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Foundation

Robert Hanawalt, Founder
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OFFICIAL NOTICE

The 2001 Annual Meeting of The Amarna Research Foundation will be held on September 8, 2001 at 3:00 PM at 7110 South Old Farm Road, Littleton, Colorado.

Nominations for board members and officers must be directed through the Nominating Committee at least 15 days in advance of the Annual Meeting.

The chairman of the Nominating Committee is Floyd Chapman, 1500 W. Thornton Parkway, Lot 124, Denver CO 80221-5457, Tel: 303-429-5393.

THE PRESIDENT'S PAPYRUS

By David Pepper

Although I was fortunate to be in Egypt twice last year, I did not get a chance to visit Amarna due to a busy schedule. I do manage to squeeze in quite a bit of travel throughout the year, and it gives me an opportunity to visit some of the Amarna material in the various museum collections scattered around the world - but more about this in a future issue.

Bob Hanawalt, the founder of our organization, did manage to meet up with Barry Kemp during his November 2000 survey at Amarna. Bob then returned home via Troy, about which he has written the first installment of a two-part article in this issue.

Research of the Amarna period, and the study of Egyptology in general, suffered a setback last year with the untimely death of Dr. William Murnane. Bill was an Honorary Trustee of our Foundation, and a very good friend of our group. By now you have probably heard of his passing, and read a eulogy or two about him. A couple of years ago, Bill gave a talk to our membership in Denver about his work on the boundary stelae at Akhetaten. His death is a great loss to Egyptology, but Bill's memory will live on as his students pick up the pieces and carry on with his work. I had the pleasure meeting Bill and several of his staff last year in the Hypostyle Hall at Karnak. One of them was Tammy Hilburn, who was awarded the first of the scholarships granted by our Foundation a couple of years ago. Another of Bill's students, Peter Brand, was also present, and I understand he will be taking over the Hypostyle Hall project. So Bill's work will be carried forward.

Our foundation has also voted to name our next student scholarship the "William J. Murnane" scholarship as a tribute to Bill. It was a pleasure to have known him, and his inspiration will live on.

This issue includes two excavation reports, one by Barry Kemp on his work at Amarna, and the other by Nicholas Reeves on his work in the Valley of the Kings.



Bill Murnane 1945-2000

BUILDING IN STONE AT AMARNA

By Barry Kemp

Very little of the stone buildings which were at the heart of the ancient city of Akhetaten survive today. Starting in the reign of Horemheb, and continuing for some time thereafter, these structures near modern-day Amarna were demolished with great thoroughness. Their blocks were carried off not only to supply cheap filling material for temples under construction elsewhere, but also to eradicate the most visible expression of the "heretic" pharaoh Akhenaten's ideas.

Nevertheless, despite this loss of material we are well informed about what Akhenaten's stone buildings looked like - and how they were built.

One reason for this is a method of construction that still seems to be unique to Amarna itself. In response to a need to quickly erect a number of large stone buildings following novel plans, one of the king's architects - or was it Akhenaten himself? - introduced a new method for preparing building foundations.

Gypsum foundation beds - The first step was to dig out a shallow foundation pit - perhaps no more than 20 cm (8 inches) deep - in the desert over the entire area to be covered by the building. This exposed either a surface of marl, or pure sand (as is found under the Small Aten Temple). Although both are soft materials they do not compact under weight and therefore provided a firm basis on which to erect a structure. A layer of concrete about five to ten centimetres (two to two-and-a-half inches) thick, made from a hard white material in which were embedded chippings of sandstone and limestone, was then spread over the entire floor of the pit to create a construction bed. There is no sign at any of the buildings that these foundations ever cracked or settled.

Analyses have shown the concrete material to have been gypsum mixed with lime. It was worked to just the right consistency so that it could be given an even surface without subsequent cracking as it dried. Its smooth flat surface made it a colossal drawing-board on which the architect could mark out the intended plan of the building - at full scale in ink or with lightly scored lines. Sometimes, the concrete bed spread unbrokenly over the entire area; such as at the Gem-pat-Aten building in the front part of the Great Aten Temple, where it covered an area 210 x 30 metres (69 x 10 feet). (Readers who have a copy of the *Pharaohs of the Sun* exhibition catalogue handy will find a plan of this building on page 63). Sometimes, for the sake of economy, gaps were left between the lines of walls. The method was used very consistently, not only beneath complete stone buildings but also beneath smaller stone features, including the larger doorways and the stone cattle-troughs at the North Palace.

Figure 1 is a reconstruction of the building method used for stone buildings at Amarna, based on evidence from Kom el-Nana. It is possible that the 'gypsum concrete fill' (as illustrated in the left-hand wall) rose to higher levels.

The gypsum concrete foundation beds, marked out in this way with the plan of the building marked upon it, guided the builders in its construction. These men also worked with another innovation, which they had already pioneered at the king's temples at Karnak. This was the use of stone building blocks of standard dimensions, generally 52 x 26 x 20 cm high (20.5 x 10.25 x 7.9 inches), which made it possible for one man to carry the stone and two men to easily position it. This innovation replaced a system in which block size was not predetermined but seems to have more reflected the convenience of quarrymen. At Karnak the habit has grown up in modern times of calling them talatat (three-hands in height) blocks.

