

ERAGRAM

VOL. 9 NO. 1 SPRING 2008

ANCIENT EGYPT RESEARCH ASSOCIATES

Groundbreaking Archaeology

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Digging Old Luxor

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Conservator Lamia el-Hadidy worked with 65 team members of the Salvage Archaeology Field School to save a rich archaeological record in Old Luxor.

## Impressions of the Past: Seals and Sealings from Pottery Mound by John Nolan and Amanda Pavlick

In 2005, Yukinori Kawae and Tove Björk excavated two 5 x 5-meter squares within a midden we dubbed Pottery Mound, uncovering enormous quantities of bone, charred plant remains, pottery, sealings, and other trash. Located in the district of large houses we call the Western Town, this mound of debris was probably left by high-ranking people. The bone, as Richard

Redding explained in the Fall 2007 issue of AERAGRAM, came primarily from animals that the well-to-do would have eaten, such as young cattle and game.

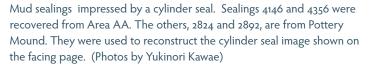
Here John Nolan, our senior epigrapher, discusses the sealings found in Pottery Mound and the part they might play in helping us learn more about our site. The sealings—mud impressed by a cylinder seal—were used to secure a wide array of goods. In analyzing these bits of impressed mud, Nolan uses a groundbreaking approach to reconstruct the cylinder seals that made the impressions. He then goes a step further and uses the same sealings to extract information about the original seal, its uses, and its owner. These impressions may be small, but they can speak volumes.

he two partially-excavated Pottery Mound squares produced 1,034 pieces of mud sealings impressed by cylinder seals, possibly the largest cache of Old Kingdom sealings excavated in Egypt to date. In comparison, by that time we had registered only 703 similar sealings from all of our previous fourteen seasons of work. Not only were the sealings abundant, they were also remarkable in a number of ways. Many of them had been used to seal flat-topped boxes and papyrus documents, which are otherwise uncommon sealing types for our site. In addition, the titles on the most frequently used seals belong almost exclusively to high-level scribes who may have been under the direct supervision of the vizier-the king's prime minister. The seals also bear the names of the kings who presented these scribes with their seals, indicating not only a connection with the royal household, but also giving us potentially important information for dating the deposits in which they were found. They can thus give us insights into activities in this corner of our site at Giza that we otherwise could not recover and show a possible connection to the kings who built the Giza pyramids.

### **Broken Bits**

In ancient Egypt, specially prepared mud was used to seal up many different kinds of containers, such as boxes, jars, and bundles of cloth and papyrus. These daubs of mud were often, though not always, impressed with a cylinder seal before the





mud dried. Commonly made of stone or precious metals and inscribed with hieroglyphs and pictures, the seal tells us about its owner. The sealing (the impressed mud), by contrast, tells us what he used the seal for and how often he used it.

All of the sealings we work with are broken pieces of these mud daubs. As fragments they only retain a portion of the original image they once bore. We have been able to learn a great deal from these sealings because many of them preserve what we call "replicate" impressions; that is, we have multiple sealings impressed by the same cylinder seal. By examining these replicate sealings, we can often piece these separate bits together to work out the seal's original image, like the one on the facing page.

### **Piecing the Fragments Together**

In the 2007 spring season, our sealings team, consisting of Ali Witsell, Foy Scalf, and Elise McArthur, all from the University of Chicago, and AERA's John Nolan, analyzed the 1,034 impressed sealings from Pottery Mound. We discovered that 284 of the Pottery Mound sealings bore replicate impressions—more than one-quarter of the total number. Previously, we had found only 11 replicates from all of our past excavations combined. This degree of replication signalled that Pottery Mound was a dramatically different type of deposit than previously encountered at our site.

With the help of Egyptologist Will Schenk, we brought together these replicate impressions to reconstruct the text on the originating seals. These texts often give us the titles—sometimes multiple titles—of the seals' owners and the names of the kings under whom they worked, but not the personal names of the owners.

After completing our analysis, we were surprised that the 284 replicate sealings appeared to have been pressed by just 19 different cylinder seals. Of these, 16 belonged to high-level scribes in the royal administration, with titles such as "Scribe of the Royal Documents" (on 14 seals), and "Scribe of the King's Writing Case" (on 7 seals)—certainly very important people during the life of our site.

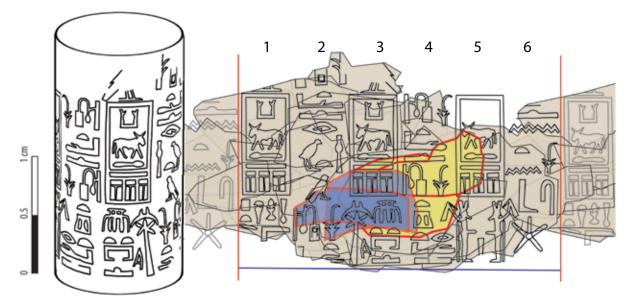
### Scribes of the Royal Documents

On the Pottery Mound seals, Scribes of the Royal Documents are often specifically dedicated to the Royal Instructions (7 seals). Such scribes may have been associated with educating noble and royal children in the king's household. Later, in the 5<sup>th</sup> Dynasty, Scribes of the Royal Documents may have worked directly under the vizier—the most powerful man in the land, second only to the Pharaoh himself. In fact, one of the standard titles adopted by the vizier during this later period was "Overseer of the Scribes of the Royal Documents." Also suggesting a connection with the vizier is the single seal in Pottery Mound whose owner was concerned primarily with royal construction projects. In the 4<sup>th</sup> Dynasty, viziers, including Hemiunu (who oversaw the completion of the Great Pyramid), regularly held the title "Overseer of All Royal Construction Projects." So, the picture emerging from these sealings is of a group of specialized scribes with connections to the vizier and the royal residence. The near-absence of other titles suggests this was a closed community of very important people.

