Egypt's Oldest Olive

Rainer Gerisch, charcoal analyst, has identified olive wood at the 4th Dynasty Lost City of the Pyramids settlement, the earliest olive in Egypt to date.
M ost of what we analyze is not entirely natural stuff. It is products or material left over after people have processed, worked, or digested it in some way. Archaeologists call it “material culture.” People select natural mate-
rial (clay, stone, mud, plants, animals, earth, wood, etc.), modify it, and distrib-
ute it according to the shared ideas that make up culture—the ideas behind their social organization, needs, perceptions, beliefs, and patterns of behavior. Culture influences the shape potters give vessels, the ornamentation they add, the people who use the pots, the means by which they procure them, how they use and reuse the vessels, and how they discard them. Material culture both pass-
ively reflects and actively affects how people used those structures and objects back in their everyday lives. In search of the context of that use, we intensify our production of data from the site, allow us to “read” the patterns of everyday life in the Lost City, and to relate those patterns to the record of Old Kingdom monumental architecture, art, and texts long-studied by Egyptologists.

In this issue of AEA R格ram we pres-
tent two of the stories to emerge from the Arch Sci Program: the earliest evi-
dence that Egyptians were cutting and valued for their fruit. The tree does not yield good timber as it is pruned vigorously to keep it short and produc-
tive. Second, the specimens found at AERA’s site are mostly from twigs. Thus
the wood was probably not imported for carving small objects either. Carving could have left scraps for firewood that might have ended up as charred
wood. Possibly then, our olive wood was not an import in its own right, but rather
entered Egypt with other products, pos-
sibly olive oil. Beginning in the 1st Dynasty, combed ware pottery vessels from the Levant appeared in Egypt. Made of a very hard ceramic decorated with struc-
tures impressed with a comb, the jars were used to transport oils. Some ar-
chaeologists believe they carried olive oil because they have been found in olive oil factory sites in the Levant, where people have pressed olives since the 4th
Millennium BCE. AERA ceramicist Anna Wodzińska has identified a
combed ware sherds at the Lost City site. If the imported jars carried olive oil, this might explain the presence of the wood. Prunings from the orchard might have come along with the jars as some sort of packing material or shipping crates. It is also possible that Egyptian work-
ers brought in the olive twigs with wood shipments. When crews were dispatched to the Levant to fell trees and transport the logs back, they may also have taken firewood to use on their return voyage or to fill out extra space on their ship. Gerisch found the olive with small pieces of charcoal from other Levantine trees—
cedar, pine, and deciduous and evergreen oaks—suggesting that they may have come from the Levant together. But what about the possibility that Egyptians were growing olive trees? In the New Kingdom Queen Hatshepsut maintained a botanical garden of exotic plants. Perhaps Menkaure made an early and undocumented effort to cultivate olive trees in palace gardens. The Pyramid Age saw very few olive trees in Egypt, but few Old Kingdom town sites have been excavated extensively and sampled methodically for wood char-
coal. Gerisch’s work may inspire others to carry out similar studies and perhaps discover more early olive remains.

By the Numbers

Specialists analyze enormous quantities of material every season. These are some of the numbers:

Royal Administrative Building
6,090 animal bone fragments (2007)
6,290 diagnostic sherds (2007)
12,520 chips and stone tools & waste
12,810 plant items
35 pigment samples
25 mud sealings

Area AA available storage facility
2,928 sherds
498 mud sealings

Olive (Olea europeae)
Nile acacia (Acacia nilotica)

Under the Microscope: Identifying Wood Charcoal

All woods have distinctive patterns of cells and other microscopic structures that are used to distinguish one species from another. Rainer Gerisch examines these features in split surfaces of the charcoal fragment, working at magnifica-
tions of 40 to 500 x. Transverse (cross) sections of Nile acacia and olive are shown in the circles at different magnifications to illustrate the differences in structure. The sections in the squares are at the same magnification. Nile acacia is the most common wood at the site, accounting for 99.5% of all the charcoal that Gerisch has identified (143,482 pieces). Olive wood accounts for 15%.
As I examined ground stone tools at our AERA Field Lab, a small quartzite piece caught my eye as highly unusual. Indentations on either side gave it a figure-eight shape, like a dog biscuit. Then I found other examples, including stones with a second set of indentations—making a sort of stone flower with four petals. What were these curious stones?

