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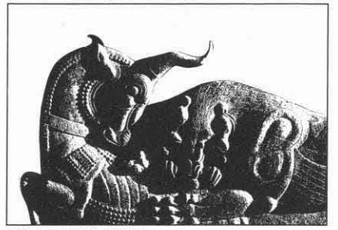
Persepolis, City of the Persians 2



BY JOHN SABINI

Sabini

Two thousand five hundred years ago the Persian Empire extended from southern Europe to the borders of India, and Darius built Persepolis as the symbol of its glory.

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An English family leaves the populous coast to walk through a high limestone wilderness where once, dense cedar forests hid the sanctuary of an ancient sylvan god.

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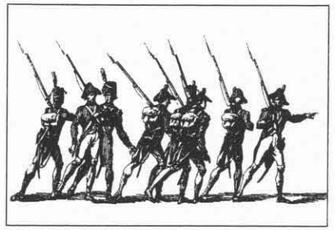

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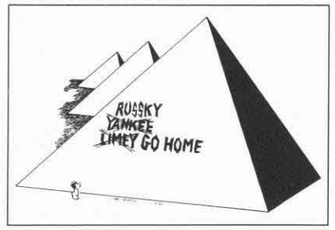

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Fitchett

Arab cartoonists, like their brothers the world over, champion the "Little Man" in his constant struggle with bureaucracy, fads and the high cost of living.

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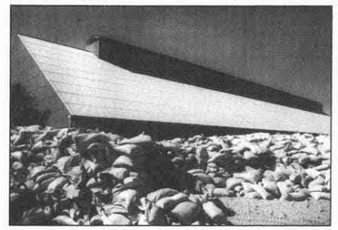

BY RAMI G. KHOURI

Khouri

Jordan's phosphate industry is a dusty business, but because of world demand for fertilizers – and soaring usage – it is taking on a golden hue.

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Cover: With Napoleon's armies in 1798 were teams of scholars who studied Egypt's pharaonic and Islamic past, and measured, described and drew its monuments, such as this obelisk in Alexandria (now in New York's Central Park) and its people, such as the young muleteer on the rear cover. Engravings on page 14.

←At the entrance to Persepolis, City of the Persians, stands an enormous gate with four piers each manned by great winged human-headed bulls. Story on page 2.

Conceived and built for a single purpose:
to receive the homage of the world . . .

PERSEPOLIS
CITY OF THE PERSIANS

WRITTEN BY JOHN SABINI
PHOTOGRAPHED BY WILLIAM TRACY

Hair. Hair and feathers, but especially hair. They were obsessed by it. Hair in ringlets, waves, tufts, coils, buns, tendrils, or straight with deep grooves of the comb. Beards shaped like spades, aprons, or logs, pointed, square, or round, curled or straight or a mixture of the two, the most magnificent—that of the Great King—in horizontal wavy tiers divided by rows of tight curls. The hairdressers and barbers must have worked overtime to prepare them for the procession, for every man——they are all men—looks as if he had come straight from the barber's chair, from under the drier. You can almost smell the hair oil and pomades that set each head so stiffly.

Even the animals are elaborately tufted and plumed. The lions' manes, like an armor of overlapping scales, extend over their shoulders and along their ribs. The bulls have patches of tight curls on their brows and jaws, along their necks and spines, and even on their haunches. The winged bulls with men's heads have the longest beards of all, flowing in regal tiers to mingle with the hair between their front legs. Their wings curve upwards in radiating ranks of spatulate feathers, and wavelets of fur lap their flanks. The fabulous beasts locked in mortal combat with a muscular king or hero are half sheathed in manes or feathers or scales as heavy and regular as bronze plates. Decidedly the makers were fascinated by the hirsute and the plumate.

Most of thesé creatures—human, animal or fabulous—are chiseled in bas-relief, marching single file in endless procession along the walls and up the stairs of a complex of platforms jutting on to a broad plain from the foot of a rocky mountain. As you drive across the plain from Shiraz in modern Iran—ancient Persia—Persepolis at a distance looks like some huge and complicated game-board, three dimensional checkers or chess, with the squares laid out on different levels. The entire site is one enormous platform on which other platforms, all square or rectangular, fit into one another like the parts of a precision instrument. On the cliff face above, the façades of tombs repeat the rectangular shapes vertically. All is straight lines, right angles, clarity, logic. The candid air of the Iranian plateau lays it all bare to the eye. It looks like what it is, not the helter-skelter accretion of ages, but the planned and purposeful product of what was almost a single mind and will, the mind and will of Darius I and his son Xerxes. For 200 years it performed its function—a machine for homage—and then was snuffed out in one moment of havoc by the conquering Alexander of Greece.

In the vast stretches of Middle Eastern history it is important to place the Achaemenids—as the Persian emperors were called—in time as well as space. To most of us ancient history is likely to appear as a simultaneous pageant wherein Cleopatra hob-nobs with Nebuchadnazzar, Alexander with Ramses I, Hammurabi with Solomon. We ask ourselves: was Babylon before Thebes, Crete contemporary with Assyria, Phoenicia after the Hyksos? From the founding of the Old Kingdom in Egypt to, let us say, the Battle of Marathon was a period of 3,000 years. Where does Persepolis fit into this perspective?

Cyrus founded the empire of the Medes and Persians in 555 B.C. This was a long time ago but a lot had happened before that. It was some 3,000 years since the civilization of Sumeria, 2,500 years since the building of the Great Pyramid of Giza. The first Babylonian dynasty was already 1,500 years in the past, the correspondence of Tell-al-Amarna almost a millennium. Tutankhamen reigned in Egypt eight centuries before Darius, Queen Semiramis of Assyria had been in her grave three centuries. The time that stretches forward from the building of Persepolis to the present day is almost exactly equal to the time that stretched back from Persepolis to the golden age of Ur.

In other words the Achaemenian empire was no primitive upstart, but came into a world that was already very old and very civilized. When Darius I began building Persepolis about 520 B.C. his ancestors the Aryans—who gave their name to the Iranian plateau—had been settled there for more than 1,000 years. They came originally from the steppes of central Asia along with their cousins the Medes and their more distant cousins the Bactrians, who settled in India. Semi-nomadic tribes at first, they owed allegiance to the older empires of Assyria and Babylon. In 612 B.C. the Medes revolted and established their own kingdom. A century later the Persian Cyrus, who was half Median through his mother, overthrew his grandfather the Median king and founded the Achaemenian line, named for a Persian ancestor, which was to rule for two centuries the largest empire yet known to man.

The history of ancient conquests is tedious. The interesting thing about Cyrus was that, having conquered Iran, Asia Minor and Babylon, he did not destroy the captured cities and massacre or enslave their inhabitants as was the custom of the day. He even spared captive kings and did not disdain to worship local gods. His son Cambyses continued this humane policy and, on adding Egypt to the empire, was instructed in the religion of Isis there. Unfortunately he went mad and committed suicide shortly thereafter, and the captured provinces broke free. A younger Achaemenid, Darius I, rewelded the fragmented empire and added to it Thrace

and Macedonia in the west, parts of southern Russia and Transoxiana in the east. The Persian empire now extended from southern Europe to the borders of India.

Darius was also a brilliant administrator. Although he continued the policy of toleration toward other nationalities, he organized the empire under strong central control. The provinces were linked by a network of roads well guarded and furnished with hostelries, and the royal messenger service brought information to the capital with incredible speed. Taxation was highly systematized and money—that swift annihilator of distance—circulated for the first time. The law of the Medes and the Persians, though proverbially unchanging, was fair and evenly applied. The combination of tolerance and efficiency was admired even by those arch-enemies of Persia, the Greeks.

Although Darius had several older capitals at his disposal, he decided to build a new city in Fars (or Pars), the home of the Persians for 10 centuries. But the concept of Persepolis was different from that of other capitals. It was primarily a ceremonial city, the center and symbol of the empire. Here, from the farthest ends of the realm, representatives of all the subject peoples came once a year in the spring to make obeisance to the Great King and to present tribute, the choicest produce and manufacture of each region. The long procession of coiffured and bearded men in bas-relief represents such a ceremony. The staircases, gateways and audience halls were designed to receive them, to ritualize their coming and to impress them with the might and majesty of the king. The vast treasury was built to store their tribute, and the administrative buildings, palaces, harems, barracks, rock cisterns, and water passages supported the great ceremonial structure. Darius died during the construction, and his son Xerxes completed it without altering the style.

This style was unique and modern in its day, as all true styles are, but it was the heir of many lands and centuries. In it art historians have discerned elements from Egypt, Assyria, Babylon and native Iranian architecture. Artisans from Ionia, Syria and the Punjab probably worked on it, and precious materials from all over the world—lapis lazuli, onyx, cedar, gold, colored brick, copper, bronze—embellished the grey marble. Today, with the chromatic harmonies gone, the visitor can appreciate the melodic purity of the structures and decoration. For the art of Persepolis is akin to music: it is rhythmical, abstract, and decorative, in short oriental. It is in fact the culmination of ancient oriental art, which was to be engulfed in the Hellenism of the Greeks and the Romans for almost a thousand years.

For centuries after its destruction Persepolis lay hidden by its debris and by the disguise of a new name, Takht-i-Jamshid —the Throne of Jamshid—after a legendary Aryan hero. The Italian traveler Pietro della Valle in 1616 and the Spanish ambassador to Iran, Don Garcia Silva Figuera, in 1617, suspected that Takht-i-Jamshid was in fact the Achaemenian capital. In the 18th and 19th centuries European travelers became more numerous, and most of them seemed to have carved their names and the date on one of the stones. Two Frenchmen, Flandrin and Coste, cleared part of the site in 1841 and later published the ground plan. Others —English, French, Dutch—came and copied the inscriptions in three languages, old Persian, Elamite and Babylonian, and took them to Europe to be deciphered. Modern archaeological investigations began in the 1930s with expeditions from the Oriental Institute of Chicago, first under Hertzfield and then Schmidt. Since 1939 the Iranian Archaeological Department has taken over, and excavation, deciphering and restoration are still going on. Hitherto the history of ancient Persia was known chiefly through outsiders, the Bible and the Greeks. Now the Achaemenids are telling their own story.

Today we enter and proceed through Persepolis much as the Persian courtiers and tributaries did. The retaining walls of the great terrace rise above us some 14 to 41 feet, dark grey like the hills behind them, constructed of those huge blocks of stone the ancients tossed about with such ease. The single entrance is a staircase near the northwest corner, a double flight, each half the mirror image of the other, the lower steps divergent, the upper convergent. The treads are broad, the grade gentle enough for horses and animal tribute to take them in stride. At the top an enormous gate rises straight ahead, its four piers manned by winged human-headed bulls. These anomalous but somehow convincing creatures already had a long history when Persepolis was built, and today it is probably impossible to recapture the ideas and emotions they inspired. They have none of the brutal ferocity of their Assyrian ancestors, who were meant to inspire one thing—terror. These Persian man-beasts, with their elaborate beards, draped headdresses, upturned wings and fringed shanks, have a jaunty air, but their aloof stare leaves no doubt of their regality. Even today without the reality they symbolize, it is possible to feel a preparatory twinge of awe before them. In the middle of the gate stands a pair of fluted pillars based on an Egyptian palm motif. The entire structure must have been roofed, a stately overture to the grandeur to follow. No doubt units of the royal guard were posted here to reinforce authority and direct the delegates on their way.

Turning to the center of the platform we look across a vast space, an esplanade

that stretches the entire width of the terrace. On the other side stand the platforms of the principal monuments. On the left is the Hall of a Hundred Columns, on the right, slightly higher and jutting forward, is the Apadana, or audience hall. A broad alley runs between them, closed by the Tripylon, another great gate. These ceremonial buildings bisect the entire terrace from east to west. Behind them, on a series of descending terraces to the south, are the banqueting halls, the residential palaces, the harems and the treasuries.

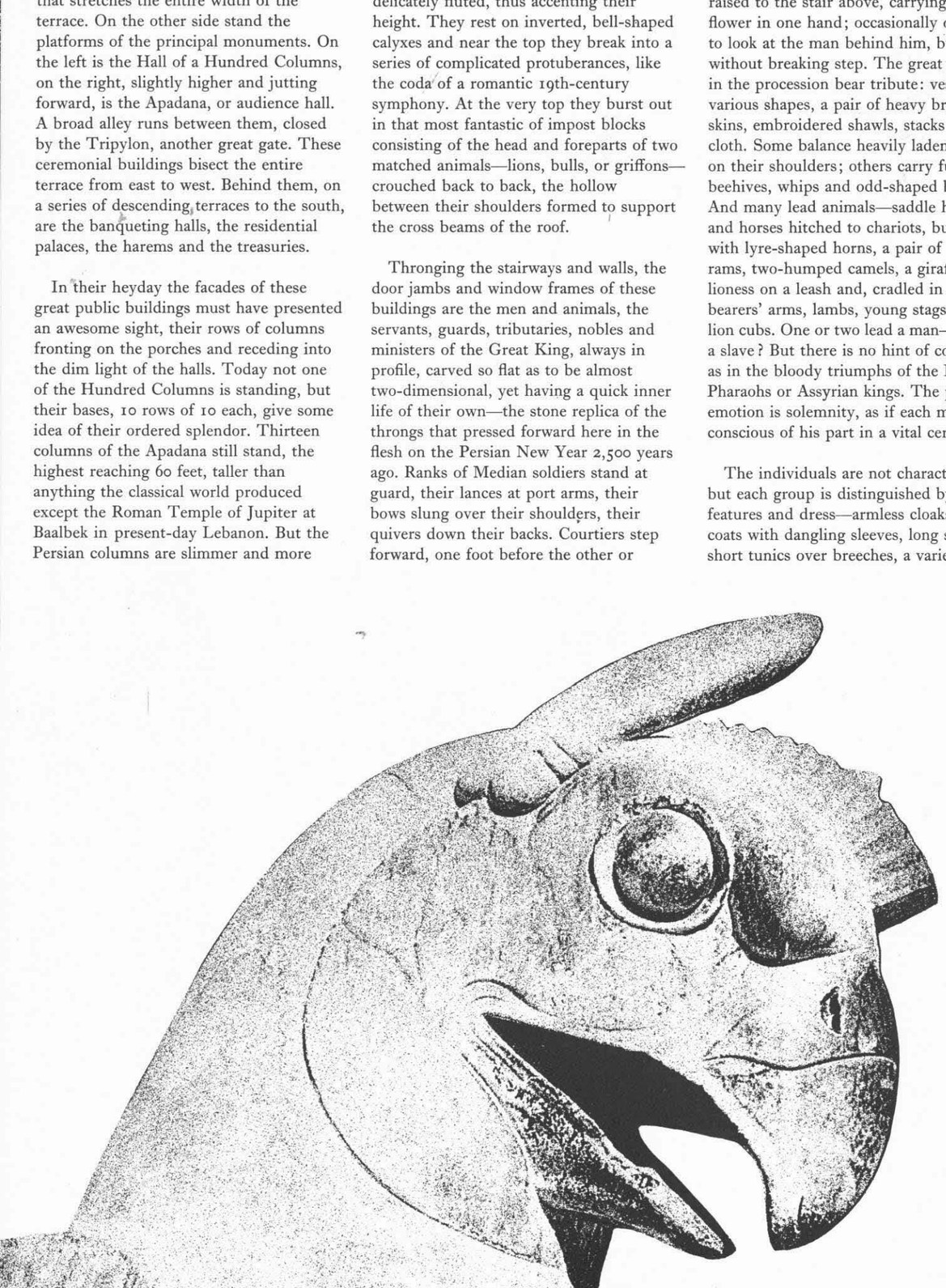
In their heyday the facades of these great public buildings must have presented an awesome sight, their rows of columns fronting on the porches and receding into the dim light of the halls. Today not one of the Hundred Columns is standing, but their bases, 10 rows of 10 each, give some idea of their ordered splendor. Thirteen columns of the Apadana still stand, the highest reaching 60 feet, taller than anything the classical world produced except the Roman Temple of Jupiter at Baalbek in present-day Lebanon. But the Persian columns are slimmer and more delicately fluted, thus accenting their height. They rest on inverted, bell-shaped calyxes and near the top they break into a series of complicated protuberances, like the coda of a romantic 19th-century symphony. At the very top they burst out in that most fantastic of impost blocks consisting of the head and foreparts of two matched animals—lions, bulls, or griffons—crouched back to back, the hollow between their shoulders formed to support the cross beams of the roof.

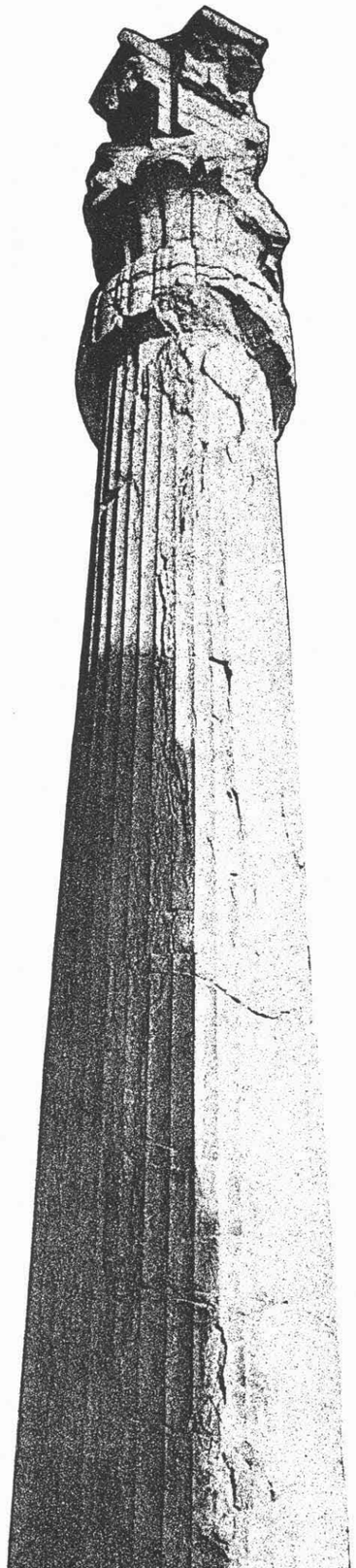
Thronging the stairways and walls, the door jambs and window frames of these buildings are the men and animals, the servants, guards, tributaries, nobles and ministers of the Great King, always in profile, carved so flat as to be almost two-dimensional, yet having a quick inner life of their own—the stone replica of the throngs that pressed forward here in the flesh on the Persian New Year 2,500 years ago. Ranks of Median soldiers stand at guard, their lances at port arms, their bows slung over their shoulders, their quivers down their backs. Courtiers step forward, one foot before the other or raised to the stair above, carrying a lotus flower in one hand; occasionally one turns to look at the man behind him, but without breaking step. The great majority in the procession bear tribute: vessels of various shapes, a pair of heavy bracelets, skins, embroidered shawls, stacks of folded cloth. Some balance heavily laden yokes on their shoulders; others carry full sacks, beehives, whips and odd-shaped bundles. And many lead animals—saddle horses and horses hitched to chariots, bullocks with lyre-shaped horns, a pair of fleecy rams, two-humped camels, a giraffe, a lioness on a leash and, cradled in the bearers' arms, lambs, young stags and lion cubs. One or two lead a man—perhaps a slave? But there is no hint of coercion as in the bloody triumphs of the Egyptian Pharaohs or Assyrian kings. The pervading emotion is solemnity, as if each man were conscious of his part in a vital ceremony.

