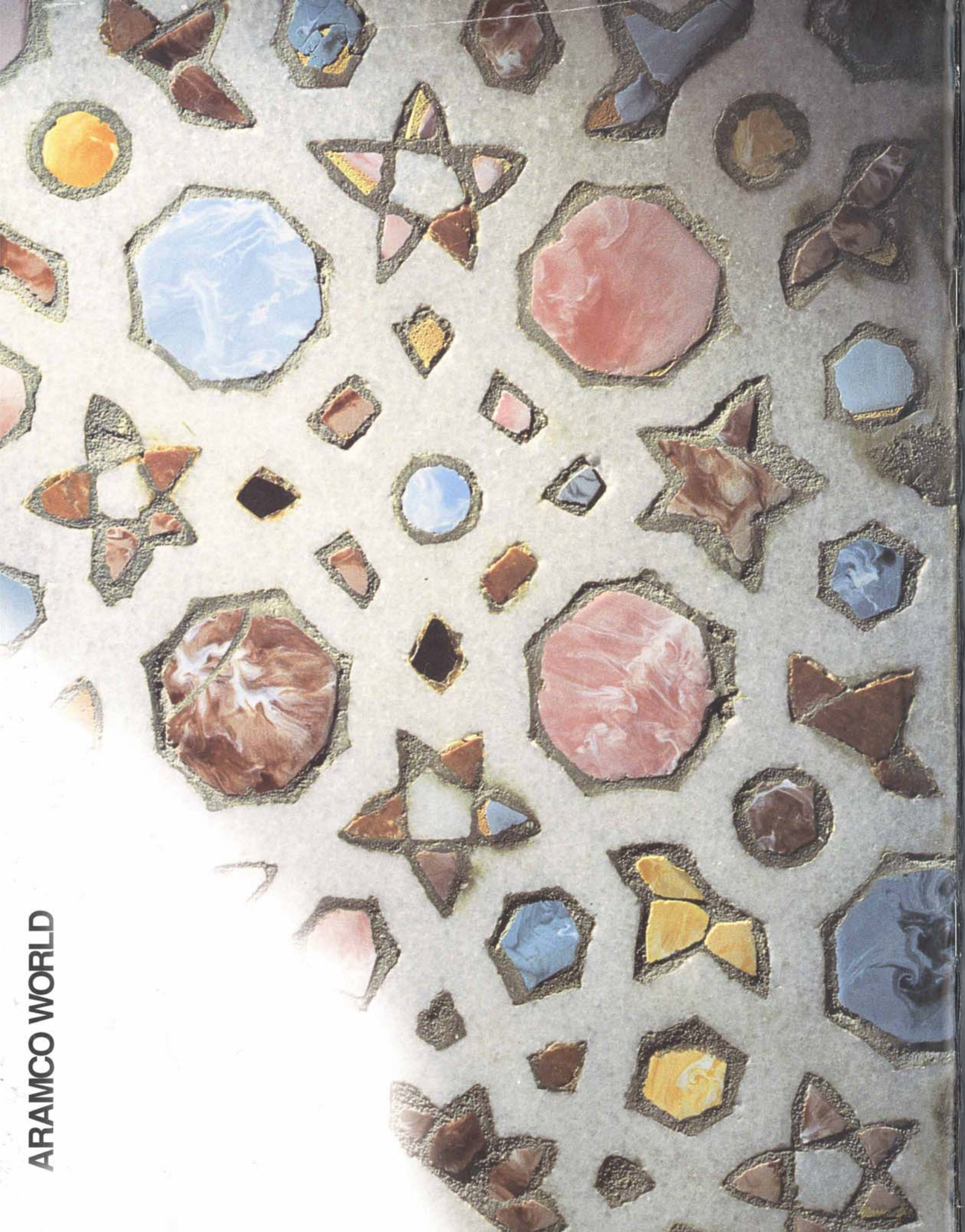
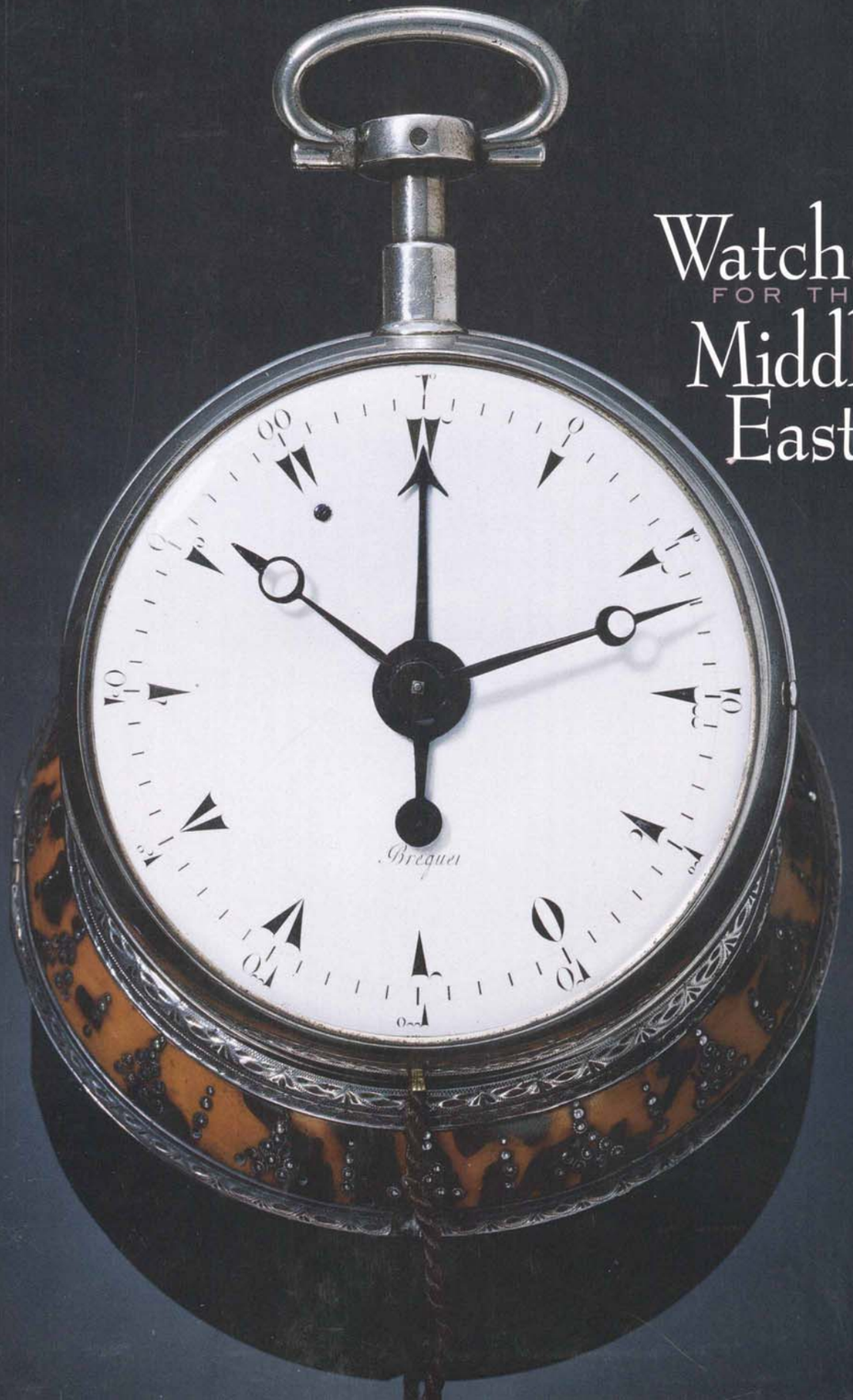


ARAMCO WORLD
SEPTEMBER-OCTOBER 1994

Watches FOR THE Middle East



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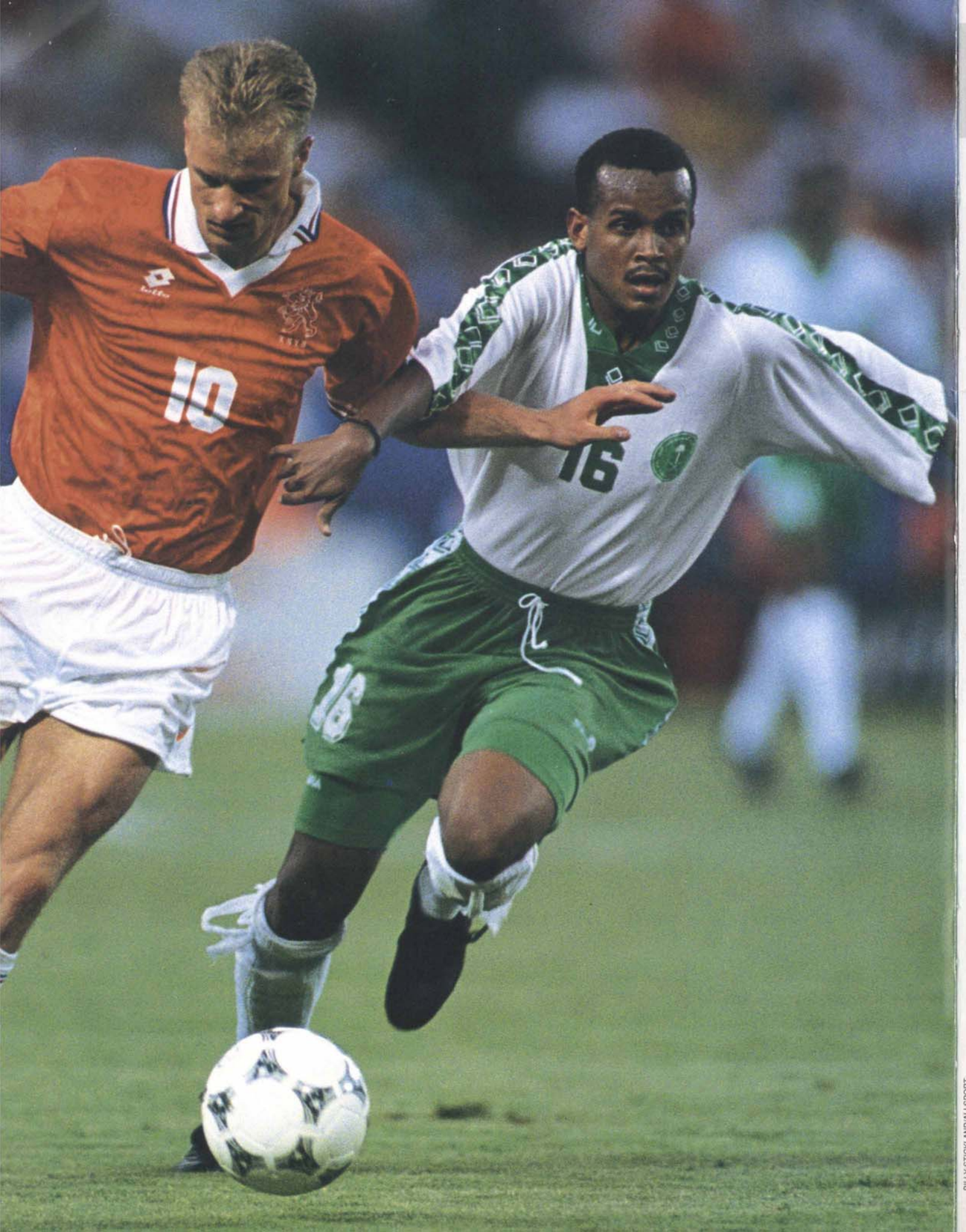

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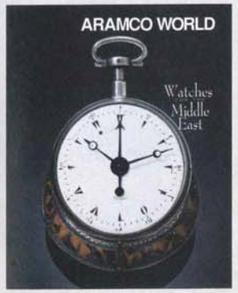

Front Cover: One of the most elegant works of the 18th-century horologist Abraham Louis Bréguet was a pair-cased silver repeater pocket watch made in 1797 and sold to the Ottoman ambassador to France. Measuring 11 centimeters across, the watch has Bréguet's characteristic understated dial—with Turkish numerals—and the blued-steel "Bréguet hands." Photo courtesy of Antiquorum. Back cover: Restored stonework in Gaza's 600-year-old Mosque of ibn 'Uthman. Photo: Dick Doughty.

◀ Saudi midfielder Talal al-Jabreen and Dennis Bergkamp of Holland.

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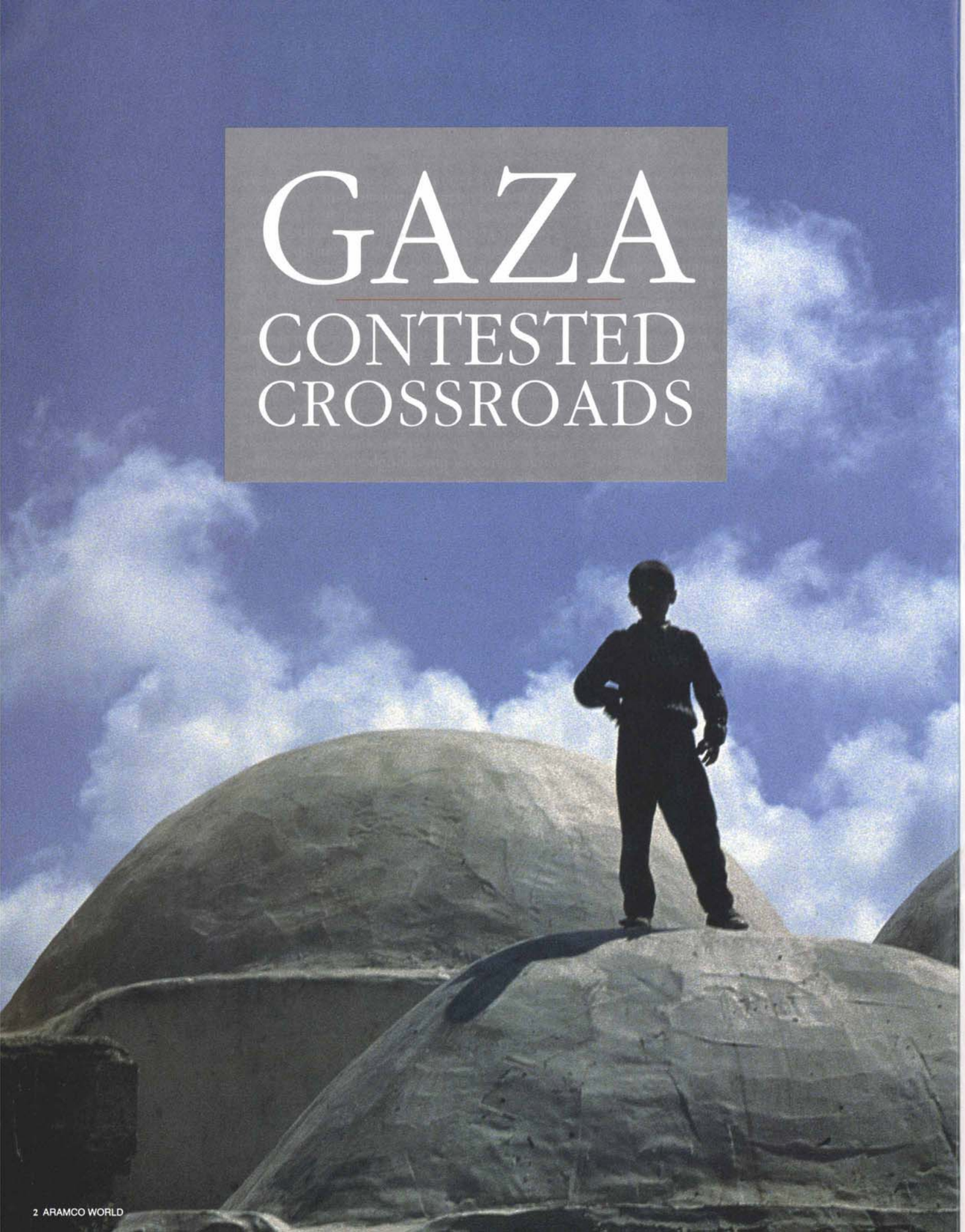
GAZA
CONTESTED CROSSROADS



WRITTEN AND PHOTOGRAPHED BY
DICK DOUGHTY

"A CITY SO RICH IN TREES IT LOOKS LIKE A CLOTH OF BROCADE SPREAD OUT UPON THE LAND,"

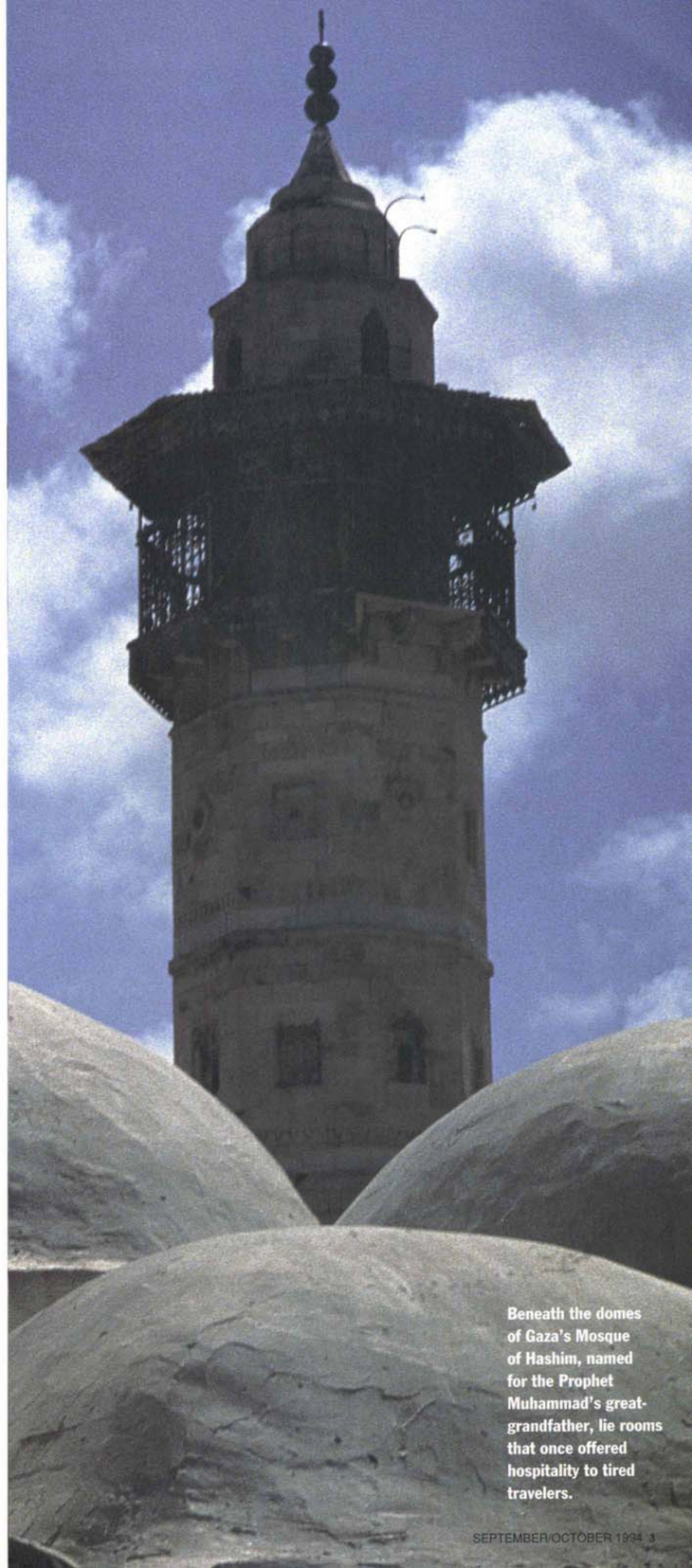
wrote the 14th-century Syrian scholar al-Dimashqi of his expansive view of Gaza. He was not the first to pen the city's praises: Herodotus, Pliny, Strabo and others had all complimented it in antiquity. Indeed, as early as 1500 BC, Pharaoh Thutmose III had chiseled into the Temple of Amun at Karnak a note that Gaza was "flourishing," and today, Gaza historian Ibrahim Skeik recalls seeing, in the early 20th century, "trees all about the city, olives and almond groves."

But the very name of Gaza, or Ghazza in Arabic, often evokes a different aspect of its history, one less pastoral, often violent; both are parts of the legacy of one of the oldest, most economically and militarily prized cities in the Middle East. The name has no dictionary meaning in Arabic, but in other languages across 3500 years, etymologists have linked it to words translated as "strong," "the treasure," "the chosen place," "to invade," and, "the ruler's prize." More precise definitions quickly become superfluous.

