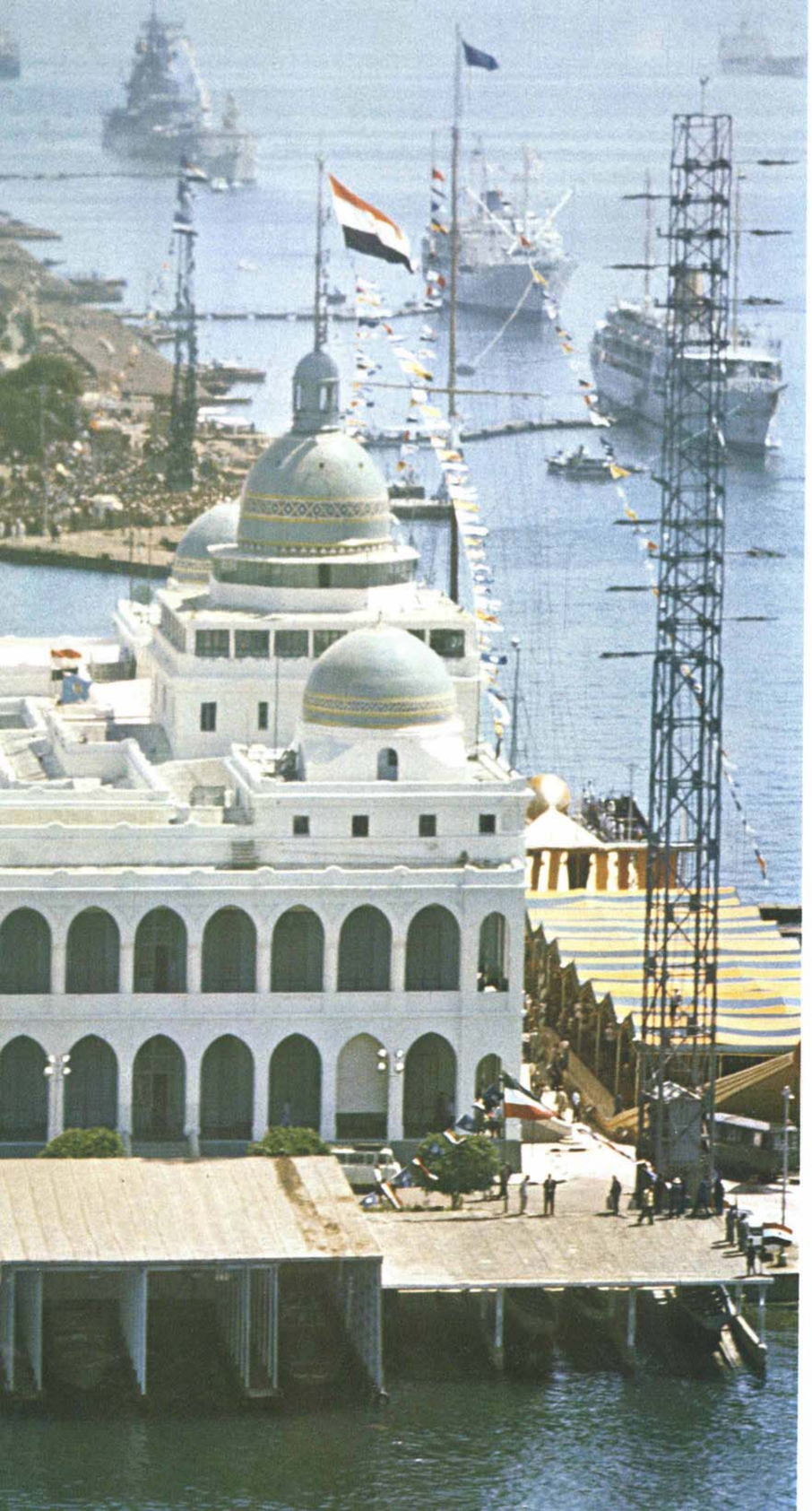

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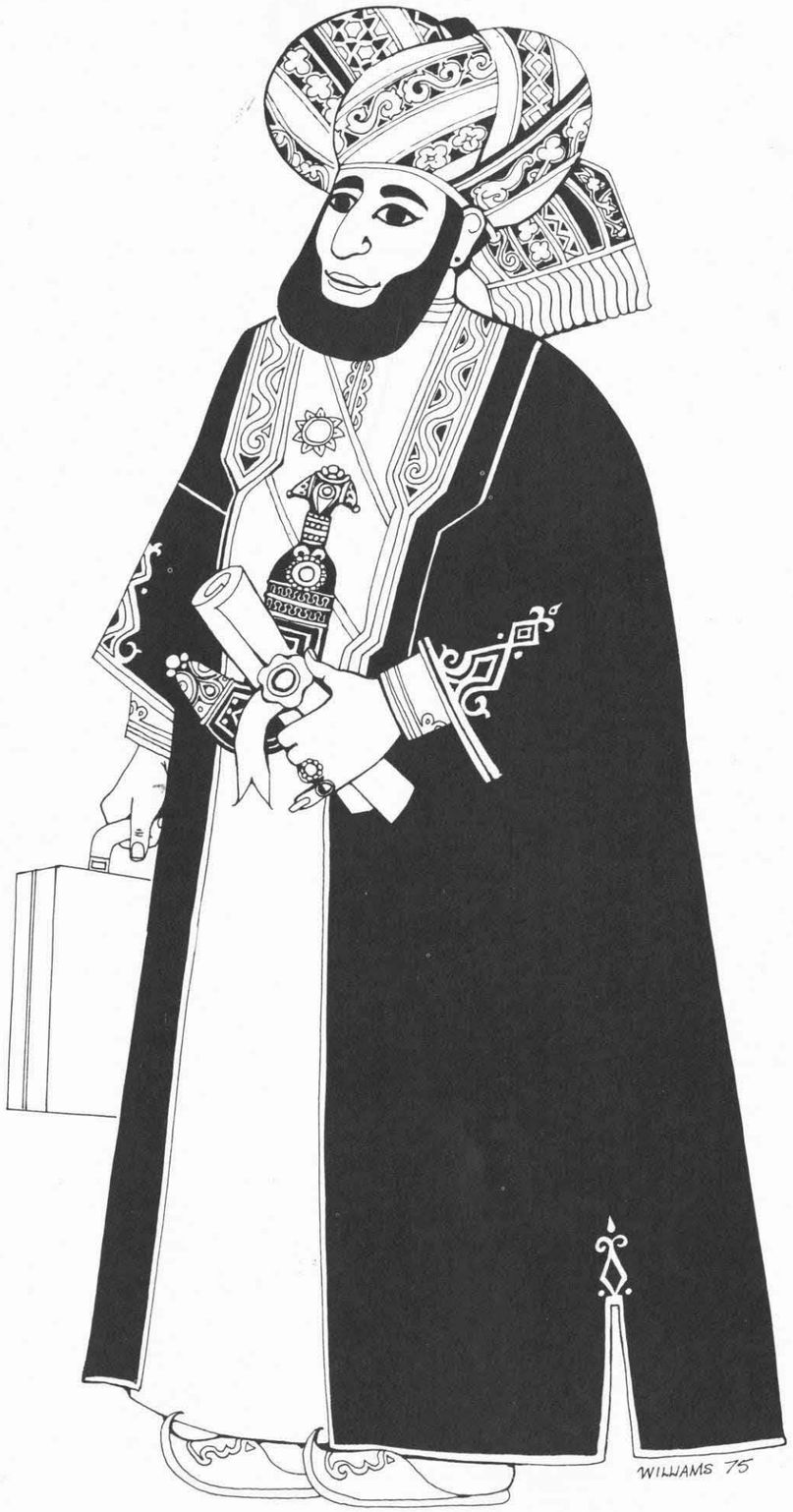
SEPTEMBER-OCTOBER 1975

SUEZ: The Reopening



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Cover: Helicopter and hydrofoil sweep the Suez Canal, closed by war in 1967, searching out sunken wrecks and unexploded ordnance. The Egyptian, American, British and French navies helped to clear the waterway of obstructions. Back Cover: the Canal was reopened with impressive ceremonies last July.

← The first Arab diplomat in the United States, sent by the Sultan of Oman in 1840, stepped ashore in New York clad in turban, cashmere shawl and gold-trimmed caftan.

EMBASSY AHOY!

WRITTEN BY JOSEPH FITCHETT
ILLUSTRATED BY PENNY WILLIAMS

Diplomatic contacts between Arab nations and the United States date back to the days of George Washington. But it was not until 1840, in one of the most colorful episodes in the 19th century, that the Sultan of Oman established formal relations by sending a ship called the *Sultanah* to New York City to serve as the first Arab embassy in the United States.

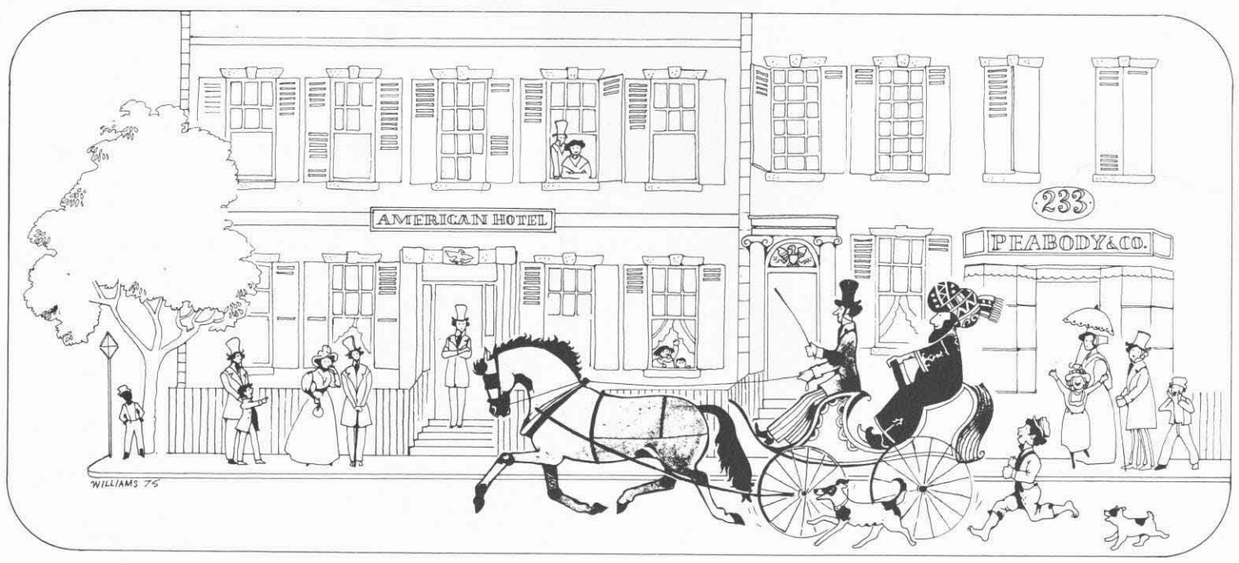
Behind the Sultan's move was a complicated plan by which Oman, heir to a 1,000-year tradition of seafaring and trade, hoped to take over Mozambique in Africa from Portugal. The point of this plan was to take control of Mozambique's trade with China. Unfortunately, there was an obstacle. To capture Mozambique, the Sultan, Sayyid Said, needed arms. But he was hesitant to seek them from Great Britain or France, the day's superpowers. He feared they might exploit Omani military dependence to strengthen their own positions in the Gulf. So Sayyid Said decided on an oblique approach to the United States—a country known to Sayyid through American vessels which had called at Muscat.

Although the Yankees had tried to interest Sayyid in letting Americans enter the British-dominated local markets, Sayyid was impressed by the Americans' lack of political designs in the area and hoped he might be able to get weapons there without incurring political obligations. Sayyid, therefore, determined to open diplomatic relations with the United States. He reasoned that if he could sell Omani goods to the Americans, he could at least finance arms purchases. But Sayyid also hoped to find in America a loophole in what amounted to a regional arms embargo imposed by Britain and France.

In the winter of 1840, therefore, the *Sultanah*, pride of the Omani fleet—a three-masted, 80-foot wooden sailing ship—set out from Oman and nearly three months later dropped anchor in New York.

In 1840 there was no Statue of Liberty to welcome incoming ships. Nevertheless the *Sultanah* created an immediate stir—especially when Ahmad ibn Na'aman, the Sultan's envoy, stepped onto a New York wharf in a bright turban, sparkling cashmere shawl and long black caftan trimmed in gold, raised the Sultan's crimson ensign over the battered *Sultanah* and calmly announced that this was Oman's temporary embassy in the United States.

Even for the boisterous Americans of the period it was a colorful moment. The *Sultanah* was a wreck, its sails torn, its ropes frayed and the crew—well . . . Hired in India, the crew was composed of "gleanings of the toughest stuff" palmed off on the



Sultanah's skipper by an unscrupulous contractor.

Another piquant touch was the presence on board of two Englishwomen who had taken passage in Muscat in hopes of eventually returning to England via New York. To protect them during the long voyage, the captain had them closely guarded in their cabins, but rumors quickly spread in New York that the Sultan had sent "two or three Circassian slaves of outstanding beauty" as gifts to the American President, Martin Van Buren. As President Van Buren was a sober-sided Victorian, jocular columnists wondered whether the White House would add a wing to accommodate a Presidential harem.

As it happened, the Sultan had sent gifts: fine jewels, a silk Persian rug, a gold-mounted sword and two slightly seasick Arabian horses. But even though they were a far cry from slave girls the gifts presented Van Buren with a problem. As the Constitution forbids an American President to accept gifts, the Sultan's well-meant generosity put the Congress in an uproar and Van Buren, bending to Congressional pressure, had to sell them at a public auction and deposit the revenues in the United States Treasury.

The Congressional attitude intended no disrespect to Sultan Sayyid. To the contrary, one Congressman during the debate urged that the U.S. government refit the battered *Sultanah*. Another suggested that the President supply Sayyid with a sloop of war.

Meanwhile, New York had gone wild over the Omani visit. Crowds pressed against the gunwales of his tattered vessel and police had to ward off unscrupulous curio hunters. Crewmen were followed by curious onlookers, some of whom yanked on the mariners' beards to verify their authenticity. Other New Yorkers were content to troop alongside admiring the sailors' colorful national costumes.

Ahmad ibn Na'aman was not slow to capitalize on New York's eager curiosity. Dressed in long silken robes and sandals with upcurved toes, the Omani ambassador gladly inspected military parades, visited model welfare institutions and, at night, gladdened the hearts of officials vying for his appearance in their homes. But he also tended to business. After presenting his letters of credence and messages from Sultan Sayyid he set about selling his cargo: bags of Omani dates, cloves from Zanzibar, sacks of coffee from Mocha, bales of Persian carpets, salted hides and ivory tusks.

