ANNUAL REPORT
New Understandings, Foundations for the Future
Ancient Egypt Research Associates

Curious about our cover?
See page 2

http://www.aeraweb.org
The photos in our annual report were taken by Mark Lehner, Claire Malleson, Richard Redding, Ali Witsell, Jason Quinlan, Sayed Salah, Mary Anne Murray, and Heidi Nichols.

Cover photo: In the AERA field lab/storeroom at Giza, archaeobotanist and Director of Archaeological Science Dr. Claire Malleson works on ancient plant samples at her microscope while sheltered from flies by a mosquito net. The flies had been settling in the Petrie dishes with Claire’s delicate, minute, sorted archaeological seeds, disturbing the samples. Study seasons, such as the one we held this past winter-spring, are especially critical for providing the time necessary to carry out comprehensive and detailed analyses of our collections. Excavation seasons do not afford specialists enough time to thoroughly study their samples and backlogs build up season after season.

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Yes, through all the news you’ve heard from the region, archaeology continues strong in Egypt. AERA worked full steam right through 2012 and the first half of 2013, making important contributions. We took this year as a study season to catch up on our backlog of materials and think about results. We sorely needed this time in the lab, at the computer, and in the library to analyze, integrate, and reflect on major discoveries we have made in the last several years.

Digging Deep Data

Without analyzing the material we have recovered—that is, without continuing to “excavate” by going to the micro-level in the lab—and reflecting on the data, we don’t really know what we’ve found or what our discoveries mean.

A case in point: a major new understanding of the Lost City site emerged when we began looking at the distribution of Levantine imports across the site. In previous seasons charcoal analyst Rainer Gerisch had identified—amidst the thousands of pieces of Nile acacia—bits of olive wood, oak, pine, and cedar, all from the Levant. When we plotted the locations of these bits across the site, we discovered that they were scattered all over—foreign woods imported at great cost, but apparently ubiquitous and abundant enough to burn. We also found another Levantine import, combed ware pottery fragments. Archaeologists had previously found complete combed ware jars in the tombs of the well-to-do. But these pieces came from the galleries, which we hypothesized served as barracks. We began to realize the settlement must have been more than a workers’ town, perhaps part of a harbor. Comparing our site with proven ports on the Red Sea that date from the Old and Middle Kingdoms, we can envision the Lost City as perhaps the port city of its time, a working hypothesis that Mark Lehner discussed in the last issue of our newsletter, AERAGRAM 14-1.

Here we are proud to share with you AERA’s other major achievements over the past year, ranging from work in the lab, AERA field school accomplishments and new programs, developments with our archive and database, to plans for the AERA-Egypt Center in Giza.

Accomplishments of 2012–2013

- Analysis and Publication Field School Completes Book
  Field School students convened at Giza and completed work they began during our 2010 Analysis and Publication Field School (APFS) for a 300-page volume that AERA will publish.

- Archaeological Science Lab Program
  Specialists in ceramics, animal bone, plant remains, objects, and clay sealings came to our Giza Lab over five months for intensive analysis of material excavated from the Lost City site, the Menkaure Valley Temple, the Khentkawes
Town, and the Silo Building Complex, with AERA Director of Archaeological Science Dr. Claire Malleson overseeing the lab.

**Sealings Survey and the SBC Corpus**
Dr. John Nolan and Ali Witsell completed a study of clay sealings retrieved in 2012 from the Silo Building Complex and from our work in the Khentkawes Town. They discovered the names of four 5th Dynasty kings, shedding new light on royal activities in these areas during the late 4th to mid 5th Dynasty.

**Botanical Study: A Snapshot of Old Kingdom Agriculture**
Dr. Claire Malleson completed a preliminary study of the plant remains from House E in the Khentkawes Town, which offer a unique snapshot of cultivated fields and agriculture during the Old Kingdom.

**Faunal Analysis: Elegant Dining in a High-Status House**
AERA Faunal Analyst Dr. Richard Redding completed a study of the mammal and fish bone from House 1 at the Lost City site and determined that the residents ate the choicest meat and fish available to the town.

