

# THE OSTRACON



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# ARCE

## *A Report on the 1997 Annual Meeting*

*by Dick Harwood*

**About the Author:** *Dick Harwood is a long time member and current Vice Chairman of the Egyptian Study Society. An attorney and banker, he retired in 1995 to devote more time to a number of interests, including Egyptology. Dick is a member of the University of Arizona Egyptian Expedition and a trustee of The Amarna Research Foundation.*

The 1997 Annual Meeting of the American Research Center in Egypt was held at the University of Michigan in Ann Arbor, on April 11-13.

For those who haven't had the opportunity to attend an ARCE conference, let me set the scene. Each spring, this distinguished and widely attended international Egyptological event is held in a different North American city. The annual meeting attracts some of the world's most renowned Egyptologists - both to speak and to listen.

The conference takes place in several different venues. In a main auditorium and two smaller conference rooms, 20-minute papers on a wide range of subjects are presented concurrently for two-and-a-half days. There is a central conference room where participants register, meet and greet, and browse through a huge array of publications from several book and print vendors. The conference spills over into the hotel and local restaurants, where everyone feels welcome to join other conference participants for food, drink and conversation. The atmosphere is friendly and informal; the titles of "Doctor" and "Professor" are heard only from graduate students who are at their first ARCE General Meeting.

I had not been in the Detroit area for almost thirty years, so I flew in a day early to look around the area. The following evening, James Harris - the dentist who has x-rayed the mummies of many Egyptian pharaohs to trace family relationships - hosted a cocktail party at his home in Ann Arbor for the several dozen conference participants who had arrived early. He is one of several attendees who has spoken to the ESS in the past.

The General Meeting formally begins on Friday morning and ends Sunday noon. Papers - usually accompanied by slide presentations - are read from early morning until late afternoon. Despite having reviewed the preliminary programs in depth, most people spend the morning and afternoon breaks trying to make final decisions about which of the three talks to take in during any given period. As frustrating as that is, the consolation is that it's hard to go wrong with any decision.

Among the most memorable talks at this year's conference were those by Peter Dorman, the recently retired Director of the Oriental Institute's Epigraphic Survey in Luxor, who reviewed the work being done on the 25th Dynasty Kushite

additions to Medinet Habu; Aiden Dodson of the University of Bristol, who spoke on "The Eighteenth Century Discovery of the Serapeum" at Saqqara; James Allen of the Metropolitan Museum of Art, who gave an excellent overview of Middle Kingdom coffins; James Hoffmeier of Wheaton College, who spoke on the probable identification of Egypt's long-lost frontier town in the Western Sinai; Salima Ikram of the American University in Cairo and also editor of the "Nile Currents" column in *KMT* magazine, who presented a fascinating look at the "Animal Mummies in the Cairo Museum"; Emily Teeter of the University of Chicago, who had spoken to the ESS in Denver earlier that week and who presented an excellent critique on the celibacy (or lack thereof) of ancient Egyptian temple priestesses; and Frank Yurco of the Field Museum in Chicago, who spoke on "The Rise of Israel from Egyptian Documentation" and who will be speaking to the ESS this fall.

Perhaps the best talk of the conference - at least that I heard - was by the keynote speaker, Ann Radwan, Executive Director of the Binational Fulbright Commission in Cairo, who cast aside prepared notes and chatted with her audience about the current educational, political, cultural and economic conditions in Egypt.

After sitting in lectures all day, you're ready for some good food, drink and mingling with other participants, and ARCE conferences are not short on any of those. On Friday evenings there is a cocktail/buffet reception given by the host institution. This year's reception was held in the wonderful Exhibit Museum of Natural History on the University of Michigan campus, where everyone socialized amid the fossilized remains of dinosaurs and early man. Saturday evenings are set aside for another reception and the Conference Banquet; this year's was mercifully short on prepared speeches and honored Madame Amira Khatab, a charming and dynamic lady who has literally run the ARCE headquarters in Cairo for the past thirty years.

Final impressions of the conference? Five stick out in my mind, in no particular order. First was the quality and information of the various papers I heard. Second was the opportunity to meet, talk with, and share ideas with some of the most respected experts in Egyptology from around the world. Third was the chance to visit with many of the people who have spoken to the ESS (or who will speak to the ESS in the coming months), including Ben Harer, Jim Harris, Don Ryan, Emily Teeter, Terry Walz, Richard Wilkinson, Frank Yurco, and several others. Fourth was to overhear all the positive comments these individuals made about the Egyptian Study Society. And fifth was to learn that an ESS member, Bob Lowdermilk, has been elected as the newest member of the National Board of Governors of the American Research Center in Egypt!

# EGYPT AND MESOPOTAMIA

## *Ancient Friends, Ancient Rivals*

*by Dr. Robert Chadwick*

### *Part I: Geography and Architecture'*



**About the Author:** *Dr. Robert Chadwick teaches at John Abbott College in Quebec, and is a dual U.S. and Canadian citizen. He is an Assyriologist and archaeo-astronomer with a Ph.D. from the University of Montreal, and is the author of a book in the First Civilization series titled "Ancient Egypt and Ancient Mesopotamia". A Denver native, Dr. Chadwick traces his interest in the ancient world to a childhood visit to the Denver Museum of Natural History. He is an ESS member, and has been a guest speaker twice.*

It is an established fact that the civilizations of Greece and Rome form the basis of modern western societies. However, a number of important elements of western civilization predate the Greeks and Romans, and come directly from Mesopotamia and Egypt. Our 365-day calendar and 24-hour day originated in Egypt. Scientific astronomy originated in Mesopotamia and spread west to the Greeks and Romans, who made their own contributions to this science<sup>2</sup>. Astrology, one of the humankind's most enduring beliefs, originated in Mesopotamia, and had a profound influence on art and religion in the Greco-Roman - and ultimately Christian and Islamic - worlds<sup>3</sup>. Key elements of architecture such as the arch and vault were in use in Egypt and Mesopotamia nearly two millennia before the Romans. Monotheism, so cherished by western religious traditions, first appeared in Egypt<sup>4</sup>. It reappeared several centuries later in Israel, and eventually formed the basis of three of the modern world's great religions: Judaism, Christianity, and Islam. Modern western religions have also been influenced by the religions of Mesopotamia<sup>5</sup>. If we add to these accomplishments the invention of the alphabet, which also originated in the ancient Near East (and at least in part in Egypt<sup>6</sup>), it is clear that some of the most important and valuable elements of our own western tradition came from the world's first civilizations: ancient Mesopotamia and ancient Egypt.

#### **Terminology**

The word *Egypt* refers to a geographical area situated in north Africa adjacent to the Nile River. However, it also refers to the Egyptians, the people who lived in this area, and to Egyptian culture, language, and religion. The modern name Egypt is derived from a Greek variation of the ancient word *hikuptah*.<sup>7</sup>

The word *Mesopotamia* ("the land between the rivers") was coined by Greek historians during the first millennium B.C.<sup>8</sup> It refers to a geographical area located in the regions of the Tigris and Euphrates Rivers. There never existed a country or nation called "Mesopotamia," nor did any ancient group of people ever refer to themselves as "Mesopotamians."

Mesopotamia was the home of numerous groups of people who moved into the region elsewhere, either migrating or invading. The principal peoples who lived in Mesopotamia were the Sumerians, the Akkadians, the Babylonians, and the Assyrians.