### A Scribal Workshop

We assume that the sealings were broken near Pottery Mound since the bone evidence suggests that people carried their trash only a short distance. But we cannot be sure where the sealings were impressed and where the scribes actually worked. However, certain tantalizing clues indicate that these sealings were indeed made near Pottery Mound. Sealing 4550, a box sealing, was impressed by one of the Pottery Mound seals, then wadded up and discarded while still wet. Since this would-be sealing was discarded while still wet, it must have been made and impressed by the seal nearby. In addition, another of our seals was used on nearby doors. Door sealings were made where they were used and discarded as people unlocked, opened, closed, and resealed the door. We can tell if a sealing was used on a door by the impression of the corner between the door and its jamb on the backside of the sealing. At least two of our reconstructed seals were used for sealing doors, thus most probably in close proximity to Pottery Mound.

A high percentage of our sealings are from flat-topped wooden boxes, such as those used for scribal tool kits in the



Egyptian scribes rolled the cylinder seal across mud, leaving an impression. John Nolan and his team reconstructed this seal design from 46 sealing fragments, shown in tan, yellow, and blue. The yellow area is the impression on sealing 2892 and the blue is sealing 2824. Both sealings are shown on the facing page. The individual sealings bore replicate impressions, as shown in the many overlapping fragments. This seal was most likely carved in the reign of Menkaure since lines 1, 3, and 5 use Menkaure's "Horus" name inside a *serekh*, which allows us to date the seal.

### Impressions of the Past: Seals and Sealings from Pottery Mound

Old Kingdom. Over 37% of all the Pottery Mound sealings for which we could determine function had been used to seal boxes with flat lids. In addition, 13% of the Pottery Mound sealings had been removed from papyrus documents. Finding such high concentrations of these two kinds of sealings covered with impressions from scribal seals suggests that scribes were working nearby. At Abydos and Elephantine, when excavators found large numbers of Middle Kingdom box sealings, they concluded that the sealings were made nearby.



John Nolan and Ali Witsell reconstruct sealings in the AERA laboratory at Giza.

### **Dating the Sealings**

Another remarkable feature of these seals is that we can often determine the reign in which they were made. Many of the texts on the seals bear the king's Horus name inside a box called a *serekh*. Written this way, the Horus name—given to a king when he ascended the throne—was probably used only during the reign of that king. This gives us a helpful framework by which to date our material. Of the nineteen cylinder seals we have reconstructed, three date to the reign of Khafre, eleven to Menkaure, and five have no preserved royal names. The mixing of these two royal names—and only these two royal names—strongly suggests that the Pottery Mound deposits were laid down during the reigns of Khafre and his son, Menkaure.

Famous Scribes of the Old Kingdom: the Seshemnefer Family In the course of our archaeological detective work, it is easy to lose sight of the fact that these seals once belonged to real people—people like those buried in the great cemeteries at Giza. For generations, Egyptologists have sought to reconstruct the lives of the nobles of the pyramid age from their tombs and monuments. Surprisingly, Pottery Mound may give us an opportunity to link the names and faces depicted in these tombs with the everyday debris we find at our site.

Some of the seals from Pottery Mound appear to have belonged to a particularly specialized group of scribes. These seals bear both a very specific title, "Scribe of Royal Documents for Royal Instructions," in addition to the title "Scribe of the King's Writing Case." Both of these titles also appear alongside texts which refer to the king as the brother of the gods Min and, possibly, Amun, while the seal owner is himself associated with the "commands of Horus." Altogether, three of the nineteen Pottery Mound seals show all of these traits, but four others may have once contained them as well. Outside of these seven seals from Pottery Mound, only one offi-

cial from the entire Old Kingdom was ever known to have held these same titles. This man, called Seshemnefer II, belonged to a famous family of scribes who were buried in a series of elaborately decorated tombs just west of the Great Pyramid in the 5<sup>th</sup> and 6<sup>th</sup> Dynasties (see back page). These tombs are among the best known for this period and have been studied over and over again by Egyptologists.

It is possible that Seshemnefer II may have begun his scribal career in the reign of Menkaure, according to scholars' recent reassessment of the date of his tomb. This conclusion, if accurate, would dovetail nicely with the activity of the scribes who held these titles and impressed sealings that were dumped in Pottery Mound.

We best know Seshemnefer II today from the famous granite head currently in the Museum of Fine Arts, Boston. Based on our sealings, it appears possible that he may have served as a scribe somewhere near Pottery Mound early in his career—a career which culminated in his elaborate tomb constructed in the shadow of the Great Pyramid. If Seshemnefer II was not the owner of one of the seven seals in the special group discussed above, the scribes who held those seals were nonetheless his equals: they were of his social class and rank and probably very much like him.

In the Fall 2007 edition of AERAGRAM, Richard Redding concluded that the Pottery Mound faunal remains, mainly from costly meats, indicated high-ranking individuals lived nearby. These results complement and strengthen the conclusion from the sealings that very elite scribes worked here.

These two sets of data—fauna and sealings—offer different perspectives on the people who worked and lived near Pottery Mound. While the animal bone reflects the diet of the whole group of residents, the sealings reveal personal, individual information. They document the scribes' ranks and titles in their own language. They give us a small window into these very real people and their daily lives.

# Lost City Site, Flooded!

### by Wilma Wetterstrom and Ana Tavares

ntediluvian—before the flood—in a manner of speaking characterized the site where we found the Lost City of the Pyramids. Now it is deluged.

It is hard to imagine that water would be a problem for an ancient city founded on low desert, and subsequently covered by wind-blown desert sands. Yet over the last three and a half years we have watched with dismay as the groundwater has crept up into our trenches and low areas of the site. Previously lurking far below the settlement ruins, the water table has risen more than a meter (3.28 feet) since 2004.

We have been very closely monitoring the creeping water. For over four years GPMP team member, and field school teacher, Ashraf Abd el-Aziz has been measuring the level of the water. When Ashraf had to be in Luxor for three months for the Salvage Archaeology Field School (sAFs) (page 10), he turned the job, and his surveyor's level, over to field school graduate and Giza Inspector Noha Bolbol, now working with Dr. Zahi Hawass on the Workmen's Cemetery excavations.

In 2004, when we uncovered the Western Town, the water stood at 14.70 meters (all values are meters above sea level). Floor levels of the ancient buildings range between 15.50 and 16.50 meters. By late 2006, groundwater formed standing pools in the deepest parts of our site from the far south to the extreme northeast. In April 2007 the water in the southern end of the site was up to 15.85 meters, 16.02 meters by November, and 16.19 meters by January 2008. By that time, much of the site was saturated.