**Data Curation Project Phase I Completed**
AERA Head Archivist Megan Lallier, Post-Excavation Manager Freya Sadarangani, Geographic Information Systems Director Rebekah Miracle, and Senior Archaeologist Dan Jones completed the first phase of a project to resolve the enormous size, complexity, and variability of AERA’s vast trove of records into a uniform, searchable dataset that scholars will be able to access in a number of meaningful ways.

**AERA K–12 Educational Outreach Launch**
Megan Lallier carried out a two-day pilot session of her new AERA Archives Outreach Program in the 4th grade class of a Vermont elementary school.

**Archaeological Field Training Program (AFT)**
AERA-Egypt Executive Director Mohsen Kamel and Co-Field Director Ana Tavares developed the new Archaeological Field Training (AFT) program for both Egyptian and non-Egyptian students in partnership with the American University in Cairo. The Egyptian Ministry of State for Antiquities granted permission for the program, which will be partially supported through tuition, to begin in January 2015.

**AERA-Egypt Building Campaign**
Ramses Nosshi of MADA Architects and Nicholas Warner finished concept design drawings for new facilities and renovations at our AERA-Egypt Center in Giza.

AERA’s Year 2012–2013 was important for analyzing past discoveries and exploring further in the lab, with significant new insights into the totality of what we have excavated and recorded over many seasons. We laid the foundation toward greater sustainability while broadening AERA’s reach through partnering with other organizations and institutions. In curating our archives, in our building campaign, and in setting up the AFT program, we took important steps toward ensuring a future for AERA’s contribution to Egyptian archaeology.
Writing papers for publication challenges all academics, especially the first time they prepare a scholarly article. So we were delighted and proud to see the students in our 2010 Analysis and Publication Field School (APFS) complete their first research papers, which AERA will publish.

With the 2013 APFS we continued AERA’s training program for young archaeologists in the Egyptian Ministry of State for Antiquities (MSA). Our field schools began in 2005 and grew into a comprehensive series of courses leading to the first Analysis and Publication Field School in 2010 under Co-Field School Director Ana Tavares. Students learned the basics of taking raw excavation data and material culture through analysis and writing to publication. They put classroom training into practice by working on areas and material excavated from AERA digs that field school teams had helped carry out, aiming for a publishable manuscript in English.

In 2013 a core group of students from the original APFS reconvened at the Mark Lehner Center in Giza to complete their 2010 work. Freya Sadarangani, AERA-ARCE Field School Instructor and Post-Excavation Manager, and Ali Witsell, Managing Editor, worked intensively with the team to help them finish their analyses and text. They challenged the students to go beyond purely descriptive reporting and look critically at their material, asking what it can tell us about the past.

At the end of the 2013 APFS session, Ali and Freya began editing the completed papers, working closely once again with the students to hone their articles. The volume of APFS papers goes to press this fall. Of all the publications we have produced, this will be one of the most gratifying.

The core group from the 2010 Analysis and Publication Field School who resumed work during 2013. They completed articles for publication on the topics listed under their names.
**A RUN OF ROYAL FAVOR: History from Clay Sealings**

Dr. John Nolan, AERA Associate Director, and Publications Managing Editor Ali Witsell do double duty as AERA’s specialists in sealings—bits of clay that ancient Egyptians used to secure bags, boxes, jars, and string locks on doors and windows, as well as to label items. By rolling a hard cylinder into the clay daub while still wet, the Egyptians would impress the design incised on the cylinder—such as names, titles, figures, and geometric patterns. When the hard, dry sealing was broken off, the fragments were discarded.

This season John and Ali studied a new group of sealings from the Silo Building Complex (SBC), which we first exposed in 2011. Located east of the Khentkawes Town (KKT) and basin, this mudbrick complex appears to have been a bakery, storage, and distribution center. John and Ali also studied their backlog of sealings from previous seasons’ excavation in KKT and the Menkaure Valley Temple.