The individuals are not characterized, but each group is distinguished by its features and dress—armless cloaks or coats with dangling sleeves, long skirts or short tunics over breeches, a variety of shoes and boots and that badge of membership and extension of personality, the headdress—pointed, domed, tiered, some like a crown of feathers, others with tailpieces down their backs, still others veiled like a Bedouin from the desert. From such details, and from the trilingual inscriptions, archeologists and epigraphers can spot the races and tribes that made up the empire: Arabs, Armenians, Babylonians, Bactrians, Cicilians, Cappadocians, Carians, Egyptians, Gandarans, Ionians, Indians, Libyans, Lydians, Parthians, Phoenicians, Scythians, men of Shush and men of Sind, Thracians—"those who dwell by the sea and those who dwell across the sea" as one inscription puts it. They brought their art and their livestock, their precious metals and gemstones, cedarwood from the Lebanon and papyrus from the Nile. They must have brought ideas as well, their skills and languages and religions. What a great mingling of men, from Africa, Europe and Asia, a mixture of congress, pilgrimage and world's fair.

The procession is sometimes broken and an awkward angle filled in with stylized vegetation, a row of spear-shaped cypresses or unfolding palmettes, a border of flat rosettes, all elegantly unnatural. At key points a large panel depicts a lion savaging a bull—but for all the fangs of the lion and the startled fear of the bull, "savaged" is too strong a word: it is fixed and hieratic, curled, coiffed and bloodless. On other panels a hero-king plunges a dagger into the belly of an upright lion or griffon, but their pose, too, has the stateliness of a formal dance. These are religious icons: the bull perhaps represents the old year, the lion the new; the stabbed beast may be the powers of darkness overcome by the powers of light. For all the apparent violence, no real blood is shed.

The Great King himself appears several times. He is seen strolling under an umbrella borne by an attendant, while another attendant manipulates a fly-whisk over his head. Elsewhere he is seated on a lion-footed throne under a tasselled canopy, with guards and ministers displaying their symbols of office. Sometimes he appears before a fire altar, and Ahuramazda, the god of light and goodness, hovers overhead seated on an orb with outstretched wings and as carefully bearded and curled as king or courtier. For the awe and solemnity of the procession are due not only to the earthly power but to divine as well.





Wings, claws, fur, scales, horns, beards, hair. Thrones, altars, fly-whisks, umbrellas. An endless procession of men marching in fixed ceremony. All is ordered, rhythmic, symbolic, iconic, abstract. There are no women or children, no lovers, no nudes, no scenes of domestic pleasures, no grief, no anger, no joy. No birth, marriage, or death. No pathos, no humor, no passion. Enormous areas of human experience are excluded. It is like a *raga*—an endless repetition of quarter tones and barely evolving themes that never reach a climax.

No wonder Alexander destroyed it. It is the antithesis of Hellenism, with its strong throb of the pulse-beat of life. Legend has it that after conquering Persepolis Alexander set fire to the palaces and audience halls during a drunken brawl, incited by a Greek courtesan named Thais, in revenge for the Persian sack of Athens 125 years before. Historians, seeking more apposite reasons, ascribe the destruction of Persepolis to policy or greed. It is known that the treasuries of the Achaemenids yielded great wealth to Alexander's war chest and the looting of the city helped satisfy his grumbling soldiers. Whatever the political or emotional motives were, the style of Persepolis would not have stopped Alexander from lighting the brand.

And burned Persepolis certainly was. One can see the ashes of the wood and curtains and other combustible material today. Ironically this is what preserved Persepolis for our eyes. The fire brought the edifice down upon itself, buried the carved men and animals under the debris, baked the clay tablets telling the accounts of the builders, and thus preserved something of the splendor of the city of the Persians. Nowhere else, except perhaps at Pompei or Herculaneum, does the ancient world look so new; so stylishly accoutred, so brushed and combed, not a whisker or a hair out of place.

John Sabini lived in the Middle East and North Africa for more than 20 years, and is author of About Tunisia. *He is now finishing a book on Western travelers in the Arabian Peninsula.*

A WALK IN THE HIGH LEBANON

WRITTEN BY GEORGE TAYLOR
ILLUSTRATED BY PENNY WILLIAMS

The asphalt road ended abruptly above the church, a black line drawn on the ground to divide the world of automobiles and summer villas from a great emptiness of space and limestone crags. We crossed the road—my wife, my daughter, and myself—and stood on the edge of 3,000 acres of weathered limestone stretching eastward to the bare shoulder of Mount Sannin. I thought of Cromwell's comment on County Clare in the west of Ireland: "There's not enough timber to hang a man, enough water to drown him, enough earth to bury him."

A taxi had just rocketed us from the teeming center of Beirut to this summer resort of Mrouj. Most of the population of Lebanon lives on or near the coast.

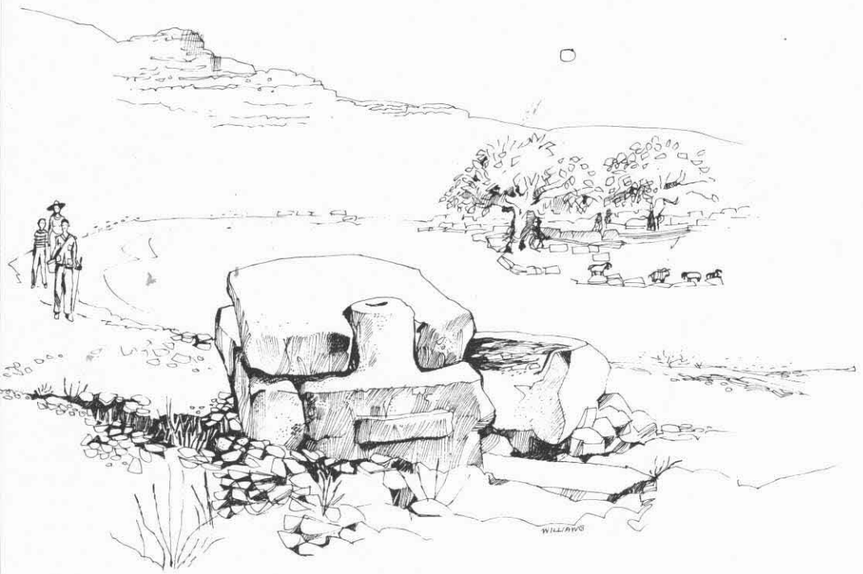
Mount Lebanon is sparsely populated, a half-empty playground for skiing, picnicing, hunting, and hiking, but also a harsh terrain for farmers, herders, quarrymen and foresters. In 40 hazardous minutes we had climbed 5,000 feet through the distinctive pomological pattern of Lebanon: first the palms, bananas and citrus fruit trees of the coast; then the olives, almonds, peaches and apricots of the foothills; then the cherries, pears and apples of the heights, with the ubiquitous, undemanding pine tree knitting the three levels of landscape together.

We dismissed the taxi and stood for a moment on the asphalt edge of the great beyond. Then we plunged onto a steep track...

At first the track, forcing its way through boulders and pillars of limestone fluted by wind and rain, was distinct and subsidiary tracks led off to numerous quarries, all disused and deserted. These quarries were one-man or one-family enterprises: they had just a small concrete platform, a beam to hold the crusher and riddler, an arc of level ground for a truck to load and turn, with a black oil stain showing where the power generator had stood. This was quarrying on an individual scale: the characteristic Lebanese individualism expressing itself even on the mountain top.

After the quarries, however, the track dwindled to a narrow stony path. Land Rover country had ended; mule and donkey country had begun. And at 6,000 feet even the mule path vanished as we burst onto a wide ledge where eroded soil from the heights had buried all but the head and shoulders of the limestone rocks. There was no path now; we stumbled through gaps among the boulders. Walking ahead of us, Alexandra pounced on a Neolithic flint, then another, and a third. They were glossy, chocolate-colored scrapers, chipped from the nodules of flint which clung to the limestone like barnacles. We were surprised to find worked flint at this height, so far from the flint areas of the coast and the Bekaa valley.

But there was a greater surprise half a mile further on. Here, at the head of a wadi gouged out by winter torrents, on a flat surface of living rock we could make out a crudely chiselled Latin inscription, badly weathered, and made legible only by the low angle of the sun: *Boundary of the Forests of*



the Emperor Hadrian Augustus. We paused to look at the forest. Five windswept leafless walnut trees huddled at the edge of the gorge with a wide arc of stony desolation stretching to the horizon beyond. Time has covered Hadrian's boast of ownership with a patina of irony.

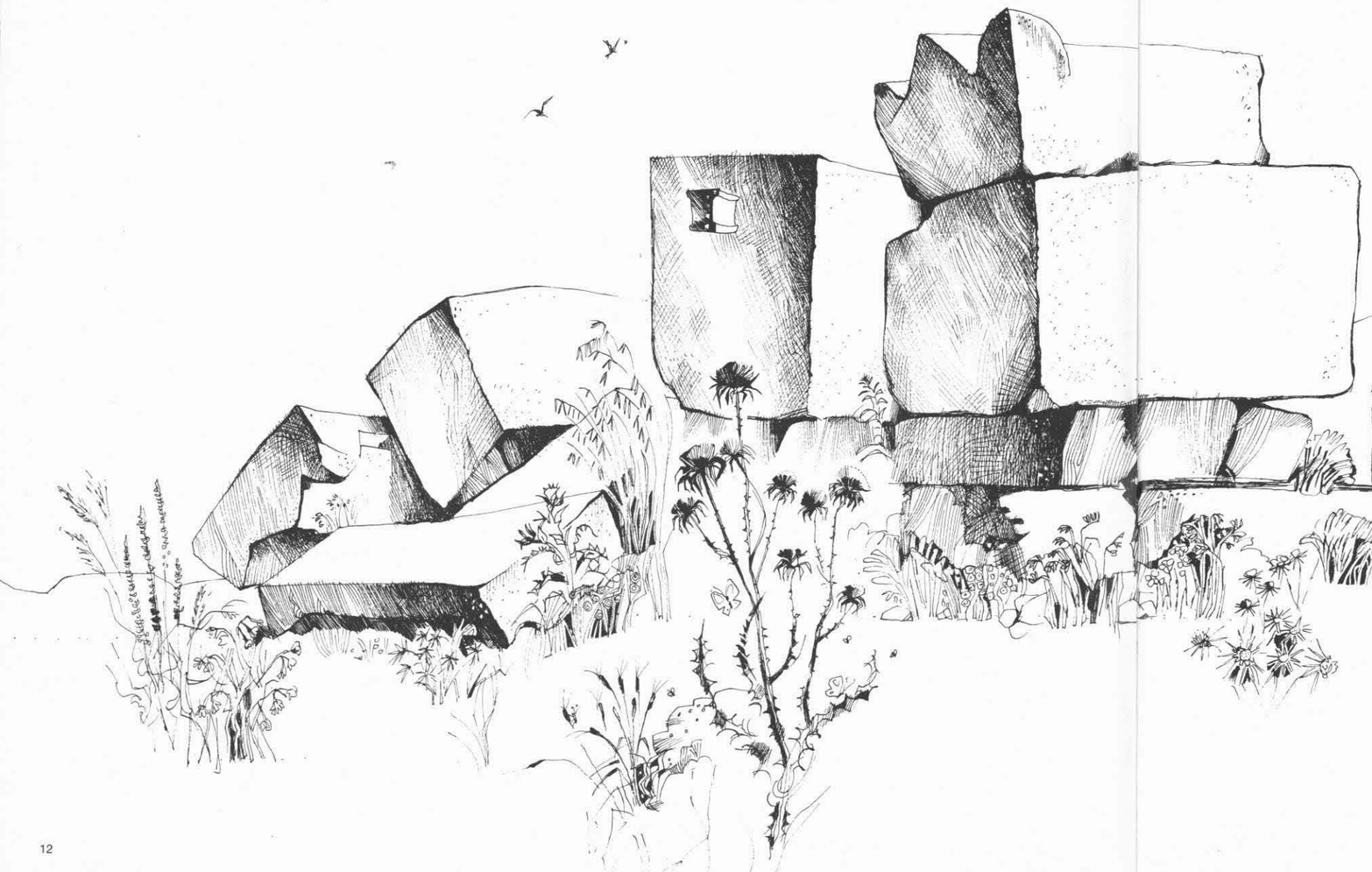
But although the forests have gone, this gesture of imperial arrogance may yet prove invaluable to those who plan to restore a green cover to Lebanon's crust. Hadrian set his boundary markers along the entire length of Mount Lebanon, providing indisputable evidence of the forest's altitude more than 18 centuries ago. Well over 100 of these boundary markers have now been found, unequivocal guidance to the ecology of the past.

The path reappeared now, just in time to help us make a final ascent to a ridge commanding the Sannin gorge. Just beneath this ridge, another surprise awaited us. Long before the Emperor Hadrian carved his boundary stone, other men had balanced massive squared blocks one upon another to form a rectangular enclosure. Inside the sanctuary walls we found a single decorated stone, a tapered block of hammered granite with four stylized trees roughly carved on its sides. Perhaps this was a free-standing *baetyl* from the courtyard of the sanctuary—the cult-stone of the Semitic equivalent of Silvanus, the woodland divinity who protected the trees and boundaries of forests. And crowning the ridge itself, breaking the skyline like a surveyor's trig point, were five massive sarcophagi. For a thousand years these sarcophagi have been a landmark for the region. The men buried in them long before can have had no fear of tomb robbers, for they scorned the deep and cunningly concealed shafts of contemporary tombs on the coast; they chose instead the protection of nature itself. The green cover of dense forests and the isolation of the mountain site sheltered them from the eyes of all but the pious worshippers who walked in procession to the sanctuary of the sylvan god. Yet the site had been plundered; several sarcophagi lids, prised off, lay half buried in the ground and one sarcophagus—the largest—had been breached where lid and sides met.

The whole of the Jebel Sannin peak was now visible, its bare slopes pink from the failing sun. Our path dropped steeply, threading apple orchards tended by the sturdy farmers of Biskinta, the biggest village in the Sannin district. Now the red tiled roofs of the cafés encircling Sannin's spring came into view. Slim poplar trees, wealthy in leaves, and oleanders—sure sign of abundant water—followed the river down the valley. A long line of red-cloaked schoolboys marched into our view, led by a young priest from the Brothers' school; their bus stood in the shade of the poplars at the spring. This was our first sighting of human beings since we'd left Mrouj.

The water of the spring surged up into a rock basin lined with bottles cooling for the café patrons. Young, ski-booted Lebanese, taking a break from the snow, supped at tables round the spring. The smoke of the shish kebab brazier drifted lazily up to meet us. Our walk through the High Lebanon—our brief visit to the past—had come to an end.

George Taylor, who teaches English at the American University of Beirut, is the author of The Roman Temples of Lebanon, *a book on little-known ancient sites.*



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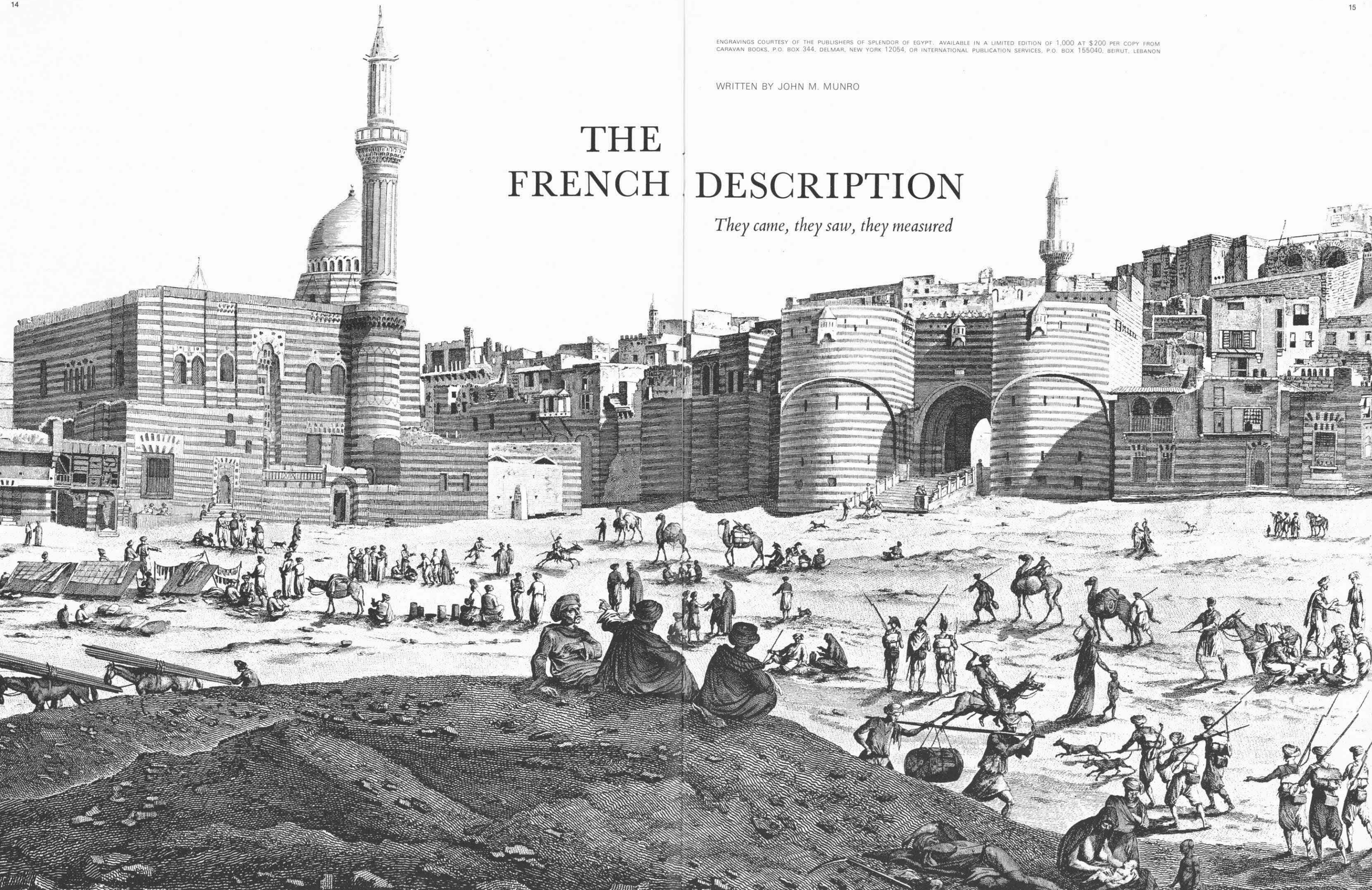
WRITTEN BY JOHN M. MUNRO

THE FRENCH DESCRIPTION

They came, they saw, they measured



Arriving at the foot of Egypt's Great Pyramid in 1798, Edmé François Jomard, the French geographer, was "seized by a vivid and powerful emotion, tempered by a sort of stupefaction, almost overwhelming in its effects." Standing beside him was the man responsible for his being there to gaze on the timeless scene, Napoleon Bonaparte. But Bonaparte, though equally impressed, responded more prosaically. He demanded to know the measurements of the great monument, then calculated that its cubic content would suffice to build a protective wall 10 feet high and a foot thick around the borders of France.