In the face of the rising inundation, we continually backfilled with clean sand to cover the ancient settlement-reburial is the best conservation measure for mudbrick. At the same time that we launched the SAFS mission in Luxor, with 40 to 70 workmen, we hired a whole team of workers at Giza under Reis ("Overseer") Es-Soughier, to cover the site with a thick blanket of clean sand. Our sand covering does not lower the water table, but buries and protects the surface of the settlement ruins and creates a higher surface where salts effloresce and the wind scours. The rising damp dissolves salt and brings it to the surface. As the surface dries, the salts re-crystallize and rupture the fabric of the silt and limestone that compose the ancient structures. With the surface turned to flakes and powder, the mudbrick and stone walls are far more susceptible to scouring by wind. In quick order, this process undermines the lower edges of walls causing them to collapse and disintegrate, as we have amply seen with our test mudbrick walls that we built only three years ago. Reburying the ancient surfaces under clean sand leaves them saturated but exempt from surface erosion caused by exposure.

### Window of Opportunity

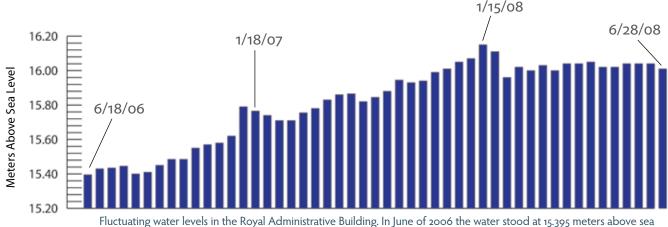
Before we mapped and excavated the Lost City site over the past two decades, the groundwater had probably been high although not as high as now. For the better part of the year

January 2008. The rising water table overtakes the mudbrick test walls and platforms that we constructed in 2005 to monitor the impact of moisture. Some completely disintegrated, others eroded, demonstrating the destructive power of the high groundwater. View to the northwest. 1981 Mark Lehner measured the surface of the groundwater in a series of locations: a shaft under the rear of the Sphinx; in the deep Late Period tomb shaft called the Osiris Shaft; a few hundred meters east of the Sphinx in the Khafre causeway; in the shaft in the vestibule of the Khafre Valley Temple where the famous Khafre diorite statue was found; and in a depression or well near the front of the Menkaure Valley Temple, about 400 meters southwest of the Sphinx.

In all these places, hundreds of meters apart, the surface of the groundwater was relatively uniform, around 15.38 to 15.40 meters above sea level. Over the last twenty years (1988-2008) during which we worked at the Lost City, the groundwater at our site has been at least 70 centimeters lower than in 1981. Have we worked in a window of opportunity? If we had found the Lost City ruins completely saturated, it would not have been possible to clear and record them.

Now that they are saturated, it is imperative that we bury them again. Yet, despite blanketing much of the site with tons of clean sand, we can hardly keep pace, because the recent rise is abnormally high and swift.

In fact, the rise in the water table is so high and unprecedented that it is causing alarm elsewhere on the Giza Plateau. Experts have measured an increase in moisture in the Sphinx as high as the colossal, godly head (about 40 meters). Water is



level. It reached a high of 16.15 meters on January 15<sup>th</sup> this year. It fell in February and has since hovered around 16 meters.



## **Keeping An Eye On The Water**

For over four years Ashraf Abd el-Aziz has been monitoring the level of the water table at our site. Since he joined the Giza Plateau Mapping Project as SCA inspector in 1999, Ashraf has excavated on our site every season since, developing into a skilled archaeologist, area supervisor, and field school teacher. Between 1999 and 2001 Ashraf excavated a series of squares along Main Street. In 2002 he took on the first excavation of a complete gallery (or barracks unit), Gallery III.4. Ashraf wrote the Data Structure Reports for these areas and subsequently prepared them for publication in our Giza Reports I.

By 2004 Ashraf had developed a whole team of Giza Pyramid inspectorsin-training, both in and outside of the formal AERA/ARCE field school program. In 2004 Ashraf and his team moved to the northeastern part of the site, where they excavated until 2007 a series of

squares that track the Eastern Boundary wall and possibly what may be an Eastern Avenue running from the north toward the entrance of the Royal Administrative Building. In 2008 Ashraf served as a teacher in the Salvage Archaeology Field School at Luxor (see page 10) at the same level as professional contract archaeologists from abroad.

Ashraf has also single-handedly taken up the scientific study of the mudbricks that composed most of the buildings in the Lost City of the Pyramids (or HeG Site after Heit el-Ghurob, "The Wall of the Crow"). He developed a typology of mudbricks, which he has expanded to include bricks from the Khentkawes Town and Menkaure Valley Temple, other parts of the Giza Necropolis, and beyond. During our recent 2008 season, Ashraf collaborated with Dr. Paul Nicholson on new directions in the detailed study of bricks and plaster.



Google Earth view of the site and nearby town (Kafr Gebel) with the Mansouriyah Canal, taken in 2005. The canal has now been filled as far south as the site.

forming ponds in the deep part of the excavations in front of the Khafre Valley Temple, where the two limestone entrance ramps slope into deep, unexcavated layers of *terra incognita*.

AERA has been helping SCA Chairman, Dr. Zahi Hawass, monitor and assess the rising groundwater threat. Dr. Hawass appointed Mark Lehner to a committee with Dr. Hafiz Abd el-Azim Ahmed, from the Engineering Center for Archaeology and Environment, and Dr. Reda M. el-Damak, from the Center of Studies and Designs for Water Projects, both of Cairo University. Drs. Hafiz and Reda have been conducting a study of causes for the groundwater rise in the vicinity of the Giza Pyramids. The committee met with Per-Olof Johansson of the Swedish company Artesia, which did much of the work for the de-watering projects around Luxor and Karnak Temples.

In mid March AERA team members Mark Lehner and Ana Tavares helped locate, survey, and measure the positions of five drill holes in the floor of the Sphinx sanctuary (around 20 meters) where the Cairo University team now monitors the level of the groundwater immediately under the Sphinx. Preliminary results indicate that the water is close to its 1981 levels, raising the question of why it should be so much higher at our Lost City site to the south.