Altogether they examined 244 sealings and sealing-related objects—such as unused bits of clay prepared for the sealing process—including 144 from our limited 2012 excavations in the SBC. These sealings produced some surprising insights regarding royal activity in the KKT and SBC areas. While the KKT was likely built at the end of the 4th Dynasty, we knew of a single sealing bearing the name of the first 5th Dynasty king from our 2005 excavations. Then during the 2012 SBC excavations we identified 5th Dynasty sealings, one bearing Niuserre’s name and the title “Overseer of the Pyramid (town) of Khafre.” The latter raised the possibility that the king might have dedicated the SBC to maintaining the memory of Khafre. Taken in combination with other evidence that Niuserre’s officials refurbished the nearby Menkaure Valley Temple, we proposed that the royal house, having moved away from Giza after Menkaure was laid to rest, was not active in these areas, until Niuserre returned nearly 40 years later.

But John and Ali’s work this season forces us to reconsider our ideas. In their KKT backlog and from the SBC corpus combined they found Userkaf, Sahure, Neferirkare, and Raneferef sealings. Additionally, in the SBC corpus, they identified 10 sealings bearing the name Niuserre. Taken altogether these sealings give significant historical depth to the occupation here. Sealings dating to the reigns of Userkaf through Niuserre imply at least intermittent activity in this area for almost 60 years. As all of these sealings bore the Horus name of the king inside a serekh, a heraldic device, which was used only while the king was alive, we know the seals that left these impressions were made during that king’s reign.

This new sealing evidence gives us a clearer picture of royal activity in KKT during the transition from the 4th to 5th Dynasties. But curiously, we have no SBC evidence for Neferirkare, although he is represented in the KKT sealings. Similarly, no
Amongst the Silo Building Complex sealings, Ali Witsell found one bearing an early representation of the hippo-goddess of childbirth, Tawaret, with leonine arms and legs and a crocodile tail. Three rolls of the cylinder seal created the three impressions, with the upper and middle ones repeating elements of the same part of the seal, just slightly askew. The upper impression gives the feet of the figures in the middle impression, but all the tops of the heads are missing. The lowest impression gives a panel of hieroglyphs too partial, unfortunately, to suggest a solid reading.

The back of the sealing bears the impression of a peg and string closure—twine or string coiled around a wooden peg or dowel. These fasteners are often associated with storage devices such as small granaries or bins.

The representation of Tawaret on the SBC sealing is not unique. Other examples can be found among Old Kingdom sealings, such as the possible Tawaret figure highlighted in blue in the drawing below. The figure to the right is a fully developed Tawaret representation common in later periods.

A modern reproduction of a Tawaret figure graces the fountain at our AERA-Egypt Center, as shown on page 15.

Animals, and among them hippos, are a common motif in these informal Old Kingdom seals, so called because they do not include the titles of officials, as do formal sealings.

Sealing 5067 from the Silo Building Complex

Sealings bear the name of Menkaure’s son Shepseskaf although he was active at Giza completing his father’s tomb and valley temple.

The new corpus of sealings also shed light on daily activities in the SBC. Over 18% of them were used with peg and string fasteners—a type of closure found on architectural features such as doors, windows, and granaries. Another 20% of the SBC sealings were used on jars. In contrast, at the Lost City site only 4% of the sealings were peg and string types, but nearly 47% were jar sealings. The SBC apparently had many secured architectural features—perhaps doors and granaries—suggesting the value and importance of the materials stored here.

We can also conclude that the government was directly involved. The majority of the SBC sealings with impressions are formal—meaning they bore royal names and official titles. They outnumber the informals—those with geometric designs or figures—in a ratio of 3 to 1, an exceptionally high proportion. In addition, almost 5% of the SBC sealings were for documents, a significant number. At the Lost City site there were almost none except in a trash dump, Pottery Mound, where the total was less than 3% even though much of the deposit apparently came from a scribal workshop.