Each man responded characteristically, of course. Bonaparte was in Egypt because the French Government had decided to occupy the country to use as a base to undermine British influence in India while at the same time protecting her own Eastern Mediterranean trade; Jomard was there to gather information for the massive work, *Description de l'Egypte*, which he later edited, initially under Bonaparte's personal patronage.

Looking back after some two and a half centuries, it is difficult to judge whether Bonaparte's conquest of Egypt or Jomard's editing of the *Description* is the more historic achievement. Twenty-four years in the making, and dependent upon the talents and industry of some 2,000 scholars, scientists, mechanics, draftsmen, typographers and engravers, the *Description de l'Egypte* was eventually published in 1826. In a sense this vast encyclopedic survey of ancient and modern Egypt was the most permanent result of Bonaparte's short and ill-fated venture into North Africa. Militarily, the expedition to Egypt must be accounted a failure, for although the French succeeded in transforming the administrative structure of the country during their brief occupation, it is the 20-volume *Description* which stands as the most enduring monument to this episode of French history.

Nothing like the *Description* had been attempted before. Not only did it give an illustrated account of Egypt's historic, artistic and religious treasures; it also described the topography and detailed the flora, fauna and mineralogy of the country. Indeed, every aspect of Egyptian life, past and present, everything that was known about Egypt up to the year 1826, was given a precise and accurate description. The exact geographical position of each monument and its relationship to neighboring buildings, the Nile and other distinctive landmarks were clearly indicated. Ceremonies, both public and private, were described with an almost pedantic devotion to detail, and even such minor objects of everyday use as cooking pots, musical instruments and smoking paraphernalia were painstakingly illustrated. The artists commissioned to draw the monuments, though evidently pulled in the way of the picturesque, never sacrificed precision for the grand effect. As a result the *Description* was not only a handsome, even sumptuous, piece of bookmaking, but also an authentic, definitive record of a country which few Europeans of the time knew anything about, except in the vaguest, most general way.

When the first volumes of the *Description* were published, the artistic and scientific value of the work were immediately recognized. Six years after the publication of the first volume of the series, a second edition began to appear, and both soon acquired the status of bibliographical rarities. Today, specimens of either edition are almost impossible to come by. Recently, however, under the title *Splendor of Egypt*, an anthology of some of the best and most representative engravings has been published by Caravan Books of New York, edited and introduced by Angele and Dickran Kouymjian, a handsome folio volume which enables modern readers to catch something of the spirit of the original.

From it one may have an idea of the immense care and erudition which Bonaparte's team of scholars invested in the production of the *Description*, reflecting the enthusiasm the French general himself had for Egypt. Long before the time came for him to undertake his expedition into the Mediterranean he had been fascinated by the Near East. As a young man he had read Baron de Tott's *Mémoires sur les Turcs* (1784), the Abbé de Marigny's four-volume *Histoire des Arabes* (1750), and the *Voyage en Syrie et en Egypte* (1787), whose author, Count Constantin François de Chasseboeuf, became one of his close friends. When the French Directory entrusted him with the conquest of Egypt, he was elated. This was to be no mere military campaign, but an opportunity to experience the ancient land at first hand.

France's decision to embark on the campaign was the inevitable result of Anglo-French rivalry which had been building up during the greater part of the 18th century. France had long dominated commercial activity in the Mediterranean and during the first part of the 18th century had begun to cast covetous eyes on India as well. This, naturally enough, did not please the British who, after the Dutch withdrawal from the country, had come to look upon that vast land as their own. When the French surrendered at Pondicherry in 1760-61, however, it seemed that the French threat to India was over. And though the French still retained the ascendancy in the Levantine trade, they were concerned that Britain might be trying to undermine them there as well. In 1766 the Mameluke Ali Bey assumed control of Egypt from the Ottoman Turks and immediately opened areas to foreign merchants. At the same time, the British consul in Egypt, George Baldwin, established an overland route to India through Egypt. French trade began to decline, British trade to grow. The French became increasingly alarmed and they determined by all means to stop the British from gaining further influence in the Nile Valley.

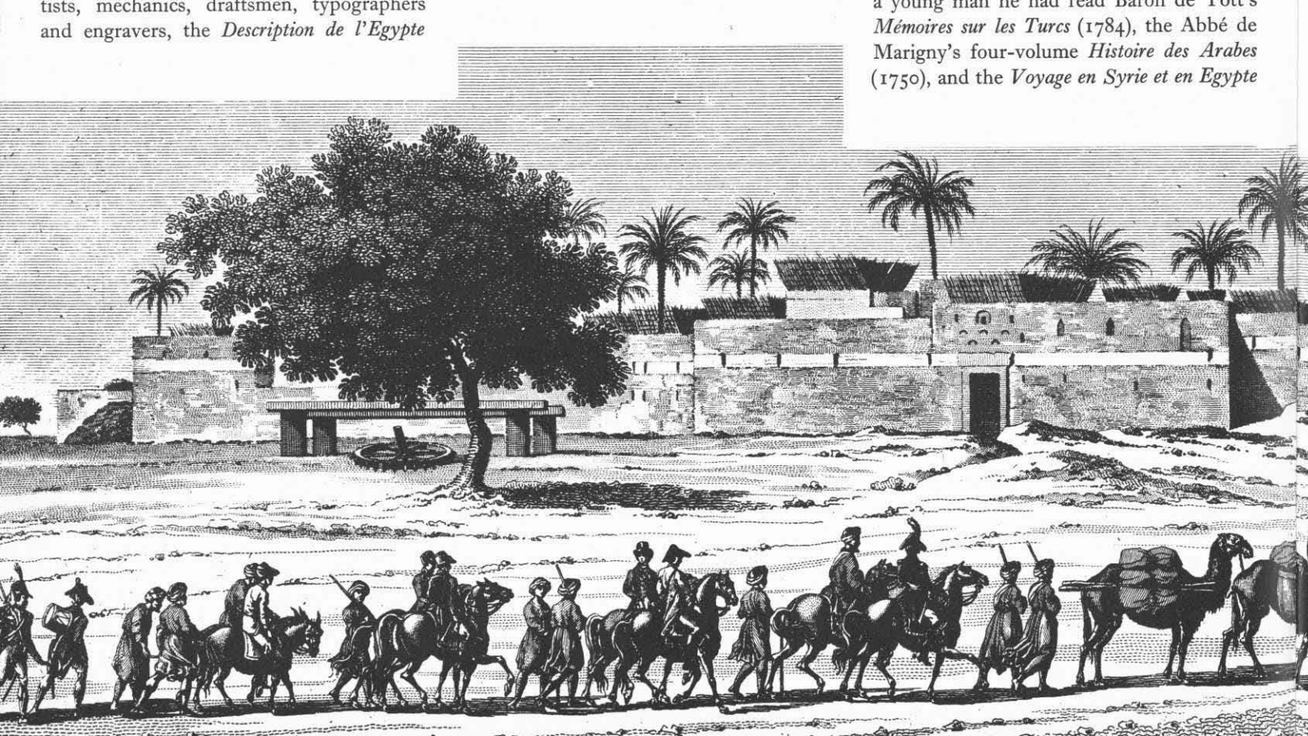
Anglo-French rivalry in the Mediterranean was halted temporarily in 1789 with the outbreak of the French Revolution, which directed the interest of both countries toward Europe. By 1792 an Anglo-French war seemed imminent, and it broke out after Holland had fallen to the French a year later. The British were acutely aware of the dangers implicit in French control of Dutch overseas interests, so they sent an expedition to Cape Town and occupied it in 1795. A year or so later, after the French had defeated Austria, Bonaparte decided to mount a massive campaign against Britain. The idea was that France should seize Egypt and from there attack British interests in India. This would simultaneously guarantee France's ascendancy in the Mediterranean. As Bonaparte expressed it: "Really, to conquer England we must make ourselves masters of Egypt." The Directory agreed, and the decision to attack was taken.

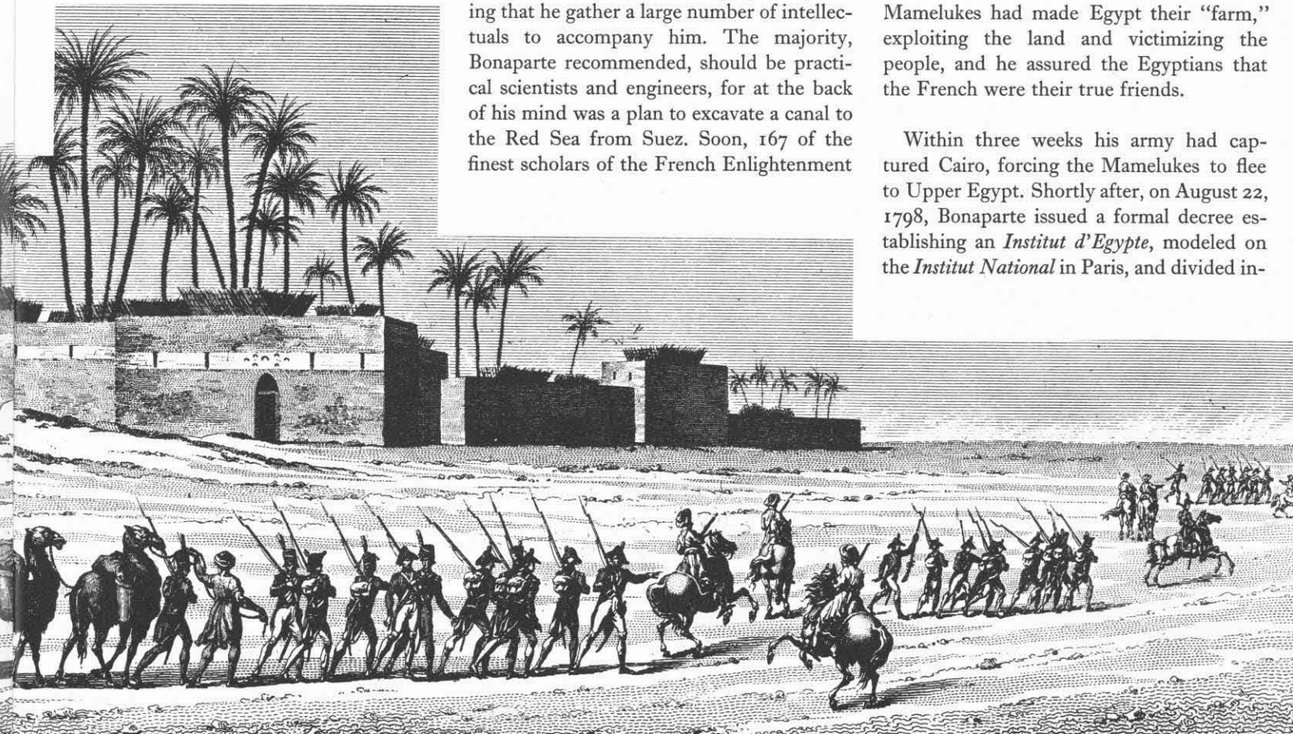
Upon receiving official orders to undertake the conquest of Egypt, Bonaparte enlisted the services of Count Claude Louis Berthollet, who had given him chemistry lessons after the Italian campaign, requesting that he gather a large number of intellectuals to accompany him. The majority, Bonaparte recommended, should be practical scientists and engineers, for at the back of his mind was a plan to excavate a canal to the Red Sea from Suez. Soon, 167 of the finest scholars of the French Enlightenment had joined him, most of them young, and these were designated the *Commission des Sciences et des Arts* of the *Armée d'Orient*.

When Bonaparte was appointed General-in-Chief of the *Armée d'Orient* and had embarked for Egypt, French anticipation of a quick and prestigious victory was high. As Talleyrand expressed it in a memorandum of February 13, 1798: "Our war with England represents the most favorable opportunity for the invasion of Egypt. Threatened by an imminent landing on her shores, she will not desert her coasts to prevent our enterprise. Furthermore, this offers us a possible chance of driving the English out of India by sending 15,000 troops from Cairo via Suez."

At first everything went well for the French. On June 12, 1798, Bonaparte seized Malta and on July 2, 1798, he made a triumphal entry into Alexandria. On landing in Egypt Napoleon distributed a proclamation printed in Arabic and addressed to the Egyptian people. In it he explained that the French had no intention of disrupting the religious, social and economic life of the country. In fact he and his soldiers would respect all Egyptians and their way of life. His quarrel, he said, was only with the Mamelukes, "an assortment of slaves bought in Georgia and the Caucasus," who had tyrannized "the most beautiful part of the world." He went on to describe how the Mamelukes had made Egypt their "farm," exploiting the land and victimizing the people, and he assured the Egyptians that the French were their true friends.

Within three weeks his army had captured Cairo, forcing the Mamelukes to flee to Upper Egypt. Shortly after, on August 22, 1798, Bonaparte issued a formal decree establishing an *Institut d'Egypte*, modeled on the *Institut National* in Paris, and divided in-





to four sections: mathematics, physics, political science and literature and art. It was housed in a number of palaces near the Sayyida Zaynab mosque, which had been abandoned by the Mameluke Beys when they fled. The creation of the institute was a great stimulus to the scholars whom Bonaparte had brought with him from France and it soon became the acknowledged center of the commission's activity, sponsoring lectures, many of which Bonaparte attended in person.

A few months after the French army's arrival in Cairo, many of Bonaparte's scholars were divided into groups and charged with surveys of specific areas. The first mission was formed in March 1799 under the chief engineer Girard, and was sent off to study the course and characteristics of the Nile. However, the sight of so many majestic Pharaonic monuments along the river's banks so captured their interest and imagination that they devoted much of their time to studying the temples of Dendur, Karnak and Esna. Fortunately, as the mission was made up largely of engineers and mathematicians, they did not allow their professional concern for exactitude to be overridden by emotional enthusiasm. They executed rigorously faithful drawings. Using the plumb line, theodolite and compass, they determined the ground plan and elevation of each temple. With a pair of drawing compasses and a square they mechanically copied the bas-reliefs of these monuments, after having taken careful impressions of them. In this way the expedition set a high standard of precise and objective description, which later expeditions were obliged to maintain.

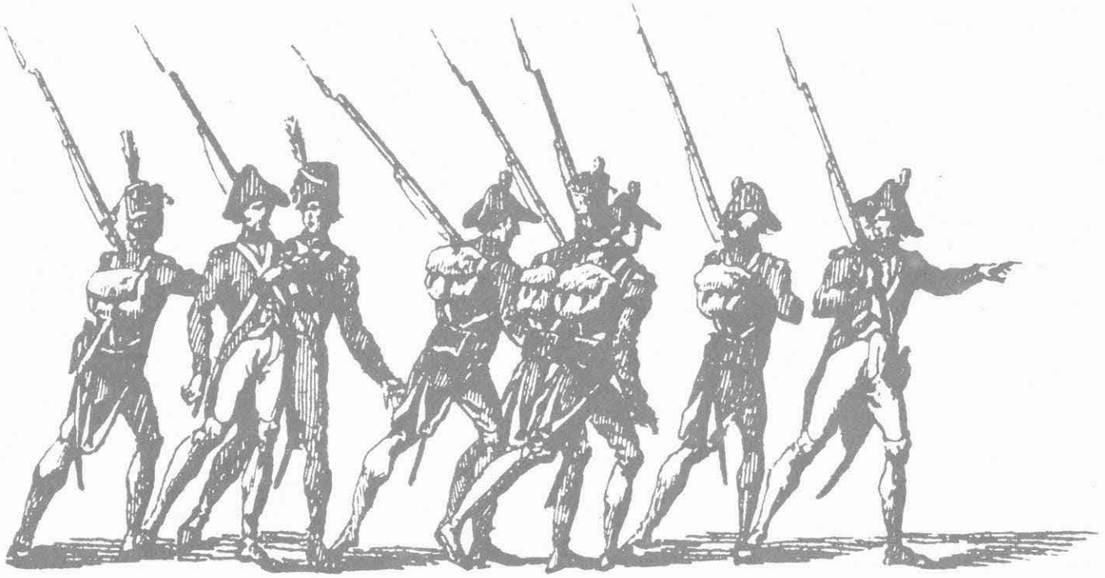
Two other scientific missions supervised by Fournier and Coustez took over the work in Upper Egypt, studying the cataract of the Nile at Aswan, the Islands of Philae and Elephantine, and the ruins at Edfu, Luxor, Karnak, Madamut, the Ramasseum, Madinat Habu and Gurna. Later they explored the Valley of the Kings, digging to the bottom of 11 known necropolises and discovering a 12th, that of Amenophis.