The objects offered several important clues: the indentations, or grooves, did not develop during tool use, but were prepared deliberately when the object was shaped. On the other hand, scenes of craft work, such as in the tomb of Ti, show how the object was made. From the thousands of stone fragments excavated at our site, we identified 11 drill-stones of fine scale for structures on the plateau, some of them because they are inconspicuous. Removed from their original context they are often incomprehensible. Then, during careful scrutiny in the lab, some attribute catches our eye and provides a clue to the story the object has to tell.

The tools are drill-bits, or borers, for hollowing out stone vessels, especially in vessels with wide shoulders where the internal diameter is wider than the vessel’s mouth.

Craftsmen used crank-shaft drills from Predynastic times until at least the 26th Dynasty; the hieroglyphic depiction of the drill appears as early as the 3rd Dynasty.

How to Start the Hole

The figure-eight, or flower-shaped, stones drilled through the vessel once it had an opening. How was that opening created? How did the craftsmen begin the mouth of the vessel? They might have used a tube-drill, a hollow copper tube force fitted onto a wooden shaft. Tube-drills were used to drill hard stone sarcophagi and stone vessels, but they were very “expensive.” Copper was precious and cutting a hole ground up the metal.

Amidst our objects we found an alternative: inverted conical quartzite pieces, with hafting grooves on the upper part and cutting surfaces on the blunt pointed end. Craftsmen used these bits to start the hole and then replaced them with different sizes of circular or figure-eight borers as the cutting progressed.

Vessels for the Sacred or the Secular?

Egyptologists have thought that ancient craftsmen used the crank drill and borers for making stone vessels intended primarily for temples and tombs as offerings to gods and the deceased. The Lost City craftsmen, as workers in a pyramid city, were undoubtedly producing objects for mortuary purposes on the Giza Plateau. We have evidence of other stone working on a more massive scale for structures on the plateau, necessarily went to tombs and temples. Some items, including some of the stone vessels, may have been intended to support daily life in the city. We do not know to what extent the settlement sustained itself. Some goods were clearly provisioned, such as cattle, sheep, and goat meat; grains; and wood fuel. But textiles made here may have been for the residents’ use.

Acknowledgements

I would like to thank Emmy Malak, Marie-Astrid Calmettes, and Henan Mahmoud for all their meticulous work on their site. I would like to thank Emmy Malak, Marie-Astrid Calmettes, and Henan Mahmoud for all their meticulous work on their site. I would like to thank Emmy Malak, Marie-Astrid Calmettes, and Henan Mahmoud for all their meticulous work on their site. I would like to thank Emmy Malak, Marie-Astrid Calmettes, and Henan Mahmoud for all their meticulous work on their site.

References


Ann couched a challenge within her question: Could the AERA team, fund, and manage a long-term, major archaeological project to retrieve what we knew were the ruins of a major settlement dating to the time of the pyramids? We already knew from our small looks down through the overburden, that underneath the sand we had what is essentially a horizontal section through the ancient city of the pyramid builders, cut by powerful forces of erosion, signalling a dramatic climate shift not long after people abandoned the site. The thick cover of windblown sand soon thereafter hid and protected the site for the remainder of history, until recent decades when workers removed sand for cleaning the many riding stables at Giza and mechanized equipment cut down into the compact, clayey settlement ruins.

We told Ann that we could meet her challenge with a project that would clear the immense overburden, map the outlines of many of the walls to salvage the ancient footprint of the pyramid builders, and excavate selectively with our extremely meticulous methods to understand the life of the people who inhabited this city 4,500 years ago.