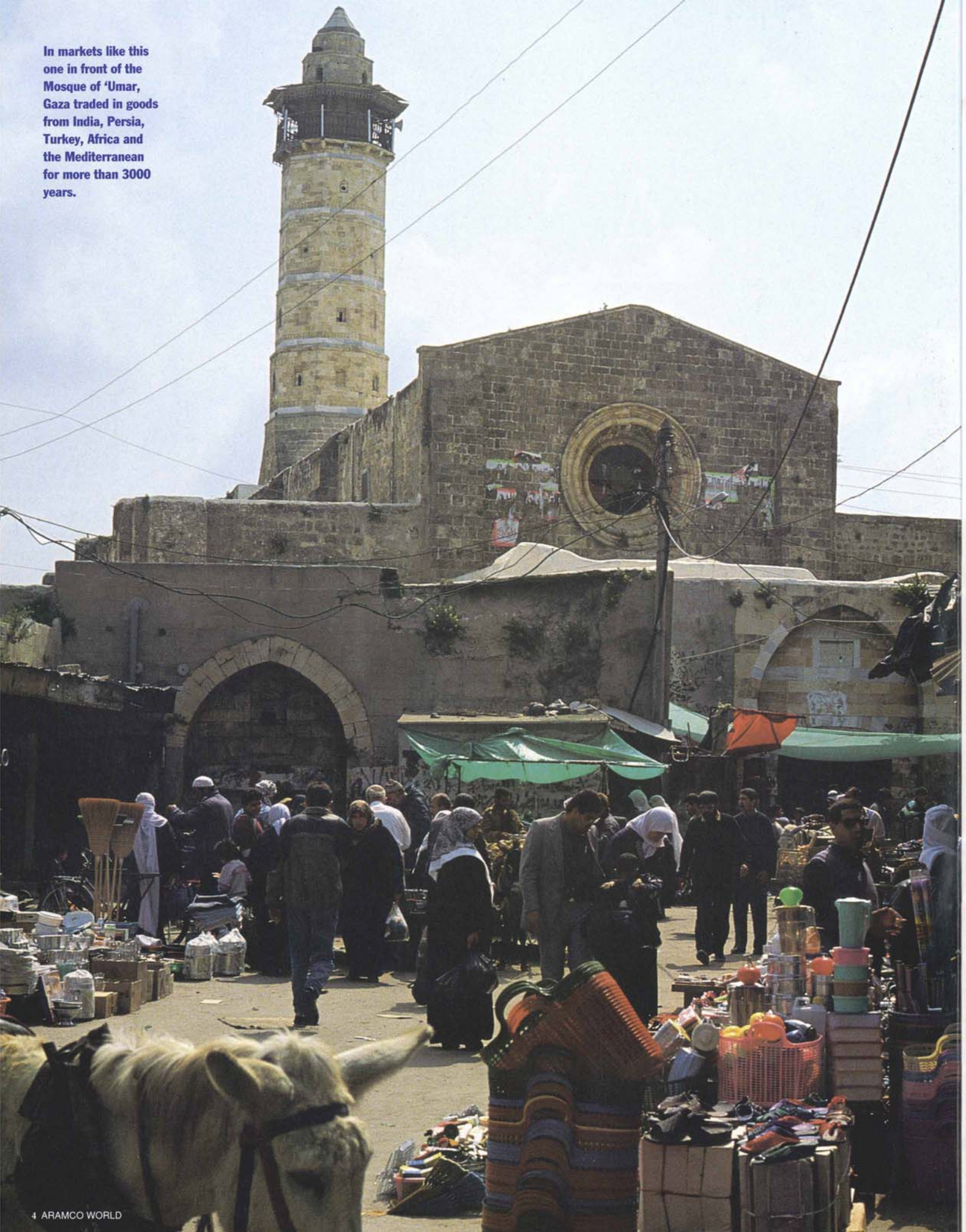
Much of Gaza's historical turbulence came about because the city sits on a geographical edge. Gaza's low, circular hill, now barely detectable amid urban sprawl, rose for ages like a gentle, topographic freckle in the southwest corner of ancient Palestine. From here the city served the most heavily traveled trade route linking Central Asia and Arabia with Egypt and Africa, called the Via Maris by Romans and the Horus Road by Egyptians. For traders, pilgrims and conquerors in both directions, Gaza lay, crucially, at the eastern edge of the Sinai Desert, which took eight days to cross by caravan.

Gaza also marked the northernmost station of the rugged Frankincense Trail from Yemen and western Arabia; this trade may have been the city's first. Gaza's port, just three miles from the city, was also one of the most convenient deep-water ports for the road from Babylon and Persia. Commerce to and from Asia, Africa, Arabia and southern Europe all passed for centuries through Gaza's markets.

More locally, the city was also known for its farms. All around Gaza, natural underground cisterns trap the irregular winter rains, and



Beneath the domes of Gaza's Mosque of Hashim, named for the Prophet Muhammad's great-grandfather, lie rooms that once offered hospitality to tired travelers.



In markets like this one in front of the Mosque of 'Umar, Gaza traded in goods from India, Persia, Turkey, Africa and the Mediterranean for more than 3000 years.

the warm, moist climate allows growing year round. Figs, dates, almonds and olives; oranges, lemons, melons and apples; wheat, barley, corn, dozens of vegetables and prized vineyards: all have grown abundantly in their time from Gaza's sandy soils. "Gaza was designed first as an agricultural and land trading center," explains Skeik, and "only secondarily" as a sea trading center.

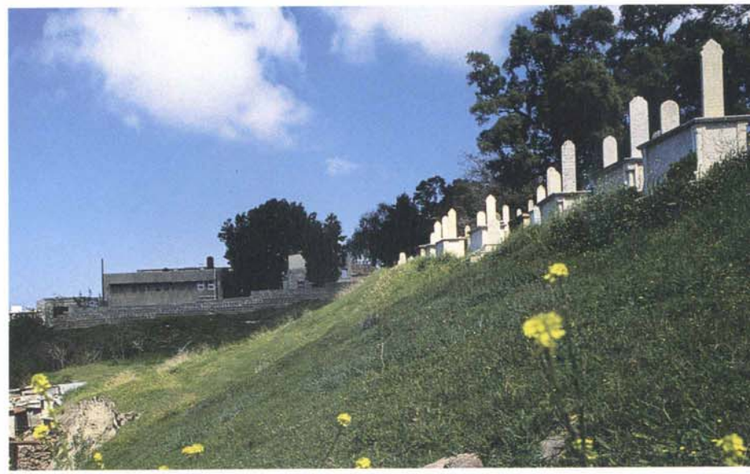
"Gaza has been both a connector and a barrier," observed Islamic archeologist Don Whitcomb of the University of Chicago. For Egyptians, Gaza and the neighboring cities of Raphia, Ascalon and Isdud were both the gateway to Syria and a strategic location for remote fortifications to slow invasion from the north and east. For the peoples in the north and east, in Palestine, Syria, Turkey and the Fertile Crescent, on the other hand, Gaza was the gateway west to the riches of the Nile. For them, Gaza could buffer invasions rising out of Egypt. So coveted has Gaza been through the ages, Whitcomb said, "it's always been on the edge of somebody's empire."

Like traders and conquerors, pilgrims also regarded Gaza mostly as a means to an end, a transit station. Centuries of Christians passed through to retrace the flight of Mary, Joseph and the baby Jesus along the Via Maris to Egypt, and to visit what was long believed to be the ruins of the temple razed by Samson. Later, curious Muslims traveling through the city stopped to visit the tomb of the great-grandfather of the Prophet Muhammad, Hashim, who died in Gaza; even today, Gaza is sometimes referred to as Ghazzat Hashim—Hashim's Gaza.

And if pilgrims passed through, scholars have largely passed over Gaza. In English, Martin A. Meyer's 1907 *History of the City of Gaza* remains unique in its comprehensive historical scope. Studies in Arabic have been penned mostly by Gazans themselves: one volume within *Baladuna Filistin* (*Palestine, Our Homeland*) by Mustafa al-Dabbagh; 15 chapter-length volumes by Ibrahim Skeik; and *Gaza and Its Strip*, by geographer and archeologist Salim Arafat al-Mobayed. "There is still too much we don't know," said al-Mobayed, pointing out that only one archeological dig has ever been conducted in the city, a preliminary excavation carried out in 1922 by a British expedition.

What is known, however, is that 3500 mostly uninterrupted years of trade formed the backdrop against which Gaza's conquerors came and went. Control of the trade routes through Gaza was as much coveted as the city on the little round hill itself.

The founders of Gaza remain unknown. There is, however, little doubt that the modern city has been inhabited continuously since that founding. According to al-Mobayed, before the spice trade began in the 18th century BC, Gaza may have been a pre-Canaanite agricultural village subject to a nearby military center that, excavations show, dates from nearly 3000 BC. The



Horus Road was well-known in Egypt as early as 2300 BC, when Pharaoh Pepi I entered Canaan five times, probably seeking Lebanese timber to build ships. His records, from the dawn of writing itself, make no references to settlements in Canaan. The first written record of the city appears in the inscription of Thutmose III, who made Gaza, even then outfitted with two defensive walls, his base for lucrative campaigns into Syria and Babylonia in 1500 BC. Meyer conservatively speculated that Gaza had not been founded until several centuries before this, at the same time the Arab Minaeans—centered in today's al-Jawf in Saudi Arabia—marked out the first frankincense trade road up from Yemen.

Though remains of the walls that defended Gaza from 1500 BC until 1191 have yet to be found, the edge of the hill on which the city was originally built is visible near the northern cemetery.

A GAZA TIMELINE

2300 — *Pharaoh Pepi I invades Canaan five times.*

1800 — *The Hyksos invade Egypt from Syria.*

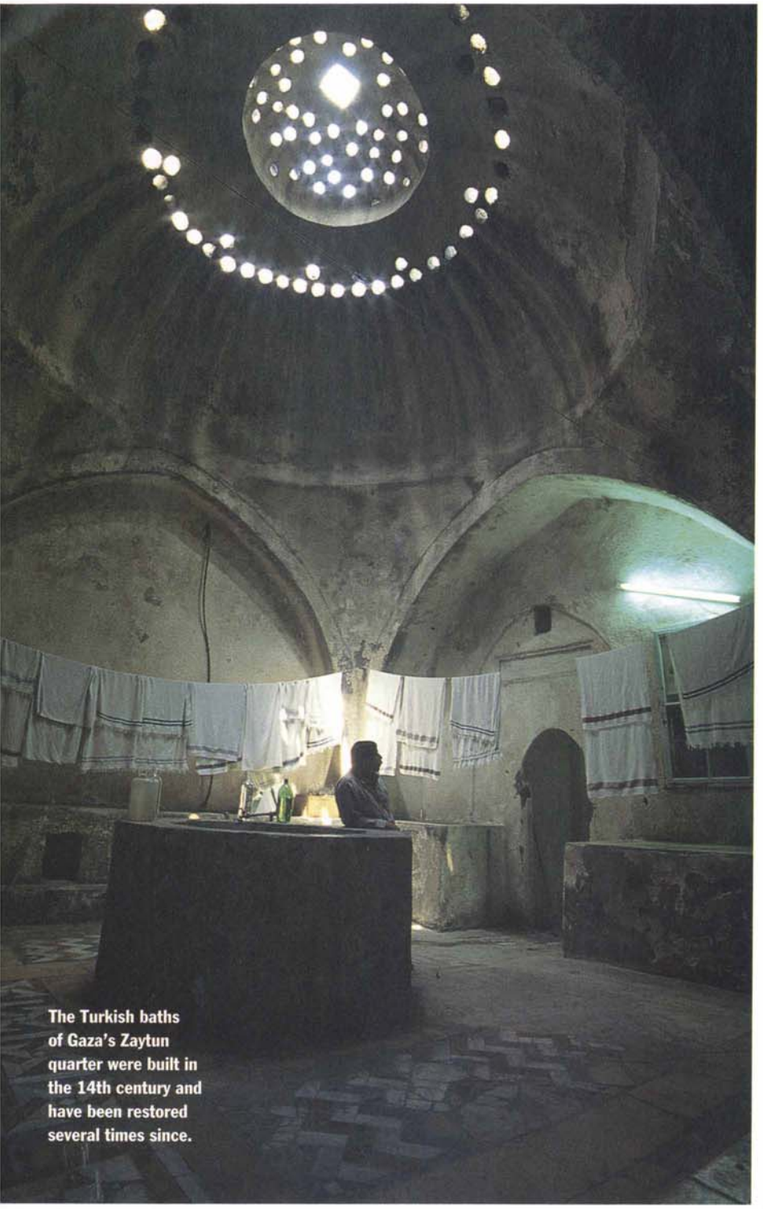
1500 — *Pharaoh Thutmose III bases his invasions of Canaan and Babylon on Gaza.*

1300 — *Babylonian and Hittite kingdoms battle pharaohs Seti I and Ramses II for southern Palestine.*

1200 — *The Sea Peoples establish Philistia.*

1030 — *Gaza, with Philistia, falls under the influence of the Israelite kingdom.*

BEFORE CHRIST



The Turkish baths of Gaza's Zaytun quarter were built in the 14th century and have been restored several times since.

Around 1200 BC, Gaza and the south Palestine coast came under the control of one of the several tribes who in ancient accounts appear as the "Sea People." Most historians believe that their uncertain origins lay in Crete and other Aegean islands—though a persuasive new theory has recently been proposed. In any case, Egyptian records show that Ramses III drove them from the Nile Delta, and they settled in the first fertile lands to the east. There they became known as the Philistines, and Philistia stretched from south of Gaza north to Carmel.

Under the Philistines, Gaza grew into the largest of five city-states. In the following centuries, all became targets of the Israelites from the east, the Egyptians from the west and the Assyrians from the north. In about 1030 BC, after years of border battles, Gaza fell under the influence of the kingdom of Prophets David and Solomon for a century, though most historians do not list the city as part of the kingdom proper.

In 525 BC, when the Persian king Cambyses set his eyes on it, Gaza was wealthy and strong enough to be the only coastal city to resist his siege. When the city finally fell, Cambyses used it as a base for his Egyptian campaign; the ensuing trade in Persian goods only increased Gaza's wealth.

But it was Alexander the Great who encountered Gaza's most dogged resistance. By his arrival in 332 BC, Gaza was trading in spices and goods from as far away as India and Ethiopia, including gold, olive oil, silks, medicines, perfumes, ivory, ostrich feathers and slaves, all in addition to frankincense, the keystone of Gaza's export economy. Meyer noted that Alexander's heavy catapults, dragged hundreds of miles from the north for the siege, bogged down in Gaza's soft fields. His forces battled for two bloody months to breach the ramparts held by allied Persians and Arabs. By the time Alexander's forces prevailed, he himself had been wounded. In revenge, he put nearly 10,000 men to the sword, enslaved the women and children, and packed the wealth of Gaza's merchants into 10 ships that set sail for Greece.

Alexander reorganized Gaza as a *polis*, or Greek city-state, and moved in large numbers of politically sympathetic new citizens, but trade continued. In the following centuries, as the city

changed hands violently more than six times among Alexander's Egyptian successors, his Persian successors, and the Israelites, Gazan traders followed the flag by redirecting trade and taxes toward whichever land was in power. New routes to western Arabia, Persia and India opened up with the rise of the Nabatean civilization to the southeast, with its capital at Petra (See *Aramco World*, July-August 1994).

The city's most luminous era began when it succumbed bloodlessly to Roman rule in 63 BC. All the coastal cities of Palestine—Gaza, Ascalon, Isdud and Jaffa—grew in the following centuries. The unity of empire left trade unhindered along all major routes, and sea traffic from Gaza's port increased. A 500-member senate governed Gaza, and in the streets could be found Philistines, Greeks, Romans, Canaanites, Phoenicians, Jews, Egyptians, Persians and Bedouin. Under Rome, Gaza's mint stamped out coins adorned with the busts of gods and emperors. One hundred thirty-five years after the birth of Christ, the emperor Hadrian personally inaugurated wrestling, boxing and oratorical competitions in Gaza's new stadium, which soon became famous from Alexandria to Damascus.

Just as the city had resisted Alexander, so too was it the last city on the Levantine coast to submit to Christianity. Sixty-three years after Emperor Constantine made Christianity the state religion of the Byzantine Empire, the ascetic Bishop Porphyrius arrived in Gaza, where the city's merchant elite worshipped the Hellenistic god Marna in a famous domed temple, one of eight about the city. Until then, the emperor had been reluctant to force the new faith on Gaza, fearing that if prominent citizens fled or were killed, "its trade will be ruined."

His fears were unfounded. Historian Glanville Downey, in his book *Gaza in the Sixth Century*, wrote that even though imperial troops burned the temples, "beat the pagans with clubs and staves" and quickly built a church upon the rubble of the temple of Marna, the city prospered overall and even, in this early Christian era, reached new heights. Gaza was adorned with a new wall and moat, new baths, new churches, a market, and a main street lined with marble columns. A library was constructed, and a school of rhetoric developed that in the early sixth century was esteemed as second only to Alexandria's. Enormous outdoor banquets celebrated the dedications of new churches, and the games begun by Emperor Hadrian four centuries earlier were carried on as an annual festival.

The spice trade diminished in this Byzantine era with the fall of Nabatean Petra to the east,

Standing on the highest point of Gaza's hill, the Zahra School (left) has been popularly called *qalat Napoleon*, "Napoleon's Castle," since the young general stayed there in 1799.

SALIM ARAFAT AL-MOBAYED COLLECTION

For nearly four centuries, Gaza was the site of a Roman mint, which produced this coin (top) in 147 or 148. Well-preserved tombstones (above) dot the city's cemeteries; this one marks the grave of one Sayed Muhammad Ali, who died in 1192.

926 *Pharaoh Shisak raids Palestine through Gaza.*

733 *Assyrian Tiglath Pileser III conquers Palestine.*

640 *Pharaoh Psammetichus takes Palestine.*

603 *Coastal cities fall to Babylonian king Nebuchadnezzar.*

601 *Pharaoh Necho retakes Palestine.*

525 *Gaza resists, then falls to, Persian king Cambyses.*

332 *Alexander the Great besieges Gaza for two months, takes it and Hellenizes the city.*

320-440 *Gaza changes hands six times between Ptolemies and Seleucids.*

150 *Jonathan the Hasmonean besieges and takes the city.*

135 *Antiochus VII takes Gaza along with Syria and Judah.*

96 *Janneus conquers Gaza, the last coastal city to resist him.*

63 *Pompey takes Palestine for Rome after besieging Jerusalem.*

402 *Gaza is the last coastal city to resist official conversion to Christianity.*

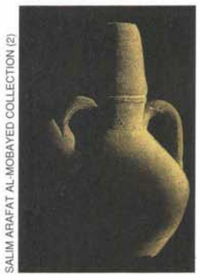
618 *Persian Chosroes II takes Gaza.*

629 *Heraclius regains Gaza and Palestine for Byzantium.*

634 *Muslims take Gaza from Byzantines, move on into Palestine, Syria and Egypt.*

AFTER CHRIST

Layers of history lie exposed by a developer's bulldozer (right). A house in the center of Gaza has an early-Ottoman ground floor atop a half-buried Mamluk-era basement; the second floor is probably from the 19th century, and the concrete blocks atop the roof were added in the early 1980's.



SALIM ARAFAT AL-MOBAYED COLLECTION (2)

Gaza's pottery industry served international traders and met household needs as well. At top, an Ottoman-era water jug; above, a flagon used in the city's perfume industry in the seventh century.

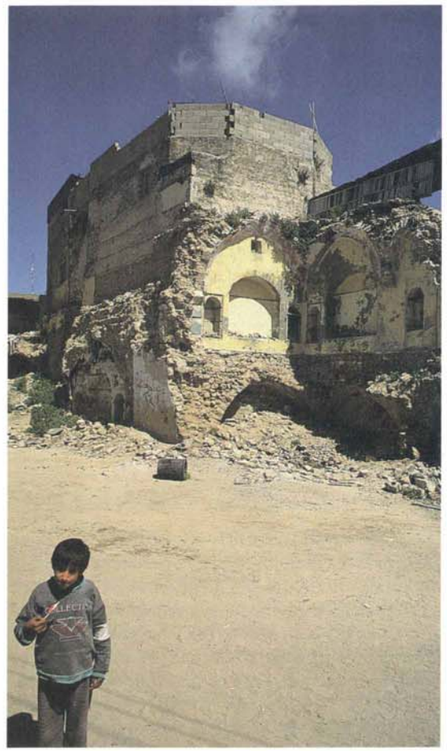
but it was supplanted by rapid growth in local wine exports. Using Nabatean irrigation techniques, vineyards around Gaza reached an extent not surpassed for more than a thousand years. Gazan vintages found favor as far away as France and Spain, while the old Frankincense Trail continued to bring Arabian trade from the south.

In the twilight of the Byzantine era, Gaza became the home of an increasingly influential group of Arab traders from Makkah. Among them was 'Umar ibn al-Khattab, later to become the second Caliph of Islam. Another, much earlier, trader, Hashim, would die in Gaza before he could see his great-grandson Muhammad change history.

In the years before his prophethood, Muhammad is believed to have visited Gaza more than once. In his early 20's, he arrived with the summer caravans, in the employ of the Makkan merchant Khadija, who would later become his first wife. More than 30 years later, when Muslims set out to capture the weakening Byzantine lands for Islam, Muhammad's commanders knew that Gaza held the key to both Palestine and Egypt. The easy victory of 'Amr ibn al-'As over the Byzantines in 634 is often attributed to a combination of Arab strategy, Byzantine weakness and the influence of Gaza's Arab residents (See *Aramco World*, November-December 1991). Under the governors installed by al-'As, Christians and Jews were taxed, though their worship and trade continued, as noted in the writings of St. Willibald, who visited Gaza in 723.

Islam gradually added a new dimension to Gazan commerce: the Hajj. Muslim pilgrims on the long journey from North Africa to Makkah found safe passage along the Via Maris through Gaza. From northern Palestine, too, pilgrims often preferred the coastal route through Gaza to the King's Road along the Jordan River. Even pilgrims passing directly from Cairo to Arabia through the Red Sea port of Aqaba bought grain, fruit and meat imported from Gaza to the north.

This was, however, a politically unstable era. The city was regularly sacked, besieged and revived in struggles among Egyptians, Syrians and Bedouin. By 985, Arab traveler and historian al-Maqdisi, "the Jerusalemite," reported that



Gaza was a "chief city of the district of Filistin," but Mediterranean trade had fallen off with the collapse of Byzantine rule, and the Byzantine navy regularly harassed the coast.

The crusaders fell upon Gaza in 1100, a year after they took Jerusalem. The mosques of the city were demolished, and a new, far larger church rose on the ancient site of the Marna temple. Gaza's citadel was refortified. Although the crusaders directed much of their trade through the rival city of Ascalon to the north, the Arab geographer al-Idrisi passed through Gaza in 1154, and commented that it was still "a very populous station."

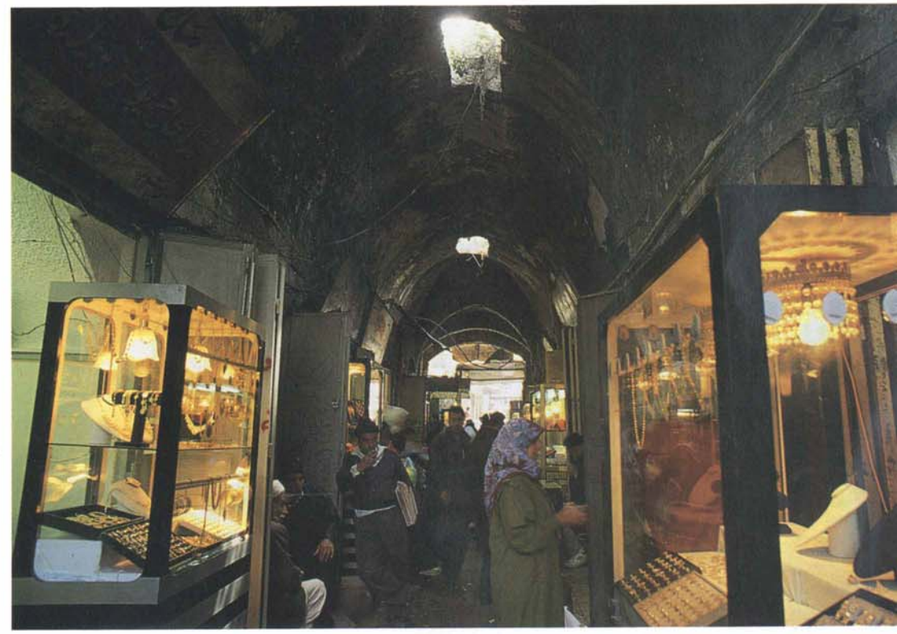
When the Mesopotamian-born hero Saladin (Salah al-Din Yusuf ibn Ayyub) tried to recapture Gaza in 1170, he won only the hinterlands, not the walled city itself. Seventeen years later, after victories to the north in Galilee and Jerusalem, he returned and entered with little resistance. But his grip on Gaza lasted only four years. In an 1191 treaty with Richard the Lion-Hearted, Saladin relinquished Gaza, on condition that its castle and walls be torn down. Richard complied, and since then, they have never been rebuilt. Today, although the perimeter of the walls can be inferred from a few steep edges of the city's hill, no trace of the crusader castle has ever been unearthed, and even its exact location remains a mystery.

