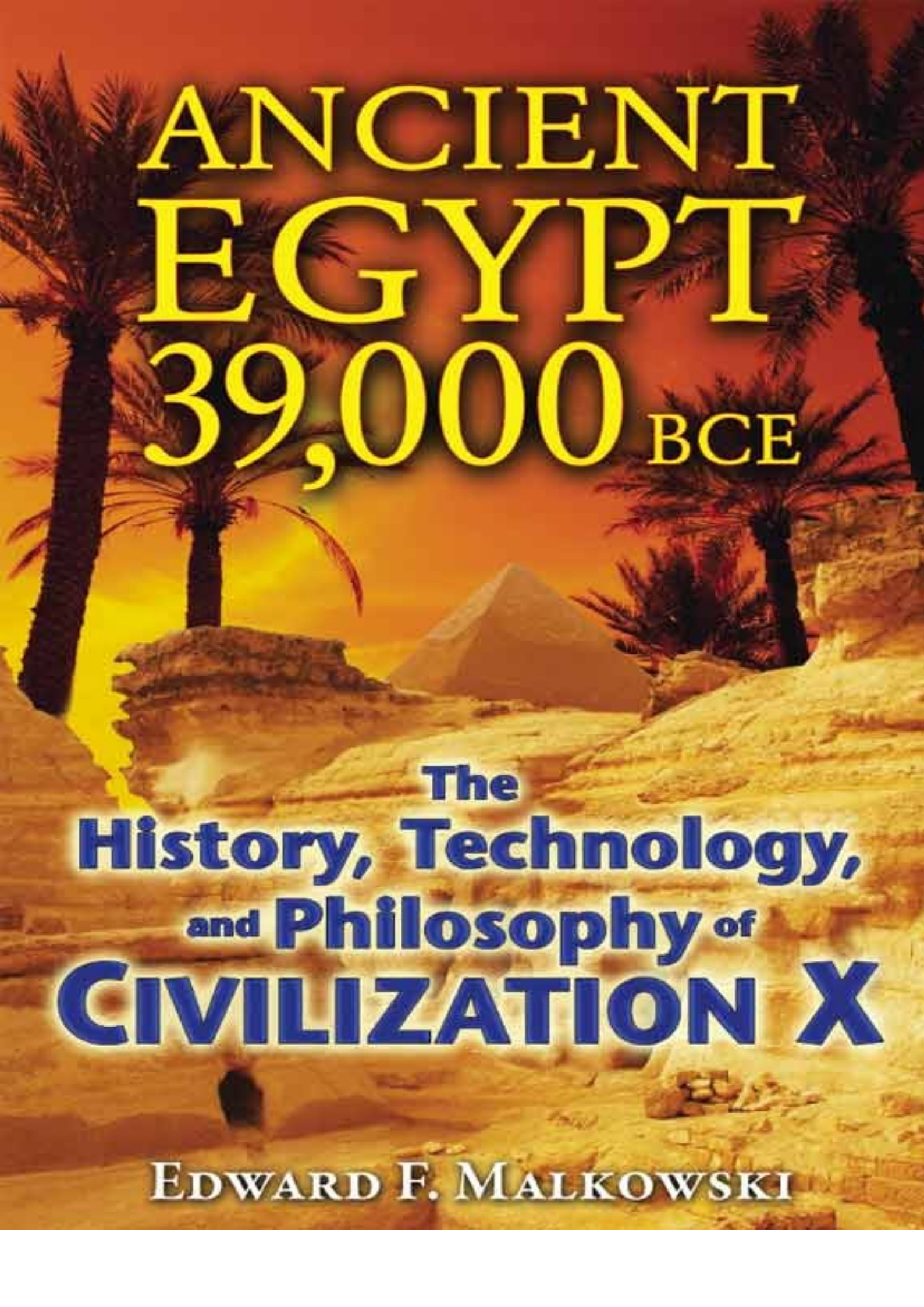
ANCIENT
EGYPT
39,000 BCE
The
History, Technology,
and Philosophy of
CIVILIZATION X
EDWARD F. MALKOWSKI

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Bear & Company
Rochester, Vermont • Toronto, Canada

ACKNOWLEDGMENTS

It has been a pleasure working with two progressive and open-minded scientists: John Cadman an Thomas Malkowski. Their scientific insights have been an invaluable source.

John Cadman, I believe, will someday go down in the history books for his experiments an modeling of the Great Pyramid's subterranean chamber and passageways. To the best of m knowledge, he is the only person to experimentally demonstrate something, anything, about Giza Great Pyramid. In my opinion, his work is the discovery of the century.

Thomas Malkowski, my son, has proven over the years to be a challenging antagonist. As a studyin physicist, he has more than once steered me in the correct direction while I've been in the process building a viable theory to explain ancient Egypt's network of pyramids. He shares the credit with m for the pyramid theory put forth in this book.

The quest to understand ancient Egyptian civilization encompasses many years of work by man researchers, including John Burke and Philip Callahan and their research about ancient agricultur John Anthony West and Robert Schoch for their research into the age of the Sphinx; Christopher Dun for his work in discovering proof positive that the civilization that built the pyramids employed som type of machine tools; Dr. Paul LaViolette and his research into galactic core bursts; and Richar Firestone, Allen West, and Simon Warwick-Smith for their work in discovering evidence o prehistoric gamma-ray bursts and their consequences for life on Earth.

