Serket I)
- c) Iry-Hor

7. Which Catholic pontiff was particularly pleased with Jean-François Champollion for being able to demonstrate that the Dendera Zodiac was a product of Egypt's Roman Period?




















EGYPTOLOGY LIBRARY OF PEGGY JOY

8. Who was the first pharaoh known to have taken shabtis into his tomb?

9. Who was the first woman to be granted permission to lead her own excavation in Egypt?

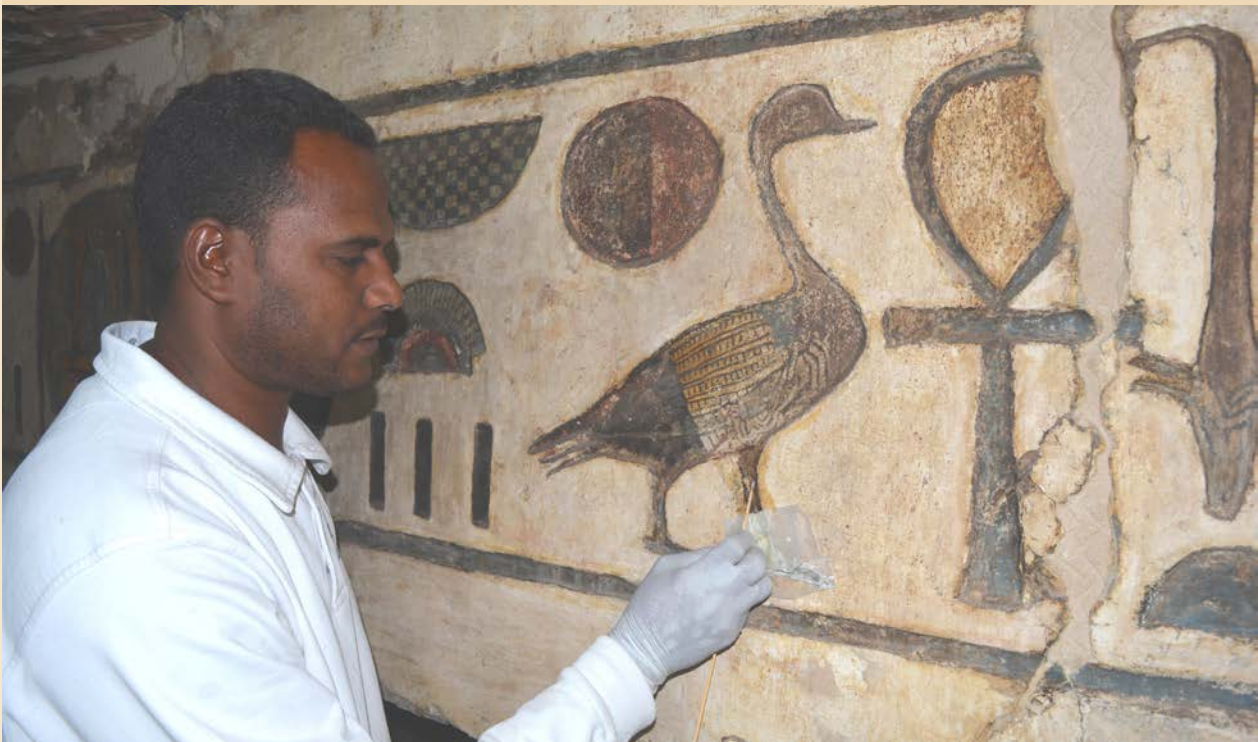
10. Which pharaoh (using blocks from an earlier structure he had dismantled) is responsible for commissioning the current Temple of Khonsu, on the southern edge of the great Karnak complex at Luxor?

	YEAR	DYNASTY	IN THIS ISSUE ...	
PTOLEMAIC PERIOD	332-30BC	Ptolemaic	 p.39	 210 B.C. Terracotta Warriors  280 B.C. Colossus of Rhodes  438 B.C. Parthenon 
		30		
LATE PERIOD	525-404	27		
	664-525	26		
		25		
3 RD I.P.	945-715	22 23		
	1069-945	21		
NEW KINGDOM	1186-1069	20	 p.6	
	1295-1186	19	 p.60	1184 B.C. Trojan Horse 
	1550-1295	18	 p.10	
			 p.23	
			 p.15	
2 ND I.P.	1650-1550	15 16 17 A*		
MIDDLE KINGDOM	1795-1650	13 14		1800 B.C. Code of Hammurabi 
	1985-1795	12	 p.30	2100 B.C. Ziggurat of Ur 
1 ST I.P.	2125-1985	9-10 11		
		7-8		
OLD KINGDOM	2345-2181	6		
	2494-2345	5		
	2613-2494	4	 p.20	2500 B.C. Stonehenge 
	2686-2613	3		
EARLY DYNASTIC PERIOD	2890-2686	2		
	3100-2890	1	 p.39	

(A* = Abydos Dynasty)

“From the beginning of the discussions... there has been agreement that any new American school in Egypt should open its doors at all times to qualified students of every country—above all to Egyptians....”

*Sterling Dow, Co-founder of the American Research Center in Egypt (ARCE),
 Archaeology Magazine, Autumn 1948*



© ARCE. PHOTO: JOHN SHEARMAN



© ARCE

At the Temple of Khonsu within the Karnak Temple complex, conservation field school trainees under the ARCE directorship of John Shearman are cleaning the walls in several chapels. The slow and careful work is revealing colours which haven't seen the light of day for well over a thousand years.

In the top image, the architrave over the doorway to Chapel 2 (see map on page 8) is being meticulously cleaned. The bottom photo showcases the finished work bearing the cartouches of King Ramesses IV—the man who became king after his father was (likely) murdered in a harem conspiracy.

LOOKING BACK, THE CLUB OF ODD VOLUMES in Boston seems a fitting site for ARCE's "Big Bang"—its founding meeting in 1948. The Club's intention was to foster a love for literature and scholarship, and it was here, on a damp, foggy Friday in May 1948 that some of America's most distinguished Egyptological

scholars and institutional leaders got together after lunch with a similarly enlightened purpose.

ARCE's first meeting was presided over by Harvard's Edward W. Forbes and Archaeological Institute of America President Sterling Dow. Their vision was to support research in all areas of the history and culture of Egypt.



© ARCE

This 1936 photo from the ARCE archives features co-founder and artist Joseph Lindon Smith, and behind him (from left to right), archaeologist George Reisner's daughter Mary, Smith's wife Corinna, and Reisner's wife, also named Mary. The group is at a picnic lunch by the Unas pyramid at Saqqara. It was probably Reisner who took the photo.

George Reisner spent almost four decades excavating the Old Kingdom cemeteries adjacent to the three great pyramids of Giza. His phenomenal output of photographs, diagrams and reports today form the foundation of Harvard University's Giza Project. From page 48 you can read about their impressive goal of digitizing and provide access to all archaeological records of Giza from institutions around the world.

Joseph Lindon Smith had first travelled to Egypt—on a whim—in 1898. He was at Abu Simbel, painting the colossal statues carved for Ramesses II, when his work caught the eye of Phoebe Hearst, mother of newspaper mogul William Randolph

Hearst—also travelling in Egypt for the first time. Later, at a dinner party given by Mrs. Hearst, Smith met George Reisner, who was her field agent in Egypt. In 1905, when Reisner became Director of the Harvard-Boston Egyptian Expedition at Giza, Smith was invited to join the expedition team as staff-artist.

A founder of ARCE in her own right, Corinna Smith spent winters in Egypt for decades and mastered classical Arabic, which was no mean feat. In his 1948 report on the beginnings of ARCE, Sterling Dow, president of the Archaeological Institute of America, noted that “Classical Arabic is not easy, in fact, for many modern Arabs, who laughingly say that the angels in heaven speak classical Arabic—adding that only an angel could do it.”

A supporter of ARCE to the end (and beyond), before she died, Corinna asked that donations be made to ARCE in lieu of flowers at her funeral.

During the early part of the 20th century, American archaeological institutions had conducted major excavations in Egypt (see photo caption above), but there was no central office in Cairo serving these institutions in their fieldwork or associated research. And so, the American Research Center in Egypt was born. Within three years the Center was up and running in Cairo.

Today, the vision of those present at the Club of Odd Volumes is alive and well, and in 2018, ARCE celebrates 70 years committed to Egypt's cultural heritage.

ARCE Field Schools

British author Amelia Edwards visited Egypt only once, in 1873–74, but it changed the course of her life:

“Such is the fate of every Egyptian monument.... The tourist carves it over with names and dates.... The ‘Collector’ buys and carries off everything of value that he can.... The work of destruction, meanwhile, goes on apace.”

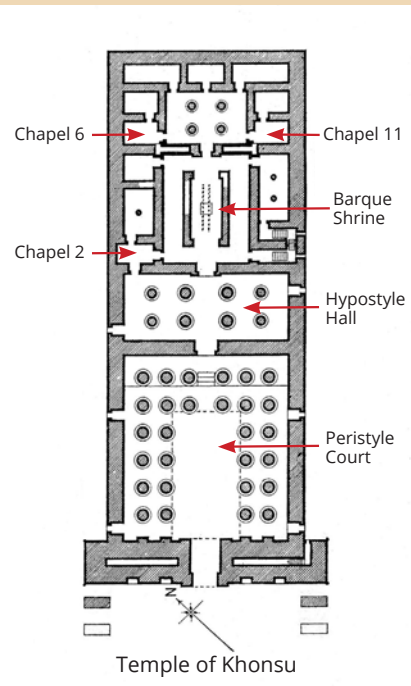
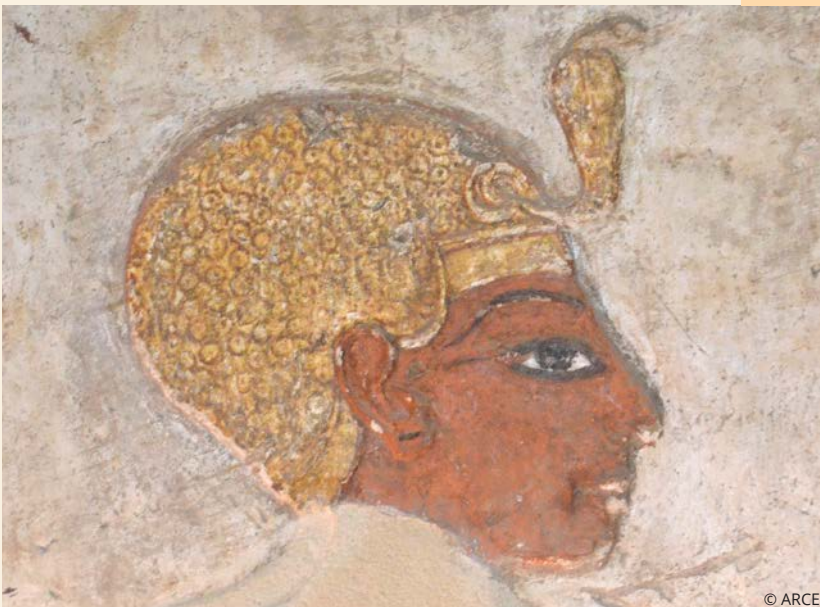
Distressed at the plight of Egypt's ancient monuments, it became her calling to raise awareness and funds for their study and conservation. Between then and now, the natural and human pressures on ancient Egypt have grown alarmingly, and the need for help has never been greater: from both sides of the Atlantic, and particularly, from the Egyptians themselves.

The American Research Center In Egypt offers training programs, largely for the benefit of Egyptian colleagues, in



Throughout Khonsu Temple, the faces of many figures—both statuary and inscription—were defaced by Egypt's early Christians. One place that has escaped willful damage is in the heavily-sooted side-chapels.

It may well be that the very smoke (from cooking fires and incense burners) that smothered the bright colours on the reliefs paid a big part in protecting them by making the scenes less of a target. Today, after cleaning by the ARCE field school, the face of pharaoh is again shining brightly. This before-and-after comparison of Ramesses III wearing the khepresh crown was taken in Chapel 6.



field archaeology, conservation techniques, salvage archaeology, and site management. One of those programs is run by John Shearman, ARCE's Associate Director for Luxor. Since 2007, ARCE has been conducting a field school at the Temple of Khonsu, on the southern side of the great Amun Temple complex at Karnak.

Khonsu Temple was begun by 20th-Dynasty kings Ramesses III and IV, and continued by later rulers, and provides an excellent example of a small but complete Late New Kingdom temple. Here, conservation field school trainees, under Shearman's direction, are cleaning the walls in several chapels, and replacing old cement with lime mortar on the temple walls to ensure stabilisation.

Cement had been used in the past to patch and reinforce walls. As John Shearman explained to [NILE Magazine](#), the problem with cement is that it retains moisture much more than the native sandstone from which much of Khonsu Temple is constructed. This means that it expands and contracts differently to the surrounding stone, and, being much stronger, can cause the sandstone to crack. In contrast, lime mortar is more porous and behaves similarly to the temple's sandstone.

To support the Egyptians' capacity in caring for the monuments, ARCE provided local conservators with their first purpose-built, onsite conservation laboratory, located within the Karnak Temple precinct, near Khonsu Temple. While the interior is hi-tech, the exterior is clad with brick that is very similar to the Roman wall surrounding the complex, allowing the lab to blend into the area.

The ARCE field schools have been an important source of employment income for the Luxor region—particularly during the lean period following the Egyptian revolution. Financial help is shared around to as many families as possible by ensuring that only one person per household is involved in excavation work or in the field school.

New Discovery at the Temple of Khonsu

The cleaning and conservation work at the Temple of Khonsu has led to some important discoveries. It's long been known that the entire Temple of Khonsu was made from reused material; monuments from around Luxor that Ramesses III took down and reemployed for quick construction of the temple complex. Parts of the Memorial Temple of the 18th Dynasty's Amenhotep III were reused

The original goal for the ARCE Khonsu Temple field school was to clean and consolidate the reliefs on the walls and columns of the building's main court. The results were so impressive that the work expanded into the temple's side chapels, seven of which have now received attention.

Khonsu was a lunar deity and considered to be the son of Amun and Mut in the Theban theology. As a sky-deity, Khonsu was generally depicted with a hawk's head. Alternatively, he was shown as a mummified young man with a side lock of hair and holding a flail and a was-scepter.

This recently-restored scene comes from the Temple of Khonsu's Chapel 11. Here the goddess Wadjet, in the form of a winged cobra and wearing a sun-disk, confers the shen ring Q (symbolising eternity) onto an aspect of Khonsu referred to as Khonsu-Neferhotep.

Wadjet was the tutelary goddess of Lower Egypt. Her name means "green one", which can refer both to the cobra's colour and to the lush Delta marshes which teemed with life and became synonymous with fertility and creation.

Seated on the hieroglyph for *maât*, Khonsu's lunar role is evident from the symbols of the moon disk and crescent on his head. He holds the ankh and was-scepter, divine symbols of eternal life and dominion.

The ARCE field school is currently preparing some of the restored chapels to be opened to the public, so that visitors can be wowed by the spectacular colours that have been released from beneath the centuries of soot and grime.



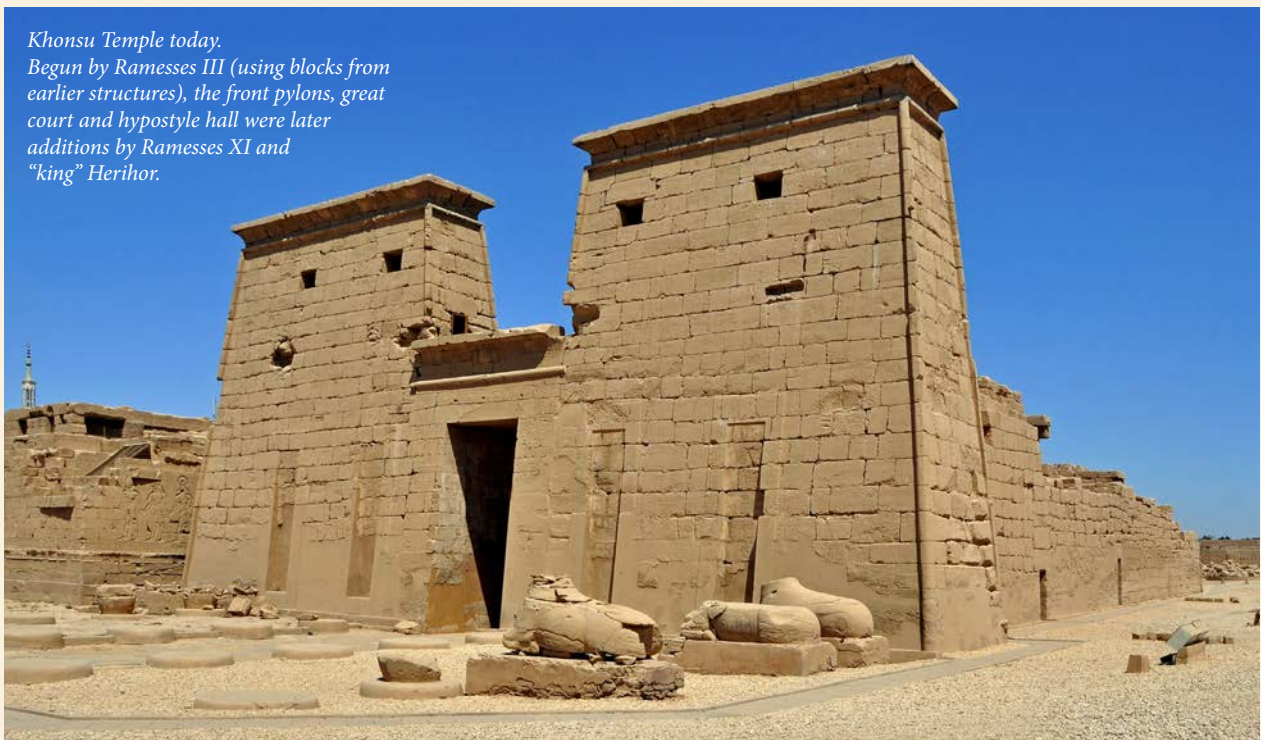
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Khonsu Temple today.

Begun by Ramesses III (using blocks from earlier structures), the front pylons, great court and hypostyle hall were later additions by Ramesses XI and "king" Herihor.



© MARC RYCKAERT



© ARCE

Margaret Benson was the first woman to be granted permission to lead her own excavation in Egypt, which ran for three highly-successful seasons at the Temple of Mut at Karnak between 1895 and 1897.

Benson first visited Egypt in 1894, seeking relief from England's soggy weather, and came across the overgrown ruins of the Mut Temple: "Having heard no more of it than that there were granite statues with cats' heads to be seen there. . . . Yet it was a place to seize upon the imagination."

Benson recorded the moment when the above royal statue was uncovered at the Temple in 1896: "We struck on what appeared to be part of a large sphere of granite. . . and suddenly perceived it to be the back of the rounded wig kings wear. . . . The face was scarred, but not too much to exhibit a physiognomy of the most pleasing character. . . ."

"The one fact which proved disappointing was that there was no certain evidence of date. . . . An oval mark on the shoulder showed that a cartouche had been chiselled out. . . ."

The above photo comes from the 1899 publication of the British excavations, *The Temple of Mut* in Asher.

In 2013 the American Research Center in Egypt conducted a conservation-restoration field school on the royal statue. ARCE removed the old cement patches, and disassembled and cleaned the separate pieces. The parts were then reassembled, with the missing sections replaced with new fabrications made from artificial stone. The restored statue was placed on a new damp-coursed base which will prevent groundwater seepage and salt-induced decay—a growing problem in the Luxor area due to the rising water table.

An information panel provided by ARCE for visitors explains that the statue was originally made for Amenhotep III. The face and abdomen had been recarved twice after Amenhotep III's reign, first in the later New Kingdom (perhaps by Ramesses II or Merenptah), and then in the Third Intermediate Period, perhaps by the High Priest (and defacto ruler of Upper Egypt) Pinedjem in the 21st Dynasty.

While the statue provided the ARCE field school with the opportunity of crafting the nose, modern restoration practice is to give the statue an authentic appearance as much as possible, and it has since been removed.



THE EGYPTOLOGY LIBRARY OF PEGGY JOY

“Egypt has sat for her likeness longer than any other country. Nothing disturbs her composure. Financial ruin may stare her in the face, armies may come and go, but each year the Nile rises and all traces of disturbances are gone.”—Charles Dana Gibson, Sketches in Egypt, 1899.

It’s no surprise that Charles Gibson chose to populate his sketch of Sekhmet statues at the Temple of Mut with two fashionable women. This was, after all, the artist who had created the vision of American beauty—the “Gibson Girl”.

This scene was sketched on January 2, 1898 while Gibson enjoyed a Dahabiya cruise up and down the Nile. The Sekhmet statue in the foreground was unearthed by Margaret Benson (see opposite) in 1896. She described it as “Sekhet of Sheshanq I”. ARCE’s onsite information panel tells visitors that the statue

was originally one of the hundreds made by the 18th Dynasty’s Amenhotep III, “but a significant number of them were never inscribed for him and were later given hieroglyphic texts identifying other rulers. This one is named by Sheshonk I of the 22nd Dynasty, a time some 500 years after the statue had been first dedicated. In this way, Sheshonk partook of Mut’s care for the world.”

In a similar fashion to the royal statue opposite, this Sekhmet sculpture received attention from the 2013 ARCE conservation and restoration field school. The statue (which had originally been consolidated from fragments) was falling apart, so the separate pieces were cleaned and reconstructed. Old cement patches were removed and missing parts replaced with modern artificial stone.

here, as were parts of the Ay and Horemheb memorial temple, just north of Medinet Habu, and other monuments belonging to the 19th Dynasty’s Seti I and Ramesses II.

In fact, it appears that Ramesses III’s 20th-Dynasty Khonsu temple was built upon an earlier Khonsu Temple that was begun in the 18th Dynasty, perhaps by Thutmose III, before being dismantled some 250 years later and used in the new temple’s foundation and flooring.