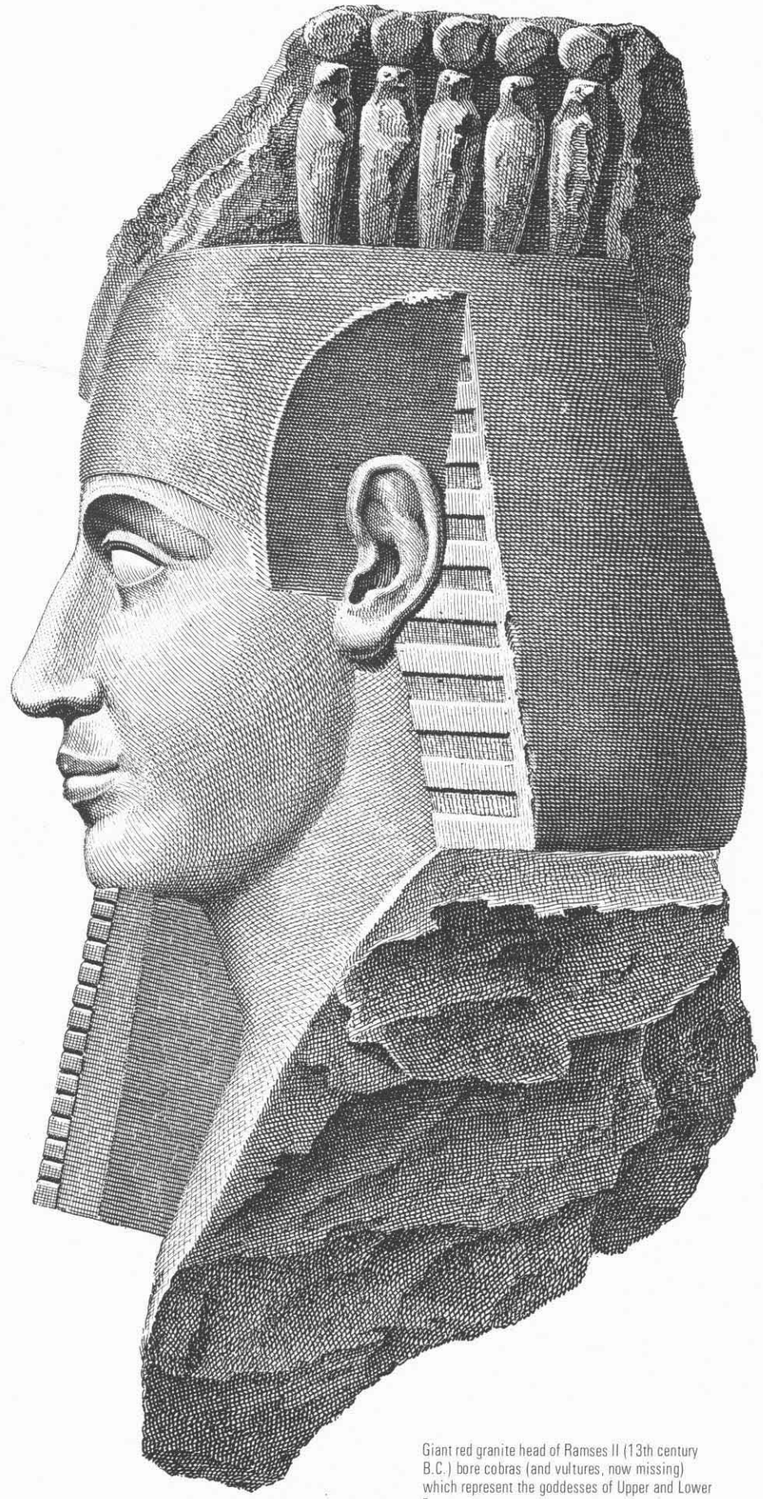
Unfortunately, from the French point of view, the success of Bonaparte's scientists and scholars was not matched by that of his soldiers, and after the heady victories of the first few months, the French began to run into difficulties. For one thing, despite France's insistence that her main concern was to restore Ottoman power to Egypt by driving out the Mamelukes, the Ottomans themselves did not see it that way. The result was the Ottoman Sultan, Selim III, formed an alliance with Britain in an attempt to wrest Egypt from France's control. And though Bonaparte made an expedition into Syria to engage the Ottomans, he suffered heavy casualties. It was not long before Cairo fell to British General John Hutchinson and the Ottoman Yusuf Pasha. Later, Abdullah Jacques Menou, a French army commander who had taken an Egyptian wife and embraced Islam, was forced to capitulate in Alexandria. By September 1801 the Egyptian adventure was over.

Yet its impact was considerable. Although Bonaparte was in Egypt for a relatively short time he greatly modernized the government structure, employing many local Christian Copts as administrators and tax collectors. He also honored all the Muslim feast days, and participated personally in the celebration of the Prophet's Birthday. In this way Bonaparte gained the trust and support of the Egyptians themselves, drawing them into the government of the country at the expense of their erstwhile Mameluke overlords. He also tried to introduce French civilization, taking care, however, to avoid offending Muslim sensibilities. He undertook a large public works program. Streets were lit, drains were installed and a quarantine was established. Later he opened a public library in the Nasriya district of Cairo, which excited the admiration of the Egyptian intelligentsia. All these innovations were supervized by the *Institut d'Egypte*, the same organization which assumed responsibility for the preparation of the *Description*.

Inevitably, however, tension grew between the occupying French and the Egyptian populace, particularly with the conservative shaikhs of al-Azhar Mosque and University (*Aramco World*, Sept.-Oct., 1973), who became the focal point of resistance. Islam could not be dominated, even by the victorious and high-minded Bonaparte. The opposition began to make Bonaparte's task of administering Egypt difficult. Nevertheless, the French occupation was to have a lasting effect. By removing the former Mameluke ruling class and elevating Egyptians to positions of authority, and by introducing orderly government and the knowledge and technology of the West Bonaparte's expedition helped set Egypt on a new course.

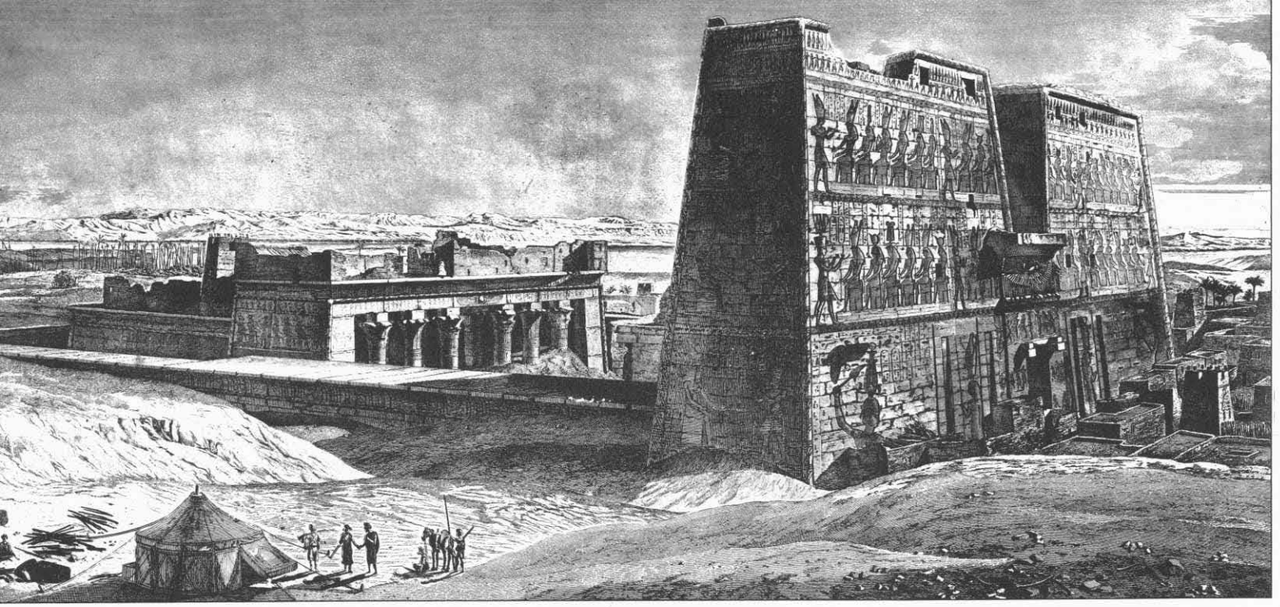
More important, despite military failure and its short duration, Bonaparte's expedition had the effect of awakening the interest of the West in Egypt and drawing attention to the Pharaonic and Muslim civilizations which had flourished there. In this last respect, especially, the French scholars' superbly illustrated, accurately documented *Description de l'Egypte* played a major and enduring role.

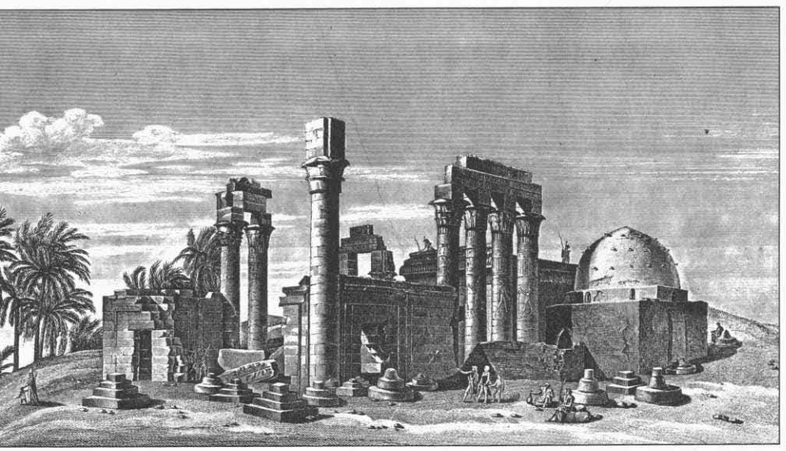


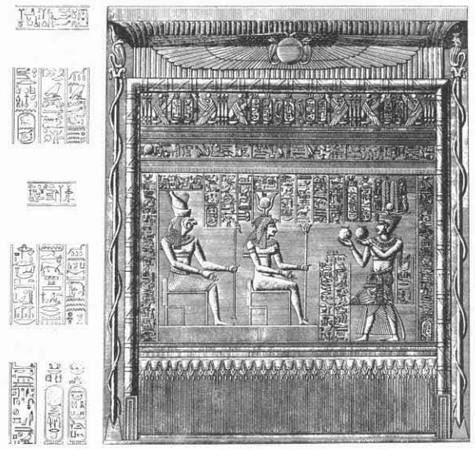


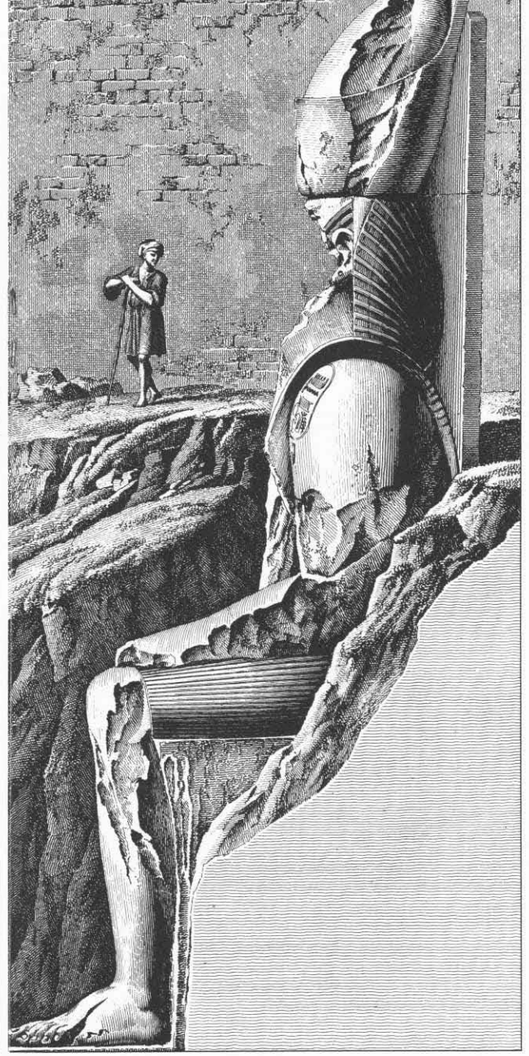
Giant red granite head of Ramses II (13th century B.C.) bore cobras (and vultures, now missing) which represent the goddesses of Upper and Lower Egypt.

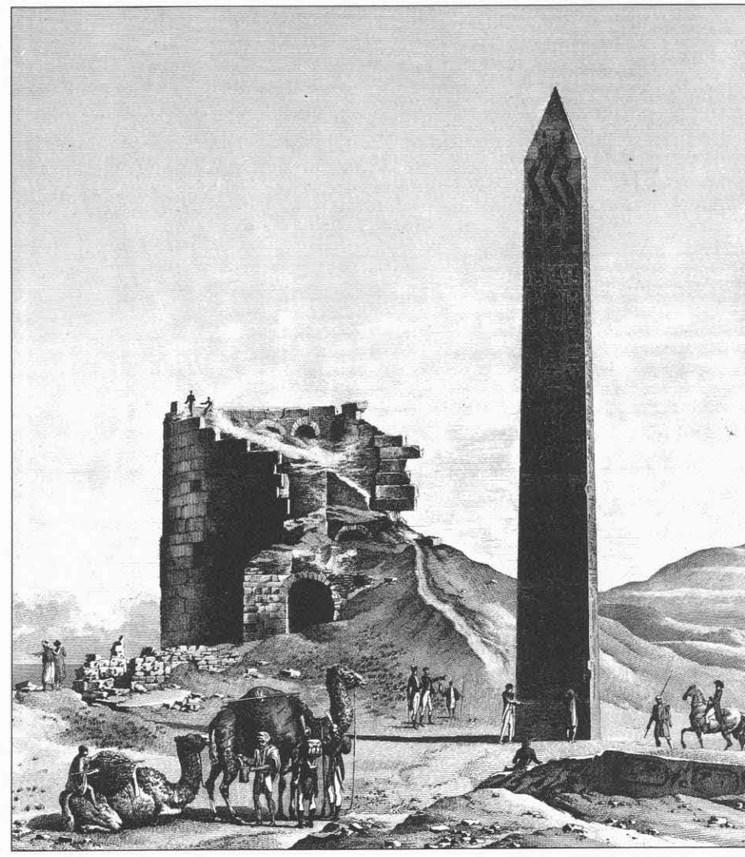
John M. Munro is Professor of English at the American University of Beirut and a free-lance writer whose work has previously appeared in Aramco World.