CONTENTS

FOREWORD

My own journey into the subject of ancient Egypt began in early 1999. At that time I had no interest
the pyramids, and like most people, I assumed they were little more than overrated piles of rock th
had been used for someone's burial. Also at that time I never dreamed I would one day be writing
foreword to one of the most fascinating books regarding ancient Egypt.

Winters are dark and rainy in northwest Washington. With little else to do, I had made a habit o
exploring local bookstores. On one such outing in 1999 I came across Edward Kunkel's book *Th*
Pharaoh's Pump, which put forth an interesting proposition: the Great Pyramid had a hydraulic ra
pump built into the subterranean section. Although Kunkel's work had been around since the earl
1960s, I had never heard of it, and after reading it, it made no sense to me—except for one sectio
Kunkel claimed that an advanced whirlpool had once existed within the subterranean chamber. Fo
me, that not only seemed plausible, but quite ingenious.

Intrigued, I sorted through dozens of books and scoured the Internet for pictures and descriptions
the subterranean section of the Great Pyramid. As a result of this research, my interest continued
grow, and I soon embarked on a quest to build a model of the subterranean section. Almost exactly
year after learning of Kunkel's theory, I completed a running model of this subterranean section, 1:4
scale (¼ inch to the foot). My approach was scientific. In addition to building the model, I describe
specific experimental setups and recording designs. I reported all the results; these can be viewed o
my website.[*1]

That was seven years ago. Since then, my work—unaltered since 2002 when the final subterranea
flows were determined—has been critiqued by some of the top people in the engineering field and h
held strong. The models that I built can be built by anyone, which I strongly encourage anyone with
keen interest to do. (For you *Mythbusters* fans, I have submitted my work on the Great Pyramid
subterranean chamber to them.)

A year ago Edward Malkowski informed me that he intended to describe my work in his boo
Ancient Egypt 39,000 BCE and that my work was going to be the basis for a new theory on the purpo
of the pyramids and the Great Pyramid. Much of the evidence he describes in this book is scientif
and backed by substantial data, and I am proud to be part of it.

For me, *Ancient Egypt 39,000 BCE* is the culmination of years of discovery by a number of peop
that comes together to paint a fascinating picture of the past. These individuals present not only the
views, but their personal research, undertaken over the decades. John Anthony West and Robe
Schoch's research and compelling theory is presented here: that rainfall eroded the Great Sphinx, thu
redating its carving by thousands of years. Sir William Flinders Petrie and Christopher Dunn
insightful analysis of precision granite artifacts is covered extensively, with beautiful photo
However, the most important artifact, in my opinion, is "the stone at Abu Rawash," dubbed b
Malkowski "the new Rosetta Stone." I completely agree with him that its discovery will eventual
change how we view history.

Indeed, my own research into the past parallels Malkowski's, particularly one of the lea
understood events—the end of the Ice Age and the death of millions of animals and numerous specie

Around 9750 BCE, with the end of the Ice Age, came the formation of the Carolina Bays, more tha 500,000 shallow elliptical depressions found along North America's Atlantic coastal plain from Ne Jersey to Florida. At the bottom of these "bays" is an unusual blue clay containing iridium, carbo spherules, and nanodiamonds, which have been determined to be extraterrestrial markers. Ted Bunc Richard Firestone, and Ken Tankersley propose that the formation of these bays is linked to th Younger Dryas impact event, which may have led to the extinction of large mammals, such a mammoths, and the Clovis people, the first inhabitants of North America.

I especially appreciate Malkowski's coverage of this episode in Earth's history in chapter 11, "A Invisible Cataclysm." Any civilization that existed prior to the end of the Ice Age would have suffere as greatly as the animals did. The decimation of a technical society would certainly explain th evidence put forth here.

After being captivated by ancient Egypt in 1999, I purchased a great number of orthodox an alternative books about Egypt and trawled the Internet to uncover a wealth of information on the topi If I were to recommend a single book on this subject, *Ancient Egypt 39,000 BCE* would be the one I share with my friends. Edward Malkowski has assembled the best pictures and data, and I believe it very important to know what others have already discovered and the wealth of historical informatio that has been put forth. It is my hope that you read this book with an open mind and enjoy the theori and opinions contained herein. And while we need to be open to new discoveries, these discoverie must be rigorously tested and analyzed.

It is also my wish that you pursue your own research to the best of your ability and always use yo intuition and imagination. This was absolutely key for me.

JOHN CADMA

John Cadman is a marine engineer who spent three years scientifically investigating the subterranea chamber of the Great Pyramid. As a consequence of his investigation, he invented the self-powere pulse pump, which pumps water without the aid of electricity. He also spent a number of years as th chief engineer of a king crab boat sailing the Bering Sea.

TIMELINE OF EGYPT'S PERIODS AND DYNASTIES

Predynastic Period (5500–3100 BCE)

Early Dynastic Period

- 1st Dynasty (2920–2770 BCE)
- 2nd Dynasty (2770–2650 BCE)

Old Kingdom

- 3rd Dynasty (2650–2575 BCE)
- 4th Dynasty (2575–2467 BCE)
- 5th Dynasty (2465–2323 BCE)
- 6th Dynasty (2323–2152 BCE)

First Intermediate Period

- 7th Dynasty (2160–2152 BCE)
- 8th Dynasty (2159–2130 BCE)
- 9th Dynasty (2130–2080 BCE)
- 10th Dynasty (2080–2040 BCE)

Middle Kingdom

- 11th Dynasty (1986–1937 BCE)
- 12th Dynasty (1937–1759 BCE)
- 13th Dynasty (1759–1633 BCE)
- 14th Dynasty (1786–1603 BCE)