The groundwater study is slated to expand in the area of the Lost City site and, higher on the escarpment, the Workers' Cemetery excavated by Dr. Zahi Hawass. Earlier in the year the Cairo University team installed a series of pisometers to check the level and quality of water and in the future hope to carry out test pumping to lower the water level.

### Why is the Water Rising on Our Site?

The rising water table is a countrywide and regional problem. But we believe the principal cause of the rise local to our site is infilling of the large Mansouriyah Canal about 300 meters to the east. The authorities have been filling in the canal over the past several years, in increments of 250 meters per season. Three lines of cement culverts carry water under the fill, which is topped by lawn and gardens, but the flow may be considerably reduced, especially if the culverts clog with debris.

Currently, the infilling is about on line with our site. During much of the 2008 season, water filled the Mansouriyah canal to its brim from the point at which infilling stopped—just opposite the site—to the south as far as the town of Shubramant, and this brim is around 18.50 meters above sea level, 2 meters above the level of the ancient settlement on our site. We hypothesize that the Mansouriyah Canal filling backed up the water, which then seeps subsurface down onto our lower site situated between the canal and the high desert escarpment.

#### The Future

We believe there is a good chance the water table will eventually be lowered and that we will be able to continue excavations at the site—certainly in the higher and drier western parts, just inside the gate through the Wall of the Crow, areas now largely blank on our site map. For season 2008, while we backfilled our main site, we turned our attention to neighboring towns on higher ground attached to the Khentkawes tomb and the Menkaure Valley Temple. We present our new discoveries at the Khentkawes Town (KKT) in the next AERAGRAM.

# **AERA's Future!**

by Mark Lehner

Great changes are underway at AERA! To keep pace with our dramatic growth, we are working to ensure that AERA's groundbreaking archaeology and educational programs remain strong for future generations. Our plan is to secure the long-term success of AERA's mission with a new membership program and capital campaign.

Over the last 25 years, as AERA evolved into a fully developed institution, we made major contributions to Egyptian archaeology and education. AERA now fields a highly skilled and diverse team of full-time archaeologists and specialists from four continents. Using cutting-edge techniques, we work each season to uncover and document the details of life on the Giza Plateau. The Lost City site marks the full emergence of the Egyptian state, one of the most important developments in human history. AERA's team works year-round to disseminate the results of our research to the larger archaeological community as well as the general public. Four years ago, AERA launched the Field School, which works to assure the future of Egypt's past by training inspectors from the Egyptian Supreme Council of Antiquities in systematic archaeological excavation and recording. Well-trained inspectors working at and overseeing excavations throughout the country guarantee that Egypt's archaeological heritage will be properly studied and preserved. The Field School continues to grow; hundreds of applicants apply each year for only 25 seats.

Our new membership program and capital campaign are gaining significant momentum, but we have a great deal of work to do to reach our goal: \$10 million in the next five years. To help us get there, Cindy Sebrell has joined the AERA team as Director of Advancement. Cindy brings professional experience to the task of raising awareness of AERA's groundbreaking research and connecting donors with AERA's work in the field. On the job since February, she has been working in Egypt and the US to achieve these goals.

# **How Can You Help?**

### Become a Member!

First, you can help by becoming a member of AERA. Your membership provides financial support for our programs and lets us know you believe in the work AERA is doing. It will also connect you with friends, colleagues, and associates around the globe who support and follow research in Egypt. Membership in AERA includes invitations to special events, access to regional lectures, notices and updates on research happening in the field, and two issues of AERAGRAM per year. As an AERA member, you become part of a growing, international community that supports research and education about ancient Egyptian history and culture.

You can find more details about membership and about AERA's expanding community by visiting **www.aeraweb.org.** Or begin your membership by sending a check or money order with your contact information in the enclosed return envelope.

> Memberships: US Basic: \$55 Foreign Basic: \$65 Senior/Student: \$30 Supporting \$250

### Contribute to Legacy: 2012!

AERA has launched a major capital campaign, Legacy: 2012, aimed at supporting our team and ensuring the continuing high quality of our on-going, year-round research.

Members of the AERA community can make a difference in many ways, such as through endowing faculty and/or research chairs, by supporting specific publications, and by sponsoring students and researchers in a number of fields of study. In addition, benefactors may help fund components of a permanent facility that AERA plans to establish in Cairo, which will provide space for classes, lectures, research, and for preparing publications.

AERA has been able to achieve so much because of the generous support of our donors, for which we are very grateful. Every donation, large or small, helps AERA advance knowledge of our common human heritage and is vital to the success of our Legacy: 2012 campaign. Learn more about how your tax-deducible donations help support AERA's research and educational programs by going to **www.aeraweb.org** or by contacting:

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# Thanks to AERA's Colleagues

For a very successful 2008 season, we are grateful to Dr. Zahi Hawass, Undersecretary of State and Secretary General of the Supreme Council of Antiquities (SCA). We thank Sabry Abd El-Aziz, General Director of Pharaonic Monuments; Atef Abu El-Dahab, Director of the Central Department of Pharaonic Monuments; Kamal Wahied, General Director of Giza Pyramids; and Mohammed Shiha, Chief Inspector of Giza Pyramids. We thank Mansour Boraik, General Director of Luxor; Sultan Eid, Director of Luxor Temple; Osama El-Shimy, Director of Saqqara; Samir Ghareeb, Supervisor of the Step Pyramid Project; and Affifi Roheim, Chief Inspector of Dahshur and Lisht and supervisor of the Step Pyramid Project.

We are grateful to Magdi El-Ghandour, Director of the Foreign Missions Department, and Shaban Abd El-Gawad for their assistance. We also thank Mme. Amira Khattab and Amir Abd El-Hamid of the American Research Center in Egypt (ARCE) for their assistance. We would like to thank the following inspectors who represented the SCA at the sites: Gaber Abd El-Dayem, Nagla Zaki, and Ahmed Eiz at Giza; Eizzat Abu Bakr and Hanem Sadek in Luxor; Samir Ramadan and Mahrous el-Sanadeety at Saqqara.