When Ramesses III ran out of stone from the original monument—which was much smaller than his new temple—he then quarried additional monuments to build up the upper walls and roof areas.

Judging from the remnants that have been found, it

appears that Ramesses III’s new Khonsu temple is an enlarged version of the original one on the same site.

But that’s not all. Mixed in with the reused material from the 18th-Dynasty temple and later additions were limestone blocks that seem to be from an even earlier (possibly Middle Kingdom) complex that were reused in the 18th-Dynasty temple. This represents an entirely new chapter in the history of the Karnak Temple complex.

Temple of Mut

On top of ARCE’s own conservation and excavation projects throughout Egypt, with decades of local experience and established relationships, ARCE provides logistical



© ARCE

One of the important projects ARCE is supporting is at the Luxor Temple Blockyard. The upper walls of the Temple's Colonnade Hall are mostly missing—quarried away in the medieval period when stone was needed for house, church, or mosque construction. With such a convenient quarry of cut stone, we are fortunate that more of the temple hasn't similarly disappeared over the centuries.

Excavations in the 1950s and '60s, which revealed the southern end of the sphinx-lined processional avenue linking Luxor and Karnak temples, also exposed hundreds of buried reused block fragments used as stone foundations. Excavators stacked the decorated blocks in dozens of rows on the ground around the temple for future study.

The next level of care began in 1999 when raised platforms were created (see above) to lift the sandstone fragments off the ground and away from groundwater and

salts which are particularly damaging to this type of stone.

Today, under the direction of Ray Johnson of Chicago House—the Egypt headquarters for the University of Chicago's Oriental Institute—a team is creating a database of blocks and fragments in the blockyard from the time of Ptolemy I. Next in line are the rows of blocks dating to the reigns of Amenhotep III and Amenhotep IV/Akhenaten.

In time, Chicago House aims to create a complete digital documentation of all 50,000+ inscribed pieces in the Luxor Temple blockyard. Following the massive job of documentation and conservation treatment, the plan is to restore as many blocks as possible back into their original positions.

The above photo shows local team members preparing blocks for photography. Pictured (from left to right), are Saoud, Sayid, Mohamed, Chicago House architect Jay Heidel and head conservator Hiroko Kariya.



Zahi Hawass supervising the transportation of Tutankhamun's mummy from his sarcophagus in the tomb's burial chamber, to a climate-controlled glass display case in the antechamber. The move, designed to help preserve the fragile mummy, was made on November 4, 2007: the 85th anniversary of Howard Carter's discovery of the young king's tomb.

Up until this point, Hawass estimated that only 60 people had seen the king's remains firsthand—most recently in 2005 when his body was brought out from the tomb to be CT-scanned. These were the scans that revealed the young king likely died from a severe infection following a thigh fracture—and put to bed the more melodramatic theories surrounding Tutankhamun's demise, such as a hippopotamus attack or an assassin's blow to the head.

Part of Hawass' keynote lecture at the ARCE annual meeting in Tucson will address Nicholas Reeves' bold but insightful hypothesis regarding the tomb of Tutankhamun/Nefertiti. Hawass is head of the latest scanning project, and we are hoping that details will emerge from the most recent radar scans of the walls of Tutankhamun's tomb. In February, the Ministry of Antiquities quashed rumours of a 15-metre-void detected behind the burial chamber's west wall.

It's a busy time of year for the worldwide cult of Tutankhamun: the 4th International Tutankhamun Conference will be held at the Grand Egyptian Museum from 5–7 May in Cairo, and the latest Tutankhamun blockbuster exhibition—King Tut: Treasures of the Golden Pharaoh—is now showing to massive crowds at the California Science Center.

support to more than a dozen archaeological teams sponsored by U.S. universities.

Several missions are ongoing at the temple of the goddess Mut. Under the direction of Dr. Richard Fazzini and Mary McKercher, the Brooklyn Museum's expedition conducted a study season to document and repair the site's Sekhmet statues. It also built retaining walls and stairways around the Thutmoside Gateway—one of the earliest standing structures in the temple—to make the area accessible to visitors for the first time.

In previous seasons, ARCE field schools have rescued and repaired larger-than-life granodiorite seated statues of Amenhotep III and the goddess Sekhmet, first discovered over 120 years ago (see pages 10 and 11).

2018 Annual Meeting

The 2018 Annual Meeting of the American Research Center in Egypt is in Tucson, Arizona, April 20–22, 2018, at the Tucson University Park Hotel. This is one of the largest gatherings of Egyptologists and enthusiasts in the world, where scholars and expedition leaders present their latest discoveries and project updates.

The special keynote speaker at this year's meeting is Egypt's renowned and colourful former antiquities chief,

Dr. Zahi Hawass (see photo caption, above). Aside from the new theories on Tutankhamun's tomb, Hawass will also discuss the other “hot topics” in Egyptology today: his recent excavations in Luxor's Western Valley (where foundation deposits and radar scans appear to have led to the remains of an 18th-Dynasty high-status tomb (robbed but with remnants of burial equipment remaining), the Egyptian Mummy project (whose DNA testing we'll explore in the next article) and *that* void in the Great Pyramid at Giza.

The Opportunity

In 1950 the *American Journal of Archaeology* reported that an “announcement is hereby made that early in 1951 the American Research Center will open in Cairo, Egypt. . . . The fee for membership is five dollars. . . but larger amounts are welcome particularly at the present stage.”

Today, as then, support for Egypt's cultural heritage is—to put it mildly—“welcome”. To register for the 2018 Annual Meeting, or learn more about the difference your membership makes, visit the website: www.arce.org.

NILE Magazine thanks ARCE's new Director for Egypt, Dr. Louise Bertini, for information on some of ARCE's many excavation and conservation projects across Egypt. We look forward to reporting on more in the next issue.



PHOTOGRAPH © MUSEUM OF FINE ARTS, BOSTON

The 4th-Dynasty Giza tomb of Meresankh III features an unparalleled number of statues of women. Pictured in this 1927 excavation photo are the leftmost three of ten female statues that line an entire wall of Meresankh's tomb.

Since the tomb's discovery in the shadow of the Great Pyramid of Giza, built by Meresankh's grandfather, Khufu, the figures shown here have deteriorated greatly. Over the past 90 years much of the facial details have been lost. We

are thankful, therefore, for images such as this one to forever record the tomb as it was in 1927.

The Giza Project from Harvard University, however, can go back even further. Using digital recreations based on original photos, excavation notes and plans, they are able to present Meresankh III's tomb as it may have appeared when it was first built around 2550 B.C. Find out more from page 48 in this issue of *NILE Magazine*.

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ANSWERS

The Nile Quiz

1. Tombs is near the Third Cataract—not far from the Kushite capital of Kerma.
2. Ahmose's older brother is thought to be Kamose.
3. The "White Chapel" was built for the 12th Dynasty's Senusert I.
4. The tomb of Meresankh III was discovered on the last day of the excavation season. Reisner wrote in his diary: "I had fixed April 23 [1927] as the final pay-day. In the morning of that day, the men uncovered the entrance to the rock-cut chambers of Meresankh III."
5. Nefertiti's bust officially debuted in Berlin in 1924. It was revealed a year earlier in a scholarly publication by the German Egyptologist Ludwig Borchardt, *Porträt der Königin Nofretete*, before being revealed publicly in the British press the same year.
6. Predynastic King Sekhen (ca. 3150 B.C.) first placed the Horus falcon on top of his royal serekh.
7. Pope Leo XII was delighted that Jean-François Champollion dated the Dendera Zodiac to Roman Egypt. Some contemporary scholars believed it was up to 15,000 years old, which undermined the Church's stance that the world was only 6,000 years old.
8. The 18th Dynasty's founding pharaoh, Ahmose I, is credited with being buried with the first shabt, around 1525 B.C. While it's likely he arrived in the afterlife with many little servants, only one survives—today in the British Museum (EA 32191).
9. In 1895, British woman, Margaret Benson, was the first female to be granted permission to lead her own excavation in Egypt. Benson led three highly-successful seasons at the Temple of Mut at Karnak between 1895 and 1897.
10. Khonsu Temple was begun by 20th-Dynasty kings Ramesses III and IV. Later, the front pylons, great court and hypostyle hall were added by Ramesses XI and "King" Herhor.

TOMBOS

A NEW SOCIETY ON THE EGYPTIAN FRONTIER



PHOTO: STUART TYSON SMITH

In 2016 the Tombos Project discovered the intact New Kingdom shaft tomb of an elderly woman named Weret. To ensure that her heart would not betray her during the Netherworld's final judgment (and reveal any less-than-pure activity from her life), Weret was buried with an expensive artefact: a heart scarab. This example was unusual, however, as it came with a human head.

Located on the southern frontier of the ancient Egyptian empire, a New Kingdom-era cemetery provides valuable new insights into the region's funeral customs.

Recent discoveries at Tombos in northern Sudan may change the way we think about the relationship and interactions between ancient Egypt and its Nubian neighbours.

The Tombos Project is also finding evidence of the long history of entanglement that began in the New Kingdom and led to the largest empire ancient Egypt had ever known.

Jeff Burzacott



JACQUES DESCLOITRES, NASA, MODIS LAND RAPID RESPONSE TEAM



“He has overthrown the chief of the Kushites”
(Tombos Stela, reign of Thutmose I, ca. 1502 B.C.)

IT MAY HAVE BEEN with a fair degree of trepidation that the native inhabitants of Tombos watched the Egyptian colonists arrive. And with good reason. The Egyptians had been here before, and it had often not ended well. Around 50 years earlier, the New Kingdom’s Thutmose I (ca. 1504–1492 B.C.) had a commemorative stela inscribed into a large boulder on the bank of the Nile. Today known as the Tombos Stela, it records his brutal slaying of the Kushite leadership and the capture of their people. In the text, Thutmose I proclaims Egypt’s supremacy over Nubia and calls on his successors to preserve the boundary.

Now, five decades later, the Egyptian troops were back at Tombos—no doubt sensing a great deal of mistrust from the locals as they moved through the streets. The colonists, also, may have felt a little uneasy—they were a long way from home. From the Egyptians’ point of view, the Third Cataract was the frontier land—the effective border of physical control. No Egyptian settlements have ever been found beyond the Fourth Cataract further south.

The Egyptians were there to control the lucrative trade traffic along the Nile, and, no doubt as a show of force to the rulers at Kerma, just a few kilometres to the south, at the 3rd Cataract of the Nile. Kerma was the capital of the Kushite Kingdom, and had thrived for millennia. In its heyday, the kingdom’s territory extended all the way from the 1st to the 5th Cataracts.

Since the Old Kingdom, however, the Egyptians had placed great importance on Nubia and its trade routes—and had experienced a long, rocky relationship. The conquest of Nubia was a crowning achievement for the early 12th-Dynasty pharaoh Amenemhat I and his son, Senusret I. Their Middle Kingdom successors built forts along the Nile to protect the waterway from nomadic tribes and to facilitate the flow of Nubian goods into Egypt. As American Egyptologist George Reisner once noted, “the southern products, the ebony, the ivory, the pelts, the incense and resin, the ostrich feathers, the black slaves, were as much desired by the kings of the Middle Kingdom as by their forebears” (*Bulletin of the Museum of Fine Arts*, 1929).

And this is the well-worn tale of Nubian-Egyptian relations. Mysterious Nubia, with overtones of “dark Africa”, served to supply a hungry Egyptian state with exotic treasures and all the gold needed to run the empire. When Nubian resentment over military trespass or forced servitude inevitably grew into revolt, violent subjugation was the pharaonic order of the day.

It certainly fits with the ancient Egyptian narrative; every good pharaoh was duty-bound to exercise more control over territory and resources—by force if need be. In this regard, it helped to portray the unfortunate inhabitants of foreign lands as vividly un-Egyptian, and therefore, wretched; classic “them and us”.

Dr. Stuart Tyson Smith, anthropology professor at the University of California, Santa Barbara, calls it “cultural chauvinism”—government-sanctioned prejudice.

There was more to it than just military conquest,



A colourful “smiting of the enemies” from Abu Simbel, as interpreted by Italian painter Giuseppe Angelelli in 1832.

Many temples are decorated with bold images of the “smiting scene”, showing the mighty pharaoh standing over the traditional enemies of Egypt, who kneel in submission at his feet. The pharaoh clutches the enemies’ hair, poised to strike down with a mace.

Scenes like this were designed to symbolically defeat Egypt’s enemies who threaten the cosmic order of *ma’at*. The foreigners embody *isfet*, the chaotic disorder that threatens to unravel creation.

By carving this action into stone, the king was forever proclaiming that he had delivered his obligation to the Egyptian people and the gods.

however. As Dr. Smith told *NILE Magazine*, “these negative ethnic stereotypes had an ideological function as the symbolic forces of *isfet* [chaos] that the king defeated/tamed in order to establish *ma’at* [the eternal order of things]. Egyptian temples are decorated with great scenes of pharaoh pounding in the heads of cowering foreigners—including Nubians (see above).

Yet at the same time that Ramesses was vividly establishing *ma’at* on the walls of Abu Simbel, further south at Tombos, in the borderlands of Egypt and Nubia, the locals and the Egyptian colonists were quietly getting on with the job of getting along.

THE TOMBOS PROJECT

Stuart Tyson Smith and Dr. Michele Buzon, a professor of anthropology at Purdue University, Indiana, have been excavating at Tombos since 2000, investigating the cemetery used by the elite and middle-class townfolk during the New Kingdom colonisation of Tombos.

Far from a picture of oppression, excavations are suggesting that when it came to designing the way in which

they would equip themselves for the afterlife, the inhabitants of Tombos enjoyed a powerful freedom: choice.

How you choose to appear as you face eternity says a lot about the hopes and values you hold, as well as the trappings you admire in life. At Tombos the researchers are finding that burial customs were very much a “mix’n’match” between traditional Nubian and new-style Egyptian. Stuart Tyson Smith explains that “you get this really interesting entangled culture blending different elements in really different ways, but also there seems to be a lot of individual choice involved. . . .”

A prime example is a tomb discovered in 2002. Inside the burial vault was a group of intact burials of men and women. The men were laid out in the extended (i.e. mummified) Egyptian fashion, while the women were flexed in traditional Nubian style and resting on beds. Included with one of the Nubian-style burials were amulets of the household dwarf god Bes.

It appears that the woman had sought to be buried in a traditional manner (or had that decision made for her by relatives who were asserting her Nubian heritage). At the



The foundations of Siamun's pyramid; one of ten in the elite Tombos cemetery.



A rectangular funerary "cone" belonging to the Tombos official, Siamun.

As soon as pyramids fell out of royal favour (at the start of the New Kingdom, around 1550 B.C.), wealthy nobles began to include mud brick pyramids as a part of their tombs. The practice quickly spread to Nubia as colonies were established, further and further south. The first pyramids at Tombos were built in the mid-18th Dynasty when the colony was founded, around the reign of Thutmose III.

In 2000 an expedition led by Stuart Tyson Smith uncovered the 3,500-year-old pyramid tomb and chapel of an Egyptian colonial administrator named Siamun, and his mother, "the Lady of the House", Weren.

Although the mudbrick superstructure has mostly disappeared, the pyramid once stood around ten-metres-high—equal to the largest private pyramids in Nubia. "Our tomb owners," Stuart Tyson Smith states, "were important players in colonial society."

Smith says that "Siamun's pyramid is particularly interesting with its Theban style T-shaped chapel and full complement of funerary cones, including rectangular ones [left]... for himself and his mother Weren.

"These are almost exclusively Theban, which really suggests our guy was sent to Nubia from Thebes."

Funerary cones were set into plaster in a decorative frieze over the entrance to the tomb. The text on Siamun's (left) and Weren's cones read:

Siamun	Weren
<p>"Osiris, Scribe and Reckoner of the Gold of Kush, Siamun"</p>	<p>"Osiris, mistress of the house, Weren"</p>

Both the size of his tomb and Siamun's titles reflect his importance in the Tombos bureaucracy. His title, "Reckoner of the Gold of Kush" meant that he was probably in charge of the collection of tribute from the rulers of the still-powerful city of Kerma, just a few kilometres to the south.

Private pyramids continued to be built through the end of the New Kingdom and into the Third Intermediate Period (at least one from the 25th Dynasty). Stuart Tyson Smith believes that it was these smaller, private pyramids that inspired the later Kushite slender-sided royal tombs, and not the Egyptian royal pyramids.

same time, she carried with her something with a distinctly Egyptian flavour: an amulet of the Egyptian household deity who scared away both evil spirits and physical dangers. Smith writes that “She was particularly fond of a rare dancing Bes amulet that had been broken in antiquity, yet was saved and included in her burial.”

Near the body of another Nubian woman was a faience scarab carrying the name of Amenhotep III (ca. 1350 B.C.), and a scaraboid plaque featuring a scarab beetle beneath a sun disk, probably representing the Egyptian god of the rising sun (and hence rebirth) Khepri. Smith’s conclusion was that “the care taken with her burial suggests she was not a slave, or even a servant, but rather a Nubian woman who had become a vital member of the colonial community through marriage with one of the colonists.”

The Nubian-style burials mixed in with Egyptian-style reveal a much closer connection between the two societies than was previously suspected.

SPOILT FOR CHOICE

As they expected for a colonial town, Smith and Buzon encountered fully Egyptian burials with canopic jars, wooden coffins, and bodies wrapped in Egyptian style. They have also found evidence of Egyptian funerary rituals, such as broken red pots. These represented *isfet* (chaos), and ritually smashing the pot or jar had the effect of expelling any evil spirits that might threaten the deceased.

Alternatively, the researchers also found contemporary Nubians buried in Nubian style with no Egyptian influence whatsoever.

What has surprised the Tombos Project team is the extraordinary variety of cultural influences within burials at Tombos. Stuart Tyson Smith explains that “it’s not just a matter of the two cultures mash up and then you get this new hybrid thing that’s consistent. There seems to be a lot of individual choice— whether or not you want a Nubian bed and/or an Egyptian coffin and/or to be wrapped like a mummy or whether or not you want an Egyptian-style amulet and/or Nubian ivory jewellery.”

They call it “cultural entanglement”: the process by which colonising powers and indigenous people influence one another and change over time.

It is here that we find that out on the frontier, far from pharaoh’s political and religious rhetoric, the Egyptians and the “wretched Kush” were getting on just fine.

(RIGHT) The timelines of the Egyptian and Nubian royal houses intersect at the 25th Dynasty, where the Nubian Kings, from Napata (between the 3rd and 4th Cataracts), ruled over Egypt as well.

Egyptian arrivals at Tombos appear to have largely stopped by the end of the New Kingdom, around 1070 B.C., and the area enters what has been referred to as a “Nubian Dark Age”, of which little has previously been known. Over the next 350 years the Napatan kings slowly grow in power and become a regional political and military force. Within a century they had pushed north and conquered Egypt, establishing the 25th Dynasty.

Perhaps its no surprise that the Napatan kings saw themselves as the true heirs to the Egyptian throne: they were, after all, probably part Egyptian.

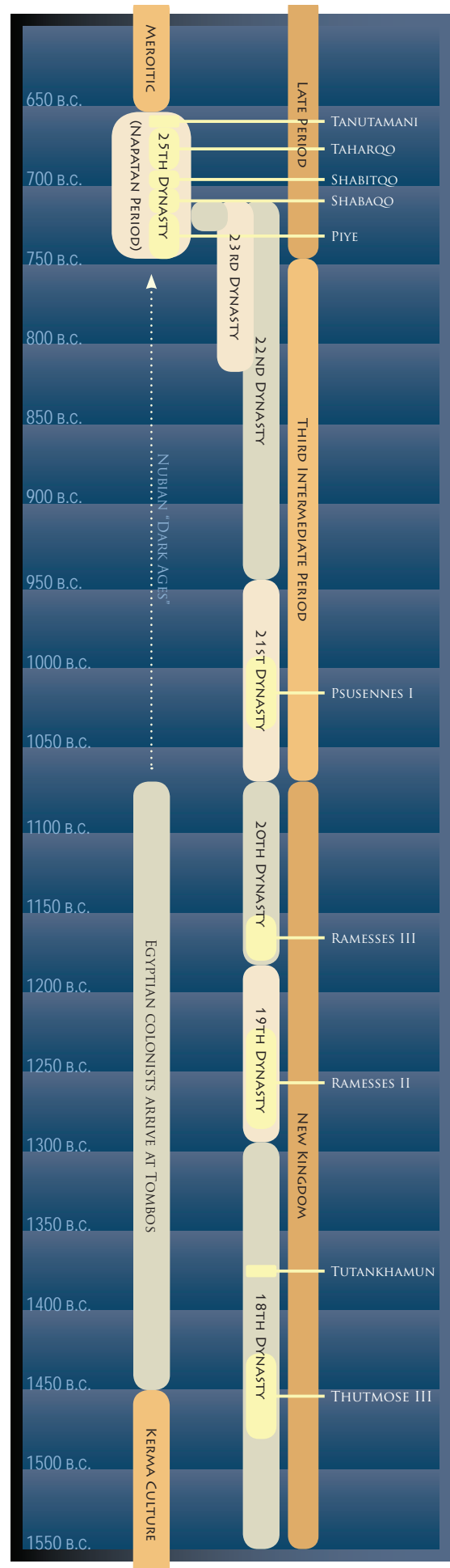




PHOTO: STUART TYSON SMITH

Discarded by thieves in their search for valuables, this ceramic canopic jar lid was discovered in January 2017 at the back of an 18th-Dynasty tomb chamber.

Each of the four canopic jar lids found in the tomb was decorated with human faces, as was the practice in the Middle and early New Kingdoms. The inscription on each vessel invoked the protection and blessing of one of the four Sons of Horus. From the 19th Dynasty canopic jar lids would take on their appearance.