The Marathon Project
The challenge was on! Ann Lurie and the Ann and Robert H. Lurie Foundation agreed to match the AERA Millennium Project, with our current map on the left. The yellow areas on the left are the squares in the 1999 map below.

ann_lurie_with_mark_lehner_visiting_the_millennium_project_excavations_in_2006.jpg

Left. The site during the 2000 field season with the Millennium Project in full swing. Much of the work involved clearing a massive blanket of overburden. Note the “cliffs” at the edge of the excavations. View to the northwest.

A Challenge
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Two Royal Towns: Old Digs, New Finds
by Ana Tavares, Co-Field Director

If you stand at Giza on the high desert knoll overlooking our Lost City site, you will see just “around the corner” the remains of two other 4th Dynasty settlements, both of which were excavated in the early 20th century: a town built in front of the tomb of Queen Khentkawes and nearby, the Valley Temple of Menkaure with a village “grafted” onto it. Since 2005 AERA has been working at these two towns in order to better understand the context in which the Lost City functioned.

Our work over three seasons has incrementally shed light on the architecture and history of the settlements. But the 2008 excavations yielded some truly surprising discoveries, offering new insights into life on the Giza Plateau in the late Old Kingdom. We were most surprised to find a building that had never been reported before, deeply buried in front of the Khentkawes Town—perhaps a valley temple for Queen Khentkawes.

Both temple towns were longer-lived than the Lost City. People occupied the Menkaure Valley Temple community for three centuries, as we know from the 1908–1910 excavations that George Reisner published in 1931. He mapped the different phases of the town and published the pottery and other materials. Selim Hassan’s 1943 publication of his excavations in 1932 of the Khentkawes Town is not adequate to establish how long the settlement was occupied. Unlike Reisner, he reported little of the artifacts and other remains. The most important result of Hassan’s work was the map, which took in the Khentkawes Town, the Menkaure Valley Temple, and the eastward extension of the Menkaure Valley Temple that we call the Ante-town.

A Town Reconfigured
After three seasons of work our conviction grows that people inhabited the Khentkawes Town to the end of the Old Kingdom. We see two major building phases (Reisner also knew that with our systematic, meticulous methods we could extract new information, even though the Khentkawes Town and Menkaure Valley Temple had been left exposed to the elements and badly eroded in the 73 years since Hassan’s excavation. Walls that stood waist-high now rose only a few centimeters, and parts had been completely scoured down to bedrock. We expected that the two temple towns would provide a picture of life at Giza that complemented and contrasted with what we had learned from the Lost City. We hoped to develop a more complete picture of the interconnections between the settlements and how they related to the landscape.

AERA Reopens the Investigation
AERA began work at the Khentkawes Town in 2005 in order to understand the wider urban context of the Lost City site. We ostensibly serving the memory of a king or queen with rituals.

The Khentkawes Town was planned and carefully laid out, while the Menkaure Valley Temple community looked like a squatters’ village; it developed “organically” over time as mud-brick houses crowded up against the front of the sanctuary and squeezed into the interior spaces of the temple.

Both towns were longer-lived than the Lost City.

Temporary Towns vs Temple Towns
In the waning years of the 4th Dynasty people occupied at the same time the Lost City, the Khentkawes Town, and the Menkaure Valley Temple village, but these settlements served different functions. The large Lost City (aka Heit el-Ghurob site, Arabic for Wall of the Crow, HeG, for short), where AERA has worked since 1988, was a short-lived “company town” put up to house the infrastructure for pyramid building and decommisioned when construction ceased.

The two other communities nestled at the southeastern foot of the plateau, slightly higher than the spread of the Lost City on the low desert. The plateau communities were “sacred towns,” attached to temples, and probably inhabited by priests
found two major periods of building in the Menkaure Valley Temple, with complex rebuilding of various parts. Modular houses arrayed along the northern side of a narrow causeway leading east from the Khentkawes monument make up the “leg” of the L-shaped settlement. The rectangular set of four buildings (I, J, K, and L) on the northeast, where the town turns south, belong to the earlier phase with an older entrance on the east that included a monumental limestone threshold and a large door jamb. When builders laid in the narrower causeway they quarried a tunnel under it so that people could still go between buildings I - J and K - L, via the north-south street.