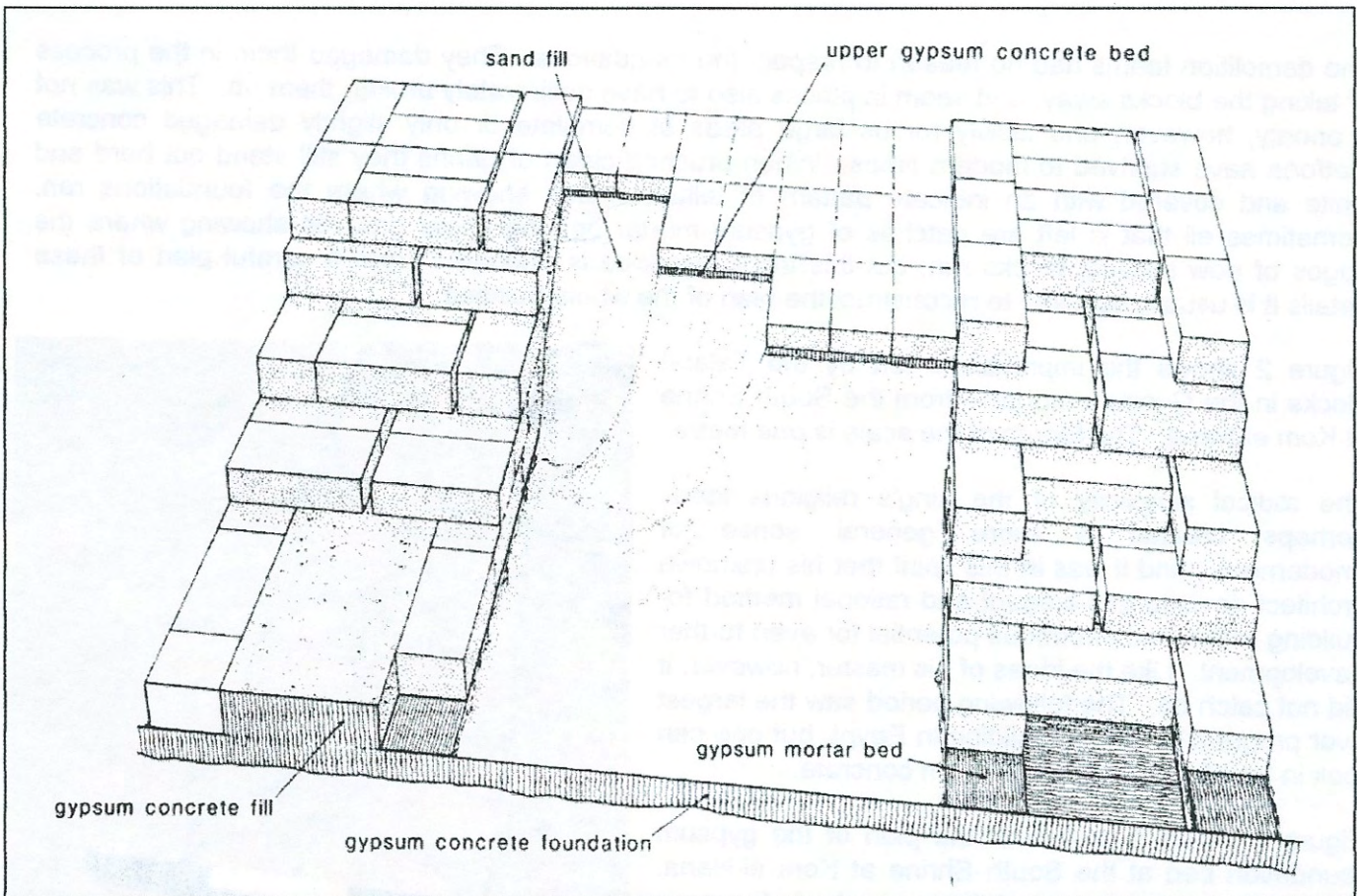


Figure 1 - Amarna building foundations

The builders laid the first course of blocks in a thin layer of wet gypsum mortar spread between the guidelines on the concrete bed. When perhaps two courses had been laid for walls, column bases, and altars, the spaces between were filled with sand and then covered with thinner limestone paving slabs.

Sometimes the potential of the concrete-like material was further realized and it was actually poured between lines of stones to form a wall of composite construction, which reduced the number of blocks to be used. In the 1922 excavation at the site of the Maru-Aten, the excavators remarked on the use of blocks of concrete which they thought had been made by casting in moulds and which were a good deal larger than the standard talatat-blocks (*City of Akhenaten* I: 113).

After the end of the Amarna Period, the stonework was removed so thoroughly that even the bottom course of stone blocks was taken away. So firmly were they cemented into place that it was usually necessary to dig a small square hole into the gypsum foundations at the side of each newly exposed block and to use it to support a lever to pry the block up. Very often when the block came up it left behind it the bed of mortar with an exact impression of its underside, complete with all the details of the chisel marks, and sometimes, too, impressions of incised signs cut into the blocks by masons, evidently as signatures.

When this bed of mortar was too firmly stuck to the block and came up as well, the position of the block was still often left behind, in the form of a ridge of mortar which had squigged out around the outside edge of the block and had then been pressed down by the builder running his fingers along it. The lines of lever-holes are also helpful in identifying the construction layout.

The demolition teams had no reason to respect the foundations. They damaged them in the process of taking the blocks away, and seem in places also to have deliberately broken them up. This was not a priority, however, and luckily for us large areas of complete or only slightly damaged concrete platform have survived to modern times. When brushed clean of debris they still stand out hard and white and covered with an intricate pattern of telltale marks showing where the foundations ran. Sometimes all that is left are patches of gypsum mortar bearing finger grooves showing where the edges of now missing blocks ran, but this trace evidence is enough. From a careful plan of these details it is usually possible to reconstruct the plan of the whole building.

Figure 2 shows the impressions left by the Talatat blocks in the Gypsum mortar – from the South Shrine at Kom el-Nana. The length of the scale is one metre.

The radical simplicity of the king's religious ideas perhaps created a more general sense of 'modernism', and it was in this spirit that his unknown architect devised this elegant and rational method for building which had enormous potential for even further development. Like the ideas of his master, however, it did not catch on. The following period saw the largest ever program of temple building in Egypt, but one can look in vain for any use of gypsum concrete.

Figure 3 shows a portion of the plan of the gypsum foundation bed at the South Shrine at Kom el-Nana. The shaded areas represent the mortar beds for stone blocks. The parts labelled 5966-5969 belong to the foundations for square pedestals, which were to support columns.