While ceramic canopic jars could be produced more quickly and cheaply than the high-class alabaster versions,

Michele Buzon writes that “the appearance of canopic jars at all indicates the high status of the primary tomb owner in Tombos’ society.”

From the 21st Dynasty (ca. 1069 B.C.) the mummified organs were usually wrapped and put back inside the body cavity, although canopic jars, sometimes solid “dummy” jars, were still included in the burial equipment.

The “proper” use of canopic jars, as embraced by the New Kingdom Tombos settlement, was revived briefly during 25th Dynasty Nubian rule over Egypt. The Napatan kings, it seems, were sticklers for the “proper way” of doing things.

A CHANGE OF PLAN?

The successful integration between the locals and the newcomers may have had something to do with a new strategy on the part of the Egyptians. Previous forays into Nubia seem to be dominated by violence and suppression.

Examination of skeletal remains by Michele Buzon, however, has shown a far lesser degree of violence at Tombos compared to other colonial sites. The Egyptians were there to impose control, there is no doubt about that, but this time they may have arrived with a diplomatic, rather than purely military plan in mind.

Whether the relative peace at Tombos was by design or accident (i.e. the locals didn’t put up a fight), it appears the Egyptians ended up working *with* the local people, rather than *against* them.

For all the “cultural entanglement”, however, one thing the researchers haven’t seen at all, however, is Egyptians buried in Nubian style. It seems clear that the Egyptians arrived from a dominant political position, and quickly impressed on the local population their customs and religion. And the elite Tombos cemetery *would* have been impressive, with as many as ten large mud-brick pyramids built for the upper-class bureaucrats stationed there.

THE PYRAMIDS OF TOMBOS

In 2000 Stuart Tyson Smith led a mission to Tombos and discovered an impressive private pyramid that would have once stood around 10-metres-tall. Only the foundations or one or two courses of the pyramids remain today.

Thanks to the extremely rare occurrence of Theban-style funerary cones, which, prior to this discovery, were unheard of this far south into Nubia, we know who commissioned such an impressive tomb. The cones were inscribed with the names and titles of an Egyptian colonial administrator, “the Scribe and Reckoner of the Gold of Kush”, Siamun, and his mother, “the Mistress of the House”, Weren. The funerary cones and the Theban-style T-shaped chapel suggest that Siamun and Weren originally came from Thebes, and wished to enter the afterlife in the same manner as their countrymen back home.

Siamun’s titles tell us that he was an important official in the Nubian colonial administration. Smith suggests that he was “probably in charge of tribute coming from the former kingdom of Kush, still based at Kerma, a mere 10km to the south.” That such a high-ranking official was based at Tombos demonstrates the importance of the town as an administrative centre and hub to control the trade corridors.

PHOTO: MICHELE BUZON



January 2017 was an exciting time for discoveries at Tombos. Found within a mudbrick-lined burial shaft, likely dating to the Third Intermediate Period (ca. 1069–747 B.C.), was a woman buried in the Nubian flexed position on top of a large woven basket with a dog at her feet. This was the first animal burial directly associated with a person at Tombos.

The discovery follows one made a year earlier by Dr. Sarah Schrader who has been co-directing with Stuart Tyson Smith a project at the Kerma Period cemetery at Abu Fatima. This site is around 10 km north of the ancient city of Kerma.

In 2016 Dr. Schrader found an intentionally buried dog

with a leather collar, buried with a young adult male. Both individuals were placed on top of cowhide.

A Swiss team has spent more than 30 years excavating the Kerma capital itself and has found a number of dogs buried at the feet of individuals at the royal burial site.

Although no cause of death has yet been established for the Tombos canine, it would have been an unlikely coincidence for both the woman and the dog to have passed away naturally around the same time. The unfortunate pooch was more probably despatched to join its sentimental owner for companionship in the afterlife.

THE 25TH DYNASTY

George Reisner, Director of the Harvard University-Museum of Fine Arts Egyptian Expedition, believed that rather than a treasure-hunt for trinkets, the prime objective of excavating a site was “to untangle the series of human actions which have left their mark on the place.” In other words, to tell the story of the people who once lived there. In this fashion, the excavations at Tombos are providing intriguing evidence of the “back story” of the eventual rise of the Napatan kings of the 25th Dynasty.

The contemporary tale goes that during Ramesses III’s reign in Dynasty 20 (ca. 1184–1153 B.C.), Lower Egypt came under pressure from invasions of Libyans and the “Sea Peoples”, who had previously swept through—and devastated—the mighty Hittite empire. They now had their sights on Egypt. The forces throughout Nubia were recalled for more

pressing military action in the north, and soon towns like Tombos were set adrift to follow their own path. This part of Nubia’s story then went cold—for almost 500 years—

before an Egyptianized ruling class from Napata (modern Karima) near the 4th Cataract sailed into the heart of Thebes and claimed Egypt.

The Napatan kings—Egypt’s 25th Dynasty—are recognised as having sponsored a renaissance of Egyptian art and culture, and created a massive empire that stretched from the 6th Cataract to the Mediterranean Sea.

So where did these Napatan kings come from? It seems likely that local Nubians had married into the Egyptian colonial community, and the people at Tombos at the end of the New Kingdom

were the descendants of these Egyptian-Nubian families.


Preliminary evidence from three seasons of excavation indicates that a multicultural community—with kinship



Michele Buzon,
Purdue University, West Lafayette, Indiana
www.tombos.org



© THE TOMBOS PROJECT

The ancient name for Tombos may have been Taroy. Stuart Tyson Smith explains that the name Taroy was mentioned on a stela of the Viceroy of Kush, Merymose , who served under Amenhotep III. The stela was discovered at Semna, north of Tombos and is now in the British Museum.

The stela describes the campaign of Merymose against bands of rebellious Nubian militias. “Merymose talks about recruiting soldiers from the region between the fortresses of Baki (Kubban in Lower Nubia) and Taroy for a campaign against a place called Ibheth (perhaps near the Wadi Allaqi). The distance mentioned places Taroy at the Third Cataract and Tombos always seemed the most likely candidate, but the absence of a fortification created problems—until we found [a] massive fortified wall and ditch enclosure.”

Dr. Mohamed Faroug Ali (standing, above) of the University of California, Santa Barbara, has been excavating under the modern village at Tombos—the site of the ancient town. He has been following a large wall running parallel to a two-metre-deep trench, lined with mud brick walls and with a mud plaster floor. This was a massive construction, running east-west for around 100 meters.

In 2016, with the assistance of Musaab Awad Allah (Shendi Antiquities Office and University of Shendi), Mohamed uncovered a corner (above), where the trench and walls make a right angle turn to the south. Large deposits of ceramics suggest a date starting from the mid-to-late 18th Dynasty. Is this the enclosure wall and trench of the Egyptian fortification? Excavations continue.

on both sides of the border—continued to flourish at Tombos beyond the New Kingdom. In fact, the Tombos cemetery shows continued use well into the Napatan Period.

Strontium isotope analysis conducted by Buzon, which reveals where you are located when your teeth are forming, suggests that following the troops’ withdrawal, more of the cemetery’s tenants were born locally, however elements of Egyptian cultural practices continued.

Rather than having been “set adrift”, it’s more likely that the Nubian/Egyptian population of Tombos continued to forge a new society that shared elements of both cultures. Indeed, images of the 25th-Dynasty Napatan pharaohs, carved during their Egyptian takeover, feature a synthesis of Nubian and Egyptian features. Reliefs show a distinctly Nubian face beneath the Kushite cap that re-

places the white crown, and two royal cobras on the king’s brow instead of the usual single uraeus.

Stuart Tyson Smith proudly sums their work at Tombos as “documenting how Egyptians and Nubians, living and buried together side by side, forged a new society that transformed Nubian culture and may have contributed to the rise of one of the greatest and longest enduring kingdoms in African history.”

Previous narratives relegated the role of the Nubians to that of the oppressed and exploited. The discoveries and interpretations being made by the Tombos Project, however, are having an unexpected side effect upon the attitude of the modern local Sudanese towards their cultural heritage. They look back at their ancestors who thrived with and without Egyptian occupation with a new sense of pride.



© CHRISTOPHER MICHEL

Dr. Stuart Tyson Smith,
University of California, Santa Barbara
www.tombos.org

AHMOSE: "LET MY PEOPLE GO."



Around 1550 B.C. a Theban prince was born in the midst of battle. This was, no less, a battle for Egypt itself.

The prince's name was Ahmose, and history remembers him for driving out the hated Hyksos occupiers from the north, reunifying the Two Lands, and installing himself on the ancestral throne. Considered a seminal moment in the history of Egypt, this reunifica-

tion marks a watershed for a renaissance in the arts, economy and military might of Egypt. Ahmose's victory heralds the golden 18th Dynasty. It begins with the long-awaited victory over the Hyksos, which echoes a Biblical narrative, but in reverse.

SHARON HAGUE

THE 18TH DYNASTY

Ahmosé was able to finish what his father, Tao, had begun, and his triumph over the hated Hyksos occupiers heralded the golden 18th Dynasty, with its long list of illustrious names.

Hatshepsut and Thutmose III rank alongside Amenhotep III, Akhenaten and Tutankhamun, placing this dynasty head and shoulders above any other in the popularity stakes today.



SEVENTEENTH DYNASTY—THE FIRST ATTEMPT

Ahmosé did not spring full-born from Thebes to take the throne. Rather, he was the last hope of his family to push back the Hyksos. His predecessors, including his father Tao II, and brother Kamose, fought and lost their battles with the enemy. It was a long road to freedom.

The Hyksos—from the Egyptian *heqa khasut* (𓆎𓅓𓏏𓏏, “ruler[s] of foreign lands”)—were Asiatics, probably originating from the area of the Levant. Throughout the Middle Kingdom, they had peacefully flowed in and settled into what must have seemed like a paradise: the lush, eastern Delta region. Over time they formed semi-independent communities, slowly broadening their influence and control further south. Eventually, even the great city of Memphis became part of Hyksos territory.

For a century, starting around 1650 B.C., these foreign kings ruled northern Egypt from the eastern Delta town of Avaris, known to them as *hut-waret*, and today as Tell el-Dab’a. Their names make up Egypt’s 15th and 16th Dynasties. Further south, the centre of power for Upper Egypt continued at Thebes, as it had during the Middle Kingdom.

The noble family of which Tao belonged had become a dynasty (the 17th) and considered itself to be the true heirs of Egypt’s great past. While they may have initially served the Hyksos as vassals, the 17th-Dynasty rulers grew in confidence and purpose, expanding their territory north until they challenged the foreign occupiers.

The civil war started innocently enough—with bellowing hippopotami. Discord between north and south was

first documented in a papyrus (British Museum EA 101085) dating from the reign of Merenptah (son and successor to Ramesses II), approximately 350 years after the war.

According to the papyrus (British Museum EA 101085), the 16th-Dynasty Hyksos ruler, Apepi, despatched a messenger to Theban King Tao II with a noise complaint. The inflammatory note informed Tao that the sound of the bellowing hippopotami in the Theban marshes was keeping Apepi awake at night, and (presumably) Tao needed to do something about it. A messenger informed him:

“It is King Apepi who sends to you saying: ‘Expel the hippopotami from the swamp that are in the eastern waters of the city, because they do not allow that sleep come to me, day or night, because their noise is in my ear!’”

Tao II was stunned:

“Then the sovereign of the southern city was surprised for a long moment, being unable to respond to the messenger of King Apepi.”

He must have known the message was code for war; the hippopotami lived 500 kilometres away from Apepi! The papyrus ends with Tao summoning his council, presumably to plan Egypt’s liberation.

But for Tao II, there was to be no victory with an enemy which had already conquered Egypt from the Levant with superior weapons, including the chariot. Today the king’s mutilated corpse lies in the mummy room of the Egyptian

THE 18TH DYNASTY

Once it was over, however, the kings of the next dynasty—the 19th—looked back with a dim view of over a third of their 18th-Dynasty forebears. It was time to rewrite history. The

offensive Amarna-era kings were excluded from official king lists (such as the one on the Second Pylon at the Ramesseum, below), as was Queen Hatshepsut's illegitimate reign.



THUTMOSE IV

AMENHOTEP III

AKHENATEN

SMENKHKARE

TUTANKHAMUN

AY

HOREMHEB

Museum in Cairo—a grim testament to that time. Covered in axe wounds, hands raised as if to ward off blows, it is a sobering reminder of human conflict. While there is debate about how Tao II died—whether in battle or by execution—there is no doubt Hyksos axe marks cover the body and are a sign that Tao's confrontation with Apepi did not go the way he planned.

THE SECOND ATTEMPT

Following in his father's footsteps, Ahmose's older brother, Kamose, attempted to oust the enemy, and succeeded in making inroads to their cities and plundering their ships.

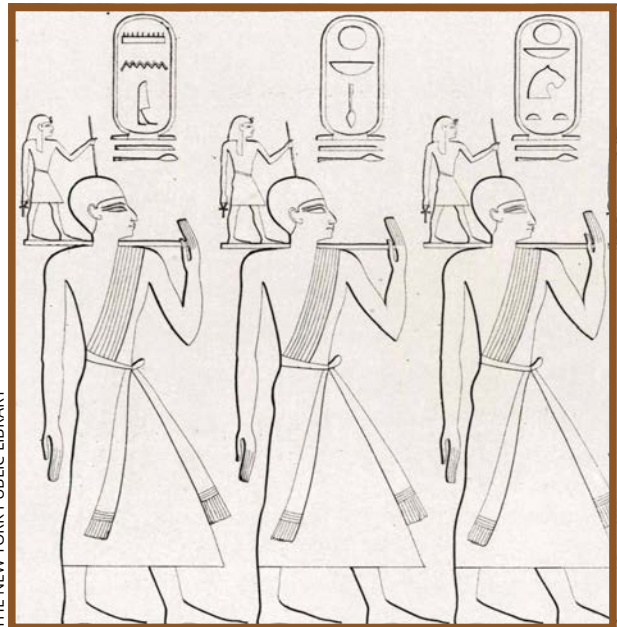
Kamose erected two stelae at Karnak Temple detailing his ongoing fight against the Hyksos. Here we learn that the devious Hyksos king had offered an alliance with Nubia to simultaneously invade Egypt from both the north and south:

"Come north! Do not hold back. . . There is none who will stand up to you in Egypt. See, I will not give him a way out until you arrive Then we shall divide the towns of Egypt."

At grave danger of being hemmed in and overpowered, Kamose launched a successful attack on the Nubians and thoroughly ruined Apepi's joint strike plans:



"Does your heart fail, O you vile Asiatic?"



The decoration of the Second Pylon at the Ramesseum features a procession of statues of past pharaohs, held aloft by priests. Assembled together (above) are the revered founders of Egypt's three great eras (from left to right), Meni (Old Kingdom), Mentuhotep II (Middle Kingdom), and Ahmose I (New Kingdom).

This drawing was made around 1845 by German artist Otto Georgi on the Prussian expedition to Egypt and Nubia under Richard Lepsius.



© RAMÓN VERDAGUER—CHRISTIANE MAQUET (SOLOEGIPTO)

The tomb of Ahmose I still waits to be discovered, although it is thought to have been cut into the Dra Abu el-Naga hill, just north of the bay of cliffs at Deir el-Bahari at Thebes.

At Abydos however, Ahmose built the last known royal pyramid in Egypt (above), originally some 50-metres-tall. The pyramid appears to be solid, without any internal

chambers and was probably a cenotaph—forever connecting the king with the area revered as a cult centre of Osiris.

With no internal rooms or corridors requiring solid structure, the core of the pyramid was composed of loose stone and sand. When the limestone casing was robbed, the pyramid crumbled into a low, 10-metre-high mound.

At this point, we encounter an escalating problem in the tale of hippos and evil foreigners like the Asiatics and Nubians. After all, the evidence of Hyksos duplicity and provocation is from the Egyptian version of events. It appears that not all Egyptians fared badly under Hyksos rule: one of Kamose's Karnak stelae records the king's council advising him that *"we are doing alright in our part of Egypt. Their free land is cultivated for us, and our cattle graze in the delta grasslands, while corn is sent for our pigs. Our cattle have not been seized."*

It does, however, give rise to questions: Did, in fact, Apepi issue his complaint to the south? Was he really planning to take over Egypt together with Nubia which was already under attack from Theban Egyptians? Or did the Theban princes simply concoct an excuse to invade the Delta and take over the country? These questions will be answered if and when more evidence is discovered, or existing artefacts and texts are reinterpreted.

What we do know is Kamose did not defeat the Hyksos, and his younger brother Ahmose took his place. What cannot be refuted is that civil war took place, the Hyksos were eventually ousted by Ahmose and Egypt became a unified country.

THE THIRD ATTEMPT

It would have been a mistake on the part of the Hyksos to underestimate the tenacity of the Theban princes to rule both Upper and Lower Egypt. Ahmose's own war against these "rulers of foreign lands" lasted ten years—the entire time it took the Greeks to lay siege to Troy, three centuries

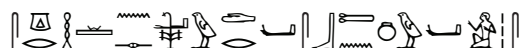


SHABTI OF AHMOSE. BRITISH MUSEUM. EA 32191 © THE TRUSTEES OF THE BRITISH MUSEUM

Ahmose I's cream-coloured limestone shabti is full of personality, and is also the oldest known royal example. It was acquired by the British Museum in 1899 and probably came from his missing Theban tomb.

It may be that the implements of afterlife servitude—hoes—were intended to be painted on the statue's shoulders, although there is no trace of paint today.

later! While Ahmose fought, his mother Ahhotep, who acted as co-regent in the early part of his reign, continued to hold the reins of power. In gratitude, Ahmose dedicated to her a stela in Karnak Temple, where he praised Queen Ahhotep for her role in winning the war of liberation against the Hyksos:



“She has pacified Upper Egypt, and subdued its rebels...”

Much of what we know originates from the account of the king’s namesake, Ahmose son of Abana (who used his mother’s name to differentiate himself from his king). This Ahmose was a naval commander whose exploits spanned the successive reigns of Ahmose, Amenhotep I and Thutmose I, and was a highly decorated hero of his day. Part of the passage of his account reads, *“When the town of Avaris was besieged I fought bravely on foot in his majesty’s presence.”* His account of one skirmish with the Hyksos continues with a graphic description of battlefield accounting:



“I made a seizure and carried off a hand.”

So, a lot of slaughter. As an interesting sidebar, Ahmose’s mummy shows signs of arthritis. Since he did not die of advanced old age, one can surmise that he may not have been as active in battle as one might think. Certainly, he would have been present to direct the battle and to encourage his troops, although he may not have engaged in hand-to-hand combat.

Ahmose was also motivated enough to expand Egypt’s borders. Not only did the southern Thebans expel the Hyksos, but they also invaded Nubia which held rich resources for the young dynasty. Egypt’s royal family was now poised for a phenomenal stage in its history.

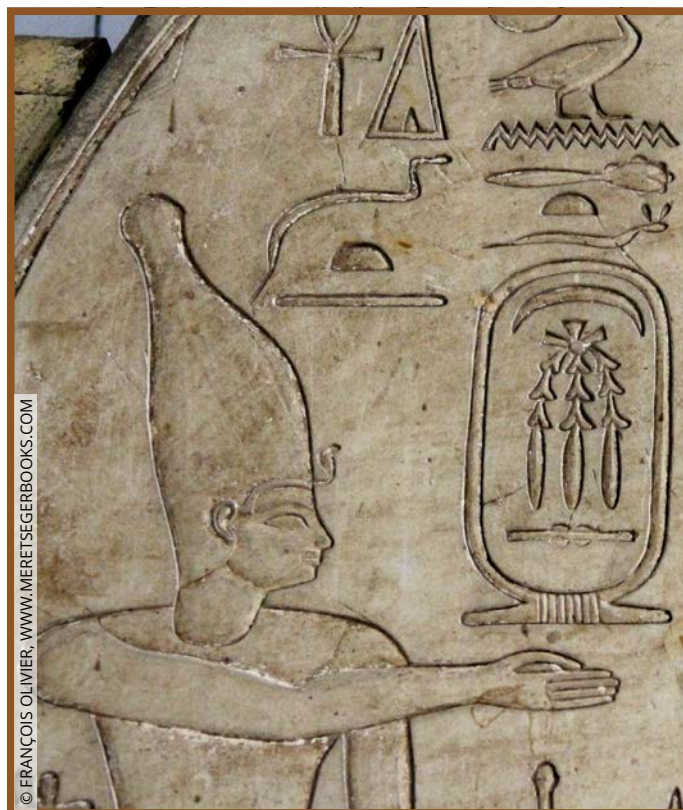
THE RISE OF THE 18TH DYNASTY

If Ahmose reunified Egypt, the Thutmosides expanded its borders. Thutmose III, popularly known as Egypt’s greatest warrior pharaoh, pushed his armies to the Euphrates. Booty flooded into Egypt and much of it into temple coffers. Amun’s priests at Karnak enjoyed gold, land and influence on an unprecedented scale.

More than one historian has noted that the oppressed Egyptians (if in fact they were under Hyksos reign), themselves became oppressors of foreign lands. We do not know if or when the Exodus occurred, but some have placed it in the 18th Dynasty when pharaohs waxed mightily and back-breaking building projects dotted Egypt.

At the same time as the great temple of Amun was receiving unprecedented levels of support from tribute and war booty, there was a slow shift towards the sun. While the sun disk creator god, Aten, may have gained prominence in Akhenaten’s time, solar devotion was rekindled in earnest some 50 years earlier when Thutmose IV erected his “Dream Stela” between the paws of the Great Sphinx. Thutmose saw in the Sphinx a powerful solar icon with the power to grant a divine mandate to rule.