We hope to continue our excavations of the SBC in 2014 and recover more sealings to help flesh out its history and function.
DINING IN A HIGH-STATUS HOUSE: The Good Life, 4th Dynasty Style

Since we first uncovered House 1 at the Lost City site in 2004, we have been learning about daily life here. The largest of all the houses we have found so far, it was outfitted with fine architectural details, such as a bed niche with painted plaster decoration and a unique double bed platform. The master of the house appears to have been a high ranking scribe who headed a scribal workshop based here. Now, we also know that the residents enjoyed a diet of the choicest meat and fish.

During the 2013 study season, faunal analyst and AERA Chief Research Officer Dr. Richard Redding examined nearly 1,100 bone fragments, discards from meals that excavators recovered from floor surfaces and the rubble of collapsed roofs, representing the final years of occupation in House 1.

Most of the bone had been smashed while fresh, as indicated by telltale fracture patterns. Cooks apparently broke up cuts of meat for a stew pot. As the meat cooked, the marrow would have released flavor and fat into the broth. Stews seem to have been the standard cooking method throughout the settlement, but the ingredients were not all the same. In House 1, stews were made of young cattle and Nile perch, highly prized in ancient Egypt and still expensive today.

While cattle supplied most of the meat, the residents also ate sheep, goat, and an occasional pig, all of which arrived at House 1 on the hoof. But cattle were delivered as cuts of meat, some of which reflect the special status of the residents. The hind legs accounted for more than three-quarters of the total cattle limb bones—an odd ratio since one would expect hind- and forelimb numbers to be about equal. But it is not so odd in light of ancient Egyptian religious practices. In tombs at Giza and Saqqara, scenes of offering processions show bearers carrying cattle forelimbs. Slaughter scenes in these tombs depict cattle on the ground trussed, with forelimbs removed. Apparently House 1 residents ate the hind leg “leftovers” from ritual slaughter. Richard has not found such a pattern in cattle limb bones in any other area of the site, except in Pottery Mound, the trash dump adjacent to House 1 where the residents of the house apparently discarded their rubbish.


Faunal analyst Dr. Richard Redding holding minute animal bones.
The residents also ate the most delectable beef: cattle 10 to 12 months old. Elsewhere across the settlement beef came from slightly older cattle, up to 24 months of age, culled at the optimum age to maximize the investment put into raising a herd.

House 1 residents enjoyed the choicest fish too. Two kinds of catfish and Nile perch accounted for most of their fish species, but the perch—the largest and most desirable fish in the Nile—supplied the bulk of the flesh. The House 1 perch were around a meter long. Other fish, though smaller, were at the large end of their species’ size spectrum, suggesting that House 1 received the best pickings from catches, probably hauled in by professional fishermen. Perch in particular, as denizens of the deep Nile channel, could not have been caught by people who lacked equipment and training. In other areas of the settlement we see fewer perch and higher proportions of less desirable species, as well as more varieties that could have been easily captured in shallow pools left by receding floods.

Another clue to the high status of the residents of House 1 comes from a single metapodial (toe) bone from what is probably a leopard. It could have come from a ritual garment. Whole leopard pels with head and claws attached were worn in mortuary rituals by the *sem* priest, a high-ranking person. In 2004 two leopard teeth, which we speculated came from a ritual garment, were found in Pottery Mound, a trash mound next to House 1. We suspected that House 1 accounted for some of the refuse in the dump and was therefore the likely source of the leopard teeth. Now we are reasonably certain that House 1 did indeed dump trash in Pottery Mound, based on the fact that the composition of the faunal collections from the two areas are so similar.
A RARE SNAPSHOT OF ANCIENT FIELDS: Multi-Cropped Food, Fodder, and Fuel

Archaeobotanist and AERA Director of Archaeological Science Dr. Claire Malleson spent the 2013 season sorting and identifying over 57,000 charred seeds and plant parts recovered from a priest’s house in the Khentkawes Town (map on pages 6–7). Based on a preliminary study (see page 5), she knew this was an exceptionally rich array of types superbly preserved. But not until well into her study did Claire realize that they offered an extensive inventory of the variety of wild plants/weeds growing in fields 4,500 years ago, with important implications for studying Egyptian agriculture.