Throughout much of Egypt's early history, the Egyptians were a more homogenous group of people, most of whom spoke the same language and shared many of the same cultural traditions. This was due in part to Egypt's location in the northeast corner of Africa which gave it a greater amount of geographical isolation from neighbors, invaders and migrants<sup>9</sup>. In contrast, the vast regions of Mesopotamia were more easily accessible to outsiders<sup>10</sup>, resulting in greater cultural and linguistic diversity.

#### **Climate and Agriculture**

Just about everyone is familiar with the statement by the Greek historian Herodotus that "Egypt is the gift of the Nile."<sup>11</sup> Without the Nile, the civilization of ancient Egypt would never have developed and flourished. Most of Egypt receives little or no rainfall, and without the Nile,

agriculture was impossible<sup>12</sup>. The Nile starts below the equator in Lake Victoria and flows 6400 kilometers north to the Mediterranean Sea. The annual flooding of the Nile was caused by spring and summer rains which occurred thousands of kilometers south of Egypt in the East African highlands. The Nile brought life-giving waters to the farmers of Egypt, and carried millions of tons of silt and nutrients which fertilized the land<sup>13</sup>. Because the Nile flooded with some degree of regularity it provided an important measure of security for Egyptian farmers.<sup>14</sup>

The Nile flooded in the summer months, before planting, and was not a menace to crops in the fields during their periods of growth and harvest<sup>15</sup>. Because the Nile flood preceded the planting of crops, it brought renewed life for the land and its inhabitants. As the process of revivification faithfully repeated itself year after year, the River gave the Egyptian people hope that like the crops, they too would be reborn in the afterlife where they would live for eternity in peace and comfort.

The situation was reversed for the early farmers of Mesopotamia. Like the Nile, the Tigris and Euphrates Rivers offered the promise of renewed life<sup>16</sup>, but there was an element of danger which accompanied their annual inundations, since both rivers flooded in the spring just as the harvest was about to begin. Such untimely flooding would occasionally destroy crops in the fields. The rivers of Mesopotamia could bring either renewed life or great destruction, a factor that almost certainly had an effect on the people's outlook on life and the afterlife. If, as some have argued,<sup>17</sup> the Egyptians' optimistic outlook on life and death was influenced by the positive elements in their physical environment, then the capricious riverine environment of Mesopotamia was most likely a factor in the development of the pessimistic world view of the Sumerians, Babylonians, and Assyrians.<sup>18</sup>

In addition to the ill-timed flooding, poor drainage caused the build-up of excessive salt deposits on agricultural lands (salinization), which rendered them useless for farming,<sup>19</sup> and, in some cases, forced farmers to abandon large areas of southern Mesopotamia. Floods and poor drainage, combined with terrible storms which sometimes struck the land, made farming difficult in Mesopotamia. In order to fully exploit the agricultural potential of Mesopotamia, farmers were required to build large and sophisticated systems of irrigation canals<sup>20</sup>, while the farmers of Egypt could exploit the riches of the Nile Valley with only a minimum of artificial control and intervention.<sup>21</sup>

### Transportation

The Nile provided a better water transportation system than either the Tigris or the Euphrates Rivers.<sup>22</sup> The prevailing winds were favorable for sailing boats up the Nile against the current and the current in turn would carry them from the First Cataract at Aswan, all the way to the Mediterranean Sea, nearly 1000 kilometers to the north. It was possible to travel this distance without encountering any rapids, and without the need to make a single portage or detour around obstacles.

The Tigris and Euphrates were also used for river transportation, and were excellent river highways. However, because the prevailing winds of Mesopotamia blew in the same direction as the flow of the rivers, sailing craft were less practical and boats often had to be rowed or towed from one place to another. To facilitate water transportation the people of Mesopotamia built extensive canal systems,<sup>23</sup> particularly on the Euphrates, which in some instances ran parallel to the river for distances over a hundred kilometers - something that was usually unnecessary in Egypt.<sup>24</sup> The Mesopotamian rivers also tended to silt up, and sometimes made radical changes in their courses. The Euphrates has moved eastward nearly 20 kilometers in historical times, while the Nile has scarcely moved from its original bed in the past 5,000 years.<sup>25</sup>

### Geography and World View

Although more recently scholars have tended to downplay its significance, over the years there has been some debate concerning the importance of certain geographical factors which tended to isolate Egypt from outside influences and attacks. Egyptologist John A. Wilson conceived the narrow confines of the Nile Valley as "a tube," that was "loosely sealed against outside contact."<sup>27</sup> Others have seen the Nile Valley as a "blissful abode" a kind of oasis, or garden in the desert, that enabled Egyptian society to grow up in isolation.<sup>28</sup> More recently, John Romer has spoken of Egypt as a world of order, while outside the Nile Valley lay a world of disorder.<sup>29</sup> Manchester Egyptologist A.R. David argues that ancient Egypt developed "largely unaffected by outside influences due to the geographical situation of the Two Lands."<sup>30</sup> Accordingly, once early predynastic contacts with Palestine and Mesopotamia were made and Egyptian civilization had been formed, natural barriers cut off the Nile Valley from much outside influence, particularly enemy invasion. The Mediterranean Sea to the north, The Red Sea to the east, the great Sahara Desert to the west, and the vast African hinterland to the south, all helped insure Egypt's isolation from outside military invasion.

Even though Egypt was shaken by internal strife on several occasions, full-scale attacks by outsiders were rare until the arrival of the Libyans and the Sea Peoples<sup>31</sup> in the latter part of the second millennium B.C.<sup>32</sup> This relative security undoubtedly gave the Egyptians some additional peace of mind and served to reinforce their optimistic world view. Egypt's optimistic view of the afterlife, and the funerary preparations that went with it, were in part a reflection of the geographical and political security offered by the Nile Valley.<sup>33</sup>