As the 18th Dynasty progressed, Egypt reached its zenith as a political power. Amenhotep III—often dubbed “the Magnificent”—was as wealthy as Solomon and in charge



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Around 600 metres from his Abydos pyramid, Ahmose erected a pyramid shrine to his grandmother, Queen Tetisheri. Inside was a large stela (details above and below) featuring Tetisheri wearing the queen’s vulture headdress and her grandson presenting her with offerings. The text below the lunette describes how Ahmose planned to build for his grandmother a pyramid and temple near his. Ahmose clearly felt that this was an extra special effort:



“Never did earlier kings do the like of it for their mothers.”



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METROPOLITAN MUSEUM OF ART. GIFT OF NANETTE R. KELEKIAN, IN MEMORY OF BEATRICE AND CHARLES DIKRAN KELEKIAN, 2006 ACC. NO. 2006.270

The inscription on the back of this limestone head (left) identifies it as one of only a handful of assignable portraits of Ahmose I.

According to the Metropolitan Museum of Art, where the head now resides, “the ancient Egyptians regarded Mentuhotep II of Dynasty 11 and Ahmose I of Dynasty 18 as two of their greatest kings. Five centuries apart, each was responsible for reuniting Egypt after a period of disunity, Mentuhotep ushering in the Middle Kingdom and Ahmose the New Kingdom.

The broad, relatively flat face and taut, smiling mouth seem to have been influenced by images of Mentuhotep II (below) whose statues would have still been prominent at Thebes in Ahmose’s time. It is no wonder that Ahmose chose to emulate his illustrious predecessor.”



of an empire which did not require war on the Thutmoseid scale. Amenhotep boasted a huge harem which was the result of alliances with important international rulers. Powerful enough to refuse his daughters to foreign kings lest they gain a foothold on the Egyptian throne, he nevertheless stocked his palace with women from every nation. Amenhotep III’s eyes, however, were fixed on eternity.

PHARAOHS OF THE SUN

Egyptian pharaohs had always straddled a line between man and god; a human ruler infused with an unending cycle of divine kingship. During his first Jubilee Festival, Amenhotep III took a leap way beyond that line and became a god on earth, identifying himself with the sun. The king would use the epithet, “Dazzling Sun Disk”.

While Amenhotep III did not broach open criticism from the clergy, his less diplomatic son Amenhotep IV/ Akhenaten did so, abandoning Thebes, which was associated with Amun, for a new city called Akhet-Aten (“the horizon of Aten”) downstream. Egypt’s ruler—usually a bastion of tradition—had changed the game.

Akhenaten suddenly disrupted the cosy career paths of scores of priests from Karnak and other centres. While many of them followed Akhenaten to his shining new city, a lot of the old roles were now redundant. There was, after all, no need for a High Priest at Akhet-Aten. Akhenaten and Nefertiti had reinvented themselves as the first male-female pair of creator deities, given life by the Aten at the beginning of time. The king didn’t need a High Priest to tend to the cult statues of the gods on his behalf—this king *was* a god—and the dazzling Aten certainly didn’t need a statue to be given form.

Although Akhenaten was now truly a living god, he wasn’t immune to criticism, and one of the Boundary Stelae carved into the Amarna cliffs to define the limits of the new city hints at a rift between the king and the priesthood.

Written in Akhenaten’s fifth year, the stela references offending words that were “worse than the things which I heard in regnal year four,” or any earlier year of his reign. The stela also says it was worse than anything heard by his predecessors, “[and] it was] worse [than] those heard by any kings who had (ever) assumed the White Crown”.

Pharaoh Ahmose I's mummy was discovered in 1881 within the Deir el-Bahari Royal Cache, located in the hills directly south the funerary temple of Queen Hatshepsut.

Ahmose had evidently been moved from his original (undiscovered) burial place, stripped of valuables, re-wrapped and placed within the cache during the reign of the 21st-Dynasty priest-king Pinedjem II, whose name also appeared on the bandages.

Margaret Bunson, in her Encyclopedia of Ancient Egypt, described Ahmose's mummy as "of medium height, somewhat thin, with a firm chin and good teeth."

The king's mummy now rests in Cairo's Egyptian Museum. A little sign next to the body reads in part: "It is interesting to note that this great warrior king was, to judge from his mummy, delicately built, and apparently suffered from arthritis, suggesting that he relied on skill and strategy rather than brute force."

In her book, *The Story of Egypt*, Joann Fletcher explains that "his curly hair was thickly coated in the same 'abundant layer' of conifer resin that had been applied to his body, a contemporary medical text even specifying 'the umbrella pine of Byblos'. The use of this deluxe preservative made a permanent statement that Egypt was once more in control of the regions that produced such a substance, with the king literally immersed in the essence of lands he now controlled."



THE MUMMY OF AHMOSE I, FROM "THE ROYAL MUMMIES" BY G. ELLIOT SMITH, 1912. COURTESY THE EGYPTOLOGY LIBRARY OF PEGGY JOY

With so many people's lives and livelihoods affected by the king's strange new fervour, it's not surprising that the king was getting some "heat". While their priestly power wasn't anywhere close to being strong enough to block Akhenaten's brief revolution (or prevent his agents raising their chisels against Amun's image up and down the Nile), we can safely assume they were a guiding hand in the return to orthodoxy.

Egyptian religion was exclusionary at the best of times; the smoky sanctuaries of the traditional temples were restricted to the king and priestly elite only. Gouges on exterior walls and outer courts of temples attest to generations of pilgrims—having been denied access to the sacred interior—resorting to scraping away little bits of temple stone to be mixed with water and drunk in healing and blessing rituals.

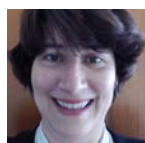
Akhenaten took exclusivity to a whole new level when he devised a theology that was almost as remote to the clergy as it was to the general public. Thus, when the reformationist king died, the rush back to the comfort of Thebes under Tutankhamun was no doubt encouraged by

the priests of Amun whose river of royal donations was again flowing.

CONCLUSION

When Ahmose ascended the throne of the Two Lands, it was the fruition of a dream held by his grandfather, father and older brother. Even the women of his family played dynamic roles in the eviction of the Hyksos. Amun was pushed to the forefront of the Egyptian pantheon of gods—only to be targeted for persecution some two centuries later.

In fact, the whole dramatic 18th Dynasty, with its sun kings, warrior rulers and female pharaoh, can be traced to the patriotic moment, when Ahmose, in a story with Biblical echoes, stood up to the Hyksos and boldly ordered King Apepi to let his people go.



SHARON HAGUE is a British lawyer who resides in New Zealand. She holds a Certificate of Egyptology from the University of Manchester and enjoys frequent visits to Egypt.

Arāb Trānslātōrṣ ōf Egypt's Hīerōglyphṣ

Tom Verde

On September 27, 1822, 31-year-old Egyptologist and philologist Jean-François Champollion stood before the members of Paris' *Académie des Inscriptions et Belles-Lettres* and proclaimed that “after ten years of intensive research... we can finally read the ancient monuments.”

I HAVE... A FIRM BASIS ON WHICH TO ASSIGN a grammar and a dictionary for these inscriptions used on a large number of monuments and whose interpretation will shed so much light on the history of Egypt,” Champollion informed his astonished audience.

Among those seated was Champollion's chief rival and former collaborator, English physician and polymath Thomas Young. Since parting company in 1815, Young and Champollion had engaged in a contentious race to unlock the tantalizing secrets of the hieroglyphs.

Yet the two linguists were competing in a race that had already been run by medieval Arab scholars and scientists. While Champollion's discoveries were groundbreaking at the Académie, previous European scholars were familiar with a 10th-century Arabic work attributed to Ibn Wahshiyya al-Nabati, an alchemist and historian from what is now Iraq. In his study titled *Kitab Shauq al-Mustaham fi Ma'irfat Rumuz al-Aqlam* (*Ancient Alphabets and Hieroglyphic Characters Explained*), Ibn Wahshiyya exhorted, “Learn then, O reader! The secrets, mysteries and treasures of the hieroglyphics, not to be found and not to be discovered anywhere else... now lo! These treasures are laid open for thy enjoyment.”

Egyptologist Okasha El-Daly of the Institute of Archaeology at University College London (UCL) points out that Joseph Hammer, an Austrian scholar who, in 1806,

translated Ibn Wahshiyya into English and published his work in London, mentioned in his introduction that French savants “were aware of the existence of Arabic manuscripts on the subject of decipherment.” Champollion's own teacher, Baron Silvestre de Sacy, was a famed professor of Arabic who produced several Arabic grammars and was among the earliest French scholars to attempt to translate the hieroglyphs.

While Ibn Wahshiyya's work was familiar to de Sacy, who reprinted an edition in 1810, it is uncertain if its contents were known to his famous student. However, as El-Daly points out: “In his own letters to his brother, Champollion complained about the pain of having to learn Arabic so he must have thought it was of value in his research.”

Though pharaonic Egypt is one of history's most enduringly popular periods among scholars, study of medieval Arabic texts concerning what we now call “Egyptology”—including the hieroglyphs—remains sparse. This attracted El-Daly's curiosity. “I read at a very young school age an encyclopedic work known as *Khitat* of the medieval Egyptian author al-Maqrizi, who died in A.D. 1440, in which he displayed a great deal of interest and knowledge of ancient Egypt. Yet when I started my formal Egyptology studies at Cairo University in 1975, I didn't see any reference to medieval Arabic sources,” El-Daly says, “and I began to make my own inquiries.”

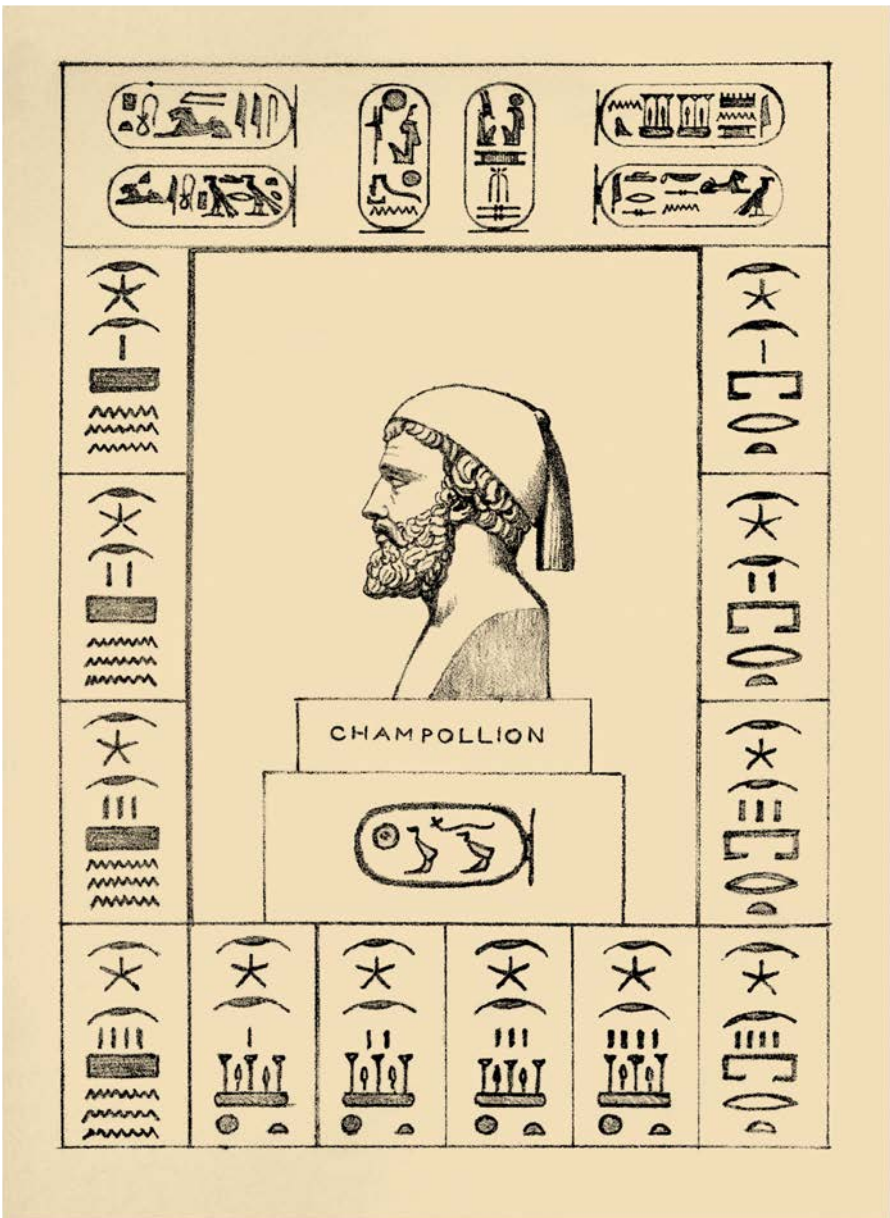
(FACING PAGE)

Dr. Okasha El-Daly: “I came across a letter written by Jean-François Champollion to his older brother Jacques-Joseph, saying that he had to learn Arabic, complaining about it: ‘I learnt Arabic to the point that it hurt my throat.’ He must have found it important to him.”

Medieval Arabic scholars took a keen interest in ancient Egypt. It may be that Champollion was looking for some

insight into their scientific studies of Egyptian hieroglyphs.

On the left is a page from an 18th-century copy of a 13th-century book on alchemy called the *Book of the Seven Climes*. The author has drawn inspiration from an ancient Egyptian stela belonging to the 12th Dynasty's Amenemhat II, erected over 3,000 years earlier. See page 37 for an explanation of the page's various elements.



THE EGYPTOLOGY LIBRARY OF PEGGY JOY

(LEFT) The frontispiece from the third volume of Christian Bunsen's "Egypt's Place in Universal History", published in 1848 and dedicated to Champollion.

Bunsen was a German philologist and diplomat, and had met Champollion some 20 years earlier (1826) in Rome.

Champollion had arrived there to copy the inscriptions on the city's obelisks and was given access to the exquisite Vatican collection of Egyptian antiquities. He had earlier been granted an audience with Pope Leo XII, who had told Champollion that he had delivered "a beautiful, great and good service to the Church".

The pontiff was particularly pleased that Champollion had been able to demonstrate that the famed Dendera Zodiac, which had arrived in Paris in 1821, was a product of Egypt's Roman Period.

Today the Zodiac is thought to have been commissioned around 50 B.C., but in Champollion's day, some scholars believed it was up to 15,000 years old, which undermined the Church's belief that the world was only 6,000 years old.

This illustration was made for Bunsen by Joseph Bonomi, an English artist who had recently returned from Richard Lepsius' Prussian expedition to Egypt. Bonomi was later appointed as curator of Sir John Soane's Museum—the home of Seti I's fabulous alabaster sarcophagus.

His pursuit of early Arabic texts on Egyptian history—in both public and private collections, over two decades and across several continents—culminated in his 2005 discourse, *Egyptology: The Missing Millennium: Ancient Egypt in Medieval Arabic Writings*, published by UCL Press.

El-Daly's research raises intriguing questions: Were 9th-century Western scholars indeed the first to unveil the "secrets" of the hieroglyphs, and to what extent were hieroglyphs already known to their medieval Arab counterparts?

The earliest hieroglyphs, dating to the end of the fourth millennium B.C., appear on pottery and ivory plaques from tombs. The last known inscriptions date from A.D. 394, at the Temple of Isis on the island of Philae in southern Egypt. "But the glory of hieroglyphs," observed the late Michael Rice, author of *Egypt's Legacy: The Archetypes of Western Civilization: 3000 to 30 B.C.*, evolved during the Old Kingdom (2686–2181 B.C.), achieving their highest level of development in the Middle Kingdom (2055–1650 B.C.). This was a monumental age when the walls of Egypt's

palaces, temples and tombs were awash in hieroglyphs rendered in the vibrant colours of the natural world: Nile blue, palm-frond green and the dusk-reddened sky of the western desert, where mummified pharaohs awaited their journeys into the afterlife.

"The beauty of the colouring of these intaglios no one can describe," observed Florence Nightingale on her visit to the richly decorated tomb of Seti I in 1850. "How anyone who has time and liberty, and has once begun the study of hieroglyphics, can leave it till he has made out every symbol ... I cannot conceive."




What Ibn Wahshiyya's classical predecessors did not grasp was that hieroglyphics are more than simple ideograms, that is, pictures representing concepts or ideas.

Historians and philosophers of the Classical Era were among the first to take up the challenge, including first-century B.C. historian Diodorus Siculus. According to Maurice Pope, author of *The Story of Decipherment: From Egyptian Hieroglyphic to Linear B*, Diodorus was among the first "to suggest the ideographic nature of the hieroglyphs." Diodorus's supposition that hieroglyphs do "not work by putting syllables together... but by drawing objects whose metaphorical meaning is

impressed in the memory” was also suggested four centuries later by Egyptian-born Roman philosopher Plotinus, who marvelled especially at the creativity and efficiency of Egyptian scribes:

[T]he wise men of Egypt... did not go through the whole business of letters, words, and sentences. Instead, in their sacred writings they drew signs, a separate sign for each idea, so as to express its whole meaning at once.

By this time, there were fewer and fewer native-born Egyptians who could read the hieroglyphs. As Egypt became increasingly Romanized after the fall of Cleopatra in the first century B.C., hieroglyphs were gradually replaced by the Greek alphabet.

Still, what Plotinus and his classical predecessors did not grasp was that hieroglyphs are more than simple ideograms, that is, pictures representing concepts or ideas, much as a circle with a red bar across a smouldering cigarette  indicates “No Smoking.” Rather, they build their meanings off three elements: logograms, representing words; phonograms, representing sounds or groups of sounds; and determinatives, marks or images placed at the end of a word to clarify its meaning.

The key to Champollion’s understanding was his knowledge of Coptic, which is the linguistic descendent of the spoken Egyptian of the pharaonic era. Coptic uses Greek letters together with a handful of colloquial, or demotic, characters. Associating spoken Coptic with the written hieroglyphic script gave him his missing link. This was how Champollion deciphered the now-famous Rosetta Stone, a fragment of a 2nd-century B.C. stela inscribed with a royal decree issued by Ptolemy V.

The inscribed decree was written in three scripts: hieroglyphs (suitable for a priestly decree), Demotic (the native Egyptian script used for daily purposes—and Coptic’s grammatical cousin) and ancient Greek. Champollion’s breakthrough came by comparing the hieroglyphic rendering of Ptolemy’s name on the Rosetta Stone with that of Cleopatra II (the wife and sister of Ptolemy VIII) from an obelisk that had been recently retrieved from Philae Temple. Champollion matched the common letters and realised that the hieroglyphs used to spell out their names were, in fact, phonetic.

Yet it was not long after Muslim expansion into Egypt in the 7th century that Muslim scholars began connecting many of these same dots. They also could not help but be intrigued by the hieroglyphs, and they speculated on their meanings. By inference, the first known Muslim scholar to pry into their mysteries was the late 8th- to early 9th-century alchemist Jabir ibn Hayyan. Although nothing of his work on hieroglyphs is known to survive, we know of his interest through other, later alchemists who refer to it. Among them was his contemporary, Egyptian-born Dhul-Nun al-Misri. Al-Misri directed those interested in learning more about ancient alphabets to Ibn Hayyan’s book *Solution of Secrets and Key of Treasures*.

El-Daly notes another early scholar, Ayub ibn Maslama, also had “knowledge of deciphering the letters of the hieroglyphs.” This we know, he explains, through the writings of the 12th-century geographer Muhammad al-Idrisi, who had a deep interest in Egypt. Al-Idrisi recorded in his book



COURTESY THE QATAR DIGITAL LIBRARY

Like most first-time visitors, early Muslim scholars were intrigued with what they saw before them. This outline of the Lighthouse of Alexandria comes from a 14th-century gazetteer of world geography, copied from a work by Persian Zakariya al-Qazwini, published in A.D. 1276.

The famed Lighthouse was some 1,500 years old in al-Qazwini’s time, and still standing—although much repaired from earthquake damage, and with the beacon replaced by a small mosque.

Less than 50 years later, however, Alexandria was shaken by two powerful earthquakes, which reduced the Lighthouse to a rubble stub. The stones were used to build a fort—the Citadel of Qaitbay—on the same site.

Secrets of the Pyramids that during a visit in 831 to Egypt by Abbasid Caliph al-Mamun, Ibn Maslama “translated for Al-Ma’moun what was written on the Pyramids, the two obelisks of Heliopolis, a stela found in a village stable near Memphis, another stela from Memphis itself, [as well as writings found] in Bu Sir and Sammanud. Everything he translated is in a book called *al-Tilasmāt al-Kahiniya* (*Priestly Talismans*).”

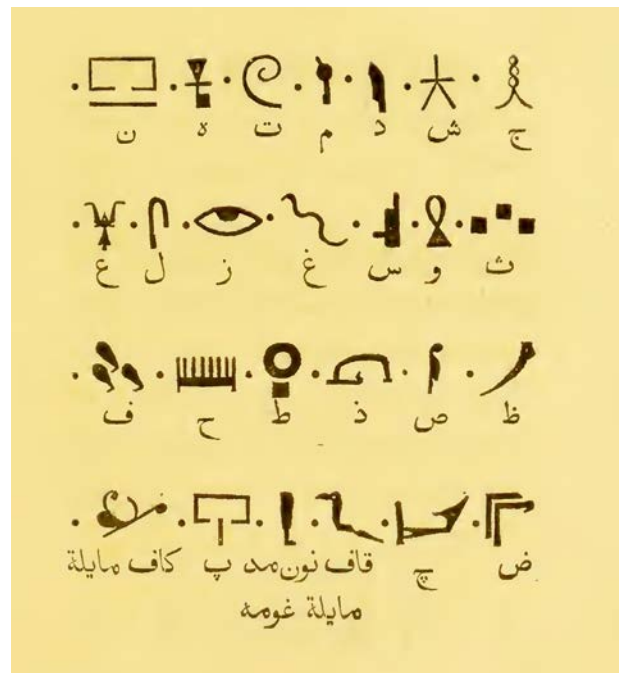
Sadly, this last book, like Ibn Hayyan’s, is now lost. Yet texts attributed to al-Misri have survived, and they offer unique, insider perspectives on the composition of the hieroglyphs. A contemporary of Ibn Maslama, al-Misri spent most of his life living in or beside one of the temples at Akhmim in Upper Egypt, El-Daly points out. There, surrounded by hieroglyphs and Coptic-speaking priests,



“In 1806, M. Von Hammer had given to the world the translation of the work of some Arabic charlatan, which professed to explain the hieroglyphs.”—John Gardner Wilkinson, *The Egyptians in the Time of the Pharaohs*, 1857.