The Egyptian Mamluk era that followed was punctuated by the conquests of rival Syrian rulers, the invasion of the Mongols, and a devastating sweep of plague. One of the most famous medieval travelers, Ibn Battutah of Morocco, passed through Gaza twice (See *Aramco World*, January-February 1978). Staying but one night each time, he commented in 1326 on Gaza's abundant markets; he noted in 1348 that the city lay nearly deserted as a result of the plague that had struck in that year; it carried off between one third and one half of the population.

Most of Gaza's oldest remaining buildings today are Mamluk. To protect the trade that fueled their Cairo-based empire, the Mamluks constructed khans, or fortified caravan hostels, throughout Palestine. Gaza's 14th-century Khan al-Zayt, or [Olive-]Oil Khan, built by Sanjar al-Jawali, fell to the bulldozers in 1960, but the city of Khan Yunis, south of Gaza, bears the name of its khan, which today lies crumbling in the town square. Al-Jawali did not destroy the crusaders' great church; rather, he converted it into the present-day Mosque of 'Umar by adding a fourth aisle and canting its southeast wall to face Makkah. He also built a hospital, a new school and a racetrack for the city; to this day his baths keep a warm fire burning beneath their worn mosaic floors, and residents of Gaza still find a steamy respite within.

Heavy pilgrim traffic—Muslims, Christians and Jews alike—bolstered Mamluk trade through Gaza. But as Europe cast its gaze again outward with the Renaissance, competition for the Far East trade grew. By 1500, Portuguese domination of Far East shipping set off the long decline of both the Mamluks and the Arab caravan merchants.

As its intercontinental trade shrank, Gaza relied more than ever on its rich agriculture and its home industries in pottery, soap and weaving. When the Ottoman Empire took Palestine from the Mamluks in 1516, Gaza remained a regional capital.



The single passageway of Gaza's gold market is all that remains of the city's 14th-century network of covered streets.

For its first century under Ottoman rule, Gaza did well. In 1660 a French visitor compared Gaza's baths and markets favorably with those of Paris, and noted that Arabic, Turkish and Greek were all spoken in the streets. But by the 18th century, Ottoman taxes had grown heavy, Bedouin raiding again choked off land trade, and the city found itself playing a diminishing role.

In 1799, Napoleon entered Gaza unopposed. Like Cambyses, Alexander, the crusaders and a

781 *Ahmed ibn Tulun conquers Syria and Palestine for Egypt.*

878-1100 *Through Ummayad, Abassid, Fatimid and early Seljuk periods, more than 20 armies pass through Gaza.*

1100 *Crusaders take Gaza and re-Christianize the city.*

1170 *Saladin takes Gaza's hinterland.*

1187 *Saladin captures Palestine and marches into Gaza.*

1191 *Richard the Lion-Hearted receives Gaza from Saladin.*

1222 *Gaza reverts to Syria.*

1244 *Allied Mamluks and Khwarezmians attack Palestine from south and north.*

1250 *Gaza besieged by Syria in effort to take it from Egypt.*

1251 *Egypt breaks Syrian siege and retakes Palestinian coast.*

1260 *Mamluks repel Mongols and make Gaza the capital of a region stretching from Egypt to Syria.*

1348 *Gaza stricken by plague.*

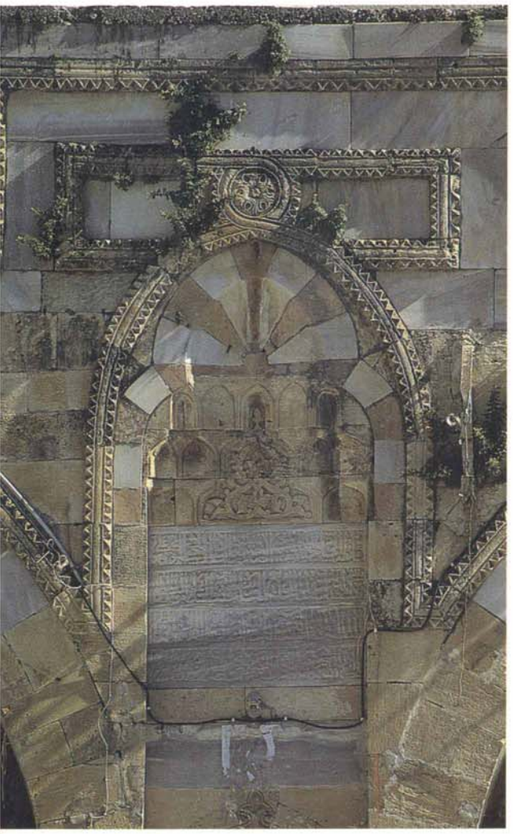
1516 *Sultan Selim II takes Palestine for Ottomans.*

1700's *Bedouin raids on the city become severe.*

1763 *Gaza revolts, unsuccessfully, against Ottoman rule.*

1766 *Ali Bey takes Gaza, along with much of Syria and Arabia, for Egypt.*

score of others before him, he sought Gaza only as a springboard into Egypt. He stayed three days in the modest palace of the governing Radwan family; in Gaza today, the palace, now a girl's school, is still called "Napoleon's Castle."



The Mosque of ibn 'Uthman, built in 1395, is Gaza's second-largest historic mosque. The builder, a merchant from Nablus, is commemorated on a plaque.

With World War I, as the shells of the British navy pounded Gaza's hill and residents fled, the city passed into the modern era with a violence befitting its turbulent past. With the renewed European strategic interest in Palestine, the city had been growing rapidly, and reached a population above 40,000 for the first time.

Soon after the war, a railway threaded iron along the hoof-worn trail of the ancient Via Maris, and the caravan trade ended forever. Sharp flowers of modernity, houses began to rise in the hundreds over the following decades, covering over Gaza's fields and spilling far beyond the faint, circular ripple of the old walls, until, by the early 1990's, the city came to be home to more than 300,000 people.

Today, the past endures, scattered amid streets dense with homes and small shops. Only the Mosque of 'Umar—the converted crusader church—and the small Greek Orthodox Church of St. Porphyrius, which still serves Gaza's 700 Christians, hark back to pre-Mamluk times. The Mamluk maze of arched, covered streets collapsed under World War I's shells, except for a lone, musty passage in Gaza's gold market. The tomb of the Prophet Muhammad's great-grandfather, Hashim, still lies in a corner of a 19th-century mosque and former pilgrim's hostel. Several smaller, Mamluk-era mosques and tombs dot Shuja'iyyah, Gaza's old Lower Town; one, the Mosque of ibn 'Uthman, is considered by historian Salim al-Mobayed to be architecturally "the purest Islamic mosque in Gaza." The Mamluk baths open in the morning for men and in the afternoon for women, and in the narrow, ancient quarters of Daraj and Zaytun, cinder-block walls rise everywhere atop the worn stones and antique arches of earlier eras.

One of the most curious of Gaza's relics is an unmarked hole in the courtyard of the Mosque of 'Umar. It is the entrance of a tunnel, dug as an escape hatch in case of siege, that likely reached beyond the edge of the city walls. No one is sure who built it, or where it resurfaces, for today it is clogged with rubble, but historian Skeik recalls that, as a boy, he held a candle and navigated it for 200 bat-infested meters.

Many details of Gaza's past hang today as equally unanswered questions. Where was the crusader castle? Where was Hadrian's famous stadium? What of the sixth-century library and school of rhetoric, known throughout the Mediterranean, or the eight Greek temples? Or, indeed, what of the remains of Gaza's cultural life in every era? And who, at the dawn of history, really founded Gaza, the city whose name has meant "strong," "treasure," and "the ruler's prize"?

Archeologist al-Mobayed believes that systematic excavation may begin to yield answers. With Gaza's Islamic waqf, he has planned several digs. "Up to today, every relic we have from the city is what we call a 'surface find,'" he explains. "Every time a new building goes up, we get a kind of archeology-by-accident: Someone is always finding something. Gaza is layer upon layer upon layer. We hope soon to learn what we can."

Photojournalist Dick Doughty's book
Gaza: Coming Home to Occupation
is scheduled for publication in early 1995 by Kumarian Press.

1776 *Ottomans retake Egypt.*

1799 *Napoleon enters Gaza unopposed.*

1800 *Allied Turkish and British forces take Gaza from Napoleonic administration.*

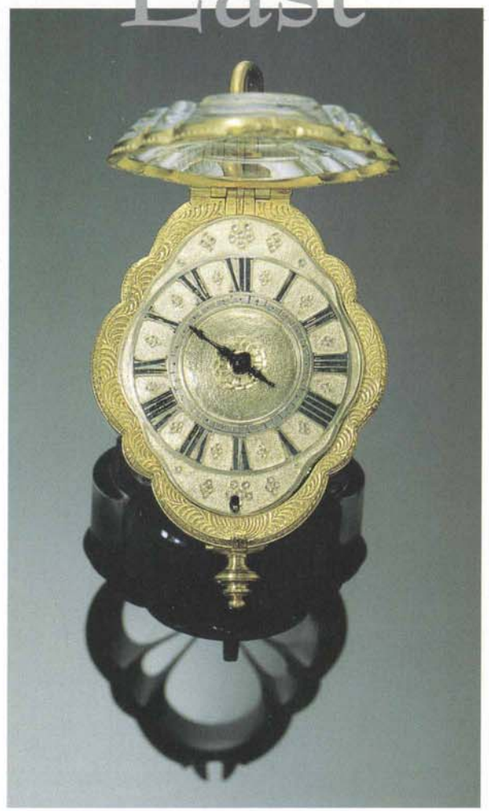
1831 *Muhammad Ali of Egypt briefly takes Gaza in war against Ottomans.*

1917 *British besiege and capture Gaza from Ottomans.*

1918 *League of Nations mandate establishes British rule.*

The first known building on the site of the central Mosque of 'Umar was the Greek temple of Marna, followed by Gaza's first Christian church and later the city's first mosque. Today's building is a Crusader-era church converted to a mosque in the late 12th century.

Watches FOR THE Middle East



WRITTEN BY ROSALIND MAZZAWI

PHOTOGRAPHS COURTESY OF ANTIQUORUM AUCTIONEERS, GENEVA

Watches—portable timepieces—were developed from clocks soon after 1500, when the invention of the mainspring in Germany freed clockmakers from weight-driven mechanisms. The first dated watch was made in Nuremberg in 1548, and there are watches dated around 1580 from Switzerland, the Netherlands and England. These were, technically, portable, though not very conveniently so: They measured some 10 to 15 centimeters (four to six inches) across, and were heavy enough that engravings of the time—possibly humorous—show them carried by servants rather than by the gentleman owners themselves.

It was in the 17th century that the real development of watchmaking technology began. Brass and steel parts, replacing iron, came into use around 1625, and in 1660 the hairspring provided a regulating mechanism that acted to moderate the balance wheel of a watch just as gravity moderated the pendulum of a clock. Toward the end of that same century, the export of watches to the East—the Ottoman Empire, Persia and India—began.

The particular interest of watches made for the Islamic countries is that they were usually the finest examples of the watchmaker's art, often intended as prestigious gifts. Most were excellent timepieces when properly maintained, but timekeeping was not necessarily their primary purpose. For the sultan or prince or court official who owned one—just as for the very rich of the present day—these watches possessed the charm of the exotic, the fascination of an intricate mechanism, the elegance of a piece of jewelry and the inherent value of the precious materials of which they were made.

There has been no comprehensive study of these timepieces or their market, though they are eagerly collected. Auction catalogues sometimes note that a certain item was "made for the Turkish [or Persian or Indian] market," and there are a few watches actually made in Istanbul or Cairo, often by European horologists who settled there, that appear from time to time at auction, or become known when some private collection is documented. Here we have gathered photographs of a few of these beautiful timepieces, samples from an engrossing history that has yet to be written.

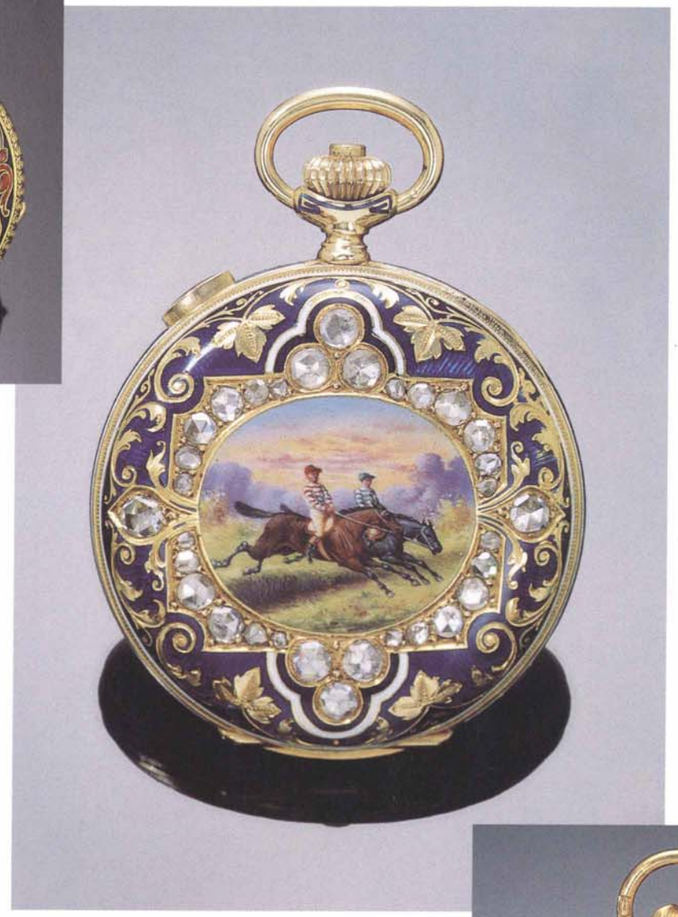
The earliest watches shown here were made in Persia by Pierre Didier Lagisse, a Swiss watchmaker from Geneva who settled in Isfahan, where he died in 1679. He became the official maker of timepieces to the shah, as well as an advisor, and it is likely that the watch at left and the Lagisse watch on page 15 were made either for the shah himself or for a court dignitary. This watch, with an unusual lobed shape, has a case carved of rock crystal, or transparent natural quartz—out of fashion in Europe by 1675, when it was made, but still much prized in Persia. The watch, wound with a key, has Lagisse's signature engraved on the works.

Rosalind Mazzawi lives in France and writes on Islamic arts.

In 1780, Daniel de Saint Leu of London, watchmaker to Queen Luisa, the wife of King George III, made three elegant timepieces for Ottoman dignitaries. All three have white enamel dials with Turkish numerals, and all three strike each quarter-hour; the discreet black lever that arms or silences the striking mechanism is visible on the bezels at the three-o'clock position.

The largest of the watches—75 millimeters, or three inches, across—(above left and above) has a case chased in high relief and in the minutest detail, showing military trophies in white, red and yellow gold. Not only are there lances, arrows, cannon, fasces, a drum and a saber, but also specifically Ottoman symbols, such as the horsetail tuğ that was the symbol of general rank and the filleted headgear of a paşa.

The Indian market for luxury watches developed somewhat later than the Turkish or Persian ones, and the styles preferred there were distinctly different. One watch made about 1880 by Lequin and Yersin in Fleurier, Switzerland (above) has a red translucent enamel back over mechanically-engraved gold, inlaid with diamonds; the border has vegetal arabesques in different colors of champlevé enamel. The whole of the 50-millimeter (2") case is highly ornamented.



Diamonds also enrich a gold eight-day watch made about 1890, probably by Barbezat Bôle of Switzerland, for the Indian market (below). Its outermost case—of four—has oddly serene enameled equestrian scenes on both front and back. The watch is only 56 millimeters in diameter (2¼") but features a carillon on three gongs, triggered by the slide visible on the right side of the bezel.

The West End Watch Company of Geneva, which also had offices in Bombay and Calcutta, made an elaborate watch around the year 1900 (above). It features a split-second chronograph, or stopwatch, operated by a button on the bezel and a push-button winding crown that triggers the 30-minute repeater. The back features a central painted scene of two jockeys in a rural landscape, riding a black and a bay horse respectively; the scene is surrounded by blue enamel and rather large diamonds.

In the late 1700's the London firm of Marwick, Markham and Perigal, competing with Bréguet, produced smaller and more floridly designed watches for the Ottoman market. One was a triple-cased gold-and-enamel repeating watch (left), with a crank-style winding key, that measures 41 millimeters across—just under 1 5/8 inches. Its second case has a black enameled back with military trophies painted in grisaille, *or shades of grey, and the pierced bezel of the outer glazed and scallop-edged case is enameled with anchors and crossed flags. The watch repeats when the pendant stem is pressed.*

The other Lagisse watch (right, below and below right) was made between 1675 and 1679. The turquoise enamel back is covered by a gilt-brass trellis design of scrolled foliage; in the center a bird of prey stoops on a fox. Inside the cover is a pink Shiraz rose—like the turquoise color, a specifically Persian feature—set among formalized black foliage, and the dial is engraved with summer flowers. The single blued-steel hand bears tulip shapes.

The painted back of a watch made in about 1830, certainly for sale in Istanbul (above), shows a wooden waterside villa, or yalı, *on the upper Bosphorus with a ship and a sailboat riding the still water. Gold engraving, enamel, painted flowers and precious stones surround the scene to create a very pretty and delicate effect.*

THE HITTITES OF ANATOLIA

In search of the past:

WRITTEN AND PHOTOGRAPHED BY EWA WASILEWSKA
ILLUSTRATIONS BY MICHAEL GRIMSDALE

Turkey's soil is rich in ruins: Ottoman, Roman, Seljuk, Byzantine, Greek. But far older than any of those cultures—and forgotten almost entirely for 3000 years—are the remains of the first Indo-European power in the Mediterranean area: the Hittites.

Their arrival in Anatolia—the Asian part of Turkey, known also as Asia Minor—some 4000 years ago changed the political map of the Middle East, at that time dominated by the civilizations born in the valleys of the Nile, the Tigris and the Euphrates. Although the Hittites ruled in Anatolia and beyond for almost 1000 years thereafter, they then vanished from human memory, to be rediscovered only at the beginning of the 20th century. Only the Bible carried some short references to the Hittites, presenting them as one of the tribes of Palestine in the first millennium BC. It was a "son of Heth"—a Hittite—who sold the Prophet Abraham the land to bury his beloved wife Sarah.

Who were the Hittites? Their discovery is still one of the most fascinating stories of the early archaeological and philological explorations of the Middle East. The ruins of their once monumental palaces and temples, their rock-reliefs in the middle of the wilderness of the Anatolian steppes, and their stone inscriptions in the least expected places were known by local people but overlooked, or ignored, by Europeans.

In 1812, for example, a Hittite hieroglyphic inscription was discovered carved on a stone built into the corner of a house in Hama, in modern Syria, by the Swiss traveler Johann Ludwig Burckhard. (See *Aramco World*, September-October 1967). But this find—like others in the area—was ignored until it was rediscovered in the 1870's by William Wright.

At a Hittite religious site (opposite) now called Gâvur Kalesi—"heathen castle"—a relief carving shows two Hittite gods encountering a goddess; the figure of the goddess has been almost entirely destroyed. Behind the relief lies a tomb where a local Hittite ruler may have been buried. Tablets of Hittite-Luvian hieroglyphics (above), such as this one from Hama, Syria, remained indecipherable for nearly a century after their discovery.

Wright, a very curious Irishman, tried to get official permission to copy some inscriptions that he had seen at Hama and elsewhere and carry them off to Istanbul. He succeeded in one of his goals—he got the permission—but the local population was not very friendly toward him and did not like his plans for the inscribed stones, either. The stones, they believed, could cure diseases such as rheumatism if the sufferer touched them or rubbed against them. Some citizens of Aleppo thought that taking the inscriptions out of their original places might bring bad luck, and preferred to destroy them rather than let them be profaned by foreigners.

Nonetheless, the copies were finally made. In the 1870's the inscriptions were independently attributed by Wright and Oxford University linguist A. H. Sayce to the "sons of Heth" mentioned in the Bible. In 1874, another researcher, William Hayes Ward, decided that the hieroglyphics on these stones—unrelated to the hieroglyphics of ancient Egypt—were not decorations or magic signs, but a writing system which should be read "boustrophedon," that is, "as the ox plows": the first line from left to right, the second from right to left, the third from left to right again, and so on. But after years of study only a very few hieroglyphic signs could be identified and assigned their proper meaning. In fact, it took scholars almost a whole century

The Hittites' arrival in Anatolia 4000 years ago changed the political and cultural map of the Middle East.

A royal silver seal set in a clay base (above) is inscribed with both cuneiform characters and Hittite-Luvian hieroglyphs. The longevity of Hittite cultural traditions is demonstrated by a relief (right) from Malatya, Turkey, carved in the ninth century BC, more than 300 years after the Hittite Empire was destroyed. It depicts the weather god accepting offerings from a local ruler.