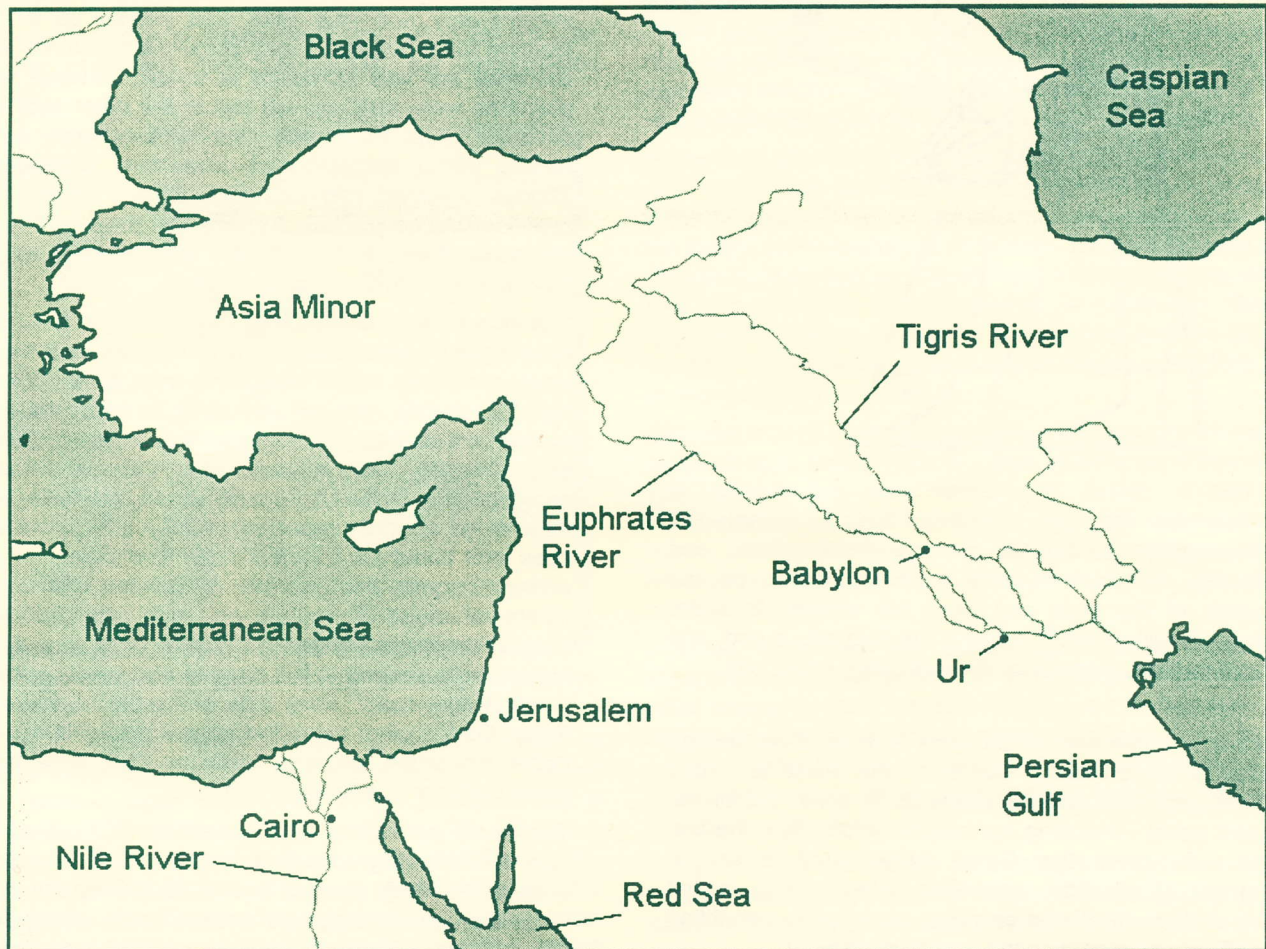
Natural barriers did exist between Egypt and its neighbors, and they do seem to have restricted military invasion, but not trade<sup>34</sup>, since commercial exchanges between Egypt and its neighbors continued during all historical periods<sup>35</sup>. As early as the Gerzian period, there is ample evidence of contact with outsiders that had a profound effect on the formation of predynastic Egypt.<sup>36</sup> Trade and outside contacts continued to be an important element of Egyptian growth, particularly through the

important trading post of Byblos, from early in the 3rd millennium BC to the end of the Pharaonic period.

Beginning in the fourth millennium BC Mesopotamia was an urban civilization and the home of a city-state form of government. At the same time Egypt remained an essentially rural nation with numerous small farming settlements scattered along the length of the Nile River, but with few real cities with large populations<sup>37</sup>. Beginning around 2900 BC the great fortification walls of the city of Uruk in southern Mesopotamia were built. These massive walls were 9.5 kilometers in length, contained 900 guard towers, and enclosed an area of 550 hectares. No fortified city of this size has been found in Egypt until much later. In fact, although there are artistic representations of

fortifications or fortified villages in Egypt, as yet there is no archaeological evidence for their existence.<sup>38</sup>

In Mesopotamia early in the third millennium BC there is much evidence of the development of walled cities and the large-scale abandonment of smaller, less defensible villages and towns<sup>39</sup>. Though the development of large, fortified cities may be a sign of increased trade and improved living standards, it is also a response to military threats from neighboring city-states and the menace of outside invaders. Although there were some fortified towns or villages in Egypt, there is no archaeological evidence of large, fortified cities during the early centuries of its history, and this may be accounted for in part by the lack of any outside military threat in this period.



### Urban Architecture

Architecture, including the spectacular building projects undertaken during the late fourth and early third millennia BC, is particularly informative about the unique nature of these two civilizations. The Egyptians, apparently unified under a single government led by a god-king and protected from invasion by geographical barriers, undertook large-scale national construction projects like the building of pyramids and vast mortuary complexes. During the same period, the peoples of Mesopotamia, fragmented into numerous city-states, and with no geographical barriers for protection from their enemies,

built massive fortification walls. Around 2100 BC the Sumerians were built a great structure called the "Amorite Wall" to stem the flow of the migrant Amorites.<sup>40</sup> Over the centuries, the number of migrating or invading peoples disturbing the political and social order in Mesopotamia is evident from one end of the land to the other. The list is long, and their raids and conquests frequent.<sup>41</sup> Whether they were Gutians or Amorites, Kassites or Arameans, textual and archaeological evidence repeatedly points to periods of upheaval and destruction in Mesopotamia brought on by outside forces.



In response to this situation the inhabitants of Mesopotamia developed a sacred literature and mythology in which humans were created to be the servants of the gods and were not allowed to share eternal life with them.<sup>42</sup> In Egypt the king was a god, and every Egyptian, regardless of social class, could look

forward to some kind of pleasant afterlife. Even though Mesopotamia produced some of the most important technological and cultural elements to come out of the ancient world - including agriculture, writing, and the first cities - it seems that Egypt, because of its unique geographical situation, was often better able to exploit many of these newfound elements of civilization, enabling it to offer its citizens an extra margin of security.

### Sacred Architecture

The most significant architectural structures created by the peoples of ancient Mesopotamia were the mud brick towers known as ziggurats.<sup>43</sup> In at least one sense, ziggurats were to Mesopotamia what the pyramids were to Egypt: monumental symbols of a great civilization. But the similarities end there. Ziggurats and pyramids were built for entirely different reasons and were in no way connected with each other. George Roux<sup>44</sup> has suggested that Sumerian architects may have been inspired by the Egyptian pyramid-builders, and though the idea is

intriguing, at this time there is no solid evidence that the monument builders of these two lands were ever in contact with each other, or exchanged ideas about architecture.

Pyramids were tombs, but no-one was ever buried in a ziggurat. A number of pyramids contain chambers and passageways, but ziggurats were completely solid. Ziggurats had wide exterior ramps and stairways leading up to a small temple at their summit. Pyramids had no exterior stairways or ramps, were never meant to be climbed, and had no temples or other kinds of structures at their summits. Finally, and perhaps most important of all, pyramids were built out of stone, while ziggurats were made out of mud bricks.

In its earliest form, a ziggurat consisted of a terrace of trodden clay and mud brick that served as a raised platform for a temple.<sup>45</sup> Early ziggurats had three levels, and later this was increased to seven. Elevated temple platforms were built one on top of the other over many centuries. With each new addition they grew in size, leaving earlier stages buried under later enlargements. Though individual pyramids always went through some modifications during their construction, they were in most cases built for a single king, and new pyramids were not built over the remains of older ones.

The largest ziggurats, such as those found in the cities of Babylon or Ur, measured about 100 meters on a side and when completed would have been from 50 to 90 meters high.<sup>46</sup> Ziggurats were not as durable as pyramids, and all of them are so badly deteriorated that archaeologists can only estimate their original size. Leonard Woolley's reconstruction of the Ur ziggurat shows it to have been a three-stage structure measuring 62.5 x 43 meters at the base and about 16.7 meters high. The plan of a sixth-century ziggurat from the city of Babylon claims that it measured about 90 meters on each side, had seven stages, each one painted a different color, and was 90 meters high, making it the highest and most impressive ziggurat ever built.<sup>47</sup> Very little of this structure remains today. On the other hand, the largest pyramids are much better preserved, primarily because they were built of stone blocks and not mud bricks.