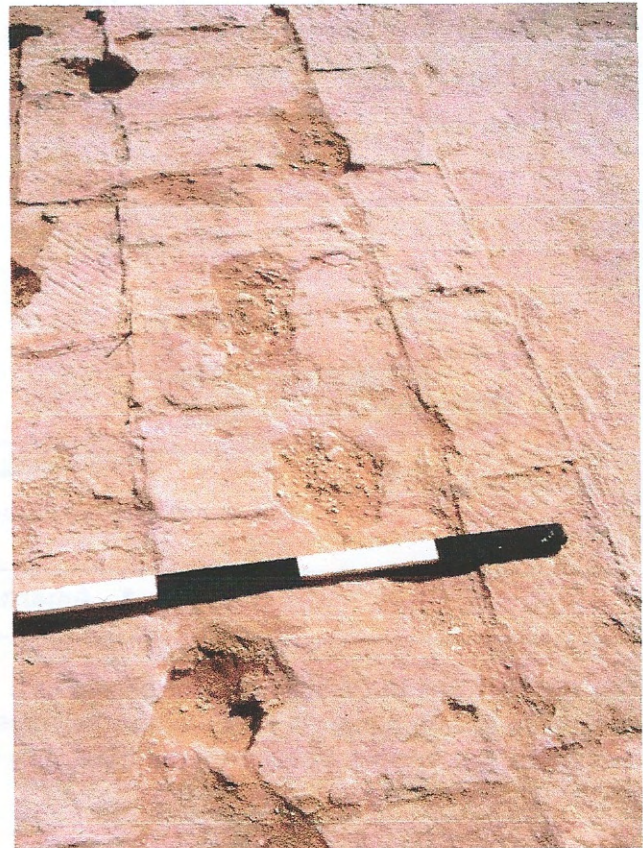


Figure 2 - Talatat block impressions

What stones were used? - As a generalization it can be said that Akhenaten's buildings at Karnak were made of sandstone and those at Amarna were built of limestone, reflecting the proximity of quarries in the two materials. But although the sandstone quarries at Gebel el-Silsila were some 560 kilometres (350 miles) of sailing upstream from Amarna, it was regularly used nonetheless. Primarily, it was the material for larger architectural elements, such as door jambs and columns, and pieces of both on a huge scale were left behind at the Small Aten Temple. Because so much of the stonework was later taken away it is hard to judge the quantities that were used, but from the fact that sandstone chippings occur frequently in the gypsum concrete foundations it is likely that quite a bit of it was originally present. Occasionally even talatat-blocks made of sandstone are found at Amarna. For special places quartzite and alabaster were used, too.

Where did the limestone come from? - Middle Egypt has much exposed limestone with abundant signs of ancient quarrying. It now supports a busy modern industry, as anyone will see who drives south by way of the eastern desert road. North of el-Minia, in the area of Gebel el-Teir, the road passes one quarry after another where the stone is removed either by blasting or by homemade electric saws mounted on sledges. Limestone blocks are therefore abundant and cheap. The stone is, however, quite unlike that used at Amarna. Upon cutting it is left with a ragged porous surface that it is poorly suited to carving, whereas most Amarna limestone is more compact and relatively fine-grained.