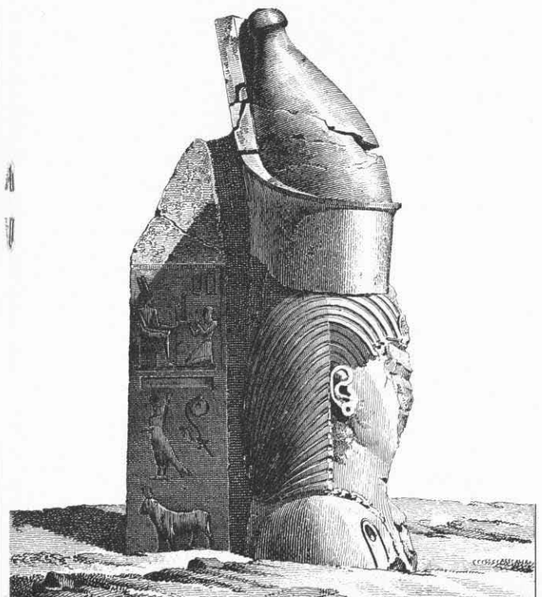




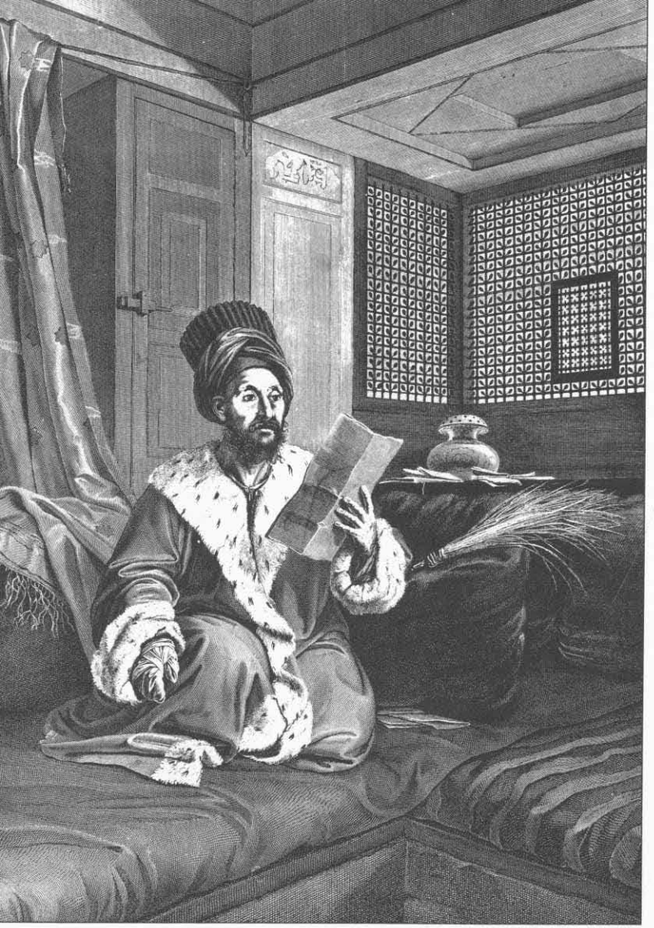


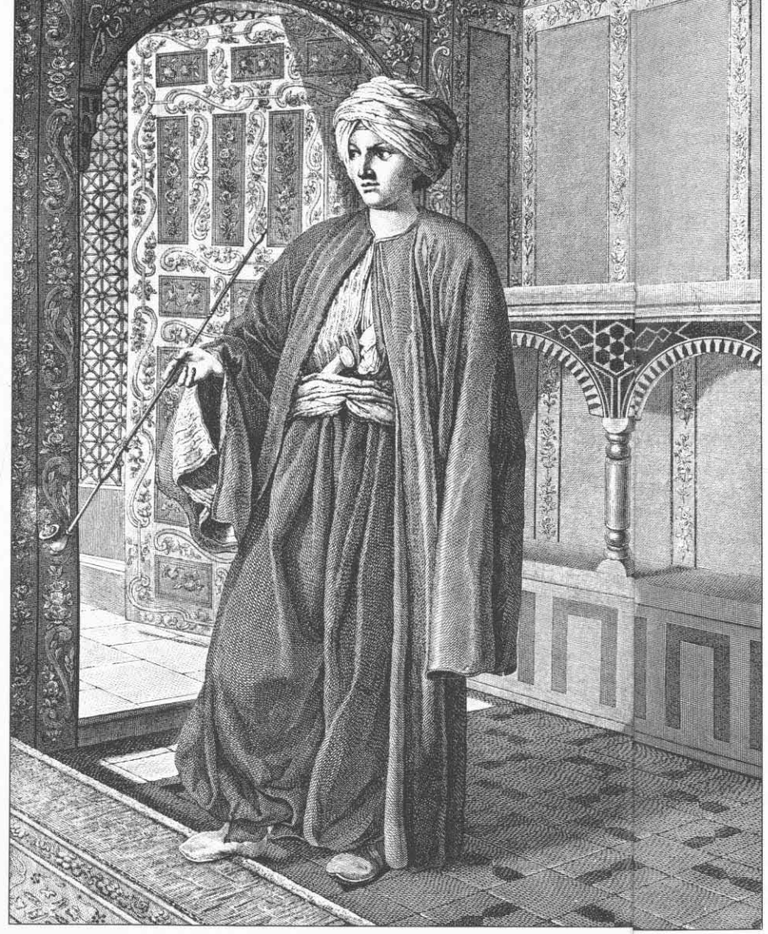


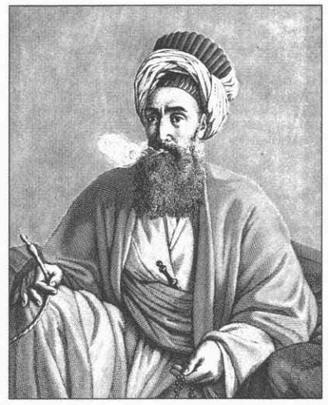


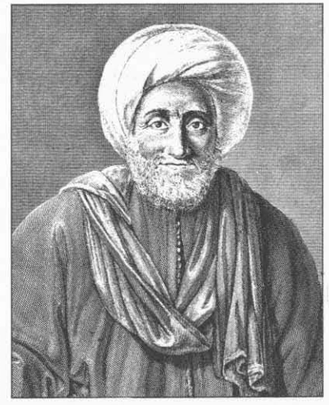


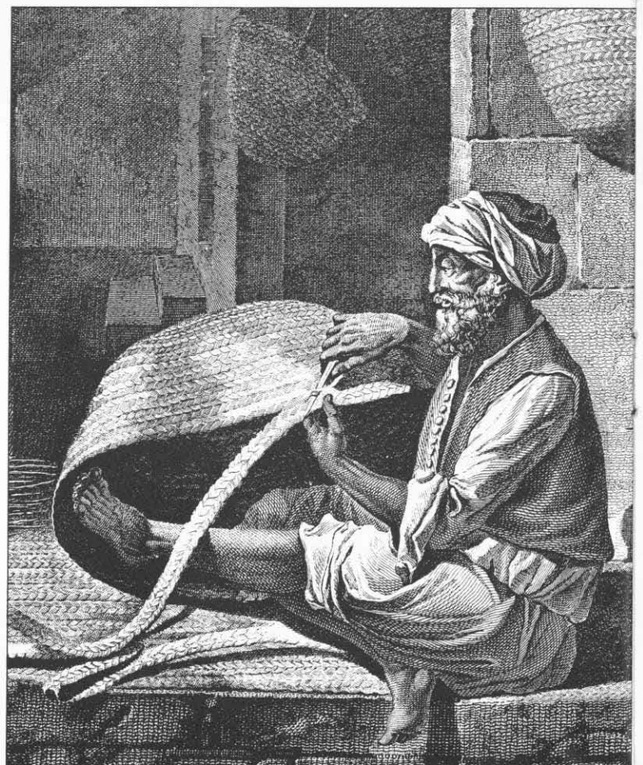
Opposite page, top: The Temple of Horus at Edfu. Two 110-foot pylons frame the entrance to the temple dedicated to the sky-god. Center, left: The Temple of Mont at Armant (Hermonthis) built by Cleopatra and dismantled after 1860 for building materials. Center, right: Scenes of ritual offering on the Pavilion of Trajan on the Island of Philae. Bottom: The second-century B.C. Temple of Antaeus at Qau al-Kabir (Antaeopolis). The 18 original columns were carried away by the Nile in 1828.
This page, top and bottom left: Black granite Colossi of Ramses II at the Temple of Luxor, Thebes. Above: ''Cleopatra's Needles'' at Alexandria, originally erected in Heliopolis for Thothmes III. (The lower right corner is enlarged on the cover.)



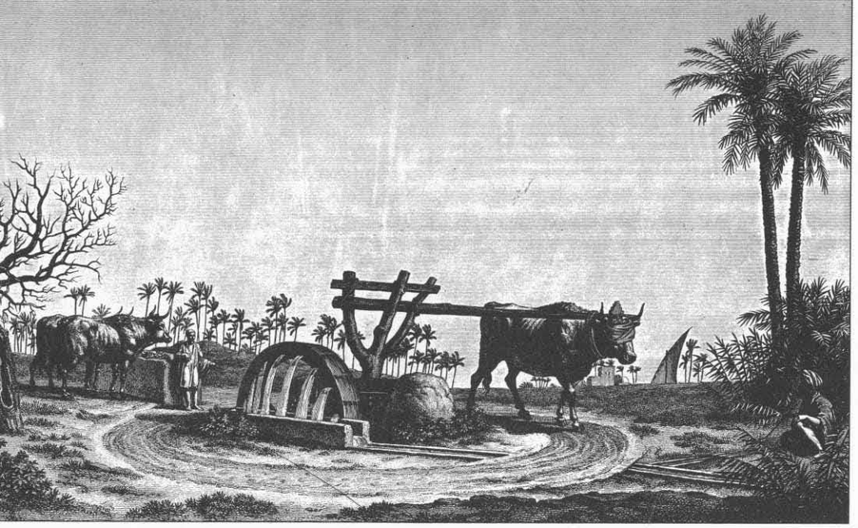


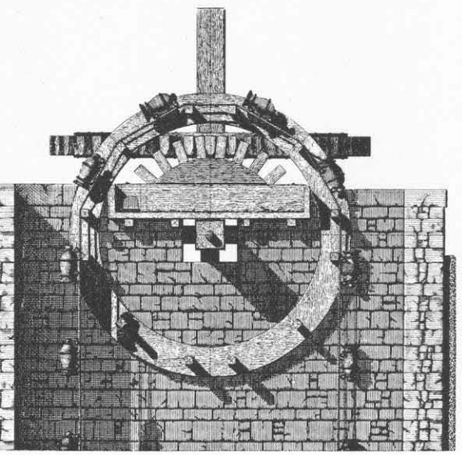


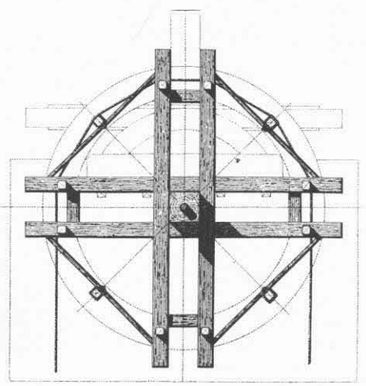


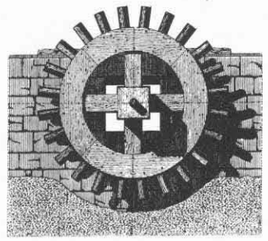


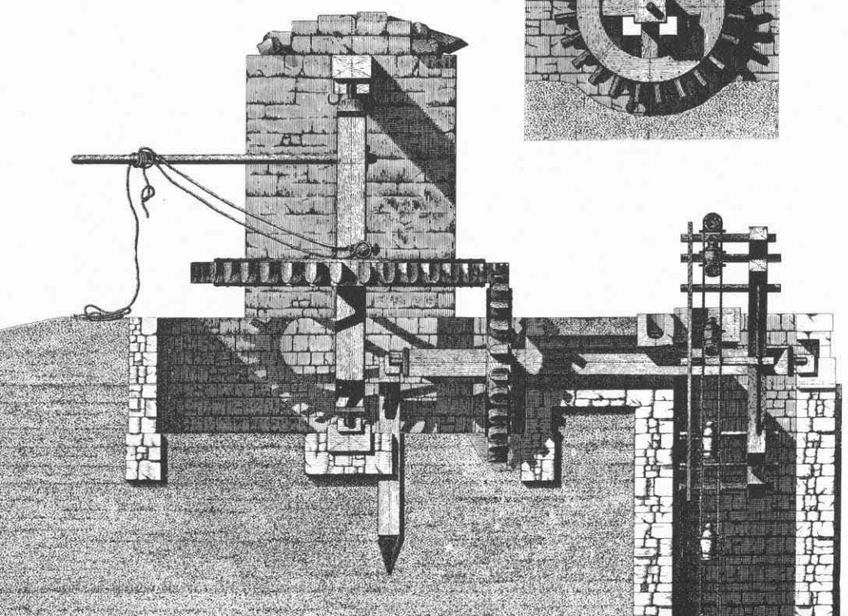
Above: Portrait of the Ottoman commander, Mustafa Pasha. Top, right: A Mameluke in upper class costume of late 18th century. Right: A basket weaver, working with coils of braided date-palm leaves. Opposite page, top row, left to right: A dragoman or translator; the Amir al-Hajj, who organized and led the annual caravan of pilgrims to Mecca; a shaikh or man of religion in wide turban. Center row: An agha or leader of a Janissary corps; a man playing the **kamancha,** a bowed two-stringed instrument; a Frankish or European woman in oriental costume of the time. Bottom row: A **saqqa** or water carrier; an itinerant merchant; a lady of Cairo.

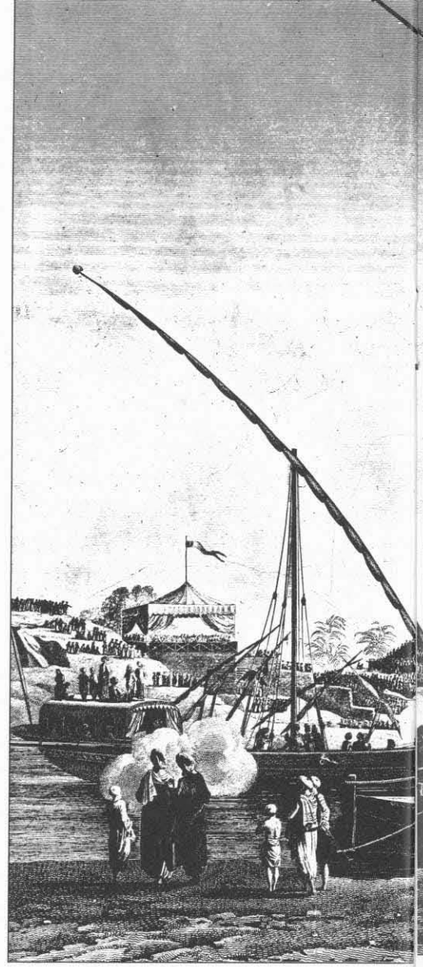


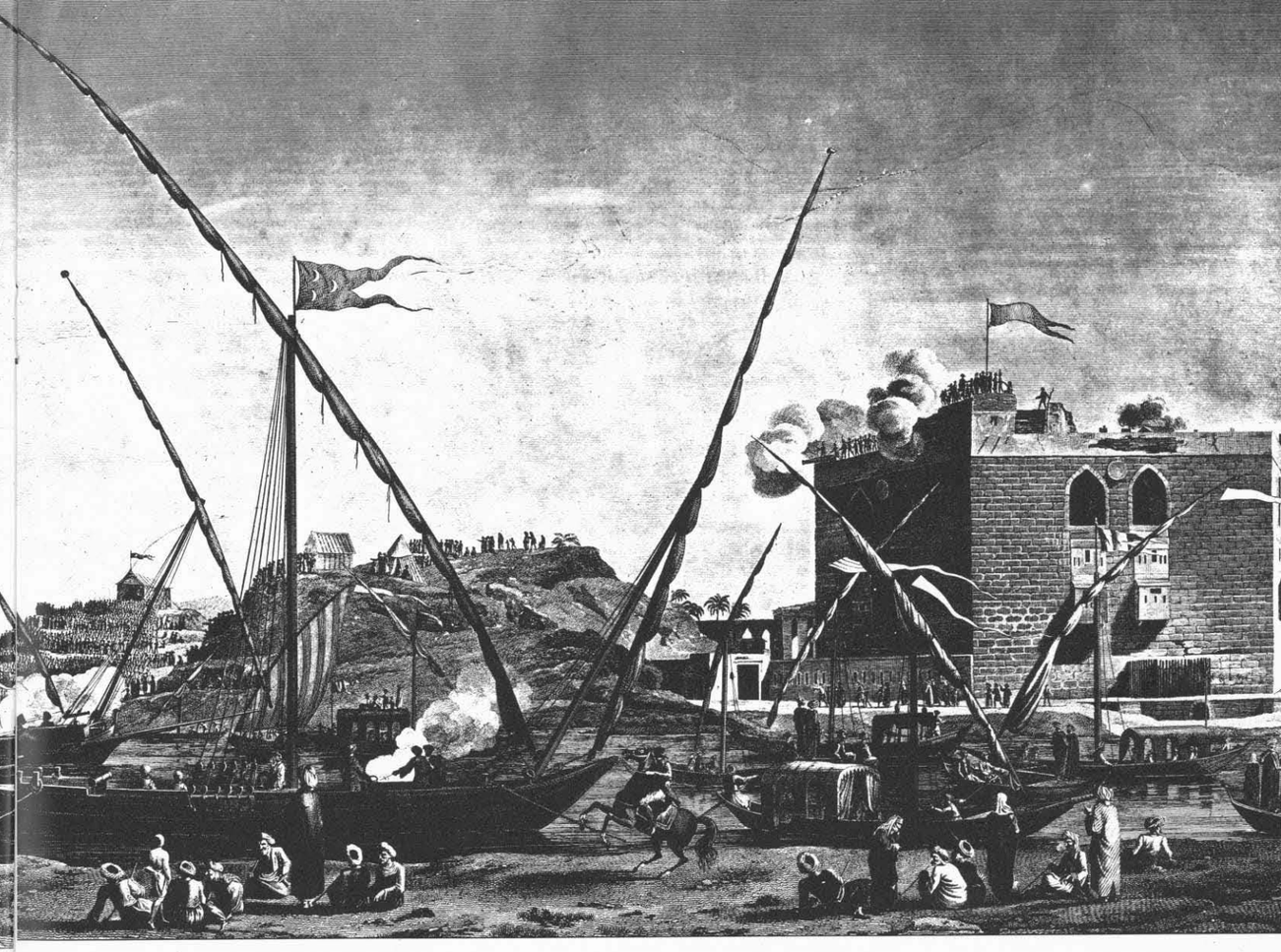




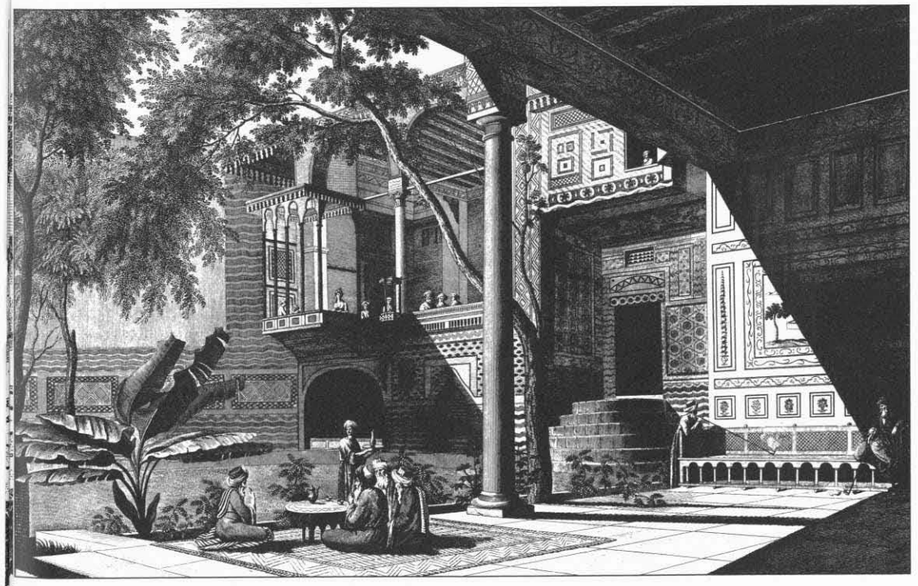








Top left: The **tabu** irrigation machine was used in the Nile Delta where water needs to be raised only a few feet. Left: The **saqiya** (shown in several projections) was usually turned by ox or buffalo and this one, with 56 earthen pots, could raise 18 gallons of water per minute to a height of 40 feet. Above: The Festival of Opening the Dike. In August 1798, less than two months after his landing in Egypt, Bonaparte is depicted (on top of building at right) at the important annual ceremony of opening Cairo's Khalij Canal during the annual Nile flood. In 1906 the canal was filled in and a trolly line was built. Right: An inner court of the palace of Qasim Bey.



SHARPER THAN THE SWORD

WRITTEN BY JOSEPH FITCHETT

At a recent annual international salon of political cartoons at Montreal's Terre des Hommes festival, one cartoonist singled out for recognition was an artist who has worked all his life in Egypt: Alexander Saroukhan, a cartoonist for newspapers in Alexandria and Cairo from 1925 until the present. Born in Constantinople and educated in Europe, Saroukhan was a pioneer in what today in the Middle East is an increasingly important contribution to the Arab press: the editorial cartoon.

Humor is a revealing national characteristic and the perceptions of cartoonists say much about the attitudes of their readers. Arab cartoonists, for example, reflect not only the predominance of the Arab-Israeli conflict in Arab thinking but also changes in attitude and approach that have emerged in the last two years: a new and refreshing willingness to poke fun at shortcomings and incongruities in Arab societies. In doing so they have arrived at a self-critical wryness that is healthy and important and proves still again that the pen is sharper than the sword.

Political cartooning has a solid tradition in Arab publishing, one going back to the European invasions of Egypt in the 19th century. Some Egyptian cartoonists even claim that it goes back to drawings in the tombs of the Pharaohs. But the new hard-hitting style really flowered in the 1950's, when Egypt took back the Suez Canal. A handful of newspaper cartoonists, emboldened by Suez, began to experiment with the forthright styles of America's Herblock and Mauldin.

The cartoonists' topics are the familiar ones—the contradictions of all bureaucracies, the "little man" facing business and government, the blind enthusiasm for fashions and fads, the eternal skirmishes between men and women. But all these situations have the special features of an Arab setting. Egyptian bureaucrats wonder why Cairenes complain about the inadequate bus service while in the background thousands of Egyptians can be seen riding on the roofs of jammed buses complete with street vendors. A wife rings the local television station to ask that a well-known star be restored to the TV screen so her husband will stay home at night.

The techniques are also familiar. Caricature is a favorite device and most Arab cartoonists have whole rosters of recognizable stock characters—the old pasha, the new bureaucrat, the man in the street, the emancipated Arab woman, the ambitious army officer—whom they use to comment on the latest developments.

Frequently those comments must be muted; as in the West editorial humor is not always appreciated in government circles. But even that is changing. Egypt's foremost cartoonist recently won wide support when he successfully stood up to an offended official who tried, and failed, to have him arrested for irreverent cartoons querying government failure to cope with municipal water supply problems.