Second Intermediate Period

- 15th Dynasty (1674–1567 BCE)
- 16th Dynasty (1684–1567 BCE)
- 17th Dynasty (1650–1539 BCE)

New Kingdom

- 18th Dynasty (1539–1295 BCE)
- 19th Dynasty (1295–1186 BCE)
- 20th Dynasty (1186–1069 BCE)

Third Intermediate Period

- 21st Dynasty (1070–945 BCE)
- 22nd Dynasty (945–712 BCE)
- 23rd Dynasty (828–725 BCE)
- 24th Dynasty (725–715 BCE)
- 25th Dynasty (712–657 BCE)

Late Dynastic Period

- 26th Dynasty (664–525 BCE)
- 27th Dynasty (525–404 BCE)
- 28th Dynasty (404–399 BCE)
- 29th Dynasty (399–380 BCE)
- 30th Dynasty (380–343 BCE)
- 31st Dynasty (343–332 BCE)

Note to the Reader: Some of these dynastic dates overlap, which is endemic to the field of Egyptolog
given the speculative nature of the discussion.

PREFACE

In the spring of 2004 I began work on my second book, *Before the Pharaohs: Egypt's Mysteriou Prehistory*, a digest of John Anthony West and Robert Schoch's investigation into the possibl prehistoric origin of ancient Egypt's Great Sphinx. Aside from telling the story of West and Schoch' research, I also searched for any evidence in the historical record indicating that a cultu sophisticated and ambitious enough to carve a 200-foot-long lion out of bedrock might have existe What I found was a mystery.

On one hand, I found no obvious physical evidence suggestive of the existence of an advanc prehistoric civilization—one that had some knowledge of physics and the means to implement th knowledge to create useful products. On the other hand, however, oral history as well as the historic record do claim that such a civilization existed; it was often referred to as the Golden Age. Most or histories claim this civilization was antediluvian, and that it was destroyed by a great delug Unfortunately, there is no evidence that a worldwide flood ever occurred. Nor does a worldwide floo make any sense, since a flood of that proportion would have seriously altered Earth's atmosphere an would have required five times the amount of water already existing in the oceans.

Perhaps the deluge originally referred to something other than water, but after many generations, i meaning was altered. If so, then it is also plausible that an advanced civilization existed at that tim just as the ancient historians describe. In this book, I call this culture Civilization X.

A perfunctory treatment of ancient Egypt's history, such as in a world history class, typically make a straightforward case that the Old Kingdom pharaohs were responsible for some of the greate monuments and temples in Egypt, most notably Giza's pyramids. But a closer look into th organization, materials, and labor required to erect these monuments, particularly the tunnelin performed on the Giza Plateau, raises too many questions. These technical and organizationa requirements create a set of assumptions for the historian that cannot be reconciled with today technology. The broadest assumption is that people of the second millennium BCE had the level o skill required to quarry and move large quantities of stone from as far away as 500 miles and then u this stone in the construction of the temples and pyramids.

No civilization has reproduced these accomplishments. Even today, using modern technolog constructing the Great Pyramid would prove to be a difficult and very expensive task. And yet we ar supposed to believe that a people who had emerged from the Stone Age just a few hundred yea earlier were able to accomplish this?

Common sense says they could not. But despite common sense, there is a long-standing belief th they built on a vast scale with the simplest of tools. It is belief because there is no evidence to suppo the assumption that people of the second millennium had the level of technology require Furthermore, there are too many anomalies and anachronisms that need to be explained, the mo obvious one being the Great Pyramid itself, with its extraordinary size and unusual internal design.

All the magnificent structures of the Old Kingdom are attributed to copper chisels and ston hammers. That's the paradigm that has been in place since the late nineteenth century. Howeve paradigms change, if society is working as it should, when enough people reject the orthodoxy in fav

of a new standard. Even so, paradigm changes are never easy. With exclusive influence in publi school systems and a noncritical approach to history, the paradigm is perpetuated. Change almo always occurs very slowly and is not final until the old guard of the orthodoxy retires or passes awa leaving a new, younger generation to interpret the evidence and form their own theories and opinions

The media is always at the cusp of change in public opinion, and through books and the cinema ne ideas that were once lunatic or fringe or even taboo find an audience that senses a correction thinking may be needed. During the 1970s, for instance, there were no television shows that embrace the paranormal. In 1972, ABC tried to get one off the ground with a series called *The Sixth Sens* starring Gary Collins, but it lasted only a single season. Later in the '70s, *The Night Stalker* achieve some faint success. Today, however, with shows like *Charmed*, *Medium*, *The Ghost Whisperer*, *Ange Buffy the Vampire Slayer*, and *Supernatural*, to name just a few, this once-atypical genre is no commonplace. And, of course, in the 1990s there was the phenomenally successful television serie *The X-Files*—my own personal favorite.

Why have these shows become so popular?

People accept the idea that there is more to life than the physical world and have opted f nontraditional ways of expressing and entertaining that view. They also seek knowledge about a who host of alternative subjects, such as consciousness, for example, which is at the core of understandi the human experience. Amazon.com lists more than 108,000 nonfiction titles for "consciousness 47,000 under Religion and Spirituality, 41,000 under Health, Mind, and Body, and 44,000 unde Science. The same is true for history, particularly ancient Egyptian history, which lists more tha 200,000 books.