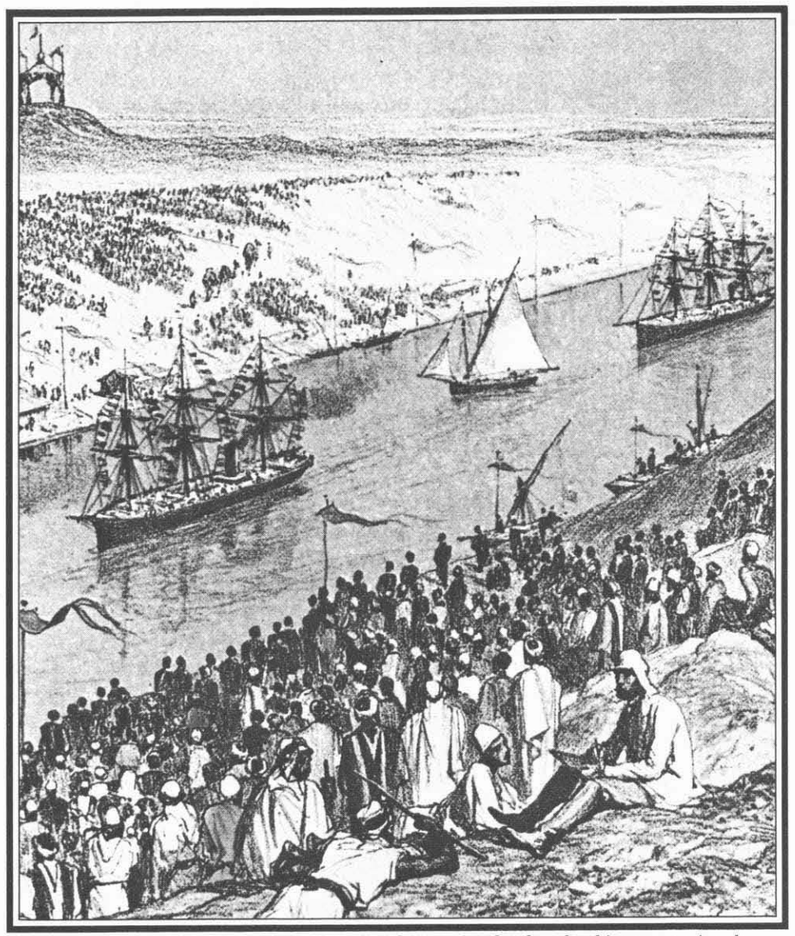
The goods were snapped up and the proceeds—more than $25,000—plowed back into arms: three hundred muskets and three tons of gunpowder. As Ahmad ibn Na'aman also hinted to the Americans that the Sultan would be delighted if arms appeared in their official gifts to him, the President sent four splendid five-chambered revolvers and two repeating rifles boxed in mahogany and elegantly inlaid with silver and pearl.

A few citizens sent other gifts. One was an Arabic translation of the Bible and another was 50 different kinds of throat lozenges which, the donor claimed, could cure anything from nervous headaches to heartburn.

In the meantime, the President, taking the Congress at its word, insisted on seeing that the *Sultanah* was completely overhauled. It took three months and by the time the job was finally done Ahmad ibn Na'aman was ready to leave. New York, even then, was an expensive town; the *Sultanah's* account book shows he was making frequent advances to his crew against the salaries due to be paid them back in Muscat. Even more worrying was the number of crewmen incited to desert by American abolitionists. Thus in early August, five months after landing, the *Sultanah*, her crew rounded out with a handful of newly articled American tars, weighed anchor for the voyage home, her mission completed.

Sultan Sayyid died before he could mount a campaign in Mozambique and Omani-American relations lapsed for generations. But the *Sultanah*'s voyage nevertheless planted a seed. In 1975 the United States and Oman again established formal relations and resumed a friendship 135 years old.

Joseph Fitchett, a free-lance reporter, contributes frequently to Aramco World.



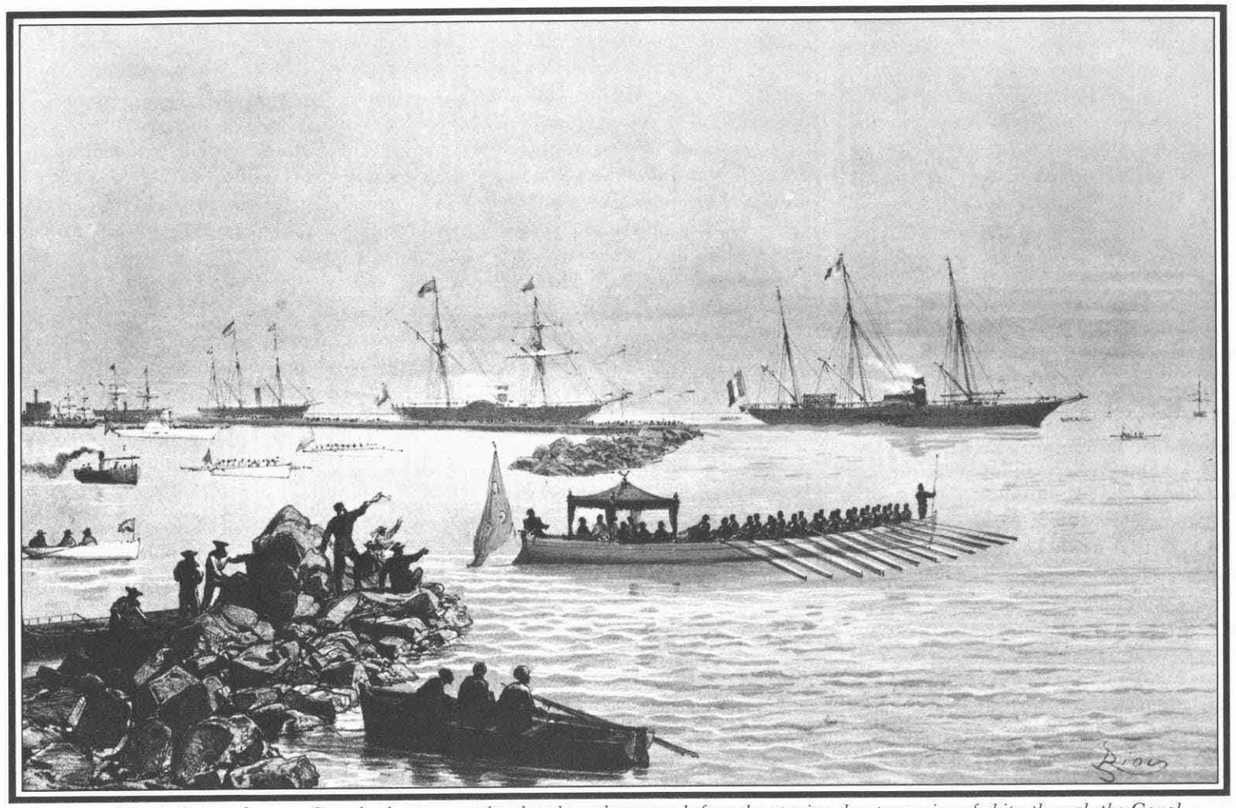
Crowds throng both banks of the Canal and an artist sketches the ships on opening day.

SUEZ: The Opening

From the notebook of a 19th-century Englishman: a lively account of one of the great events of the century.

WRITTEN BY EDMUND S. WHITMAN

Illustrations: Courtesy the Compagnie Financière de Suez.



A royal party is rowed across Suez harbor to a yacht already under steam before the opening-day procession of ships through the Canal.

Sir Frederick Arrow, a droll and delightful Englishman, decided to visit Egypt as he sat in his office in Trinity House on a humid mid-summer day of 1869, studying an elaborately hand-lettered invitation from Ismail, hereditary Khedive and Viceroy of Egypt. Would Sir Frederick be the honored guest of the Khedive during special ceremonies marking the historic opening of a canal linking the Mediterranean with the Red Sea, Europe with India, Occident with Orient? In anticipation of a favorable reply it would be the Khedive's pleasure to provide first-class accommodations, with all expenses paid, from London to Egypt and return.

Why was he being so honored, Sir Frederick may well have asked himself. And he thought he might have the answer: he was Deputy Master of Trinity House, a corporation whose objective had been, since 1514, to report to the Crown on all matters having to do with the safety and progress of navigation. Anything having to do with buoys, lighthouses, beacons or pilots was his responsibility, as well as studies on canals and channel markings. Furthermore, as a former master of a merchant ship in the East India trade, he would seem to be well qualified to make some penetrating observations about the brand-new Suez Canal. Yes, that was undoubtedly the reason, and Sir Frederick would indeed be the Khedive's honored guest.

He would also be an informal but observant chronicler of these events and the author of a delightful little pamphlet which is today tucked away in a folio in the New York Public Library. It is called *Fortnight in Egypt* and relates the reactions of an aimiable, humorous and possibly typical 19th-century Englishman to one of the great events of the century.

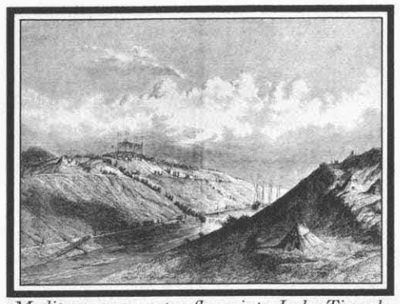
The pamphlet, however, was to come later. At the time Sir Frederick simply thought he would be expected to jot down his impressions. "I'll be expected to take along my notebook," he mused, "and that I will."

The first entries are routine. Sir Frederick made his way to Marseilles, boarded a P & O paddle steamer called *The Delta*, disembarked at Alexandria and began to sample what his notebook describes as "exceedingly good" living. But the tone changed as Sir Frederick plunged into the extraordinary activities which Egypt's generous Khedive had laid on to mark the opening of the great canal.

One of the events, Sir Frederick learned, was the presentation of Verdi's *Rigoletto* at Cairo's glittering Opera House, a substitute for *Aida*, which the composer had agreed to write for the opening but failed to complete on time. The Khedive, of course, was disappointed, but not nearly as much as Sir Frederick was on learning that there were two classes of invitations for the opening: one for Royalty and one for the likes of Sir Frederick.

"Below the salt, eh, Arrow?" he counseled himself. "Well so be it then." Or so he said. In fact, Sir Frederick would spend the rest of the trip, and much of his notebook, on improving his position.

On November 14th Sir Frederick was informed that he would transit the canal aboard the Egyptian vessel *El Misr* which,



Mediterranean water flows into Lake Timsah

he noted after boarding, was "a large, powerful screw vessel, fitted up as a passenger vessel, but loaded with gilding and beautiful wood carving, her occupation being, about once a year, to take the Viceroy's entourage for a sniff of the briny." Sir Frederick stayed aboard *El Misr* until it docked at Port Said, departure point for the fleet of ships whose voyage would officially open the canal, and the meeting place for many of the crowned heads of Europe.

The inner harbour was full of vessels which were going to go through the canal ranged in 2 lines with the sterns to the banks and heads pointing to the middle and a large water space between the lines. The southernmost vessel on the port side was the Khedive's Mahrousseh, *with a berth vacant south of her. North of her was the Emperor of Austria's yacht; then H. M. S.* Psyche *with the English Ambassador; and then came the yachts of Prussian and Dutch Royalty, and of Ambassadors of other countries and a general mixture.*

It was now nearly 9 am and all eyes were turned seaward as the taper spars of the French Imperial yacht began to show up. When within easy distance she turned to the westward—slowly passing along the Austrian ships, pointed for the sternmost ship of the English line, passing slowly along them, dipping the Imperial standard as she passed the Admiral, and then round his bows between him and our vessel. Of course the usual compliments were paid; yards were manned, the men cheering as she passed; the ships dressed; the cannon thundering a royal welcome, while the strains of "Partant pour la Syrie," *emerging through the noise and smoke, could be heard at intervals . . . . The Empress* [Eugénie of France] *standing on the bridge looking radiantly happy, and might well be proud of her reception . . . . At last the yacht was moored in the vacant berth next to the* Mahrousseh, *the first ship ready to lead into the canal.*

Sir Frederick, however, was equally interested in what was happening on shore. He devoted several pages to an amused account of the entertainment that was offered: the bears dancing clumsily to the music of the hurdy-gurdy and a magician who managed to extract up to 12 live chicks from his mouth. But he was horrified by a fire-eater who exhaled a six-foot plume of flame, a chap who gulped live scorpions and a silver-gilded acrobat who walked a tight-rope with a baby lashed to either ankle. These, for a 19th-century Englishman, were a bit much.

In the meantime, he goes on, the smoke of battle from various 21-gun salutes had cleared and he returned to the waterfront, determined to make some sort of report on the number of British flags he could identify through the haze. There, amid a boatload of guests from his ship, he noticed a pompous and beribboned individual whose frock coat and distinguished hat were so obviously British that Sir Frederick decided he could hazard a comment.

"A bit difficult to pick out the Union Jack in all this smoke," he said, sidling up to this party.

"Humph!" was the reply, as the little man rose on his toes, much after the manner of a rooster crowing on a picket fence. "What you are witnessing is an extravagant and needless waste of gunpowder, much of it British! For your information we have a dozen ships out there, sloops-of-war, gunboats and ships of the line, all belching smoke. Outrageous. I can assure you, Parliament shall hear about this upon my return!"

"Your Lordship,"—Sir Frederick's voice was full of respect—"I didn't realize that a person of your rank should have been a passenger on *El Misr*. That is a matter that should be put to rights at once. Permit me to introduce myself, Sir Frederick Arrow of Trinity House."

"Trinity House, eh?" His companion looked at him with a minimum amount of consideration. "And what do you propose to do about it, eh?"

Sir Frederick was thinking fast and scanning the harbor diligently.

"Well, having with me a Member of Parliament . . . "

"And a member of the Admiralty Committee to boot. Lord Heatherton's the name."

"And a member of the Admiralty Committee to boot, it seems to me that you and I should seek sanctuary for the canal trip on that ship right there!" And he pointed to the *Psyche*, a trim dispatch boat directly ahead, flying not only the Union Jack but also the Admiral's emblem.

The two lost no time in commanding a gig to take them back to *El Misr* where they quickly convinced the affable Master that they should be transferred to the dispatch boat *Psyche*.

Sir Frederick had no trouble convincing his stuffy Lordship that he, Arrow, should give the view halloo when their gig came alongside. "Beneath your dignity to shout and all that . . . ."

"Quite." The reply was crisp and affirmative.

"Ahoy!" Sir Frederick bellowed through cupped hands. "Englishmen here. Guests of the Viceroy, both. Request permission to come aboard."

"Identification," came the staccato word from the bridge.

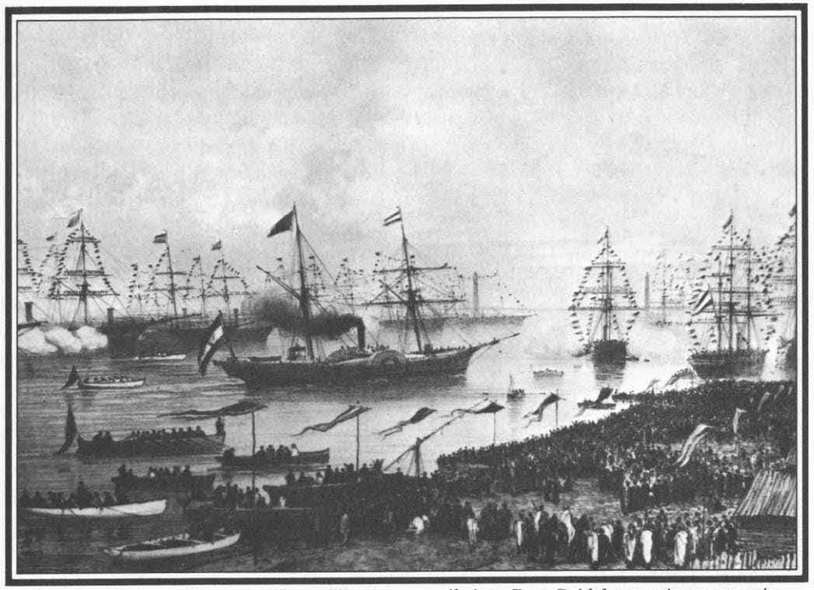
"Lord Heatherton of the Admiralty Committee and . . . ."

His voice was drowned out before he could complete the identification. "Lower the ladder!" roared the voice from the bridge and moments later, according to a characteristic entry in his journal, he and the member of the Admiralty Committee were "back on British soil once more."

His base temporarily secured, Sir Frederick sallied forth the next day to shore, where in the rear of the pavilion which was to shelter the Empress herself he jotted down a glowing description of the official opening of the ceremonies:

Sound of cannon now heralded the arrival of the Emperor of Austria, the Prince Royal of Prussia, with Prince Louis of Hesse, Prince Henry of the Netherlands, and his fair sister, and various Ambassadors. Presently, however, appeared the most prominent of the guests in the

Bird's-eye view of Canal from southern end.



Austrian Emperor Franz Josef's paddle steamer sails into Port Said for opening ceremonies.

person of the Empress, who arrived in her barge, fully manned but towed by a steam launch. When the vessel glided up to the platform everyone pressed forward as she, taking the Khedive's hand, fairly jumped out of the boat amidst loud and continuous cheers and vivas; bands playing and troops saluting; and very handsome and imperial she looked; she had a hat and feather, and, like all French women, was bien chaussée *as well as* bien gantée.