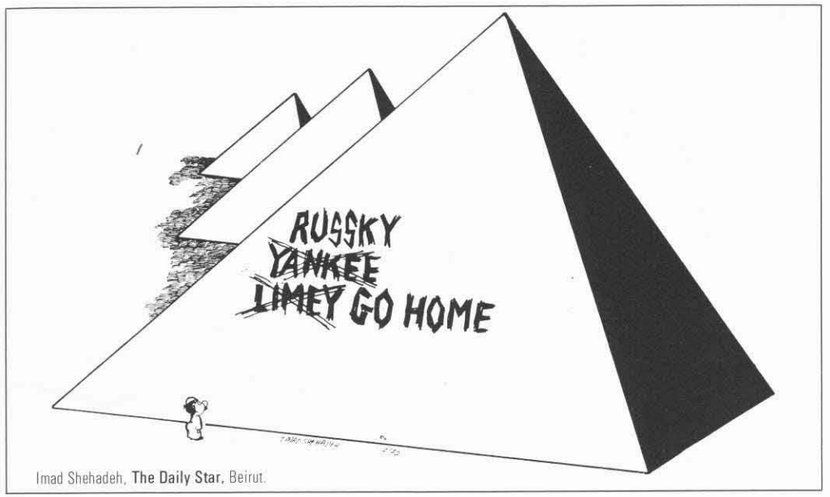
Arab cartooning talent and enthusiasm, gradually spreading in wider circles, still flourish best in the cosmopolitan centers where it started—and above all, in Cairo. In these centers, the state of the art is already two generations old. For example, the doyen of Egyptian cartoonists, Abdulla Abdul Samih, published his first cartoons in 1945. Then, most Cairo cartoonists were frankly willing to pirate drawings and ideas from American and European magazines. They don't any more.

In those early days, Abdul Samih says, many cartoonists uncritically glorified government achievements. But, he adds, the strong political passions aroused by events then also fostered Egypt's first generation of indigenous cartoonists by creating a ready market for new talent.

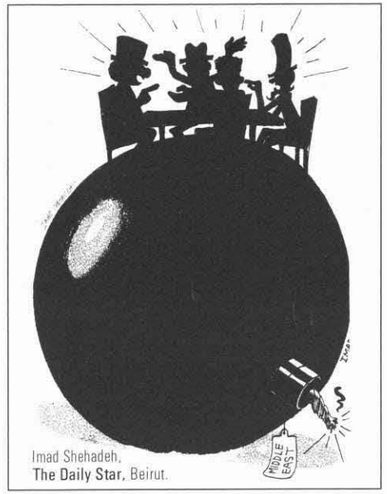
On the debit side, the same passions encouraged unpleasantly crude cartoons about Arab enemies. But this too is absent from increasingly subtle Arab cartooning, in which a new generation is making itself felt. (Abdul Samih's own son already cartoons on one of Egypt's widely circulated, professional-standard student newspapers produced by journalism majors at Cairo University.)

Cartoonists are also becoming more conscious of their collective influence. In Beirut, the 14 Lebanese who made their living entirely from political cartoons met regularly at a mountain hotel to discuss professional problems and ideas. And in Egypt cartoonists are an important part of the influential Cairo milieu of journalists and artists. Some are even consulted by political editors who, like the Chinese before them, believe that one picture is worth a thousand editorials.

Joseph Fitchett contributes frequently to the Christian Science Monitor, *broadcasts for ABC, edits* Near East Business *and is Middle East correspondent of the London* Observer.



Imad Shehadeh, **The Daily Star**, Beirut.



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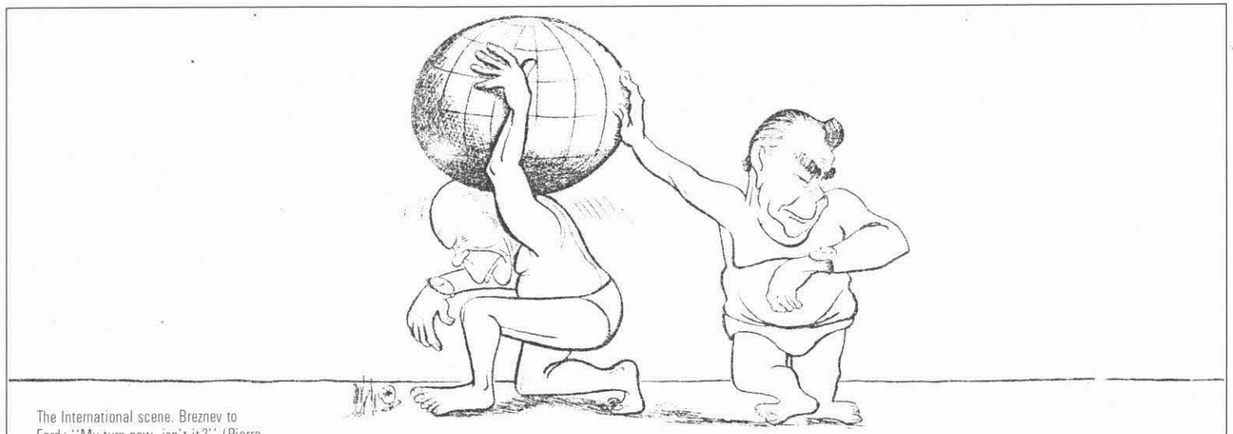


The International scene. Breznev to Ford: "My turn now, isn't it?" (Pierre Sadek, **An-Nahar**, Beirut).

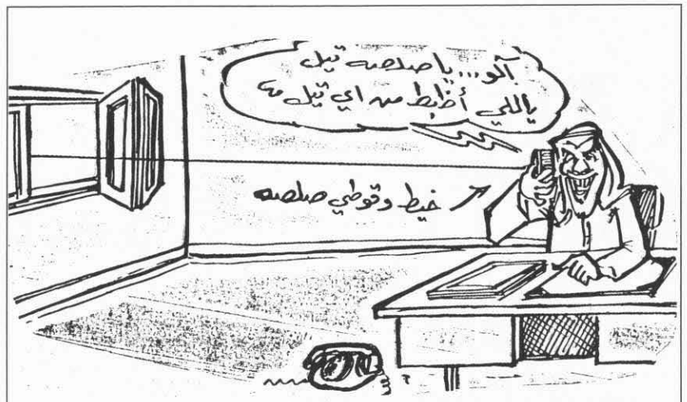
A comment on public transportation. Official: "Why do they want more buses when they have such comfortable roofs?" (Saleh Jaheen, **Al-Ahram**, Cairo).

The U.S. and Europe: "What's he doing **here**?"

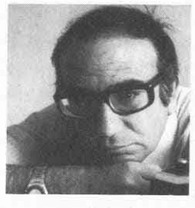
A comment on political speeches: "Now he's **really** funny!" (Pierre Sadek, **An-Nahar**, Beirut).

A comment on new techniques in administration. The computer: "Come back tomorrow, come back tomorrow." (Muhammad al-Khunaifar, **Al-Jazirah**, Riyadh).

A comment on life in America: "Excuse me, Sir, are you a Vietnam casualty or a student protester?" (Saleh Jaheen, **Al-Ahram**, Cairo).



A comment on the telephone system: "No, I'm using a soup-can; it works much better." (Al-Kharji, **Al-Riyadh**, Riyadh).



Jalul

"Jalul" is the professional name of the Lebanese cartoonist Niazi Jalul, who draws for Al-Hawadess, *a Beirut-based weekly magazine that in 1975 had a circulation of nearly 250,000 throughout the Arab world. Born in Buenos Aires of Lebanese parents, Jalul moved to the Middle East as a child and eventually studied at the School of Fine Arts in Beirut. He joined* Al-Hawadess *nearly a decade ago and became, by 1975, the best paid of the 14 full-time cartoonists working in the Lebanese capital. At* Al-Hawadess, *he has been responsible for four cartoons a week: two on Lebanese affairs, one on Arab affairs and one on international news. The cartoons were planned at an editorial conference with the news editors, after which Jalul worked up the ideas into finished form for publication. One of Jalul's favorite devices is to mix photographs of actual people and places with original drawings.*

Al-Hawadess *may have seemed ambitious in believing cartoons could succeed in a magazine circulating in a dozen different countries with quite different social and political preoccupations. But* Al-Hawadess *was convinced, said Jalul, that Arab readers enjoy cartoons immensely.*

Shehadeh

Imad Shehadeh, a 35-year-old Palestinian, became a cartoonist by accident. "When I worked on a Beirut daily," he said, "I had an office reputation for doodling. So one day, when the cartoonist failed to deliver, the editor roped me into supplying a cartoon. After that, they wouldn't let me stop and I got to like it. Even when I became editor, I decided to order myself, as cartoonist, to stay on the job despite my other duties."

Shehadeh's cartoons once included a series published in the USA under the title "David and Goliath," ridiculing American beliefs about the comparative strength of the Arab countries and Israel. Taking off from the American belief that an Arab giant was trying to crush a tiny David, Shehadeh's drawings pointed out that standing firmly behind the tiny David was an immense American.

As a cartoonist and editor of The Daily Star, *an English-language newspaper in Beirut, Shehadeh sharpened his work for readers accustomed to American and British cartoons. That meant drawings that stood on their own and eliminated the wordy captions which are often the bane of Arab cartoons elsewhere.*

When he became co-editor of the Beirut English-language weekly Monday Morning, *Shehadeh no longer considered himself primarily a cartoonist, even though he continued to spice the pages of the magazine with his often biting illustrations. Shehadeh was also a skilled satirist with words and his column "Kritikos," when it hit its mark, was probably the closest thing to Art Buchwald on this side of the Atlantic.*

Saleh Jaheen's five-days-a-week cartoons in Al-Ahram *are an Egyptian national institution.*

His familiar cast of characters—stock figures like the short-sleeved, open-faced average Egyptian, the fez-topped old pasha, the bland bureaucrat—touch a responsive chord of wry humor in weary Egyptians and make their problems endurable. A recent Jaheen drawing, for example, showed a crammed Cairo bus with an enterprising street vendor peddling fresh-baked ears of roast corn to passengers on the roof. Two bureaucrats, presumably from the Transport Ministry, disdainfully regarded the familiar spectacle, and one commented: "Why do they want more buses when they have such comfortable roofs?"

Jaheen's stature is measured by his unique status at Al-Ahram. *Jaheen, who started drawing there in 1961, is the only cartoonist ever published by the staid Egyptian daily, which is often called the* New York Times *of Arab newspapers.*

Jaheen's genius for capturing current Egyptian moods, as well as apt angles on daily events, reflects his own deep involvement in popular Egyptian culture. The only son of an itinerant magistrate, Jaheen spent much of his childhood moving around Egypt, passing many hours in the company of his mother, an educated woman and musician who encouraged his interest in poetry based on local folklore.

Jaheen's instinctive grasp of public moods and his imaginative ability to marry recognizable scenes and gestures with pungent Egyptian aphorisms has enabled him to capture the doubts, exasperations and emotions of the little man with whom he is allied against the establishment.

George Bahgory, an Egyptian artist who has acquired an immense following as a cartoonist—and is published frequently in European magazines—is a leader in the second generation of Arab cartoonists to push for change through laughter. In his drawings—which run regularly in Rose El-Yussef, *a Cairo weekly newsmagazine—Bahgory dramatizes his own reactions to daily life in the Egyptian capital. Bahgory fans instantly identify with the central character—unaggressive but irrepressibly curious, dutiful but hedonistic, patriotic but unfanatic, romantic but henpecked. He is a latter-day, more politically conscious James Thurber. Bahgory's tiny, recognizable self-portrait appears in all his drawings, even if only as a commentator. His wry caricature of author Joseph Fitchett appears on the contents page of this issue of* Aramco World.

Bahgory's interest in cartoons dates back to his art-school days in Cairo just after the Egyptian revolution. Fascinated by the power of caricature to illuminate reality, Bahgory became the first cartoonist in Egypt to move into sophisticated commentary.

Al-Kharji

Cartooning in Saudi Arabia is still in its first generation, but already there are two or three cartoonists of note. Ali al-Kharji of Al-Riyadh *newspaper often takes the suppliers of utilities to task and zeroes in on such human foibles as weight-watching. Al-Kharji, a native-born Saudi, has studied in Iraq, England and Egypt, including a stint as a student of sculpture at the Fine Arts Academy in Cairo. He knows the bureaucracy from the inside, having worked in the Department of Roads and Bridges, the Meteorology Department and the Ministry of Labor and Social Affairs. His book* Abu Salih and the World *takes a look at the birth and development of the art of caricature.*

Another is Batrawi, who draws for the Jiddah daily Al-Bilad, *and is of Egyptian origin. His satire is extremely gentle, but his draftsmanship is superb.*

A third cartoonist is Muhammad al-Khunaifar of the Riyadh daily Al-Jazirah, *who also directs his shafts at the bureaucracy and the utility companies—likely targets in any country.*

Sadek

Beirut's An-Nahar *has traditionally been a brash, outspoken newspaper and Pierre Sadek, its regular cartoonist, fitted the mold. An "independent spirit," as he himself would say, Pierre Sadek has been a columnist who uses pictures instead of prose.*

Sadek has drawn a daily cartoon for An-Nahar *for more than a decade. His usual approach has been to read widely and talk constantly with his colleagues and, two hours every afternoon, lock himself in to draw his cartoon for the next day's paper.*

In Sadek's French-furnished office on the editorial floor of An-Nahar, *certain volumes on the bookshelves offered clues to his models: "A History of* Punch," *and a collection of* New Yorker *cartoons. There were also samples of such colleagues as Herblock and Oliphant, whom he knows from international congresses of cartoonists, envies for their independence and sometimes imitates.*

Sadek has a solid artistic background; he attended art school in Beirut. But he soon turned to cartooning and began to focus on the cartoonist's permanent themes: the desire for peace, the impact of war, skepticism about the rhetoric of politicians and the common sense of the man in the street when given a chance to express himself.

Lear and Burgon: Petra's Victorian visitors

CARVING THEIR NAMES ON THE WALLS OF TIME

WRITTEN BY RICHARD USBORNE

On the Amman/Aqaba road through the desert of Jordan, sign posts point the way in English to "Petra, the rose-red city."

"A rose-red city, half as old as Time" must be one of the best known single lines in English verse, and one would like to say that its author had left his name on Petra. But do *you* know his name? John William Burgon. There—you didn't know it. In fact it must be one of the least known names in English verse. Burgon wrote the line when he was an undergraduate at Oxford in 1845, 16 years before he actually visited Petra. He became a clergyman. He died as Dean of Chichester Cathedral in Sussex. If there are ghosts in Petra, Burgon's must be one—a ghost in full Anglican canonicals walking on "lissom, clerical, printless toe" through the asphodel.

Another Englishman who *did* leave his name on Petra is better known: Edward Lear, Victorian landscape artist, writer of nonsense verses for children and popularizer of the limerick. (Be it said that Lear did not use the word limerick, and nobody seems to know why that name became attached in later years to that five-line verse form. Be it also said that Lear's limericks were simple-minded, unsophisticated, and utterly clean.) He went to Petra in 1858 to sketch and paint and his party was surrounded by armed tribesmen shouting for money. Lear thought his last hours might have come and he wrote his name on the wall inside the Treasury, to indicate to later search parties that this was where an artist had perished.

People are paying high prices for Lear drawings and water colors these days. It's a pity they didn't then. He could never quite see himself clear financially beyond the month ahead. And he was a worrier. He traveled a lot because he didn't like the English winter and because, in those days, a landscape artist would get commissions from the rich—"I want the Cedars of Lebanon" ... "I want the Valley of the Kings" ... "I want the Taj Mahal." Indeed, before the days of cameras and color TV, it was only through artists, some in words, most in line and paint, that the many could see Abroad. Edward Lear had some rich and appreciative patrons. But he was never in the big time, like Lord Leighton or Landseer or Sargent.

Lear's attitude to Abroad, in letters and journals, was one common for centuries to his class of Englishman: "Abroad is full of good scenery. But all foreigners are funny, and the ones I meet are often rogues and robbers as well."

Still, Lear traveled. He filled sketchbooks, had a studio in Rome and taught drawing to English pupils, came back to London and had exhibitions, briefly gave Queen Victoria drawing lessons, tried to sell his books of nonsense, kept journals, wrote a lot of letters, amusing, full of puns, funny names and made-up words. ("Runcible" is a Lear word—a runcible hat, a runcible spoon.)

Some of his letters were sad beneath a tone of banter. He was an epileptic and suffered from depressions which he called "the morbids." His men friends got married. His lady friends ... well, he could never bring himself to propose to them ... and *they* got married. He traveled with his sketchbooks in Italy, Corsica, Albania, Greece, Turkey, the Ionian Islands, Corfu, Malta, Egypt, Palestine, India. Lear acquired a Corfiote servant / cook / traveling-companion / carrier-of-sketching-kit / interpreter / sewer-on-of-buttons. His name was Giorgio. It was Giorgio who, if we can believe Lear, said, on first seeing Petra, "Oh, Master, we have come into the world where everything is made of chocolate, ham, curry powder and salmon."

Lear didn't publish the journal of his visit to Petra till nearly 40 years afterwards. Since Burckhardt had "discovered" Petra to the West in 1812, it had attracted not a few visitors from England, with Old Testaments in their hands, sketchbooks under their arms and pistols in their inner pockets. They may have been tracing the itinerary of the Children of Israel, or looking for the shoe that the Lord had cast out over Edom, or seeing the city (Seir) out of which someone in *Isaiah* hauntingly "calleth to me 'Watchman, what of the night? Watchman, what of the night?'," or just sketching as an excuse for escaping the bitter English spring (all the best people visited Petra at Easter). But they felt safer with pistols, to frighten off, if not actually to wound or kill, bandits.

It was at Hebron that Lear negotiated, through his dragoman Abdul, for a camelcade to get to Petra, to stay there a week, to return via the Dead Sea (another four days). The party totaled 15 including Abdul and Giorgio. The cost of the round trip, Hebron/Petra/Hebron all found, was to be £30. This covered servants, six camels, tents, food and everything else.

Early on April 8 they rode out from Hebron on horses to meet their camels. One of these camels, which Lear called Grumpy or Hubblebubble, was for baggage only, and got a cage of live poultry as part of his burden. This offended his dignity all the time and sometimes scared the daylights out of him when a cock crowed on the march. Lear himself walked as often as possible. He didn't like camel-riding. He did like botanizing and found it easier at ground level.