The Khufu pyramid at Giza measures 283 meters on a side and originally rose to a height of 146 meters. The base of the Khufu pyramid covers 53,000 square meters, while the largest ziggurats covered only about 10,000 square meters. These dimensions indicate more than just the physical size of these structures. Indirectly, they reveal a great deal about the societies that built them and the raw materials that were available to their builders. Since there was no stone for building projects in Mesopotamia, mud brick was the only available building material. Mud bricks were literally "dirt cheap." One had only to scoop up a few handfuls of earth, add some water and straw and pour the mixture into a brick mold to produce an endless supply of bricks. Despite the availability of this building material, ziggurats were always considerably smaller than pyramids. This may have been because the Sumerian city-states were smaller and could not assemble either the manpower or the wealth required

to build pyramid-size structures.<sup>48</sup> Later, when the Assyrians had a vast empire that included Egypt, ziggurats were still small in comparison to Egyptian pyramids. This is due to several factors.

The central core of a ziggurat was made of unbaked, sun-dried bricks and covered with an outer shell of baked bricks, up to 15 meters thick. In the core of the ziggurat reed mats were laid and layers of tar were added to keep water from penetrating to the interior. But even with these precautions, rain water from the rare yet devastating cloudbursts that sometimes occurred in the region did occasionally leak into the interior of the structure, causing its unbaked core to expand, bulge and crumble. Kings faced the constant task of rebuilding crumbling mud-brick structures such as palaces, temples, fortifications and ziggurats. Mud-brick structures rarely lasted a century without major refurbishment, and often after only a few decades, work crews were required to repair or rebuild the variety of mud brick structures in use throughout Mesopotamia.

The Egyptians did not have this problem. They built in stone which required little or no maintenance, and their structures have lasted into modern times. Like stone, baked mud bricks are practically indestructible and will last for millennia. Why then, were ziggurats not built entirely out of baked bricks? Environmental factors may have dictated the quantity of burnt mud bricks used in large structures. There were very few trees in Mesopotamia, and the Sumerians, Babylonians, and Assyrians may have lacked the necessary fuel to bake the millions of bricks required for large structures. Most of the wood and straw fuel available was used for cooking fires in private homes and could not be spared for brick making. A second factor was size of the brick building material used to make them. Mud bricks are smaller and lighter than the great stones used in pyramid construction - usually about 25 centimeters square by 12 centimeters thick - and in the millennia since they were abandoned, local peasants found the outer parts of the ziggurats to be a convenient source of baked brick for constructing houses, fences, and farm buildings.

The purpose of Egyptian pyramids is clear: they were tombs for their deceased kings. But if ziggurats were not tombs, then what was their purpose? Early explorers naively thought that they were used by Babylonian and Assyrian priests to escape the mosquitoes.<sup>49</sup> Some maintain that the first small ziggurats were simple raised platforms where the village grain supply was kept dry during the annual flood.<sup>50</sup> As early as the fourth millennium BC temples were built on raised earth and mud-brick mounds, and ziggurats were an outgrowth of this type of construction.<sup>51</sup> The most widely-accepted explanation is that ziggurats were meant to be climbed. Ziggurats always had several stairways leading to their summits and it is clear that their primary purpose was to elevate the priests closer to the realm of the gods in the heavens. It is evident that offerings were made to the gods from a small temple at the summit of the ziggurat.<sup>52</sup> In this way, ziggurats formed a spiritual link between humans on earth and the sacred realm of the gods in the

heavens. The Greek historian Herodotus claimed that ziggurats were used in the sacred marriage ritual where the king, who represented the god Marduk, spent the night in the shrine at the summit of the ziggurat with the high priestess of the Moon god. If she descended the ziggurat pregnant, according to Herodotus,<sup>53</sup> the crops would be fertile in the coming year.

In the early days of Assyriological research it was claimed that ziggurats were built as celestial observatories where astronomers could have studied the stars without city buildings obstructing their view.<sup>54</sup> Though it is possible that celestial observers climbed to the top of ziggurats to observe the night-time sky or to make offerings to the celestial gods, today few scholars accept this interpretation. Climbing a few meters to the top of a ziggurat would not give an astronomer a significantly better view of celestial objects, and it is doubtful that ziggurats would have been of much use to astronomers and calendar makers. Whether or not they were used for making celestial observations, one thing is certain: ziggurats were not originally built to be observatories or celestial observation platforms. Not once in the hundreds of Assyrian and Babylonian astronomical and astrological texts do astronomers ever mention that they climbed to the top of a ziggurat to observe the heavens.<sup>55</sup>



The most widely known reference to a ziggurat outside of Mesopotamia occurs in the Old Testament, in the story of the Tower of Babel.<sup>56</sup> The story was probably borrowed by the Hebrews from the Babylonians during the first millennium B.C.<sup>57</sup> The Old Testament writers were impressed by the great temple structure dedicated to the chief Babylonian god, Marduk, and its towering ziggurat they called the "Tower of Babel". The word *Babel* is the Hebrew form of the Akkadian *bab-ilim* meaning "gate of god."<sup>58</sup> The more modern word *Babylon* is the Greek form of the same name, known as early as the seventh century BC. The ziggurat at Babylon was called *E-temen-an-ki* "the

temple foundation of heaven and earth." The god Marduk commanded its builders to make the base of the tower in the underworld and build its summit so high that it would reach the heavens. Even though today there are practically no physical remains of the Tower of Babel, in ancient times it must have been a spectacular sight to behold, since its builders called it "the rival of heaven."

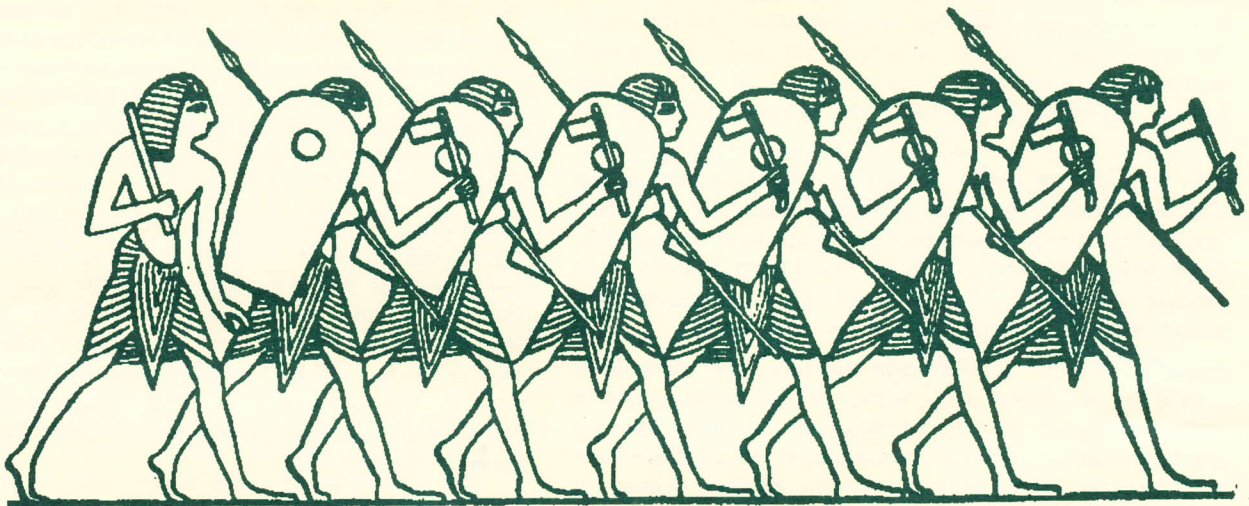
*Next installment: Death and the afterlife in Egypt and Mesopotamia.*