(ABOVE) Pioneering English Egyptologist John Gardner Wilkinson failed to see the value in Ibn Wahshiyya’s 9th-century studies (and likely Hammer’s translation).

What Wilkinson had missed, however, was the significance of Wahshiyya’s work, in attempting to distinguish between hieroglyphic signs that were phonetic and those that served as determinatives.



(ABOVE) Egyptologist El-Daly maintains that Ibn Wahshiyya’s most important contribution came with his tables of “determinatives” which attempt to explain—with widely varying degrees of accuracy—how certain signs influence the meaning of a word. The tables were reproduced in Joseph Hammer’s 19th-century English translation, *Ancient Alphabets and Hieroglyphic Characters Explained*.

Ibn Wahshiyya divided hieroglyphs into four categories: 1) celestial objects; 2) figures of animals, actions and affections; 3) trees, plants and produce; and 4) words and ideas connected to minerals—an analysis that shows his alchemist’s orientation.

he would have been perfectly positioned to learn “the language of the walls of the temple, i.e., hieroglyphs,” El-Daly says.

This is more than pure speculation, he adds, because al-Misri himself indicated as much in his attributed *al-Qasida fi al-San’ah al-Karimah* (*Poem on the Noble Craft*), in which he stated he was a student of the priests and was aware of the knowledge they possessed, still visible on the walls of temples. He also recorded that he made a connection between the spoken Coptic of his day and the ancient Egyptian language, and recognized that the hieroglyphs had phonetic value—the same connection Champollion would make ten centuries later. He left behind a record of his research, *Kitab Hall al-Rumuz* (*Book of Deciphering Symbols*). Tellingly, al-Misri’s book included a table of Arabic letters and their Coptic equivalents, which proved a valuable resource for later medieval Muslim scholars who sought to translate the hieroglyphs.

It was no coincidence that these scholars practised alchemy, which at that time constituted a broad field of pursuits. “Egypt was the epicenter of ancient wisdom, magic, alchemy, mysterious scripts and astrology,” notes Isabel Toral-Niehoff, a scholar of Arabic Occult Sciences at Germany’s University of Göttingen. “Whoever was interested in magic, astrology, mysterious alphabets, etc., in medieval Islam came automatically in contact with *aegyptiaca* or

pseudo-aegyptiaca. This connection, harmonized with the popular perception of Egypt as the epitome of miracles... inspired the everyday experience of inhabitants and visitors of Egypt.”

Foremost among these visitors was Ibn Wahshiyya al-Nabati. Born in the ninth century in Qusayn, near Kufa (now in Iraq), he was interested also in medicine, toxicology and agriculture. His most important contribution is what El-Daly identifies as his tables of determinatives, the essential symbols that “determined” the meaning of words.

As an example, let’s look at an ancient Egyptian group of letters: “p + r + t” (𓆎𓆏𓆐). This is usually expressed as 𓆎𓆏, where 𓆎 represents the consonants ‘pr’, and 𓆏 is a sound complement that clarifies the ‘r’ ending of ‘pr’.

Depending on its determinative sign, *prrt* can mean the verb “to go,” the growing season, or the word for “fruit” or “seed” (in the sense of offspring). If the scribe meant to communicate walking, running or movement, he added the determinative symbol of a pair of walking legs at the end of the word *prrt* (𓆎𓆏𓆑). A sun disc (𓆎𓆏𓆒) indicated the winter season, while adding phallus and pellet symbols (𓆎𓆏𓆑𓆒) established that he was referring to children or descendants. Thus, without an understanding of the role of determinatives, Egyptian hieroglyphs remain hopelessly muddled. Ibn Wahshiyya’s achievement rested in pulling all these threads together, distinguishing between



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Ibn Wahshiyya's contributions were well known among Arab Egyptologists and, in Europe, admired by one of the 17th century's most famous authors, Athanasius Kircher, who built upon Ibn Wahshiyya's findings.

Above is the frontispiece to Volume 1 of Kircher's *Oedipus Aegyptiacus* (1652), which shows the author as the victorious Egyptian Oedipus before the hieroglyphic sphinx, having defeated the creature and solved the riddle of the ancient script.

Kircher was a German Jesuit priest, drawn to the hiero-

glyphic texts of Ancient Egypt, which he believed to have been the very first writing system, as used by Adam and Eve. To Kircher, understanding hieroglyphs was the key to unlocking a secretive wisdom that was supposed to have been laid down in the hieroglyphic signs.

While Kircher correctly described the Coptic language as a further development of ancient Egyptian, and published a Coptic grammar in 1636, he didn't make the crucial connection with hieroglyphs that Champollion would, almost 200 years later (see picture caption on page 36).

The closest descendent of ancient Egyptian is Coptic Egyptian, which still exists in the liturgy of the Christian Coptic Church.

It was Champollion's fluent knowledge of Coptic, that proved the turning point in his being able to figure out the Egyptian hieroglyphic system, and prove that it was largely phonetic.

He was able to guesstimate the sound and meaning of some signs based on their Coptic equivalent. He matched, for example, a sign that looked like the sun (☉) with the Coptic word for 'sun': "Ra".

This page comes from Champollion's 1824 publication, *Précis du système hiéroglyphique des anciens Egyptiens*.

	Signes du texte Hiéroglyphique	Signes équivalents dans le texte Hiéroglyphique	Hiéroglyphes équivalents	Copte
5.	☉	Ⲓ.Ⲓ. ⲓ.ⲓ.ⲓ.	Ⲓ ⲓ	Ⲑ.Ⲑ ⲑ.ⲑ
6.	Ⲓ	Ⲓ.Ⲓ. Ⲓ.Ⲓ.	Ⲓ	Ⲓ Ⲓ
7.	ⲐⲐ	ⲐⲐ.ⲐⲐ.ⲐⲐ. Ⲓ.Ⲓ. Ⲓ.Ⲓ.Ⲓ.Ⲓ.	ⲐⲐ Ⲓ Ⲓ	Ⲑ Ⲓ Ⲓ
8.	Ⲑ	Ⲑ.Ⲑ.Ⲑ.Ⲑ. Ⲓ.Ⲓ.Ⲓ	Ⲑ Ⲓ	Ⲑ Ⲑ

"PRÉCIS DU SYSTÈME HIÉROGLYPHIQUE DES ANCIENS EGYPTIENS", JEAN-FRANÇOIS CHAMPOLLION, 1824 © HEIDELBERG UNIVERSITY LIBRARY

hieroglyphic symbols that were phonetic and those that pictographically served as determinatives.

El-Daly himself was uncertain about Ibn Wahshiyya's claims until he compared the alchemist's tables of determinatives to those in "Gardiner's Sign List," the modern, standard guide to interpreting the hieroglyphs, published in 1927 by renowned Egyptologist Sir Alan Gardiner. "In every case I compared them, they were exactly the same," said El-Daly.

However, Ibn Wahshiyya was not entirely consistent with his phonetic transliteration of the hieroglyphs into Arabic. Hence some scholars, Toral-Niehoff among them, remain sceptical about just how much Ibn Wahshiyya actually understood from what he was looking at. She contends this is because Ibn Wahshiyya never mentioned a connection between the language of the hieroglyphs and Coptic. This, in her view, led to many errors. "Even though the signs of [his] list are actual hieroglyphs, the values of the Arabic letters bear no relationship to the actual phonetic values of the hieroglyphs depicted," she asserts.

Yet El-Daly defends Ibn Wahshiyya's work by pointing out that like any language, hieroglyphic symbols changed over time. Those seen by the medieval alchemist during his sojourn in Egypt were likely from the Greco-Roman period, El-Daly says, and differed from earlier hieroglyphs. He also stresses that the number of hieroglyphs Ibn Wahshiyya correctly translated is not the issue: What matters is that he realized the hieroglyphs were phonetic and that determinatives governed their meaning. Considering that none of this began to dawn upon European scholars until the mid-17th century, El-Daly thinks Ibn Wahshiyya deserves more than passing credit

for working out as many symbols as he did. "Do you know how many letters Champollion started with? Three letters. So, good for Ibn Wahshiyya, who had at least nine right," remarks El-Daly.

Later, Ibn Wahshiyya had his own followers. The 13th-century alchemist Abu al-Qasim al-Iraqi produced *Kitab al-Aqalim al-Sab'ah* (*Book of the Seven Climes*), a visually striking manuscript that includes the phonetic values of hieroglyphs (not always correctly) as well as colorful, at times fanciful, illustrations that combine hieroglyphs, Arabic and alchemical symbols.

In one such rendering (facing page and p. 30), al-Iraqi apparently copied a now-missing stela dedicated to the 12th-Dynasty (early second-millennium B.C.) pharaoh Amenemhat II. The top line of the illustration, written in Arabic, credits the content of the page to the "hidden book" of the mythological Hermes Trismegistus (Hermes of Triple Wisdom). Hermes was an amalgam of the Egyptian god Thoth and the Greek deity Hermes who, as a messenger of the gods, was associated with communication and the written word. Medieval Muslim alchemists equated him with the prophet Idris mentioned in the Qur'an (and in the Bible as Enoch), and they respected him as not only the first alchemist, but also the originator of the hieroglyphs as well as a source of ancient, hidden wisdom.

However, the copy of the Amenemhat stela reveals the limits of al-Iraqi's knowledge as well as his drive to align them with his own alchemist's agenda. He correctly places Amenemhat's name in a cartouche, an oval surrounding a grouping of hieroglyphs that indicates a royal name. Yet, he mistakes a geometric oval for a bain-marie (essentially a double boiler), and he interprets what was likely a falcon



Medieval Arabic discussions of hieroglyphs were mirrors for their contemporary ideas about ancient Egyptian philosophy and theology.

Bink Hallum,
Arabic Scientific Manuscripts Curator,
British Library

(BELOW) This 18th-century copy of alchemist Abu al-Qasim al-Iraqi's 13th-century Book of the Seven Climes reflects Arab interest in hieroglyphs, largely inspired by long-held beliefs that Egypt was a source of lost wisdom—a motive that was later shared by Europeans who sought to translate the symbols.

Al-Iraqi was an alchemist who was inspired by earlier Arabic alchemical and magical texts, as well as ancient Egyptian sources, believing that he could interpret and decode their mysterious symbols to reveal ancient secrets.

Egyptologist Okasha El-Daly was the first to suggest that one of al-Iraqi's sources was a stela erected for the 12th-Dynasty

king Amenemhat II. While al-Iraqi believed he was interpreting a secret alchemical process, he was inadvertently recording for posterity a pharaonic artefact that is now lost.

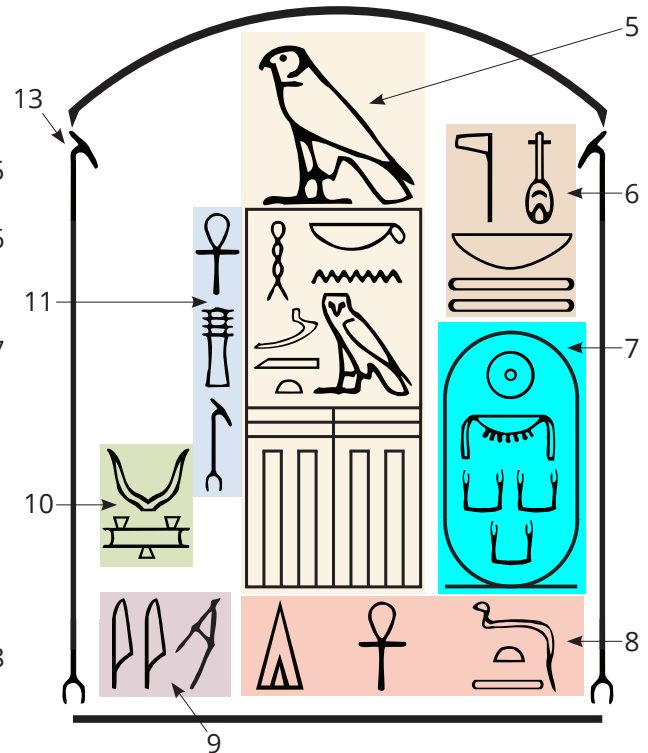
Elements from the Seven Climes page have been numbered and explained below, thanks to Bink Hallum, Arabic Scientific Manuscripts Curator at the British Library, and Marcel Marée, Assistant Keeper in the Department of Ancient Egypt & Sudan at the British Museum.

While some of the hieroglyphs have been creatively interpreted, most are legible enough to allow a partial recreation of Amenemhat II's stela (after M. Marée, 2016).



▶ PAGE FROM THE BOOK OF THE SEVEN CLIMES.

▶ PARTIAL RECONSTRUCTION OF THE NOW LOST MIDDLE KINGDOM STELA OF AMENEMHAT II.



1. Al-Iraqi: "This (material) comes from what Hermes, triplicate in wisdom and crowned with grace, depicted symbolically in the Hidden Book."

2. Al-Iraqi: "Eagle on a tree".
Ancient model: possibly the vulture goddess Nekhbet perched on a lily.



3. Al-Iraqi: "The second eagle, with a golden beak."
Ancient model: the bird and the 'rack' below may be based on a Horus falcon atop a royal serekh (a palace façade motif enclosing a king's Horus Name). Perhaps this image was inspired by an object bearing the name of the 1st Dynasty's King Aha, in which the falcon is shown clasping a mace.



4. Al-Iraqi: "Distillation furnace, and the sage operating".

5. Al-Iraqi: "Raven of intense blackness".
Ancient model: Horus falcon atop a serekh containing the Horus Name of Amenemhat II.

6. Al-Iraqi: "Roasting".
Ancient model: royal epithets "the great god, lord of the Two Lands (Upper and Lower Egypt)".

7. Al-Iraqi: "Maria's bath (bain-marie)".
Ancient model: cartouche surrounding the throne name of Amenemhat II.

8. Ancient model: hieroglyphs stating that the pharaoh is "given life forever".

9. Ancient model: hieroglyphs stating that the pharaoh is "beloved" of a deity. On the original stela this word would have stood further to the left than al-Iraqi's illustration suggests, below the name of the deity in question.

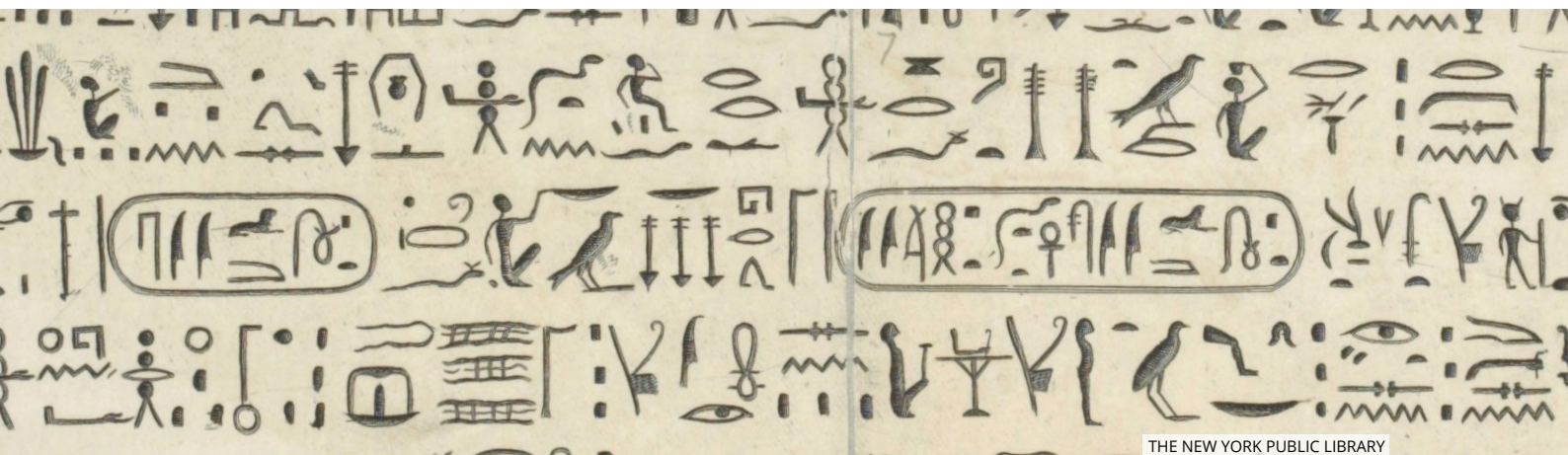
10. Ancient model: two hieroglyphs from the name of Wepwawet, a jackal god.



11. Ancient model: hieroglyphs expressing divine blessings conferred on the king: "life, stability, dominion".

12. Al-Iraqi: "Bird with clipped wings".
Ancient model: as yet uncertain, but the bird was a hieroglyph forming part of a deity's name or epithets.

13. Ancient model: one of two divine sceptres (symbolic of "dominion") that often support a heavenly vault shown at the top of royal inscriptions.



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Most Western medieval commentators believed that ancient Egypt's hieroglyphs were symbols that carried (and often concealed) hidden knowledge. The translations they created were earnest but wildly fanciful.

In contrast, Okasha El-Daly from University College London has shown that some earlier Arab scholars had grasped the fundamental principle that hieroglyphs could represent sounds as well as ideas.

The Rosetta Stone helped confirm this. When Champollion compared a count of the Greek words and the hieroglyphic characters, he found that the relationship wasn't consistent with hieroglyphs being used solely for sounds or symbols, but could act in both ways.

This detail, featuring the name and epithets of Ptolemy V (205–180 B.C.) is from an 1811 published account of the Rosetta Stone by British scholar Matthew Raper.

representing the god Horus as a “raven of intense blackness,” the alchemist’s symbol for iron and lead. These and other haphazard readings demonstrate that while medieval Muslim scholars were on track in their technical understanding of how the hieroglyphs worked, they were still often inaccurate in setting out their meanings.

Nonetheless, the trails they blazed were picked up by Renaissance European scholars who believed that Arabic manuscripts on Egypt might offer clues to deciphering hieroglyphs. Among the most influential was a 17th-century Jesuit priest, Athanasius Kircher (see p. 35)

In his seminal work, *Lingua Aegyptiaca Restituta* (*The Egyptian Language Restored*), published in 1643, Kircher correctly hypothesized that hieroglyphs recorded an earlier stage of Coptic, and that the signs had phonetic values. His sources included Coptic grammars, translated from Arabic and Coptic-Arabic vocabularies brought back from the Middle East by travellers. By El-Daly’s estimation, Kircher had access to some 40 medieval Arabic texts on ancient Egyptian culture, including Ibn Wahshiyya’s. Though the Jesuit only got one hieroglyph right, his contribution, too, pointed subsequent scholars in the right direction.

“Only with the work of Athanasius Kircher, in the mid-17th century, did scholars begin to think that hieroglyphs could represent sounds as well as ideas,” writes Brown University Egyptologist James P. Allen in *Middle Egyptian: An Introduction to the Language and Culture of Hieroglyphs*. “It was not until the discovery of the Rosetta Stone, in 1799, that scholars were able to make practical use of Kircher’s ideas.”



A version of this article originally appeared in *AramcoWorld Magazine*: www.aramcoworld.com.


TOM VERDE specialises in Middle Eastern history and Islamic studies. His series on historical Muslim queens, “Malikas,” won 2017 “Best Series” awards from the U.S. National Federation of Press Women and the Association of Women in Communications. www.tomverde.pressfolios.com.


While some believe El-Daly overstates the importance of medieval Muslim scholarship on the hieroglyphs, and they are thus doubtful of its Egyptological value, El-Daly himself says that he never set out to unseat Champollion or credit medieval Muslim scholars with as deep an understanding of the hieroglyphs as the French savant or his successors. He merely wished to add to the conversation “over a thousand years of Arabic scholarship and inquiry” that modern Egyptology has largely overlooked.