The plant remains, all charred in fires, still retained many of their original features—such as shape, size, and surface texture—allowing Claire to identify many to species.

The plant types were typical of Egyptian settlement sites: mainly “waste” from threshing, winnowing, and sieving to clean the cereal crop. But Claire found far more types than are usually seen in these collections.

The waste products—cereal chaff and field weeds harvested with the crop—were valuable, especially as fodder and fuel. Harvest waste fodder often appears among botanical samples from Egyptian settlements, since dung was a common fuel in ancient Egypt, and some seeds and other plant parts pass through the animal gut more or less undigested.

But Claire’s samples must have been burned directly as kindling, rather than in dung used as fuel. With minute hairs, delicate papery husks and other fine details still intact, the remains are too well preserved to have been bovine cud. Moreover, wood appears to have been the main fuel for cooking and heating; charcoal was abundant, while there were almost no remains of dung.

Thus the House E collection directly reflects the weeds/wild plants growing in cereal fields, but it offers more than most plant assemblages from Egyptian settlement sites. Because of the exceptional preservation, the collection includes species that are rarely recovered or identifiable—a unique snapshot.

Based on the habitat of the weeds, Claire concluded that the cereals consumed in House E were grown close to the desert on the edge of the Nile floodplain. Since many of the weed species are much shorter than the cereals, farmers obviously harvested very low to the ground. They could have avoided many of the weeds by cutting high up on the stalk, as shown in the “snapshot” above. But perhaps the other plants were more than “weeds,” furnishing valuable kindling and fodder, which the farmers harvested together with the cereals and then sorted out later.

The great quantity of weed/wild seeds indicates that the ancient fields were heavily infested and apparently not weeded. Crop loss due to competition from these wild plants must not have concerned the farmers. Perhaps they intended the fields to be heterogeneous reservoirs of many useful plants—even if cereals were the primary ones.

Claire also inferred that harvest workers cleaned the crop only minimally before it went into granaries. This cleaning job required a large workforce for just a few days/weeks once a year. The rest of the cleaning was done when grains were taken out of storage as needed. Apparently it was more economically viable to have workers clean grain through the course of the year rather than immediately following the harvest.

Excavations in 2009 at House E in the Khentkawes Town on the Giza Plateau. The plant remains that Claire Malleson studied came from the fill collected from hearths and floors, and from under the silos seen in the foreground. View to the south.
Over the past 25 years AERA excavation teams have collected vast amounts of data, as shown in the sidebar (below right), which does not even list all of our material. AERA’s data set is now one of the most detailed, extensive, and comprehensive from an ancient settlement site in Egypt—an archaeological exemplar of “big data,” or “deep data,” that itself must now be “excavated” to get the fullest, most accurate understanding of life 4,500 years ago in the settlements we have excavated.

But digging into the data and making full use of it has been a challenge. Over the course of 25 years our excavation and recording methods have evolved and changed. Errors, such as incorrect feature numbers, have crept in. Excavation data have not always been recorded consistently. Not all excavation records have been scanned and incorporated into our server and database, which make them accessible to team members worldwide. And much of the spatial data from areas excavated prior to 2005 is unavailable for instant query in our Geographic Information Systems (GIS) database. Moreover, the sheer volume and complexity of the data have rendered some of it impenetrable to all but the most dogged researchers, and even then they have not always succeeded in finding what they needed.