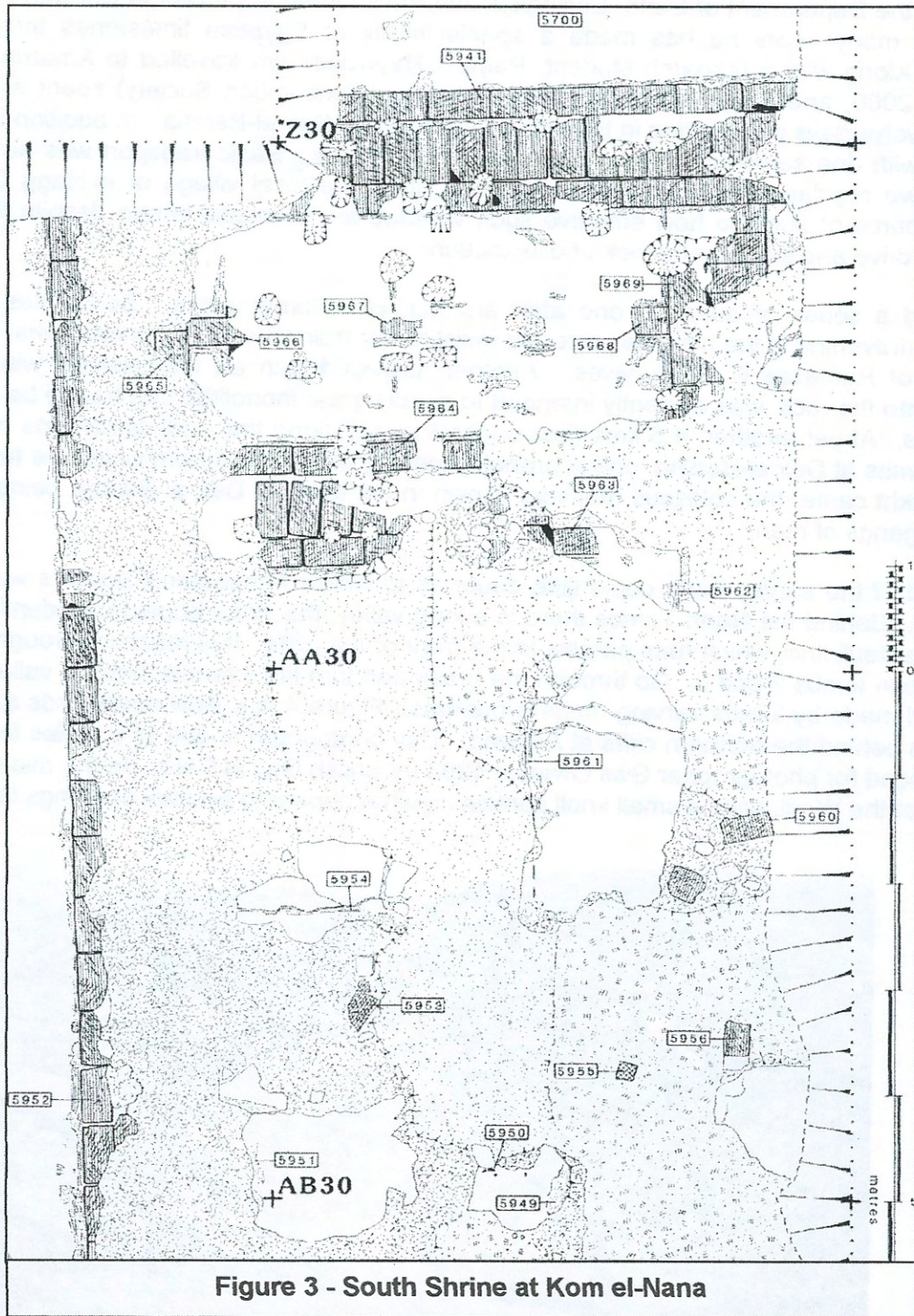


Figure 3 - South Shrine at Kom el-Nana

In his one-season burst of activity at Amarna in 1892, Flinders Petrie marched around the limits of the site and made a few notes on such quarries as he came across or was led to. Some were in the northern part of the site, behind the North Tombs. Little more has been done since then, however. Arising from a chance correspondence, last year I suggested to American geologist Jim Harrell that he take a closer look at the quarries in the vicinity of Amarna with a view to establishing on a more scientific basis where Akhenaten's builders were getting most of their stone. Jim is Professor of

Geology in the Department of Earth, Ecological and Environmental Studies at the University of Toledo, Ohio. For many years he has made a special study of Egyptian limestones through extensive fieldwork. Along with a research student, Pamela Haywood, Jim travelled to Amarna at the end of November 2000, and (under the auspices of the Egypt Exploration Society) spent a very profitable period of twelve days prospecting in the hills as far north as Deir el-Bersha. In addition to the northerly searches, with one sortie was made to the south of Amarna. Basic transport was an elderly pickup truck that we regularly hire, with its willing driver, from the local village of el-Hagg Qandil. It is a constant source of surprise how effective such vehicles are in desert terrain despite the absence of four-wheel drive and the general look of dilapidation.

Jim located a series of quarries, one after another, of different dates. Sometimes they were for 'alabaster' (travertine is the now the preferred term) rather than limestone. In one, what is probably the cartouche of Rameses II still survives. Another, provided with an impressively wide roadway cut shallowly into the rock, was evidently intended to supply great monoliths that had to be dragged to the river's edge. At yet another, 4.5 kms (just under 3 miles) along the wadi which runs behind the 12th Dynasty tombs at Deir el-Bersha, one is probably looking at the place from which the famous statue of Djehuty-nakht came, the colossus that was shown in his tomb at Deir el-Bersha being dragged on a sledge by gangs of men.

By the end of the survey there could little doubt as to where Akhenaten's builders were going to for their stone. Behind the North Tombs there is a long valley, the Wadi Zubeida, evidently formed along a geological fault line, which runs parallel to the front of the cliffs. It is reached through a break in the cliffs between tombs 2 and 3. Go through the break and turn left into this 'hidden' valley, following the rough road made by lorries serving modern quarries. Figure 4 is a view northwards along this valley, which runs behind the northern cliffs at Amarna. This photograph is one of a series from a helicopter flight arranged for photographer Gwil Owen in 1993 by British Gas in Cairo. In the mid-distance, a little to the left of the Wadi, rises a small knoll containing what appear to be dark openings to caves.



Figure 4 - Wadi Zubeida

About a mile along the Wadi, on the left side, a short side valley branches off. A scramble up the lower slope of the headland between the valleys reveals the opening to a large underground quarry which extends far back into the hillside for some distance, its roof supported on pillars. The walls of this cavern bear the marks of the quarrymen's tools as they extracted blocks in even layers. There can be no doubt that this is the quarry described by Petrie: 'In a spur of the hill between the valleys is a limestone quarry, H, facing towards the peak of white rock on the top of the cliffs; it is cut as galleries into the cliff face, and contains the cartouche of Queen Tiy, in the wide cartouche band which is characteristic of the art of Tell el-Amarna.' Petrie's drawing of the cartouche gives the impression that the original was in paint. It no longer seems to survive, but there is at least one place, on the face of a pillar, where in modern times a small area of stone has been cut out in the way that often denotes an attempt to remove an ancient design for sale on the antiquities market. The entrance to the 'Queen Tiy' limestone quarry is shown in Figure 5.

