ARAMCO WORLD
magazine

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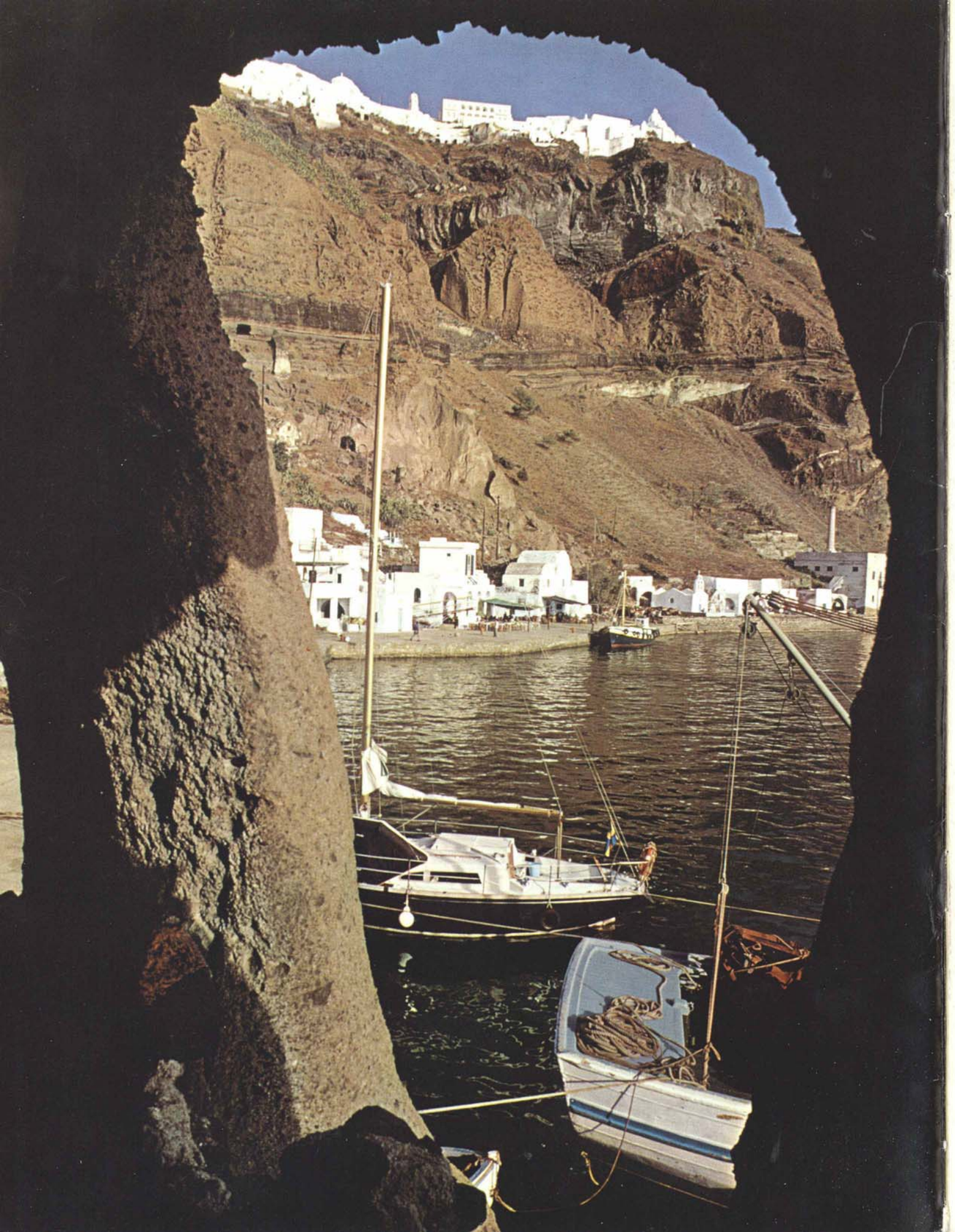
JULY-AUGUST 1973

AHMAD AND OIL



ARAMCO WORLD magazine

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Cover: When Aramco public relations specialists in Dhahran decided to publish a simple, but technically exact booklet which would help Saudi Arab youngsters learn about their country's most important industry, they asked artist Don Thompson to illustrate it. See page 6 for some of the results. Rear cover: Backgammon Comes Back.

← From the harbor of Santorin, 587 steps zigzag up the sheer 800-foot cliff to Phira, the island's largest town, which gleams like sugar cubes scattered in the sun.