To Khentkawes Town and Buried Building

Ever since Hassan’s excavation, Egyptologists have wondered why the Khentkawes Town turned south so abruptly. In 2007 we discovered why. The eastern town wall runs exactly along a vertical bedrock ledge that drops more than a meters (about 6.5 feet). But then we found that the town actually continues eastward, but at a lower level! Geophysicist Glen Dash discovered the first indication of a building on the lower level during his 2006 radar survey. In 2007 we found the

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future explorations

In 2009 we will continue to investigate the Khentkawes Town and Menkaure Valley Temple. We will excavate the lower building on the east and clear and record more houses along the Khentkawes causeway. At the Menkaure Valley temple we will explore the course of the monumental ramp westward and the area between the two settlements.

City, the “company town,” went out of business.

Ramping Up Between Two Towns

Yet another monumental ramp came to light in our clearing between the Khentkawes Town and the Menkaure Valley Temple. Reisner’s excavation of the Menkaure Valley was a virtual island in a sea of sand. Hassan’s forces excavated south of the Khentkawes Town at the front of the Menkaure Valley Temple, but his map left a blank space in the area between the two towns.

Continued excavation in the northern Ante-town area turned up a second ramp, still at a lower level than that to the Menkaure Valley Temple. This ramp served as a roadway to the town and temple, and to the necropolis higher on the plateau. The 2006 radar survey shows that the ramp continues as a broad roadway to the west along the northern temple wall.

In 2008 at the northern end of the Ante-town, we partially excavated the vestibule opening north onto the top of the ramp. This was the vestibule for the second phase of the Menkaure Valley Temple, after the Ante-town closed off the first vestibule inside the original eastern temple entrance. People who occupied the vestibule sunk pots in the floor, which they re-plastered numerous times. They successively narrowed the interior space that the roof beams had to span.

Egyptologists have thought that the Khentkawes and Menkaure Valley settlements were “sacred towns,” that is, maintained and occupied for liturgical reasons. Given the monumentality of the ramps up into these complexes, and their location in front and left of the northern exit from the gate in the Wall of the Crow, and at the low southeastern access on the southern edge of the mouth of the wadi, it is possible that the two temple towns may have functioned as gateways to the necropolis. They may have controlled access up into the Plateau for generations of Egyptians who continued to make monumental tombs and receive burial in the great Giza Necropolis, long after the Lost City.

Excavations in the vestibule on the east end of the Menkaure Valley Temple. Two round alabaster columns baize sit in the floor, all that is left of columns that once supported the roof. The ramp can be seen in the background and beyond, the Khentkawes Town operations. View to the north. (Photo by Mark Lehner.)

Future Explorations

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This article is a brief overview of the work and insights of Mark Lehner, Mohsen Kamel, Lisa Yeomans, Pieter Collet, Amelia Fairman, Daniel Jones, and the teams they have supervised during three seasons in the Khentkawes Town. The remote sensing work was conducted by Glen Dash and his team.
AERA Field Notes

On a chilly morning in February 2008, ULI Governors watch excavators working in a trench on their tour of the Salvage Archaeology Field School site in Luxor. (Photo by Jason Quinlan.)