Giving his arm to the Empress, the Emperor of Austria led the way, the Khedive accompanying them to the kiosk fitted up for the religious ceremony.

Crowds followed; black coats and blue, red coats and green. There were 3 kiosks; one for the exalted portion of spectators—one for the Mohammedan—a third for the Christian rites.

The Mohammedan was the first, reading from a scroll in his hand. Following the Moolah, the Christian ceremony with the Patriarch of Jerusalem celebrating a grand Mass. There were the usual number of magnificently vested priests and acolytes, with here and there in the crowd, coarse brown-gowned, rope-begirt and tonsured Carmelites.

When the Almoner to the Empress, Mons. Bauer, in violet robe, made a very good address on the great changes that may be effected by the Canal, and the wonders already achieved in its construction; and with a grateful tribute to De Lesseps, whom he likened to Columbus.

For benediction there was a grand triumphal arch, and under it a large platform on which there were at least 1,000 people in every description of uniform, and blazing, except for the English, with decorations. The Khedive, who looks better out of than in uniform, was standing on a part cleared for the reception of the most distinguished guests, with Abd-el-Kadir [an Algerian leader] *in his white Arab bernous, with hood drawn over his head, only partially showing his face, and M. De Lesseps standing by his side. What a contrast the men were! It was worth the journey to see the grand old Emir, with his eagle eye, coal-black beard and impassive face; a true son of Ishmael . . . De Lesseps (all honour to his name) on the other hand, personified the civilization which his energy had created; while his open, handsome face, and frank, genial manner bespoke the man whose energy and fascination are irresistible, and attracts to himself all with whom he is brought in contact. At a little distance, amongst a group of ladies, was pointed out to me his fiancée, to be his bride as soon as the fetes are finished."*

It was at this juncture that Sir Frederick's eye was taken by an English naval officer in white who was standing nearby. Arrow wormed his way over and tapped him on the arm.

"Arrow here. Am I mistaken in believing that you served with me in the *Monarch* in East Indian waters some years ago?"

"Indeed you are not mistaken," whispered the delighted officer. "Captain Wood now of the gunboat *Rapid*. And no matter where you may be berthed, you are to board my ship and share my quarters!"

And thus it was that Sir Frederick made an unobtrusive transfer from the *Psyche* to the *Rapid*, where he and his former shipmate immediately began plotting ways and means of improving the British flotilla's position behind the *Aigle*, the imperial yacht, for the historic voyage through the canal.

There has been some confusion as to the places ships were to take. Our captain, however, was not the man to stop behind when he could get ahead and, after consulting the Admiral, made a push for his place in the first arrangement, which he very cleverly effected with the exception of being behind a great, lumbering vessel of the Messageries Imperiales, rejoicing in the appropriate name of La Peluse. *She turned out to be the veritable* bête noir *of the squadron. It was rather good fun to see the flutter our appearance created; half-savage, half-amused looks and remarks of those who thought they ought to be ahead of us, and were trying to get out of the line.*

From seven o'clock on, Arrow and the captain, telescopes in hand, kept a careful eye on the *Aigle*. If she decided to slip through the massive obelisks that marked the official entrance to the canal a few minutes before the appointed hour, an alert navigator with anchors aweigh might just possibly slip closer to the head of the lines.

Alas, it was not to be. At five minutes before the hour they spotted a flag-festooned Egyptian launch delivering the great Frenchman De Lesseps to the *Aigle's* starboard ladder. They were able to follow his movements to the bridge deck where he joined the waiting Empress.

"Not a chance," said the captain. "Eugénie's a stickler for punctuality . . . and so is De Lesseps."

Precisely at eight bells the *Aigle's* paddles started churning and at once the harbor exploded with cannon, sirens and whistles and the historic voyage was under way, the *Aigle* leading, followed by the *Greif*, flying the flag of the Emperor of Austria, the Prussian frigate *Grille*, with the Crown Prince aboard, a fourth ship flying a Swedish flag, and a huge Russian warship called *Yachut*, her massive tier of guns swung ominously over the *Rapid*'s bow; the *Walk*, a trim Dutch gunboat with Prince Henry and Princess Sophia aboard, the *Psyche* and, to the annoyance of Sir Frederick and Captain Wood, *La Peluse*. The *Rapid* tried to slip into line ahead of *La Peluse*, Sir Frederick wrote, but could not without being rammed.

"Well, anyway," Sir Frederick said, trying to cheer up his glum shipmate, "Britain has top representation aboard the *Psyche*, and we're not far behind. Cheer up! Who knows what the future may hold?"

It was a prophetic remark, for shortly after *La Peluse* went aground and the *Rapid* was able to move ahead—to Sir Frederick's obvious glee.

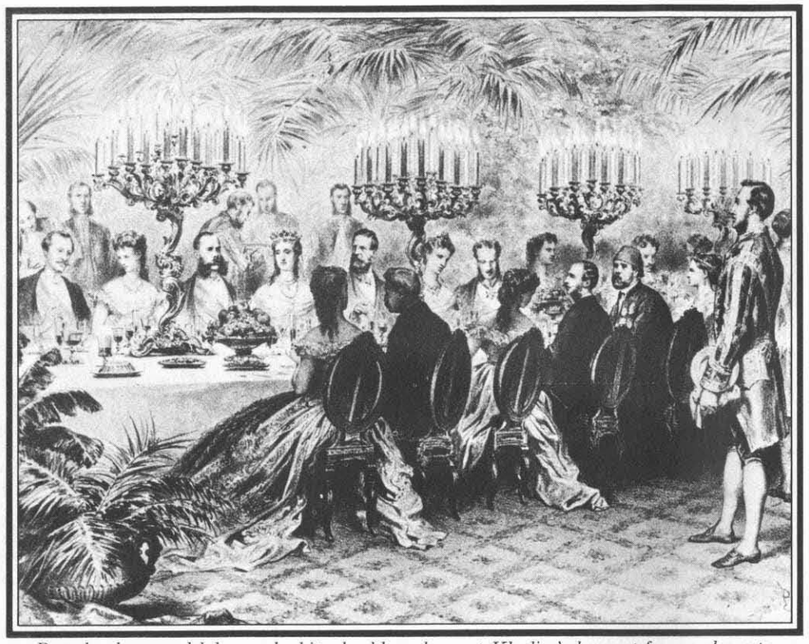
About 2 pm we got fairly going through the canal, watching the while to see that the ships ahead kept their proper distance. The wind kept blowing us down, and to counteract this we had to go astern. One of the ships ahead kept straight enough but she backed too much and La Peluse *had to gradually back up on the starboard side of the channel, leaving half of its width clear.*

When we saw our friend shoot on the starboard side of the channel and go fast aground, we knew our chance to pass had come. Luckily La Peluse *did not tail out, but as she began screwing astern to get off, as long as she did this we were obliged to stop, as well as all behind us. After some time it was found that she could only be got off by anchor, and then we prepared to pass her. Sending the Master ahead to see if there was room and water depth,* Rapid *slowly drew up to her and without ever touching her, went clear.*

The conduct of our gallant allies, the French, belied their reputation for politeness to the last, refusing to give the least help when courteously asked to brace their yards around, and as we came abreast, greeting us with a volley of bad language which was only stopped when an English party on board of her drowned it by cheering us.

Once we had a clear field, nothing ahead of us and nothing astern; for La Peluse *effectually blocked the way for the rest by getting a little more athwart, and so we rattled along at nearly full speed.*

It was evening when the *Rapid* dropped anchor alongside the *Psyche* in Ismailia but Sir Frederick scribbled on, quoting the Book of Isaiah ("The desert shall rejoice and blossom as the rose") to express his astonishment at what the Khedive had built on empty sand wastes in a matter of days. There were two hotels, five cafés, a theatre, a chapel in addition to an elaborate mosque, a hospital, a telegraph office and the stately villas and, to crown it all, the triumphal arch that graced the Quay Mehemet Ali and the Khedive's stately palace where, that evening, a great dinner would be served.



Potted palms, candelabra and white shoulders gleam at Khedive's banquet for royal guests.

Ashore in Ismailia throngs of wildly cheering spectators streaming across the boulevard immediately engaged his interest and set him scribbling frantically again. There were, he says, dervishes, dancers, shaikhs, fellahin, women and children as well as jack tars, foreigners in mufti, a scattering of notables and, in their midst, the Empress Eugénie, in floppy hat and yellow dress, stunningly mounted on a white camel. As if that were not enough for one day, he was destined to bump into Emile Zola, Henrik Ibsen and Théophile Gautier holding literary court beside the sparkling fountain.

But it was the final entry for the day that capped his climactic day and night ashore. This was the one covering the dazzling reception in the Khedive's palace, to which he had a specific invitation.

I arrived at the Palace punctually at nine o'clock in the evening, suitably attired in dress coat and cocked hat, as the invitation clearly stipulated. At once I was herded into a vast, dusty room where I was joined by a shuffling, disorganized herd of frock coats, tall hats, uniforms, turbans and oriental dress.

He went on to report that there was a big expanse to the right, set apart from the rest of the vast chamber by massive and closely placed potted palms.

"For royalty I presume," he said to a perspiring American.

"Yep. That's where Her Majesty will feed later on, after all the other high muck-a-mucks have arrived. Most of the folks will wait here and peek in through the bushes, but not yours truly. I saw her on her camel this morning. That's enough for me. I came here tonight to eat."

"You'd better try to find a seat then," Arrow suggested. "I understand that the Khedive has given orders that only those seated shall be served."

But even as he spoke, Sir Frederick could see that every seat at every long table was occupied, with groups clustered behind each diner. At first he was horrified, but eventually hunger overcame his upbringing. Like hundreds of others he began to snatch food and drink from trays even as they were being brought to the tables. It was the start of an incredible episode in which officers with blazing decorations snatched fruits and vegetables, gentlemen seized whole roast chickens and tore the drumsticks off and those without seats reached right over bare shoulders and gold-encrusted epaulets to wrest food from the plates of those who had seats.

As the hour approached midnight, royalty began arriving and as places of vantage to watch were at a premium, Sir Frederick had to fend off encroachment from jack-booted Prussian officers. Fortunately, he reports, some ballet dancers on the marble tables nearby distracted them.

Meanwhile, to the blare of martial music, the Empress Eugénie made her entrance and took the place of honor at the center of the table magnificently arranged by Europe's most famous culinary artists. The napery was snowy, the stemware polished to perfection and scores of silver candelabra towered well over the diners, bathed in flickering candlelight.

The menu, according to a helpful waiter that Sir Frederick came across, was equal to its setting: lobster, saddle of veal, fish and turkey flanked by all sorts of galantines, one molded in the form of the imperial yacht. There were also boned woodcocks on crisp toast points, clear turtle soup served in wafer-thin bowls and embellished with croutons. Service included *petits fours*, a whipped cream soufflé and cake pyramids whose frosted sides were garnished with almonds and green pistachio nuts. Coffee was served from gleaming urns into the tiniest and most delicate cups imaginable.

Fortunately for Sir Frederick, who was bone tired by then, Eugénie's toast was much shorter than the menu:

Thirty-five centuries ago, the waters of the Red Sea drew back at the word of Moses. Today, at the order of the sovereign of Egypt they return to their bed. Let us then raise our glasses to the two great figures involved: the man who spoke those words in the presence of the Prince of Wales when the canal dyke was breached—Ferdinand de Lesseps—and the one at whose order it all transpired—our most exalted and distinguished host—Ismail Pasha, Khedive of Egypt.

With that, Sir Frederick repaired to his

The Canal was cut through ridge at Serapeum.

beloved British sanctuary aboard the *Rapid*, and perhaps a post-midnight foray into her galley. But tired as he was, he still found time to make a last-minute entry into his journal:

The ball was fearfully crowded—a few ladies indeed. Our middies had the word that to make up for the paucity of the female element the Khedive had imported from Cairo the entire corps de ballet and ladies of the opera.

What makes one doubt the creditability of this story is that the prevailing type were exceedingly plain, while at the opera in Cairo I was struck with the good looks of the Terpsichorean troupe.

The Empress, Emperor of Austria, Khedive etc. occasionally perambulated the big room. You can imagine the crush when I tell you that an unfortunate marine was hustled up against Sa Majesté *and actually trod on her robe.*

She looked very regal with her diamond necklace and tiara but somehow I liked her appearance better in her morning dress.

The supper was a caution—very good to those who got any—they wanted to be very 'pucka' and serve no one not seated; which was rather hard, there not being seats for one half. But it is dangerous work playing with hungry men and in the end we made a very substantial, if not recherché *supper.*

The next day an atmosphere of lethargy seemed to prevail, the aftermath, no doubt, of the Khedive's gargantuan reception. The Empress, nevertheless, managed to make it to a ceremony at which she bestowed the Grand Cross of the French Legion of Honor upon De Lesseps and not long after most of the fleet moved to the south end of the Bitter Lakes for the final leg of the trip to the Red Sea. Except to note proudly that the *Rapid* held its place in line, Sir Frederick wrote little that day but on Saturday, November 20, got back to work.

Last day of our progress. The clear atmosphere and glorious dawn, which threw a flood of golden light over the desert, was an augury of the success with which our journey closed.

On the western shore might be seen the long, tapering sails of the Arab boats on the sweet-water canal, while between them and the margin of the lake were visible the telegraph poles on the railway and a train puffing and smoking along; three channels of communication utilizing the greatest wonders of modern science were before us . . . .

Daylight as I write this—a general bustle—steam and smoke from funnels showed that an early start was widely contemplated.

He was interrupted by the Captain, who came in to report that the British contingent had been able to regroup en masse, thanks to the wide Bitter Lake, and would therefore accomplish the objective that the Admiral had held from the outset: to group 12 British vessels, directly aft of the *Grief*. It was, as Captain Woods put it, the "only way to demonstrate that Britannia rules the waves."

After that, the journal goes on, the ceremonies drew quickly to a close. The British flotilla managed, as planned, to stay together as the ships navigated the final 14 miles to the anchorage at Suez but, Sir Frederick says unhappily, not quite as triumphantly as the Admiral had expected.

The Admiral's flagship, next vessel but one to us, followed suit and the Admiral had the pleasure of bringing his flag from the Mediterranean into the Red Sea with a greater contingent than any other nation represented in the transit.

As we did not arrive until two hours after the grandees all the salutes of welcome were over.

Still, all was not lost. When the *Greif*, on her way to the new dock, serenaded the British fleet with *Rule Britannia!* the *Rapid's* crew came up with an idea over high tea to recruit a band and glee club from the British ships and send them on a cutter to serenade the Empress. The idea was accepted and not long after a boatload of Englishmen pulled alongside the *Aigle* and brought Eugénie to the rail with rousing renditions of the popular French military air *Partant pour la Syrie*, the stirring *Marseillaise* and *God Save The Queen*. When it was over Eugénie blew kisses to the British flotilla while her ship's company on the deck below waved and cheered.

It was, Sir Frederick wrote, a notable "*finis*" to a notable fortnight. There remained now only a gathering of British officers and guests aboard the Admiral's flagship. There, he writes, toasts were proposed to Queen Victoria, the Prince of Wales, Empress Eugénie, the Emperor of Austria, Ferdinand de Lesseps, the Admiral, Captain Wood and even poor, below-the-salt Sir Frederick, whose record of the ceremonies remains one of liveliest accounts of Suez ever written.

Edmund S. Whitman, a former vice president of the United Fruit Company, is the author of several books and a former columnist for the old New York World.

The blocked Canal and (inset) the first ships through after clearing operations.

SUEZ: The Reopening

"After eight years of stagnant stillness one of the world's greatest man-made waterways was alive and open again."

WRITTEN BY ROBERT ARNDT
PHOTOGRAPHED BY TOMAS SENNETT, THE ASSOCIATED PRESS AND THE U.S. NAVY

On June 5, 1975, amid the echoes of a 21-gun salute, a seven-ship flotilla eased through ceremonial gates in mid-Canal waters off Port Said and steamed south through the Suez Canal to Ismailia in a five-hour voyage marking the official reopening of the Canal exactly eight years after its closure during the 1967 Arab-Israeli war.