We are grateful to Dr. Gil Stein, Director of the Oriental Institute, University of Chicago, and Dr. Larry Stager, Director of the Harvard Semitic Museum, for the support of their institutions. We also thank Dr. Joe Greene and Dr. James Armstrong of the Harvard Semitic Museum.

We thank Douglas Rawles and Mark Wakim of Reed Smith LLP for providing advice and counsel on a myriad of legal matters. Douglas, who has worked with AERA for over 12 years, continues to provide services on a pro bono basis, which is much appreciated by the AERA team.

# Real World Rescue Díg: AERA Fields the SAFS

SAFS Supervisor and Ceramicist Mohamed

Aly Abd el-Hakiem

Yukinori Kawae

SCA Supervisor and Surveyor Mohammed Abd El-Basit, graduate of the Advanced Field School, surveyed and plotted the map of the trenches in the KIW site. (Photo by Mark Lehner)





View to the northeast, looking down Trench 2 to the eastern end of Operation C.

SAFS Supervisor Ahmed el-Lathiy teaches students in Trench 2.

SAFS student Nagwan Fayez and Nora Shalaby look up from their work in Trench 2.

SAFS Photographer and Illustrator Yaser Mahmoud Hossein

Trench

Trench 1



SAFS Teacher Hanan Mamoud Mohamed works in Trench E.





Everyone pitches in to clear upper layers of silt in Operation C.

f on any day between January and March 2008 you wandered from the People's Ferry landing on the Nile into the heart of Luxor you might have passed the Khaled Ibn el-Waleed ("Khaled son of Waleed") Garden, a couple hundred meters from the front of the world-renown Luxor Temple. You could have peeked through the trees and shrubs to witness the largest archaeological mission anywhere in Egypt at that time: large white tents housing labs for illustrating and conserving ancient artifacts; a wooden tool shed with tripods, surveyors' theodolites, levels, tapes,



inL

SAFS Supervisor Mohamed Hatem Ali Soliman tutors students in Trench C.

trowels, pick axes, shovels and wheel barrows; and maybe, at 10:30 am and again at 1:00 pm breakfast and lunch being catered for 100 people: workers, drivers, and archaeologists from Luxor and surrounding towns assisted by professional contract diggers, botanists, ceramicists, bioanthropologists, and surveyors from America, Britain, France, Sweden, Japan, Poland, and Norway, all together pick-axing thick layers of silt, scraping delicate ancient floors of old Luxor with trowels and brushes, and sorting tens of thousands of pottery sherds from layers spanning more than two thousand years. You would have seen all these people working with a sense of pride, meaning, enthusiasm, and with a togetherness that surpassed any other excavation or field school session we at AERA have so far conducted.

You would have glimpsed the SAFS in action! The SAFS is the Salvage Archaeological Field School, a logical third extension of AERA's Beginners and Advanced Field Schools in Giza for inspectors of Egypt's Supreme Council of Antiquities (SCA), in which we integrate teaching archaeology within our interdisciplinary excavations of the Lost City of the Pyramids. The Giza Field schools, which AERA runs with funding from USAID through the American Research Center in Egypt (ARCE), are certainly rigorous, but they take place within the protection and control of the Giza Plateau Mapping Project excavations. We compare this to teaching first aid and elective surgery. But then the students must return to their inspectorates throughout Egypt where they face drastic interventions from bulldozers, backhoes, and loaders into archaeological layers for making roads, tourist facilities, and urban development. These are archaeological battle fields. With the SAFS we took archaeological training into the real, workaday world of urgent, rescue archaeology in an urban setting.





A brick-lined tree pit. (Photo by Yukinori Kawae))

A sphinx base with inscription of Nectanebo I (380–362 BCE). (Photo by Yukinori Kawae)

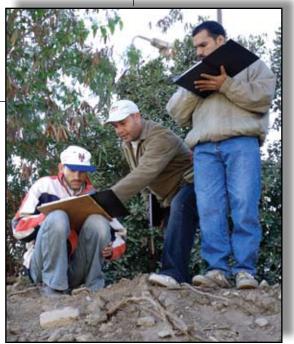
### From Giza to Luxor

The story begins with an urgent plea from the sCA General Director of Luxor, Mansour Boraik, former Chief Inspector at Giza, good friend of AERA, and Field School Supervisor. He sent out a call for help with the rescue excavations launched in November 2005 along the Avenue of the Sphinxes. The famous avenue once ran the 2.7 kilometers between Luxor and Karnak Temples. One of the last native Egyptian pharaohs, Nectanebo I, lined the avenue with sandstone sphinxes on pedestals every 5 meters interspersed with trees.

A development plan of recent years for greater Luxor called for excavating much of the remainder of the avenue right through, and under modern Luxor, which sits upon many layers of ancient Thebes, one of the preeminent cities of the ancient world. Although Egyptologists have been excavating and recording Karnak and Luxor Temple for nearly two centuries, there has been very little excavation of those parts of the city where people lived. Many opportunities for excavating and recording settlement have been lost. For instance, two thousand years of housing—Medieval Islamic to late Ptolemaic periods were removed from within, and in front of Luxor Temple in drastic clearings during the early 19<sup>th</sup> century and into the late 1950s. This clearing stopped just before reaching the Khaled Ibn el-Waleed Garden. Drastic digging began again in late 2005, with two huge trenches cut through the garden to expose the sphinxes. A world of systematic, scientific archaeology, especially for ancient settlements, has evolved since the 1950s. Knowing this, and having taught in the Field Schools, Mansour asked AERA and some of the graduates of the AERA Field Schools for help in early 2006.







SCA Supervisor Essam Shehab (center) instructs SAFS students Mohamed Naguib Reda Abd el-Kader (left) and Yasser Abd el-Razik Mahmoud on making preliminary sketch maps of the site before excavations begin.

To help with the urgent excavations we dispatched members of AERA's Rapid Response Team. Mohsen Kamel, Ana Tavares, Tim Stevens, James Taylor, and Freya Sadarangani worked with ARCE/AERA Field School graduates Moamen Saad, Tayeb Khodary, Amer Gad el-Karim, and Susan Sobhi Azeer along with Luxor-based inspectors from late March through October 2006 to document the evidence already exposed by the 2005 trenches and turn the excavations to more systematic methods of modern standard archaeological practice.