At night, in desert encampments, they discharged their firearms to warn potential robbers what would happen if they approached. During the day Lear's retinue and suite quarrelled loudly and Lear put cotton wool in his ears so that he could enjoy the charm of the Moab mountain scenery, with Mount Hor and Wadi Musa in the distance but getting nearer. "Petra is before me."

Gazelles, roe deer, jackals, eagles, storks, owls, wild doves, rock partridges, hoopoes. An Arab boy chased a gazelle, caught it and brought it alive to Lear. But it wouldn't eat and it wilted. Lear gave orders for it to be killed and cooked: its four feet he kept to make handles for paper knives when he got home.

EDWARD LEAR

JOHN WILLIAM BURGON

They entered Petra. "I own to having been more delighted and astonished than I had ever been by any spectacle." They pitched their tents and Lear sketched and painted ardently. But Abdul spotted a line of figures on the rocks above their tents. They were the front rank of bandits who were now to make havoc of the peace of Petra for Lear and his men. Daily they encircled the tents. Finally, before his contracted week was up, Lear gave orders for the tents to be struck and the camels loaded for leaving. He himself hurried through his last sketchings of the Roman theater and then faced the angry mob. They had disputed his right to be there. Now they disputed his right to go away. There was a scuffle. Someone hit him in the face with one of his own live chickens and he had everything taken from his pockets except his pistols and his watch. The "everything" included dollars, penknives, handkerchiefs and, for some reason, hard-boiled eggs. At what moment, where, and with what paint or ink, Lear wrote his name on the wall of the Treasury, he does not specify.

Lear and his party in fact got out of Petra *without* perishing, after all. In the desert, by sunset, they felt safer. Two hours later they camped, but "only sleeping winkily, prepared to start again long before dawn."

Lear had seen Petra.

The epitaph of the great Greek poet and playwright Aeschylus does not mention his writings: only his military prowess at the battle of Marathon. Lord Alfred Douglas in a sonnet prayed that, before he died, he might have planted "one naked phrase like a lean dagger in the ribs of time." But people know his name today only as the young man who caused Oscar Wilde's downfall. The two-volume Life of John William Burgon, published in 1892, is a monument to a churchman, Bible scholar and dean of a cathedral, and it was written by another churchman, Bible scholar and dean of a cathedral. The "rose-red city, half as old as Time" line comes into Dean Goulburn's Life of Dean Burgon only in a footnote.

Burgon wrote the poem "Petra," 371 lines of it, as an entry for the Newdigate Prize for Poetry for undergraduates at Oxford, in 1845. Petra was the subject set that year. Burgon had written occasional verse and poetry from boyhood and had competed, unsuccessfully, for the Newdigate in the three previous years. At his fourth attempt he won it. He was 32, an advanced age for an undergraduate. But he had dutifully worked in his father's business for 11 years before the collapse of the business gave him a chance to fulfil what had always been his ambition and dream ... to go to Oxford and read for the Church. Winners of the Oxford Newdigate Poetry Prize have included, besides Burgon, John Ruskin, Matthew Arnold, Oscar Wilde, the father of Alec and Evelyn Waugh, P.G. Wodehouse's elder brother and Julian Huxley.

It is clear that Burgon relied (as probably all the other competitors did) on the Old Testament, Dr. Robinson's *Biblical Researches* and the sketches of Petra that David Roberts had made in 1839.

His heroic couplets are not at all bad:

Where rocks on rocks, on mountains mountains piled
Have form'd a scene so wondrous and so wild ...
The rough, rude ocean frozen into stone ...

But rosy-red, as if the blush of dawn
Which first beheld them was not yet withdrawn ...
and
The hues of youth upon a brow of woe
Which men called old two thousand years ago!
Match me such marvel, save in Eastern clime,
A rose-red city half as old as Time.

The famous single line of verse presents us with two minor mysteries. The phrase "half as old as Time" had twice appeared in published poems before 1845, the more recent occasion being in the work of Samuel Rogers, a friend and benefactor of Burgon's father. One early printed edition of Burgon's "Petra" has the phrase inside single quotation marks: which may have been Burgon's brief acknowledgement of its being an echo. And, when Burgon did at last go to Petra, he wrote to his sister that there was "nothing rosy in Petra by any means." It is difficult to account for this statement. Roses come in 50 shades of red, and Petra, in various strata, various places, and various lights matches most of them, as any visitor will vouch for.

A major mystery, still unsolved, is how a single line from an undergraduate poem found its way into all the dictionaries of quotations. Burgon died in the odor of sanctity, a man of God who had dabbled in verse, not as John Donne, say, a poet with a pulpit. Yet the London *Times* gave him, in addition to an obituary, a leader which recalled his "Petra" line. It had already become famous. How? A good question. I

have been looking, sporadically, for an answer for 15 years.

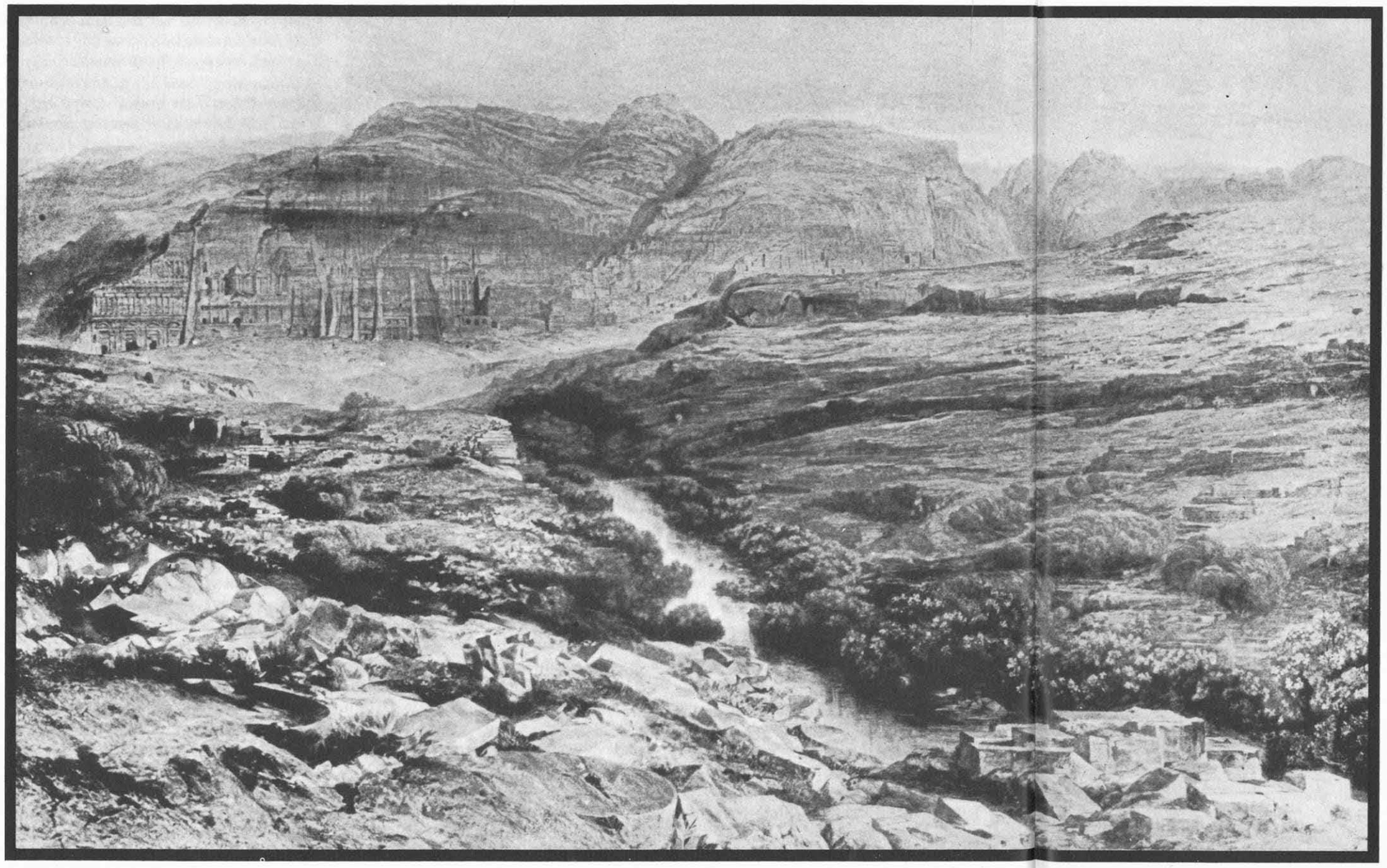
Burgon graduated at Oxford to a fellowship at Oriel College. He had planned a trip to Egypt and Syria with a pupil for six months in 1848, but "cholera and war" in those parts stopped them.

A good man (Goulburn) writing the life of another good man (Burgon) is faced with the difficulty of showing his man in the act of being good. None of Goulburn's snapshots of Burgon treading the way of the saints is very convincing.

As a curate in West Ilsley near Oxford, Burgon succored the sick, the faint and the weary, and Goulburn catches him at it. The nearest railway station to West Ilsley was at Steventon, seven miles away. Burgon himself liked to do these seven miles on foot for his journeys to and from Oxford. Once he brought back with him from Oxford a West Ilsley boy who had been in hospital. They left the train at Steventon and set out to walk the rest of the way to Ilsley. But the boy wilted after two miles and sat down and cried: so Burgon *carried him on his back* the remaining five miles and delivered him safe to his anxious mother.

Burgon's mother died in 1854, and he wore her wedding ring on his little finger ever afterwards: thus occasionally giving people to believe that he might be engaged to be married. Burgon took a ministry in Rome and there he met a rich lady parishioner, Miss Webb. One guesses, reading between Dean Goulburn's lamentably discreet lines, that Miss Webb set her cap at Burgon. It may have been mutual. He and Miss Webb, without doubt amply chaperoned, spent a blissful fortnight in Naples, and Burgon refers to it in letters, "O that never-to-be-forgotten fortnight" and "I can see the finger of God in it all." Then Miss Webb asked him to accompany, as chaplain, a party that was going for six or seven months in 1861 and 62 to the Holy Land, via Venice, Trieste, Alexandria, Cairo, the Nile, Sinai, Petra, Hebron, Jerusalem, Jaffa and Beirut. If Miss Webb paid Burgon's way, it was certainly no hardship to her. She had, Burgon wrote, "a considerable fortune ... and was the niece of Sir John Guise."

The party left Shepeard's Hotel in Cairo, for Sinai and points east and north, with 35 camels, a horse, a foal and a donkey. There was Miss Webb (no Christian name ever mentioned by the discreet Goulburn; he leaves a blank on one occasion for the pet name with which Burgon addressed his *sister* in a letter), her cousin Miss Guise, their two English lady's maids, one with a bullfinch in a cage, a Captain Bayley, RN (retd.) and his wife, Burgon the chaplain, Ali the dragoman, one cook, two manservants, one groom and 18 Arabs who managed the animals and served as guards and guides.



They spent four and a half "delightful" days at Petra, including Good Friday and Easter Sunday. Burgon wrote, in a letter, that Petra was "the most astonishing and interesting place I ever visited, and may well stand alone." Burgon and his friends had their periods of anxiety as Edward Lear had four years earlier. The three tribes between Cairo and Hebron had to be "conciliated." A levy of £2 each was imposed for pitching tents in Petra, and "lawless men with swords and guns" watched Burgon when *he* sat and sketched in the ruins.

But, strangely, in none of the letters that Goulburn quotes, does Burgon ever once say anything like "Petra ... ah ... that reminds me, I won the Newdigate with a poem about Petra." Nor does Goulburn, apparently, think this extraordinary. It seems that the 1845 poem had sunk virtually out of its author's memory by 1862.

Burgon was not well when he left Petra, and he thought it might have been something he caught when bathing in the Red Sea at Aqaba. Miss Webb had been planning a trip to Abyssinia the following year. If she went, Burgon didn't. Perhaps it was because rumors were already round in England that he was planning matrimony: this must have referred to Miss Webb, though of course Goulburn mentions nothing so specific. At all events we read a letter of Burgon's to a friend begging him to take all opportunities of denying the rumor.

Burgon published several books on church matters, and many of his sermons were printed as pamphlets in Oxford. He was, or tried to be, a scourge of the rationalists who, in the Canute wave of what might be called Darwinism, allowed themselves to doubt the strict, sentence-by-sentence truth of the Old and Authorized New Testaments. Burgon's last words were alleged to have been "It is a consolatory reflexion that I have been able to crush the Revised Version of the New Testament, so that I believe it will never lift up its head again."

Burgon spoke out sharply against the legalizing of marriage with a deceased wife's sister. And against women having the same status as men at universities: "a thing inexpedient and immodest" and, terrible thought, exposing girls to the obscenities of the great Latin and Greek authors, the filth of old-world civilizations and irreligious systems of philosophy. To the women of Oxford he stated his case from the pulpit of St. Mary's (apparently without getting hassocks thrown at him) ... "Inferior to us God made you, and inferior to the end of time you will remain." He remained a bachelor to the end of his life.

Burgon campaigned at Oxford against undergraduates going out of College into lodgings. In his fulminations for this (now lost) cause it is not clear what his priorities were: whether he wished to protect landladies' daughters from the lust of unsupervised undergraduates, or protect undergraduates from the wiles of landladies' daughters. Oxford came to laugh at Burgon.

When Benjamin Disraeli transferred Burgon to the deanery of Chichester, he lost his good Oxford pulpit (sermons at Oxford got *printed*), but perhaps he was safer from unkind laughter down in Sussex by the sea. There is a story that at Chichester, on his way to the Cathedral one Sunday in all his robes for Matins, the Dean saw one of his friends, a very young girl, coming behind him. He hid behind a buttress and, when he heard footsteps on the gravel, he jumped out and said "Boo!" But the little girl had taken another turning, and Dean Burgon was left to explain his odd behavior to a startled grown-up parishioner.

His biographer has to record that Burgon was a man of books rather than a social force. He was no leader of men. He quarrelled with his canons at Chichester. He died before the publication of what could have been his most important work, *An Exposition of the True Principles of the Textual Criticism of the New Testament, and the Vindication and Establishment of the Traditional Text by the Application of Those Principles.* Beyond his calling he had been a good Shakespearean scholar. He could draw well. He made a lot of friends among young girls (as Lewis Carroll did, and perhaps many bachelor clerics). And, as a parlor trick, he could imitate the noise of an angry gnat in a bedroom.

A quiet life. And what's to show for it today? A single line in the books of quotations. It is something.

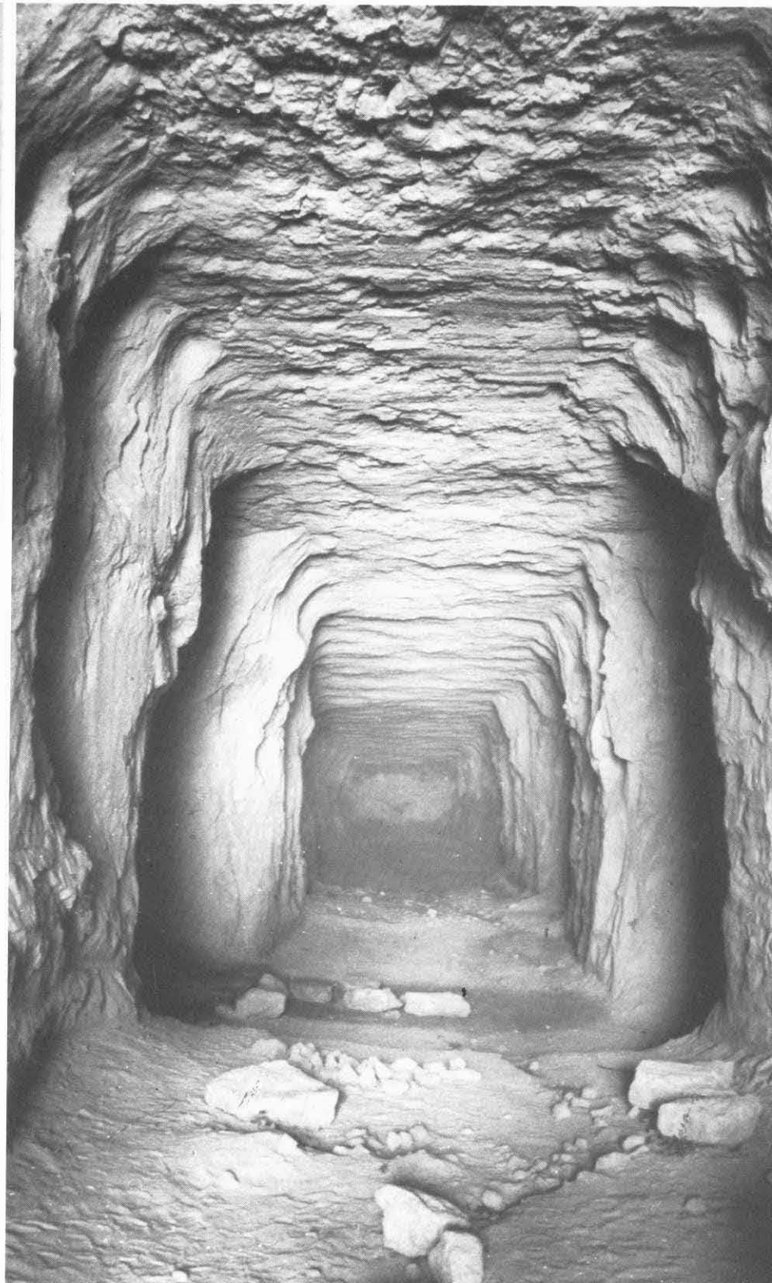
Richard Usborne is a British writer with experience in advertising, broadcasting and magazine editing. He has contributed frequently to Punch, *both prose and verse, and is the author of* Clubhouse Heroes *and* Wodehouse at Work.

Left to right: Giant bulldozer removes overburden from phosphate deposit; crushed rock rides 1,700-foot belt to Hasa processing complex; old underground mine at Hasa.

Jordan's phosphates:

GOLDEN DUST

WRITTEN AND PHOTOGRAPHED BY
RAMI G. KHOURI



Hani Ghanma leans back in his chair, rocks forward and decisively plants both elbows on his desk. If you did not know him, you could picture the burly man as a contender in the East Mediterranean arm wrestling championships, practicing in the relative quiet of his Amman, Jordan, office. But then he whips a small electronic calculator from his coat pocket, rips open a cellophane-wrapped package and—before you can say "tricalcium phosphate"—the marketing and sales manager of the Jordan Phosphate Mines Company replaces the batteries in his little machine and begins to punch in some figures. The performance takes perhaps 10 seconds. He does not miss a breath or ruffle any of the many copies of *The Financial Times* that clutter his desk. But when he puts the calculator down he has some impressive totals to discuss: some three million tons in anticipated phosphate rock sales worth $180 million.