For the maritime nations of the world, for the Middle East and, above all, for Egypt, it was an event of historic proportions. And if the ceremonies were less spectacular than those marking the original opening of the Canal *(see page 4)* *they were, nonetheless, impressive.*

The ceremonies began on a symbolically decorated platform in the Canal just in front of Port Said's ornate Canal Authority building overlooking a waterway again alive with ships in the sparkling sunshine. There, Egypt's President Anwar Sadat, impeccable in a white admiral's uniform, surrounded by some 600 dignitaries, opened the "Day of Joy" by signing a document transferring the Canal from military to civilian control. Then, amid a din of horns, whistles and martial music uncomfortably mixed with the recorded tones of Um Kalthum, the late, revered Egyptian singer, he boarded the destroyer that would carry him to Ismailia. Minutes later, as the last salvo of the destroyer's 21-gun salute echoed across the Canal's blue water, the stately 10-knots-per-hour voyage began and one of the world's greatest man-made waterways was again open.

Behind the ceremonies, of course, was another story: the long, technically challenging and highly dangerous task of clearing the Canal of the debris of war. This task, largely overlooked during the tense, uncertain negotiations that preceded Egypt's decision to reopen the Canal, is the subject of this article.

In 1974, after two brisk wars and seven years as an embattled frontier, the Suez Canal, a waterway that once carried a sixth of the world's trade and an even greater proportion of its oil, had been reduced to a stagnant cesspool. The days when the Canal had earned Egypt an annual $220 million in foreign exchange were over and there were those who said that they were over for good. That seven years of disuse and the development of supertankers—fast, efficient and cheap—had made the Suez Canal obsolete.

The government of Egypt and the Suez Canal Authority disagreed. They believed that rising costs of building, operating and insuring supertankers had begun to cancel the original economies of scale soon after 1970. They knew that the closure of the Canal had cost the world nearly eight billion dollars in increased shipping costs alone and that East African and Asian nations had lost a further four billion in calculable export growth. There was no question, the Authority decided, that the Canal was still viable.

The problem was: could it be cleared? The Canal, 102 miles long and 38 feet deep, was jammed from one end to the other with sunken ships, boats and trucks loaded with ammunition; solidly blocked at one point with a causeway; and strewn with live artillery shells and unexploded grenades. Even worse, the Canal and its sloping banks were thought to be carpeted with mines. Clearance, therefore, would not only be difficult; it would also be extremely dangerous.

"We believed," said Ahmad Amar of the SCA, "that up and down the waterway, and on both banks, were innumerable mines, many of them of the very latest types, some of which would explode even with a decrease of light."

The first priority was the waterway itself, but how? The Canal was so chockablock with wreckage that any minesweeper would tear its bottom out before it had gone a mile, and there could be no question of trying to sweep mines with divers. Only aerial minesweeping, it seemed, could interrupt this cycle of impossibilities.

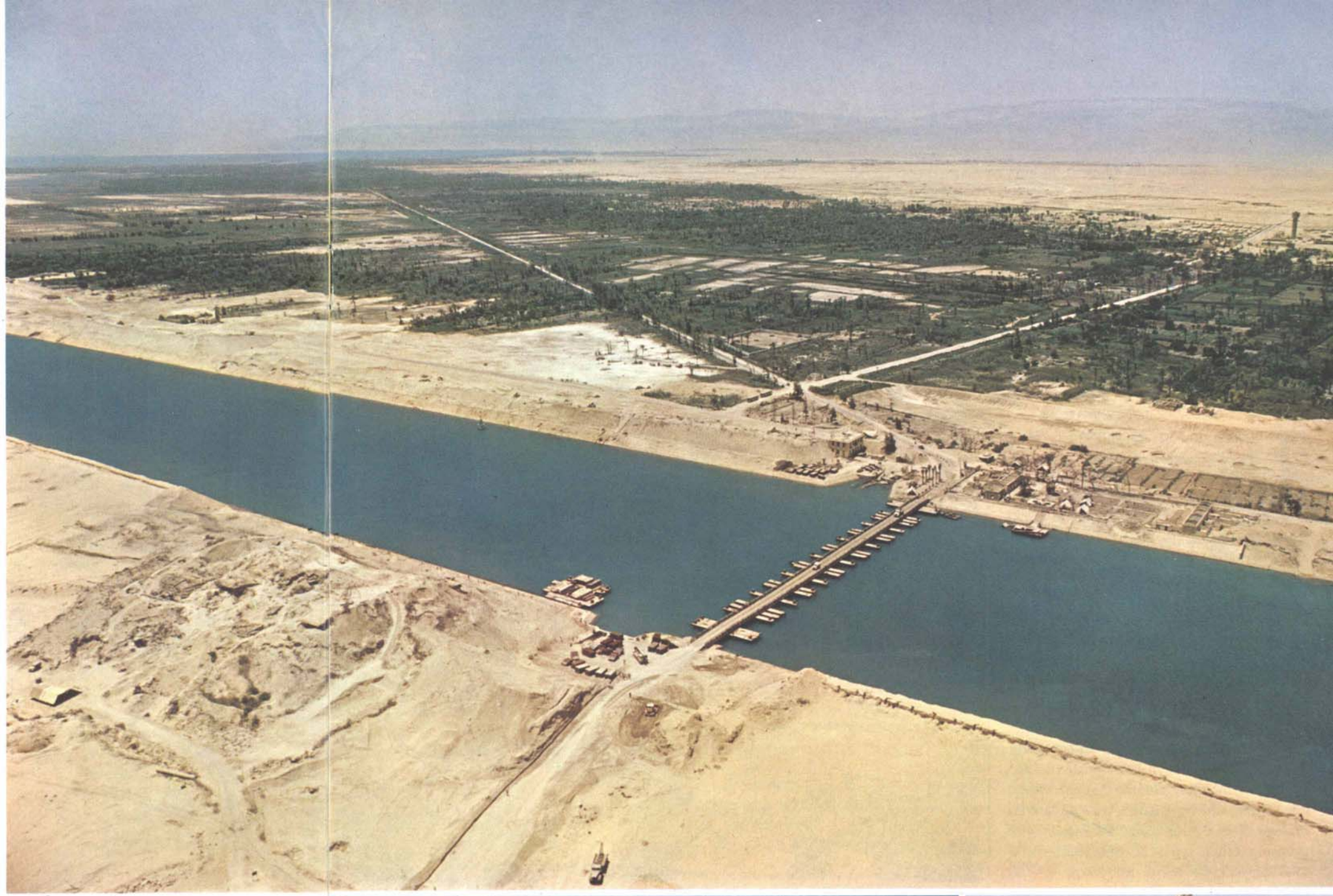
From that very practical suggestion grew the series of complex, coordinated international operations that, over a year's time and at a cost of nearly $10 million, succeeded in restoring the Suez Canal to utility and profitability and reopening it to the world's shipping.

Under overall Egyptian direction, the undertaking involved primarily the Egyptian, American, British and French navies, the Suez Canal Authority and its salvage divers, other divers of the Cairo police force, American Army personnel and two commercial salvage companies—one American, one German. The varied capabilities of this polyglot force had to be harnessed and coordinated into an effective whole if the work was to go forward at all, and that delicate task was handed to U.S. Admiral Brian McCauley, who had only two years ago run Operation Endsweep, the clearing of Vietnam's Haiphong harbor of American mines.

The same methods were used in the Canal as in Haiphong. Airlifted in giant C-5A Galaxy transports from the U.S. east coast came a dozen Sea Stallion twin-turbine helicopters, and from the Mediterranean came the 18,000-ton helicopter assault ship *Iwo Jima* to take up its role as floating command center and landing pad. The helicopter squadron, specialized in minesweeping, brought along two cryptically named items from its largely secret bag of tricks: a MOP and a Sled. Both were devices intended to be towed over the surface of the water by a low-flying helicopter and to detonate any mines near their path by "imitating" the effects of a passing ship.

Of the two devices, the MOP—for Magnetic Orange Pipe—was the simpler. It was just an eight-foot length of heavy magnetized iron pipe, capped at the ends and painted international orange; its field was sufficient to detonate magnetic mines. The Sled was more complex both in its uses and in its effects. It was a high-amperage electrical generator driven by a compact gas-turbine engine. Engine and generator were mounted together on a hydrofoil platform that could be air-towed at high speed; whether the power generated was used to set up a magnetic field that could detonate a mine, or instead produce an acoustic or other kind of signal, no one would say—but whatever mines were there would be taken care of.

"It's a little like fly fishing," said a Navy officer. "You figure there's something there, so you choose your fly, drop it in, and see if you get a bite." And the minesweepers



The Canal was made impassable by a causeway (above), jammed with sunken vessels and vehicles and strewn with unexploded missiles. Ships that had been in transit at the time of hostilities were stranded in the Bitter Lakes (near right) for more than seven years, some of them leaking oil into the stagnant waters. The wrecked city of Suez (far right) at the southern end of the Canal was a stark reminder of the bitter fighting that had closed the international waterway to shipping since 1967.

displayed a true angler's patience. They had 121 square miles of waterway to cover, and flying an average of almost 13 hours a day over 39 days, they swept 7,616 linear miles, chopping up and down the Canal from Port Said to Suez, waiting for the bang and the waterspout that would mean a "bite" at last.

As it turned out, there were no bangs. The only result of over five weeks of helicopter minesweeping of the Canal was the discovery that the waterway had never been mined.

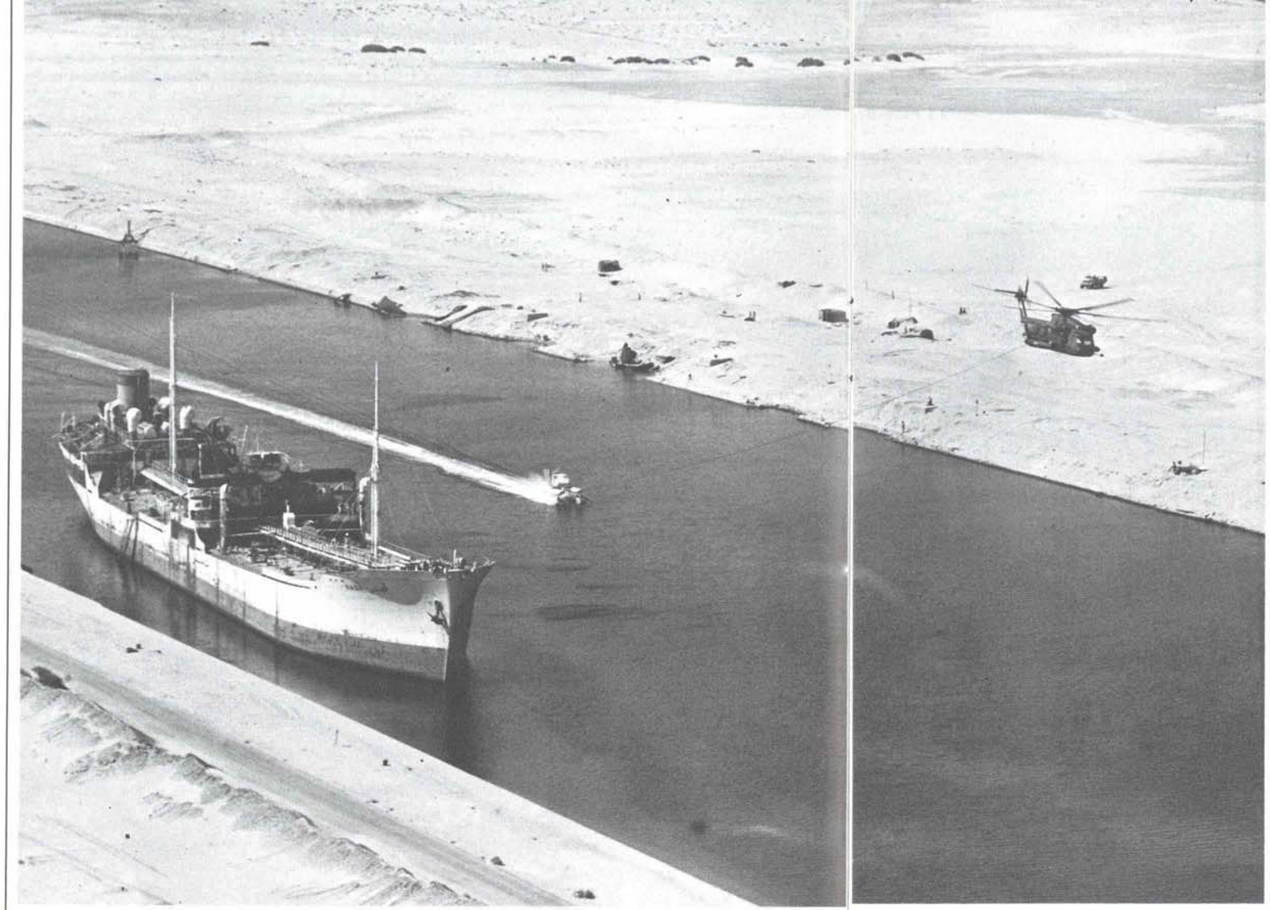
The banks, however, were. As American and Egyptian engineers put it, land mines were sown so densely that "even the snakes were moving on tiptoe."

The first step was training. The American engineers and a group of Army specialists in handling and disposing of unexploded ordnance trained 173 Egyptian officers in mine detection and disposal, and stood by while the officers trained nearly 1,700 Egyptian troops.

This group then began the dangerous and delicate job of clearing a strip of land 800 feet wide along both banks of the Canal and over its full 102-mile length. In the desert heat, they worked by inches, finding one anti-tank or anti-personnel mine per 10 square feet on the average and carefully excavating it—often with brushes as the safest tool—then disarming it; where safety allowed, the mine might be detonated on the spot. Over the three months that the operation lasted the Egyptian troops found an average of one mine *every six seconds*—not counting other types of ordnance—for a total of 686,000 mines and some 13,500 other satanic devices. Finding them cost the lives of 96 men.

With the Canal banks clear, the more difficult phases of the work could begin. For even though unmined, the Canal's waters concealed great dangers. For seven years, thousands of artillery shells had been fired across those waters—and into them; trucks carrying war materiel had driven across pontoon bridges—or fallen from them; bombs had fallen and planes and missiles had crashed in the Canal, and all had been concealed in its waters; amphibious tanks had sunk. The result was what one French officer called "a military bouillabaisse"—and a perfect paradigm for the synonymy of "war" and "waste."

But it had to be cleared—and not only of



Top: U.S. Navy helicopter tows minesweeping Sled past Egyptian merchant vessel in Canal. Center row: the MOP, or Magnetic Orange Pipe (left), for detonating mines is attached to helicopter; a hydrofoil device (center) detonates an explosive ordnance in background; maintenance crews (right) service helicopters between mine-sweeping flights. Left: Egyptian divers hunt for mines near Port Tawfiq.

the larger obstacles. Even a hand grenade left on the bottom could one day be brought up by a dredger and explode, and anything that protruded significantly from the bottom meant, potentially, a damaged ship and the closure of the Canal sometime in the future. It had to be cleared—and the united efforts of four navies were not too much for this job, which combined dullest routine with sharpest danger, and high technology with the most primitive grope-and-grab methods.

Four full sweeps were made of the Canal, each slower and more painstaking than the last. Simultaneously with the first of them, American Explosive Ordnance Disposal diving teams gave specialized instruction to divers of the Egyptian Navy, training them in pattern-search methods and in the safe handling of the live and utterly unreliable explosives that they would be dealing with. Small naval vessels equipped with special sonar devices then began the search, starting at the Canal's southern end and working north toward the Little Bitter Lake.

The special devices—side-scanning sonar—were exceptionally precise instruments. "You just about have the name and address of anything lying on the bottom there," said a technician proudly. The essential phrase in that sentence is "just about." For although it could pinpoint both the shape and location of objects, it could not tell whether the find was a hand grenade or a beer can, or distinguish between a tangle of old steampipe and a 250-pound bomb. Only a diver, working on the bottom by sight and feel, can distinguish—sometimes—between a find that must be brought up and disposed of, or whether it can be safely left where it lies.