ULI Group Rallies to Support AERA's Research

A group of 25 members of the Urban Land Institute Governors have together donated $75,000 to AERA, given in honor of Bruce and Carolyn Ludwig. A long-time AERA board member and friend, Bruce has been a fervent supporter ever since first meeting Mark Lehner. In 1985, on the recommendation of Kent Weeks, Bruce caught up with Mark mapping at the base of the Khafre Pyramid. The Governors' group donation will work with a match challenge placed by the Waitt Giza Plateau Mapping Project was a modest operation with few resources and a priority to protect the site. This year’s student body of just 35 was selected from more than 180 applicants. Each prospective candidate was personally interviewed over a two-day period by the AERA Interview Committee. The selection process included a scoring system based on knowledge of the Egyptian language, professionalism, and determination to advance archaeology, and experience in site work. The committee also assessed each candidate’s ability to function in a fast-moving, motivated archaeological team. "There were many superb candidates and it was difficult to narrow it down to 35," said Mohsen Kamel, AERA Co-Field Director and a member of the Interview Committee. “But we are very pleased with the quality of the students this year and we feel it will be a very successful session.”

This year marks AERA’s fifth Field School session. This unique program provides Egyptian Supreme Council of Antiquities (SCA) archaeologists with the skills they need to carry out and monitor archaeological work throughout Egypt according to internationally accepted scientific methods. With well-trained SCA archaeologists in the field, Egypt's rich and vast archaeological heritage is protected and properly studied. In light of recent economic news, the AERA team is working hard not to let this important and unique program lose momentum. Each year AERA’s Field School teachers work hard to ensure that every student receives the support they need to successfully complete this rigorous program. Now more than ever your contribution is essential. Your tax-deductible donation goes directly to support the Field School and the archaeological research that makes it possible. Please consider a gift to the Field School today.

Save the Date! Join Our 20th Anniversary Celebration!

We are celebrating the 20th anniversary of our Giza excavations! Special events on March 14–15, 2009:

- Lectures
- Tours of the site and the AERA Field Lab
- Invitation-only reception
- Other festivities

Please help us mark this important occasion by joining us in Giza next March. Contact Cindy Sebrell at csrebrell@aeraweb.org for more information.

Give the Gift of Discovery!

A gift membership to AERA is a great way to celebrate the holiday season this year. Join AERA today and receive a free gift membership for family or friends. Respond by December 15th and we will send you a gift card that you can wrap and present at gift time. Or, if you have another special event coming up and would like to give the gift of discovery, just let us know the date so we can ensure delivery in time.

Gift memberships to AERA not only help introduce a new reader to the world of archaeology and ancient Egyptian culture and history, but it also helps AERA continue its mission to advance and protect the quality of archaeological research while sharing new information about ancient Egypt with the rest of the world.

Your AERA membership and your free gift membership will each include:

- invitations to special events
- access to regional lectures
- notices & updates on research as it happens in the field
- two issues per year of the AERAGRAM newsletter
- connections with friends, colleagues, and associates around the globe who support and follow archaeological research in Egypt.

Your Contributions Are Making a Difference in Egypt Today

The Field School class of 2009 is preparing for an intense certification program scheduled to begin in February. The Field School is funded in part by a grant from USAID. Additional funding is provided through the generosity of AERA’s individual donors, benefactors, and members.

AERA gratefully acknowledges the Waitt Giza Plateau Mapping Project as a modest operation with few resources and a priority to protect the site. This year’s student body of just 35 was selected from more than 180 applicants. Each prospective candidate was personally interviewed over a two-day period by the AERA Interview Committee. The selection process included a scoring system based on knowledge of the Egyptian language, professionalism, and determination to advance archaeology, and experience in site work. The committee also assessed each candidate’s ability to function in a fast-moving, motivated archaeological team. “There were many superb candidates and it was difficult to narrow it down to 35,” said Mohsen Kamel, AERA Co-Field Director and a member of the Interview Committee. “But we are very pleased with the quality of the students this year and we feel it will be a very successful session.”

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Please send application and payment to AERA in the return envelope.