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36. Michael Astour, "Overland Trade Routes in Ancient Western Asia," *Civilizations of the Ancient Near East*, Jack Sasson editor, Charles Scribner's Sons, New York, 1995, Vol. III, p. 1405.
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38. Amihai Mazar, "The Fortification of Cities in the Ancient Near East," *Civilizations of the Ancient Near East*, Charles Scribner's Sons, New York, 1995, Vol. III, p. 1524.
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47. *op. cit.*, Wiseman, pp. 68-73.
48. *op. cit.*, Saggs, p. 57.
49. *op. cit.*, Roux, p. 156.
50. *op. cit.*, Bushink, p. 93, and Parrot, pp. 200-217.
51. But see *op. cit.*, Busink, p. 120.
52. *op. cit.*, Busink, pp. 98-99.
53. Herodotus, *Histories*, Book I, 181.
54. *op. cit.*, Parrot, p.216. However, it might have helped them make more accurate observations of the rising and setting of the Moon when it appeared near the horizon. The Moon was of particular interest to the people of Mesopotamia since throughout their history they maintained a lunar calendar. Perhaps by climbing to the summit of a ziggurat calendar makers may have had a better chance of seeing the slim lunar crescent which was essential for determining the first day of the month.
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# *Nefertiti and Akhenaten:*

## *Evidence for a Co-Regency?*

*by Laura Engel*

**About the Author:** *Laura Engel is facilitator of the Book Study Group, and a former ESS board member. She has a degree in Anthropology from the University of Colorado, Denver, and has been to Egypt eight times. Laura runs an Egyptian import business with her sister Linda, and is particularly interested in the time of Hatshepsut.*

Queen Nefertiti, whose name means "the beautiful one has come," has long been portrayed as one of the most beautiful women in the world. Her portrait adorns cosmetics and beauty treatments in many countries, and of all of the women in Egypt's long history, her name is second only to that of Cleopatra. But was Nefertiti only a beautiful woman, or did she rule as a king alongside her husband Amenhotep IV, better known as Akhenaten?

The period of the late 17th and the 18th Dynasties produced many strong female role models. Before Nefertiti, there was Queen Ah-hotep of the 17th Dynasty, whose son dedicated a royal stela to her for the part she played in defending Egypt against its enemies. She was honored by receiving the royal necklace of golden flies - usually bestowed upon generals in recognition of their courage in battle. Ah-hotep's granddaughter, Queen Hatshepsut, ruled for 22 years, and was the only female known to rule as king. She is known for her great building projects and the restoration of many temples throughout Egypt, as well for her advancement of foreign trade.

Even Nefertiti's mother-in-law, Queen Tiye, was a strong, influential woman. Tiye, a woman of non-royal birth, helped to rule the country with her husband, Amenhotep III; "ultimately she functioned not only as omnipresent consort, but unprecedentedly as *de facto* co-ruler as well" (Forbes 26). Her son Amenhotep IV would have witnessed his mother's strength and abilities, even if they were not recognized in titles.

Queen Tiye bore seven children: five daughters, Sitamen, Iset, Henuttaunebu, Nebetan and Baketaten, and two sons, Tuthmosis, the royal heir, and Amenhotep. Tuthmosis died before he could assume the throne, and his younger brother, Amenhotep IV, became heir and eventually king.

It appears likely that Amenhotep IV was made co-regent with his father at about the age of 16. On a relief at the Karnak temple, he is portrayed much smaller than his father, but the young regent mirrors the king's posture and actions. Soon after he became co-regent, Amenhotep IV was wed to Nefertiti, a woman not unlike Queen Tiye. Both women were older than their husbands, and of non-royal blood.

Nefertiti's lineage is not known for sure. The most likely choice for her father is Ay, a high official in the courts of both Amenhotep III and Amenhotep IV, who became pharaoh after the death of Tutankhamen. He held the titles of "Overseer of Horses" (chariotry officer), "Chief of Bowmen," "True Royal Scribe," "Fanbearer" and "God's Father" - the last, it is believed, referring to Ay's being the

father of Nefertiti, and thus Akhenaten's father-in-law (Schaden 92). It has also been argued that Ay was Queen Tiye's brother, which would have made Akhenaten Nefertiti's first cousin as well as her husband. Ay's wife, Ty, bore the title of "Great Nurse Who Reared the Goddess" referring to Nefertiti's divine status.

Ty also bore the titles "Nurse of the King's Great Wife, Neferneferuaten Nefertiti" in addition to "Royal Ornament," a common title of women of the court, "Lady of the House" and "Greatly Praised of Waenre" - that is, Akhenaten (Sahaden 94). It is not known if Ty was Nefertiti's birth mother, her wet-nurse or just her nurse. Ty was eventually elevated to Great Royal Wife when her husband Ay became king.

Nefertiti gave birth to six daughters during the first nine years of Amenhotep IV's 17- year reign: Meryetaten, Maketaten, Ankhesenpaaten, Neferneferuaten-Tesherit, Neferneferure and Sotepenre. Meryetaten, the eldest daughter, was married to her father about the 14th year of his reign. This followed a precedent set by her grandfather Amenhotep III, who married both his eldest daughter Sitamen and his daughter Iset. Both these women were elevated to the position of Great Royal Wife - as was Meryetaten upon her marriage to Akhenaten (Forbes 29). If Queen Nefertiti had become co-regent, then the position of Great Royal Wife would be vacant, and Meryetaten would be the first choice to fill it. Ankhesenpaaten, Nefertiti's third daughter, was wed to Tutankhamen when he became king at the age of nine years.

By the fifth year of his reign, Amenhotep IV proclaimed Atenism the national religion and changed his name to Akhenaten, "One Who Is Serviceable to Aten." At this time, his royal wife added the name Neferneferuaten to her own name. This name addition is interesting in the hieroglyphic characters used. Both the long and short versions of the new name use a female determinative (a seated female figure), representing the queen. Facing this determinative is the name of the god Aten. This name-form is evident in other royal names, but only in the name of a king. It is possible that this name addition was one of Nefertiti's throne names, and that it is at this time she became co-regent of Egypt.

The name of "king Ankhkheperure" also appears on reliefs during the reign of Akhenaten. There has been much speculation as to this individual's identity. On a co-regency stela is written "Ankhkheperure Beloved of Waenre, Neferneferuaten Beloved of Akhenaten." It seems clear to me that the two names Ankhkheperure and Neferneferuaten refer to the same person. This seems especially true considering the fact that some of the names bear a feminine gender reference.

Further evidence is found on a stela dedicated by Pasi, a soldier in Akhenaten's army. The stela depicts two

pharaohs, seated on thrones under the rays of the Aten, caressing one another. Some scholars suggest that Akhenaten had a homosexual lover and co-regent rather than explaining the second figure as his wife, Nefertiti (Allen 74-75), elevated to co-regency. Reliefs also portray Ankhkheperure with "The Great Royal Wife" Meryetaten. The conventions of the day demanded that a ruler must have a Great Royal Wife, and I believe that it is for this reason that Meryetaten was shown with her mother in these reliefs.