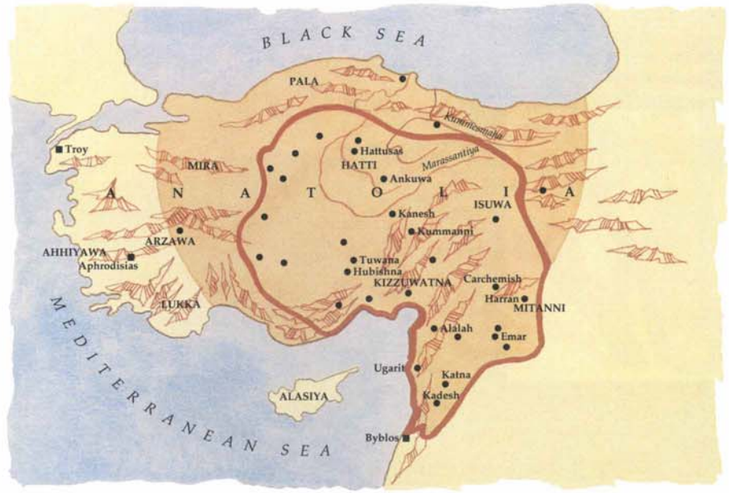
Part of a pre-Hittite royal tomb complex at Alaca Hüyük (above) that dates from about 2500 BC. Excavation here has provided evidence of a rich culture especially skilled in metalwork. A two-meter stone carving of a warrior (above left) guarded the King's Gate at Boğazköy.

to achieve a degree of certainty in reading this hieroglyphic Hittite-Luvian script, as it was called. And it would not have happened at all but for the 1945 discovery, in Karatepe in southern Turkey, of inscriptions that presented the same text in hieroglyphic Hittite-Luvian and in the Phoenician alphabetic script. Working between the known script and the unknown one, the Hittite-Luvian hieroglyphics were deciphered.

In the meantime, about 1894, another discovery was made in Anatolia. At Boğazköy, in central Anatolia, cuneiform clay tablets were found by the French archeologist Ernest Chantre. He brought them to Europe, where they became the center of attention for many scholars. The cuneiform writing system was familiar, thanks to earlier work on tablets discovered during numerous excavations in Iraq. But the language of the Boğazköy texts, as well as the identity of the people who wrote it, were a mystery.

In assigning these texts to their "owners," the so-called Amarna tablets, found in Egypt two decades earlier, were of great help. The royal archives of Tell el-Amarna, a city occupied between 1375 and 1360 BC, comprised the official letters of two Egyptian pharaohs, Amenhotep III and Akhenaton, and included some 400 cuneiform tablets, mostly in the Akkadian language—the lingua franca of the Middle East in the second millennium BC. Among them, however, there were also some tablets written in the same language as those from Boğazköy. Since both the Bible and Egyptian written sources referred occasionally to the Hittites as a power comparable to Egypt itself, scholars concluded that something like a Hittite empire must have existed in Anatolia some time in the second millennium BC.

Early in this century, University of Vienna professor Bedřich Hrozný realized that Hittite was the oldest known Indo-European language. His discovery was based on this short sentence written in cuneiform: NU NINDA-AN EZZATENI, WATAR-MA EKUTENI.



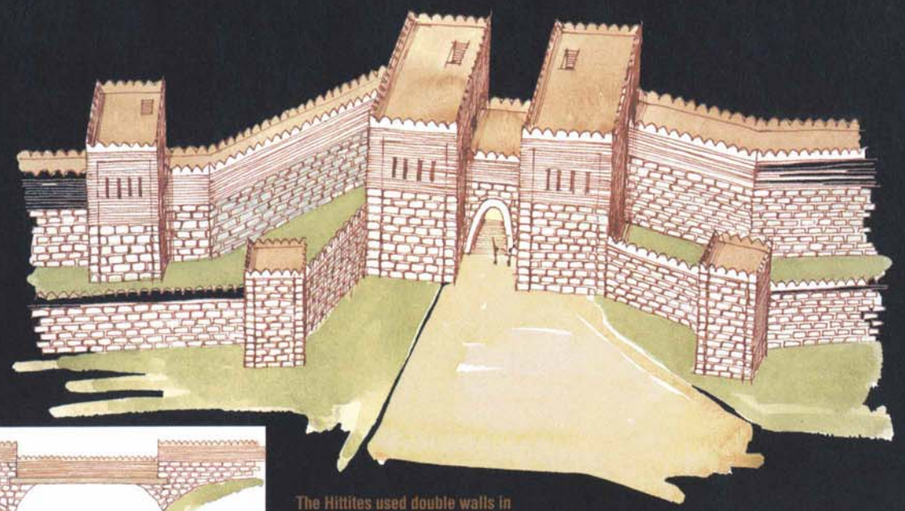
The forgotten power of the Middle East, the Hittites ruled in Anatolia for more than a thousand years. The shaded area above shows the maximum extent of Hittite power; within the brown line is the area of Hittite rule about 1300 BC. Hittite sites are indicated with dots; the Hittite names of many of them are unknown.

Since many Babylonian words were included in Hittite texts, the clue was provided by the Babylonian word *ninda*, which means "food" or "bread." Hrozný asked himself a very simple question: What does one do with food or bread? The answer, of course, was, one eats it. So the word *ezzateni* must be related to eating. Then the *-an* suffix on *ninda* must be a marker for a direct object in the Hittite language, added to the Babylonian word for "food" or "bread."

With these two propositions in hand, Hrozný looked at both the vocabulary and the grammar of Indo-European languages. He noted that the verb *to eat* is similar to Hittite *ezza-* not only in English, but also in Greek (*edein*), Latin (*edere*) and German (*essen*), and especially in medieval German (*ezzan*). Suspecting strongly that the Hittite language was of Indo-European origin, Hrozný identified the suffix *-an* as the accusative-case marker still preserved in Greek as *-n*. If that was true, the second line of the inscription was not much of a problem, since it began with the word *watar*, which could easily be translated as English *water* or German *Wasser*. Hrozný proposed the reading of the whole sentence as NOW BREAD YOU EAT, THEN WATER YOU DRINK—and he turned out to be right. Hittite was an Indo-European language!

The texts uncovered at Boğazköy and elsewhere in Anatolia opened up a new chapter in the history of ancient civilizations, written by the Hittites and other Indo-European peoples—Luvians and Palaians—who arrived in Asia Minor at the end of the third millennium BC or a little later. The land they came from and the route they took in their search for a new homeland are still among the unsolved mysteries of the past. Might they have come from the vast steppes of Russia, as Turkic tribes did some 30 centuries later? Or were they from the once dense forests of Europe? The search for those answers is still on.

Wherever they came from, it seems that the Indo-Europeans' infiltration into Asia Minor was rather peaceful, in spite of some violent



The Hittites used double walls in their fortifications (above), protected vulnerable corners with towers, and designed impregnable gateways. At Boğazköy, they spanned a gorge 15 meters deep with a defensive wall (left), building the earliest example of this type of bridge ever found.

One cannot help but stand breathless before the remains of the Hittite civilization, thinking about the amount of work and organization that were required to create it.

On a rock wall at Yazılıkaya (above), Teshub, the weather god, and Hepat, the mother-goddess, lead processions of other Hittite dieties. Large ceramic jars set in the ground (right) mark the storage area of the temple at Boğazköy.

local conflicts described in the archives of Boğazköy. The Hittites settled down mostly in central Anatolia, while the Luvians established themselves in the southwest, and the Palaians spread out to the north. Not much is known about either the Luvians or the Palaians, because not many texts by them or about them have been found, but the Hittites left behind rich archives that are fascinating in their content.

Anatolia was not empty when the Hittites arrived. The Anatolian cultures of the time were relatively rich but small communities whose royal tombs have been discovered in such places as Alaca Hüyük and Horoztepe. Gold, silver and bronze objects from these tombs are considered to be of equal or higher quality than the treasures found in ancient Egypt or Mesopotamia. These people spoke Hattic—a language of different structure than Indo-European or other languages known from the area. Because we have few texts or other clues, this language, and the identity of its speakers, are still a matter of speculation, but we do know that the Hattic people, and the land of Hatti, became part of a new political entity known as the Hittite Old Kingdom in about 1650 BC.

In 1286 BC, Hittite ruler Muwatallis fought Egyptian Pharaoh Ramses II at the Battle of Kadesh, on today's Syrian-Lebanese border. The indeterminate outcome confirmed the regional balance of power for more than half a century at the twilight of the Hittite era.

The kingdom's founder, Hattusilis I, rebuilt the city of Hattusas—destroyed and cursed by the pre-Hittite ruler of the area—and proclaimed it his capital. Here, in Hattusas, now known as Boğazköy, the cuneiform texts of the ancient Hittite kings spoke again some 35 centuries later.

Hattusilis I set up the rules and directions for the future development of his kingdom. The Hittites would rule in a flexible way, accepting the customs, traditions and deities of any land which became part of their growing empire. Hence, the Hittite kingdom is often called the "kingdom of thousands of gods." All the deities, those of the conquerors and those of the conquered, were to be worshiped in their own languages and according to their own customs. They were left as rulers of their lands—although their earthly representatives had to recognize Hittite suzerainty.

The originally small Hittite kingdom of Central Anatolia soon grew beyond Asia Minor. The Hittites looked with interest to Syro-Palestine and even to the famous civilizations of Mesopotamia. In 1595 BC the grandson and successor of Hattusilis I, Mursilis I, took northern Syria and the city of Aleppo. In the same campaign he conquered Babylon, putting an end to the first Babylonian dynasty of Hammurabi. But though his military success was very impressive, its effects did not last. Mursilis was murdered on his return to Hattusas, and shortly thereafter the kingdom of the Hittites was once again limited to central Anatolia.

The Hittites organized themselves again to conquer the world. The New Hittite Empire is usually dated to the period between 1450 and 1180 BC. Suppiluliumas I of the 14th century BC made Anatolia and Northern Syria his dominion. He did not repeat Mursilis's mistake of moving into an area which he could not directly control. Instead, through the most immediate conquests and a whole system of alliances, he founded a kingdom whose strength and wealth surpassed that of any other nation of the period. Even an Egyptian queen, alone after the death of her husband, asked Suppiluliumas to send one of his sons for her to marry, since she did not want to marry any of her courtiers. Suppiluliumas, apparently incredulous that his son could become a pharaoh, took his time in checking the legitimacy of the queen's letter. Offended, the queen sent another letter, whose genuineness was confirmed by Suppiluliumas's secret service, and he sent his son to Egypt for a wedding that could have had considerable consequences, had it happened. Instead, the prince was murdered by enemies of the queen before he reached Egypt, and she herself disappears from Egyptian records shortly after this event.

Another ruler of the Hittite Empire, Muwatallis, had a less than friendly brush with Pharaoh Ramses II. Both the Hittites and the Egyptians were so interested in the political and economic importance of the Syro-Palestine area between them that conflict was inevitable. Their two armies met in one of the most famous battles of history, at Kadesh on the Orontes River in about 1286 BC. Historian O. R. Gurney

describes the battle this way:

> The Hittite army based on Kadesh succeeded in completely concealing its position from the Egyptian scouts; and as the unsuspecting Egyptians advanced in marching order towards the city and started to pitch their camp, a strong detachment of Hittite chariotry passed round unnoticed behind the city, crossed the river Orontes and fell upon the Egyptian column with shattering force. The Egyptian army would have been annihilated, had not a detached Egyptian regiment arrived most opportunely from another direction and caught the Hittites unaware as they were pillaging the camp. This lucky chance enabled the Egyptian king to save the remainder of his forces and to represent the battle as a great victory.

The results of the battle, which confirmed the status quo in the Middle East—the division of influence in Syro-Palestine between Egypt and Anatolia—were sealed some 16 years later by an international treaty signed by Hattusilis III and Ramses II. The treaty also represents one of the last attempts to keep the growing power of the Assyrians of what is now northern Iraq out of the area controlled by the Hittites and the Egyptians.

However, it was not Assyria which caused the fall of the Hittite Empire. The blow was delivered by the so-called "Sea People," a group of possibly Indo-European tribes of disputed origin who attacked much of the Middle East by land and sea around 1200 BC. Eventually these people were stopped by Pharaoh Ramses III just at the borders of his own kingdom, but the damage was done. The Hittite kingdom was destroyed, along with many famous cities of the Anatolian and Syro-Palestinian coast. However, Hittite cultural traditions were kept alive for the next few hundred years in the so-called Neo-Hittite states of southern Turkey and northern Syria. And the ruins of many of their constructions can be admired all over Anatolia.

Among them is the capital of the Hittite kingdom, Hattusas, located 200 kilometers (125 miles) east of Ankara and a few kilometers north of the Turkish town of Yozgat. Here, thanks to German excavations conducted for most of this century, the city's ancient temples, palaces, and gates can be recognized, among many other structures. Although mostly only foundations are preserved, one cannot help but stand there breathless, thinking about the amount of work—and organization—required to construct such monumental buildings.

The founder of the Hittite Old Kingdom rebuilt the city of Hattusas about 1650 BC and named himself after it. The site is called Boğazköy today. Opposite, a view from what remains of the King's Gate.

Here and there, large intact storage jars that may once have held oil or grain or wine protrude from the ground. One can peer through what used to be huge windows at the cella, the temple's innermost shrine where the Hittites' gods dwelt. Gates, secret tunnels and other parts of the city's defense system can be seen, for the Hittites were masters of defensive construction. One of the first bridges ever built is part of Boğazköy's city walls, carrying them across a narrow gorge. It's hard to imagine that such a fabulous city with so much protection was destroyed and rebuilt more than once. It's even harder to imagine that its constructors were forgotten for 30 centuries.

Only two kilometers (1.2 miles) northeast of Hattusas there is another interesting monument of the Hittite past: a natural rock sanctuary. The place is known as Yazılıkaya—"the written rock" in Turkish—for processions of deities from the Hittite pantheon are carved into the galleries of stone. On the west side of the Great Gallery are mostly male gods, led by the Weather God of Heaven, while the east side belongs to their female counterparts, headed by the Sun Goddess of Arinna; the two processions meet in the middle of the north wall. The Small Gallery has a procession of twelve well-preserved, almost identical, gods on its west wall while the east one is dedicated to the Sword God, a deity whose significance is still unknown.

The cemetery of Hattusas lies outside the city, close to the road leading to Yazılıkaya. It consists of various graves, pottery vessels, or simple niches and crevices prepared for both cremation and inhumation burials. In many cases, animal remains have been recorded in these graves together with human bodies. Why? We simply don't know yet. The other mystery in this cemetery is the large number of graves in which an adult and a child were found buried together. Is this a coincidence, or some sort of religious custom—not suggested by anything in the texts—that required child sacrifice?

There are many other places in modern Turkey where one can still see and touch the fabulous past of the first recorded Indo-Europeans—the Hittites. Although forgotten for many centuries, they are finally getting the recognition due them for their contribution to the history of humankind. Their power was once at least equal to that of pharaonic Egypt; now their fame may also grow as great, as we search for our past in the beauty of the Turkish land.

Anthropologist and archeologist Ewa Wasilewska earned an M.A. from Warsaw University and a Ph.D. from the University of Utah, where she is a professor of anthropology.

Only 58 species of butterfly have ever been recorded from Egypt, compared with, say, 154 from tiny Lebanon.

Butterflies of Egypt

WRITTEN AND PHOTOGRAPHED
BY TORBEN B. LARSEN

Hypolimnas misippus and Danaus chrysippus

SOME 3500 YEARS AGO, AN EGYPTIAN ARTIST in Thebes—today's Luxor—sat down at his work table. Before him lay an odd assortment of dead ducks, flowers, plants, insects and fish that had been collected on the banks of the Nile earlier that morning.

The artist was painting a fresco of a duck-hunting scene in the tomb of Nebamun, a high and powerful court official in charge of grain collecting and storage. He had already finished the painting of Nebamun in his boat—in the classical Egyptian pose, his wife shown in diminutive size sitting between his legs. Now he had to fill in the details.

Colotis danae

Artogeia rapae

This was the part of the job he liked best. When painting gods and men, he was hemmed in by conventions: Everything had to be stylized. Even stalks of papyrus and certain sacred animals had to be drawn according to stylistic conventions, or the priests would be angered, and that would mean an end to his commissions. But when it came to nature and its creatures, he could give his creative talents free rein.

The artist surveyed the table and fixed his gaze on a large brown butterfly, the Common Tiger (*Danaus chrysippus*). Its body was deep black with numerous white dots, matching the black-and-white of the wingtips. He painted seven of them in the fresco. The black head and thorax with their minute white dots fascinated the artist so much that he extended the pattern to the abdomen in his painting, though in reality the butterfly's abdomen is brown.

The anonymous Theban artist left us with the earliest recognizable painting of a butterfly; living examples of the species he

painted can usually be seen flying among the flowers in the splendidly laid-out gardens of the Winter Palace Hotel at Luxor, not far from where the artist's assistants caught them 3500 years ago.

It is not surprising that the artist chose as a motif the Common Tiger, one of the largest and most beautiful insects in Egypt and presumably as common then as it is now. But it is somewhat ironic that the oldest painting of a butterfly should be from Egypt, one of the poorest habitats for butterflies anywhere in the world.

Only 58 species of butterfly have ever been recorded from Egypt, compared with, say, 154 from tiny Lebanon. Even the figure of 58 is somewhat inflated, because several of the species are only found in the highest mountains of the Sinai or in the Gebel Elba, a mountainous region of Egypt's extreme southeast, and some are migrants that do not maintain permanent populations anywhere in Egypt.

But though the Egyptian butterfly fauna is limited, it is not without appeal. On the contrary, it is curious that there are any butterflies at all in one of the most arid countries in the world, where significant vegetation is found only along the Nile and in its delta. Not only is Egypt dry, but its summers are very hot and winters cold, making butterfly survival even more precarious. Also, Egypt's geographical position, bridging Africa and Asia and bordering the Mediterranean, allows flora and fauna to be drawn from three of the world's major biogeographical regions: the Afrotropical, the Oriental and the temperate Palearctic. All these factors combine to make the limited Egyptian butterfly fauna more interesting than its numbers would lead one to expect.

The Common Tiger painted 3500 years ago is a tropical butterfly found throughout Asia and Africa, extending to the eastern Mediterranean. A closely related species is found in tropical Africa. As a migrant, it has great colonizing powers and it is not unusual to meet specimens making their way across the most extreme deserts, continuing till they find an oasis where breeding opportunities exist.

The caterpillar of the Common Tiger, like that of the Monarch butterfly of North America, feeds on plants of the milkweed family (*Asclepiadaceae*), which contain powerful toxic alkaloids. These are stored in the butterfly's tissues, making it both poisonous and foul-tasting to birds and other predators. The female of another butterfly species, the Diadem (*Hypolimnas misippus*), has evolved into a near-perfect copy of the Common Tiger, thus escaping attack by predators that already know from bitter experience to avoid the Common Tiger.

The Diadem has the same distribution as the Tiger, but has been introduced also to the Caribbean area, probably with the slave trade. It is an irregular visitor to Egypt, sometimes skipping a year, but when it does appear, it can become quite numerous in the many parks of Cairo. The prettiest member of this group of butterflies is probably the Yellow Pansy (*Junonia hierta*), which is not seen in Egypt every year.

One might expect Egypt to have a number of tropical African butterflies, but the

Junonia hierta

Vanessa cardui

Lycaena phlaeas

winter climate is too cold to permit the permanent survival of most tropical species. The so-called Afrotropical species are either temporary migrants or species hardy enough to colonize much of the Mediterranean. The intricately patterned Zebra Blue (*Syntarucus pirithous*) is the best established of the true African butterflies. Most of the others are rare or found only in the Gebel Elba.

Species from Asia, the so-called Oriental butterflies, are in short supply: There are only three, one of which is a migrant and hardly relevant. However, the two other species are interesting. The Asian Grass Blue (*Zizeeria karsandra*) is found from the Pacific islands throughout Asia to eastern Arabia, Iraq, the Levant and North Africa. It is a tiny butterfly, very common in Egypt; in Algeria, Morocco and the rest of Africa, it is displaced by the African Grass Blue. This is a most curious distribution pattern, since butterflies of the Oriental region usually do not penetrate farther west than the Indian subcontinent.

A close relative of this species, *Zizina otis*, is one of the most surprising butterflies in all of Africa. It is widespread and common throughout Asia, as far west as Karachi in Pakistan. But it is also found in the oasis of Siwa in Egypt, in the middle of the desert near the Libyan border. There are two possible explanations for this isolated population: Either it arrived from India as a stowaway, with a new form of animal feedstuff, or else it has been marooned in Siwa since the age of the dinosaurs. Experts would dearly like to know which is true, but so far there is no way to tell for sure.

So the tropical species, be they African, Oriental or both, are not really at home in Egypt. But then, neither are the Palearctic butterflies, from the temperate zones of Europe and the Near East. There are 22 of these species, by far the largest group of Egyptian butterflies, but most types are found only high in the Sinai mountains or in the narrow coastal strip between Alexandria and Libya, or are very rare or migratory.

The Small Copper (*Lycaena phlaeas*) is an example. Though not uncommon in Sinai, it has only very occasionally been found in the delta and on the coast. One species in this group, though, has become very successful in Egypt: the Small Cabbage White (*Artogeia rapae*), which feeds on wild and cultivated cabbages. It is one of the most common butterflies in Egypt, found all the way up the Nile to Aswan and in desert oases. When the Egyptian government starts a new irrigation scheme in the desert, the Small Cabbage White manages to establish itself there within months. Together with two tropical species, the Pea Blue (*Lampides boeticus*) and the Pomegranate Playboy (*Deudorix livia*), the Cabbage White is one of the few butterfly species that qualify as pests. The caterpillar of the Pea Blue feeds on many species of beans and peas, while that of the Pomegranate Playboy can spoil a wide range of fruits.

Many of the butterflies discussed so far could not live permanently in Egypt were it not for the vegetation of the Nile Valley and Delta. In fact, 40 percent of all the butterflies recorded in Egypt are known to migrate.