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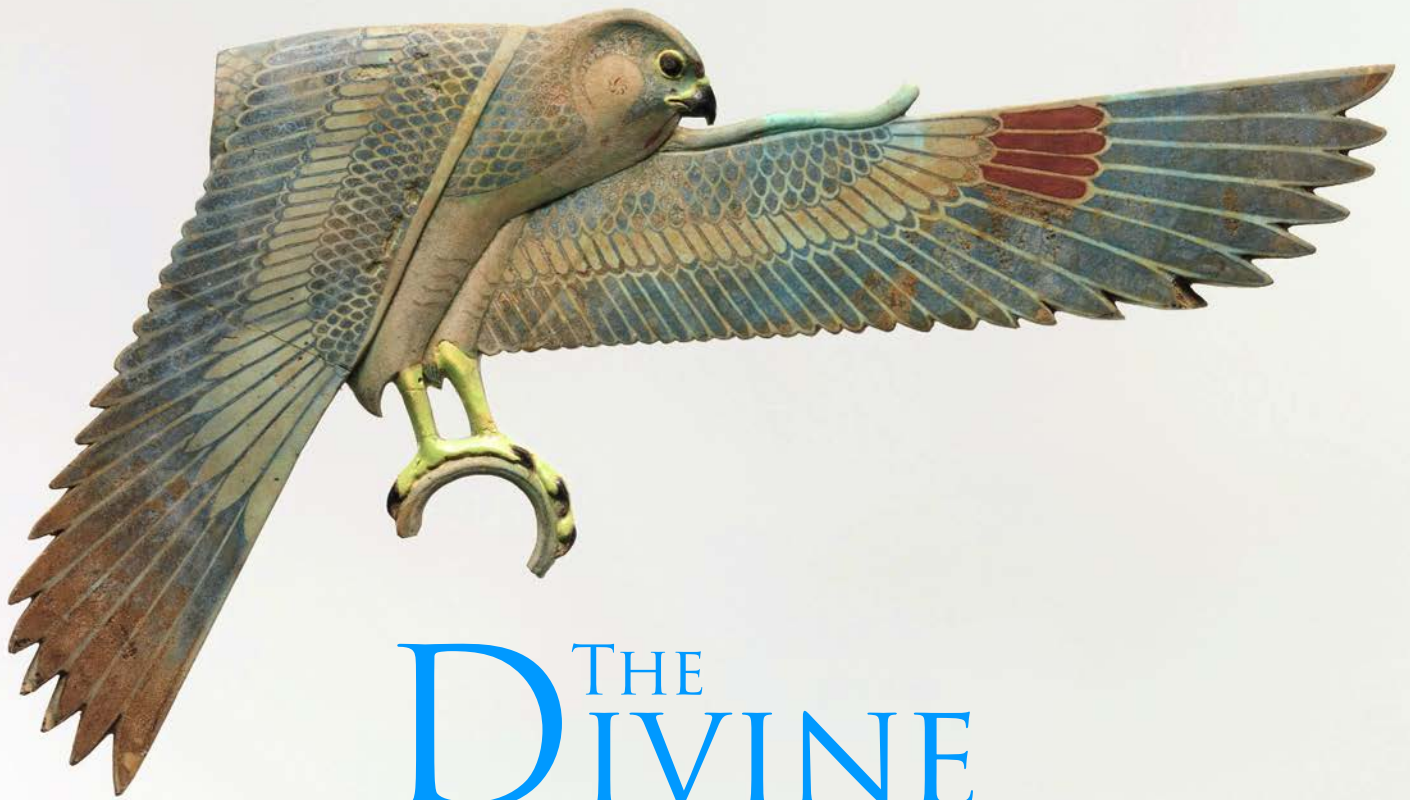




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THE DIVINE FALCON

LESLEY JACKSON

The most commonly-depicted deity in the entire history of ancient Egypt is the falcon god, Horus Behdety —Horus of Edfu Temple.

He appears above nearly every temple doorway as a winged sun disc  (representing the union of Horus and the sun god), and in a large percentage of temple scenes in the form of a falcon hovering protectively above the king.

However, Horus Behdety was only one of a number of gods who took the form of the falcon. Curiously, while raptors were revered throughout the ancient world, the Egyptians focused on the relatively small falcon rather than the eagle beloved of other empires. In the second of her four-part series on bird symbolism (part one is in NILE issue #10), Lesley Jackson explores the appeal of the Divine Falcon.

(ABOVE)

This delicate inlay, 30 cm wide, is thought to have been made for the 30th-Dynasty pharaoh Nectanebo II (360–343 B.C.).

The falcon may have presided over an elaborate inlaid scene on a large wooden shrine, appearing directly above

the king or his royal cartouche, as protector and guarantor.

It's not hard to see why this piece caught the eye of Lord Carnarvon, who purchased it—along with a collection of accompanying inlays—from a Cairo dealer in 1918.

METROPOLITAN MUSEUM OF ART. PURCHASE, EDWARD S. HARKNESS GIFT, 1926. ACC. NO. 26.7.991.



© JEFFREY ROSS BURZACOTT

A black granite statue Horus of Behdet—one of the many manifestations of Horus—at the Temple of Edfu.

There were cities named Behdet in both Upper and Lower Egypt. The most famous is the large and well-preserved Ptolemaic Period temple at Edfu in Upper Egypt. Also named Behdet and dedicated to Horus was a temple at Tell el-Balamun in the Nile Delta.

It may be that having cult centres in Upper and Lower Egypt helped reinforce Horus' position as a national god, and the king's position as "Lord of the Two Lands".

Nekhen (Hierakonpolis) near Edfu may have been the original Predynastic cult site of Horus, known there as Nekheny. During the Old Kingdom, however, Horus of Behdet began taking over as the protector of the king.

NATURAL HISTORY

The members of the falcon family (Falconidae) show the same characteristics as all raptors; hooked bill, keen vision, strong flight, powerful legs and feet with curved talons. Two areas, in particular, characterise the falcons; their eyes and their method of hunting and this gave falcons great symbolic importance.

A falcon's wings are long and pointed, a shape fine-tuned for high speed and agility but which also allows them to soar with ease. Their wing muscles are powerful; in level flight they can reach speeds of up to 100 kph. They usually attack their prey from above in a rapid dive, often from a great height. The peregrine falcon can reach speeds of over 160 kph during its dive. At this speed, they usually kill their

prey on impact or at least stun it. Frequently they attack with the sun behind them.

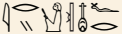
Such a method of attack requires precision and the falcon's sensory and nervous systems operate at high speed. This gives them very fast reactions because their prey appears to move slowly.

A rapid focus is essential when chasing prey at this speed. Falcons have very large eyes and densely packed visual sensory cells resulting in a visual acuity four to eight times that of humans. It is believed that falcons can see both polarised and ultraviolet light and they have four different colour sensors compared to our three.

They are also excellent judges of distance, using head bobbing to aid this. Such technical facts might not have



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A painting of Horus from the tomb of Irynefer  (TT 290) at Deir el-Medina, the royal tomb builders' village at Luxor. The drop and spiral below the eye imitate the distinctive markings of the sacred falcon.

Irynefer served under two kings: Seti I and Ramesses II, ca. 1279 B.C. The tomb was discovered in 1922 by Bernard Bruyère for the Institut Français d'Archéologie Orientale.



The falcon's fierce look, as well as its hooked bill, show that this is a bird to be taken seriously.

It may be that the aggression of the falcon's attack appealed to the Egyptian attitude towards their enemies. One inscription at Edfu Temple says that Horus is "the falcon who tears rebels to pieces with his talons after his claw has grasped his enemies."

has made him secure on his throne forever."



This is the title of Spell 78 in the Book of the Dead:



The "Spell for being transformed into a divine falcon"

It was recited so that the deceased could escape from the underworld and ascend into the heavens: "I am the falcon who dwells in the sunshine, who has power through his light and his flashing."

EARLY DEPICTION OF FALCONS

Falcon images frequently appear in the Predynastic Period (prior to ca. 3100 B.C.) on amulets and small carvings. The falcon is often depicted crouching  as if preparing to launch into flight. At the end of the Predynastic Period this posture was replaced by the classic standing pose , probably when it became an emblem of the king, giving it a more dignified and imposing stature.

Small statues of falcons, not associated with burials, have been found in areas such as Hierakonpolis. A number of these feature holes which appear to be meant for mounting, and date to the Late Predynastic Period, suggesting the existence of early falcon cults.

THE HORUS FALCON

No other bird is depicted as frequently as the Horus Falcon. It appears on everything from monumental architecture to tiny amulets. The falcon associated with Horus has a consistent depiction over all periods, but it appears to be a

composite of a number of similar-looking but different species, which have variously been suggested as the Hobby Falcon, the Lanner Falcon and the Peregrine Falcon.

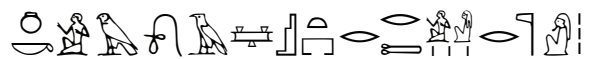
THE GOD HORUS

Horus can be quite a confusing god as there are a number of Horus gods. Whatever aspect and name he takes Horus is always depicted as a falcon or a falcon-headed man.

Taking a simplistic approach there are two basic aspects of Horus: the Creator Sky Falcon (often referred to as Horus the Elder), and the Son of Isis whose form is assumed by the reigning king.

Horus the Elder (*hor-wer*)

Horus is one of the early gods attested to at the start of the Pharaonic Period. His name is thought to mean "The Distant One (in the sky)" or "The One on High"; an appropriate epithet for the high soaring falcon god:



"I am Horus, more distant of place than people or gods."
(Coffin Texts, Spell 148.)



Horus' original form appears to have been as Horus the Elder whose wings formed the vault of the sky, his right eye the sun and his left eye the moon. In later periods when the solar theology became dominant, Horus was sometimes fused with the sun god as Ra-Horakhty  ("Ra [is] Horus of the Horizon") and is depicted wearing the sun-disc as a crown .



PHOTO: PATRICIA MORA © UNIVERSITY OF JAÉN

The imported cedar inner coffin of Lady Sattjeni was discovered in 2016 in the necropolis at Qubbet el-Hawa, across the Nile River from Aswan. She was the daughter of the Middle Kingdom governor Sarenput II, who managed the frontier region of Elephantine for King Amenemhat II.

When the director of the Qubbet el-Hawa Project, Alejandro Jiménez-Serrano, first shone his torch through a

small hole into the burial chamber, this striking pair of eyes were staring back at him.

From the Middle Kingdom, the Eyes of Horus were painted on the sides of coffins to enable the deceased to see beyond the coffin to the reborn rising sun.

You can read more of Lady Sattjeni's fascinating story in NILE Magazine Issue #10 (Oct-Nov 2017).



The Narmer Palette (1st Dynasty, ca. 3100 B.C.) was found among a cache of ritual temple objects at Hierakonpolis, 20 km north of Edfu. It features a Horus falcon (with a human arm) subduing an enemy's head emerging from a marsh (likely portraying Lower Egypt).



© RAMÓN VERDAGUER—CHRISTIANE MAQUET (SOLOGEIPITO)

Predynastic King Sekhen (ca. 3150 B.C.) was the first ruler to place the Horus falcon upon the palace façade or serekh. Some 250 years later, the 1st Dynasty's King Qa'a had this basalt stela erected by his tomb (Tomb Q) at Abydos. Today it is in Cairo's Egyptian Museum.



© JEFFREY ROSS BURZACOTT

Images of the winged sun disk, identified with Horus of Behdet (Edfu) are found nearly everywhere throughout Egypt. The earliest clear example comes from the Giza tomb of Queen Hetepheres (ca. 2600 B.C.), wife of Sneferu and mother of Khufu, where it sits above the name of Sneferu on the end of a curtain box.

The form of the winged sun disk is unique to Horus of

Behdet and represents the union of Horus and the sun god, protecting and endorsing the reigning king.

This colourful example comes from the Temple of Ramesses III at Medinet Habu. It decorates the underside of a massive limestone architrave that hangs over the entrance to the raised portico between the temple's Second Courtyard and the Hypostyle Hall.

Horus of Behdet, whose winged-disk motif is so ubiquitous on Egyptian temples and stelae (see above) represents the union of Horus and the sun god, and holds a special place in protecting king and country.

The inner face of the west enclosure wall of Edfu Temple carried the “Legend of the Winged Disk”. The text reveals how Horus of Behdet, harpoon in hand and in the form of the winged disk, valiantly faced the enemies of Ra (who had transformed into crocodiles and hippopotami): “Horus of Behdet inflicted great slaughter upon them. . . . then those foes fled before him. . . . their hearts being faint through fear of him. . . .” Horus had defended Egypt against the forces of chaos, and the delighted Ra (“Let us rejoice over our foes. . . .”), ordered Thoth to place the winged sun-disk in every temple along the Nile (see above) to similarly safeguard the king.


Horus, son of Isis (*hor-sa-Isset*)


Horus son of Isis (and Osiris) has a strong link to kingship because he was the legitimate inheritor of his father's throne. At coronation the king became Horus incarnate. He was also protected by the falcon who is frequently depicted hovering just above and behind him.

At his birth, Isis addresses her son “O falcon, my son Horus, dwell in this land of your father, Osiris.” (Coffin Texts, Spell 148.) By naming him as the falcon, Isis endows her son with its powers; solar, celestial and kingship.


The myths of Horus son of Isis are dominated by the endless battles with his uncle Seth who had usurped the throne by murdering Horus' father, Osiris. In these battles, the wounding of the Eye of Horus was a common theme.

The story goes that Horus was badly injured during one

of his fights with Seth; his left eye had been brutally plucked out. Using powerful magic, the eye was restored by Isis (or, in some stories, Hathor or Thoth), and the *wedjat* —the healed Eye of Horus—becomes one of the iconic Egyptian symbols. The *wedjat*-eye combines a human eye with the facial markings of a falcon and symbolises healing and “making whole”; the word *wedjat* literally meaning “sound”.

The regenerative powers of the *wedjat* was considered so powerful that it could even restore the dead to life. *Wedjat* eyes () were painted on coffins (see page 43) and placed among the wrappings of mummies so that the deceased may wake up, happy and healthy, in the afterlife.

Inside the coffin, the mummy's face was aligned with the eyes painted on the side to enable the dead person to see. By orientating the coffin in the tomb so that the side with the eyes faced east, the deceased could view the rising sun each dawn, symbolic of new life, and could also look towards the part of his tomb where offerings would be placed to sustain their spirit.

Originally the *wedjat*-eye was linked with the moon; it was the *wedja*  (“healthy”) Eye of Horus, as its restoration became identified with the phases of the moon.

The cosmic falcon whose eye is the moon is thus equated with Horus and his divine misadventures with Seth—and subsequent wounding of the Divine Eye. The distinctive eyes and facial markings on the falcon emphasised its link to the Eye of Horus and power of healing and revival.

THE OTHER FALCON GODS

Horus is not the only falcon god, and many local falcon gods were ultimately assimilated by Horus. A few, however, managed to keep their independence. Worthy of mention



© OLAF TAUSCH

The goddess Isis and her sister Nephthys could be represented as kites, which can look similar to falcons but lack the latter's distinctive facial markings.

This scene comes from the Ptah-Sokar Chapel of Seti I's 19th Dynasty Abydos Temple (ca. 1270 B.C.). Mortally wounded, Osiris lies on a funerary bier while Isis, in the form of a kite, revives him with the breeze from her wings. Isis then perches on Osiris who lives just long enough to conceive a son, Horus.

Isis appears again, although in human form, along with the adult Horus, at the head and foot of the funerary bier upon which Osiris lays. Two falcons, representing Isis and her sister Nephthys, offer protection to the critically injured Osiris. He soon dies again and becomes Lord of the Underworld.



is Montu—the falcon war god of Thebes—whose bellicose nature in battle is reflected in the hunting skill of falcons.

Warrior kings of the New Kingdom frequently identify themselves with Montu, for example in the famous inscriptions of Ramesses II describing his Battle of Kadesh against the Hittites in Syria, where the king is repeatedly compared to Montu or identified as Montu's son:



"His majesty appeared like the rising of Re, he assumed the adornments of his father, Montu."

Page 41 features a depiction of Montu bestowing eternal life onto the 12th Dynasty's Senusret I, from the king's White Chapel at Karnak Temple.

GODDESSES AND RAPTORS

The symbol of the West, the euphemistic name for the afterlife, was a falcon perched on a pole. This was often worn as a crown by goddesses, such as Isis and Hathor, to denote their afterlife and rebirth aspects.

Given their attributes, raptors in general might appear as a masculine symbol and thus only associated with male gods. The falcon gods may dominate, but Isis and Nephthys can take a raptor form as either a kestrel or a kite.

The Kestrel

The kestrel is a small type of falcon whose main distinguishing characteristic is hovering 10–20m above the ground as it waits for prey to appear.



Wrapped protectively around the back of Ramesses III's khat headdress is a small falcon bearing a sun disk. Because of the solar reference, this is likely a representation of Ra-Horakhty and a symbol of divine rebirth.

While no actual headdress bearing this sort of design have survived, it is believed to have been part of the actual headwear rather than an artistic device added afterwards.

This example continues a long tradition of the falcon god appearing behind the pharaoh or attached to the

back or top of crowns. A well-known example is the 4th-Dynasty diorite statue of Khafre (builder of the second pyramid at Giza), now in the Cairo Museum (CG 14). The sculpture portrays Khafre with a falcon perched on the back of his throne. The bird's outstretched wings curve around the king's head to show how Khafre has become Horus on earth.

The above image comes from the Tomb of Ramesses III's son, Khaemwaset (QV 44), in the Valley of the Queens.

Wings in general were associated with protection and the generation of wind and through that breathing. In vignettes depicting the conception of Horus, the Isis kestrel hovers over the mummy of Osiris. Isis is she “who creates air (for breathing) with her wings, who makes jubilation and revives her brother (Osiris)”:



Keen observers of nature, the Egyptians linked the kestrel's distinctive hovering flight with Isis.

THE KITE

The kite is a type of hawk from the Accipitridae family. They wander the countryside in search of carrion and adapt well to human habitats. Two species have been suggested

from depictions of Isis and Nephthys; the Black Kite and the Chanting Goshawk. Chanting Goshawks are often seen hunting in pairs, alluding to the bond between Isis and Nephthys. They have a melodic song which may have suggested temple singers to the Egyptians.

As with the kestrel, Isis and Nephthys are depicted as kites in funerary scenes especially when they are mourning Osiris. They are often referred to as “the Two Kites”.

Kites have a shrill piercing cry which suggested the wailing of mourners and their wanderings replicated those of Isis as she searched for the body of Osiris. Utterance 535 of the Pyramid Texts reads: “Thus said Isis and Nephthys: The screecher comes, the kite Comes, (namely) Isis and Nephthys; they have come seeking their brother Osiris, seeking their brother the King (Osiris).”

A SACRED DESTINY

For the majority of falcons and hawks being a sacred bird had unfortunate consequences; during Egypt's Late and Ptolemaic Periods (ca. 747—30 B.C.) they were sacrificed in vast numbers and mummified as votive offerings.

In 2015 the *Journal of Archaeological Science* reported on a study that suggested the ancient Egyptians may have not only bred raptors for ritual purposes, but also force-fed the birds in captivity.

Usually when a bird is prepared as an offering, its insides are removed, the bird is dried, dipped into hot resin and wrapped. Sometimes, however, corners were cut, and that first step was skipped, giving researchers a peek into a bird's last days on earth.

Researchers from the American University in Cairo, Stellenbosch University in South Africa and the Stellenbosch Institute for Advanced Studies chose a bird mummy—a kestrel—from Iziko Museums of South Africa in Cape Town for a closer look. It turned out that this feathered offering was one of those exceptions to the rule; its insides weren't removed, allowing the researchers a peek at the preserved contents of its stomach. What the CT imaging revealed was surprising: it seems that the kestrel had not only been kept in captivity and force-fed—but with fatal consequences.

Sitting undigested inside were fragments of several mice (bones, fur, and over two dozen loose teeth). They also found the remains of a small sparrow. Tellingly, part of a mouse's tail was still in the kestrel's esophagus, which—together with a lack of any obvious trauma—suggests that this unfortunate bird had choked on its last meal.

Like other raptors, kestrels regurgitate pellets of indigestible materials like fur, feathers or large bones. This normally happens around 10 hours after ingesting the meal. This particular bird, however, didn't get that far. Its stomach contents reveal that the kestrel had digested most of the mice, and at least some of the sparrow, but at the time of death, it had not yet regurgitated a pellet. From the evidence it appears that this kestrel was force-fed and ushered into the afterlife intentionally. And it was probably not alone.

"This animal was fed far beyond its inclination and capacity," says Salima Ikram, professor of Egyptology at the American University of Cairo and lead author of the study. "The idea of birds of prey being bred to the extent of being kept and force-fed is new. Until now, the sheer number of raptor mummies had been a mystery—did they catch or trap them and kill them, raid nests, or find them dead? Our results explain why they had so many: we now think it was because of active breeding."

The hastily-embalmed kestrel from Iziko Museums of South Africa may be another example of where the mummified packages created by priests for paying pilgrims weren't everything that they seemed. Perhaps it was simply to keep up with an overwhelming demand—or perhaps the incentive was to find some "efficiencies" that would maximise mummification turnaround time and save on costs (and subsequently maximise profits). Alternatively, this may have been a "bargain mummy" and available more cheaply. Whichever the reason, this kestrel's unlikely survival over two millennia has given us a better insight into the massive animal mummy industry that turned out bundled offerings in their millions to act as intermediaries between the donors and the deities.



© STELLENBOSCH UNIVERSITY

CT image of the mummified kestrel from Iziko Museums of South Africa showing the tail of a mouse extending through the bird's oesophagus.

Mummies like this were despatched into the afterlife to carry a donor's request to solve some sort of personal drama on earth. The intended deity was likely a solar one associated with raptors such as Ra-Horakhty.



LESLEY JACKSON writes about the Egyptian deities and is the author of *Thoth: The History of the Ancient Egyptian God of Wisdom, Hathor: A Reintroduction to an Ancient Egyptian Goddess and Isis: The Eternal Goddess of Egypt and Rome*.



MERESANKH III ON THE SOUTHERN
DOOR JAMB TO HER TOMB
PHOTO © JEFFREY ROSS BURZACOTT

DIGITAL ARCHAEOLOGY AND THE (AFTER)LIFE
OF
MERESANKH III AT GIZA

RACHEL ARONIN
The Giza Project, Harvard University

On April 23, 1927, American Egyptologist George Andrew Reisner made one of the most spectacular discoveries in a forty-year career of spectacular discoveries.



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A 2002 photo of the northern part of the decorated interior of the tomb of Meresankh III (G 7530-7540), looking from Room A into Room C, which has as its centerpiece a row of ten rock-cut female statues.

THE LONG-TIME DIRECTOR of the joint Harvard University-Boston Museum of Fine Arts (HUMFA) Expedition to Egypt was finishing up the very last day of a nearly three-month long dig season at the Giza Plateau, five kilometres southwest of Cairo, when he uncovered an unexpected doorway on the eastern side of a large stone-built tomb. Designated G 7530-7540, the tomb was comparable to a number of such 4th Dynasty (c. 2575–2465 B.C.) monuments built in the so-called Eastern Cemetery at Giza, in the shadow of the Great Pyramid of King Khufu, for the famous ruler's immediate family members.