I was surprised and intrigued that the film *10,000 BC* (released in March 2008) portrayed a Egyptian-type civilization as an advanced prehistoric society—pyramids and all. (The producers the film did an extraordinary job creating the visual effects of pyramid building, but the true majes and scale of the pyramids can only be appreciated in person.) Although the film was a work of fictio and not a very good one according to most film critics, such a portrayal of ancient Egypt as a "lo civilization" hints at a growing curiosity about prehistory and continued uncertainty about the identi of the builders of ancient Egypt's temples and pyramids.

Of course, there are those who will vehemently object to this type of imaginative and explorato approach to history on the grounds that it's not scientific. But the truth is that history is not scientif and never will be. The inductive approach cannot be considered the definitive means by which ascertain the truth. In the case of the pyramids, one must see the evidence firsthand to truly begin understand the truth. There is no substitute for visiting Egypt and walking among the ancient ruins.

No documentary or book has ever truly captured the essence of Egypt's ancient temples or temp ruins. There is granite everywhere—ashlars, columns, broken temple edifices, fields of rubble, an piles of rubble. The ancient Egyptians built public buildings out of limestone and dressed them solid granite.

Being the hardest known rock, granite is difficult to work with, even with current technology. Th makes it very expensive in today's world. So how could such an ancient culture build a civilization o of granite using simple hand tools? No civilization has done so before or since.

How could the dynastic Egyptians[*2] have done it?

They shouldn't have, couldn't have. But there has never been irrefutable evidence to sugge otherwise, according to the orthodoxy. *Now, in this volume, there is. Ancient Egypt 39,000 BCE* is th

sequel to *Before the Pharaohs: Egypt's Mysterious Prehistory* . For readers of the latter, chapter 2 i
this volume, "A Prehistoric Sphinx," is an updated and abridged version of chapters 1 and 2 in *Befo*
the Pharaohs: Egypt's Mysterious Prehistory . Eight new photographs have been added—five of whic
depict the eroded Sphinx and its enclosure—as well as a 2004 study of limestone erosion that suppor
a prehistoric age for the Sphinx. Although the evidence concerning the great antiquity of the Sphinx
covered in depth in *Before the Pharaohs*, I wanted this volume to include all the conclusive evidenc
for the existence of Civilization X that I have discovered. This volume, *Ancient Egypt 39,000 BCE,*
part travelogue, part history, and part science.[†16] As such, it is intended to present ancient Egypt
ruins as I have experienced them and to explain them to the best of my abilities.

INTRODUCTION

A POCALYPSE NOW

Our civilization lives in precarious equilibrium between its distance from the sun and the emptiness
space. Whether you believe that global warming is the result of civilization's emission of greenhou
gases or that it is a natural cycle, the evidence points to global warming as a real phenomenon. But t
fact is, global warming has been occurring for the past 13,000 years. Before Earth began its warmi
trend, the northern climes that are so agriculturally productive today were buried under miles of i
and snow.

Scientists claim that our world could return to such a harsh climate in as little as ten years if t
ocean conveyor that pumps warm water into the North Atlantic ceases to do so. There is also t
possibility of an Armageddon asteroid, an asteroid sufficiently large to create a "total evaporati
impact" that would scour the planet's surface down to the bedrock.

Curiously, however, before the 1960s there was no proof that rocks from space entered Earth
atmosphere and hit the ground. No one believed in the reality of asteroid impacts, and it was only t
determination of astronomer Gene Shoemaker through his work at Arizona's Meteor Crater th
science took notice. Apparently, space rocks did fall to earth, and now we know that asteroids hav
been striking Earth from the very beginning of Earth's history.

Today, asteroids whose orbits are close to Earth have become a serious topic for some astronomer
There are more than a few, astronomers have discovered. Alarmingly, it takes only a single roc
greater than a few miles across to pummel us into a dark age. The most likely site of a meteor impa
would be one of the oceans, given that two-thirds of the planet is covered by water. Although this ma
seem like a relatively safe place for an impact, the energy created by vaporizing rock would generate
tsunami of unprecedented proportions, one that might be perceived as a great flood. Trillions of to
of displaced water would create a wave so large it is difficult to imagine. It could never happen in o
lifetime, could it?

Although such devastation has never occurred within the memory of our civilization, we have bee
periodically reminded of nature's power. Almost 100 years before the 2004 Sumatra tsunami, in 190
near Russia's Tunguska River, a comet exploded in the atmosphere, releasing energy somewher
between the equivalent of five and thirty-five tons of TNT. It destroyed 800 square miles of forest.
the Tunguska comet had exploded over a densely populated area, millions of people would have bee
killed.

What if the Tunguska comet had been significantly larger? Would it have destroyed ou
civilization? How much destruction does it take to erase civilization? If a global catastrophe occurre
today, like the meteor strike astronomers warn us will eventually happen, what *would* be the impact o
civilization?

The impact on civilization, of course, would depend on the size of the projectile. If t
extraterrestrial body were the size of a planetoid, like the moon, for example, nothing of Earth

surface would be left. Except for microbes buried in Earth's crust, all life would be annihilated. A much smaller meteor would still do significant damage, such as that which ended the Age of th Dinosaurs. Paleontologists are convinced by the evidence that a six-mile-wide meteor struck Mexico's Yucatan Peninsula sixty-five million years ago, leaving a crater 112 miles wide and thre thousand feet deep. What effect this size impact would have on human populations is unknow although the fossil record indicates even such a small impact would be devastating.

No such devastating impacts have been recorded in human history, but some scientists, such as D Stanley Ambrose of the University of Illinois, believe that a supervolcanic eruption seventy-thre thousand years ago wreaked havoc on our planet, leaving a crater thirty miles wide and sixty mil long. According to Ambrose, the fallout from the Toba eruption reduced the human population t possibly as few as several thousand individuals, which, according to geneticists, helps explain th similarity in all human DNA. All of us living today are the descendents of a handful of survivors fro the Toba eruption.