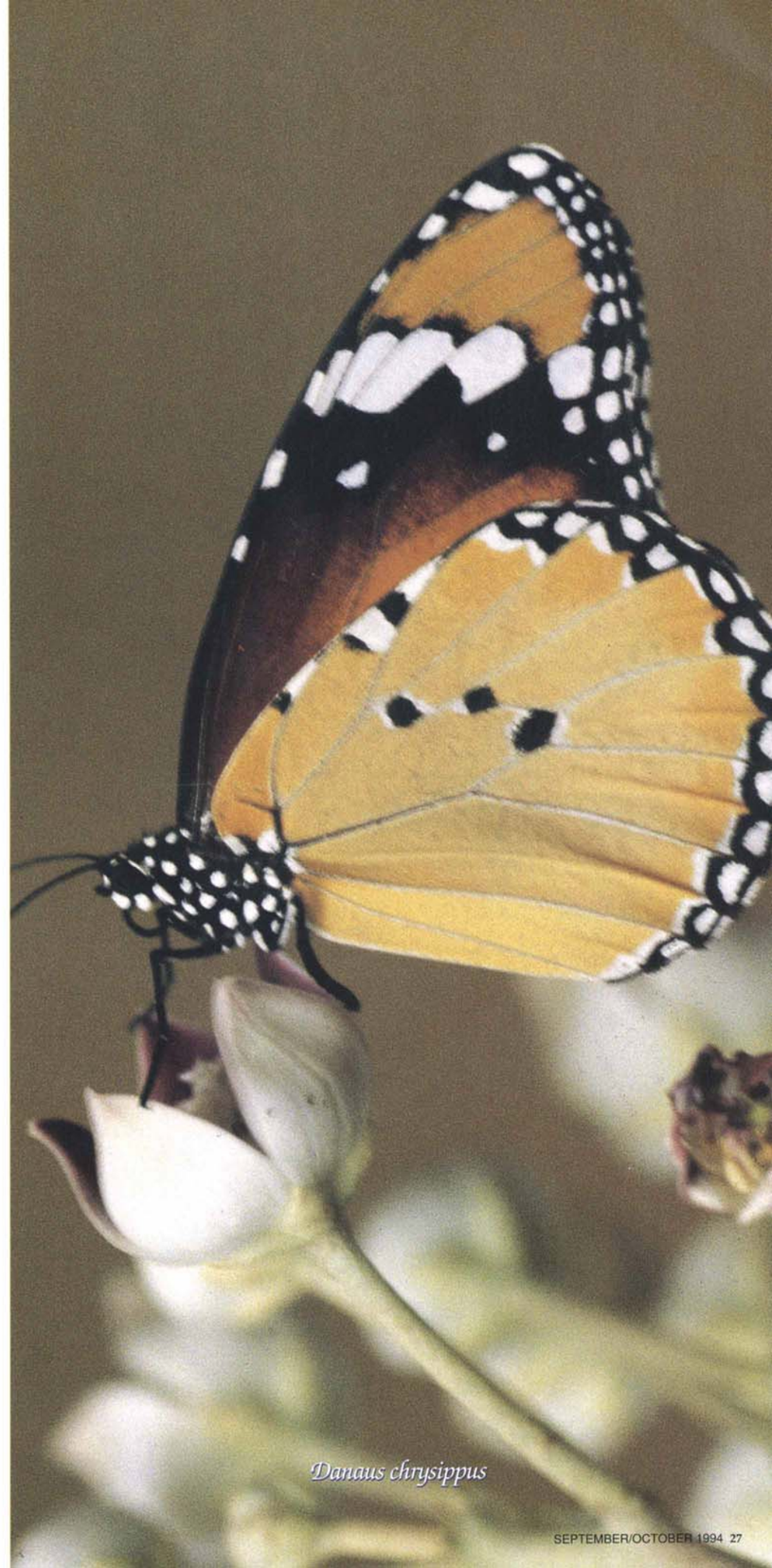
Though the presence in Egypt of all these species is not necessarily dependent on migration, more than a dozen are regular visitors that cannot survive in the country permanently. The Caper White (*Anaphaeis aurota*) is an example. It does not arrive in Egypt every year, but when it does it may breed in incredible numbers, stripping all available food plants and flying in swarms of millions. The Red Admiral (*Vanessa atalanta*) is a different type of migrant. It comes from Europe in autumn to benefit from Egypt's mild winter, and returns to Europe in March and April. Its close relative, the Painted Lady (*Vanessa cardui*), has much the same pattern.

The highly specialized desert butterflies are true Egyptian residents. Deserts are deeply inimical to those butterflies whose caterpillars depend on green plants and are very choosy about which plants they can eat. All desert butterflies have had to develop special survival mechanisms to cope with a stressful and unpredictable environment. Here pride of place is taken by the Leopard Butterflies (*Apharitis acamas*), which can live in the driest desert tracts. To do so, they have developed a close relationship with ants. The caterpillar produces a honey-like substance that the ants enjoy. In return, the ants permit the caterpillar to share their food, and even to eat the immature stages of the ants. In this way the butterfly has become independent of green food plants.

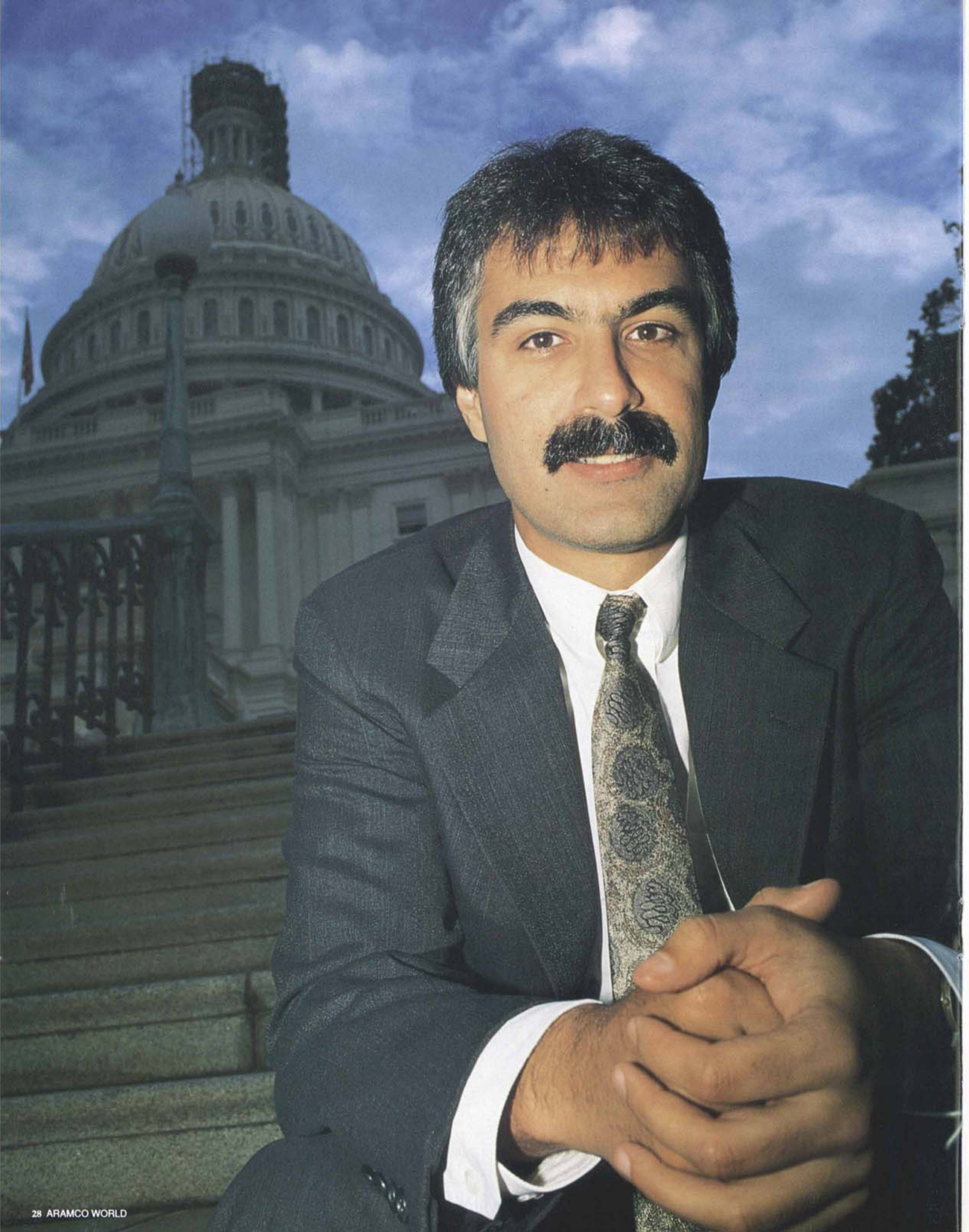
Other butterflies have developed the ability to spend many years in the chrysalis or pupa stage, waiting for the rare rain squalls that set the desert blooming. A tiny butterfly chrysalis can survive up to four years in the desert without moving or taking nourishment—an amazing feat. It is not surprising that relatively few butterflies have been able to adapt in this manner to desert conditions.

The Common Tiger, as Egypt's largest and most visible butterfly, began this story; let the Grass Jewel (*Freyeria trochylus*) end it. This is Egypt's smallest butterfly. In the desert near the Pyramids of Giza, I once caught a dwarf specimen, barely seven millimeters (a quarter of an inch) across both wings. Yet this creature, tiny though it is, has an immense distribution range that stretches from Australia and New Guinea through much of Asia, the Middle East, the Balkans and all of Africa.

Torben Larsen is the author of Butterflies of Egypt, *available from the American University in Cairo Press and from Apollo Books in Steenstrup, Denmark, and of* The Butterflies of Kenya and Their Natural History.



Danaus chrysippus



LENDING AN EAR

Christopher Mansour glances at his watch and rises abruptly from his seat. To the relief of all present, he ends the staff meeting, and with it another 12-hour workday. It is 7:30 p.m.; he is late for a performance at his son's school. Grabbing his umbrella, he races down the halls of the Rayburn Office Building and out into the autumn drizzle of Washington, D.C.

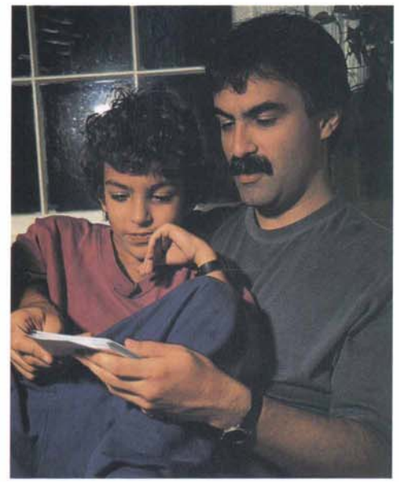
By 8:00 the next morning, Mansour is back at his desk, working the phones between meetings with his boss, Congressman Dale E. Kildee of Flint, Michigan. Through Kildee, a Democrat, Mansour serves the people of Michigan's ninth congressional district, one of the most heavily Arab-American districts in the United States.

As Kildee's administrative aide, Mansour serves as the congressman's principal political advisor, drafts his speeches, and helps Kildee form his positions on economic, defense and foreign-affairs issues. In 1992, Mansour acted as Kildee's liaison with the Clinton-Gore campaign.

Getting to Capitol Hill, however, was not easy for the soft-spoken young man from Flint. "My Arab-American background was a negative for me in a lot of ways," he says. "I had many people say, 'You'd better hide that Arab background.'"

Mansour works the Hill with understated assurance. Among his achievements is his work on the budget committee that secured funding for Kildee's new national child-care initiative, and billion-dollar annual increases for Head Start and job-training programs.

But another goal of Mansour's nine years in Washington has been to chip away at misconceptions about the Arab world, and his impact is felt. Kildee was among the first congressmen to speak on the record in defense of Palestinian human rights. In 1988, Mansour helped organize a fact-finding trip to the West Bank for congressional staffers; he feels it allowed many of its participants to grasp the Arab perspective for the first time. Mansour later organized a congressional forum on the Middle East which brought some diverse views of the region to Capitol Hill.



Looking at family photos gives Mansour and his son, Thomas, time together and encourages a sense of history. Mansour's father and grandfather immigrated from Nazareth.

Mansour grew up believing that the foods and customs of Flint's large Arab community were standard American fare. It wasn't until he reached high school that he realized that his Arab heritage sparked hostility in many of his peers. It was a rude awakening to offensive remarks and open taunts. "It made me aware, for the first time, that I am different. I am an *Arab*-American."

Mansour went to Michigan State University, then on to Georgetown University's graduate Arab-studies program. After graduation he went to work for an Arab-American organization and produced an oral history of Flint's Arab community. Later he spent several years in Palestine, working for American Near East Refugee Aid and other groups.

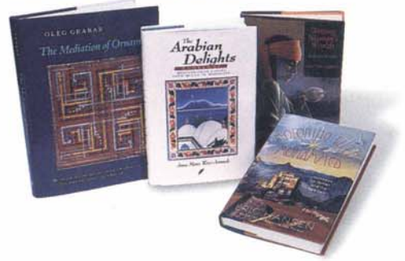
Mansour's experience in the Middle East, in a militarily occupied area, has had a profound effect on his world view. He strives to bring personal insights to the often abstract political discussions that take place on the Hill. "I feel my time there also gives me deeper insight into the lives of people in places like Bosnia and Somalia—insights which most Americans don't have. As a result I have a great deal more understanding of what these situations are really like on the ground."

Najib Joe Hakim is a photojournalist and writer living in San Francisco. He has written on Middle East topics for 13 years.

WRITTEN AND PHOTOGRAPHED BY NAJIB JOE HAKIM

SUGGESTIONS FOR READING

English-language publishing on subjects likely to be of interest to Aramco World *readers is growing ever more diverse, and its volume is increasing; our task of compiling a reading list to fit within two pages of the magazine has thus also become increasingly difficult. The selections below are but a small sample of all that is available, and we hope they will lead readers on to other works. While we do not specifically endorse any position taken by the authors of our selections, we have searched for books that can provide breadth, depth and perspective for wide-ranging and thoughtful readers. Our previous reading lists appeared in the issues for March-April 1991 and March-April 1993. —The Editors*



Abha, Bilad Asir: South-western region of the Kingdom of Saudi Arabia. *Noura bint Muhammad al-Saud and Al-Jawharah Muhammad al-'Anqari (text), Madeha Muhammad al-'Ajroush (photographs). Riyadh: [no publisher], 1989, 0-905906-82-9.* This large and lavishly illustrated volume provides detailed information on the geography, history and cultures of the little-known, mountainous Asir region of western Saudi Arabia.

The Arab World: Society, Culture, and State. *Halim Barakat. Berkeley, University of California Press, 1993, 0-520-08427-6 (pb).* The author, professor of sociology at Georgetown University, views the Arab world not as a mosaic of subgroups but as a single, overarching society coping with polar stresses, such as tradition versus modernity, sacred versus secular and local versus national.

The Arabian Delights Cookbook: Mediterranean Cuisine From Mecca to Marrakesh. *Anne Marie Weiss-Armush. Los Angeles: Lowell House, 1994, 1-56565-126-X.* Among the wide range of primarily low-fat and high-fiber recipes presented here are many traditional favorite dishes, with explanations of the cultural and geographical contexts from which they come. Charming as well as informative.

Arabic Short Stories. *Denys Johnson-Davies, tr. London: Quartet Books, 1983, 0-7043-2367-2. U.S. distributor: Salem House, Ltd.* An eclectic sampler of 24 stories from throughout the Arab world, including works from many well-known writers. Johnson-Davies has introduced more than 15 volumes of Arabic literature to the English-speaking world.

Architecture for Islamic Societies Today. *James Steele, ed. London: Academy Editions, 1994, 1-85490-207-5. U.S. distributor: St. Martin's Press.* A beautifully illustrated presentation of award-winning designs from the fourth cycle of the Aga Khan Award for Architecture, with essays by such luminaries as Oleg Grabar and Charles Correa.

Astronomy in the Service of Islam. *David A. King. Aldershot and Brookfield: Variorum, 1993, 0-86078-357-X.* A collection of King's historical and scientific writings on the complexities and contributions of Islamic astronomy, showing how Muslim scientists and Muslim legal scholars dealt with the practical questions of visibility of the new moon, lunar time-keeping and the *qibla*, the sacred direction of Islam.

Avicenna and the Visionary Recital. *Henry Corbin. Willard R. Trask, tr. Princeton: Princeton University Press, 1988, 0-691-01893-6 (pb).* Using a text discovered in an Istanbul library, the author examines the psychological thought of Ibn Sina (called Avicenna in the West), the 11th-century Persian philosopher and physician, author of more than 100 works on theology, logic, medicine, and mathematics.

The Cambridge History of Early Inner Asia. *Denis Sinor, ed. Cambridge and New York: Cambridge University Press, 1990, 0-521-2-4304-1.* From the paleolithic era to the rise of the Mongol empire, this volume presents the current state of knowledge of the geographic, political and cultural factors that have shaped Central Asia.

Cities and Caliphs: On the Genesis of Arab Muslim Urbanism. *Nezar AlSayyad. Westport: Greenwood Press, 1991, 0-313-27791-5.* The author draws almost exclusively on original Arab chronicles to propose an alternative, holistic framework for understanding the Muslim city in its social, economic and religious contexts.

Cultural Atlas of Mesopotamia and the Ancient Near East. *Michael Roaf. Oxford and New York: Facts on File, 1990, 0-8160-2218-6.* With 53 maps, 468 illustrations and a lucid text, this may be the non-specialist's best introduction yet to the complexities of history in the cradles of civilization.

Everyday Life in the Muslim Middle East. *Donna Lee Bowen and Evelyn A. Early, eds. Bloomington: Indiana University Press, 1993, 0-253-20779-7 (pb).* Putting the significance of daily life ahead of politics, the editors offer Westerners "a sense of what it is like to live in the Middle East" today through readings focusing on home, culture, religion, growing up and social life.

Fate of a Cockroach. *Tawfiq al-Hakim. Denys Johnson-Davies, tr. Colorado Springs: Three Continents Press, 1994, 0-89410-750-X (pb).* Arguably the most famous play by one of Egypt's most prolific and esteemed writers, this three-act satire contrasts the creative, free-spirited side of human nature with its disciplined, obedient side. Three other plays on the theme of freedom complete the volume.

Fields of Fig and Olive: Ameera and Other Stories of the Middle East. *Kathryn K. Abdul-Baki. Washington: Three Continents Press, 1991, 0-89410-726-7.* A rich and vibrant collection of 14 stories set in Jerusalem, Lebanon, Greece, the Arabian Gulf, and Jordan, written in English by a "bifocal" Arab writer.

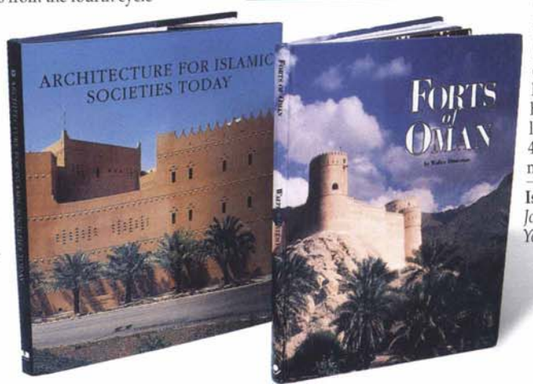
Forces of Change: Artists of the Arab World. *Salwa Mikdadi Nashashibi,* et al. *Lafayette: The International Council for Women in the Arts, 1994, 0-940979-26-8 (pb), 0-940979-27-6 (hb).* The catalogue of the critically acclaimed exhibition of the same name, highlighting the contributions of Arab women, includes essays by Shahira Doss Davezac, Todd Porterfield and Wijdan Ali.

Forts of Oman. *Walter Dinteman. Dubai and London: Motivate Publishing, 1993, 1-873544-41-3.* A photographic survey of one of Oman's most spectacular and historically significant legacies: its forts, watchtowers and *aswar*. Includes maps, floor plans, glossary, etc.

The Founders of the Western World: A History of Greece and Rome. *Michael Grant. New York: Scribner's, 1991, 0-684-19303-5.* A far-reaching, lucid synthesis of political, military, cultural and economic life in the times that were "the building blocks of what we today call the Western World," by an eminent classical historian.

A House Not Her Own: Stories from Beirut. *Emily Nasrallah. Thuraya Khalil-Khouri, tr. Charlottetown: Gynergy Books, 1992, 0-921881-19-3 (pb).* Using "ashes as the source of inspiration," Nasrallah writes of details and dreams of the ordinary residents of the city as a compassionate eyewitness, providing "a living testimony...from the core of fire and destruction."

Iblis. *Shulamith Levey Oppenheim. New York: Harcourt Brace, 1994, 0-15-238016-7.* A sumptuously illustrated retelling, from an Islamic viewpoint, of the story of the banishment of Adam and Eve from paradise, suitable for both children and adults.



Ibn Hazm. *A.G. Chejne. Chicago: Kazi, 1982, 0-935782-04-4 (hb), 0-935782-03-6 (pb).* The first major work in English on the great 11th-century scholar of Muslim Spain, an intellectual rebel in his own time who deeply influenced later generations, author of more than 400 volumes in the sciences, theology, medicine and other disciplines.

Islam and Ecology. *Fazlun Khalid and Joanne O'Brien, eds. London and New York: Cassell, 1992, 0-304-032377-2 (pb).* In a series sponsored by the World Wide Fund for Nature, Muslim writers present essays on the relationship between Islamic principles and ecology, science, trade and the use of natural resources.

Islamic Astronomy and Medieval Spain. *Julio Samsó. Aldershot and Brookfield: Variorum, 1994, 0-86078-309-X.* A collection of the author's scholarship focusing on the Golden Age (1031-1086) of astronomy in Muslim Spain and its development under Alfonso X.

Istanbul, A Traveller's Companion. *Laurence Kelly, ed. New York: Atheneum, 1987, 0-689-70716-9 (pb).* A delightful compilation of extracts from historical writings across 14 centuries—diaries, letters, memoirs, histories and novels—to add depth and flavor to wanderings about the incomparable city.

The Mediation of Ornament. *Oleg Grabar. Princeton: Princeton University Press, 1992, 0-691-04099-0.* Ornamentation, although based on universal motifs, reached one of its most expressive and tangible forms in Islamic art. A leading art historian compares Islamic and Western ornamentation.

The Modern Middle East: A Reader. *Albert Hourani, Philip S. Khoury and Mary C. Wilson, eds. Berkeley: University of California Press, 1994, 0-520-08240-0 (hb), 0-520-08241-9 (pb).* Conceived as a complement to the latter parts of Hourani's highly respected *A History of the Arab Peoples*, this reader covers both Arab and non-Arab areas of the Middle East in light of politics, economy and intellectual life from the colonial period to today.

Middle East Patterns: Places, Peoples and Politics. *Colbert C. Held. Boulder: Westview Press, 1989, 0-8133-0017-7 (pb), 0-8133-0016-9 (hb).* A geographer's survey of the Middle East that examines cultural and political patterns and relates them to the region's physical characteristics, written in an unusually accessible, non-technical style.

Modernization in the Middle East: The Ottoman Empire and Its Afro-Asian Successors. *Cyril E. Black and L. Carl Brown, eds. Princeton: Darwin Press, 1992, 0-87850-085-5.* Leading Mideast scholars examine the region's response to modernization since Ottoman times. This composite work goes beyond politics to look at social, ideological and economic factors in the Ottoman Empire and its modern successor states.

Motoring With Mohammed: Journeys to Yemen and the Red Sea. *Eric Hansen. Boston: Houghton Mifflin, 1991, 0-395-48347-6 (hb).* A captivating, sympathetic and engagingly written tale of the author's not-as-simple-as-you-think attempts to recover his own travel journals a decade after he buried them following a shipwreck off North Yemen.