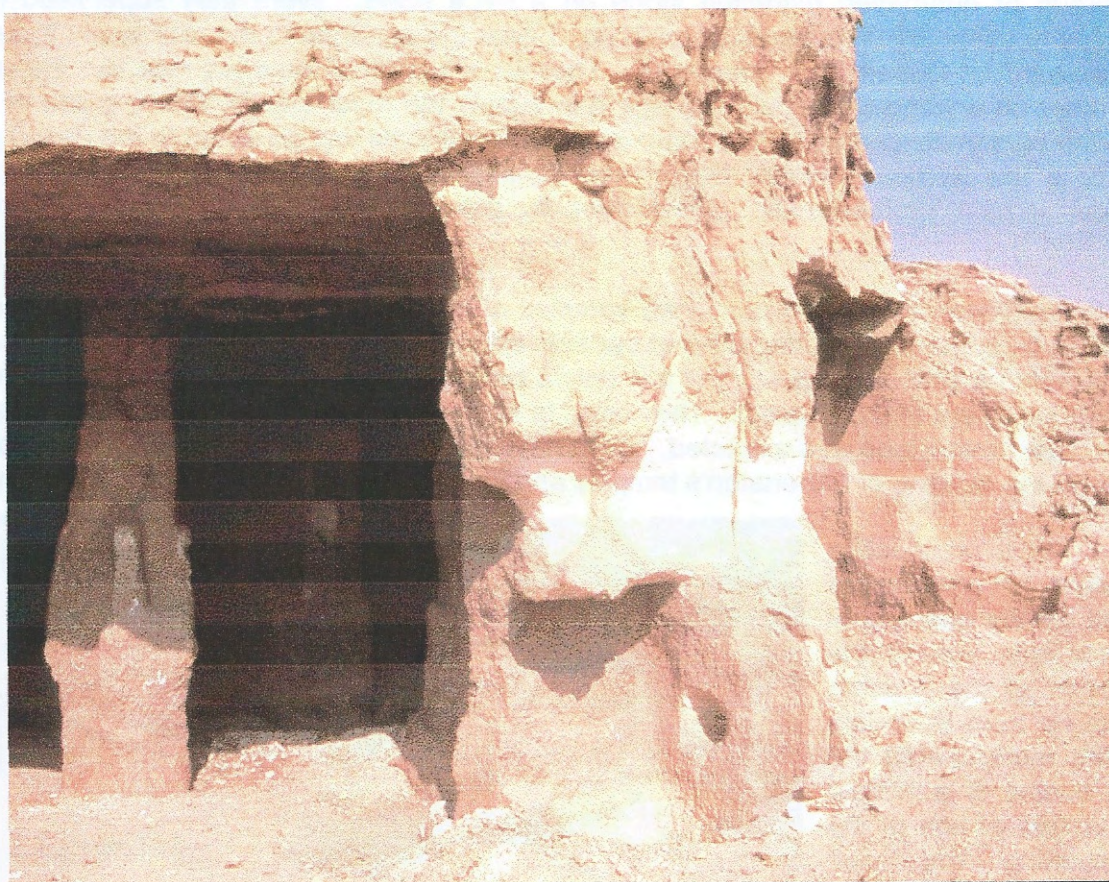


Figure 5 - Queen Tiy limestone quarry

I accompanied Jim on one of his hikes and from here he led me round the edges of the headland and then across the top of the desert plateau. He pointed out that everywhere one looks over a considerable distance there are small shallow workings. Some, near the top where the sides of the valleys become steep, are cut nearly vertically; but most are places where just one layer of blocks has been taken out over an irregular patch. Dispersed amongst them are ancient stone windbreaks. The exciting thing about them is that many roughly shaped blocks still remain in place not completely detached from the rock when the quarrying was abandoned. These have the right dimensions for talatat-blocks once one has allowed for the extra layer of stone to be taken off when the blocks were finally dressed. In a few places the quarry bed is curved, the explanation being that this is where column bases were cut out.

One feature is missing, though. The quarries are on a rough hilltop but there is no sign of a ramp or causeway leading down to the valley floor. The reason must be that most of the stone removed was in handy-sized blocks which could be strapped to the back of a donkey, perhaps one on each side. The vision of constant trains of donkeys plodding back and forth to Akhenaten's building sites belongs to that combination of the grand and the homely which was a constant feature of the past, of Egypt and of so many other places. Figure 6 shows one of the many small shallow quarries on the surface of the desert above and to the north of the Queen Tiy quarry. Several blocks have been separated from the rock, but have left behind. The length of the wooden scale is one metre.

I came away with no doubt that this is the main source of limestone blocks used in the ancient city. But what should one make of the contrast in working methods, between the main underground quarry and the surface cuttings? It is suggestive of two styles of organization. In 'Queen Tiy's quarry' an organized group of quarrymen extracted stone on a large scale. Were they supervised by men attached to her household? The owner of tomb no. 1 near the entrance to the rear valley system was Huya, the 'steward' of Queen Tiy's household. The numerous small quarries look like the result of placing an order on anyone who could manage it to supply the royal estates with a quota of blocks, leaving it to the person concerned to find some assistants and tools and go up on to the desert plateau and work for a few weeks. Ancient Egypt often seems to have worked like this: some projects accomplished by paid 'professionals', others done by delegation through quotas often backed by coercion.

In addition to his fieldwork Jim also examined samples of the rock at the various quarries and many fragments of stone in the storage magazine at our site, to provide the basis for a first proper geological report on the Amarna side of the river. But it is only a beginning. His survey points towards the need for a proper assessment of the quarries. They need to be measured and planned so that we can form some idea of how much stone was extracted. Will it have been sufficient to account for the substantial amount used in the building of Akhenaten's temples and palaces? And so a new project is born.

As a bonus, whilst prospecting in another impressive underground gallery quarry that overlooks the Nile around the northern corner of the Amarna bay (and not far from Boundary Stela X), Jim rediscovered the well known outline of a 'temple plan', on the side of one of the pillars supporting the roof. Readers will perhaps be most familiar with it from its having been used as the cover design on Dieter Arnold's book, *Building in Egypt; Pharaonic stone masonry* (New York and Oxford 1991). The plan, drawn in red paint, is impressively large and in very good condition. It is perhaps



Figure 6 - The small surface quarry

contemporary with a stage of quarrying in which the amounts of stone to be removed were carefully marked out in red painted lines on the rock surface. Whether this is contemporary with the Amarna Period, and whether therefore the plan has anything to do with Amarna (and is even the plan of a building at all) is another matter. Time and research may yield further answers.

THE AMARNA ROYAL TOMBS PROJECT

Report on the Third Season of Work - by Dr. Nicholas Reeves

Excavations in the Valley of the Kings resumed on 23 September 2000, and continued until 3 December 2000, concurrent with the ongoing study of the previous seasons' finds.

The Project's concession has now generously been extended by the Supreme Council of Antiquities to encompass all of the central area of the Valley of the Kings. Our next season of work is planned for November-December 2001 (continuing study of previous seasons' finds) and December 2001-February 2002 (digging).

Staff of the Expedition - *Project Director and Joint Field-director* - Dr Nicholas Reeves; *Joint Field-director* - Prof. Geoffrey T. Martin; *Archaeologists* - Dr David Aston, Ms Bettina Bader, Mr Mohsen Kamel, Dr Ian Shaw, Mr Paul Sussman, Ms Yumiko Ueno, Mr Ken Walton; *Management/Administration* - Mr Masanori Ito, Ms Seiko Kamada, Mr Makoto Ueda, Mr Hirokatsu Watanabe; *Surveyors* - Piers Litherland, Jenny Litherland; *SCA Inspector* - Mr Ezz el-Din Kamal:

Excavations between the tombs of Amenmesse and Ramesses III - The plan agreed with the Supreme Council of Antiquities was to shift the existing path a little to the south, to run between the tombs of Amenmesse (KV 10) and Ramesses III (KV 11); the intention is for a temporary rerouting, in due course, to allow access to the crucial area beneath the present tourist way. Before any new path was installed, however, it was decided to investigate thoroughly its intended route, with a view to further clarifying the section of the wadi at this point and the extent of the Ramessid workmen's settlement already encountered to the north between KV 56 and the tomb of Ramesses VI (KV 9).