If a global catastrophe occurred today, such as Earth being struck by the Armageddon asteroid or a eruption of Yellowstone's caldera, and reduced the world's population to a billion people or less could our technical society survive? Could the county or state you live in continue with more than 8 percent of its inhabitants gone?

No one knows for sure, although studies have been made on the subject, albeit involving a less magnitude of destruction. In 1972, the Office of Technology Assessment—the U.S. Government advisory group of scientists, technologists, and engineers—performed a study on the effects of limited nuclear war. They concluded that the *best case* scenario was that civilization would return to medieval-style society.

In 1998, a small preview of such a tragedy occurred in Quebec. An ice storm knocked out power an demonstrated the frailty of modern civilization and the dependence it has on its technology. The vit infrastructure of society—energy distribution for heating, food production, a clean water suppl telecommunications, information technology, the transportation of people and goods, hospitals, an banking—was crippled. Within a few days, people were burning their furniture to stay warm.

What would have happened if the situation had not been corrected?

Any modern equipment that survived would be scavenged and used for as long as possible, b without the manufacturing of replacement parts, the equipment would eventually become useless. F equipment requiring fuel of some type, how long would existing supplies last? Regardless of how lon fuel supplies lasted, over time the caustic forces of nature would have their way, and any survivin equipment would return to the mineral elements from which it was originally forged.

According to a recent documentary entitled *Life After People*, experts in civil engineering an geology testify to the speed in which civilization's infrastructure would erode into nothing. If th human species were to succumb to extinction, within a few hundred years all buildings, regardless their composition, would begin to crumble, and after a thousand years there would be very litt evidence that cities of steel and concrete had ever existed. Only objects made from the hardest rock the thickest concrete would survive. Hoover Dam might last for ten thousand years, but after that on Mount Rushmore and its solid granite faces would remain.

As for future generations, only the tools necessary to survive and eke out a living would be tho that provided an advantage in the hunt or in the fields. Forget about machines and electronics, eve paper and pencil. Individuals born post-apocalypse would have to begin again and forge a new societ In a few thousand years, maybe less, the civilization that once was would be nothing more than a di

memory, and within ten thousand years all traces of civilization would have vanished.

If there were various pockets of survivors scattered across the globe, different civilizations wou begin to emerge, most likely with a culture and language specific to each region. Precisely how long would take for these civilizations to emerge no one knows. Nonetheless, they would emerge all about the same time, for human beings are inherently social and naturally organize themselves into form that benefits the group. Once a threshold of manpower was reached, specialization would occu Thus, civilization would be reborn. Science, trade, education, and all the other aspects of civilizatio would develop. Eventually, thousands of years later, civilization would reach a level comparable what it had been eons ago, yet it might never know that a previous civilization had ever existed.

How would those later archaeologists who were excavating this civilization know that such a brea in civilization had occurred? What form would the evidence take?

A large meteor impact or the eruption of a supervolcano would result in nearly everything bein buried under leagues of ash, as it was sixtyfive million years ago in Central America's Yucata Peninsula, or seventythree thousand years ago in the Toba supereruption.

In the Toba eruption, 1,740 cubic miles of magma was ejected; it covered two hundred thousan square miles of land and sea. If the Yellowstone caldera erupted, the continental United States woul be devastated by a blast equivalent to that detonated by millions of Hiroshima-sized nuclear bomb the long-term consequences of which are truly unimaginable.

The toughest of buildings farthest away from ground zero would likely survive and might still b standing if they were not subsequently disassembled for use as materials in new construction by th first few generations of survivors. So too any large monuments carved in stone.

To the new civilization many thousands of years later, Rushmore's emboldened faces would b meaningless, as would be the engraved plates within the mountain's hall of records. The ne civilization would infer that the heads of Rushmore had been carved in relatively recent times by th native population of the Black Hills, even though how they accomplished such a feat would remain mystery.

If not buried in ash, heavy structures made from thick reinforced concrete would lightly pepper th landscape. But with their chambers gutted by scavengers and their exteriors plain, there would be n way of assigning them a history. They too would be designated as structures built by primitive y extraordinarily resourceful inhabitants.

When the new civilization reached a certain point of sophistication, its archaeologists and historian would assess and reassemble what could be determined about these structures from what legends an stories survived. They would also dig into the soil and discover other structures of a similar natur Without any other evidence to go on, these enigmatic structures might be categorized as part of som primitive people's religious traditions, just as the more recent ancestors of the new civilization bui massive religious structures to honor their god. As with all cultures, the ancient inhabitants who bui these majestic temples must have been motivated completely by religious beliefs.

As years pass, the new civilization would become increasingly knowledgeable and its science wou progress in unimaginable ways. Such would be its progress that life would become easy, and thu ample time would exist for many to reflect on life and on history. A number of people would becom interested in the ancient ruins that dotted the countryside, and after decades of work, they would b able to recognize some of the unusual technology that previous civilizations employed. Yet, eve though they were scientists and engineers, they would remain baffled by their conclusions.

Although the scenario of global cataclysm presented here is hypothetical, it hints at the technical an historical evidence you are about to read. One need only review the effect of Hurricane Katrina on th city of New Orleans in 2005 or the Sumatra tsunami of 2004 to get a glimpse of how devastatin natural catastrophes can be. The effect on civilization of a large meteor impact or a supervolcan eruption would be so vast and so damaging that a hurricane or tsunami would be dwarfed comparison; a whole new scale of destruction would have to be invented. Yet in our resilience, w humans would likely survive while other species became extinct.