However, what made this new doorway so intriguing was that it was built, not into the eastern façade of the tomb as was normally the case, but rather under it,

reached by a pair of stairways descending about two meters from the street east of the structure. This entryway led downward to a subterranean offering chapel consisting of three magnificently carved and painted chambers. A shaft and burial chamber were sunk even more deeply into the bedrock. Reisner's astonishment as he first poked his head into the main room was similar to that felt by excavators at their first glimpse into the tomb of King Tutankhamen, discovered only five years previously.

As he wrote in a 1927 article published in the *Bulletin of the Museum of Fine Arts* (vol. XXV, p. 64) six months after his find: "Our eyes were first startled by the vivid colors of the reliefs and inscriptions around the northern part of this large chamber. None of us had ever seen anything like it."



COLOUR DETAIL © WHITE STAR PUBLISHERS

PHOTOGRAPH © MUSEUM OF FINE ARTS, BOSTON

A 1927 excavation photo of the west wall in the main chamber (Room A) of the tomb of Meresankh III (G 7530-7540), used in the digital recreation of this tomb by the Giza Project at Harvard University (as seen on the opposite page). In the far chamber

(Room B) is the false door, which enabled contact between the realms of the living and the dead. The colour inset gives us an idea of how spectacular the whole tomb chapel must have appeared when it was first opened by George Reisner.

The inscriptions on the walls of the chapel indicated that it belonged to the “king’s daughter of his body and beloved king’s wife” Meresankh, the third queen of that name in the Old Kingdom. Today, this exceptional tomb, remarkably well-preserved at discovery even after 4,500 years, provides a valuable argument for the vital importance of conservation efforts, both physically for ancient sites themselves, and more recently, also digitally for the preservation of extensive archival data-sets as well.

After more than fifteen years of painstaking work and scholarly study, all of the HU-MFA Expedition’s thousands of Giza excavation photographs, diaries, plans, and publications are freely available on a new interactive prototype website, Digital Giza (<http://giza.fas.harvard.edu/>). Based on these data, as well as archival materials from over a dozen additional major museum collections worldwide, the Giza Project at Harvard University has created a number of archaeologically-informed, 3D computer models of tombs, temples, and

pyramids in order to better understand some of Giza’s unique features and to attempt to visualize them in meaningful new ways. The burial complex of Queen Meresankh III may serve as just one example of how these monuments are digitally reconstructed, what sorts of information the

resulting models may present, and the urgent necessity of digitally recording and preserving these ancient monuments for future generations.

The architectural layout of G 7530-7540’s chapel resembles those of a number of other royal princes and princesses of Meresankh’s generation, many of them children of King Khafre, who were buried near his pyramid in the Central Field at Giza. It consists of a main chamber (Room A), continued to the north by a

smaller room (Room C) and to the west by a long offering chamber (Room B), the latter separated from the main room by one or more pillar supports.

Several of these tombs, including Meresankh’s, also have a window in the eastern wall to allow sunlight to penetrate



COURTESY THE GIZA PROJECT, HARVARD UNIVERSITY

View of Giza Plateau with the mastaba tomb of Meresankh III (G 7530-7540) indicated with the yellow arrow.

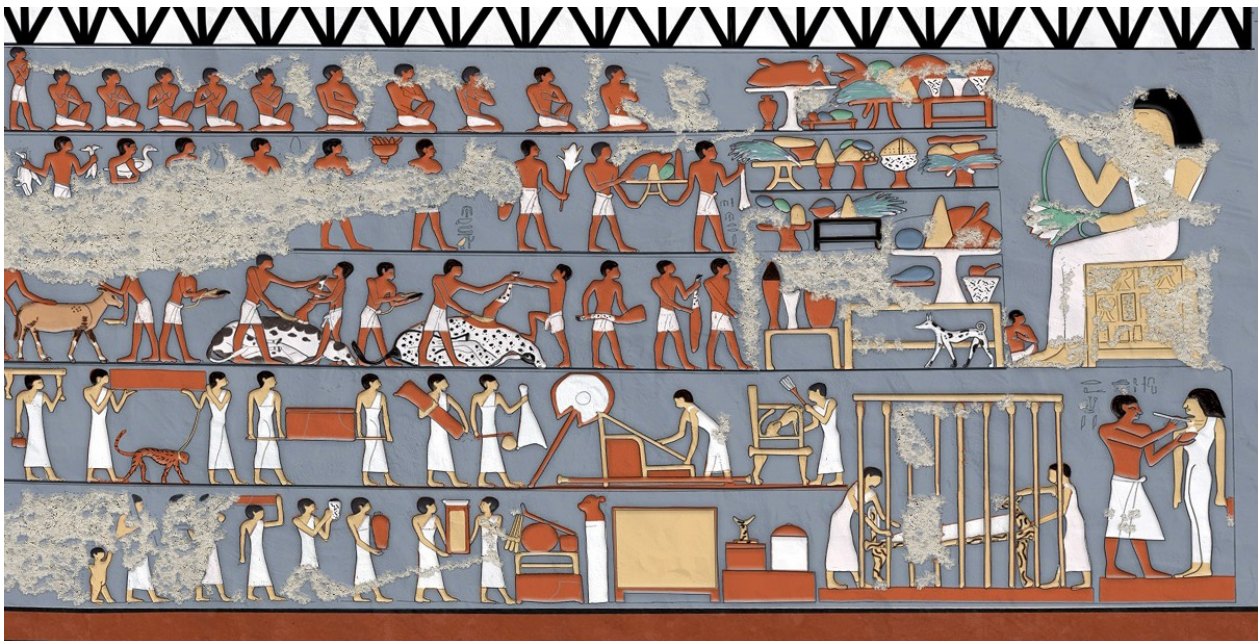
HOW TO BUILD A (VIRTUAL) ANCIENT EGYPTIAN TOMB

Working from archaeological plans and sections to construct the tomb's architecture, and examining 90-year-old black and white excavation photographs alongside more recent images and drawings for details of decoration and color, the Giza Project has built a digital model of the magnificent tomb of Queen Meresankh III.

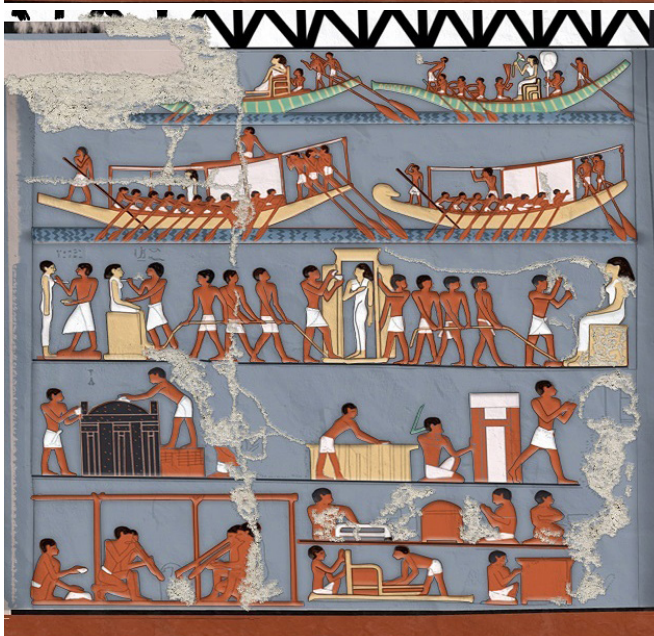
The stages of creating the tomb model were probably fairly similar to those carried out by the ancient Egyptians themselves in constructing the original tomb. We may illustrate this process by examining the western wall of the main chamber. Firstly, a 3D framework of the interior tomb structure was built (top right), onto which the relief drawings of each wall were laid flat in outline. Next, the reliefs were modeled to give them depth. Some preliminary coloring was then applied to the walls and ceiling, including the layer of pinkish-tan plaster on the walls, into which the reliefs were actually carved (right, middle). Finally, the reliefs and hieroglyphs were meticulously painted to evoke the original polychromatic splendor of the tomb (below).



ALL IMAGES ON THIS PAGE COURTESY THE GIZA PROJECT, HARVARD UNIVERSITY



COURTESY THE GIZA PROJECT, HARVARD UNIVERSITY



(LEFT and ABOVE)

Few grave goods remained within the looted burial chamber of Meresankh's tomb other than her sarcophagus and four canopic jars, used to hold her embalmed internal organs. However, we may get a hint of the sorts of things that the queen would have taken with her by examining the painted reliefs on the south and east walls of Room A.

Boxes, bags and jars would have contained food, clothing and jewelry. Statues and fine furniture would have equipped her for the next world. Even a representation of her black granite sarcophagus appears, being smoothed and polished by two workers (left).

Some of the types of furniture seen on her walls have very similar, sometimes nearly identical, parallels in the grave goods discovered in the Giza tomb of Queen Hetepheres I (G 7000 X), mother of Khufu and thus great-grandmother to Meresankh III. This important lady's tiny burial chamber was crammed with many of the sorts of objects that also appear in G 7530-7540's wall decoration (above), including a bed with canopy, a carrying chair, and an ornately carved armchair, all now in the Egyptian Museum in Cairo.

the interior, an important feature to which we will return later in this article.

Although the regal Meresankh herself, granddaughter of one pharaoh and wife to another, is clearly the focal point of all decoration and inscriptions in the tomb, a number of relatives and other members of the queen's household appear on the walls of the chapel as well. These include several of her children, her father Kawab (owner of his own tomb, G 7110-7120, about 100 meters to the northwest of Meresankh's), and her mother Hetepheres II. Both her parents were children of King Khufu and thus siblings or half-siblings. Queen Hetepheres is depicted multiple times throughout the chapel and was a very important figure in her daughter's life and in her burial. There is even some evidence that the tomb was originally intended as the final resting place of Hetepheres. Several short graffiti, found on outer casing blocks of G 7530-7540, mention her name together with dates which may refer to the main tomb's construction, thus leading to the belief that the superstructure at least was originally built for this queen. When her

daughter died before her, Hetepheres may have donated both her tomb and even her own black granite sarcophagus to her child.

This theory receives further support from inscriptions found on the sarcophagus of Meresankh, discovered in situ in her burial chamber and soon to be on view in the upcoming Grand Egyptian Museum (GEM_45475, formerly JE_54935), which is inscribed all around the top with the name and titles of Hetepheres and down the sides with the following statement:



"I have given it (i.e. the sarcophagus) to the king's daughter and wife Meresankh."

Since the sarcophagus also seems to have been made originally for Hetepheres, it seems likely that upon the premature death of her daughter the queen donated her own intended burial place to her child. Finally, a beautiful pair statue of mother and daughter, Hetepheres' arm



Meresankh's chapel contains an unusual number of engaged statues (cut into the living rock of the walls) for tombs during this time period at Giza. Although none of these are inscribed, it seems likely that the standing female statues represent the tomb owner with her mother and daughters.

The row of ten rock-cut statues in Room C was damaged

even when Reisner first found it in 1927, and this damage has worsened dramatically over the intervening decades through exposure to both natural and human wear and tear. However, through careful study of Reisner's meticulous excavation notes and photos, it has been possible to restore these statues to their likely original appearance in the 3D reconstruction.

wrapped protectively around Meresankh's neck in a manner most usually seen in statues of husbands with their wives, was found in pieces in the main room of the tomb. The reconstructed statue, now in the Museum of Fine Arts, Boston (MFAB_30.1456), is another demonstration of the close bond between these two queens. So we can be sure that we are dealing here with a monument originally intended for a royal woman, though it is not certain precisely which one.

Either way, the wall reliefs and statuary, although most likely constructed, painted, and inscribed by men, reflect a female worldview allowing us some insight into what was important to upper-class women in the 4th Dynasty: who and what were so vital that they literally had to be carved in stone to last forever with Meresankh in the afterlife?

For the ancient Egyptians, tomb decoration was part self-representation and part wish fulfilment: everyone

wanted to record themselves in the presence of their loved ones and servants, engaging in pleasant activities and pastimes, and possessing a never-ending bounty of all the wonderful things they enjoyed while alive. Many of these items, such as food and drink, clothing, jewelry, furniture, and other items of daily life were actually placed in the tomb itself to accompany the deceased on his or her journey into the next world. Ideally, surviving family members and funerary priests would continue to place new offerings in the tomb chapel, thereby provisioning the deceased's spirit in perpetuity. However, as this eternal devotion could not be guaranteed, the practical-minded Egyptians devised other methods to ensure their afterlives. Images of offering bearers, friezes of objects, offering lists and formulae were inscribed on tomb walls and were intended magically to replace or replenish actual offerings.

As previously mentioned, a narrow window was built



COURTESY THE GIZA PROJECT, HARVARD UNIVERSITY

Like the row of statues in Room C, the beautifully painted reliefs in the main chamber (above) have not come through four and a half millennia unscathed. One major source of damage was the window high in the eastern wall of the main chamber, which allowed in rain water as well as the desired air and sunlight into Meresankh's chapel.

This exposure washed away part of the scene of Meresankh and her mother boating in a papyrus thicket below. Thanks to the detailed archival records of the HU-MFA Expedition, the Giza Project has been able to reconstruct damaged areas in the digital model (below), based on similar scenes found in contemporaneous tombs.

into the tomb's upper eastern wall. Its primary purpose would have been to permit sunlight to illuminate Meresankh's chapel. The Egyptians saw the daily journey of the sun from east to west as parallel to the lifecycle of man. The west, as the place of the sun's disappearance every evening, was seen as the realm of the dead, while the east was viewed as a place of rebirth and resurrection. Therefore, funerary architecture was usually constructed on an east-west axis, so that the life-giving rays of the sun could enter the tomb and reach the deceased, often thought to come forth from the west via a so-called "false door" (a carved and inscribed representation of a portal through which the deceased's

spirit was believed to emerge from the underworld to take nourishment in the form of offerings).

Interestingly, it was discovered during the construction of the 3D model of G 7530-7540 that this focused beam of radiant sunlight would strike the opposite western wall of the main chamber directly upon the northern of the two doorways that open into the important offering room (Room B). As the westernmost room of the chapel, this chamber was likely the focus of cult activities in the tomb; in the floor was dug the burial shaft leading over five meters down to the room where the queen was actually interred. Carved in the west wall of Room B are two pairs of engaged female

Because they can be continually altered and adapted, digital archaeological models can be very useful for testing out different research hypotheses. For instance, based on surviving stone sockets, doorjambbs, and thresholds, it is clear that there were doors in at least some of the recesses dividing the chambers of Meresankh's chapel from one another. However, because these doors were made from perishable materials like wood, we do not always know precisely where they were positioned or how they looked. By making adjustments to the model, we can test out various possibilities to find the combination that best fits the surviving archaeological data.

This reconstructed double-door with doorbolt is based on examples of limestone imitations of wooden doors from a 5th-Dynasty tomb at Giza.



DIGITAL RECONSTRUCTIONS AND EXPERIMENTATION

The modelling process also allowed for experimentation with different sources of light. Generally, an artificial ambient light was used to allow details of color and relief to be seen. However, in antiquity the interior of the chapel would have been quite dark and difficult for the artists to work in (as it was in 1927 for George Reisner and his crew).

Some sunlight would have entered through the tomb's entranceway (when the door was open) and through the window, both located in the eastern wall of the main room. The only other light source for priests and tomb workers would have been in the form of oil lamps, placed perhaps on the floor or on top of stands. When these are included in the model, a better idea emerges of how Queen Meresankh's tomb might actually have appeared.



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COURTESY THE GIZA PROJECT, HARVARD UNIVERSITY

Sunbeams from the eastern window would illuminate the false door in the west wall of Room B. Similar architectural layouts may also be found in other Old Kingdom tombs at Giza. It is clear that there was great symbolic meaning attached to this arrangement. By causing the sunlight to strike the false door, the spirit of the deceased was reinvigorated.

This same principle may be observed at the Great Temple of Ramses II at Abu Simbel, built over a thousand years later, which was positioned so that twice a year the sun's light would penetrate down the long central east-west corridor to the innermost sanctuary and illuminate images of the gods and the deified king himself.

statues, perhaps representing Meresankh and her mother, (as with the small double statue now in the MFA, mentioned above) or possibly just the deceased herself. These statue pairs flank a shallow false door, which depicts the name, titles, and image of the queen. When the doors of the main chamber were thrown open, the ray of sunlight from the window would fall directly on this false door, the most significant point in the entire tomb, the emblematic nexus of chapel and burial shaft, this world and the next.

The archaeologically-informed 3D models available on the Digital Giza website (which, once the site is complete, will include the reconstruction of the tomb of Queen Meresankh discussed above) demonstrate the value in marrying traditional and innovative new ways of presenting data, and may be used for many different purposes: as tools to envision and assess a variety of research hypotheses; as graphic illustrations with obvious educational value in classrooms, museum galleries, and online; and as a means of digitally preserving and even sometimes restoring

monuments threatened by conflict, neglect, and the ravages of time. Models allow for total visualization and experimentation in ways which were previously difficult or even impossible. The day may not be far off when a visitor to the Giza Plateau will even be able to point their smart phone at the recently reopened tomb of Queen Meresankh and call up this digital reconstruction to enhance their sightseeing experience with augmented reality. By combining detail-rich archaeological and archival datasets with cutting-edge technology, the Giza Project at Harvard University is shining new light on ancient questions.

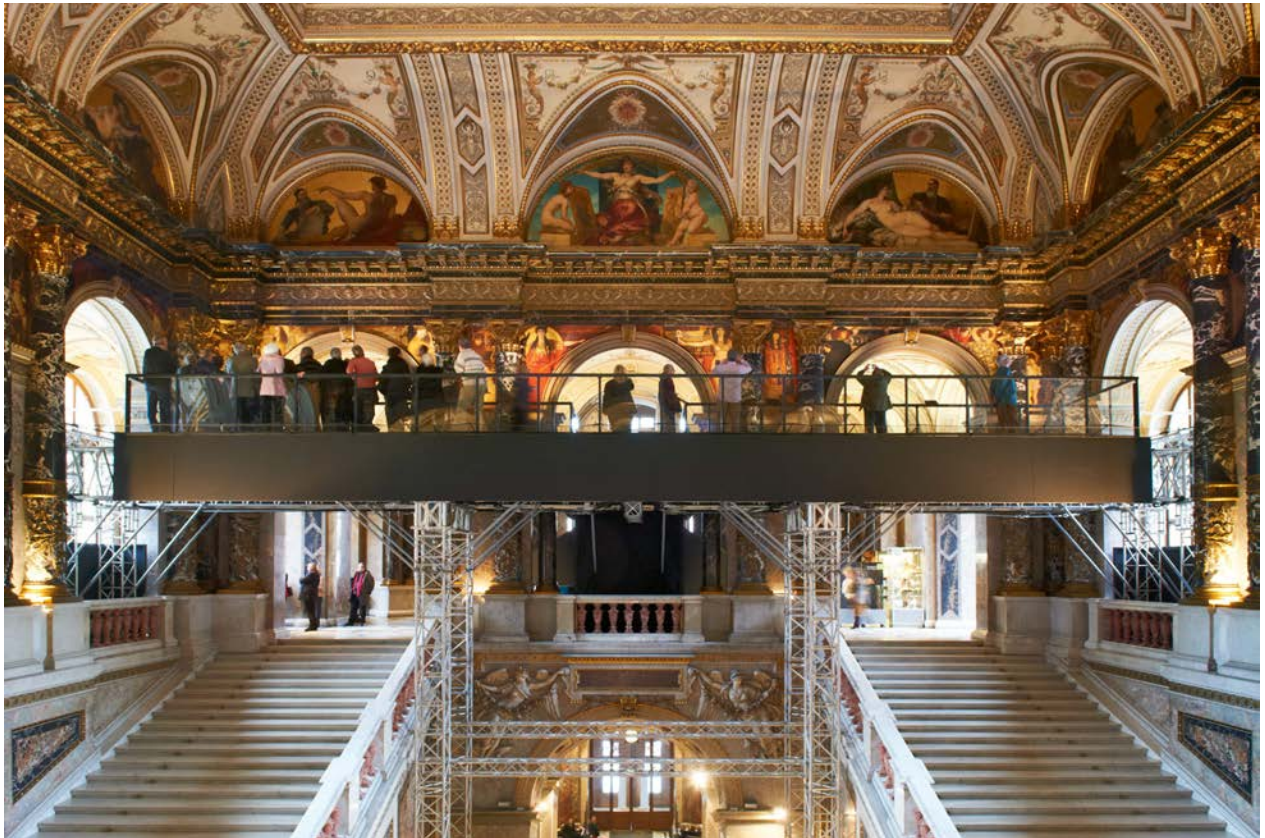


RACHEL ARONIN is an Egyptologist and Research Associate with the Department of Near Eastern Languages and Civilizations at Harvard University. She has written and lectured on a variety of subjects, including ancient Egyptian religion, funerary texts of the New Kingdom, Old Kingdom mortuary architecture, and Ptolemaic history, and has conducted archaeological research at sites in Egypt, Israel, and mainland Greece.



Digital Giza <http://giza.fas.harvard.edu>

COURTESY THE GIZA PROJECT, HARVARD UNIVERSITY



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Thanks to a temporary elevated walkway, visitors enjoy a close encounter with Gustav Klimt's 19th-century representations of ancient Egyptian art (to the right of the central archway).

STAIRWAY TO KLIMT

GUSTAV KLIMT HAD NEVER BEEN TO EGYPT. It was 1890 and he, along with his younger brother Ernst and their friend Franz Matsch, had just accepted a lucrative commission: a major work at the newly-built home of the formidable Viennese imperial art collection: the Kunsthistorisches Museum ("Museum of Art History"). It meant that 28-year-old Gustav suddenly needed a crash-course in ancient Egyptian art and religion.

The trio was already the darling of Vienna's upper class and aristocracy, decorating Vienna's theatres and soaring churches with historical murals. Two years earlier, they were honoured with the Golden Order of Merit from the Austro-Hungarian Emperor Franz Josef.