During the course of the work, in the uppermost levels, a miscellaneous but impressive collection of broken funerary material was discovered to the east of the entrance to the tomb of Ramesses III. To judge from accompanying newspaper fragments, this material had been deposited at the end of the nineteenth century, when it seems the tomb had been cleared out to facilitate tourist access. Among the finds were fragments of shabti figures of Ramesses III and possibly other kings in alabaster, faience and wood, and pieces of Ramesses III's previously unknown inner alabaster sarcophagus. Fragments of this same king's outer red-granite sarcophagus (the lid of which is now in the Fitzwilliam, the box in the Louvre, both removed by Giovanni Battista Belzoni in 1817) were also found, as well as two fragments from the basalt sarcophagus of Ramesses VI and fragment(s) from the previously unknown alabaster canopic chest of Ramesses IV. In addition, the area yielded a large and highly important series of New Kingdom glass and faience vessel fragments. The material recovered from outside the entrance to KV 11 promises, with further study, to add considerably to our knowledge of the burial equipment of Ramesses III and his successors.

Towards the centre of the site, not far beneath the surface in a depression in the hillside, a deposit of 14 complete and fragmentary mid-size faience and small-size steatite shabti figures of Sethos I was discovered. It appears likely that the cache was deposited not in antiquity, but early in the nineteenth century, perhaps by Belzoni—a grouping of objects removed from Sethos I's newly discovered tomb (KV 17) to the explorer's likely camp.

By the end of the 2000 season, the area between KV 10 and KV 11 had been completely excavated, with the exception of a 2-metre area around the entrance to the tomb of Amenmesse. This will be examined by Otto Schaden and the University of Memphis expedition, in the hope of discovering the foundation deposits of KV 10.

Continued excavation of the area between KV 56 and the tomb of Ramesses VI - After final documentation at the start of the 2000 season, the central area of the KV 56-Ramesses VI (KV 9) site excavated in 1998 and 1999 was refilled, and attention concentrated on its western and eastern ends. Figure 7 shows the excavation area.



Figure 7 - King's Valley Excavation site

To the west, further 20th Dynasty huts were revealed, including a well-preserved kitchen-complex with pot-stand and hearth in situ. This is still in course of excavation.

Work at the eastern end of the site, towards the tomb of Ramesses VI (KV9), uncovered further workmen's structures, including the most westward of the Ramessid structures recorded by Howard Carter on his survey of the area. This complex was (re-)excavated, and fully planned and recorded by means of photogrammetry to expand upon and complete Carter's documentation.

Finds, both at the western and eastern ends of this site, were fewer than in previous seasons, but included two fine ostraca: one Ramessid piece showing a man walking with a staff and with a bundle tied to a stick carried over his shoulder; and, intriguingly, a large charcoal sketch of an official, arms raised in adoration, in characteristic Amarna style. The dating of this find was confirmed by fragments from an extremely large storage jar of late 18th Dynasty blue-painted ware in this same stratum. The ostrakon and pottery represent the first objects of Amarna period date to have been encountered in the Valley since the tomb of Tutankhamun, and bode well for the future.

Re-excavation of 'The Gold Tomb' - The undecorated, single-chambered shaft tomb KV 56 was first discovered and cleared by Theodore Davis in 1908. The ARTP's aim in re-clearing this tomb is (i) to establish an accurate plan, and (ii) to clarify when and for/by whom the tomb had been intended and/or employed.

Work began in 1999 with the removal of superficial layers of washed in modern debris and a preliminary investigation of the more closely packed lower fill. This season, the floor of the tomb was gridded, and a square by square excavation begun. Careful sieving yielded several strays from Davis's work, including quantities of gold leaf and a small gold necklace ornament of gold with repoussé cartouches of Sethos II—similar to 16 identical elements recovered in 1908 and now in the Cairo Museum. A new survey of the tomb was undertaken, and a computerised 3-dimensional wire-frame plan and section of the tomb and surrounding area produced. Geophysical examination indicated that the tomb's adapted, i.e. unachieved, plan was not the result of structural considerations—i.e. poor quality rock or severe faulting—but of some other, as yet undetermined factor. The work will be completed in 2001.

Mapping and documentation of settlement located between tomb KV 37 and the tomb of Siptah -
A detailed survey of the standing remains in the area between KV 37 and the tomb of Siptah (KV 47) was undertaken by the ARTP's survey team, with the aim of producing a full and detailed record prior to excavation.

Geophysical survey - A longer-term aim of the ARTP's geophysical survey of the Valley is to produce a subsurface computerised map of the site, to be used in conjunction with selective clearance/excavation to identify the location of existing underground features, geological as well as archaeological. The terrain is notoriously difficult, and this first season of geophysical survey focused on testing and calibration of the equipment—ground-penetrating radar. Detailed analysis will be needed before the full results of the season's work are known.

Acknowledgements - The expedition would like to acknowledge with gratitude Professor Dr Gaballa Aly Gaballa, Permanent Secretary of the Supreme Council of Antiquities for his interest in our work and his valuable support. In Luxor, the expedition benefited immensely from the generous assistance and cooperation of Mr Sabry Abd el-Aziz Ibrahim, General Director of Antiquities for Upper Egypt, Mr Mohammed Abd el-Aziz Bialy, General Director of Antiquities for the Theban West Bank, and Mr Ibrahim Mahmoud Suleiman, Chief Inspector of Antiquities, Valley of the Kings. The expedition's inspector, Mr Ezz el-Din Kamal, kindly facilitated our work at all times. A particular debt of thanks is extended to our sponsors, without whose far-sighted support our work would not be possible. They are acknowledged by name on our website (currently being updated) at www.valleyofthekings.org, where further details of ARTP's work and results, with photographs, will in due course be posted.