Lebanon's '39 pavilion made use of crafts, photographs, paintings, stone. At the opening the Corms posed with Mayor LaGuardia.

THEY WENT TO THE FAIR

WRITTEN BY FREDERICK KING POOLE
ILLUSTRATIONS FROM
THE CHARLES CORM COLLECTION

Native golden marble, streaked with fossils, was quarried and polished; the selfsame costly and fragrant Cedar Wood of Lebanon, which adorned Solomon's Temple in Jerusalem, was carpentered with wainscots, frames and maps; Silk was raised, woven and embroidered by our peasants; oil canvases unfolding ancient Mythologies and telling Tales of Romance and Chivalry depicting history in Lebanon, were commissioned to our artists. The best materials were used to express the highest of our ambitions.

•

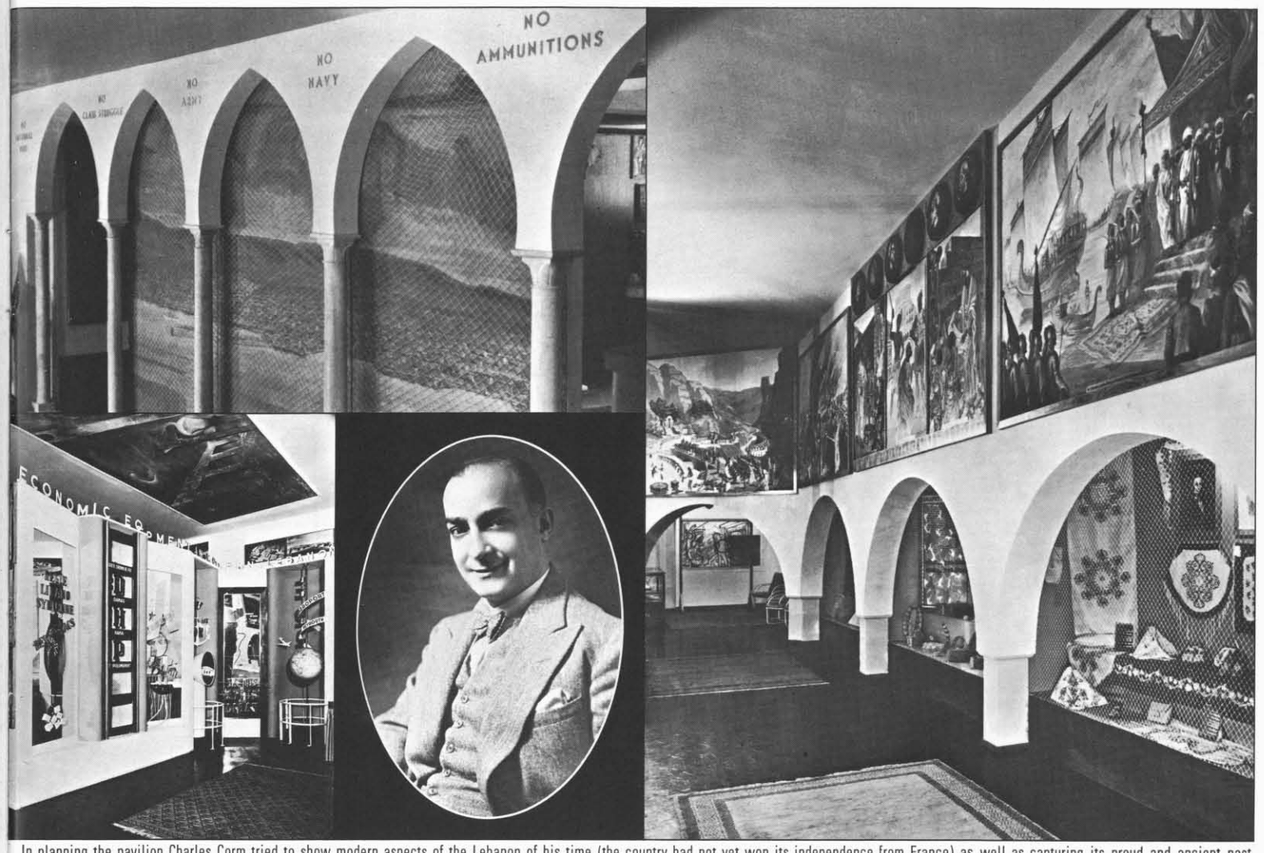
The Hon. Charles Corm, Lebanese Commissioner General to the 1939 New York World's Fair at the opening of the Lebanese Pavilion in the Hall of Nations, July 13, 1939.