Akhenaten has been portrayed as an individualist, a poet, a pacifist and a religious fanatic. There is evidence, in the form of correspondence, that he allowed Egypt's army to become corrupt. With his lack of rulership and authority the borders of his country became endangered. It is not hard to believe that he decided he needed help in administering the government, and who would be better suited for the role than his royal wife and companion, the strong-willed Nefertiti?



Nefertiti and Akhenaten. Berlin Museum #14145. From Kemp, *Anatomy of a Civilization*

The art of Ancient Egypt consists to a large extent of religious symbols. The color and size of an object, as well as its location within the context of the piece, all had a bearing on its function within the artwork. The size of a person rarely reflected the visual reality (Wilkinson 38). People of lower social standing were shown on a smaller scale than people of greater importance. The king, being the incarnation of the living god, was portrayed using the largest scale. His family was often shown standing at his feet. Wives and adult children had the stature of small children or pets rather than true adults. These individuals would be of varying heights, depending on their importance, but they would all be smaller than the king. As the art of the Amarna period progressed, people were portrayed closer to their true stature than in previous art, but commoners were still portrayed smaller than the king. Even in the caricatures of the royal family that were popular for a time, the facts of their physical appearance seem to hold true in a form of exaggerated naturalism. Children began to look like children instead of miniature adults, and people with injuries or deformities were shown accurately.

In the early Amarna art, Nefertiti is portrayed at about half the height of her husband, reaching only to his waist. In later pictures, she is portrayed as reaching her husband's armpits. Even later in the period, the noble queen seems to have been elevated in stature as well as importance to what looks to be her normal height, just above the king's shoulder-level. It is true that she is shown to be shorter than Akhenaten, but since in life this was probably true, and considering the realism in the art of the time, it would be more appropriate for her elevation in position to elevate her height to her normal size, instead of the same height as the king. We can be reasonably sure that the Queen did not grow two feet in height, but rather that something transpired to elevate her importance.

There is a correlation between how many daughters had been born and the height of Nefertiti's relief portraits. This is not to say that having six daughters is the reason why Nefertiti was elevated in importance - many royal women had more children, including royal heirs - but the time of her rise in importance can be traced to a time between births.

Some time after the birth of their first daughter, Nefertiti was promoted to the stature of reaching her husband's armpits. After the birth of their second daughter, she was elevated to the height of her husband's shoulders. This is the height she remained from then on - apart from a few occasions when she is shown to be the same height as Akhenaten. This is accomplished either by having him bending down to deliver rewards to his officials, or on a few occasions when they are shown praying to the Aten.

Different crowns or headpieces were also used to denote a person's rank. Before Nefertiti's time, queens were portrayed with crowns that were feminine in design. Except for Hatshepsut, who ruled as "female King", the queens never wore a masculine crown. Several goddesses wore masculine headpieces, but they were divine, not mere mortal queens.

However, after year five of Akhenaten's reign, Nefertiti is depicted on temple walls and in tomb paintings wearing what seems to be a feminine counterpart to the blue war crown (*khepresh*) worn exclusively by kings. This crown became Nefertiti's best-known insignia; its first appearance is in a relief where she is shown smiting Egypt's enemies in a kingly fashion (Green 31).

In Ay's tomb, Nefertiti is shown wearing the *atit* crown, which is also customarily worn by kings. It is thought by some scholars that this crown was used in her coronation. She is also shown wearing this crown in two private tombs. If these portraits had no special significance, then why is she wearing this particular crown? It seems likely that the officials in whose tombs she is thus represented were those who had officiated at her coronation as co-regent. This would explain why this particular image was thought worthy of a place on the walls of these officials' tombs for eternity.

On a *talatat* (construction block three hands wide) in the Boston Museum of Art is more evidence of Nefertiti's peculiar role. The tops of the steering oars on the Queen's royal barge are adorned with portrait-heads of the Queen. In the art of the day a pharaoh's barge, his boat of state, was identifiable by the portrait-heads of the king that were used

as standards on the ends of the great steering oars. In a famous relief showing three such craft, the ends of Akhenaten's oars are shown with his face on the capitals. Also present is a boat bearing the portrait-heads of Queen Nefertiti wearing her tall blue crown (Ertman 51). Cyril Aldred stated that the portraits of Akhenaten definitely indicate that he is king. It seems, then, that the portrait heads of Nefertiti also indicate kingship.

Also shown on the Boston *talatat* is the Queen in a kiosk at the bough of her barge. In this picture she is bare to the waist, smiting a female enemy; "from the time of Narmer onward this motif was essentially a portrayal of the king's royal status" (Green 36). Her clothing has a higher waistline than that worn by her husband in a similar relief, but it is obvious that she is wearing the kilt of a king as well as performing the act of a king defending his country. Another picture of the queen nude to the waist, like a male, is in the tomb of Ay at Tell el Armana. Due to the lack of clothing on the upper torso, a partial statue in the Metropolitan Museum of Art has been catalogued as being Akhenaten. Because of the presence of the female qualities of this statue, most notably the prominent breasts, I agree with Earl Ertman's conclusion that the statue represents Nefertiti and not her husband. Similar portrayals of Hatshepsut exist to show that a female might be portrayed with male trappings to denote rulership.

In the 1960s, a project was started to reconstruct a temple that had been dismantled in the Karnak Temple complex, in the area of ancient Thebes. 16,000 *talatats* had been found, used as filler inside a pylon of Horemheb, one of Tutankhamen's successors.

Horemheb had been a general during the time of Nefertiti and Akhenaten, and assumed the throne after the brief reign of Ay. With the help of a computer in Cairo and funding from the Foreign Currency Program of the Smithsonian Museum, these blocks were pieced together to form scenes from Akhenaten's Aten temple complex. The most exciting and surprising find were blocks that had been used in the construction of a pillared courtyard, named "House of the Benben", dedicated to the noble consort, Nefertiti (Smith 647).

This beautiful courtyard is the only structure of its kind ever discovered. All the blocks were delicately decorated with female figures - there is not a single portrayal of a male within the complex. There is no image of the king, and not even a mention of his name. There are no male fan-bearers, musicians or animals.

Most of the scenes show Nefertiti making offerings to herself or being blessed by the golden rays of the Aten's solar disk (Smith 648). In many of the scenes she is accompanied by her daughter Meryetaten. Scholars believe that this temple was constructed to honor Nefertiti while she was still in her teens, and "suggests that Nefertiti had a special, separate relationship with the Aten" (Green 38). This would have made the Queen an equal with her husband.

In his article on the reconstruction of the Aten complex at Karnak, Ray Smith speculated that Nefertiti was the power behind the throne. He also seems to have believed that in time evidence would emerge to confirm his theory. I believe that evidence is surfacing now, in the form of royal headdresses, stature changes and name changes. It may not yet be conclusive, but I feel that more evidence will be uncovered to prove that not only was Nefertiti the power *behind* the throne, she was also the power *on* the throne.

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# LECTURE REPORTS

*Editor's Note: Because of the packed lecture schedule since the last Ostrakon (Vol. 7 No. 3), the lecture reports in this issue are somewhat condensed, and reports on some lectures will be printed in the next issue.*

## **THE ANCIENT EGYPTIANS AS ASTRONOMERS**

Presented by Dr. Don Hughes  
ESS Meeting, February 18th

Dr. Don Hughes, Professor of History at Denver University, is always a popular speaker. This time, he presented a good-natured rebuttal to a previous speaker who had claimed that the Babylonians were better astronomers and astrologers than the Egyptians.