This will no longer be the case thanks to AERA Head Archivist Megan Lallier, Post-Excavation Manager Freya Sadarangani, GIS Director Rebekah Miracle, and Senior Archaeologist Dan Jones. This spring they completed the first phase of the Data Curation Project, a massive undertaking to resolve the enormous size, complexity, and variability of AERA’s information into a uniform, searchable, query-able data set. When the Data Curation Project is finished the AERA Excavation Archive will meet the highest professional standards and allow us to interpret and understand our data more thoroughly than we ever have, as well as explore new research avenues. In the long term our excavation data will continue to be accessible and meaningful for future generations of scholars. Ultimately, the AERA Archive will remain our most significant legacy for future generations.

**AERA DATA**

23 excavation seasons at Giza have generated:
- Features: 19,369
- Burials: 1,360
- Drawings (maps): 6,724
- Field notebooks: 345
- Photos: 200,000+
- Bags of all finds/samples: 64,033
- Bags of animal bone: 8,292
- Bags of ceramics: 17,472
- Bags of charcoal: 5,737
- Bags of lithics: 6,556
- Bags of objects: 3,214
- Bags of sealings: 3,354
- Flotation samples: 6,088
- Wet sieve samples: 7,302
- Mineral/pigment samples: 540
- Reports on database: 1,403

Field school excavations, Luxor:
- Features: 2,550
- Photographs: 6,650

Field school excavations, Mit Rahina:
- Features: 700
- Photographs: 1,700
BRINGING THE AERA ARCHIVES TO LIFE:  
AERA Educational Outreach

With a masters degree in Library & Information Science (Archives Concentration) from Simmons College, Boston, AERA Archivist Megan Lallier brings to AERA the concept that archives are not static, silent repositories, but rather well-springs for dynamic educational outreach. In March Megan launched the AERA Archive Outreach Program with a pilot session for 4th graders studying ancient Egypt at Dothan Brook Elementary School in Wilder, Vermont.

Megan brought maps, photographs, and excavation records from the AERA Boston Office Archive. The goal was not just to describe the lives of pyramid builders, but to show how we do archaeology and then challenge the students to think critically about our results, as we must do.

Megan laid out a large-scale map of the Gallery Complex at our Lost City site and asked the students: What did the pyramid builders do in these strange structures that look something like ancient bowling alleys? (We think they were barracks for troops and workers.)

Megan gave students “clues:” a photo of 40 workers lying comfortably in the long front hall of a gallery, followed by photos and drawings of artifacts and material we retrieved while excavating these structures: bread pots and ash, stone tools, casserole-like bowls, sealings from jars and bags, a sewing needle, and a hippopotamus bone.

The students met in small groups to work out answers. What did people do in the galleries? Does everyone in the group agree? Can you come up with alternative ideas (hypotheses)? Did you change your minds with additional clues? While stated simply, these questions are our very thought processes as archaeologists.

We plan to continue AERA educational outreach as a regular, ongoing program aimed, not only at K-12, but also K-retirement.
BROADENING OUR REACH: AERA/AUC Archaeological Field Training

Not least of our achievements during the 2013 season: obtaining an agreement from the Egyptian Ministry of State for Antiquities (MSA) for permission to launch the new Archaeological Field Training (AFT) program in January 2015. In partnership with the American University in Cairo (AUC), we will offer the program to both Egyptian and non-Egyptian students. We had originally scheduled the AFT for January 2014, but to give more time to develop the program and to allow conditions in Egypt to settle, we plan now to launch in January 2015.

Mohsen Kamel, AERA Joint Field Director and Executive Director of the AERA-Egypt NGO, negotiated the agreement with the MSA, while Joint Field Director Ana Tavares worked out the agreement between AERA and AUC, with generous help from AERA legal counsel Douglas Rawles of Reed Smith LLP.

Our poster advertising the AFT program.

AERA has formally trained students in archaeological methods since 2005. With support from USAID (through the American Research Center in Egypt), we have run nine field schools for inspectors in the MSA. The AFT will open our training program for the first time to foreigners. They will work side by side with Egyptian students in small teams taught by both foreign and Egyptian teachers, the latter among the best of our field school graduates.