As to the "address" of the find: the diver underwater cannot locate himself as exactly as the surface sonar ship can, and he must still search a certain area of the bottom to find the object he knows is there. When one adds to these difficulties the facts that a heavy falling object can easily bury itself in the sand and ooze of the bottom; that there is, in parts of the Canal, a certain amount of silting; and that underwater visibility is limited, then the difficulty of the job faced by the Egyptian Army divers becomes clear. For all the expert technological help they had, their work, in the end, came down again to the "grope, grub and tremble" of the salvage divers' motto. In this way they worked the length of the Canal, from Suez north, then skipping from the Little Bitter Lake to Port Said and working south again from there to the Great Bitter Lake and its channel.

Almost every find on the bottom and banks of the Canal had to be brought up or countercharged—blown up—where it lay. Hand grenades by the hundreds were bundled with wire, interspersed with explosives, snarled with a tangle of fuse and set off in a few feet of muffling water, and the tall white waterspouts punctuated the Canal's length like momentary exclamation points. When the whole length of the Canal had been swept, the Egyptian-American team went back to those areas that had been particularly rich in finds and searched them again, and again found a rich harvest.

At the same time, starting at the north end of the Canal, the Royal Navy began two sweeps of its own. Whereas the Egyptian-American operation had covered all the banks and bottom of the waterway, the three British mine-hunting ships made a sonar and magnetometer search of that part of the banks and bottom below the 25-foot depth line, producing a map of every metal object that protruded more than two feet. Then the Royal Navy's Fleet Clearance Diving Team swam pattern searches along the banks between the 10 and 25-foot depth lines: slow and arduous work that was for that very reason one of the most reliable search methods.

Pattern searches of this kind could not be used in very deep water, because the divers search by sight and touch as they swim and so need the light that does not penetrate to deeper levels. Swimming slowly in line abreast, the divers orient their sweep by a guide rope strung along the bank of the shallow side of their search area; eyes and fingers investigate possible finds, which are carefully extracted, passed into shallow water and parked by the guide rope for later disposal. Swimming speed is very slow, and slowed further as any find is dealt with; setting up the guide rope for each dive takes further time and currents in the southern half of the Canal limited diving to a few hours a day. So it is not surprising that the Royal Navy took seven months to complete the job but also found an important per-

centage of the ordnance disposed of. At the cost of one "minor accident with injury," and by a process that a diver later described as "long periods of boredom interrupted by moments of sheer terror," the two British sweeps found 27 large bombs, 508 small ones, 78 missiles, 517 anti-personnel mines, 209 tons of TNT in trucks and lighters, seven planes, three tanks, 15 trucks and personnel carriers, six bodies, and assorted explosives of Russian, American, Egyptian, Czech, Israeli, Danish, British and Swiss manufacture.

Then the French Navy took its turn, concentrating on the banks between the 10-foot line and the high-water mark. Again, large quantities of explosives were found, especially land mines that had probably fallen in from dry areas of the bank.

By the end of 1974, the four navies had found and disposed of nearly 10,000 pieces of live ordnance, as well as some 800 major non-explosive obstructions. More than 100 of the latter were boats and barges, but the list also included 15 aircraft wrecks, oil drums, large anchors, buoys and beacons, tanks, trucks and amphibious vehicles, and 127 pontoon-bridge sections. It also included the most difficult obstruction of all: the Deversoir Causeway.

This was a permanent, 65-foot-wide roadway across the Canal near the town of Deversoir just north of the Great Bitter Lake. It had been built during the 1973 war by simply filling in the Canal at that point, and its foundation consisted of barges. There were 29 of them, each of 75 tons weight and each loaded with another 75 tons of sand and stone. They had been drawn into position and sunk in sequence so that they lay atop each other like a row of dominoes that has been knocked down. On top of them and alongside was a jumble of giant four-ton concrete blocks—12,000 of them—and an unknown quantity of rubble, stone and earth fill. And as a final complication, the length of the causeway, even more than the sites of the pontoon bridges elsewhere on the Canal, was lined with trucks, tanks and other vehicles that had fallen or been blown off the roadway while crossing. All of these had to be presumed full of explosives—indeed, nearly all were—and every one had to be cleared before the causeway itself could be dismantled. But it was done. Grenade by grenade, truck by truck, step by step the preliminary obstructions were located, raised and disposed of.

Then came the causeway itself. For this job the Suez Canal Authority's own salvage divers teamed up with an expert group of divers from the Cairo police force, working in the closest, most painstaking cooperation with land-based cranes and lifters to remove the 50,000 tons of concrete block by block. Then, with less finesse and a great deal more muscle, the barges followed, and for the second time since 1869 the waters of the Red Sea and the Mediterranean were joined.

Besides symbolism, there were some very specific reasons to be glad of that. There had been hardly any time since the Canal clearance operation began in April of 1974 when divers had not been at work in the Great Bitter Lake, and operations there had been more difficult than in any other part of the Canal. The channel through the lake, where it includes a bypass and two widenings of irregular shape, was no longer marked by buoys and beacons and its boundaries had in effect to be relocated for every dive until new markers were placed. But more distressing still, as one of the divers said, "There was something down there!"

He was not talking about explosives, or man-traps of wreckage but about a strange water layer that hung above the bottom of the lake, 45 feet below the surface. It was impenetrable to sonar and, more remarkably, impenetrable also to the divers who were sent down to find out why the sonar wasn't working. "They couldn't swim through it: they just bounced off," said an American naval officer.

The Navy, however, was determined to sink if it couldn't swim, and so more divers went down, carrying a total of 40 pounds of lead around their waists. When they surfaced they had the answer.

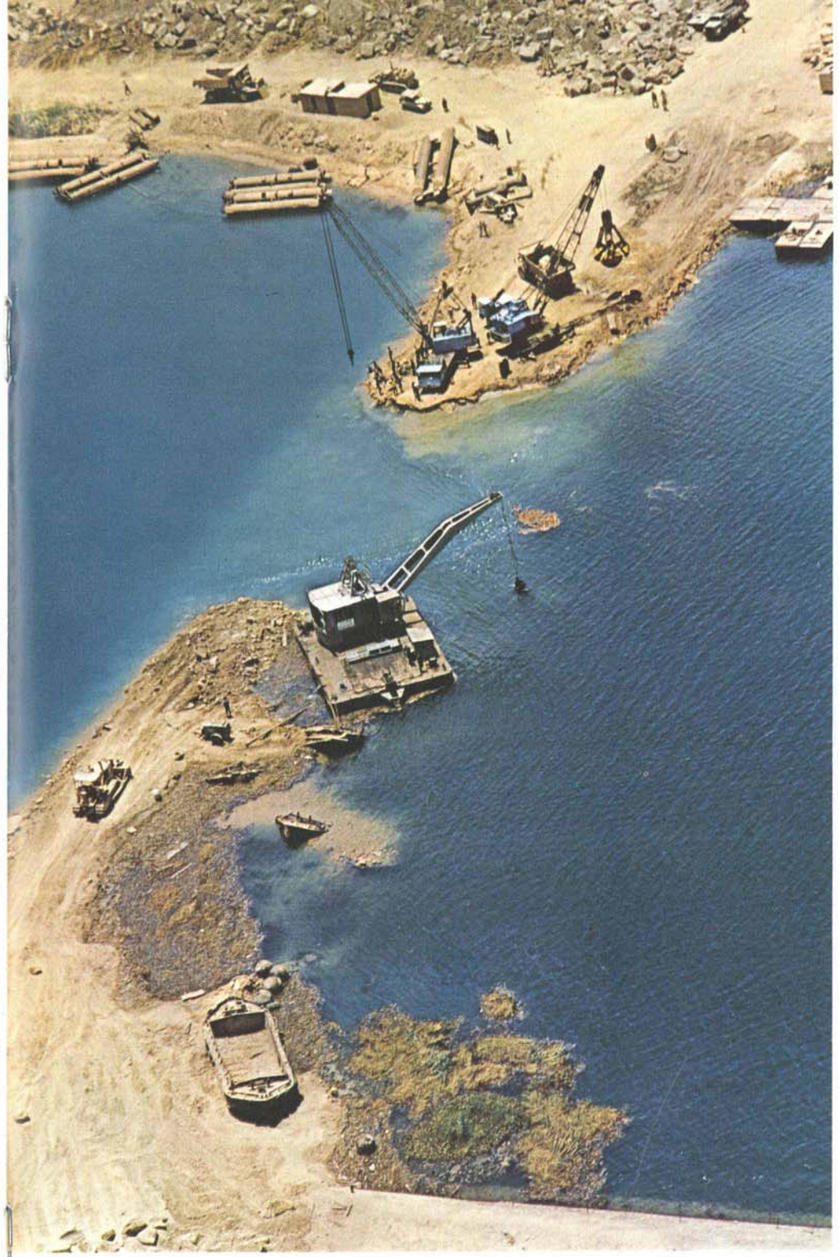
The discrete layer was a mixture of heavily saline water plus oil—leakage from the fuel tanks of the 15 ships that the 1967 war had trapped in the Bitter Lakes. The normal currents in that part of the Canal, which ranged up to five knots, had been cut off by the Deversoir Causeway, and in the suddenly still waters this opaque, salty layer had been able to form—though even now no one is sure by what process. Until the layer began to break up and disappear after the removal of the causeway its effectiveness as an obstacle was high: the British minehunters had to be called in to sweep the area with magnetometer equipment when the American sonars proved useless. Unfortunately for the divers, who in any case could work there only during the few daily hours of slack water and had to be hosed off thoroughly after every dive, over 10,000 magnetic contacts were found under that layer of oily water; every one of those that was in the fairway had to be investigated, collected, detonated or dumped in other parts of the lake—a wearisome process that lasted well into the first part of this year.

The rest of the Canal, north and south of the lakes was largely clear of explosives by mid-August of 1974, by which time the various national authorities agreed that the waterway was finally safe enough for "the real muscle work" to begin: the raising of the ten major and over 60 minor wrecks that still blocked the Suez Canal.

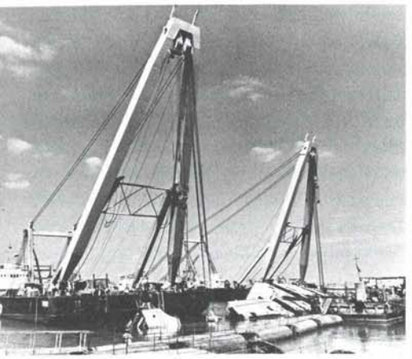
The 10 large wrecks averaged 2,500 tons each, with the largest 6,700 tons. They were spotted over the full length of the Canal, in some cases with only 200 to 600 yards of maneuvering room between them. Several had been carefully scuttled across the axis of the waterway to block traffic more efficiently; only one lay in a bypass area of the Canal where salvage craft could creep around it.

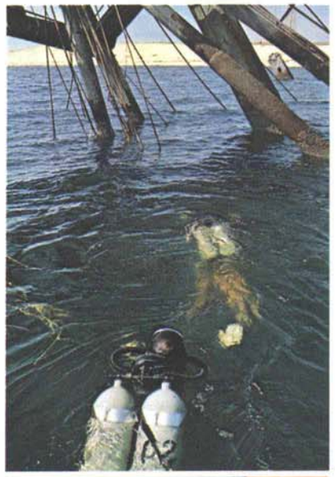
To move them the Canal Authority employed two YHLC's—curious lifting devices that seemed both efficient and incompetent at the same time, rather like animals so overspecialized by evolution that they can do only one thing—but that superbly. Brought 6,000 miles to Suez from storage at Subic Bay in the Philippines—a trip that took 58 days under tow, because they have no engines of their own—the YHLC's (their naval designation) are the only two heavy-lift craft in the world, a pair of ungainly black hulls with no superstructure to speak of. But between them they can lift 4,000-ton chunks of sunken ship, working from a position moored side-by-side on either side of the wreck. Divers pass lines between the two YHLC's, passing them under the wreck; the lift craft then ballast down like submarines, flooding large hull tanks with seawater.

Then the lines are gathered in tight and cinched up, and the seawater tanks are



Junk littered the banks and was crane-lifted out of the shallows of the Canal (above). More cranes dismantled the causeway (right above), allowing the trapped water to flow once more. At right, Egyptian divers emerge from the murky depths where a nearly impenetrable layer of heavy saline water mixed with oil made it hard for them to touch bottom.





gradually pumped out; as the two YHLC's rise higher in the water the submerged wreck is raised to a corresponding degree until it hangs below and between the lift craft a few feet off the bottom. In the Suez Canal operation, the entire unit—two YHLC's and the wreck—would then be towed off to the Great Bitter Lake where, far from the fairway, the wreck would be deposited in a wet dump area designated by the Canal Authority.

Workers at this stage also used a pair of German giant floating cranes that had one great advantage over the lift craft: the cranes could lift their burdens clear of the water and dump them on the banks.

In use, the cranes too depended on salvage divers, not only for the attachment of lifting tackle but also for the far more difficult work of breaking the larger wrecks into pieces small enough to lift. In the case of the largest wreck, the 6700-ton Egyptian passenger ship *Mecca*, the 584-foot-long wreck was cut into 10 pieces. Carefully placed shear charges were used: explosives placed opposite each other, slightly offset, so that when they were detonated simultaneously they acted like the opposing blades of a pair of scissors, shearing the wreck into two parts. After each 50-foot piece of wreck had been sheared off, the German cranes—named *Thor* and *Roland*—picked it up and placed it on the Canal's east bank. The same method was used for the *Ismailia*, a 1,500-ton Egyptian freighter, reduced to five small mouthfuls for the patient heron-like cranes.

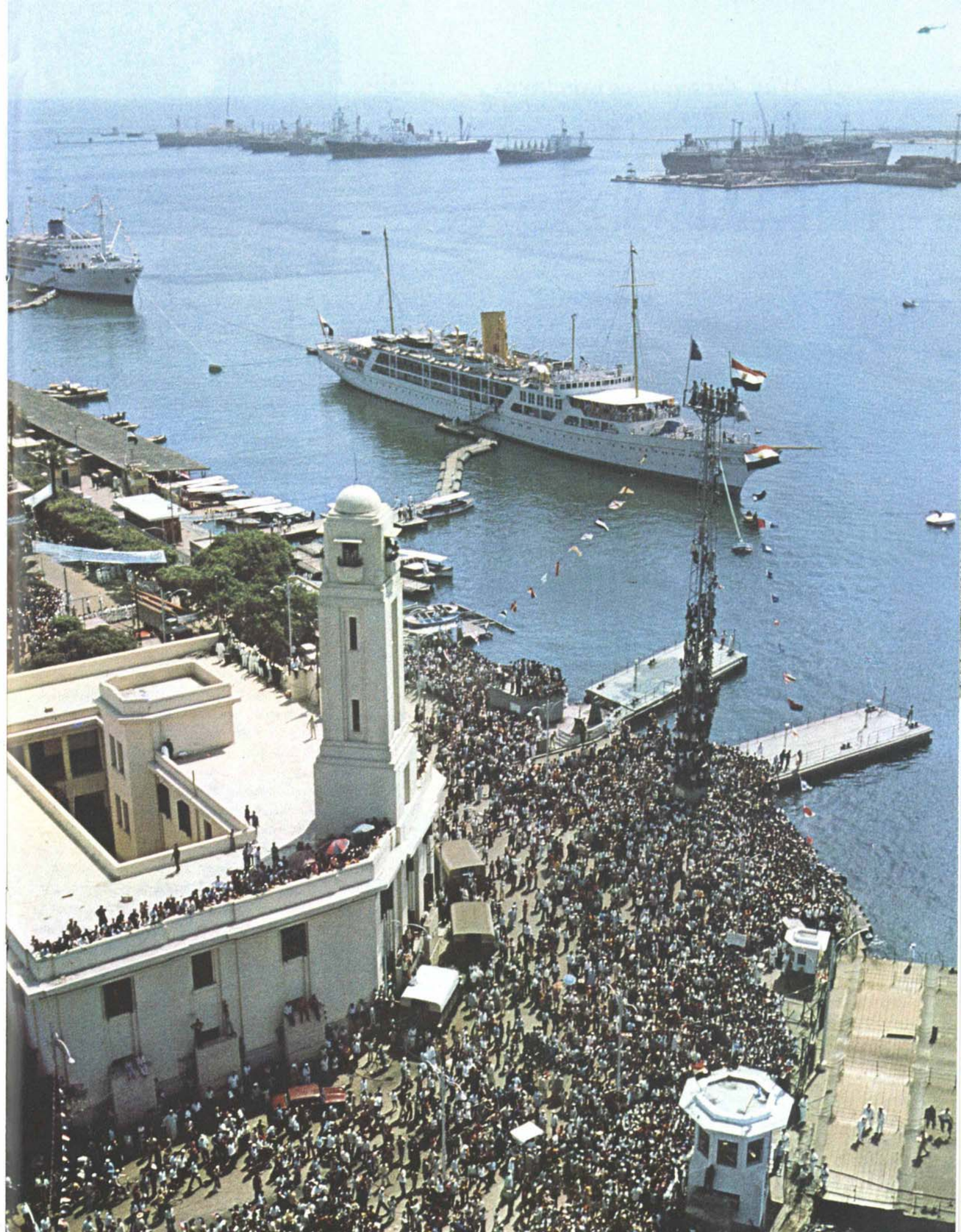
Some minor wrecks presented problems, like a series of four 1,200-ton ships—two tugs, a tanker and a dredge—that the lift craft and the cranes raised, moved and dumped in the Great Bitter Lake or another dump area in Suez Bay. Others were somewhat more complex: the tanker *Madg* had to be blown in two before it could be raised; and a 3,800-ton concrete caisson—almost a floating shipyard, measuring 203 by 44 feet and drawing 40 feet of water, scuttled south of Lake Timsah—had to be cut into seven pieces before the YHLC's could carry it off. But all the wrecks were dealt with, one after the other, along with a swarm of smaller irritations: 35 miscellaneous obstacles in Port Said harbor, ten near Kantara, eight others in Suez harbor, and sunken buoys, motorboats, stone-crushers and bridge sections that dotted the Canal in profusion.