Most of the headlines, that August day, made grim reading: REICH AIM TO GET HUNGARY NOW SEEN... JERSEY ADOPTS RELIEF PLAN... $85,000,000 ORDER FOR ARMY PLANES. Only one, in fact, dealt with the lighter side of life. That story, headlined MAYOR IN CHICAGO SCORES CRITICS, had to do with New York's irrepressible Fiorello LaGuardia, the 10-cent hot dog, a fan dancer named Sally Rand and the incidental revelation by His Honor that at the New York World's Fair of 1939, the most comprehensive and grandiose international exposition of all time, one of the most popular attractions was a small, hastily assembled, historically oriented pavilion from a tiny, almost unknown country called Lebanon.

Given the ebullient mayor's motives—to stimulate interest in his World's Fair—that disclosure may not have been either incidental or accidental. Nevertheless, Mayor LaGuardia was genuinely impressed by Lebanon's entry. When he visited the fair he paused in front of the three-dimensional "diorama" of an ancient Lebanese city called Byblos and said, "When I look at Byblos thousands of years ago, and then look at many of the streets of New York, I am ashamed." The mayor also issued a proclamation making Charles Corm, Lebanon's Commissioner General, a citizen of New York, and presented him with a gold medal. In so doing he gave formal recognition to the businessman-turned-poet who, 34 years ago, with little warning and less money, pieced together a comprehensive display of his country's past and present, a display that blended Lebanon's golden marble, cedar branches, and home-grown silks into what one commentator called "the most restful, simple and inspiring" exhibit at the fair.

That proclamation and the gold medal hang today, along with yellowing photographs and old sketches, in the Corm's unusual six-story home in Beirut. They are among the proud possessions of Charles Corm's handsome, graying widow, Samia, who, as a young bride, accompanied Charles to New York and stood proudly by as he poured out not only time and energy but also his part of personal fortune. "In those days," says Mrs. Corm, "people knew so little of the world. Some thought Lebanon meant Liberia, some thought Libya. In the United States, Lebanese were called 'Turkos' because of the area's long association with the Ottomans... What Charles Corm wanted to do was to tell the truth about Lebanon to the world..."

For Charles Corm idealism of that sort was by no means empty rhetoric. Although he had been a highly successful businessman, Corm, the descendant of a long line of Lebanese artists and scholars (his grandfather, Simon, had been tutor to the court of Lebanon's powerful ruler, Emir Bashir),



In planning the pavilion Charles Corm tried to show modern aspects of the Lebanon of his time (the country had not yet won its independence from France) as well as capturing its proud and ancient past.

was far more interested in art and poetry. In 1934, at 40, he had turned over many of his commercial interests—such as his Middle East motor car agencies—to his employees and had begun to devote his energies—as he would continue to do until his death in 1963—to art and poetry.