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AERAGRAM 9/2 Fall 2008

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The Giza Plateau Mapping Project (GPMP) started with an analysis of the overall geomorphology (shape of the ground) of the Giza plateau. I wanted to understand the pyramids as a huge architectural landscape project. The landscape holds clues about how the Egyptians organized their forces to build the pyramids. My ideas about their quarries, ramps, delivery areas, and the urban infrastructure that fed and housed the labor force emerged from trekking across this landscape at all hours of the day and night over the years from 1973 until we started excavations in 1988. After I returned to the USA following 13 years of full time residence in Egypt, I walked the plateau less, and less so, too, after we began our intensive excavation seasons. But I still walk the plateau and experience completely new perceptions of the Giza Plateau and its ancient monuments. I find it sobering that understanding of my attic home office. A glance up from my keyboard and I am looking straight down onto the pyramids, tombs, and temples of Giza. I sometimes ponder this aerial perspective and combine it with ground truth impressions derived from years of physically trekking the landscape.

With this issue of AERAGRAM I launch a new column on my observations. I start with ponderings about the location of the Khentkawes monument to accompany the report on our 2008 field season at the Khentkawes Town (page 8).

Mark Lehner

Khentkawes and the Great Circle of Quarrying

It appears to me that the Khentkawes monument occupies the center of a circle, actually a gigantic gaping hole, that pyramid quarriers gouged incrementally into the plateau, leaving the bedrock immediately north of Khentkawes as a kind of reference to the original Giza Plateau surface. For the queen’s monument, the quarrymen reserved a roughly square block of this unquarried limestone bedrock, 12 meters high, on which workers built a stepped, vaulted mastaba superstructure, rising another 7 meters.

If I line my half-meter ruler along the eastern side of the Great Pyramid of Khufu, it aligns to my left (south) with the Khentkawes monument to my right (west). The Khentkawes monument is like a great corner post of a horseshoe-shaped quarry within the greater circular depression, and both the eastern (Khentkawes) side and the western side of this quarry align rather neatly with the eastern and western sides of the Great Pyramid. Located 300 to 600 meters south of the Pyramid, the volume of missing stone is close to that of the pyramid (Lehner 1985:312). We might infer that this is the “hole” corresponding to the “pile” of the Great Pyramid.

A Tour of the Great Circle of Quarrying

Let us scribe a true circle, with the Khentkawes monument as its center, and the distance to the Khafre causeway (200 meters) as its radius, so about 400 meters diameter. The circumference corresponds with the Khafre causeway, approximates the line of the western quarry cliff, and roughly corresponds with the limit of the bedrock exposure east of the Khentkawes monument. The scribed circle shows that the western cliff and the Khafre causeway are about equipollent from the Khentkawes monument. If we quarter the circle by extending the center axes of the Khentkawes monument, we see that the lesser-worked part of the quarry fits nicely within the northeastern quarter.

The western side of the horseshoe quarry within the larger circular area is the human-made 10-meter-tall cliff, stubbed with dark tombs hollowed out of bedrock, the earliest belonging to some of the children of Khafre. The farthest western edge of the quarry is about 200 meters due west of the Khentkawes monument. The horseshoe-shaped quarry broadens out to the north to just over 230 meters—about the width of the Khufu Pyramid, to which it aligns! This western rock-cut edge curves around toward the east-northeast to meet the Khafre causeway. Khafre’s forces worked his causeway on a linear ramp reserved in the bedrock. We could take this ramp as the northern edge of the greater circle; indeed, the causeway is just about 200 meters north of the Khentkawes monument, just as the western edge is about 200 meters west of the monument. The greater circle of quarrying, starting from the Khafre causeway tangentially and then curves toward the southeast just behind the Khafre Valley Temple. On a southeast–northeast diagonal, the quarry and later Old Kingdom rock-cut tombs extend about 244 meters from the Khentkawes monument. On a direct line due east of the monument, the bedrock quarry exposure disappears under sand along a line 175 to 195 meters from the monument.

The bedrock in the southern part of the great circle of quarrying is buried under an immensely thick blanket of sand that fills the central wadi between the Moqattam and Maadi Formation outcrops at Giza. The southern knoll, the Qebel el-Qibli, of the Maadi Formation, located 273 meters due southeast of the Khentkawes monument, gives a sense of a border to the greater quarry area.