In light of recent archaeological discoveries, such a scenario of cataclysmic decimation appears be the best explanation for what science simply refers to as “the end of the Ice Age.” It also appears have been recorded in the most ancient of human histories, what our civilization has labeled as myth

1

A CIVILIZATION IN GRANITE

Egypt might be the single most visited place in the world. It may also be the most documented pla in the world. More books have been written and more documentaries have been filmed about Giza a ancient Egypt than any other ancient civilization of place. And this is for good reason: there are other man-made monuments more grandiose than the pyramids and the Great Sphinx, and there is temple more mysterious and majestic than Luxor's Temple of Amun-Mut-Khonsu. So large are t Giza pyramids that it wasn't until the Eiffel Tower's completion in 1889 that a building taller than t Great Pyramid was erected. Even so, the Great Pyramid still ranks as one of the most massi structures in existence. Little wonder that it is the Seventh Wonder of the World and is still standing.

In the numerous books and documentaries about ancient Egypt, what is seldom addressed in meaningful way is the volume of granite still remaining on the plateau—even after thousands of yea of scavenging. *The Oxford History of Ancient Egypt* barely mentions it except to state that "t pyramid of Menkaure shows extensive use of granite."[1] Although this is true, granite rubble can b found nearly everywhere on the Giza Plateau, particularly on the south side of the middle pyramid a to the east and south of the Valley Temple.

Without knowing its significance, tourists capture on film Giza's fields of granite rubble. Grani rubble is not majestic, nor is it anything special to show your family and friends in presentation your vacation. In fact, granite rubble is close to being uninviting. To the average tourist the rubb scattered about the plateau might even be perceived as an eyesore compared with the majesty of t pyramids and the Sphinx. However, among the rubble there are large, beautifully crafted pieces ornate granite displaying the handiwork of Giza's builders.

Two characteristics, each of which required a great deal of skill, distinguish the buildings of th "granite" civilization. First, the ancient Egyptians built on a colossal scale. Why they did this is matter of conjecture, but for whatever reason, it is a good bet that they considered it necessary. Th second characteristic is that the structures are finished with granite. Although most of the grani casings, facings, and columns of ancient Egypt's structures have been either destroyed or scavenge stored in the Cairo Museum, or reduced to rubble, the granite workmanship that still exists speaks of grand unified ancient civilization. For those who want to know not only why but also how, t abundance of granite used in the building of these structures is problematic, given the rudimenta level of skill that existed in dynastic Egypt.

Granite is the hardest rock there is. Cutting it into shapes and sizes to build a structure or carve forty-foot statue is a feat that is today best left to modern technology and machines that use diamon for tooling. Yet whoever built the ancient civilization that we see remnants of in Egypt were clear experts in granite quarrying, transporting, and finishing. There is no statistic as to how much grani was used in ancient Egypt, but at nearly every ancient site there *is* granite, and a lot of it. At som sites there are multiton granite artifacts, evidence of the technical means and knowledge necessary efficiently quarry, cut, shape, and assemble mass quantities of granite.

THE GIZA PYRAMIDS

Despite a small army of local salesmen hawking trinkets, souvenirs, and camel rides, as one wande across the Giza Plateau it's difficult not to be awestruck by the pyramids—simply because of the sheer size. Large blocks of limestone and granite that were once part of these giant stone hills pepp the landscape as a testament to the sense of permanence the builders desired. Standing between th third and second pyramids, a local saying comes to mind: "Man fears time but time fears th pyramids." There is no sensation or vista in the world like it. From a distance, people walking alon the base of the second pyramid look like an army of ants marching in rhythm to the feast of the da The pyramids dwarf everything man-made I have ever seen, except perhaps the presidents of Mou Rushmore.

The scale of construction exceeds everything known to mankind except for the most recent projec built with twentieth-century construction technology. Each monumental pyramid on the plateau wa built on the scale of Arizona's Hoover Dam. It is as if some ancient civilization's Department of th Interior decided to build not one dam but three, all within a quarter mile of each other, and then co two of them with granite.

Today, however, these structures have been stripped of their granite glory and stand as mountains o coarse limestone blocks. Seeing them as they appeared soon after completion must have been a sig almost more spectacular than can be imagined: two large mountain peaks of pink granite and a thi peak of white limestone—the brilliant sun dancing off the surfaces of all three.

The Great Pyramid, the crowning glory of the plateau and the focus of speculation for many a author, has been picked clean of its limestone casing. Only a few casing stones remain, most of whic are in sorry shape. Why the builders of the Great Pyramid chose limestone as its siding is unknow Limestone is softer than granite and easier to work with, so it is no surprise that the limestone casi of the Great Pyramid has been completely removed.

The pyramid builders also used granite in various parts of the Great Pyramid. In its interior, th uppermost chamber (more commonly known as the King's Chamber) was constructed out of smoot solid granite slabs, some of which weigh seventy tons. Although not polished, the slabs that make u the uppermost chamber walls feel as if they were run through a planer machine. Only minu depressions remain where crystals once existed but were torn out by whatever process surfaced th slab.

The second (middle) and third pyramids were cased in granite, and amazingly some of these casing still remain today. Even more remarkable is that the second pyramid has retained its pinnacle o granite casing. Neither the third pyramid nor the Great Pyramid have held onto casing stones ne their peaks.