Their brief at the Kunsthistorisches Museum was to decorate the spaces between the columns and left and right of the arches along the walls of the grand Main Staircase. They were to create a 40-part cycle that depicted the history of art, from ancient Egypt until the 19th century. Each historical era and region was to be personified using men and women dressed in the appropriate attire and aided by suitable props and setting.

The three artists divided up the project and Klimt took charge of the north wall at the top of the staircase (above).

The artist was responsible for 13 paintings that would appear 12 metres above the staircase, and was given just five months to do the job.

EYE TO EYE WITH GUSTAVE KLIMT

Gustav Klimt died in February 1918. He was just 55 when he was hospitalised following a stroke. It was there that he fell victim to pneumonia.

On the 100th anniversary of his death, Klimt is being honoured at the Kunsthistorisches Museum by inviting visitors to take a closer look at his celebrated wall paintings from a lofty vantage point.

Until now, the museum's 1.4 million annual visitors could only admire the paintings from afar. Now a temporary bridge has been installed to bring admirers up to eye level with Klimt's creations. It reprises a similar temporary bridge built to celebrate Gustav Klimt's 150th birthday in 2012.

If visitors look closely, they will realise that the artist didn't paint directly onto the plastered walls of the museum. The paintings were created in oil on canvas at the artists' shared studio and glued to the walls six months prior to the opening of the Kunsthistorisches Museum in 1891. Incredibly, after 127 years, the paintings in the cycle at the



museum are still in excellent condition and have never needed to be restored.

Klimt created two pieces to depict ancient Egyptian art, focussing on faith and beauty in this world, and the hope of eternal life in the next. For reference, he sought inspiration from contemporary publications available in Austria at the time, including a sumptuously illustrated atlas of Egyptian art by Émile Prisse d'Avennes, and a catalogue of the Egyptian Museum in Cairo by its director, Auguste Mariette.

Ancient Egypt came easily to Klimt. After his death, contemporary Austrian artist Anton Faistauer wrote that Klimt's "entire spirituality is oriental. . . [he] never looked westwards and with the exception of a journey to Spain and to Paris was never interested in Western culture."

Gustav Klimt's 19th-century interpretation of ancient Egypt had as much to do with contemporary notions of the exotic East, as his fascination with the naked female body. "Woman," he once declared, "is the major creation."

Stairway to Klimt is showing at the Kunsthistorisches Museum in Vienna through to September 2, 2018.



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ANCIENT EGYPT II

In the shadows between the columns on the north wall of the Main Staircase lurks the counterpoint to Ancient Egypt I and its bright promise of eternal life. The Kunsthistorisches Museum describes this scene as "Death: a sombre still-life, rich in content, featuring ancient Egyptian artefacts informed by excavated examples and contemporary research."

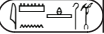

Klimt never visited Egypt, so elements such as the Hathor-headed column in the background were drawn from the large atlas of ancient Egyptian art by Émile Prisse d'Avennes. The atlas was published in Paris in 1877 and available at the time in libraries in Vienna. In this example, it seems that Klimt drew on features from at least two different columns (right) to form a composite for his painting.



© KHM-MUSEUMSVERBAND

ANCIENT EGYPT I

Filling the spandrel of the central archway above the Museum's Main Staircase is a radiant nude figure—presumably a priestess. Her right hand clutches an ankh, the Egyptian sign of eternal life. Indeed, the figure appears to be benefitting from a healthy glow. Her left hand is holding what may be a sistrum—a ritual rattle.

In the background are elements of tomb and temple scenes. Klimt also seems to have happily brought together private tomb scenes (a noblewoman sits at the feet of her husband) and royal texts. While some of the groupings of hieroglyphs appear to have been chosen for style over substance (they don't make a lot of sense), others are fairly accurate. Cartouches containing the Birth and Throne names of the 18th Dynasty's Amenhotep III can be seen:  and  respectively).

Klimt has given his priestess the same striated wig as that which adorns the coffin in the accompanying scene (opposite). Perhaps

the artist was pointing to the woman's inevitable earthly fate.

Needing reference material to paint a passable rendition of an ancient Egyptian coffin, Klimt turned to a contemporary source: the first catalogue of the Egyptian Museum in Cairo. It had been published in 1872 by Auguste Mariette, Egypt's first Director of Egyptian Monuments.

The commission for the Kunsthistorisches Museum gave Gustav Klimt the opportunity to paint a subject that he relished above all others: women, preferably in various states of undress or, as in our example above, full nudity. This personal inclination may be why Klimt drifted so conspicuously from Egyptian artistic convention. While women are often sensuously portrayed in tomb chapel scenes wearing barely-there diaphanous gowns (as an aid to male post-mortem arousal and hence, fertility and rebirth), usually only children, dancers and prisoners depicted in the nude.

THE SPHERE

AN ILLUSTRATED NEWSPAPER FOR THE HOME

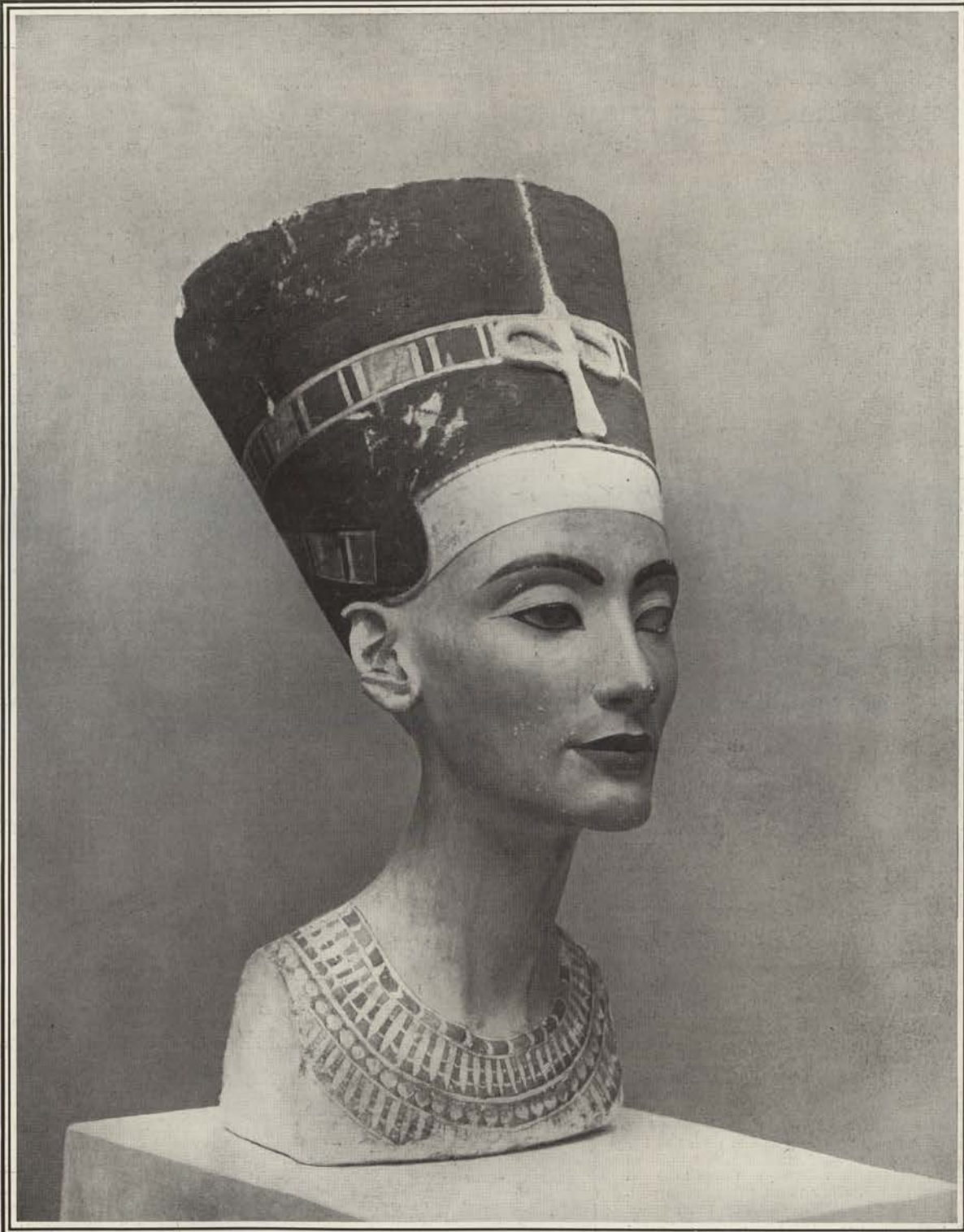
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Price One Shilling.

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London, February 17, 1923.



THE WONDER HEAD OF EGYPTIAN ART—THE PORTRAIT BUST OF QUEEN NEFERTITI

We are now able to present to our readers, by courtesy of the editor of "The Manchester Guardian," this splendid work of Egyptian sculpture, made public for the first time in this country. It is now in Berlin, having been taken there from Tel-el-Amarna in 1912 by the German archaeologists who had been working on the site of Akhnaton's sacred city. The crown alone identifies the head as that of the wife of Akhnaton, the "heretic" king. One hardly knows what to admire most—the modelling of the chin, the sensitive mouth, the ears, or the tapering neck with its muscles so admirably modelled. Further notes appear on a following page

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THE EGYPTOLOGY LIBRARY OF PEGGY JOY

LOOKING BACK

Vintage Images of Ancient Egypt

WE'RE QUITE FAMILIAR BY NOW with the bust of Nefertiti, discovered at Amarna in December 1912 and now displayed reverently in Berlin's Neues Museum. So what's so special about this photo from London's *The Sphere* newspaper? The answer lies in the date: February 17, 1923. For most people, this was their astonishing first look at the famous queen. In fact, this article appeared before the bust was officially unveiled to the public the following year.

Prior to this, the bust had spent almost a decade as a spectacular trophy on the mantelpiece of James Simon—the wealthy German industrialist who had bankrolled the Amarna expedition. Simon was the permit holder for the dig and thus legally owned the German share of everything they found. He eventually donated the finds to the Neues Museum after the 1914–1918 war.

For the author of *The Sphere's* 1923 article, it appears to have been love at first sight, and he gushed charmingly about the bust. Here is a portion of the article that accompanied these first photos of Nefertiti:

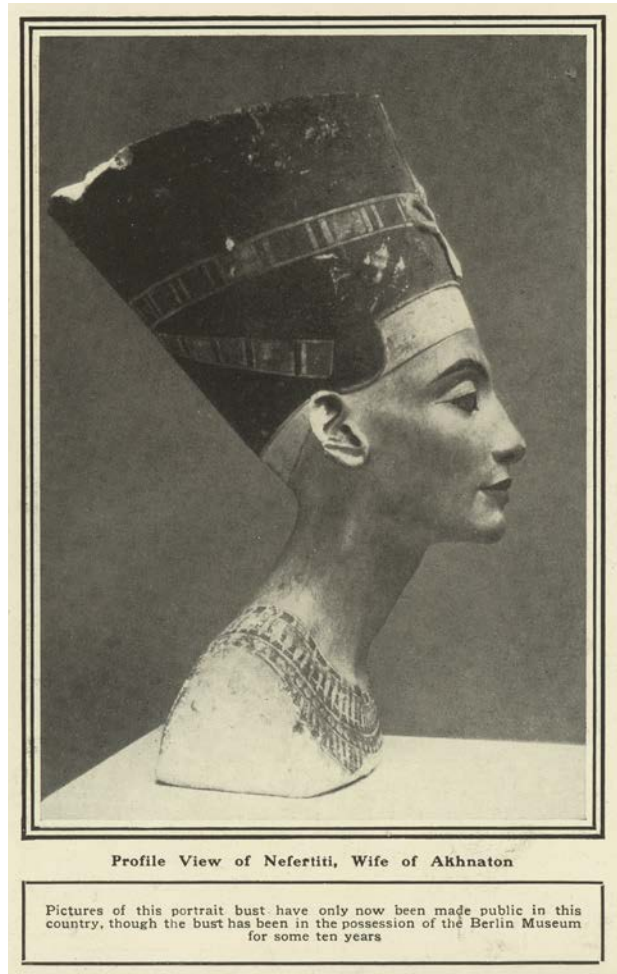
THE VISION OF A LOVING WIFE

A world of romance clings round the wonderful portrait of Queen Nefertiti, which we are able to reproduce on this page. Since the statue was discovered some year or two before the war, it has lain very quietly, almost *perdu*, in the new museum in Berlin. Egyptologists knew that this marvellous head was in Berlin, but no photographic reproductions, as far as we are aware, had been made public in this country [the U.K.] before *The Manchester Guardian* published them last week. Every student of art and of Egyptian history owes a debt of gratitude to the editor of the distinguished Manchester journal for bringing to public notice this most beautiful head of the mother of Tutankhamen's wife. . . .

This young and beautiful girl—her father was a nobleman named Ay—was married to Akhnaton when he was but Prince Amenophis. . . .

This wonderful wife shared her husband's idealist religion; she officiated in a temple of her own in Akhnaton's sacred city by the Nile—the city of the all-pervading deity of the Solar Disc. . . .

Gazing at this astonishingly beautiful countenance, it seems almost possible to bridge the gulf of time which separates us from Akhnaton's days, and to live once again with the Pharaohs of old.



THE EGYPTOLOGY LIBRARY OF PEGGY JOY

From 1923 to now, the iconic image of Nefertiti and her distinctive, flat-topped blue crown has continued to capture hearts and fuel controversy.

We should see in May the results of the latest geo-radar scans in Tutankhamun's tomb. A team from the Turin Polytechnic is looking to verify (or otherwise) the presence of hidden spaces behind the walls of Tutankhamun's burial chamber. One of these spaces is proposed to contain the burial of the tomb's original tenant: Nefertiti.

Some believe, however, that rather than being holed-up inside Tutankhamun's tomb, Nefertiti has been reposing in the Egyptian Museum in Cairo for well over a century. DNA evidence reveals that a nameless female mummy found in 1898 within the tomb of Amenhotep II (KV 35) is Tutankhamun's mother. Some researchers believe that the long-necked and fine-featured mummy (dubbed the "Younger Lady") is also Queen Nefertiti.

The most recent controversy involves a forensic facial reconstruction of the "Younger Lady", created for a TV program. To cement the link between the anonymous mummy and Nefertiti, the reconstruction is topped with the queen's iconic crown. Is it Nefertiti? Read the arguments for and against in the next issue of **NILE** Magazine.

U.K.

ANCIENT EGYPT LIFE ALONG THE RIVER NILE



Touchstones Rochdale

Showing until 21 April 2018

Explore Rochdale's own Egyptian collection spanning over 4,000 years of history.

EGYPT UNCOVERED BELZONI AND THE TOMB OF PHARAOH SETI I



**Sir John Soane's Museum,
London**

Showing until 14 April 2018

Celebrating the 200th anniversary of the discovery of the tomb of Seti I by Giovanni Belzoni.

BOOK OF THE DEAD PASSPORT THROUGH THE UNDERWORLD



**Victoria Gallery and Museum,
University of Liverpool**

Showing until September 2018

A guide to navigating the ancient Egyptian underworld along the path to eternity, featuring never before displayed objects.

THE MEROË HEAD OF AUGUSTUS



**Victoria Gallery and Museum,
University of Liverpool**

Showing until 30 June 2018

The Meroë Head of Augustus, discovered by John Garstang in 1910 is in Liverpool for the first time in over 100 years.

EUROPE

SCANNING SETI THE REGENERATION OF A PHARAONIC TOMB



**Antikenmuseum Basel und
Sammlung Ludwig, Switzerland**

Showing until 6 May 2018

Two complete rooms of the tomb of Seti I have been re-created: the Hall of Beauties and the Sarcophagus Room.

EGYPT GODS, PHARAOHS, MEN



**Spazio Aquileia 123 exhibition
center, Jesolo, Italy**

Showing until 15 December 2018

Artefacts from museums and private collections across Italy. Includes a 1:1 reproduction of Tutankhamun's tomb.

MUMMIES THE DREAM OF ETERNAL LIFE



**Gustav Lübcke Museum,
Hamm, Germany**

Showing until 17 June 2018

One of the largest collections of human and animal mummies, along with their related artefacts ever assembled.

MUMMIES IN BRUGES SECRETS OF ANCIENT EGYPT



XPO Center Bruges, Belgium

Showing until 11 November 2018

Touring exhibition from the *Rijksmuseum van Oudheden* in Leiden. Over 200 pieces —some have never before been shown.

THE FASCINATING WORLD OF THE PYRAMIDS



**MAMUZ Museum Mistelbach,
Austria**

Showing until 25 November 2018

Explores the big questions surrounding Egyptian pyramids, with amazing pieces from museums across Europe.

EGYPT

THE FOURTH INTERNATIONAL TUTANKHAMUN CONFERENCE



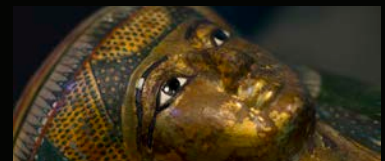
Grand Egyptian Museum, Cairo

5-7 May 2018

Annual conference presenting fresh research and often lively discussions on Tutankhamun's tomb, mummy and artefacts; this year focussing on the king's statuary and armory in particular.

AUSTRALIA

EGYPTIAN MUMMIES EXPLORING ANCIENT LIVES



Queensland Museum, Brisbane

Showing until 26 August 2018

A British Museum touring exhibition, allowing visitors to see below the wrappings with the latest CT technology.

U.S.A. & CANADA

DIVINE FELINES CATS OF ANCIENT EGYPT



Michael C. Carlos Museum,
Emory University, Atlanta,
Georgia

Showing until 11 November 2018
Explores the role of cats and other
felines in Egyptian mythology, kingship,
and everyday life.

PAINT THE EYES SOFTER MUMMY PORTRAITS FROM ROMAN EGYPT



Block Museum of Art, North-
western University, Evanston,
Illinois

Showing until 11 November 2018
Rare Roman-Egyptian funerary portraits,
painted on wooden panels in the Faiyum
between the 1st and 3rd centuries A.D.

THE FUTURE OF THE PAST MUMMIES and MEDICINE



Legion of Honor Museum
San Francisco

Showing until 26 August 2018
State-of-the-art scientific techniques help
explore two of the Fine Arts Museums'
mummies.

SUNKEN CITIES



St. Louis Art Museum

Showing until 9 September 2018
After touring Europe, the incredible
submerged treasures of the lost city of
Thonis-Heracleion arrive in the U.S.

EGYPT THE TIME OF THE PHARAOHS



Royal BC Museum, Victoria

18 May 2018 – 31 December 2018
More than 300 original artifacts from
the emergence of Egyptian civilization to
the Ptolemaic and Roman eras.

KING TUT TREASURES OF THE GOLDEN PHARAOH



California Science Center,
Los Angeles

Showing until 6 January 2019

The largest collection of artefacts from
Tutankhamun's tomb ever to leave Egypt.
Uniquely, this exhibition is focused on
interpreting the significance and meaning
of Tutankhamun's funerary treasures.

californiasciencecenter.org

ART AND PEOPLES OF THE KHARGA OASIS



Metropolitan Museum of Art,
New York

Showing until 30 September 2018
Highlights from the Met's excavations of
the 3rd-7th-century A.D. sites, including
Egyptian, Greek, and Roman art.

PAST IS PRESENT REVIVAL JEWELRY



Museum of Fine Arts, Boston

Showing until 19 August 2018
Features a number of beautiful Egyptian
revival pieces, as well as the original styles
that inspired the revivals.

BEYOND THE NILE EGYPT IN THE CLASSICAL WORLD



The Getty Center, Los Angeles,
California

Showing until 9 September 2018
Covers the interplay between the Egyptian
and the Greek and Roman cultures from
the Bronze Age to Roman times.

A WOMAN'S AFTERLIFE



Brooklyn Museum

Ongoing
Women had an extra hurdle to deal with
before they could access the afterlife:
they had to first become a man.

ARCE ANNUAL CONFERENCE



Tucson Marriott University
Park, Arizona

20-22 April 2018
One of the largest gatherings of Egypt-
ologists and enthusiasts in the world, with
a keynote address by Zahi Hawass.

COMING UP



THE CELESTIAL DUNG BEETLE

Sofia Aziz discovers what it is about this humble looking creature that led the Egyptians make it not just a deity, but also the most popular amulet in Egyptian history.



THE FACE OF NEFERTITI?

The head of the mummy called "The Younger Lady" was recently scanned and modelled. It's a remarkable portrait, but is it Nefertiti? We look at the cases for and against.



SETI I

Nicky Nielsen (University of Manchester) looks at the sometimes unusual reaction to the discovery of Seti I's tomb and mummy in the 18th and 19th centuries.



THE ROYAL TOMBS OF ANCIENT EGYPT.

PART 4: The Middle Kingdom. The next extract from Aidan Dodson's new book. After a century in the wilderness, royal pyramids are back—but not as we knew them.

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CONTACT NILE

hello@nilemagazine.com.au



EDITOR

Jeff Burzacott

editor@nilemagazine.com.au

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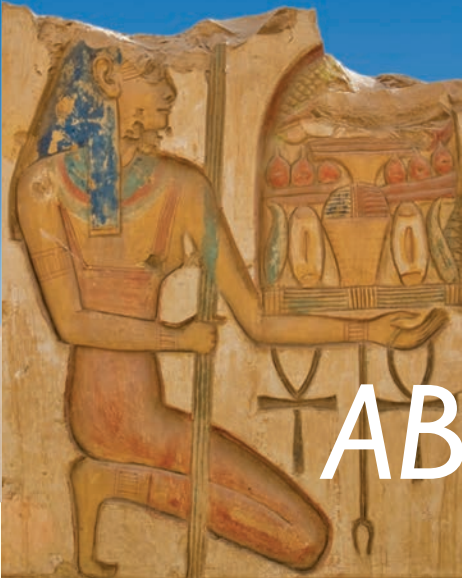
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