Muhammad and the Quran. *Rafiq Zakaria. London: Penguin Books, 1991, 0-14-014423-4 (pb).* An eminent Islamic scholar makes a sober and reasoned effort to dispel the myths and misconceptions that still dominate most Western writing about Islam, its scripture and the life of the Prophet Muhammad.

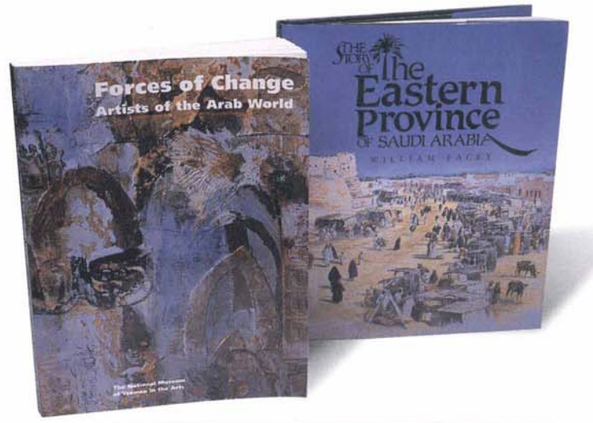
Muslim Communities in North America. *Yvonne Yazbeck Haddad and Jane Idleman Smith, eds. Albany: State University of New York Press, 1994, 0-7914-2020-5 (pb), 0-7914-2019-1 (hb).* A groundbreaking survey that examines the full range of Muslim life and institutions forming in North America, offering insight into diverse views on acculturation, identity formation, orthodoxy, ethnicity and gender roles.

Natural Healing With the Medicine of the Prophet: From *The Book of the Provisions of the Hereafter* by Imam Ibn Qayyim Al-Jawziyya. *Muhammad Al-Akili, tr. Philadelphia: Pearl Publishing House, 1993, 1-879405-07-5 (pb).* Born in Damascus in 1292 ,the author became part of that city's remarkable intellectual life. This first translation of his writings on medicine provide insight into the history of the art, and Al-Akili has included biographical and contextual notes.

Return to Jerusalem. *Hassan Jamal Husseini. London: Quartet, 1989, 0-7043-2735-X.* A Palestinian journalist tells his disturbing and courageous tale of life in his native city.

Science in the Medieval World, "Book of the Categories of Nations." *Sa'id al-Andalusi. Sema'an I. Salem and Alok Kumar, trs. and eds. Austin: University of Texas Press, 1992, 0-292-71139-5.* The first English translation of one of the few surviving medieval Spanish Muslim texts, which surveys the scientific achievements of the known world as of the 11th century. The translators are scientists themselves.

Silent Day in Tangier. *Taher Ben Jelloun. David Lobdell, tr. New York: Harcourt Brace Jovanovich, 1989, 0-15-182631-5.* A lyrical, hypnotic tale of the memories of a proud man dying in a silent corner of the Arab world, written by a winner of the *Prix Goncourt*.



The Story of the Eastern Province of Saudi Arabia. *William Facey. London: Stacey International, 1994, 0-905743-68-7.* A richly pictorial survey of what has become, over the past half century, one of the most economically significant regions of the Middle East, set in the context of its past.

Strolling Through Istanbul: A Guide to the City. *Hilary Sumner-Boyd and John Freely. London: Routledge & Kegan Paul, 1987, 0-7103-0214-2 (pb).* First published in 1972, this has become a classic. After an orientation chapter, 23 detailed walks guide the visitor through the city's past and present-day riches, from the world-renowned to the nearly hidden.

Struggle and Survival in the Modern Middle East. *Edmund Burke, III. Berkeley: University of California Press, 1993, 0-520-07988-4 (pb), 0-520-07566-8 (hb).* The social history of the Middle East is explored through the life stories of 24 men and women, Muslim and non-Muslim, from different walks of life, in the pre-colonial, colonial and contemporary periods.

The Transmission of Knowledge in Medieval Cairo: A Social History of Islamic Education. *Jonathan Berkey. Princeton: Princeton University Press, 1992, 0-691-03191-6.* Using Cairo as exemplar, the author argues that the highly personalized system of religious education of Medieval Islam favored direct student-teacher relationships over institutional power. The effects included opening education to a broader social spectrum than is commonly assumed, and helping forge a common Muslim identity.

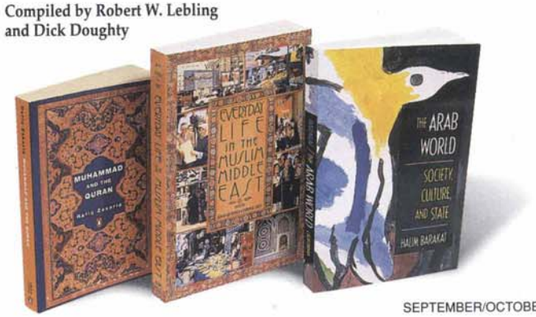
Undiscovered Asir. *Thierry Mauger. London: Stacey International, 1993, 0-905473-70-9.* The author-photographer spent 10 years in Saudi Arabia's most remote, rugged and ethnically diverse region to produce this fascinating and copiously illustrated ethnographic travel account.

We Belong to the Land: The Story of a Palestinian Israeli Who Lives For Peace and Reconciliation. *Elias Chacour with Mary E. Jensen. New York: HarperCollins, 1992, 0-06-061415-3 (pb), 0-06-061352-1 (hb).* A Palestinian priest, twice nominated for the Nobel Peace Prize, tells the wrenching story of his life, from the destruction of his boyhood village in Galilee to his efforts to bring peace and reconciliation among the three peoples living in Palestine.

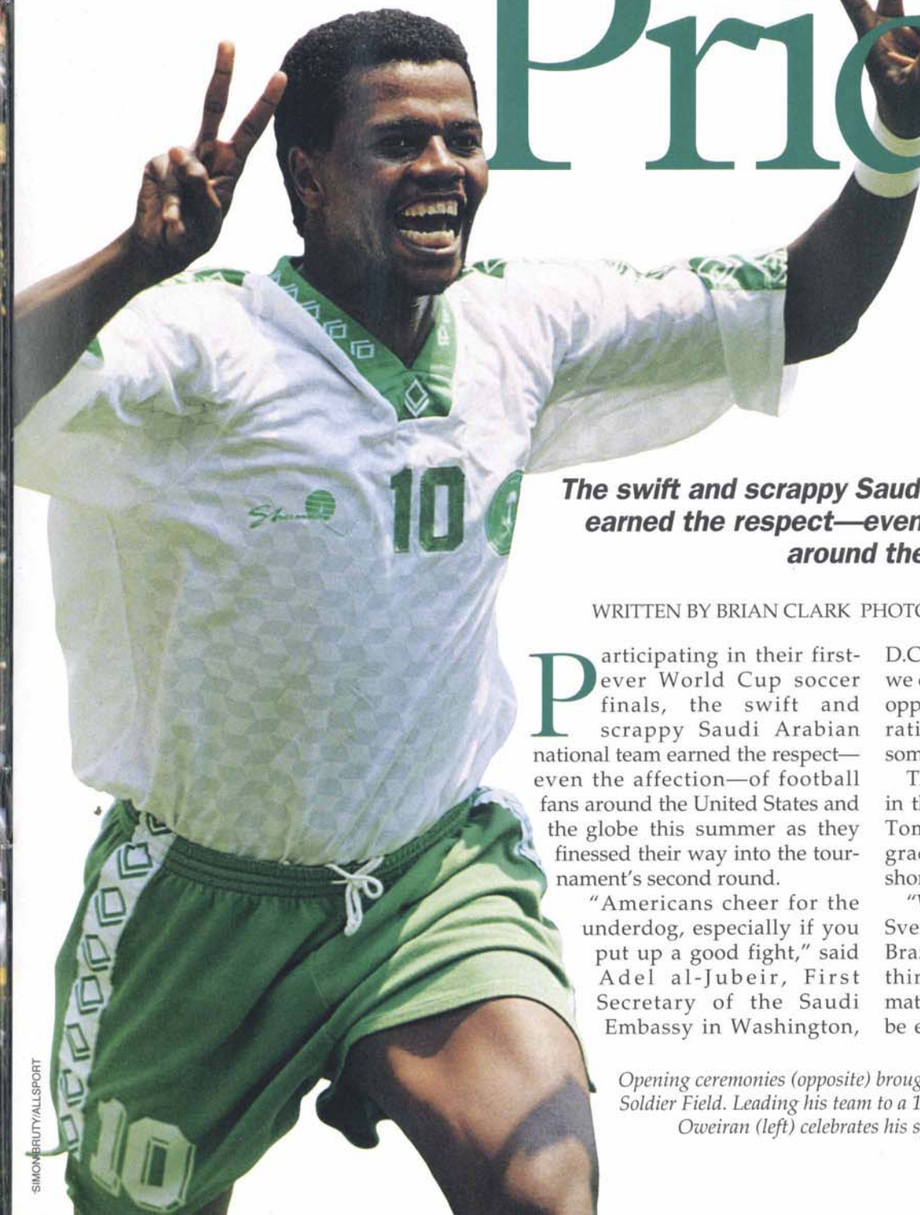
Writing Women's Worlds: Bedouin Stories. *Lila Abu-Lughod. Berkeley: University of California Press, 1993, 0-520-07946-9 (hb), 0-520-08304-0 (pb).* In a decade spent with the Awlad 'Ali bedouin of Egypt, a noted Arab-American anthropologist has collected narratives and presented them in a clear, reflective form that places this book in the forefront of contemporary anthropology.

These books are available from libraries and bookstores or can be ordered from the publishers, whose addresses are listed in Books in Print *and other sources. Ten-digit International Standard Book Numbers (ISBN) are provided for ease in identifying and ordering them, though in some cases, other editions than those listed may be found. Please do not order books from* Aramco World.

Compiled by Robert W. Lebling and Dick Doughty



A Cupful of Pride



The swift and scrappy Saudi World Cup soccer team earned the respect—even the affection—of fans around the globe.

WRITTEN BY BRIAN CLARK PHOTOGRAPHED BY MEHMET BIBER

Participating in their first-ever World Cup soccer finals, the swift and scrappy Saudi Arabian national team earned the respect—even the affection—of football fans around the United States and the globe this summer as they finessed their way into the tournament's second round.

"Americans cheer for the underdog, especially if you put up a good fight," said Adel al-Jubeir, First Secretary of the Saudi Embassy in Washington, D.C. "We did put up a good fight and we certainly weren't intimidated by our opponents. We won friends and admiration with our play. We surprised some people."

Though the Saudis fell to Sweden 3-1 in the knockout round, Swedish coach Tommy Svensson praised their flair, grace and aggressiveness—and their short passes.

"We took them very seriously," said Svensson, whose team fell in turn to Brazil in the semifinals and finished third overall. "We knew before the match that the Saudis were not going to be easy. I think the other teams didn't

Opening ceremonies (opposite) brought the Saudi Folklore Team to Chicago's Soldier Field. Leading his team to a 1-0 upset victory over Belgium, Saeed al-Oweiran (left) celebrates his spectacular midfield scoring dash.

SIMON BRUTY/ALLSPORT

have as much respect for them as we did. They were wrong."

The defining moment for the Saudis in World Cup 94, which silenced skeptics and set Arab fans roaring, came in the fifth minute of the match against Belgium's Red Devils at RFK Stadium in Washington, D.C.

Midfielder Saeed al-Oweiran took the ball behind the midfield line and sprinted forward in what one sports writer called "one of the great, long-distance scoring runs in World Cup annals." The amazing 60-meter attack elicited comparisons to Argentine football great Diego Maradona's score in the 1986 semifinals against England, and may well have been the most electrifying play in the entire tournament.

The sprint lasted only a few seconds, but by the time Oweiran blasted the ball into the net past Belgian goalkeeper Michel Preud'homme, he had maneuvered around, over and through four defenders, and had left them spinning, nearly falling over their own feet. A beautiful, masterful thing to watch, his run was repeated many times during the broadcast of the match and in later compilations of highlights. Even some newspapers ran sequential photographs showing Oweiran slicing through the Belgian defense. "He was really fast. He took us all," said Red Devil midfielder Franky van der Elst.

Though the Belgians outshot the Saudis 26 to 12, Oweiran's goal was all the Saudis needed to win their third match 1-0 and advance from the round of 24 to the round of 16 with a second-place finish in their division, behind the Dutch. (Unfortunately for the Moroccans, the only other Arab team in World Cup 94, good play didn't add up to any victories. The North Africans lost to the Dutch, the Saudis and the Belgians in the first round.)

Second place in the first round was just the result that Saudi coach Jorge Solari had predicted in his initial press conference before the finals began. Solari, who had only joined the team four months before, was elated with his side's success.

"We remind you of what we said—that we would finish second," Solari told reporters after the Belgium match, a twinkle in his eye. "We saw a lot of smiles then, because most people did not believe such a thing was possible. Well, it was."

Oweiran, who dedicated the goal to King Fahd ibn 'Abd al-'Aziz, said he felt tremendous pressure before the game. But the 24-year-old from the Shabab Sports Club said a call to his mother, who wished him luck, steadied him.

"We took them very seriously. We knew before the match that the Saudis were not going to be easy. I think the other teams didn't have as much respect for them as we did."

"I can't describe my feelings," said Oweiran after the Belgium match. "This victory is not for me, but for every Arab person," he said, and predicted a win over Sweden.

In an interview before the game, Oweiran had said that he believed the contest with the Belgians would be the toughest.

"They are a very good team," he said. "I respect their play. If we can beat them, we will advance."

Though all the team basked in the victory, much of the credit went to Saudi goalkeeper Mohammed al-Deayea, who blocked a number of goals. When a Belgian striker blasted the ball toward the goal mouth late in the match, the lanky al-Deayea leaped for the ball, seemed to stretch again in mid-air, then arched his body still further to stop the ball.

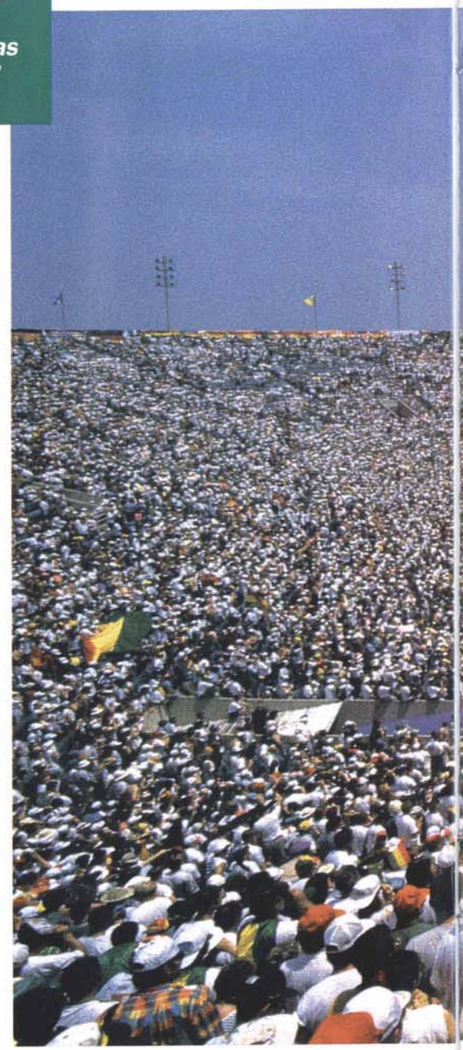
Al-Deayea, who plays for the al-Taee club, also made an impressive save during the match when the ball ricocheted off the head of one of his defending teammates.

Before the competition started, the Saudi team kept a low profile, training hard in the heat of a muggy Washington summer, where temperatures on the playing field reached 43 degrees Celsius (110°F) at times. Before the games, players were confined to their rooms for mandatory rest.

In an interview at the Grand Hotel, the team's headquarters in the capital, co-captain Mohammed Abdul Jawad said he and his teammates were both excited and confident going into the first match with the Netherlands.

"It wasn't easy to get here," said Abdul Jawad, a member of the 1984 soccer team that competed in the Los Angeles Olympic Games (See *Aramco World*, September-October 1984). Only Abdul Jawad, 31, and Majed Abdullah, the 34-year-old known as "the Desert Pelé," remained on the Saudi team from that Olympic squad. "Majed and I go back a long time," joked Abdul Jawad. "We are the old men of this young team."

Abdul Jawad, who plays for the al-Ahli club, said he and his teammates of a decade ago had enjoyed playing in the Olympics. "We made friends, we played and we made progress. Making it to that level back



Many members of the Saudi World Cup team (at top before the match with Morocco) were also part of the World Youth Soccer Cup team that nailed an encouraging world title for Saudi Arabia in 1989. From the Chicago opening (above) to the final match in Pasadena, California, more than half the population of the planet watched one or more World Cup games.

then made us especially proud. It was the kingdom's first Olympics."

Abdul Jawad said his feelings were similar over getting to the finals of the World Cup, qualifying as one of the top 24 of the 141 soccer teams that competed in the globe's largest sporting event.

"Actually, this is probably an even greater achievement," said Abdul Jawad, who grew up admiring the play of Maradona and Brazilian soccer legend Pelé. "It was a while coming, and I have no doubt that we earned our spot here." Later in the tournament, Abdul Jawad expressed irritation at commentators who said that the Saudis performed so well mainly because they were used to extreme desert heat.

"They should know that we play matches at night in Saudi Arabia," he said. "They should understand there is much more to our success here than just the heat." The Saudis had faced tough teams in winning the Asian Division to reach the World Cup finals, the co-captain said. In the second round of the qualifying matches, the Saudis advanced by beating Iran and North Korea and tying South Korea and Iraq.

The star defender, who has played in more than 145 international matches, said Saudis and Arab-Americans alike had wished the footballers *"hazz sa'id,"* or "good luck," many times.

"It means so much to represent our country here," said Abdul Jawad, who was separated from his wife and two boys, ages eight and three, for more than a month during the tournament. "The greetings, the good wishes...all of that raises our morale and makes us even more enthusiastic. Still, I miss my family more than a little."

Saudi goalie al-Deayea also scoffed at the idea that he and his teammates should be happy just to play in the World Cup finals.

"We've worked and trained hard to be here," he said before the competition started. "This is no fluke, and I think the world will see us perform at a good level," he predicted.

"I have no doubt that Saudi Arabia has a very good team. Its best quality is the attack, a powerful and fast attack."

In both the Olympics and World Cup, soccer gave the Saudis a chance to show the United States a personal and personable face.

"We want to project a friendly image to the American people," said Prince Faysal ibn Fahd, Saudi Arabia's General President of Youth Welfare. "Unfortunately, too many of them think of Arabs as either terrorists or Bedouins. We want to show them that people are the same everywhere."

In the Saudi team's third game (opposite), acrobatic goalie Mohammed al-Deayea frustrated each of Belgium's 26 shots; Saudi fans (above) clapped, chanted and cheered through two victories and two losses in three different cities.

Ironically, there was little, if any, soccer played in Saudi Arabia only two decades ago. Grass soccer pitches were almost non-existent; the country's main sports were falconry and camel and horse racing.

But as the country developed, its leaders decided that soccer—among other sports—was worth encouraging among the kingdom's youth.

In 1974, the General Presidency of Youth Welfare was created, in part to get as many Saudi boys as possible interested in sports such as soccer. Saudi Arabia's extensive and intensive national sports program produced rapid growth, both in quantity and quality. Today, more than 18,000 schools, colleges and universities in the kingdom emphasize sports and recreation as important parts of their curricula.

"It is not an exaggeration to say that we have come from sand lots to the World Cup in just 20 years" said Adel al-Jubeir of the Saudi Embassy. "We are the youngest team here, and the one with the least international experience. But we will do well."

After the boost from the 1984 Olympics, the kingdom successfully defended its Asian Games Gold Cup, first won in 1984. In 1989, the Saudis hosted the fifth World Youth Soccer Cup championship and stunned the soccer community by winning the title.

The country's professional league was only started two years ago, with many of the top players coming from that Youth Soccer Cup championship team.

Raed Attar, a 27-year-old Saudi Aramco engineer who lives in Jiddah, follows club soccer closely in his homeland. He came all the way to the United States to follow his national team.

"This is great," he said at the team's hotel, where he got autographs from many of the players. "We have won many championships and come very close in the past. But to finally get here, especially after having not quite reached this level in 1990—well, it means so much to us."

Abbas Serafi, a Jiddah-based mechanical engineer, said his only disappointment was that the Saudis and the Moroccan team were both in the same first-round group.

"If our team should not advance, I will be for our Arab brothers," he said. "But I have to say, I want our guys to get to the next round most of all. As for

Doing the Bike Thing

It was the "trip of a lifetime" for Saudi brothers Muhammad and Saud Bukri Yunis.

The pair, who live in Riyadh, rode thousands of kilometers on their specially outfitted 1400cc Suzuki motorcycle to watch the Saudi Arabian soccer team compete in World Cup 94.

"To follow our team to the pinnacle of football, to be part of the first Saudi World Cup and to represent our country on the way here—well, it is something we will always carry with us," said Saud.

While their trip across the Middle East, North Africa and Europe and down the eastern seaboard of the United States may have been the longest route of any soccer fan's at the tournament, the Yunis brothers were just two of the thousands of Saudi football aficionados who made the trek to North America.

BRIAN CLARK

State of cool: After a 14-country trip, Saud and Muhammad Yunis and their refrigerator-equipped dream machine.

In venues from Washington to East Rutherford to Dallas, Saudis and Arab-Americans of all stripes waved flags, cheered and danced in the parking lots as their team moved skillfully through the first round, shocking the soccer experts who had given them only a minuscule chance of advancing.

That the team made it to the 24-nation finals was no surprise to the Yunis brothers, though, who have both played on club teams in their homeland.

"Our guys deserve to be here," said Saud.

"And frankly, we thought the team should have made it the last time around," said Muhammad, echoing a sentiment voiced by many Saudi fans.

The Yunises, who had made one long motorcycle trip through Jordan, Syria and Iraq six years ago, said the idea for their journey came to them during the World Cup qualifying rounds.

They proposed their idea to Prince Sultan ibn Fahd, the kingdom's Vice President of Youth Welfare, who gave them the go-ahead for an 18-day warm-up trip to cities and towns around Saudi Arabia, where they spread the word about the national's team's success in reaching the finals.

"We gave him a report and photos from that trip and he endorsed the remaining four legs of our journey," said Saud.