Counter clockwise? What Does It Mean? It is possible that the 4th Dynasty Egyptians exploited the great circle of quarrying counterclockwise. Khufu’s forces may have begun in the northeastern quarter, the closest to his pyramid. As they quarried deeper, they extended farther south, into the southwestern quarter, forming the southern end of the horseshoe shape. Khafre’s quarrymen may have quarried bedrock farther south yet, and then east into the southeastern quarter. The Menkaure Valley Temple and Khentkawes Town fit rather neatly into the southeastern quarter. We know from our work in the Khentkawes Town that its builders founded the settlement on a quarry plane, the top of one of the natural limestone beds, which they exposed by stripping off the higher layers for building material, perhaps carrying on from Khafre’s reign. At the end of major quarry works, they had isolated great rectangular blocks of bedrock in the northeastern quarter where they had not worked the bedrock down nearly as deep as in the other three quadrants of the quarry circle. These bedrock blocks stand tall along the northern side of the Khentkawes Town where people used them for rock cut tombs in the 5th and 6th Dynasties. We certainly would be wrong to think the 4th Dynasty surveyors and quarrymen intended to create such a neat and perfect circle, but it seems they did approximate a center to their greater quarry area. They reserved much of the original height of the plateau immediately around this center point. They cut a deep and yawning corridor to separate off a squarish pedestal as a base of Khentkawes’ tomb. They leveled and lowered the top of that pedestal to build upon it the stepped and slightly vaulted mastaba for the queen. The quarrymen never cut down the irregular block of bedrock north of the separating corridor. Why did they reserve the original plateau surface at this point? This may have been a result of quarrying by quadrant: they never got around to working the northeastern quadrant deeply, so they left its corner standing tall. But the fact that the Khentkawes monument pedestal juts forward from the corner, as it occupies the center of the greater quarry circle, suggests that they reserved this patch of bedrock as some kind of benchmark. We might guess the purpose was to calculate volume of stone or to monitor work. How appropriate that at the end of the 4th Dynasty of pyramid building kings, the pyramid benchmark at the center of the great quarry circle entombed a queen named Khentkawes. Her name could mean, “may her life force predominate” (James Allen, personal communication 2008), from the term khent, “in front” or “predominant.” It is a generic life force transmitted through generations. A parent could say of a child, “my ka repeats itself.” The Egyptians said of burial in the necropolis, “the ka of your ancestors reach out to you.” The Khentkawes monument stands like a sentinel on the eastern front of the gigantic pyramid tombs of her ancestors. Together the Menkaure Valley Temple and Khentkawes monument and town closed off the passage up into the plateau, and dominated the quarries that had served to build the pyramids.

We reported in the last issue of AERAGRAM that our Lost City site was flooded by rising ground water. But now, thanks to the efforts of the Supreme Council of Antiquities and Cairo University, the site is dry!

Like the Lost City, the Sphinx and nearby temples have been threatened by rising ground water. In an effort to lower the water table, the Supreme Council of Antiquities began a test program to pump the water away. Since late June, 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, have been working with Dr. Zahi Hawass, Chairman of the Supreme Council of Antiquities, to test three pump sites. They set up a pump in front of the Sphinx and Khafre Valley Temple, another in the Sound and Light Show building complex, and the third in the slope east of the Khenktawes Town. Operating continuously, the pumps drew water from the wells, about three meters deep, a level roughly commensurate with the inundation of our site.

Pumping over two or three months seems to have worked wonders. The water is now gone from the low area around the Sphinx, the target for Drs. Reda and Hafiz. And gone too are all the puddles and ponds across the Lost City.

Drs. Hafiz and Reda suggested setting up two or three wells at the north and south ends of our site. With a diameter of about one foot, these wells are not intrusive. Mohsen Kamel, AERA Co-Field Director, and I gladly accepted and encouraged the efforts of the Cairo University team, and conveyed our support to Dr. Zahi Hawass, hoping for an even drier site by the time we resume excavations in January 2009.  

All photos by Mark Lehner.