Why the second and third pyramids were cased in granite is a mystery. It may have been due to th beauty of granite's sparkling quartz, yet a sizable portion of the third pyramid's casing stones wer never finished, but were left rough and uneven. Its uneven and bumpy exterior makes for a curio sight. An area of smooth, finished casing stones rests next to another area where each and every ston is rounded, displaying a "bumpy" appearance. Evidently it was more important for the granite casi stones to fit the inner limestone course work than to have a smooth, finished appearance. Som theorists believe that the granite casing stones were first put in place, then cut to a smooth, flat finis Such a technique would ensure flat and even sides for the pyramid, but enough granite exists at th

base of the pyramid to suggest that it had been fully cased. However, only a small section of grani casing stones near the ground level appears to have been leveled.

It might also be the case that granite was chosen for its functionality and not for its aesthetic Granite is erosion resistant and would have been an apt choice for siding if the desired structure w intended to last for an indefinite period. On that point, it certainly appears that the pyramid builde succeeded.

Uniquely, and although no one knows why, the third pyramid has retained a greater percentage of i casing stones than the other two, and it boasts a granite pavement of megalithic proportion. Ea pavement stone is nearly four feet high. Standing amid these humongous blocks, I felt as if I was the *Land of the Giants*. Around the base of the third pyramid are piles of granite rubble, or I shou say piles of boulders, really, since the blocks are incredibly large.

The descending passage of the third pyramid is also lined with granite. Discovered in 1908 b Egyptologist George Reisner, the passageway was buried, “covered with a tangled mass of gre granite blocks.” According to Reisner, under his direction Egyptian workers removed several hundre pieces of granite weighing anywhere from one to eleven tons from around the pyramid’s entrance.[2]

How the granite casing stones of the pyramids were removed is unknown. Perhaps a maj earthquake occurred at some time in the remote past. The field of rubble on the east and south sides the middle pyramid and the piles of blocks and rubble around the third pyramid suggest that a earthquake might have been the cause. perhaps later, scavengers pilfered only the lighter stones th offered the easiest access. It might also be the case that demolition teams climbed to the top of the stone peaks and pried away the casing blocks one by one.

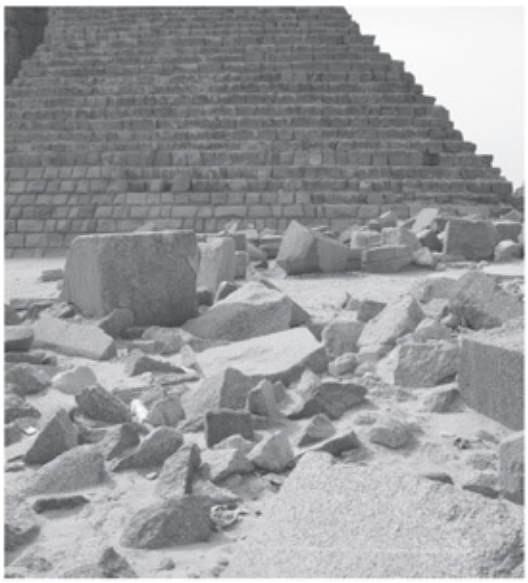

Fig. 1.1. Vast amounts of granite rubble surround Giza’s third pyramid. Notice that some of the pyramid’s granite casing stones remain in place.

Fig. 1.2. Not all casing stones of the third pyramid were cut smooth. Granite may have been chosen for its durability as opposed to its beauty.

Fig. 1.3. Megalithic granite paving blocks at the base of Giza's third pyramid

Whatever happened during more recent times, scavenger crews attempting to harvest the grani crop met the stubbornness of hardened volcanic stone. Whoever was attempting to break and tow awa ready-made granite blocks found it a futile venture. A good portion of the granite blocks litterir Giza's landscape display chisel furrows—deep cuts where someone attempted to split the block half. Today, such acts are no doubt a crime, but for those who chose to scavenge the pyramids, certainly was easy access to granite that had already been quarried. Prior to the eighteenth century, th pyramids were likely to have been derelict structures anyway.

Fig. 1.4. Numerous granite blocks with chisel grooves litter the base of the third pyramid. In vain, scavengers tried to split these blocks.

Fig. 1.5. Close-up of the chisel groove

Unlike the third pyramid, the second pyramid has no piles of rubble at its base. However, on the ea side of the middle pyramid, within a field of granite and limestone rubble there is a clue as to t pyramid's purpose: a granite trough emerges from the sand. (See plate 1 of the color insert.) That trough was a part of the pyramid complex suggests that its builders built for functionality. Presumab the complex might have had something to do with water, possibly irrigation.

A few hundred feet east of Giza's middle pyramid, among strewn-about granite blocks, lies anoth testament to the genius of the pyramid builders. Exactly what this large granite object was may nev be known (speculatively, it may be the pillar of an entranceway), but its smooth surface and perfect curved shape is an incredible feat of technology. I cannot imagine how it was carved to perfectio perfectly round and smooth to the touch. (See plate 2 of the color insert.)

The most striking aspect of this granite pillar, besides its perfect shape and smoothness, is that thr surfaces—two flat surfaces and one curved—come together at its base. Next to this granite marvel li a square pillar inscribed with hieroglyphs and another piece of curved, smooth granite. Built on smaller scale than the pyramids and carved with elegance, the buildings from which these pieces can must have been for human occupancy or use.