To prepare for the jaunt to the United States, Saud first traveled to Japan to learn how to maintain their high-tech motorcycle. The half-ton Suzuki has beefed-up hydraulics, cruise control, a tape player, an on-board computer and two small refrigerators.

The next segment of their long trip took them through Kuwait, Bahrain, Qatar, Oman and the United Arab Emirates in 12 days. Muhammad said the pair was most concerned about how the region's heat would affect their Suzuki. "But things went well," he said.

The third leg was from Riyadh to Aqaba, where they shipped their cycle to Egypt. Then it was on through Libya, Tunisia, Algeria and Morocco, where they participated in a "Made in Saudi Arabia" conference, talking about soccer in their homeland.

After Morocco, the brothers put their bike on a ferry across the Strait of Gibraltar to Spain. They spent several days in Madrid, then headed north through France to England.

The brothers split the trip's duties, with Muhammad doing most of the driving, while Saud handled the paperwork, passports and promotional work: extolling the Saudi team and talking about life and business in the kingdom.

Once in the United States, the brothers met with Saudi officials, attended cultural shows, gave interviews to newspapers and television reporters, saw the sights and, of course, went to soccer matches.

"However our guys perform, we're behind them all the way," said Muhammad early in the first round. "But to those people who don't think we have a chance, we say, 'You just watch.'"

The Yunises, like most Saudi fans, weren't disappointed.

the overall winner, I am thinking it will be Brazil."

In addition to watching the matches, Attar and Serafi, along with their friends Anas Attar and Abdulaziz Alaiban, also took in Saudi cultural events staged in Washington.

"Americans know more about us now than they did 10 years ago, but there are still some big gaps," said Anas Attar. "This helps create more understanding."

Before the first match against the Netherlands on June 20, Dutch fans in orange capes, orange-painted faces and huge, orange wooden shoes were predicting a blow-out by a score of 5-0 or more.

But in a pattern they were to keep up through the first round, the Saudis silenced the Dutchmen and their chants from *Aïda* with an initial goal. It came in the 19th minute on a short header by forward Fuad Amin off a free kick by Saeed al-Oweiran. Dutch goalie Ed de Goey lunged for the ball, but could only grope with his left hand at empty air.

As the Hollanders felt silent, the Saudis gasped and then erupted, waving flags, banging drums, shouting and ululating at the top of their lungs.

Down on the field, Amin reacted emotionally, sprinting down one side of the pitch, shaking his white jersey at the overwhelmingly orange-clad crowd. "Do you still think you'll beat us 5-0?" his face seemed to say.

The Saudis carried the lead into the locker room at half time, thanks to their speed and aggressive play. In the press box, reporters were talking about what might become the biggest World Cup upset since the United States beat England in 1950. In the lines at refreshment stands, Dutch faces were long.

But in the locker room, the Dutch players managed to find a new resolve. They came back out, asserting themselves, controlling the ball, finding—and creating—gaps in the Saudi defense.

Midfielders Frank Rijkaard and Wim Jonk got off 10 shots between them, among the 29 the Dutch fired at the goal. At the 50th minute, Jonk drove in the equalizer.

For the next 37 minutes, the score remained tied. But at the 87th minute, goalie al-Deayea came out too far and allowed Dutch forward Gaston Taument to punch a header into the empty net. The Saudis lost 2-1.

After the match, Amin told reporters, "I am disappointed. But we played with style. We were not intimidated. We played well." Jorge Solari was also pleased. "With a little more experience, we could have done better," he said at a later press conference. "They thought they were going to just come here and have a party tonight. They didn't."

With Abdullah Sulaiman (4) and Sami al-Jaber (12), Saudi midfielder Fuad Amin (center) celebrates his goal against Morocco. With al-Jaber's earlier penalty-kick score, he handed the Saudi team its first victory. Embracing Amin is Saleh al-Dawod; goalie Hussein al-Sadig is at right.

Five days later, before a crowd of more than 72,000 in East Rutherford, New Jersey, the Saudis again demonstrated that they had been underrated. In the eighth minute, Sami al-Jaber was tripped near the goal. His penalty kick blasted past the Moroccan goalie, Khalil Azmi. Much of the pro-Morocco crowd fell quiet as, again, the Saudis roared.

In the 27th minute, the Moroccans answered when Ahmed Bahja confused the Saudi defenders with dazzling footwork. He got the ball to Mohammed Chaouch, who drilled it past al-Deayea.

But the North Africans could not find the net after that, thanks in large part to the leaps and twists of al-Deayea, who shut the Moroccans down, blocking more than 25 of their kicks.

Then, just before the half, Amin snagged a weak Moroccan pass at midfield, dribbled to about 25 yards from the goal and booted a shot that faded to the far post and then sliced back into the net. Azmi, clearly fooled by the shot, could only get one hand on it.

Co-captain Abdul Jawad marveled at the kick. "It was like a banana!" he exclaimed. "The goalie went to his right and the ball bent back in. It surprised him."

With a long history of good soccer, and a number of players on European clubs, the Moroccans were clearly the statistical favorites in the match. But in the second half, the crowd's sentiments seemed to shift toward the Saudis. In spite of flashes of brilliance, the minutes ticked away for the frustrated Moroccans, who outshot their opponents 29-10. When the clock finally ran down, it was Saudi Arabia in a 2-1 upset of Morocco.

"I feel happiness. I feel good for the win," said al-Deayea.

Adel al-Jubeir, of the kingdom's embassy, was elated as well. "We have exceeded most people's expectations. This is great stuff."

As for mixed feelings about defeating a fellow Arab team, he said, "Sports are sports and politics are politics. Of course I'm glad we beat them."

Back in RFK Stadium four days later, the magic was still with the Saudi team. Despite being outshot 26-12, Oweiran's Maradona-like goal in the fifth minute and al-Deayea's great blocks toppled Belgium from the top of Group F, barely allowing them to squeak into the second round in third place.

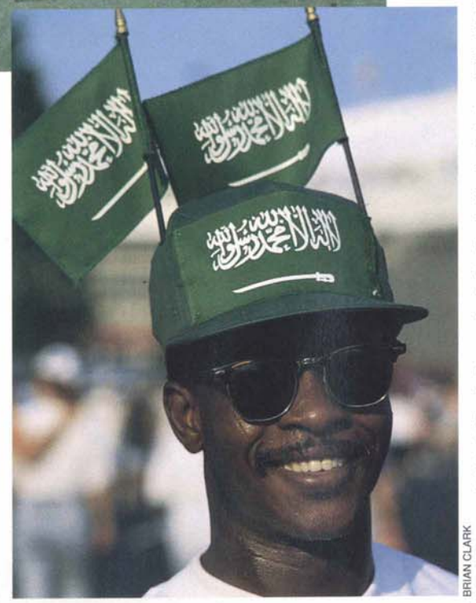
"We could not get the ball in the net," said forward Josip Weber, who missed a header near the mouth of the goal near the end of the match.

On the field, Saudi players were beside themselves with joy. Abdul Jawad made a big circle with his arms raised, lost in his own emotions. Other Saudi players jumped into each other's arms and then clapped for the fans, who screamed back at them and waved bright green flags.

"It was a fantastic match," said Solari. "We were able to control the game. We kept our form superbly." He also took the opportunity to thank King Fahd, with whom he had spoken the night before. "Because of his direction, we made this victory," said Solari, who also thanked the Saudi people for their solid support.

In the kingdom, there was celebration. One newspaper's banner headline read, "In America, Against Belgium, We Showed The World."

But all things end, and Saudi Arabia's string of successes ended in Dallas on July 2, when Sweden eliminated the Saudis from the tournament with a 3-1 defeat. They did it with a tough defense that stifled the Saudis' counterattacks, and by doing the small



BRIAN CLARK

Forward Sami al-Jaber works up an attack on a nearly impenetrable Swedish defense in second-round play in Dallas (top); despite the 3-1 loss that eliminated the Saudi team from the tournament, fans left optimistic about the future of the youngest team in World Cup competition.

things well despite the heat of the Cotton Bowl.

Some 60,277 fans watched as the Swedes took a page from the Saudi script by scoring in the sixth minute, when forward Martin Dahlin knocked a header past al-Deayea from the left side of the penalty box.

In the 42nd minute, the Saudis had a good chance to score when Fahad al-Huraifi al-Bishi got the ball in front of the Swedish goal. But he slipped and gave the opposing goalie just enough time to block his shot.

Still, the Saudis were not out of the match, going into the locker room down just 1-0. But Kennet Andersson, the Swedes' 193-centimeter (6'4") striker, chilled the Saudis in the 51st minute when he leaped over Abdul Jawad to get the ball, cut across the top of the penalty area and blasted a left-footed shot into the lower right corner of the net.

The Arab team gathered itself again and played some of its best soccer between the 65th and 77th minutes. Their aggressive play garnered six corner kicks in that time, but Swedish goalkeeper Thomas Ravelli and the Swedish defense kept them out of the goal.

Then, in the 85th minute, Fahad al-Ghashiyan narrowed the gap with a beautiful feint on the right and a blast just past the near post. Saudi fans, who turned whole sections of the stadium green with their clothing and flags, came back to life as the momentum seemed to shift to their team.

But the lanky Andersson quieted those cheers three minutes later when he scored his second goal of the match. Behind 3-1 and exhausted by the heat, the Saudis closed out their World Cup effort.

Not, however, without praise from all corners. In Bangladesh, the mass-circulation daily newspaper *Banglabazar Patrika* ran the headline "Desert Tigers Go Down Fighting."

One of the best accolades came from Tommy Svensson, the Swedish coach.

"I have no doubt that Saudi Arabia has a very good team," said the balding Svensson. "Its best quality is the attack, a powerful and fast attack. Our success came because we took the time to analyze them."

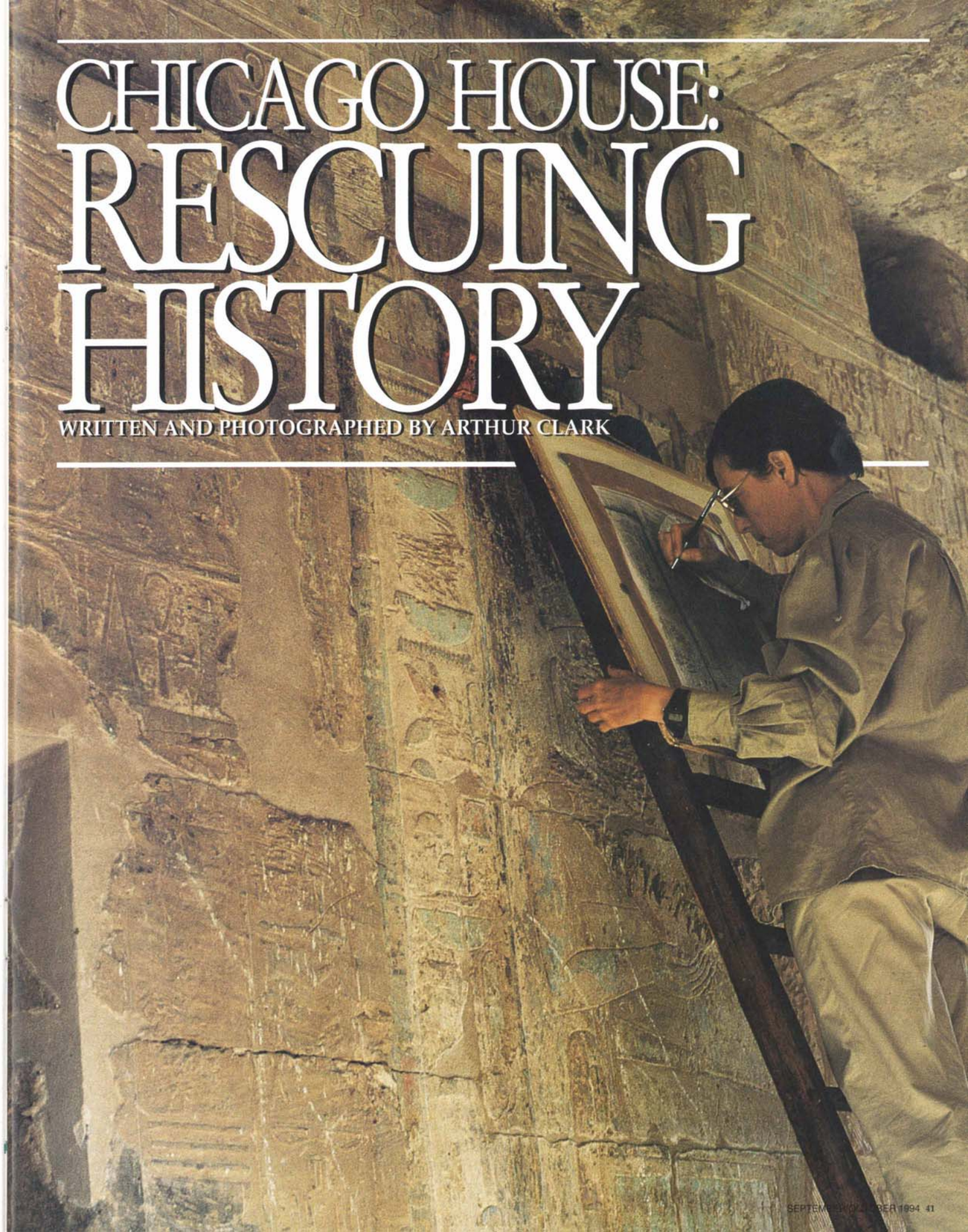
Nor was there any head-hanging on the part of the Saudi team.

"We're going home heroes," said Abdul Jawad. "I think we can all feel good about what we accomplished here."

Brian Clark covered the Los Angeles and Seoul Olympic Games for Aramco World.

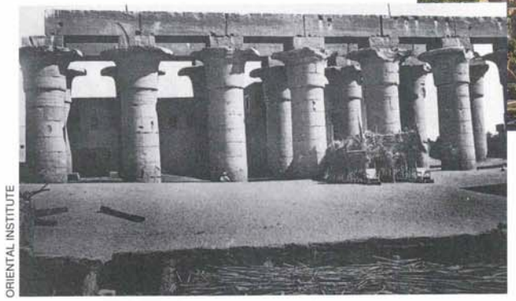
CHICAGO HOUSE: RESCUING HISTORY

WRITTEN AND PHOTOGRAPHED BY ARTHUR CLARK



EGYPTOLOGISTS, ARTISTS AND PHOTOGRAPHERS WORKING OUT OF THIS RAMBLING HEADQUARTERS ARE RESCUING HISTORY, RECORDING THE INSCRIPTIONS AND RELIEFS ON ENDANGERED ANCIENT MONUMENTS BEFORE THEY CRUMBLE INTO DUST.

Chicago House in Luxor, Egypt.



ORIENTAL INSTITUTE

In the 1860's, Luxor Temple lay half-buried by 3500 years' accumulation of earth (left); excavation has restored the former ground level.

"Take me to Chicago."

Say that in Luxor, in Upper Egypt, and you'll find yourself before the iron gates of Chicago House—called simply "Chicago" by local residents—and some 34 centuries back in time.

Egyptologists, artists and photographers working out of this rambling headquarters are rescuing history, recording the inscriptions and reliefs on endangered ancient monuments before they crumble into dust. With what they learn, they're rewriting history, too.

Among the most intriguing recent discoveries is that the pharaoh Tutankhamen, long held to have been a youth with no real claim to fame when he died in 1325 BC, may in fact have been a mature, chariot-riding warrior who led an army against Hittites and Nubians. One hypothesis: An official "coverup" after Tutankhamen's death, perhaps of a battle wound, expunged records of his military exploits (See box, page 45).

Established 70 years ago by James Henry Breasted, the father of the University of Chicago's Oriental Institute (See *Aramco World*, November-December 1993), Chicago House is home, six months a year, to the Institute's Epigraphic Survey. Epigraphy is the careful study of monumental texts—in this case hieroglyphic inscriptions that represent some of humankind's earliest writing.

But the job involves more than just copying. "We're not only trying to record, but to interpret as we go," said Peter Dorman, Survey director since mid-1989. "That's part of 'reading' a wall, especially if it's damaged."

He was speaking from high on a ladder inside the colossal Colonnade Hall in Luxor Temple, where Chicago House recently completed the fieldwork of a 20-year project. The temple was a paramount structure in ancient Thebes, which took in the precincts of modern-day Luxor and the opposite west bank of the Nile and was long the religious capital of ancient Egypt.

Experts from Chicago House have been tackling projects in and around Luxor since 1924, barring only the World War II years, making the Survey the longest-running foreign archeological expedition in Egypt. Work lasts from October to March, the coolest months of the year. In recent seasons, the Luxór crew has numbered about 20; the Survey has a year-round staff of five artists and three Egyptologists. Their main goal is to produce drawings so precise that—if necessary—they could replace the originals. And indeed, they may have to.

Egypt is now facing "great problems" in preserving its monuments, said Dr. Mohammed Bakr, former chairman of the Egyptian Antiquities Organization. Bakr worked closely with the Epigraphic Survey until he left his post last May. "The ancient Egyptians built these temples to remain forever." But, he added, they didn't reckon with industrial pollution, changes in conditions above and below ground since the construction of the High Dam at Aswan, and ever-increasing numbers of tourists, whose very breathing and sweating inside certain monuments have damaged fragile rock decoration.

"We are trying to do something for the monuments because the heritage is so great," said Bakr. "In case we need to preserve or restore them, we have to depend on the good documentation of the team of Chicago House in Luxor."

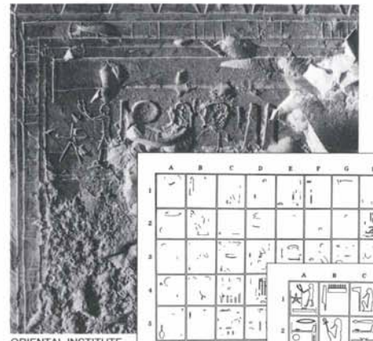
His words would please Breasted, who devoted much of his life to documenting and deciphering the past in the Middle East so that people might better understand the present.

James Henry Breasted made his first trip to Egypt in 1894-95, combining a post-doctoral holiday, his honeymoon, and an antiquities-buying expedition for the University of Chicago. On that trip, he discovered that many of Egypt's ancient monuments had been damaged or destroyed by man or nature or a combination of the two. As a scholar who knew the value of primary evidence, he was also shocked to find that much of what remained had been incorrectly published.

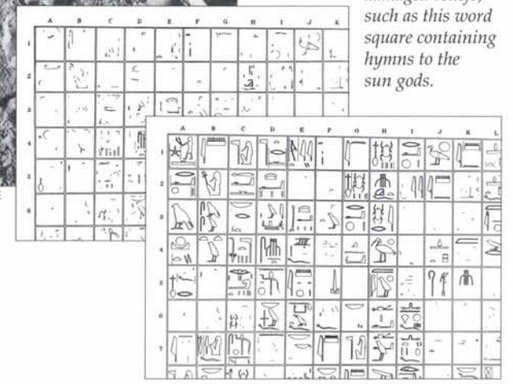
In the decade that followed, Breasted compiled ancient Egyptian historical texts and translated them into English, work which convinced him even more of the need for an in-depth epigraphic survey, for the science of field documentation was still in its infancy. "A more highly developed organization," Breasted wrote, "combined with better equipment, improved processes, and especially *much more time*, must be brought to bear on the great problem of salvaging the ancient records still surviving in the Nile Valley."

ORIENTAL INSTITUTE / LEZON (2)

The "Chicago House method" combines photographic accuracy and expert interpretation. Drawing in pencil on a photograph of a section of the wall (upper photo), Chicago House artist Carol Meyer traces the carvings on-site, eliminating accidental marks or damages. Back in the studio, she will retrace her lines in ink (lower photo), then bleach away the photographic emulsion, leaving only her drawing.



ORIENTAL INSTITUTE



Artists' observation and epigraphers' interpretation together often allow the reading of even badly damaged reliefs, such as this word square containing hymns to the sun gods.

In two more expeditions up the Nile, in 1905-06 and 1906-07, Breasted developed his own methodology for precision recording. He also made plans for a survey to cover "all of Egypt." He reckoned—incautiously, it seems today—that he could do the survey in 15 years, at a cost of $375,000. But he could get neither university backing nor financing until after World War I.

It was through the Oriental Institute, established in 1919 by the University of Chicago with substantial donations from John D. Rockefeller, Jr., that the Egyptologist put his plan to work.

"Mrs. Rockefeller read Breasted's book *Ancient Times* to the children at bedtime," noted Carlotta Maher, assistant to the director of Chicago House. "That was, I believe, the beginning of a personal friendship between Rockefeller and Breasted. He gave him the support he needed."

The original Chicago House opened on the west bank of the Nile in 1924, with room for just four people—a photographer, an artist, an Egyptologist and the Survey director. It was built next door to the initial Survey project, the huge Temple of Ramses III at Medinet Habu.

That first project demonstrated the realism of Breasted's dream of having "much more time" to record a monument: The eighth and final volume of photographs and line drawings, covering the temple's 7000 square meters (75,350 square feet) of decorated surface, did not appear until 1970, a full 35 years after his death.

The choice of the Temple of Ramses III, large as it was, reflected Breasted's vision of history, one which saw Egypt and the Near East as the base from which civilization had progressed. On the temple's northern exterior wall is a relief of the first recorded collision of Egyptian culture with that of Europe—a battle between Egypt and the so-called Sea People of the Aegean that took place in the Mediterranean Sea in the 13th century BC.

"Breasted felt that our civilization's roots were in the ancient Near East," said Maher. "He felt very much that Mesopotamia, Egypt, Turkey and the Holy Land fed directly into Greece and Rome."

The Survey carried out a number of other projects, on both sides of the Nile, while work at Medinet Habu was under way, and a branch of Chicago House operated at Sakkarah near Cairo in the 1930's.

The Survey has published 17 folio volumes on seven different projects in the Theban area, and two volumes on Sakkarah. Since 1979, the volumes have included translations of the inscriptions, along with a textual commentary.

Only in its first project, at Medinet Habu, did the Survey do any of the digging that is normally associated with Egyptian archeology. Excavation was required to carry out the epigraphic work and the results are published in five separate architectural volumes.