The ancient Egyptian calendar comprised twelve months of 30 days each (divided into three "dekans", or periods of ten days), plus five extra days corresponding to various gods. This did not allow for leap years, but the ancient Egyptians were aware of the problem. An hour was one-twelfth of the time between sunrise and sunset, measured by a shadow-clock with seasonal adjustments, so its length varied with the time of year.

After noting that the clear skies of Egypt were ideal for stargazing, Dr. Hughes explained the links between the major celestial bodies and various deities, and the astrological reasoning behind the patron deity of each dekan. The association of Seshat, the star-crowned

goddess, with the act of "stretching the cord" in the laying of temple foundations reinforces other evidence that buildings were aligned with the sun and stars, especially the points where they rose above the horizon.

On a night when the Hale-Bopp comet was clearly visible in the skies above Denver, Dr. Hughes concluded by speculating that comets might have been associated with the god Bes. Both are outsiders, and can appear unexpectedly - and the god's long hair and tail might be suggestive of a comet's tail.



## **THE KA, THE BA AND THE AKH**

Presented by Bob Hanawalt  
ESS Meeting, March 18th

Always a popular speaker, Bob Hanawalt addressed a difficult topic, made harder by the fact that these three terms have no equivalent in modern language or theology. Nonetheless, they were of the greatest importance to the ancient Egyptians, as is shown by the fact that the belief in these three concepts remained constant throughout the many changes in Egyptian religion, apart from some changes in the monotheistic Amarna period.

The ancient Egyptians believed that a human being was made up of many parts. The body, name and shadow are easily understood by the modern mind, but *ka*, *ba* and *akh* can be more confusing, especially since each has often been

translated into the same English word - usually 'soul' or 'spirit'.

The *ka* could not be seen, though evidence of its existence was sometimes visible. There were two kinds of *ka*: that of an individual, and the royal *ka*. An individual's *ka* was that person's life-force, and at death its needs for sustenance had to be fulfilled by the offerings and prayers of the bereaved. It had to be able to recognize the mummy to which it belonged, though a statue could serve as a *ka* vessel if the body had been destroyed.

The royal *ka* was a spiritual double of the king, accompanying him through life as a divine protective power. Upon the king's death the royal *ka* - itself a god - announced his arrival in the afterworld. The royal *ka* was handed down from a mummified king to his successor by an embrace during the ceremony of opening the

mouth. During the coronation ceremony, the king would confer with the gods in the temple - usually at Luxor - and would then become completely divine. The *atef* crown was worn as a symbol of this apotheosis.

Unlike the *ka*, an individual's *ba* did not exist until after death. It was the sum total of the individual's personality, and as such had to answer for the individual in the Hall of Judgment. The *ba* was symbolized as a birdlike creature with a human head and small human arms, possibly inspired by swallows which nested in some tombs. Migratory and noisy, it could wake the living and talk in dreams.

If the individual was found to be "true of voice" in the Hall of Judgment, the *ka* and *ba* combined, and became the *akh* - an immortal, transfigured

spirit, desiring to reside among the "imperishable ones" in the northern sky (see the notes on Dr. Don Hughes' lecture, above). The honor of being placed among the stars belong exclusively to kings until the end of the Old Kingdom, but then became open to anyone of rank.



### **CAMBYSSES AND THE LOST ARMY: FACT OR FICTION?**

Presented by Dr. Thomas Bown  
ESS Meeting, April 15th

In 523 BC, a Persian army marched from Thebes to Kharga oasis on the way to attack the oasis of Siwa, and vanished in the desert. Apart from the account in Herodotus' *Histories* III 26, there is no other evidence to indicate that a Persian army was ever in the desert. Various explorers and mapping expeditions have searched for some trace of the lost army, without success. In an entertaining and thought-provoking lecture, Dr. Thomas Bown offered some ideas about why.

The capture of Nineveh in 612 BC marked the collapse of Assyria, and created a power vacuum resulting in the rise of the empire of the Medes and Persians under Cyrus. His son, Cambyses, set out to conquer Egypt in 525-524 BC.

Stories about Cambyses paint him as mad, cruel or both, but under his rule peasant taxes were reduced and the legal recourse of the common people was strengthened. The hostility of Greek sources may be because they were written after Greece's war with the Persians under Darius.

Why would Cambyses want to attack Siwa? In 523 BC, Siwa oasis was neither wealthy nor strategically placed - but it was the home of an oracle, and it is possible that Cambyses wanted to gain control of the oracle, or that he had been offended by some oracular pronouncement that has been lost to history.

The logistics of a desert march are a nightmare. Soldiers could not carry enough water for more than a couple of days, and on a long march camels could only carry enough water for themselves. The distance from Kharga to Siwa is

405 miles at a bearing of 310 degrees - a minimum of 17 days' march, with 25 days as a more realistic estimate. The expedition simply could not have carried enough supplies for such a journey. Although there is one oasis along the way, there is no trace of the army there.

Herodotus' map, dating to a century after the expedition, gives the distance as 270 miles, and the bearing as 289 degrees. Ancient maps usually had significant errors in longitude. Using this map, the journey from Kharga to Siwa looks to be 11-12 days' march, which would have been logistically feasible. In addition, the oasis between Kharga and Siwa appears to be some distance off the route.

According to Herodotus, a south wind arose at breakfast and buried the army in sand. From his own experience and his conversations with the modern inhabitants of the area, Dr. Bown contended that no sandstorm could do such a thing - a meter of sand per hour for three hours or so is the worst that can be expected, and able-bodied individuals can keep from being buried alive. In addition, the matter of how Herodotus learned such precise details of a disaster that left no survivors and no witnesses must undermine the credibility of his account.

Dr. Bown concluded that, by following the inaccurate maps of the day, the army probably reached the edge of the Great Sand Sea, with insufficient water to turn back, and died of thirst. As to the question of why no trace of the lost army has ever been found, he pointed to the vast size and remoteness of the area, the shifting dunes, and the fact that expeditions looking for the army did not refer to ancient maps, and were searching only as a secondary goal to their exploration, geological and mapping activities.

# House of Scrolls

## Book Reviews



### *The Reader's Guide to Ancient Egypt*

For anyone interested in Egyptology, *The Reader's Guide to Ancient Egypt* is an absolute "must". Those are strong words to use for any publication, but in reviewing Stuart Wier's newly revised bibliography, there is simply no other way to say it.

Dr. Wier is a long-time member of the Egyptian Study Society who lives in Boulder, Colorado where he is a computer programmer with the Forecast Systems Laboratory. He has been fascinated with Egyptology for many years and, more importantly for the rest of us, he has made a thorough study of the myriad books that have been written on the subject, compiling a bibliography of over 600 of the best popular and scholarly books that have been published in English on Egyptological subjects. A select list of fiction titles is also included.

For ease of use, the bibliography is divided into a number of categories. Those interested in mummification can turn to one section; those interested in ancient Egyptian religion and mythology can turn to another; those interested in the Fifth Dynasty sun temples at Abu Ghurab can easily find publications about those as well. Although there is no index (a rarity in any bibliography), *The Reader's Guide* divides its fifty-five pages into forty-six different topics that make any subject easy to find.