The Valley of the Kings Foundation

THE ROAD TO TROY

By Robert Hanawalt

Ever since I was very young--centuries ago it seems--Troy and the story of the Trojan War has fascinated me. Several times over I read of the exploits of Odysseus, Agamemnon and Achilles, and of Priam and Hector. I have stood under the Lions Gate at Mycenae, stared into grave circles "A" and "B" and entered the so-called treasury of Atreus. I have had the good fortune of viewing the famous gold masks from the grave circles, now located in the beautiful and modern museum in Athens.

These were the material things. In my mind's eye I could see poor Hector being dragged around the city of Troy by Achilles, super hero and genuine "tough guy" although a bit narcissistic. I felt sorry for Hector. He was killed in battle because of the foolish actions of his brother, who couldn't leave other people's wives alone. I must say, though, that my sympathies had always lay on the side of Trojans. The Achaeans were a bunch of thugs.

Later in life I read of the exploits of Heinrich Schliemann and his finding of what he believed was Troy. Guided by what he believed in explicitly, Homer's Iliad and Odyssey, he located a ruin on top of a hill near the Turkish town of Hisarlik, located on the Asian side of the Dardanelles. He convinced himself, and finally the world, that he had indeed found the ruins of the fabled Troy. I have always wanted to go to Troy - that far away, mystical spot where one of the great stories of the world unfolded - or at least some events occurred that caused the Poet Homer to write (or record) the first mythological tale that can be mixed with archeology. He wrote the story of the Trojan War. I wanted to go see what Schliemann had found.



Figure 8 - An ancient Trojan Horse

Late in the year 2000 my wish became a reality. Today the road to Troy lies through Istanbul, a very modern, industrial city located on Lake Miramar near the Golden Horn in the passage from the Aegean Sea to the Black Sea. With a population of nearly eleven million, Istanbul is the largest city in Europe. Although very old in years, it is quite modern and cosmopolitan. It has very classy museums, a brand new International Airport, 5 star hotels, lovely residential areas, and a huge industrial base. The Turks are a very friendly people, many of whom speak English (the government requires that English be taught in schools from the fourth grade on). In any event, or whatever your point of origin, the road to Troy starts here.

The distance from Istanbul to Troy is roughly 378 Km. The route is on a well-paved highway, and follows the sea on the north (European) side of the Dardanelles. The countryside is beautiful and does not seem overcrowded. The color, for the most part, was a luxuriant green from fresh plantings on the brown to black soil. Apparently December is one of the planting seasons. But also it is quite chilly at 50 degrees F. But being from Denver, it made me perspire when I looked at the driver and guide bundled up in sweaters and down jackets as if it were cold. To them it was!

By mid-afternoon we arrived at a small port town and had a bite to eat while we waited for the ferry to take us to the other side of the Dardanelles, a distance of a couple of miles. The weather continued to

be pretty miserable. I thought "all this way and I am not going to be able to get any good pictures". It was rather discouraging. Finally the ferry arrived (there are only three crossing points from Europe to Asia in the entire span across lake Miramar and the Dardanelles) and we boarded. My guide and I went to the upper deck lounge, which was heated, while the driver stayed with the car.

In short order we cast off. Fortunately, the water was very smooth and was certainly much calmer than when Leander tried his final swim and didn't make it, and as it was when Lord Bryan and also Richard Halliburton successfully swam across.

We had been out to sea for only a few minutes when our driver came up the stairs, then came over to us and said something to the guide. The guide told me that there was a quite elderly woman down below who was very cold. Her husband had asked if she could sit in the van. I told him to tell the driver, yes - but only if we would come down and join them. I had several dollars worth of camera equipment in the van and one cannot be too careful, in foreign countries (or in the U.S.A.) in situations like this. As we approached the van and saw the lady it was quite obvious that she was quiet old and also quite cold. We immediately got her in the van - the heater was on as the driver had been staying in the van - and got her comfortable. Her husband hesitated to enter until we invited him. He was also very much up in years, cold, thin and frail. The crossing took upwards of half an hour. I don't know why it took so long, but was enjoyable. We stayed in the van and the guide and the driver talked to the couple as our trip progressed.

Finally we docked at the City of Canocole, described to me by the driver as a community of 2,000,000: and by the guide as around 180,000 population. The road sign said POP 65,000. I believe the latter. The couple started to get out of the van but I told the guide to tell them that we would take them to where they needed to go. We took them to a town square where apparently the lady's Dr. had an office where they asked to be let out. We stopped and the elderly gentleman got out and tried to help his wife out of the van. I have never, never in my life seen a more beautiful and loving face than that of the old fellow as he encouraged his wife. But she couldn't make it. Immediately the driver got out of the van and bodily lifted her out of the cab and placed her feet on the ground. They were both full of thanks and extremely grateful. I was full of remorse for ever thinking about the value of my camera equipment.



Figure 9 - Modern Trojan Horse 0

I had noticed, during the crossing, that the sky was beginning to clear. As we proceeded up the road to the hill of Hisarlik the sun broke through and the light got brighter and brighter. It's only about a 10 km drive out to the site from the town. By the time we reached the area the sky had completely cleared and was filled with the late afternoon sun with those long rays that you only encounter in winter. Perfect for photography.

Up ahead I could make out the outline on a very large something at least forty feet tall, and as we got closer recognized it a monstrous representation of the Trojan horse. It was a little bit tacky but at least we know where we were.

We had arrived at TROY! (Next issue - all about Troy - complete with pictures).

CURRIED CHICKEN

By Suresh Dhargalkar

Mr. Suresh Dhargalkar, the EES expedition's architect and advisor to Barry Kemp has supplied us with a recipe that their expedition serves at Amarna.

It may not be ancient Egyptian, but you can serve it up on your patio on a warm summer evening and put some Egyptian music on, and hey, it will be just like being on the excavation team ...

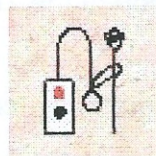


Chicken curry - Bombay style.