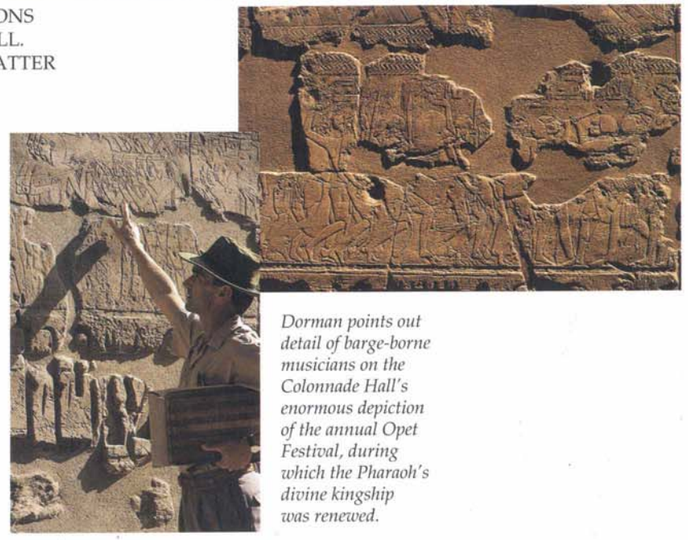
Breasted's painstaking survey process, known as the "Chicago House method," is respected worldwide today for its pinpoint accuracy. It remains basically the same as when it was devised.

Work begins with black-and-white photography of inscriptions and reliefs using a 20-by-25-centimeter (8x10") studio camera. Drawing directly on an enlargement of the photo, an artist then makes on-site pencil tracings of the carving, eliminating accidental marks or peripheral damaged areas that might obscure the decoration. Back in the studio, pencil lines are retraced in ink. Then the photo emulsion is bleached away, leaving only the artist's work.

From this drawing, photographers produce a "blueprint," which is cut into small sections that are pasted onto a white collation sheet. These are reviewed and annotated on location by two Egyptologist-epigraphers, working independently. On the basis of their knowledge of related texts and scenes, they can

"YOU HAVE TO EXAMINE THE INSCRIPTIONS LITERALLY TWO INCHES FROM THE WALL. EPIGRAPHY IS, AND ALWAYS WILL BE, A MATTER OF HUMAN INTERPRETATION."

Epigraphic Survey director Peter Dorman and assistant to the director Carlotta Maher examine Luxor drawings back at the Oriental Institute in Chicago after the winter field season.



Dorman points out detail of barge-borne musicians on the Colonnade Hall's enormous depiction of the annual Opet Festival, during which the Pharaoh's divine kingship was renewed.

often suggest restorations for damaged or missing areas of the surface.

The artist then revises the drawing in consultation with the epigraphers. The revision is reviewed by the Survey director, who often comes up with a few more questions to be resolved. It may take up to a year to complete one drawing, although experienced artists often work on half a dozen at one time.

In the Colonnade Hall, the work was stretched out even farther by the decision in the mid-1980's to revise documentation standards. That required the complete redrafting of some earlier jobs.

Using photography alone "just can't replace the Survey's epigraphic process," noted Dorman, because it combines photographic accuracy with human interpretation. Nor can digital images of the walls.

"You have to examine the inscriptions literally two inches from the wall, from different angles, eliminating the distracting shadows with lights or mirrors to see if the carving is old or new, scraping away the cobwebs to see what's underneath," the director said. "Computers—at this point anyway—can't speed up the process, nor can they really give us a better product. Epigraphy is, and always will be, a matter of human interpretation."

The objective is to ensure "we catch everything that's there but don't read anything into it that isn't there," said Dorman. Often, the path to an accurate representation is complicated by the fact that pharaohs sometimes obliterated or modified their predecessors' inscriptions.

Survey artists may draw in dashed lines to represent the missing portions of a relief, using old photographs and other archival material for reference. The final drawing provides a sharply clearer picture than otherwise possible.

Key resources in the process are the Chicago House photo archive and its large library. They are also widely used by other expeditions and researchers in the Theban area.

The photo archive holds more than 17,000 large-format negatives and some 20,000 prints from negatives owned by Chicago House or other institutions. It provides "the most extensive photo coverage of Theban tombs and temples anywhere in the world," said Lanny Bell, who preceded Dorman as Epigraphic Survey director.

In 1989, the archive got a shot in the arm when Chicago House landed a $139,000 grant from the J. Paul Getty Trust in Santa Monica, California, to copy disintegrating old silver-nitrate negatives and other early negatives of work done before the advent of safety film in the 1950's, and to computerize its records.

The 16,500-volume library is said to be one of the best in the world on ancient Egypt, rivaled in scope within Egypt only by the library of the Cairo Museum. The library also has "dictionary" and "paleography" files containing hand copies of every inscription and every hieroglyph it has ever documented—even those partially damaged.

Both facilities have proved valuable to surveyors in the Colonnade Hall, where big sections of delicate carvings done by Tutankhamen's artists, undermined by salt blisters, are flaking off. The reliefs are important because they provide a vivid snapshot of an Egyptian riverine festival of more than 3000 years ago, in detail found nowhere else.

Most of the 24.5-meter-long (80-foot) side walls of the hall are taken up by reliefs depicting the barge-borne Opet Festival procession. On the west wall, great boats bring the gods of Karnak, located just downriver, to Luxor Temple, amid rejoicing people from all walks of life. In the temple, at the climax of the festival, the divine kingship of the pharaoh is reaffirmed and the god Amun-Re is reborn, rejuvenating the world for another year and saving it from chaos. On the east wall, sails furled, the procession is shown returning to Karnak.

The dramatic panorama was deemed so important that it was selected for inclusion in the Survey's long-awaited first volume on Luxor Temple. Entitled *The Festival Procession of Opet*, the folio was published late this summer. A second volume on Luxor is projected for publication in 1996, and a third volume after that.

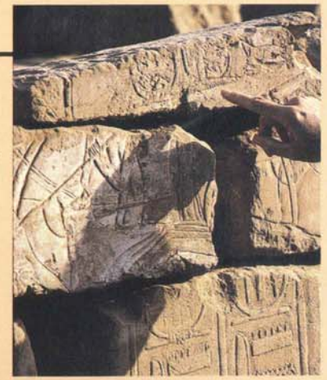
The Colonnade Hall, named after the double row of giant columns that runs down its center, has a mixed history. Its foundations were laid by Amenhotep III, who ruled from 1386 to 1349 BC and who built the oldest standing part of the temple. His successor, Akhenaten, abandoned the temple and built a new city on the Nile in a bid to change Egypt's religious course. Tutankhamen, who followed him to the throne in 1334 BC, returned to the fold, completed the hall and decorated most of its walls. Later pharaohs finished the decoration and modified some of the inscriptions.

Though Akhenaten's religious coup failed, his associated artistic revolution was a magnificent success. Its imprint is visible in the mammoth scenes of the transportation of the barges adorning the walls of the hall.

"They are enormous in scope, lively in detail and very realistic," representing a sharp break with earlier reliefs and certainly reflecting the influence of Akhenaten, said Dorman. "Akhenaten realized the possibilities for large-scale composition on temple walls. This innovation was kept, and later artists found it ideal for religious and narrative scenes."

The cancer that's eating away at the walls occurs when rising, salty groundwater is absorbed into the sandstone of the temple. Salt crystalizes on the surface of the rock, causing it to crumble. Salt damage is evident throughout the Theban area and is probably related to the construction of the Aswan High

TUTANKHAMEN REVISED?



In a sunny blockyard near Luxor Temple, Ray Johnson, senior artist of the Epigraphic Survey, was puzzling over a group of small stone blocks carved with reliefs and parts of the name of the pharaoh Tutankhamen.

The style of the carvings was right, but, like leftover pieces of a watch, the blocks did not fit into the decorative scheme of the Luxor Temple's Colonnade Hall. Then Johnson noticed that they were the same size as the blocks that Akhenaten, Tutankhamen's predecessor, had used to build temples at Karnak, and that the carvings on their backs and bottom sides were decorations from Akhenaton's time.

Clearly, he realized, the blocks had been salvaged from Akhenaton's temples, turned over, recarved and reused by Tutankhamen—and not in the Colonnade Hall, but to build another temple altogether. What was more, the decoration on some of the blocks was as interesting as the monument they had come from.

Drawing on key parts of scenes carved on the blocks and on other, later battle epics, Johnson was able to reconstruct the scene on the whole of the wall, in which Tutankhamen wars against a northern foe. A second wall being reconstructed by the joint Egyptian-French expedition at nearby Karnak shows an identical battle scene set in Nubia.

The Tutankhamen reliefs in the temple blockyard are "unusually graphic," says Johnson. They include episodes showing the chariot-mounted Tutankhamen in the midst of a battle; the battle aftermath in which booty, prisoners and severed hands are presented to the king; the trip home to Egypt by boat, with a caged Syrian prisoner hanging from the yard; and the king's presentation of prisoners and booty to the god Amun, probably in Thebes. Each episode measures about 2.5 by 3.6 meters (8 by 12 feet).

Johnson thinks the scene may commemorate the "first tentative clash between Egypt and the Hittite empire."

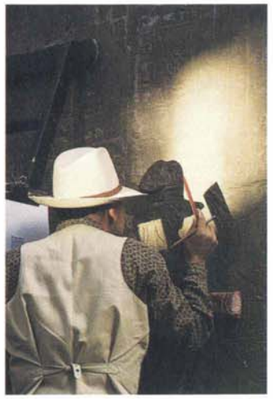
It's been generally believed that Tutankhamen died when he was 19, young for such martial exploits. But questionable techniques used to date the age of the pharaoh at death make it possible he was as old as 25 to 27 when he expired, says Lanny Bell, former Chicago House director.

The find "shows that the history of this period is far more complex than what has been assumed," Johnson asserts.

"After Tutankhamen's early death, there was an officially sanctioned 'coverup' that effectively eliminated the young king from the history books," he says. "Why is still a mystery. Perhaps his association with Akhenaten led to his disgrace; perhaps he died of a wound received in battle.

"There will be endless debates on this," he predicts.

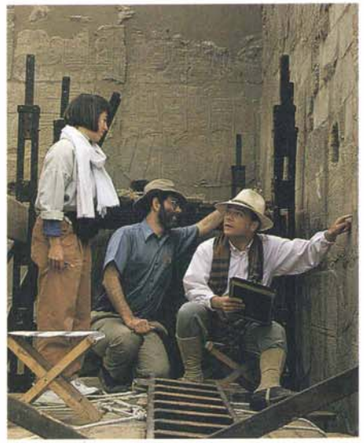
Johnson's discovery is an example of what goes on "all the time," at Chicago House, notes Survey director Peter Dorman. "You find something curious going on, and you start looking harder, and then you start researching for parallels. And you realize you've found something no one's recognized before."



Mirrors help epigrapher John Darnell angle sunlight onto faint reliefs for sketching.

"WITH EVERY HIEROGLYPH OR RELIEF THAT'S LOST WITHOUT BEING RECORDED, A BIT OF MANKIND'S HERITAGE IS GONE FOREVER."

Two decades of work in Luxor Temple led Former Epigraphic Survey director Lanny Bell to reinterpret the structure as having civil as well as religious functions.



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The mosque of Abu al-Haggag, built inside the Luxor Temple centuries before excavation began in 1892, is visible in the temple walls (right). The mosque's entrance now opens more than seven meters above floor level.

At left and opposite, artist Sue Osgood and epigraphers Richard Jasnow and John Darnell confer on the scaffolding partway up a wall of the Colonnade Hall.

Inside back cover: Dorman annotates a photograph of a portion of the Colonnade Hall's west wall.

Dam; prior to 1970, the annual Nile flood washed away much of the natural ground salt. At Luxor Temple, the problem is exacerbated because the monument stands atop a main drainage route from Luxor to the Nile.

Salt erosion is "insidious," said Dorman. "It's so slow and it's not immediately visible. You can't put a deadline on exactly when things will be lost. They just crumble off very, very slowly."

Tourists also contribute to the demolition of ancient structures. Millions of people have tramped through the Colonnade Hall over the years, sometimes at the rate of 3500 a day.

Instead of banning sightseers, Dorman urges educating them about how to treat temples and tombs. Chicago House itself welcomes tourists. With advance warning, arrangements can be made to tour the facility's library. Once a year, a special tour of ancient Thebes is offered to members of a support organization called Friends of Chicago House.

Because of salt blistering and other ills, the long-range prognosis for the Luxor monuments is poor. "We can document temples," said Dorman, "but without enormous sums of money there is no way we can reasonably save them."

The Colonnade Hall didn't get kid-glove treatment in the olden days, either. When the temple fell out of use in the sixth century after Christ, townspeople moved in, building homes and quarrying away the walls for building blocks.

Over the years, the ground level rose some 7.5 meters (25 feet), covering—but protecting—most of the lowest register of the hall's walls; the top two registers, containing other religious scenes, were carted off and used in other structures. Recovered blocks from the upper registers have been reassembled in a yard just east of the hall.

A Coptic church was built in the first court of the temple. After Islam came to Egypt in the seventh century, a mosque was built on the site. Named after a virtuous man called Abu el-Haggag, it stands high up in the temple today, at the level of the ground before excavation began in 1892. Equally notable is the annual festival of Abu el-Haggag in Luxor. During the celebration, boats are borne through streets by celebrating townsfolk, suggesting a possible link with the Opet Festival of long ago.

Though the precinct of Luxor Temple has been used continuously for religious proposes for some 3400 years, it was only in 1985 that Lanny Bell, who worked in the temple for 12 years as Survey director and had spent the previous 10 years there on another project, discovered that the building had had dual religious and civil functions. Bell came to that conclusion by taking careful note of the scenes and hieroglyphs on the ancient walls around him, and he worries today that there are many more secrets that may never be discovered.

Every hieroglyph or relief that's lost without being recorded, he warned, means "a bit of mankind's heritage, a bit of human history, a bit of the activity of people long ago, is gone forever. We'll never be able to reconstruct it."

The experts at Chicago House know that, too, and new projects are beginning.

Work has started at the Small Temple of Amun on the west bank, within shouting distance of the Temple of Ramses III, the Survey's original project. The temple, built by Hatshepsut, Egypt's only female pharaoh, and her co-regent Thutmose III, dates to 1400 BC and in ancient times was held to be the burial place of the eight primeval Egyptian gods. It has some outstanding reliefs which, cleaned by conservators from Chicago House between 1981 and 1985, retain their rich, original colors. A privately financed color publication of these paintings is planned.

And the job won't stop there. Late in 1991, the Egyptian Antiquities Organization gave the Survey the green light to complete the rest of Luxor Temple built by Amenhotep III, south of the Colonnade Hall. That will take Chicago House—and the task of preserving Egypt's past and the world's heritage—well into the 21st century.

Arthur Clark is a staff writer for Saudi Aramco and a frequent contributor to Aramco World.

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Teaching About the Arab World and Islam is the theme of teacher workshops cosponsored by the Middle East Policy Council in Washington, D.C., and conducted by AWAIR, Arab World And Islamic Resources and School Services in Berkeley, California. Confirmed sites and dates include: Clark County Schools, **Las Vegas, Nevada,** September 24; The Maine Collaborative, **Portland,** September 30, and **Orono,** October 1; Montgomery County Schools, **Rockville, Maryland,** October 27; Roland Park Country School, **Baltimore,** October 29; Fall Conference of AAUG, **Atlanta,** November 3; Natrona County Schools, **Casper, Wyoming,** November 5; **Patterson** Public Schools, **New Jersey,** November 9; Indiana University, **Bloomington,** November 11; New Hampshire Social Studies, **Epping,** November 15. For details, call (202) 296-6767 or (510) 704-0517.

Images of Realities: *Tragedy, Love and Hope.* Fathi Meghelli's contemporary oil paintings, prints and works on paper tell bitterly critical, compassionate stories of an unjust world and hopes for social change. Alif Gallery, **Washington, D.C.,** through September 30, 1994.

Greek Gold: *Jewelry of the Classical World.* Magnificent pieces from the Hermitage and the Metropolitan and British Museums are featured in this tribute to the skills of Greek goldsmiths throughout the Mediterranean and Asia Minor from the 5th to 3rd centuries BC. British Museum, **London,** through October 23, 1994; Metropolitan Museum of Art, **New York,** December 2, 1994 through March 26, 1995; other venues.

Merina Textiles from Madagascar. Silk weavings from the most numerous of Madagascar's 18 peoples, who received the Chinese silkworm from Arab traders to India, and subsequently developed what is now East Africa's sole remaining handloom silk tradition. Exhibited pieces range from 19th-century to contemporary. Museum of Mankind, **London,** through October 23, 1994.

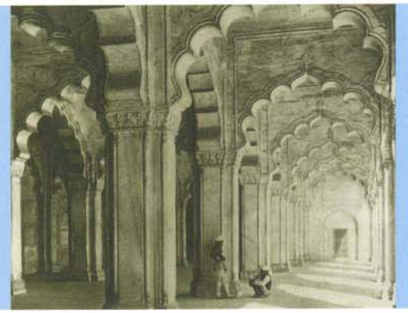
Treasures in Heaven: *Armenian Illuminated Manuscripts.* The exhibition explores one of the Armenian people's principal artistic legacies in the context of Armenia's troubled history. Walters Art Gallery, **Baltimore,** through October 23, 1994.

Contemporary Artists Inspired by Ancient Egypt. This unusual display in the Egyptian Sculpture Gallery includes paintings, sculptures and interactive installation pieces using CD-ROM computer technology. British Museum, **London,** November 1994 through February 1995.

Modern Art From North Africa. Paintings, sculptures and graphics illustrate the variations in the artistic climates of Egypt, Morocco, Algeria and Tunisia. Museum voor Volkenkunde **Rotterdam,** December 10, 1994 through May 31, 1995.

Kurdish Tribal Rugs of the Senneh Tradition. This exhibit, the second in a series on Near Eastern rug-weaving, focuses on the most refined of the Kurds' carpet-making traditions. **Cincinnati** Art Museum, through December 11, 1994.

EVENTS & EXHIBITIONS



From Bombay to Shanghai: *Historic Photographs of South and South East Asia.* Within a few years of the invention of photography in 1839, western photographers began long voyages into Asia, and by the 1860's many had established studios in major cities. Working mostly for European clients, their photographs of landscapes, people and colonial industries helped define the region—not necessarily accurately—in the European mind. Included in this exhibition of 78 previously unseen photographs from the collection of G. Verschuur, now part of the permanent collection of the Museum voor Volkenkunde (Museum of Ethnology), are works from late 19th-century India, Malaysia, Burma, Thailand and China. The views are not only of peoples and cultures, but also of the colonial presence and its consequences. Museum voor Volkenkunde, **Rotterdam,** October 22, 1994 through February 5, 1995.

Nostalgia Transformed: *Monoprints by Rashid Diab.* A Sudanese artist now working in Spain, Diab draws on Islamic, African and Spanish influences. His rich monoprints suggest truth that exists between or beyond distinctions of North and South, past and present, dream and reality. Alif Gallery, **Washington, D.C.,** October 6 through 31, 1994.

Reflections of Women in the New Kingdom: *Egyptian Art from The British Museum.* The first major exhibition of Egyptian art from The British Museum in the United States. More than 100 sculptures, statues, papyri, pieces of jewelry and decorative works explain the many ways women were perceived in ancient Egypt. Michael C. Carlos Museum, Emory University, **Atlanta,** October 12, 1994 through April 30, 1995.

Realms of Heroism: *Indian Paintings From the Brooklyn Museum.* Various categories of hero, including warrior, romantic figure and royal ruler, are explored in this show of 75 Indian miniature paintings from the museum's permanent collection. **Brooklyn** Museum, October 14, 1994 through January 8, 1995.

A Stitch Through Time: *The Journey of an Islamic Embroidery Stitch to Europe and the New World.* The double running stitch is followed on a fascinating 700-year journey from Egypt and the Mediterranean world to Northern Europe, and from England and Spain to their respective New World colonies. Textile Museum, **Washington, D.C.,** through October 16, 1994.

Forces of Change: *Artists of the Arab World.* This extensive exhibition of contemporary works by Arab women artists seeks to demystify the region and its women. Featured are 160 artworks by 70 artists from 15 countries. Chicago Cultural Center, **Chicago,** October 23 through December 9, 1994; Wolfson Galleries, Miami-Dade Community College, **Miami,** January 13 through February 25, 1995; Gwinnett Art Center and Nexus Contemporary Art Center, **Atlanta,** March 14 through May 7, 1995; other venues.

The Orientalists, An Extended View. Traditional Middle Eastern artifacts of the 19th century are linked to four dozen prints of Orientalist paintings of the period. Nance Museum, **Kingsville, Missouri,** through October 31, 1994.

Tana-Bana (Warp & Weft) Tapestries and Drawings: *An Exhibition by Priya Ravish Mehra.* Handwoven tapestries of cotton, jute and silk combine European and Indian designs. Commonwealth Institute, **London,** November 11, 1994 through January 15, 1995.

Martina Stephens. New watercolors including Middle East still lifes and miniatures. Rosenthal-Herend Gallery, **Jiddah,** November 13 through 17, 1994.

Middle East Studies Association Annual Conference. Pointe Hilton Resort, **Phoenix, Arizona,** November 19 through 22, 1994. For information call MESA at (602) 621-5850.

Genghis Khan: *Treasures From Inner Mongolia.* This unprecedented exhibition, a collaboration between the United States and China, explores 3500 years of culture and history in a land that produced one of the world's greatest conquerors. American Museum of Natural History, **New York,** through November 27, 1994; Tennessee State Museum, **Nashville,** December 17, 1994 through March 5, 1995; other venues.

Ancient Nubia: *Egypt's Rival in Africa.* More than 200 artifacts from the museum's large and celebrated Nubian collection help trace the history of Nubia over a 3500-year period, from about 3100 BC to 500 after Christ. The exhibition features statues of ancient Nubians; inscriptions in the still-undeciphered writing of the Meroitic Nubians; vessels crafted of bronze; inlaid wood and faïence; and numerous personal adornments in gold, shell, amethyst and faïence. University of Miami's Lowe Art Museum, **Coral Gables, Florida,** through December 1994; **Rochester [New York]** Museum and Science Center, January through April 1995.

Textile Trip to the Maghreb. Textile pieces and contextual objects demonstrate the cultural, historical and economic links between Arab northwest Africa and Spain. Museu Tèxtil, **Barcelona,** through January 12, 1995.

Knotted Splendor: *European and Near Eastern Carpets from the Permanent Collection.* More than 30 carpets dating from the 16th to 19th centuries. Art Institute of **Chicago,** through January 22, 1995.

The Saudi Aramco Exhibit. Centered on the Arab-Islamic technical heritage, this permanent interactive, "learn-by-doing" scientific exhibit relates the historical background to today's petroleum exploration, production and transportation. **Dhahran, Saudi Arabia.**

Information is correct at press time, but please reconfirm dates and times before traveling. Readers are welcome to submit information for possible inclusion in this listing.

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