### *Uppity Women of Ancient Times*

As may be surmised from its title, this book is neither a strait-laced work of scholarship, nor is it exclusively devoted to ancient Egypt - but nevertheless it is well worth the attention of ESS members.

*Uppity Women of Ancient Times* is a collection of historical anecdotes - with a lighthearted, gossipy and distinctly feminist slant - covering the exploits of over a hundred women who apparently were unaware that their ordained role in ancient society was to bear children, endure arranged marriages and generally be oppressed. Fun, feisty and compulsively readable, it is ideal for the bathroom or bedside table - or, indeed, as a gift for those friends or relatives who think history is dry and dull.

Mesopotamia, Greece, Rome and the Holy Land all contribute to the cause, but Egypt is well represented. In addition to the obligatory mentions of Hatshepsut and Cleopatra VII, many formidable royal women are covered (including Nefertiti, the subject of an article elsewhere in this issue), plus lady doctors, priestesses, real-estate magnates, travelers, and more. Dip into this book for five minutes, and you're sure to be gone for an hour.

Particularly useful are Dr. Wier's brief comments on many of the works listed: "one of the best references"; "easy reading"; "the definitive study"; "very technical" and so on. In addition, Wier clearly identifies publications that give good introductions to Egyptology or overviews of a particular topic. There are very few negative comments, so if you're in a hurry, it may be best to start with the books that have positive comments rather than those with no comments at all.

*The Reader's Guide* has been revised several times since its initial publication in 1993, and the most recent revision includes publications issued or discovered since the beginning of 1997. Through Dr. Wier's generosity, this recent supplement is available at no charge to anyone who has already purchased the June, 1996 revision of the bibliography.

*The Reader's Guide to Ancient Egypt* costs \$4 and is available only from the Egyptian Study Society at the Denver Museum of Natural History. Copies may be purchased for a limited time at general meetings of the ESS, or by leaving a message on the Egyptian Study Society Hotline at (303) 904-6366. A mailing and handling charge will apply to telephone orders.

Review by Dick Harwood



*Uppity Women of Ancient Times* is written by Vicki Leon and was published by Conari Press, Berkeley, CA, in 1995. It costs \$14.95, and is available in most good bookstores. If you don't find it in the History section, try looking under Women's Studies.

Review by Graeme Davis

# The Electric Papyrus

*Egyptology in the New Media*

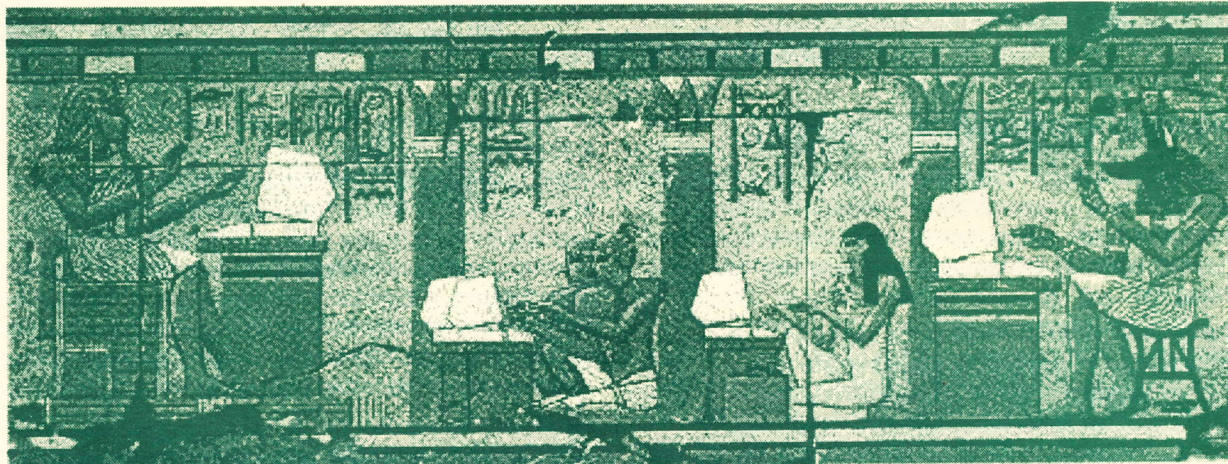


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Visit Nigel Strudwick's Egyptology Resources page at <http://www.newton.cam.ac.uk/egypt/>.

*Editor's note: The Electric Papyrus is a new feature for the Ostrakon. House of Scrolls will continue to provide reviews of books on Egyptology and allied subjects, and The Electric Papyrus will provide complementary coverage of Egyptology resources in electronic media: video, CD-ROM and the Internet. Members are warmly invited to submit reviews for both this column and House of Scrolls. In this issue, we look at one of the best online Egyptology research tools available.*

## **ABZU REGIONAL INDEX: EGYPT**

[http://www-oi.uchicago.edu/OI/DEPT/RA/ABZU/ABZU\\_REGINDX\\_EGYPT.HTML](http://www-oi.uchicago.edu/OI/DEPT/RA/ABZU/ABZU_REGINDX_EGYPT.HTML)

Abzu is a huge index of online resources for the history and archaeology of the ancient near east, maintained by Charles E. Jones of the Oriental Institute in Chicago. The index is split into two sections, one on Egypt and the other on Mesopotamia (which can be reached by substituting MESO for EGYPT in the address given above). It is not one of the most graphically appealing Egyptology sites on the World Wide Web, but it is probably the most exhaustive listing of links to online Egyptology resources.

The index can be browsed by topic - including archaeological sites, art, Egyptological institutions, imaging and site reconstruction, museums and collections, papyrology, philology and texts, travel and miscellaneous - and alphabetically. In addition, there is a search engine which lets you type in one or more keywords and searches the Abzu database for matching links. The site also has a link to the Oriental Institute's main Web site, which merits a review of its own.

If it is true that - to paraphrase Dr. Johnson - wisdom consists not of knowledge itself, but of the ability to acquire knowledge at need, then the Abzu Egypt index is a source of great wisdom indeed. Whether you are researching some knotty Egyptological subject (for a future Ostrakon article, he hinted blatantly) or simply surfing the Web to see what's out there, there is no better place to start than Abzu.

*Review by Graeme Davis*

*Scribe's Palette* editor David Lovering contributed the following World Wide Web addresses that will be of interest to ESS members. Look out for his recommendations in each issue of the *Scribe's Palette*.

<http://www.arce.org/home.html>  
-- ARCE homepage

<http://www-oi.uchicago.edu/OI/default.html>  
-- Oriental Institute homepage

<http://interoz.com/egypt/>  
-- Egyptian Ministry of Tourism homepage

[http://www.netvision.be/egyptologica/e\\_hiero.htm](http://www.netvision.be/egyptologica/e_hiero.htm)  
-- Reading Hieroglyphs Pages

<http://www.leidenuniv.nl/nino/aeb.html>  
-- Leiden Annual Egyptological Bibliography

<http://spirit.lib.uconn.edu/ArchNet/ArchNet.html>  
-- Archaeology Virtual Library (Univ. of Connecticut)

<http://www.lib.utulsa.edu/guides/egypt.htm>  
-- Univ. of Tulsa McFarlin Library Egyptian Section

<http://www.memst.edu/egypt/>  
-- University of Memphis Egyptian image archives

<http://www.teleport.com/%7Eeddonahue/egyptol.html>  
Pharaoh's Heart Egyptology page