The eight-week AFT program, designed for graduate students and upper level undergrads, will offer a comprehensive introduction to all aspects of field work at a settlement site: such as survey; systematic excavation; recording; mapping; photography; and retrieving and analyzing material culture.

The students will join AERA archaeologists in our ongoing excavations of the Silo Building Complex on the Giza Plateau (discussed on pages 6–7). Foreign students will receive college credit through AUC. Their tuition money, in turn, will largely support the AFT’s field operations, as well as cover the costs for the Egyptian students, who train for free.

We are thrilled to be going forward with this new phase of our field school and believe it offers benefits beyond the excellent field training the students will receive. Partnering with AUC will broaden AERA’s footprint and sustainability for the future. Integrating foreign students into the AFT will open young Egyptian archaeologists to the scholarship of their foreign counterparts. In addition, the cultural exchange inherent in the AFT will make a small contribution toward improving U.S.-Egyptian relations.
Since buying a villa near the entrance to the pyramids in 2009, we have turned the property into the Mark Lehner Center, an efficient and comfortable base of operations, supporting our team both during field work and off season. This Study Season 2013 the Analysis and Publication Field School team worked at the center, drawing upon resources in the archives and library. Other team members, who worked in the AERA field lab, joined them at the center for meals and socializing. The computer server in the center’s IT office makes AERA files available to team members 24/7 for research and writing year-round. In addition Egyptian colleagues and former AERA field school students often use the library throughout the year for their research.

As active as the AERA-Egypt center has become, we have greater plans for it. Our goal is to create a first rate archaeological facility and an international community of archaeologists. To realize this vision, we need to first expand the facilities.

In our fiscal year 2012–2013 we took an important first step toward this goal by engaging Ramses Nosshi of the Egyptian firm MADA Architects and architect Nicholas Warner to design our expansion. They first completed an architectural and photographic survey of existing structures and then developed a preliminary design, which they reviewed with Mark Lehner, Mohsen Kamel (Executive Director of our NGO AERA-Egypt) and AERA Board Member Richard Redding, who acted as point person for the building initiative.

Next Warner and Nosshi met with officials from the Hayy el-Haram, the government office that grants building permits, and then prepared a revised concept design, shown above. Within the approximately 2,800 square meters of our plot, Warner and Nosshi conceived a new residential building, auditorium, refectory, and guest house/director suite. They designed with an eye toward the environmental sensibilities of the site, such as saving most of the existing trees, preserving the orientation—facing directly toward the Great Pyramid—

AERA-EGYPT:
Growing a Community of Archaeologists
and maximizing cross-ventilation, shade, and natural light.

At the same time, their design accommodates modern living and working requirements. The four-floor dormitory building, with screened and shaded roof, will house 34 people. The auditorium will seat 100 people.

This design makes maximum use of the existing structure and keeps the built footprint to a minimum. It employs a variety of strategies to optimize environmental performance, including photo-voltaic panels on the roof of the main buildings to provide a “green” source of energy. The design includes a standby generator to serve as a backup during power outages and a system for gray water recycling.

We look forward to developing this efficient complex that will allow us to house all team members on site during our field seasons, provide ample working space, hold lectures and host conferences, as well as to open our doors to the wider community of archaeologists in Egypt.

An Ancient Real Estate Transaction

Our purchase of the AERA-Egypt property in 2009 followed a long tradition of real estate transactions near the Giza Pyramids. Uvo Hölscher discovered the oldest recorded property sale at Giza, dated to around 2450 BC, during his 1909 excavations in front of the Khafre Valley Temple, described in his *Das Grabdenkmal des Königs Chephren* (1912). A legal text etched in stone documented the sale of a house by a scribe named Tjenti to another man who paid in cloth and a wooden bed equaling ten units of copper. A butcher, bricklayer, two assistant directors of phyles (service crews), a stone worker, and three funerary priests witnessed the transaction, which was then sealed in the land registry in the “court of magistrates of the Pyramid, Horizon of Khufu.” These men must have lived in the pyramid town of Khufu. The legal notice—the stone etching—may have been posted at the front of the Khafre Valley Temple; the pyramid temples served as courthouse and notary.