Fig. 1.6. Granite and limestone rubble field on the south side of the second pyramid

Fig. 1.7. Curved granite object within a few hundred feet east of the middle pyramid

Fig. 1.8. Close-up view from the north

There is nothing left of the structure or structures of which these unique granite artifacts were once part. Like the casing stones of the pyramids, the buildings near the pyramids offered easy access already finished granite. Close to the ground, they were likely the first structures to be disassembl and carried away to be used as building materials elsewhere.

THE SPHINX AND VALLEY TEMPLES

In front of the Sphinx, Giza's builders erected two temples. The northern temple is known as t Sphinx temple and the other, the Valley Temple. Like the area surrounding the middle and thi pyramids, the area surrounding the Sphinx complex, particularly in the Valley Temple's east yard, littered with granite rubble.

Although the Sphinx Temple was at one time faced with granite, all that remains is its inn limestone core. However, much of the Valley Temple's granite is still in place. The Valley Temple' front side (east) is lined with megalithic granite blocks, each nearly six feet tall. (See plates 3 and 4 the color insert.) the granite pillars and lintels that make up the temple's interior are also largely st intact. A puzzling feature of the corners of the Valley Temple is their strange construction. (See pla 5 of the color insert.)

A more exquisite example of technical know-how rests on the south side of the Valley Temple ar is perhaps the most precise granite carving in Lower Egypt. Although what this broken block granite was used for is unknown, it was obviously sculpted for decorative purposes.

The face of the granite block was carved in the shape of the letter S (figure 1.9), and at the end of t rolling S curve, the granite squares off to form a squared face. Its surface is still smooth to the touch.

My guide assured me that this unique granite block *was carved by hand* but did not comment exactly how it was carved by hand or what tools were used. Considering that this ornate block nearly four feet tall and six feet long, weighing many tons, and was part of a much larger piece, t idea that it was carved into a perfect S shape by hand defies common sense, in my opinion, given t simple hand tools available to the ancient Egyptians.

Further west along the Valley Temple there lies a second block of granite with its face also curv in an S shape. Although this second block is not a mate to the first block, its appearance is similar; may have been used for the same purpose as the first block. One possible use for this style of block as decorative trimming on the top of the temple wall, such as is found in the temples of Esna and Ed in Upper Egypt.

Fig. 1.9. Ornate granite block on the south side of the Valley Temple

Fig. 1.10. Ornate granite viewed on end from the west

Fig. 1.11. Ornate granite viewed on end from the east

Walking west past the Valley Temple, east of the middle pyramid, and south of the causeway, the is a maze of rock-cut tombs and crypts built into the small rolling hills of the plateau. Rock, san ancient brick structures, and modern restorations all blur together. it is a desolate site. The rock which these tombs are carved is the same yellow limestone formation from which the Sphinx carved. (See plate 6 of the color insert.) For some reason, the guides call this area “the Sphi Museum.”

I followed my guide though this long-abandoned cemetery, which resembles the no-man’s-land th one might see in an old World War I film. Almost everything of interest has been moved to the Cai Museum. The only statues that remain are those carved into walls or so broken that there is little ne to pay someone to move them.

What is very noticeable is that the tombs in the area were hand cut with chisels, and the statues well. Chisel marks are well defined in tunnels and chambers throughout the area. In a few crypt doorposts and headers were finished and inscribed with hieroglyphs. But nowhere in this area do anything resemble the magnificence and the precision of the pyramids or the granite pillars of t

Valley Temple. Then, out of the corner of my eye, far to the south, I noticed four dark-red pilla lightly coated with Saharan dust.

Fig. 1.12. Second granite block ornately carved in an S shape

Giza's Unknown Temple

Standing at the far southern edge of this no-man's-land of rock-cut tombs is a place not featured o any Giza map, at least the maps I have seen. Yet even from a distance it is easy to see, once you cre the cemetery's final dune. Four red pillars stand erect in front of what appears to be a rock shelter, or pillar taller than the rest. It's an unusual scene for the area. The dark-red pillars stand out against background of Sahara yellow. Beyond these giant pillars of granite the land flattens out into cordoned area reserved for archaeologists currently working on the plateau. There, behind barbe wire, ten huge granite blocks lie neatly in a row. Armed guards are on station at various strateg points, overhead on the rocks above as well as in the distance at the area's perimeter. Most likely th is an important site, since it is also off limits.

I visited the so-called Sphinx Museum twice, each visit separated by a week. The second time a ma dressed in a long blue tunic stopped my friend and me and would not let us pass into the area of th giant pillars, the point where I took the photo in figure 1.14. I desperately wanted another loo Nonetheless, the man in the blue tunic looked serious as he walked toward us with outstretched hand My friend tried to snap a photo, but the man waved his hands in an attempt to spoil his pictur Whatever he was saying in Arabic, my Sphinx Museum guide that day understood and quickly turne us back.

I asked why and received the answer I was expecting. The area below, where the red granite pilla were, was a restricted area. Ironically, the man who turned us back had been *my guide* the previou week! And a week ago he took me wherever I wanted to go, including to the red granite pillars of th unknown temple. He spoke English quite well and without a doubt was the most cordial guide encountered.

The week before I received a close-up view of the giant pillars. Like the Valley Temple, they wer made from solid granite. But these pillars are very different. Fluted along their vertical axis an inscribed with hieroglyphs, they must have held a simple yet powerful beauty for the temple builders (figures 1.16 and 1.17). Although the structure these stones are from no longer exists, the must have been a part of the building's exterior. I wonder: Do the hieroglyphs tell of a king or queen Or do they pay tribute to a god? Perhaps they tell of neither and are simply a testament to th knowledge and skill of the civilization that created them.

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