(Serves two)

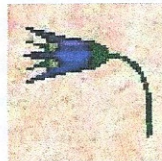
INGREDIENTS:

- A. 4 quarters of a medium size chicken, skinned and cut up in pieces to suit.
- B. 1/4 tsp (tea spoon) turmeric powder (Haldi).
1/2 tsp chilli powder (not cayenne pepper).
1/2 tsp Garam masala (similar to curry powder).
- C. 2 large onions roughly chopped.
4 cloves of garlic finely chopped.
Further 1/4 tsp turmeric.
Further 1 tsp chilli powder.
Further 1 tsp Garam masala.
- D. 4 tablespoons cooking oil (corn or vegetable).
2 Bay leaves crushed.
Two cinnamon sticks each approx. 1" long broken into small pieces (or cinnamon bark)
6 Cardamom pods seeds.
- E. 75 grams of concentrated Tomato puree.
1/2 Lemon or Lime.
Salt to taste.
1/2 tsp. sugar
Coconut cream or milk if desired.



INSTRUCTIONS:

1. Make cuts in the chicken pieces and rub 'B' ingredients into it and leave for 30 minutes.
2. Grind 'C' ingredients in a food processor with just enough water added to make thick puree.
3. Heat oil in a large saucepan and place 'D' ingredients in it for a minute or so.
4. Put chicken pieces in it, stir well and cook on medium heat for about 5 minutes.
5. Add the puree from the processor, add further little water if you wish to cover the chicken pieces. Add tomato puree.
6. Cook by simmering until chicken is tender, (say 15-20 minutes).
7. Squeeze in lemon or lime juice, add sugar and salt to season.
8. Add coconut if you wish to make the curry milder.
9. Cook for further 5 minutes by bringing it to boil.

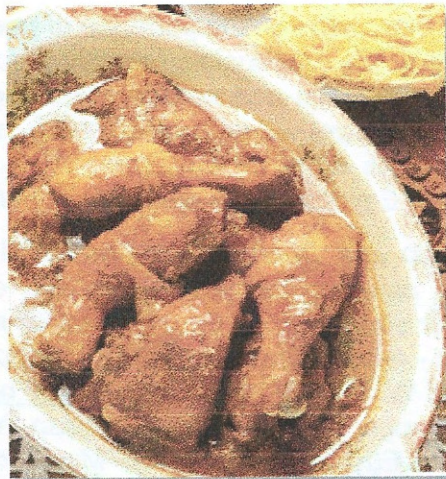


HINTS:

Serve with plain boiled Basmati rice or Nan bread.

If you have made the curry watery, you can always thicken it with a little flour and water. Remaining curry always tastes better the following day when reheated.

To make perfect rice, make it in a saucepan which has a tightly fitting lid. Add double the quantity of water to the rice, add a pinch of salt and 1/2 tsp of cooking oil. Stir and bring it to boil. Then put the lid on firmly and turn the heat to its lowest level and **DO NOT TAKE THE LID OFF** until the rice is cooked fluffy which is for 4 grams (a single portion) of rice. Never open the pot and stir the rice whilst it is cooking!



ENJOY!

SO, YOU WANT TO GO ON A DIG?

By Robert Hanawalt

Every so often the Amarna Research Foundation gets inquiries regarding the possibility of becoming a member of a "dig" in Egypt- and more especially at Amarna. The possibilities, in both cases, are slim and next to none. (But one should never give up hope). The days of the amateur archeologist digging in Egypt are just about over. Over the years the Egyptian government was ripped off by people without knowledge of archeological technique and Egypt was plundered of it's most precious commodity- it's past. Plundered by people over which they had no control. For over one hundred years decisions on the issuance of a "firman," or right to dig, was in the hands of either the British or the French, with the officials of Egypt rubber stamping the applications.

Now, however, things have changed completely, and the government of Egypt has set up a procedural protocol for permission to dig that virtually eliminates excavations by amateurs. Let me outline for you the procedure (with certain comments also thrown in):

1. You must be connected with a respected institution that the Egyptian government knows has policies toward the use of correct archeological methods and that you have taken courses of instruction in archeological and related disciplines.
2. You must fill out an application provided to you by the expedition leader (and, I might add, this is probably useless unless he or she knows you personally, or knows that you are outstanding in you field of study). Along with this, you must file a curriculum vitae indicating your courses of study, the institutions involved, any publications you have authored, and/or related indications that you have an in-depth knowledge of what tasks you are being proposed to do.
3. You must indicate on the application what your position will be on the dig and what exactly your field of study will be (such as ceramics, human remains, photography, et cetera).
4. You must list your current occupation. It should not be "far removed" from your field of research. A person who lists that he is a basketball coach or the like, has very, very, little chance of being approved.
5. The excavation's director then submits the application to the Supreme Council of Antiquities (SCA) for approval or disapproval. Many more requests are disapproved than approved.
6. If approved, the SCA submits the application to the tourist police for investigation and review. If they approve, they in turn submit it to the local police force so that they also will know of your presence. Note that this is done for your protection and in no way should it be considered punitive.

Are you still with me? I cannot over emphasize the importance of personally knowing the expedition's director. He is the captain of his ship and is responsible not only to report to the Egyptian government the results of his dig, but is also for the health and welfare of the dig members. Additionally, saying that you are handy with a shovel and a trowel will get you nowhere, as the actual digging and the first line supervision of the diggers is always done by Egyptians. The SCA then assigns an Egyptian Inspector, who usually holds a Ph.D. in Egyptology, to each dig. All are highly skilled individuals.

Now, having said all this, don't give up your dream of going on a dig! There are opportunities in other lands in the Middle East where an amateur can participate, and even earn college credit for the experience. You should not consider your study of Egypt complete if you are not aware of what was going on throughout the middle east - especially during the Amarna period (during the Trojan War, for instance). If you will go to the World Wide Web and address www.bib-arch.org and visit "Join a Dig," you will find out about volunteer dig opportunities in Israel, Jordan (Yes, in Petra!), England, Greece, Italy and Malta - many of them with an Egyptian connection - Megiddo, for instance. The web site lists the dates, the cost, housing arrangements, possible university credits, the expedition leaders, and the contact for information. And yes, you CAN get your hands dirty on these digs. Oh, to be 40 years younger!