Some 4,500 years later we, like the man who bought from Tjenti, recorded our transaction for the AERA-Egypt property in an official land registry, albeit now civil rather than temple-based. As our whole purpose is uncovering the deep past, we feel in our property transaction a strong sense of continuity with the ancient people who lived in this very district, in the pyramid towns just around the corner of the Giza Plateau.

Thanks to Our Benefactors

We are grateful to generous donors whose major gifts made it possible for us to establish the Mark Lehner Center: the Waitt Family Foundation, the Ann and Robert H. Lurie Foundation, the David H. Koch Foundation, Charles and Lisa Simonyi, Peter Norton and the Isambard Kingdom Brunel Society, Dr. Marjorie Fisher, and the Urban Land Institute members on behalf of Bruce Ludwig.
Scholarly Publications

YUKINORI KAWAE

ANNA WODZIŃSKA

Lectures and Conference Presentations
(See also the symposia talks listed in the box on facing page)

AFIFI ROHIM AFIFI and GLEN DASH

YUKINORI KAWAE


“Pyramid Quest.” TEDxKyoto. Kyoto University, Japan, September 16, 2012.

MARK LEHNER


“Discovering Ancient Egypt with Modern Archaeology in a Changing World.” Pacific Science Center’s 50th Year. Pacific Science Center, Seattle, WA, October 18, 2012.


CLAIRE MALLESON

JOHN NOLAN


RICHARD REDDING


ANA TAVARES

**OUR WORK**


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**Symposia Presentations**

**BIOARCHAEOLOGY OF ANCIENT EGYPT**
Flamenco (Golden Tulip) Hotel, Zamalek, Cairo, Egypt, January 31–February 2, 2013.

**ZEINAB HASHESH**

**RASHA NASR ABD EL-MAGEED**
“The Faunal Remains from the AA Bakery with a Comparison to Other Areas of the Heit el-Ghurab, Giza, Egypt.” February 2, 2013.

**RICHARD REDDING and CLAIRE MALLESON**
“Modeling Old Kingdom Food Production: What is the Limiting Factor?” February 1, 2013.

Field schools graduates Afaf Wahba and Ahmed Gabr also participated in the conference. Afaf presented her work on the cemetery associated with a small pyramid of the Teti complex. Ahmed Gabr described four burials in a tomb from the Southern Cemetery at Abydos. Field School instructor Scott D. Haddow presented a paper on the dental morphology of Roman burials at the Dakhleh Oasis. AERA Director of Archaeological Science Claire Malleson spoke about her archaeobotanical work at Tell el-Retaba in addition to the paper she co-authored with Richard Redding.

**AMERICAN RESEARCH CENTER IN EGYPT ANNUAL MEETING**
Hilton Netherland Plaza Hotel, Cincinnati, OH

**RABEE EISSA MOHAMED**

**NAGWAN BAHAA EL-HADEDI**
“Middle Kingdom Objects in Context: Teaching at the AERA-ARCE Mit Rahina Field School.” April 21, 2013.

**MOHSEN KAMEL**
“Coming Full Circle: The AERA-ARCE Archaeological Field Schools.” April 21, 2013.

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Above: Nagwan Bahaa el-Hadedi presents a paper on the AERA-ARCE Mit Rahina Field School at the annual meetings of the American Research Center in Egypt.

Facing page: Claire Malleson discusses her archaeobotanical work at Tell el-Retaba at the Bioarchaeology of Egypt Conference.
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Detail from a scene in the pyramid causeway of Sahure at Abusir. Two rows of men, pulling together, drag the pyramidion (not shown) for Sahure’s pyramid. (After a drawing by J. Malátková in Abusir XVI, Sahure - The Pyramid Causeway: History and Decoration in the Old Kingdom, T. El Awady, Charles University in Prague, Prague, 2009, plate 11.)
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