Throughout all this, and well into the early part of this year, Egyptian-American diving teams still swept and reswept sections of the waterway, each time slightly increasing the security of the Canal's future traffic at ever-greater costs in effort and time; foundations were poured and sites readied for the re-installation of the radio-telephone and other communications systems that will coordinate the passage of ships again when the waterway is reopened; the Canal Authority's 230 professional pilots, many of whom had found work as far afield as Hong Kong during the years since 1967, were warned that their services would be needed again soon; the SCA headquarters and operations buildings in Port Said, Ismailia and Suez were rebuilt and began filling with the buzz of bureaucratic activity; and in the Egyptian press, in the Authority's Cairo boardrooms and in similar rooms around the world, the levels of transit fees and other questions of transport economics came up for debate.

One by one, the ships of four navies weighed anchor and slipped away; piece by piece, heavy equipment was shipped off to be refitted for other mammoth jobs elsewhere in the world, and technicians flew home, their work done. A full year of technical skill and sheer dogged tenacity had conquered, bite by bite, a complex problem that had been thought too big a mouthful for anyone to chew. After eight years of stagnant stillness one of the world's greatest man-made waterways was alive and open again.

Robert Arndt, a free-lance writer based in Istanbul, contributes regularly to Aramco World.

Left: Wrecked passenger ship was removed by cranes (top). Divers check a bridge partly sunk in Lake Timsah (below). Right: On reopening day, crowds gathered at the Suez Canal Authority Building at Port Said to watch the departure of the destroyer carrying President Anwar Sadat from the Mediterranean end of the Canal to Ismailia, at about the half-way point, in the procession that officially reopened the recently cleared waterway.



Why, the scientists wondered, did this lovely creature vanish every year - and where?

THE SALMON ARAB

WRITTEN BY PETER HARRISON SMITH AND TORBEN LARSEN
PHOTOGRAPHED BY PETER HARRISON SMITH

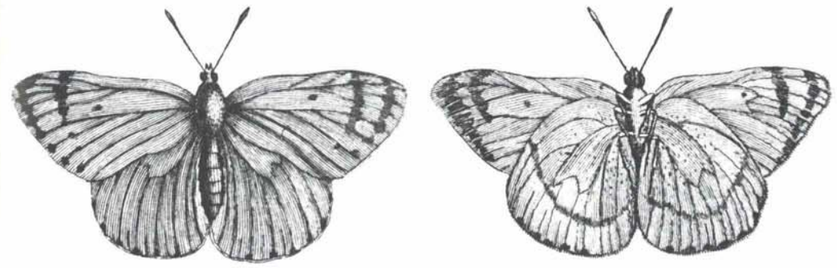
The Salmon Arab has scales and wings, but is neither fish nor fowl. Despite its name, the Salmon Arab is a butterfly. Its non-scientific name signifies its color, a salmon pink, and its home, the Arab world, for the Salmon Arab may be found from Yemen, Oman, and Saudi Arabia in the south to the mountains of Iraq and Turkey in the north. Its habitat is enough to qualify it as an Arab, although it also lives in the deserts of India and Africa. But its life history was, until recently, something of a mystery.

The Salmon Arab was first noted by a Westerner in the autumn of 1804, when the French explorer G.A. Olivier described it in his book *Voyage dans l'Empire Othoman*. It was a rare and splendid creature he found in a pine forest near Beirut, Lebanon. He described it in detail in the formal scientific Latin used by natural historians of his period. In a free translation, he described his new discovery as having "a pale salmon color with two crenelated black bands and black eyespots on the forward wings, trailed by feather-soft white edges on the rear wings."

Olivier also gave the Salmon Arab its scientific name: *Colotis fausta*.

In 1899, 95 years after Olivier described the Salmon Arab, Professor and Mrs. Day of the American University of Beirut began a new study. They were baffled by a mystery concerning its life history, for in winter and spring the Salmon Arab disappeared from the Mediterranean coast of Lebanon, Syria and Palestine and could not be found in its dormant stages of eggs or chrysalids, or as a caterpillar. Despite intensive study, the Days failed to explain the mystery of the whereabouts of the Salmon Arab for eight months of every year. Only recently has the mystery been partly solved, revealing the remarkable story of the life of the Salmon Arab.

In August of each year, the Salmon Arab



A gourmet among butterflies, the Salmon Arab **(Colotis fausta)** feeds exclusively on capers and migrates over long distances in the Middle East to find its favorite food in season.

is found in abundance in the mountains of Lebanon, Syria and Turkey, fluttering pinkly among the rocks where the caper shrub spreads its spiny, trailing branches. The red-stemmed, thorny caper *(Capparis spinosa)* is a Mediterranean plant with green buds and white flowers. The flower bud of the caper is used as a condiment by human beings in salads, scrambled eggs, and *steak tartare*. Man prefers his caper buds pickled in vinegar, but the Salmon Arab likes them just as they grow in nature. Even so, the Salmon Arab is something of a gourmet among butterflies, for its closest relatives feed upon such mundane things as cabbages and beets.

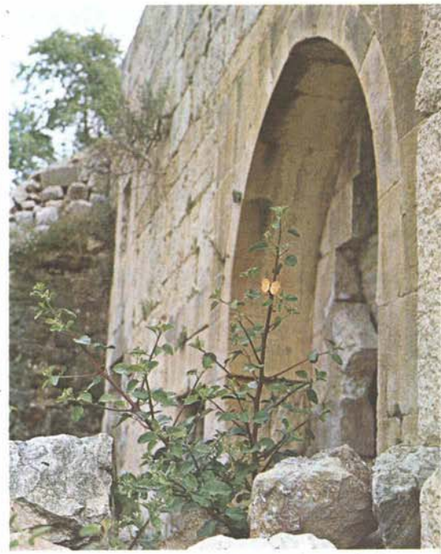
The caper plant is an accommodating host, for it is prolific, growing wild on stony soil amid piles of rock, and is often seen growing out of the chinks in the stones of Arab mountain houses. As winter approaches, however, the caper ceases to bloom and becomes dormant, and by mid-November the Salmon Arab disappears from among its haunts.

In itself there is nothing unusual about this disappearance, for most butterflies are on the wing only briefly each year. They spend most of their life-cycle in the form of eggs, caterpillars and chrysalids. Some spend as much as nine months in one of these stages. The mystery confronting Professor Day was that from November to July none of these three stages of the life cycle of the Salmon Arab could be found in the Arab countries of the Mediterranean coast, which were thought to form the natural habitat of the butterfly. Hence, the dedicated Days spent hours vainly trying to detect which of the stages the butterfly used for surviving winter and, most important, where. For all their efforts, and for all practical purposes, the Salmon Arab was extinct from each December onwards.

It was only recently that lepidopterists have discovered the secret of the Salmon Arab and the discovery justifies the butterfly's last name. The tale begins when, in November, the butterflies commence a journey southwards, taking them from the green mountains of the Mediterranean coastline. They fly south through Syria, Lebanon, Palestine and Jordan and down across the deserts of Arabia. Between December and April, the Salmon Arab reaches Oman, Yemen and southern Saudi Arabia. It probably finds a hospitable climate in the green and clement mountains of Saudi Arabia's 'Asir Province on the Red Sea. Here the climatic conditions are favorable in winter and the caper plant is in abundance. But by April the scorching sun dries out even the hardy desert species of *Capparis* and the butterfly is forced to retrace its migration back towards the north once again. Probably no individual butterfly ever makes the entire journey all the way to Iraq, Lebanon or Syria, a distance of more than 1,600 miles. Rather, it is likely that there are one or two broods in the area between Mecca and Riyadh in Saudi Arabia before the butterfly recommences its northward flight.

Theirs is a purposeful flight in a dead-straight line just above the ground (one intrepid butterfly collector recounts having chased a single butterfly for nine miles). By May the vanguard will have reached Iraq, and by June, the Mediterranean coastline. When climatic conditions become perfect and the supply of capers is plentiful, they will stop, mate and lay their eggs. In only six weeks, in early August, the new brood is on the wing.

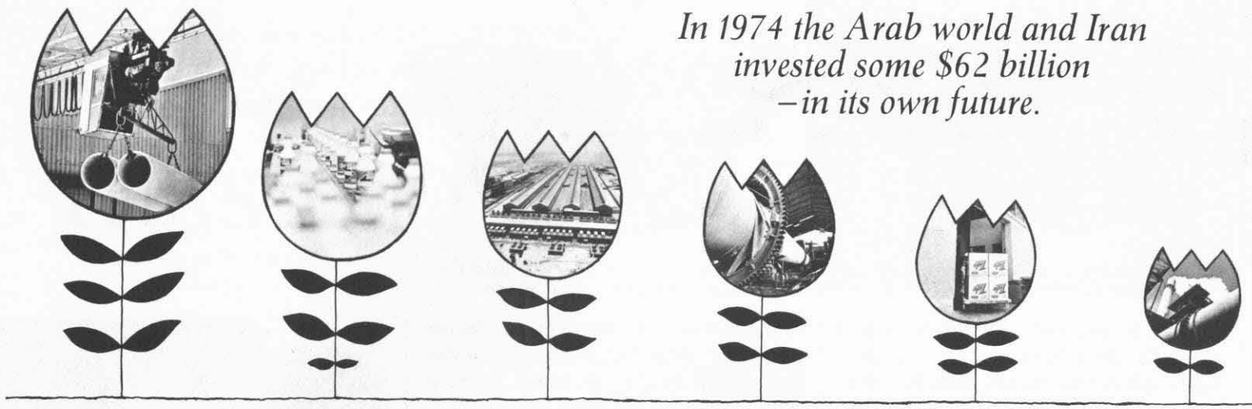
These shimmering creatures cannot survive winter in the northern Arab countries, nor can they survive summer in the Arabian Peninsula. The successive broods live a life of perfect adaptation, in perpetual movement back and forth as the season dictates,



wringing the maximum benefit from their different environments. Without the remarkable adaptability the Salmon Arab would soon be extinct.

Virtually nothing is known of the physiological mechanisms which allow the butterfly to accomplish this annual triumph. Very little is known of the timing, routes and numbers of their migratory movements. All this information awaits discovery by researchers in the tradition of Olivier and the Days.

Peter Harrison Smith is Assistant Professor of Art and Art History at the American University of Beirut and works summers as a professional photographer in the Middle East.



In 1974 the Arab world and Iran invested some $62 billion –in its own future.

PLOW-BACK: The Use of Arab Money

WRITTEN BY BERTRAND P. BOUCHER AND HARBANS SINGH

Throughout 1974 alarming bulletins from the Middle East suggested that the "oil-rich" Arabs and their Iranian neighbors were about to buy the Western world. Solidly financed by multiplying oil revenues, the story went, Arab governments and businessmen were able and ready to seize control of airlines, hotels, banks, steel mills and other industrial plants in Europe and America.

According to a study we recently launched, however, the facts are quite different. Contrary to popular belief, the Arab nations and Iran are investing impressive amounts of money in their own countries. Between December 1973 and January 1975, for example, they committed somewhere between $38 billion and $62 billion to the construction of pipelines, railroads, highways, steel mills, cement plants, petrochemical complexes, entirely new communities, desalting plants and numerous other projects representing virtually all sectors of economic life.

The study we made, furthermore, was limited to publicly announced agreements between Middle Eastern governments and private firms or trading associations. It did not include the normal flow of trade, the establishment of branch plants and offices by foreign firms, or contracts signed by private Middle Eastern nationals with foreign firms, all worth many additional millions of dollars. But the results, nevertheless, provide clear evidence of an unprecedented effort to funnel the so-called petrodollars into massive programs of industrialization.

The heart of the study was 1,039 contracts signed by governments of various states between December 1973 and January 1975. Most of the states produce oil but others were included as well for purposes of comparison, to preserve a regional unity and to include oil money that might have been channeled through them. The 18 nations are: Morocco, Algeria, Tunisia, Libya, Egypt, Lebanon, Syria, Jordan, Saudi Arabia, Kuwait, Iraq, Iran, Bahrain, Qatar, United Arab Emirates, Oman and the two Yemens.

As shown in Table 1, these 18 nations awarded contracts whose known value exceeded $38 billion during the 14 months under review. Almost half, or 43 percent, of this vast sum was allocated to new industrial projects—projects which ranged from simple facilities to produce matches, cigarettes, baby food, wooden boxes, vinegar, date syrup, glass and metal containers, to vast multimillion-dollar complexes to assemble trucks and buses, construct ships, process metals, or to produce petrochemicals,

TABLE 1:
MAJOR CLASSIFICATIONS, ARAB AND IRANIAN CONTRACTS DECEMBER 1973-JANUARY 1975

Project Classification	Value	Percent
Industrial	$16,247,510,000	43
Transportation	7,899,552,000	21
Armaments	4,539,047,000	12
Construction	2,658,572,000	07
Electric power and related facilities	2,356,591,000	06
Agriculture	1,751,848,000	05
Misc. equip. and services	868,320,000	02
Communications	793,946,000	02
Water projects	422,849,000	01
Studies, surveys, plans, etc.	297,451,000	01
Industrial machinery and equipment	127,950,000	—
Raw materials, foodstuffs	76,800,000	—
	$38,040,436,000	

to modernize, to become independent of Western industrial powers. And the inference is obvious: a determination to master modern technology, to provide new sources of employment and to improve living standards.

The pattern of industrial development is suggested in Table 2. Middle Eastern governments are placing the biggest proportion of their petrodollars in steel, petrochemicals, cement and oil refining. During the 14-month period contracts were let for 25 cement, 12 iron and/or steel, 28 petrochemical and two aluminum-reduction plants.