### A New Field School Program

In the Spring of 2007 at the urging and encouragement of Dr. Gerry Scott, Director of the ARCE, and under the joint direction of Dr. Zahi Hawass and Dr. Mark Lehner, we began to plan for a field school that addressed real world sCA needs for salvage and rescue archaeology. This archaeological work would be carried out in the wake of—and hopefully in the future, in the advance of—drastic interventions into ancient Luxor by modern engineering for urban and tourist development, and conservation measures such as trenches for pipes and pumps to dewater the zones around Luxor's many ancient stone temples.

So, we conceived the fourth session of our field school for SCA inspectors as a new program in Luxor: the Salvage Archaeology Field School (SAFS). Dr. Gerry Scott arranged a substantial grant from ARCE's Egyptian Antiquities Conservation Project (EAC), funded by USAID, which covered a large share of the total cost of this ambitious project. AERA, thanks to our many benefactors, covered a large cost share, as well as all survey and photographic equipment, and of course we also brought our experience with prior field schools at Giza.

For AERA, this was a tremendous redeployment in our budgeting and planning. We had already budgeted and planned another session of the Giza Advanced Field School to be set within an extensive excavation season. AERA now had to allocate energy, resources, and planning for hiring, lodging, and feeding up to 55 people for a period of three months of intensive, fast-paced archaeological excavation and recording in the heart of downtown Luxor, one of the busiest tourist destinations in the world.

### The Team

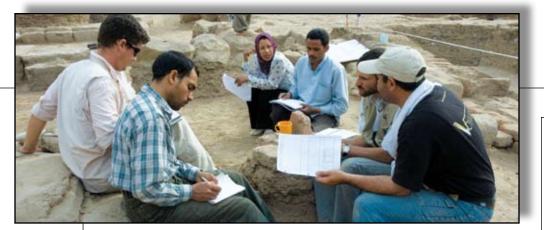
Our SAFS class consisted of 25 SCA inspectors, organized into five teams, each with its own excavation area. While our first field school was staffed largely by Westerners, Egyptians have come to play an increasingly greater role with each succeeding program. The staff of the SAFS included 15 SCA inspectors, who served as instructors or assistants. In addition, they continued their own training with workshops on archiving data and writing reports. Each excavation/teaching unit was composed of one non-SCA teacher (foreign or Egyptian), one non-SCA archaeologist (foreign or Egyptian), two SCA teachers/archaeologists and five to six SCA students.

The 45 members of the SAFS team also included two photographers; a surveyor assisted by one SCA supervisor; an osteo-archaeologist, also assisted by an SCA supervisor; three ceramicists, two of whom are trained SCA supervisors; and a conservator. Four specialists—a conservator, an archaeological illustrator, an archaeobotanist, and an archaeozoologist —taught in their respective fields.

#### The Curriculum

Like our other field school programs, the SAFS emphasized the basics of standard, modern archaeological practice. We taught survey, systematic excavation and recording, retrieval and analysis of archaeological materials, storage of data, and report preparation. We added to this core program material specific to the needs of rescue work, such as assessing a site under threat and designing a project with time constraints and limited resources. We introduced students to ways of drawing together disparate information into a coherent whole that informs us about the lives of ancient people. Another aim of the field school was to instill an awareness that information is there to be retrieved, conserved, and recorded—or ignored, destroyed, and discarded—and that the information helps tell a story.

To accommodate the additional material for salvage work, the field school—previously an eight-week program—expanded



Members of Field School Unit 1 discuss their work in Trench B. Clockwise from lower left: Ayman Damarany, James Taylor, Mona Fathy, Mansour el-Badry, Essam Mahmoud, and Essam Shehab. (Photo by Jason Quinlan)



Members of Field School Unit 1 learn the basics of drawing pottery with SAFS teacher Will Schenk. Clockwise from lower left: Mansour el-Badry, Mona Fathy, Ezzat Abo Bakr, Will Schenk, and Yasser Mahmoud Hossein. (Photo by Jason Quinlan)

to twelve weeks: January 5<sup>th</sup> through March 27.<sup>th</sup> It included seven weeks of fieldwork, one full week of laboratory tutorials in material culture, and three weeks of work on a special topic that overlapped with the final two weeks dedicated to writing a report.

### A Full Day, a Busy Week

Each SAFS team worked in its trench at the excavation site all morning. After lunch the students focused on paper work: feature forms, logs, drawings, etc. Late in the afternoon, they attended lectures given by our staff and visiting speakers. On Wednesdays, they themselves were the speakers, giving presentations on their own work. Friday was the only day off. On Saturdays the students took written exams. The five teams also rotated through the lab, learning the basics of illustration, conservation, ceramics, and the analysis of plant and animal remains.

### Graduation and Beyond

On March 27<sup>th</sup> the students graduated in a ceremony held in the Luxor Mummification Museum. They were honored to receive their certificates from Sabri Abdel Aziz, Undersecretary of State and SCA Director of Pharaonic Sites and Monuments; Michael Jones, Director of the EAC program of ARCE; and Mark Lehner, Director of AERA.

We have left in Luxor a motivated and well trained pool of graduates and field school teachers who will be able to respond to urgent archaeological demands in the area and be able to make a real contribution to urban archaeology. They have the skills to carry out rescue work and an appreciation for the information that they can salvage.

With the SAFS and the other components of our field school program, we hope to have a long-term impact on Egyptian archaeology. Our goal is to offer training in the full range of skills that SCA inspectors need to save Egypt's past.

 $\sim$  Mohsen Kamel & Ana Tavares, SAFS Co-Field Directors



### Acknowledgements

The Salvage Archaeology Field School was supported by the American Research Center in Egypt (ARCE) USAID grant (No. 263-A-00-04-00018-00) and AERA donors. We thank Dr. Gerry Scott, ARCE Director; Shari Saunders, ARCE Assistant Director; and Michael Jones, Egyptian Antiquities Conservation (EAC) Project Director. We are grateful to Janie Abdul Aziz, Laura Shawky, Amira Khattab, and Amir Abd El-Hamid of ARCE for their assistance.