Phosphate production is one of the most gawdawfully dusty, gritty, messy industries this side of the coal mines, but the white stuff somehow sprouts golden haloes when you recognize that it sells for over $60 a ton these days, nearly the going price of oil. In a neighborhood of petroleum giants, Jordan still has no oil at all, as far as anybody has been able to determine, but the desert country's prospects seem a little more verdant when you realize that experts estimate that it may be sitting on three *billion* tons of high-grade phosphate rock.

Phosphate is a vital raw material for the world fertilizer industry. The good stuff in the rock is the chemical fellow called tricalcium phosphate (TCP), and the quality of the rock is measured principally by how much TCP it contains. Jordan's best seller is Hasa rock, with a TCP content of 75 percent. The tricalcium phosphate—$Ca_3(PO_2)$—can be combined with sulphuric acid to make what is known as single superphosphate fertilizer. It can also be mixed with phosphoric acid to produce triple superphosphate fertilizer, which is to young vegetables in the ground as guitars are to singing nuns.

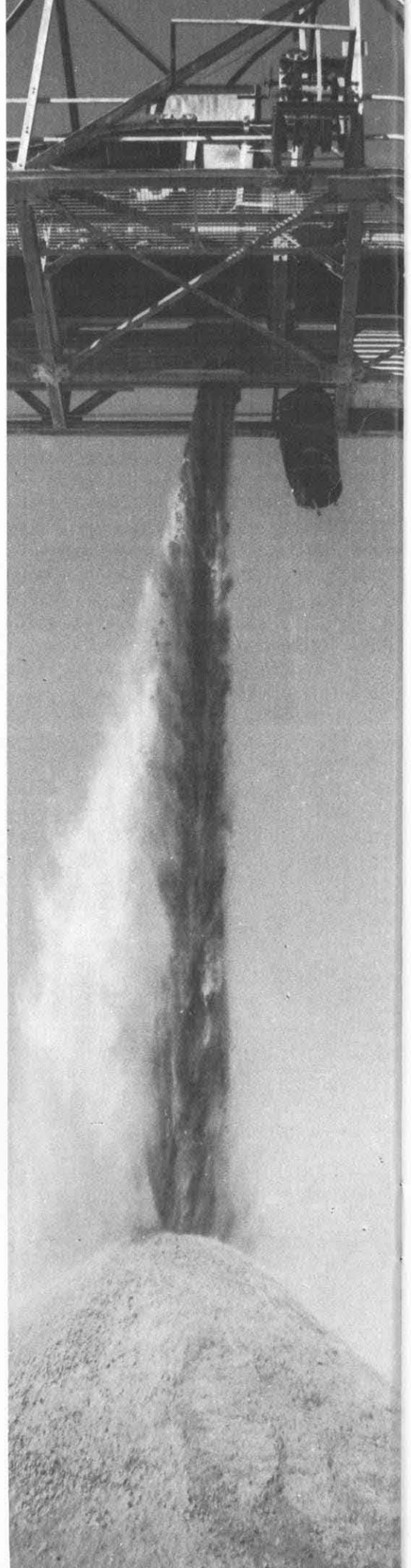
The phosphate rock can also be treated to produce phosphorous chemicals for industrial and other uses. Or, if you're in the business, you can take the rock, knock its fluorine content down from three percent to less than one-tenth percent and use it to upgrade animal feeds, for sparkling teeth and strong bones.

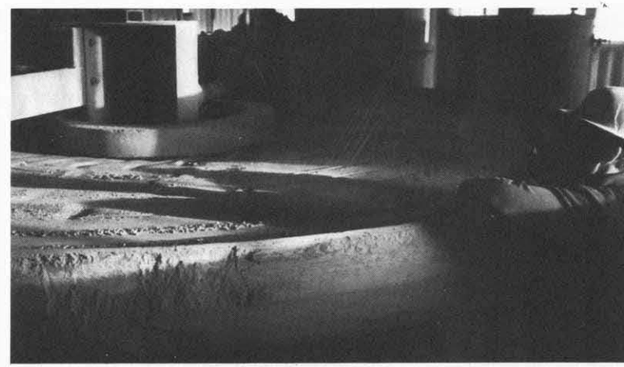
The phosphate industry in Jordan has come into its own during the past three years, just as the international price of phosphate quadrupled from the long-time $15 level. The world export market in phosphates is currently dominated by Morocco, the United States and the Soviet Union, with Jordan's share of international sales in the past few years hovering around the two-to-three percent mark. This would not make Chicago commodity brokers tango, but for Jordan it was beautiful music. Now, in 1976, Jordan expects to export enough of the golden dust to bring in some $180 million in revenues. Phosphate rock is already by far the country's leading foreign exchange earner (accounting for more than half of total exports), and the industry is providing spinoff benefits in technical, managerial and human services that are spreading to some neighboring Arab countries. This year's target of three million tons will at last put Jordan in the big leagues of international phosphates, and the men who run the Jordan Phosphate Mines Company (JPMC) are ready to play ball.

Hani Ghanma, the company's marketing and sales manager, is one member of the team, and his calculator has been toting up increasing annual sales because of the work of still others, men such as Salah Taqieddin.

Taqieddin is acting manager at the company's huge Hasa mine, 100 miles down the road from Amman. Twice a day, he hops into his six-cylinder Dodge Ramcharger wagon and rides out to check operations in the open-cast mines, where local drivers wrap their headdresses around their faces to protect themselves from the dust, and handle the giant D-9 bulldozers and mammoth earthmovers the way photogenic cowboys steer doggies around Marlboro Country.

Another 150 miles down the same road, Adel Sharie answers the radio call in his office to learn from Amman headquarters





Above: Phosphate rock is dumped onto a belt. Right: processed rock. Opposite page, three photos: After the wet screening process the mud-like mixture is shot into a "cyclone" which separates the very thin particles while the remainder of it moves into a filter and drier.

that a French ship is steaming via Suez to Jordan to pick up 7,000 tons of top-quality phosphate rock in one week's time. As manager of the company's storage and shipping facilities at Aqaba, a port in south Jordan, his job is to make sure the order goes out as promised. He calls his dockside foreman on the internal phone and instructs him to set aside a special spot to receive the French order, then hops into his white Peugeot sedan and bumps down to the waterside where the company has built automated installations that will handle the bulk of this year's exports.

Dr. Mamoun Abu Khader, head of the company's research and development department, says that about 75 percent of exports now go into the fertilizer industry, with the rest being used for other chemicals, detergents or animal feed grades. He also points out, talking about the chemistry of phosphates as most people talk about their children, that Jordan's phosphate rock is especially good because it has a low chlorine and moisture content. The JPMC concentrates on mining, processing and exporting, but also runs a small single superphosphate fertilizer plant to meet local needs and soon may take a share in a planned $150-million triple superphosphate fertilizer plant scheduled to be built at Aqaba as a joint venture with the American company Agrico.

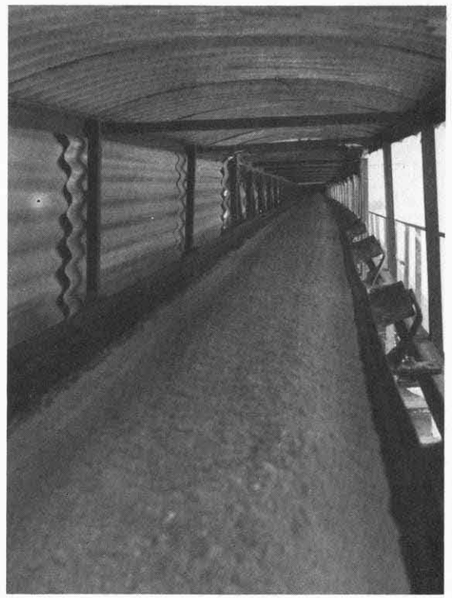
As yet, however, JPMC essentially undertakes a process called, in Dr. Abu Khader's words, "mechanical upgrading of raw phosphate." Simply stated, Jordan's phosphate industry at this stage is a collection of men (the only women so far are clerical staff in Amman headquarters) who find the phosphate deposits, dig the rock out of the ground, crush and sift it into a fine, sand-like powder, wash it with plain water, dry it in a big oven, truck it, store it and ship it away for processing into fertilizers, or whatever, in other countries. Phosphate mining is, at heart, a mechanical rather than a chemical industry. No rotten egg smell here — just dust, and plenty of it.

In doing their dusty deed, the 2,423 employees of the Jordan Phosphate Mines Company run a physical plant made up of seemingly endless miles of conveyor belts that move the rock from the ground where it is mined, through the various processes and into the ships that dock at Aqaba to take it away.

The company runs two mine sites, at Ruseifa, just 10 miles north of Amman, and at Hasa, 100 miles south. The beauty of the Hasa site is that the phosphate rock sits in one huge bed under the earth. After digging up the top layer—which at Hasa averages 15 yards thickness—the phosphate rock is sitting there in one of the earth's best examples of easy pickin'. (At least as compared with Ruseifa, where four layers of phosphate are separated by layers of unwanted rock that must be discarded.)

Trucks take the rock from the mine site to the crushing and screening units that smash the stuff into tiny fragments. After that there is the screening unit where anything over a half inch is separated and set aside in huge storage areas. This is called the "hard reject," and has a low TCP content of about 50 percent. Dr. Abu Khader and his crew of chemists are working on means of upgrading it to near 70 percent TCP, which would make it a very marketable product.

The bulk of the now sand-like phosphate rock passes through more screens and rides a conveyor belt into the washing, or "wet screening" unit. Here it is hosed down with water as it passes through two shaking 8 mm. and 4 mm. screens. It comes out as a sort of slush that is shot at very high speeds into a spinning "cyclone," where the very thin particles fly off and the rest goes into the filter. The filter sucks out a good deal of the water, and the clean wet "cake," with about 15 percent moisture content, rides another long conveyor belt into the drier (or "roaster" in Arabic). The drier is a large, drum-like rotating oven with temperatures of over 212° F. The original phosphate rock that was pulled out of the ground with TCP content of about 65 percent finally emerges from the drier with a TCP content of over 70 percent, and frequently as high as 75 percent.



Left: Screened rock on a covered belt. Right: Sample bags at Ruseifa. Opposite: Bags of "Jorphos" at Aqaba.

During the run through the drier, electrostatic precipitators pull up very fine particles of phosphate rock, which are bagged and sold as a unique product called JORPHOS (Jordan Phosphate). It can be applied directly to the earth as a fertilizer, and is used extensively for the fine tea plants of Ceylon.

Sometimes the whole washing and screening process is skipped. Some high-quality rock is so good when it is mined that it is simply passed through the first crushing unit and sent directly to the drier.

Most of the final product is then loaded onto specially designed trucks or railway hopper wagons and sent down to Aqaba where it goes by sea to markets in Europe and Asia, although a small amount still moves by truck through neighboring Syria to Turkey. Both the wagons and the trucks dump their loads into an underground unit at Aqaba, where the fine rock once again rides a conveyor belt into one of the four huge silos at the dockside. The inside of the silo is something like the inside of a giant can of talcum powder with a high-powered fan inside. It is infinite dust. When the operation must be stopped for some reason, it takes half a day for the dust inside to settle.

The four silos, with a total capacity of 180,000 tons, are connected by yet more conveyor belts to the two berths, where ships of up to 100,000 tons can dock and load. After a JPMC man has gone aboard the ship to be sure its hold is clean, swept out and ready to receive the phosphate, the rock is conveyor-belted for the last time and shot into the hold through a huge nozzle-like monster which belches and bellows dust in something of a final act of glory at the end of the line.

By this time, the phosphate has come a long way. And so has the industry in Jordan itself. The country's first phosphate deposits were discovered accidentally in 1902 during construction of the Hijaz Railway which passed through Jordan on its route from Damascus to Medina, the Muslim Holy City in present-day Saudi Arabia. The railroad became widely known in the West after Lawrence of Arabia destroyed much of it during World War I during the Arab Revolt against the Ottoman Turks. Production on a significant scale did not begin until 1934 when a few underground mines at Ruseifa were opened. Small driers were installed in 1950, and today's large, 90-ton-per-hour German units started operations in the mid-60's. Overall production has increased from a few hundred tons in 1934 to 368,000 tons in 1960 and 1.6 million in 1974. This year the JPMC plans to produce 3 million tons from the Hasa and Ruseifa mines, with an ultimate target of 10 million tons per year by the 1980's.

Allied to its mining activity, the company also runs a vast mechanical maintenance operation which can overhaul a bulldozer's motor or rethread a tiny screw. At the Hasa site, with its graceful 1,700-yard-long conveyor belt, the workers and their families live in a handsome town complete with private homes, clinic, school, club, dining facilities, recreational center and buses to take the single men to Amman for weekends with their families.

The company, which is 93 percent government-owned, boasts 52 engineers who have studied abroad for their university degrees in mining technology or mineral sciences. The winner of the degree derby, hands down, is Dr. Abu Khader, who followed up his BSc and MSc from Cairo and Ankara with a diploma from London's Imperial College, a PhD from London University and, for good measure, a year's post-doctoral research in London.

The company's managing director, Sabet Tahir, says with a flourish that his company has been requested by neighboring Syria and Iraq to provide technical aid for their nascent phosphate industries. In fact, the company is starting to feel the pressure of labor-poor oil producers in the Gulf region who are scouting around the rest of the Arab world for technical people. Company spokesmen are also quick to confirm that the entire

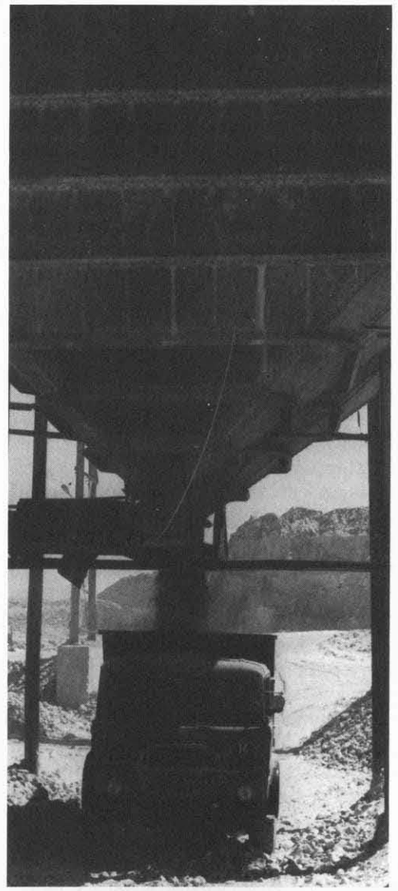
operation is run by Jordanians, with foreign specialists called in only when a new machine or technique is introduced.

A case in point is the exploration activity taking place in the southeastern part of the country, in an area around Shadir, where some British technicians are introducing new drilling equipment. The Shadir area is already known to be rich in phosphates, and company geologists estimate that up to 60 percent of Jordan may be endowed with phosphate rock. The new airport site south of Amman is reportedly sitting on one giant bed of phosphate, for example, as is the city of Zarqa, north of Amman.

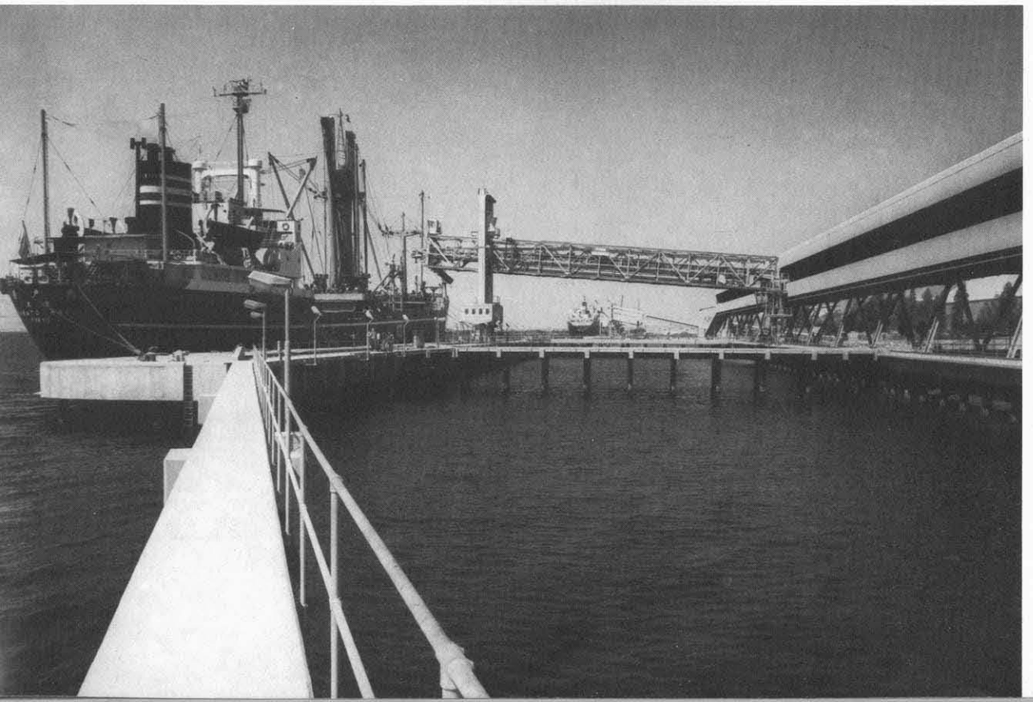
Sales and marketing manager Hani Ghanma believes the company's role in the Jordanian scheme of things transcends the "purely commercial considerations" of bringing in foreign exchange. "We have a big role to play in technology," he says. And, Ruseifa mine manager Abdul Fattah Abu Hassan adds, the company offers employee benefits that are something of a pace-setter in the country, if not the region.

On the technical side, there is a pervasive confidence that Dr. Abu Khader and his young chemists will find an economical way to upgrade the vast stores of low-quality, discarded rock that has so far been a by-product of the production process. The matter seems almost frivolous in view of the new discoveries being made, which may bring the country's proven reserves of phosphate rock to a snug three billion tons.

That's a lot of TCP, but as long as Hani Ghanma's pocket calculator is well supplied with batteries, Jordan and its Phosphate Mines Company will step onto the international stage with the depth and deposits to move forward—on schedule and on a conveyor belt billowing clouds of golden dust.



Rami G. Khouri, who has written for the Daily Star, An-Nahar *and* Arab Report, *all in Beirut, is a Palestinian journalist now working in Jiddah, Saudi Arabia.*



Trucks or railroad hopper wagons carry processed phosphate to the dock side in Aqaba, one of the few stages in its long journey that Jordan's phosphate does not ride the seemingly endless miles of conveyor belts.