The impact of these contracts will be substantial. At the moment the 18 nations produce more than 2.6 million tons of steel. But by the early 1980's, more than 39 million tons of steel will be poured annually and Bahrain, Oman, the two Yemens and, possibly, Kuwait will be the only countries not engaged in steel production. Most of the new mills, furthermore, have been designed to use natural gas to produce sponge iron directly from iron ore and then convert the sponge iron into steel in electric-arc furnaces. As this system completely bypasses the expensive, environmentally destructive blast-furnace operation, and is based on abundant and previously unused natural gas, the use of the new sponge-iron process makes solid economic sense. Indeed, their large reserves of natural gas may well give the Arabs and Iranians a competitive edge in world steel markets. It is even possible that Middle Eastern sponge iron could be exported to steel-making areas, such as Japan and Western Europe, where the high cost of coal and pollution control

TABLE 2:
BREAKDOWN, ARAB AND IRANIAN INDUSTRIAL CONTRACTS, DECEMBER 1973-JANUARY 1975

Industry Type	Total Number of Projects	Known Cost of Projects
Primary metals	18	$6,497,112,0000*
Chemicals and chemical products	33	5,790,667,000
Stone, clay and glass	40	1,750,520,000
Petroleum and petroleum products	9	623,612,000
Rubber and plastic products	11	589,553,000
Transportation equipment	11	302,691,000
Fabricated metal products	10	212,877,000
Food and food processing	39	172,116,000
Electrical equipment and machinery	4	165,000,000**
Paper and paper products	3	74,596,000
Miscellaneous manufactures	4	35,076,000
Textiles and textile mill products	3	30,290,000
Tobacco products	1	3,400,000

* Includes $3 billion French-Iranian contract for a steel mill, electrical switch-gear plant and other projects.
** Does not include switch-gear plant as noted above.

poses serious problems for the processing of crude-iron ore.

Table 2, however, also points up weaknesses in the area. The paucity of contracts for plants producing machinery, electrical goods, scientific equipment and transportation equipment underlines the non-industrialized nature of most of the region. Such industries require technicians, highly skilled workers and large, sophisticated, affluent markets. It may well be decades, for instance, before plants are established to produce the machinery and equipment for the region's growing petrochemical industry. Although autos are assembled in a number of countries and buses are assembled in Iran, Algeria and Lebanon there are no supportive industries to supply parts to the assembly plants. On the other hand, a beginning is being made in Morocco, Egypt, Lebanon, Iraq and Iran, where contracts have been let for the construction of plants to produce tires, batteries, valves and miscellaneous auto parts.

The contracts let also suggest the present level of industrial achievement in individual countries and their potential. Saudi Arabia, for example, having both financial reserves and untapped mineral resources, has the potential to become an industrial power. For quite different reasons so does Lebanon, whereas Tunisia, Libya, Jordan, Bahrain, Oman and Yemen still have considerable catching up to do.

At the moment, however, Algeria is the country to watch. With a 30 percent rate of industrial growth in 1973, Algeria is giving top priority to industrial development to help solve its chronic unemployment problem. Industrial contracts awarded between December 1973 and January 1974 included six cement and concrete products plants, eight petrochemical complexes, two paper and paper-products plants, three transportation-equipment plants, one oil refinery, one textile complex, one steel mill, two electrical-equipment plants, two plastic plants, four building-products factories, one leather plant, one ceramics plant, seven food-processing plants, one tube mill and one container plant. The total known value of these contracts exceeded $3 billion. Algeria could become the industrial leader of Africa within a few decades.

In reference to Table 1, it is clear that although investment in armaments is heavy —12 percent of the total known value—and might be much more, an overwhelming proportion of investments is in infrastructure: bridges, seaports, airport improvements, housing, sewage and water systems, electrification, communications and education and health services. Contracts for harbor deepening and expansion, new docks, dockside cranes, storage sheds and the like were common during the 14-month period as just about every major port from Casablanca to Aden to Umm Qasr is undergoing major improvement to handle the increased shipping load. Two large hospitals and 100 clinics for Saudi Arabia are included in the general-construction category, as well as new hospitals and clinics for Bahrain, Iraq, Morocco and Kuwait. There are also dozens of projects throughout the area to expand telephone service, to lay down transmarine cables, improve earth-satellite communication systems and expand radio and television networks. These investments in infrastructure are extremely significant. They help to modernize all sectors of the economy and improve living standards; they also provide the fundamental base upon which further development can take place—but at a more rapid pace.

Another fact that emerges from the study is the extent to which Western nations and Japan are benefitting from these expenditures. As Table 3 shows, a solid 86 percent of contract money went to the developed nations, with France, the United States, West Germany, Italy, the United Kingdom and Japan the leading participants in that order. Together those nations accounted for more than

TABLE 3:
DISPOSITION OF SOME ARAB AND IRANIAN CONTRACTS BY NATIONAL HOME BASE:

Rank		Total No. of Contracts	No. of Contracts with Values Given	Known Value of Contracts (in $000s)
	Western Democracies			
	(Total)	685	479	33,027,271
1	France	90	53	10,121,049
2	United States of America	83	60	6,073,992
3	West Germany	46	33	4,278,724
4	Italy	33	23	3,436,856
5	United Kingdom	283	195	2,837,116
6	Japan	44	31	1,781,348
7	Austria-West Germany-Belgium-U.S.-France	1	1	850,000
8	Sweden	31	21	708,665
9	Italy and United States	1	1	700,000
13	U.S.-United Kingdom	1	1	400,000
14	Greece	6	6	260,960
15	Australia	3	2	248,750
16	Denmark	2	2	233,260
17	Japan-U.S.-West Germany	1	1	233,000
21	United States-France	2	2	129,750
24	France-United Kingdom	1	1	104,850
25	Denmark-Italy	1	1	102,963
26	Switzerland	13	10	101,959
27	France-West Germany	2	1	100,000
34	France-Belgium	1	1	84,600
42	Netherlands	9	7	43,554
44	Canada	5	4	38,955
47	Belgium	5	4	30,374
48	Ireland	3	2	23,766
49	New Zealand	3	3	17,355
50	Finland	2	2	17,202
51	France-Japan	1	1	16,867
56	West Germany-Luxembourg	1	1	11,494
57	Austria	5	4	11,333
60	United Kingdom-Sweden	2	1	8,155
62	West Germany-Switzerland	1	1	6,440
63	Denmark-Greece	1	1	6,000
64	United Kingdom-Italy	1	1	5,243
67	United Kingdom-Netherlands	1	1	2,691
	Eastern Bloc			
	(Total)	117	79	$1,053,637
12	Yugoslavia	20	16	424,774
18	U.S.S.R.	25	15	176,129
23	East Germany	7	5	119,657
31	Hungary	19	15	92,820
32	Rumania	14	8	89,563
37	Bulgaria	6	4	61,280
41	Poland	21	11	45,326
43	Czechoslovakia	4	4	43,242
71	Poland-U.S.S.R.	1	1	846

$28 billion of the approximately $38 billion awarded.

With over $10 billion worth of contracts, or more than 25 percent of the total amount awarded, France was substantially ahead of the other nations. The French, furthermore, participated in joint ventures with other nationals to the tune of another $1.2 billion and were the leading contractual partners in Algeria, Iraq, Iran, Kuwait, Morocco, Qatar and Tunisia. The United States was first in Lebanon and Saudi Arabia, Great Britain in Bahrain, United Arab Emirates and Yemen (San'a) and West Germany in Libya.

Two other facts emerge too. One is that the United States, despite its size, industrial efficiency and aggressiveness and its increasing need for export markets, was sixth in sales of non-military goods and services. The other is that the Soviet bloc has done even worse. Contracts awarded to the nine nations in the Soviet bloc amounted to slightly more than $1 billion, about 10 percent of the known value of the contracts awarded to France alone. Forty percent of this sum went to Yugoslavia, which has strong ties with the Arab world. The known value of contracts with the Soviet Union was only $176 million, giving the Russians a rank of 18th in monetary value of contracts. It would appear that the Eastern-bloc nations have not made any significant economic penetration of the region.

The study also provides grounds for an optimistic assessment of future economic prospects. Indeed, it might even be predicted that petroleum and natural gas will do for the Gulf what coal did for the West in the 19th century.

There are, of course, qualifications to such rosy predictions. There is still a serious shortage of engineers, technicians and skilled workers. There is the problem of small internal markets. There is the uncertain capacity of world markets to absorb manufactured goods from the area. There

TABLE 4:
SOME MAJOR ARAB AND IRANIAN CONTRACTS

Construction of a bus-manufacturing plant at Rouiba, Algeria. (Contractors: Fruehauf of France and Bennes Marrel, France. Second bus-manufacturing plant at Tiaret, Algeria. Contractor: Kirchfeld, Eisenbau, West Germany.)
Value: $100,000,000

Construction of a 36-mile subway network, Iran. (Contractor: Sofreta)
Value: $1,000,000,000

Design and supervision of construction of a power and desalination facility at Jubail, Saudi Arabia. (Contractor: Sanderson and Porter, United States)
Value: $200,000,000

Supply of 74 diesel locomotives, Iran. (Contractor: General Motors, United States)
Value: $100,000,000

Development of 2 tourist centers in Egypt, one near the Pyramids and the other at Ras al-Hikma. (Contractor: Southern Pacific Properties, United States and Great Britain)
Value: $400,000,000

Construction of a petrochemical project at Mohammedia, Morocco (Contractors: Krebs of France and a United States firm)
Value: $120,000,000

Exploitation of Oman's natural gas reserves (Contractors: Gaz Ocean, France; Tesoro Petroleum, United States)
Value: $500,000,000

Construction of a shipyard, Bandar Abbas, Iran. (Contractor: Bolhm and Voss, West Germany)
Value: $200,000,000

Establishment of an industrial complex, including a three-million-tons-a-year steel mill in the Bandar Abbas region, Iran. (Contractors: Mainly IRI, Italy)
Value: $2,000,000

Reclamation of 247,100 acres of desert 48 miles south of Tripoli, Libya. (Contractors: Western Australia)
Value: £95,000,000

Establishment of a petrochemical plant and a fleet of ships to carry the plant products, Qatar. (Contractors: CDF-Chime, and Gaz Ocean of France)
Value: $900,000,000

Construction of a liquefied natural gas plant for Sonatrach at Arzew, Algeria. (Contractors: Sybetra, Belgium; Mannesmann, West Germany; Creusot-Loire France; Voest-Alpine, Austria; Chemical Construction Corp., United States; Traction et Electricité, Belgium)
Value: $800,000,000

Construction of a steel works at Khor al-Zubair, Iraq. (Contractors: Creusot-Loire Enterprise of France).
Value: FF 600,000,000

Construction of airport at Jiddah, Saudi Arabia. (Contractors: Hochtief of West Germany)
Value: SR 1,054 million

TABLE 5:
CONTRACTS AWARDED BY SAUDI ARABIAN GOVERNMENT, JANUARY 1975

1. Consultancy. Assist in project expansion of automatic telephone system. (Contractor: Swedetel, Sweden)
Value: $3,500,000

2. Supply several squadrons of U.S. Northrop F-5E jet aircraft. (Contractor: Northrop, U.S.)
Value: $750,000,000

3. Consultancy and engineering at the 3rd stage desalting and power plant at Jiddah. (Contractor: Ewbank and Partners, Great Britain)
Value: Not stated

4. Extension of contract to provide operating and maintenance services for aviation communication at many airports. (Contractor: International Aeradio, Great Britain)
Value: Not stated

5. Supply of vitrified clay pipes and fittings for drainage project at Qatif. (Contractor: Hepworth Iraon Co., Great Britain)
Value: $816,000

6. Supply of a BAC-167 Strikemaster flight trainer. (Contractor: Redifon Flight Simulation, Great Britain)
Value: $250,000

7. Supply of electric drive and control equipment for 10 surface water pumping stations in Hofuf, Mubarraz and Buraida. (Contractor GEC Electric Projects, Great Britain)
Value: $932,000

8. Construction of a fixed-bed naphtha reformer and related facilities. (Contractor: Fluor Corp., U.S.)
Value: $50,000,000

9. Construction of first stage of new Abha airport. (Contractor: Laing, Wimpey, Alireza, United Corps., Great Britain and Saudi Arabia)
Value: $46,600

10. Supply of 66 electric dockside cranes. (Contractor: Stothert and Pitt, United Kingdom)
Value: $34,950,000

11. Supply of pharmaceuticals. (Contractor: Glaxo Holding, Great Britain)
Value: $2,913,000

12. Maintenance of 14 airports in Saudi Arabia for 5 years. (Contractor: Avco-Dallah Joint Venture, Saudi Arabia)
Value: $114,286,000

13. Supply of medical equipment. (Contractor: Chas. F. Thackeray, Ltd. Great Britain)
Value: $233,000

14. Construction of 23-mile road in the Qasim area. (Contractor: Ibrahim Rashid Hamid, Saudi Arabia)
Value: $10,435,000

15. Illumination of circular road and secondary streets and parking areas, Qatif. (Contractor: Hussayen Stoves, Saudi Arabia)
Value: $433,000

16. Construction of 60-mile road between Hofuf and Abqaiq. (Contractor: Herakles, Greece)
Value: $18,244,000

17. Construction of 22-mile road. (Contractor: Shula Trading Co., Saudi Arabia)
Value: $4,541,000

18. Studies and designs for roads. (Contractor: Santi, Italy)
Value: Not stated

19. Asphalting and illumination of streets and construction of sidewalks in Dammam. (Contractor: Rashed and Umran, Saudi Arabia)
Value: $13,447,000

20. Asphalting and illumination of 30 streets and the building of sidewalks in Jubail. (Contractor: General Agencies Co., Saudi Arabia)
Value: Not stated

21. Asphalting and building of sidewalks for circular road and parking area in Qatif. (Contractor: Abdullah Rashed Al Dousain, Saudi Arabia)
Value: $1,803,000

22. Asphalting and building of sidewalks in Qatif and Humaima. (Contractor: Ibrahim Al Humaidhi, Saudi Arabia)
Value: $1,750,000

is the need to resolve some of the political conflicts which trouble the area. Finally, there is the threat of war.

But on the positive side there is already in existence a small but increasing pool of managers, engineers and skilled workers, especially among the Egyptians, Lebanese and Palestinians. The use of a common language among the Arabic-speaking nations permits the mass shift of workers from one area to another which, in fact, has been taking place for years. Economic inducements are being utilized to persuade Western-trained Arabs and Iranians to return to their homelands from abroad. Pakistan, India and Africa have already provided large numbers of highly trained migrants. The Turkish workers in Germany and the Algerians in France, who are now facing unemployment, form a large potential labor force. Moreover, most of the nations have made strong commitments to educate their people. Schools, colleges and universities are being established in ever-increasing numbers and free education from kindergarten to the Ph.D is now the rule in a number of countries.

We believe, in fact, that continued investment in Middle Eastern development will eventually result in a vast and affluent market for the industrialized nations. While there may be some economic dislocations in the short run, the recycling of petrodollars will eventually become merely an item of interest to the economic historian. Development demands so much capital that capital needs may soon exceed oil-export earnings, and trade between the Middle East and the rest of the world should increase enormously. Industrial nations make the best trading partners, and so, too, will the Arabs and the Iranians as they develop modern, industrial societies.