View to the northeast down Trench 2 in the direction of Karnak Temple from the former edge of Old Luxor. (Photo by Mark Lehner)

he context of the SAFS excavations in the geography and history of Luxor centers on the New Kingdom Luxor Temple, which formed the southwest end of a 2.8 kilometers axis with Karnak Temple, the "Vatican of ancient Egypt," the main temple of "Amun-Re, King of the Gods." On the Festival of Opet priests carried the image of Amun enshrined on a symbolic boat in a great procession down this avenue to Luxor Temple

where king and god communed and renewed their interdependent vital force (ka).

One of the last native rulers of Egypt, Nectanebo I (380–362 BCE), lined the avenue with sandstone sphinxes interspersed with trees planted in circular pits lined with red brick, spaced every ten cubits (5.25 meters). Around 300 AD, during the Tetrarchy (Greek for "leadership of four") instituted by the Ro-



Far right: Location of Luxor in Egypt. Right: Satellite photo of Luxor from Google Maps. The red outlines indicate the locations of Luxor Temple and the Khaled Ibn el-Waleed Garden, where the SAFS worked. The Avenue of the Sphinxes ran from Luxor to Karnak Temple.

15



The Avenue of the Sphinxes, cleared and reconstructed in front of Luxor Temple in the 1950s and early 1960s.

Mark Lehner

man Emperor Diocletian, local authorities turned Luxor Temple into a fortress of Roman legionaries. A cluster of houses and settlement no doubt surrounded Luxor Temple from the time it was founded, but it was the settlement around the late Roman fortress which probably evolved into the thick and dense settlement mound that occupied the very interior of the temple up into the 19<sup>th</sup> century AD.

Old Luxor also rose upon a mound of its own building, demolition, dumping, and rebuilding. By Medieval Islamic times, the living floors of the old Luxor town occupied a high level inside the Luxor Temple, witnessed to this day by the floor level of the Abu Haggag Mosque, which the town demolishers spared in the eastern corner of the first court. The old town mound spread to the northeast front of the temple for a stretch of several hundred meters, tailing out, it seems, just where the Khaled Ibn el-Waleed Garden (KIW) begins.

Beginning in the early 1880s, antiquities authorities began to remove the old town, first within the temple, and then from the area just outside the main entrance pylon to the northeast, where old lithographs and the earliest photographs show the obelisks and colossal statues of Ramses II embedded in mudbrick houses, animal pens, and pigeon houses. A major operation between 1958 and 1962 removed 10 to 12 meters off the top of the town, nearly 2,000 years of recent premodern, Mediaeval, and Roman houses and settlement deposits between Luxor Temple and the Makeshkesh Mosque and police station (the station was recently demolished), which stand between the KIW and the Luxor Temple preserve. The clearing exposed the sandstone pavement and sphinxes of Nectanebo I's avenue, but stopped at higher levels on either side leaving the remains of houses and other structures dating from the 25<sup>th</sup> dynasty to the Roman Period.

The excavations also left a standing section of the old town mound in back of "Pasha's House" on the Nile corniche where the National Democratic Party has long headquartered in Luxor. In the 1980s an Oriental Institute mission, under Donald Whitcomb, excavated trenches within this section and determined that here the mound contained layers dating from the 14<sup>th</sup> century CE down to late Ptolemaic Period (332-30 BCE).

The old Luxor town mound thinned out toward the northeast and ended about at the location of the KIW. The early 20<sup>th</sup> century maps show the urban agglomeration ending just about where the KIW comes to a point behind the Savoy and Grand Hotels, between El-Markaz Street and El-Muntaza Street, which stream with people when the ferry from the west bank docks below Luxor Temple. Much of the area from here to Karnak Temple was open and green, occupied by six *ezbas* (rural estates), and two large ponds south of the Sphinx Avenue axis in the area now behind the Suzanne Mubarak Library. Today, a dense lenticular spread of city covers the entire stretch of the Sphinx Avenue between the two temples.

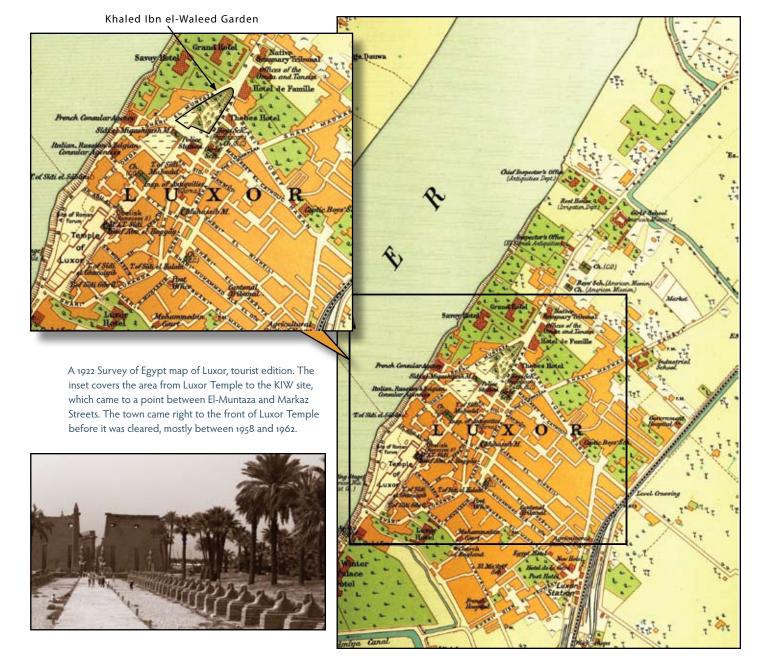
The recent plan to clear more of the Sphinx Avenue is the continuation of the removal of the archaeological record of 4,000 years of settlement, the erasure that began in the 1880s. The temples of Luxor and Karnak are two of the most famous archaeological sites in the world, the pillars of the Egyptian Thebes, one of the preeminent cities of the ancient world. Yet, after nearly two centuries of archaeology in Luxor, until the sCA and AERA fielded the SAFS, there has been only scant and minimal excavation of the houses and settlement layers, of the

structures of everyday life in this great city. As is the case at other Egyptian sites, an earlier generation destroyed the settlement contexts that embedded great stone temples in order to save them. But in so doing they, in a sense, lost those temples they lost so much of the record of the daily lives of the people who built those temples, worked in the temples, and administrated the temples as social and economic institutions.

Working at the edge of the old Luxor Town mound in the KIW site allows SCA archaeologists to study the interface between the town and countryside and the history of the Sphinx Avenue. Within only two or three meters of occupation layers, the SAFS excavators found deposits that they date tentatively from the 14<sup>th</sup> century to Nectanebo I. They found evidence that the Avenue became a channel. For a very long time, people used the banks on either side for pottery kilns and wine processing, industries that make sense on the outskirts of town.

The SAFS ended just when the excavators had found thick walls cutting across the avenue and under the sphinx pedestals, calling into question the nature or very existence of the pre-Nectanebo avenue. Further salvage excavations at KIW, or even in the remaining settlement layers flanking the Sphinx Avenue closer to Luxor Temple, would shed much light on the lives of ancient citizens of Luxor, and therefore about the history of Luxor Temple itself.

 $\sim$  Mark Lehner



# **Rising to the Call from Luxor!**

## The whole AERA team had to switch tracks suddenly in mid 2007 to mount the monumental SAFS project in Luxor.

Members of the AERA senior team were well into planning for the 2008 field season at the Lost City of the Pyramids in Giza and for the 2008 Advanced Field School session when we agreed to urgent requests from Luxor Director Mansour Boraik, and ARCE Directors, Gerry Scott and Shari Saunders, and Chicago House Director, Dr. Ray Johnson, to take up the challenge of the SAFS in Luxor, with the blessing of SCA Chairman, Dr. Zahi Hawass (see page 10).

We put aside our first draft of proposals and budgets for our various Giza projects and planned instead for a smaller excavation season at the Khentkawes Town, and for an expanded Archaeological Science Program in the Giza Field Laboratory (see our next AERAGRAM!). We postponed the next session of the Advanced Giza Field School until 2009.

Our major investment of energy turned to meeting the challenges of launching the sAFs in Luxor. We began working intensively with Lara Shawky, Janie Abdul Aziz, and Michael Jones of ARCE's Egyptian Antiquities Conservation Grant to plan and budget for an operation that came to include 150 people, 419 miles from "home" at Giza.

This was like turning a very large ship. In place of our usual villa and rented apartments at Giza (which we hope to replace soon with our own property), Field School Directors Mohsen Kamel and Ana Tavares needed to provide accommodation at Luxor for 48 people, including 11 SCA supervisors who do not live in Luxor, and 10 professional archaeologists from abroad,

all recruited in short order by Dr. Mary Anne Murray. Mohsen, who suspended work on his PhD dissertation at UCLA, and Ana had to provide breakfast, second breakfast, lunch, and dinner for 55 to 62 people, catering on a scale seen for large feature films with many actors and extras! All this for three months of intensive rescue archaeology compared to the usual two-month field school sessions at home in Giza.

### Senior AERA Team

Mark Lehner, Director John Nolan, Associate Director, Egyptologist Richard Redding, Research Director, Faunal Analyst Mohsen Kamel, Co-Field Director Ana Tavares, Co-Field Director Mary Anne Murray, Archaeological Science Director, Archaeobotanist Cindy Sebrell, Director of Advancement Erin Nell, Business Manager Mari Rygh, Archivist Brian Hunt, Website Manager Farrah Brown, GIS Manager Wilma Wetterstrom, Editor

In January, only six months after the late June go-ahead for USAID funding, AERA successfully fielded the ambitious program over three months (January–March), without major problems, and within the strict limitations of USAID grants—this thanks to substantial cost share provided by AERA's many benefactors. It required the

entire AERA team, with tremendous help from Luxor sCA Director Mansour Boraik to field the largest settlement archaeological excavation ever in Luxor.

Everyone on the AERA team—the 25 SAFS students from Luxor, the 15 SCA supervisors, the 18 archaeologists from Egypt and abroad—were impressed at the powerful *esprit de corps*. All worked as one in a group spirit filled with a sense of pride and honor to be part of this undertaking. So were those in ARCE and USAID who made this possible. We were happy to receive, when the SAFS was in full swing, visits to the KIW excavations and field school from Director of USAID in Egypt, Bambi Arellano and her husband, Dr. Jose Arellano, an Amazonian archaeologist; Director of ARCE, Dr. Gerry Scott; Assistant ARCE Director, Shari Saunders; and EAC Director, Michael Jones.

### AERAGRAM

Volume 9 Number I, Spring 2008 Editor: Dr. Wilma Wetterstrom Assistant: Amanda Pavlick

**AERAGRAM** is published by **AERA**, Ancient Egypt Research Associates, a 501(c) (3), tax-exempt, non-profit organization.

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The 2008 SAFS team: students and staff. (Photo by Mark Lehner)





## **Full Circle**

During the 4<sup>th</sup> Dynasty Seshemnefer II may have begun his career here at Giza. As "Scribe of the Royal Documents for Royal Instructions," he would have worked in the "House of the Book Roll," perhaps somewhere on the west side of the Lost City site. During the 5<sup>th</sup> Dynasty he returned to Giza to his final abode, his "House of Eternity," a large tomb just west of the Great Pyramid. See page 2 to learn how John Nolan used impressions that may have been made by Seshemnefer's own cylinder seal to trace the trail of this flesh-and-blood man who lived 4,500 years ago.

> Peggy Sanders, Archaeological Graphics Services

### **House Unit 1**

Where Seshemnefer may have lived and worked; might have been part of the "House of the Book Roll."

# Lost City of the Pyramids

## Seshemnefer II

Life-sized red granite head, discovered in 1912 by the Harvard-Boston Museum of Fine Arts Expedition under the direction of George A. Reisner (MFA 12.1487). (Photo by Peter Der Manuelian)



# Mark Lehner

### **Pottery Mound**

Sealings with Seshemnefer's titles were found here. (Photo by Yukinori Kawae)