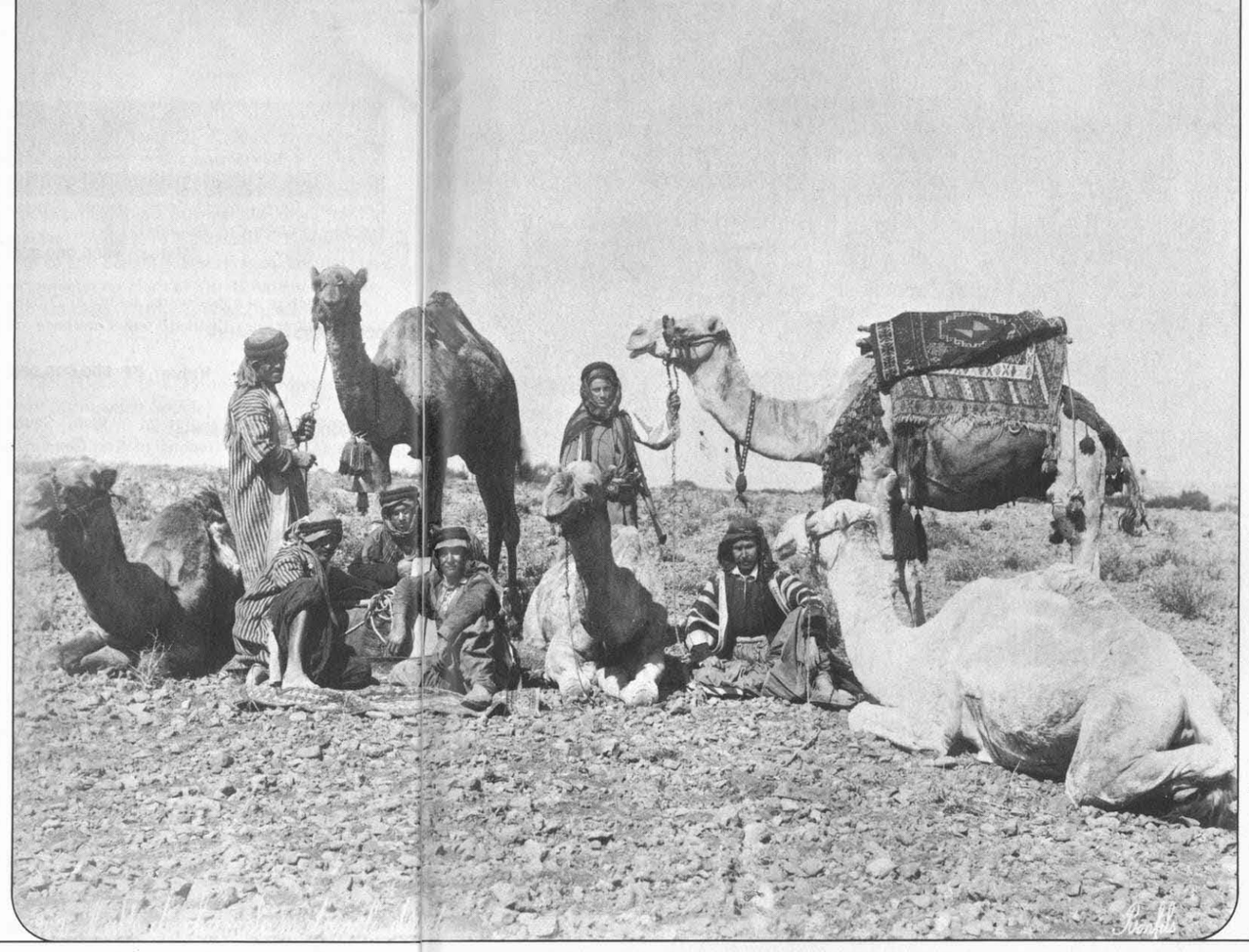
Bertrand P. Boucher, Associate Professor and Chairman of the Department of Geography and Urban Studies at Montclair State College in New Jersey, specializes in economic geography. Harbans Singh, Assistant Professor at Montclair, specializes in Third World economic development. This article is an adaptation of an on-going, two-year study of Arab petrodollar expenditures.

THE TIN-BOX PHOTOS

It was the golden age of travel and the green years of photography.

WRITTEN BY RITCHIE THOMAS

Photographs: Courtesy the Jafet Memorial Library, The American University of Beirut.



In the good old days, tourists traveled the hard way and wanted photographs to prove it. Here, tourists and their Bedouin guides join in a group picture at a camel halt in the Syrian desert.

Tourists and photographs go together like movies and popcorn. In fact, for some people taking photographs has almost taken the place of sightseeing. But back in the days before the portable camera and cheap, efficient developing service, the tourist still wanted a visual memento of the sights he had seen and incontrovertible proof that he had climbed the Matterhorn or stood on the left ear of the Sphinx. He turned, therefore, to the professional photographers in the country of his travels.

In fact, photography and mass tourism developed hand in hand. In November 1851, *The Illustrated London News* complained, "Every now and then a young gentleman returns from Greece or Egypt, with a beard and an M.S. (manuscript). In a week or two, the new journal of Travels in the East is announced, and a new 'oriental traveller' takes his place among 'wise men' who have preceded him." In the same year, Frederick Scott Archer brought forth the wet collodion process of developing photographic negatives. This greatly simplified the production of photographs, but it was still a far cry from the camera-draped tourist of today. Unless he was adept with pencil or water colors, the 19th and early 20th century tourist had no recourse but the local photographer's shop.

The growth of tourism in the Middle East is attested to by the appearance of Thomas Cook's first tourist handbooks for Palestine, Syria and Egypt in 1876 and of Baedeker's first guide to Palestine and Syria in the same year and one on Egypt in 1877. Baedeker in 1876 listed only one photographer in Beirut, with the good French name of Dumas. By 1894, the new edition of Baedeker was able to report that photographs in Beirut were available from three sources, Dumas, Bonfils and Guarelli. "The photographs, generally good and cheap," Baedeker admonishes, "should be bought only from the photographers themselves, and not from dealers who offer them at the hotels. Unmounted photographs should be rolled on a piece of wood, or packed in a tin box which may be bought at the bazaar for a few piastres." The earlier Baedeker mentions two photographers in Jerusalem, Bergheim and Shapira, both of Christian Street. Bergheim also sold "wine, English beer, etc." and was "a respectable banker." Despite such diversity he doesn't seem to have stayed in the photography business for long; by 1894, the recommended photographers in Jerusalem had changed to Nicodemus, Vester and Hentschel. The American missionary, Bertha Spafford, who married Frederick Vester, a German, recounts in her book *Our Jerusalem*, (*Aramco World*, July-August 1967) that the family photographic business began in 1898; one of its first jobs was to photograph the Kaiser Wilhelm II on his journey through Palestine in that year.

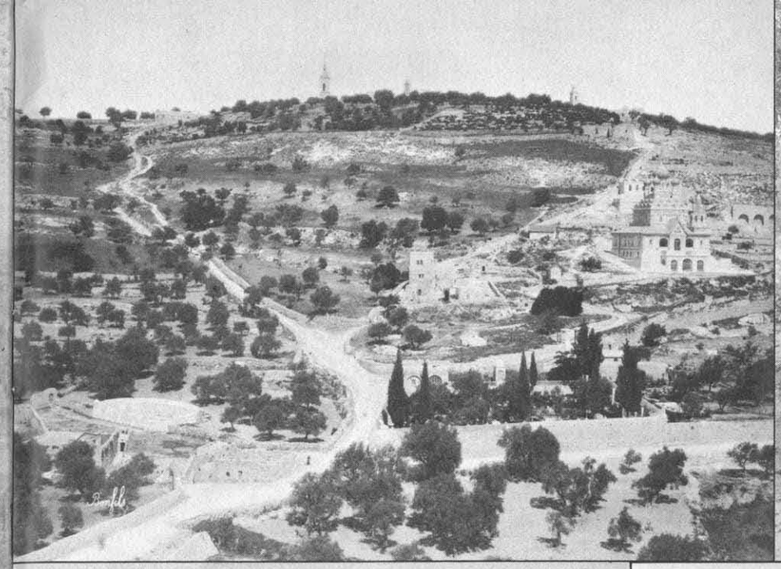
In Cairo, the Germans seem to have dominated the photographic scene from the first. In Baedeker's *Egypt, Handbook for Travellers* published in 1885, Schoefft, Stromeyer and Heymann are listed as the chief sellers of photographs, though there is also "Sebah of Constantinople" and Laroche and Co. Schoefft is recommended for "a good background for groups; also a fine collection of groups of natives and a few desert scenes, some of which are very striking." But, Baedeker goes on to say, "among the numerous photographs of Egyptian landscapes and temples the best are those of Sebah of Constantinople." By 1905, however, A.B. de Guerville, in his *New Egypt*, complains, "There are very few good photographers in Egypt. To those in Cairo I can thoroughly recommend either M. Lekegian or M. Dittrich, photographer to the Court."

Perhaps it was just as well that the early tourist did not carry his own photographic equipment. Thomas Cook and Son in 1911 advised: "It is always desirable in traveling to dispense with unnecessary luggage, at the same time it is necessary to be well supplied, especially if the journey is to be prolonged for months. . . . Among the miscellaneous articles which it may be found advantageous to take, may be mentioned a leather drinking cup, and a pocket filter, leather straps, small strong writing case, with writing materials, a ball of twine, a good serviceable pocket knife, green spectacles, if the eyes are at all weak; needles, thread, tape, buttons, and other similar articles will suggest themselves to every traveler; soap, a pocket compass, a blue or green veil, as a protection not only against the glare of the sun, but also the dust; a botanical case, or if this cannot be obtained, a tin canister, in which roots, etc. may be preserved. Magnesium wire or torches should be taken to supplement the lights, provided at the dark tombs, temples, etc. Any special 'hobby' that the traveler may have should be provided for before starting, such as sketching books, botanical presses; provision should be made beforehand, if the traveler intends to prosecute geological or entymological researches, etc. A good field or opera-glass should be taken." With such an assortment of impedimenta, the tourist was probably relieved to be spared the necessity of taking his own pictures and glad to buy them ready-made.

These photographers of the golden age of travel before World War I were no doubt largely responsible for the image of the Middle East carried back to the stay-at-homes and, given the power of pictures to influence the human eye, even for the visions and memories of the tourists themselves. Many of their prints are probably still preserved in the "tin boxes" and photograph albums of our grandfathers and grandmothers. The accompanying selection of pictures has been taken from the collection of the Jafet Memorial Library of the American University of Beirut.

Ritchie Thomas is Chief Librarian at the Jafet Memorial Library at the American University of Beirut.

1



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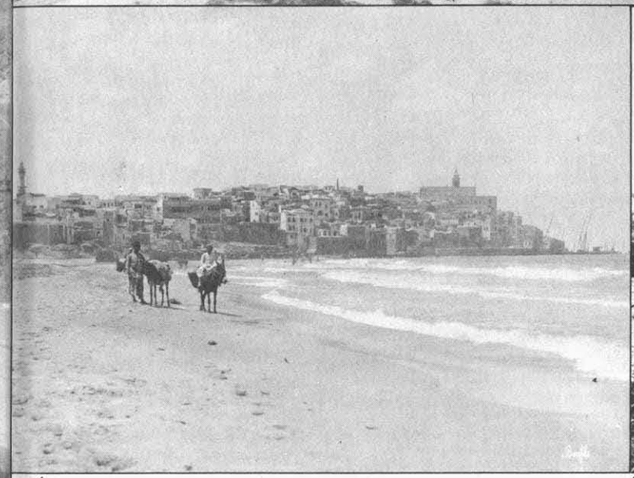

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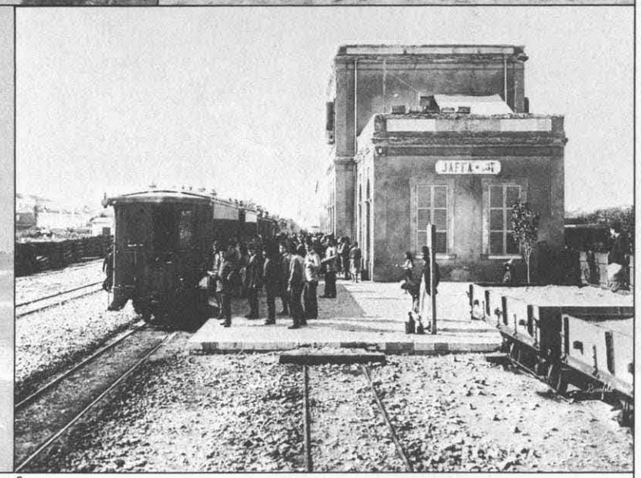

5

1. In Jerusalem near the Jaffa Gate, the tourist is offered "Objects of Piety" and articles of olive wood and mother-of-pearl; photographs by Bonfils and curiosities of the East; and, at Cooks World Ticket Office, the best in saddlery and camp equipment.

2. The Mount of Olives is almost bare except for its ancient olive trees, the minarets and church towers on the summit, and the Russian church of Gethsemane at right.

3. A group of Druze poses under an olive tree on Mount Carmel.

4. A view of Jaffa from the seashore.

5. At the Jaffa railway station nearly everyone wore a fez.

6. Jaffa, like most Middle Eastern ports, was a lighterage port. The ships waited beyond the rocks while these hearty boatmen brought passengers and cargo into shore.

6

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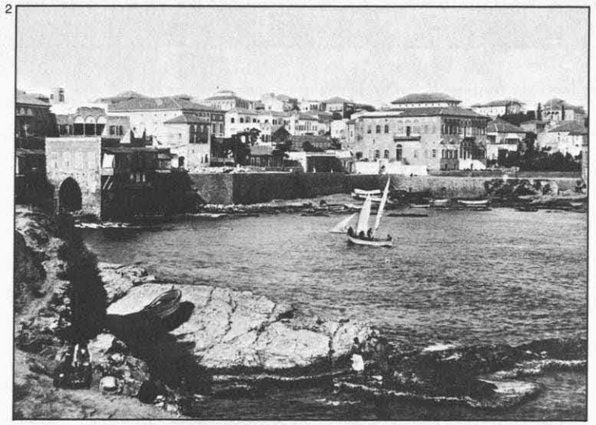

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1. An early photograph of the port of Beirut looks like an oil painting by some 19th-century master.

2. The Beirut coastline a hundred years ago. If any of these old houses still exist, they are masked by high-rise neighbors.

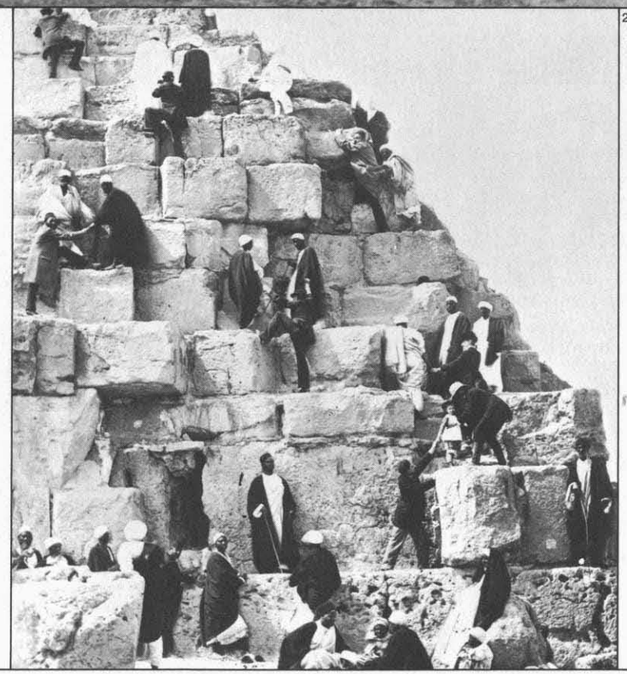
3. Traffic was light in the pine groves of Beirut.

4. A crowded day at the Hotel Victoria in Sofar, in the mountains above Beirut. It must have been a Sunday.

1

1. The drive from Cairo to the Pyramids of Gizeh took half a day by fiacre.

2. With a little help from their friends, the more energetic tourists climbed the pyramids and wanted a photographic record of the feat. Felix Bonfils was glad to oblige. Note small child and woman tourist near center right of picture.



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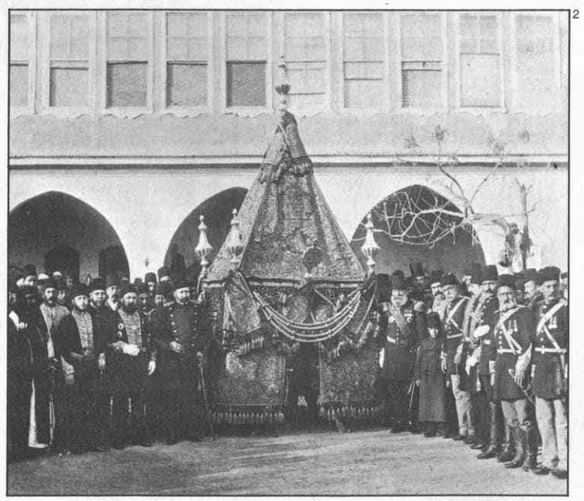
1. Before Son et Lumière, *this beautifully composed shot of the Pyramid of Cheops by "Sebah of Constantinople" shows what could be done with natural light and a slightly posed group of Bedouins.*

2. Mecca-bound: the Mahmal, *a litter containing a copy of the Koran, is displayed in Cairo before its departure on the back of a camel for the Sacred Mosque in Mecca.*

3. Look natural, please! Even the donkey strikes a self-conscious pose in this Cairo "street scene" by an unknown local photographer. Is the girl at lower left buried up to the waist, or is she inside the pot?



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