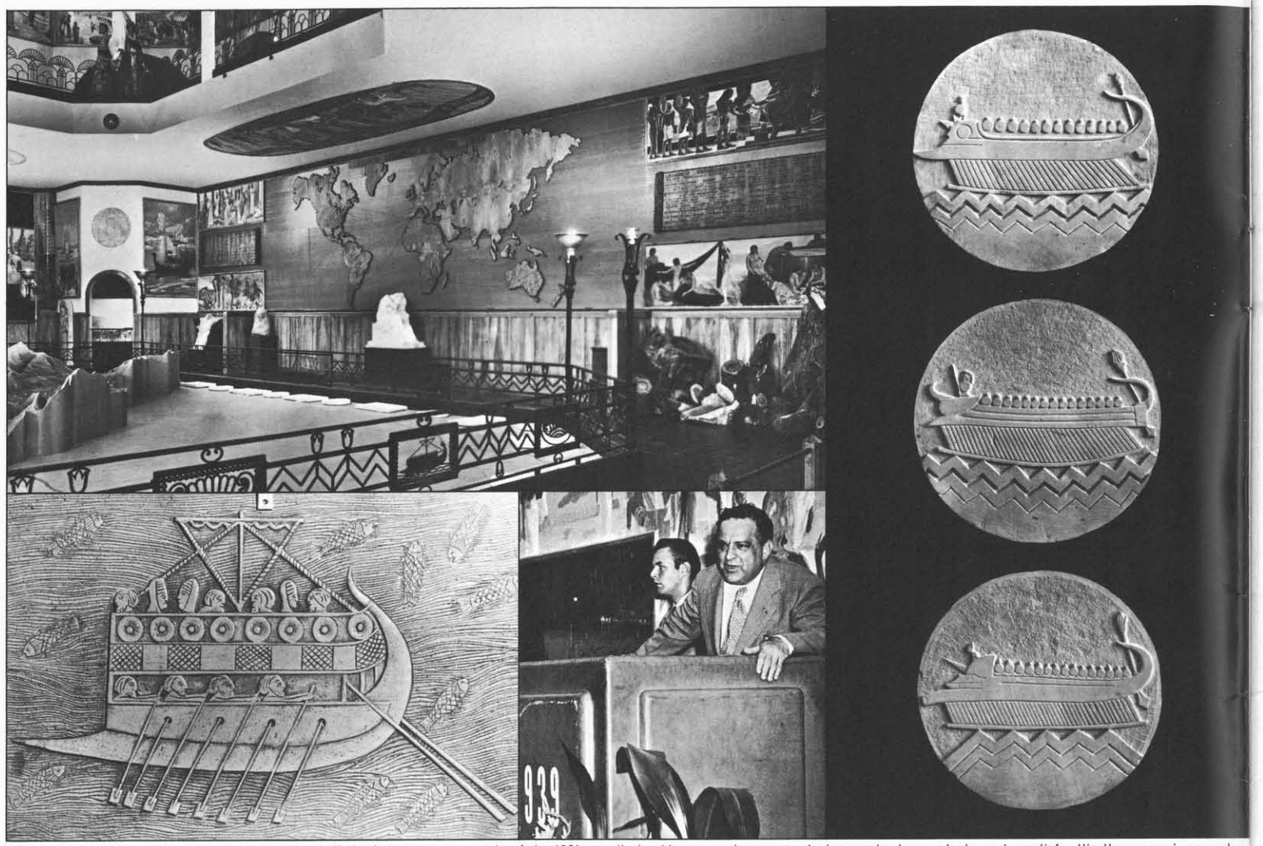
Many of his poems reflected his absorbing interest in Lebanon. Published in French, they were widely circulated wherever that language was spoken. He won numerous international literary prizes but his feeling for Lebanon was so real that, for nationalistic reasons, he turned down one of France's greatest marks of esteem: the *légion d'honneur*. It was no surprise therefore, that when he was asked to serve as Commissioner General of Lebanon—just a few months before the fair was scheduled to open—he plunged into the undertaking as if it were a challenge to him personally.

And it was a challenge. Aside from a small pavilion from Iraq, and an unofficial one from Palestine, the Middle East, still largely governed under mandate by the Western powers, would have gone entirely unrepresented at the fair if it had not been for the personal efforts of Corm. In less than three months from the time President Emile Edde gave him the go-ahead, he conceived, constructed and opened an exhibit which, in that pre-jet era, offered millions their first glimpse of the Middle East.

To be certain that it was an accurate glimpse, Corm concentrated on giving the American people information rather than commerce or spectacle. In addition to the usual displays he focused on such great leaps of the imagination as the discovery of navigation, the invention of the alphabet and the development of stonecutting—all Lebanese contributions to civilization—and on such historical footnotes as the fact that six Roman emperors and six Catholic popes had Arab blood; that an ancient Roman law school still stood in Beirut; that the city of Tyre held out for nine months against Alexander the Great.

Every inch of the pavilion was utilized to say something of cultural significance about Lebanon. The floors were in Lebanese marble. At the entrance, behind traditional archways, was a mural depicting Lebanon as seen from the sea. Beneath the mural were flower boxes of the scented green herb, basil, which is bound up with lore concerning courting couples in Lebanese mountain villages. Above the mural were the ironically innocent, pre-1940 words, "NO ARMY." "NO NAVY." "NO AMMUNITIONS." "NO INTERNAL DEBT."

In the center of the central hall of the pavilion was a walk-around high-relief map of Lebanon. The scale was so large that Lebanon's 10,000-foot peaks were three feet high. Surrounding the map was a railing with wrought iron designs based on Corm's sketches of graceful Phoenician motifs. Every



Corm used walls, floor and ceiling of the pavilion, built in the contemporary style of the '30's, to display his maps, charts, wrought iron, cedar logs and plaster bas-reliefs. His Honor was impressed.

village in the country was depicted on the map. "The Lebanese immigrants would wander around until they had found their villages," Mrs. Corm says. "Then they were so overcome by emotion they could not speak."

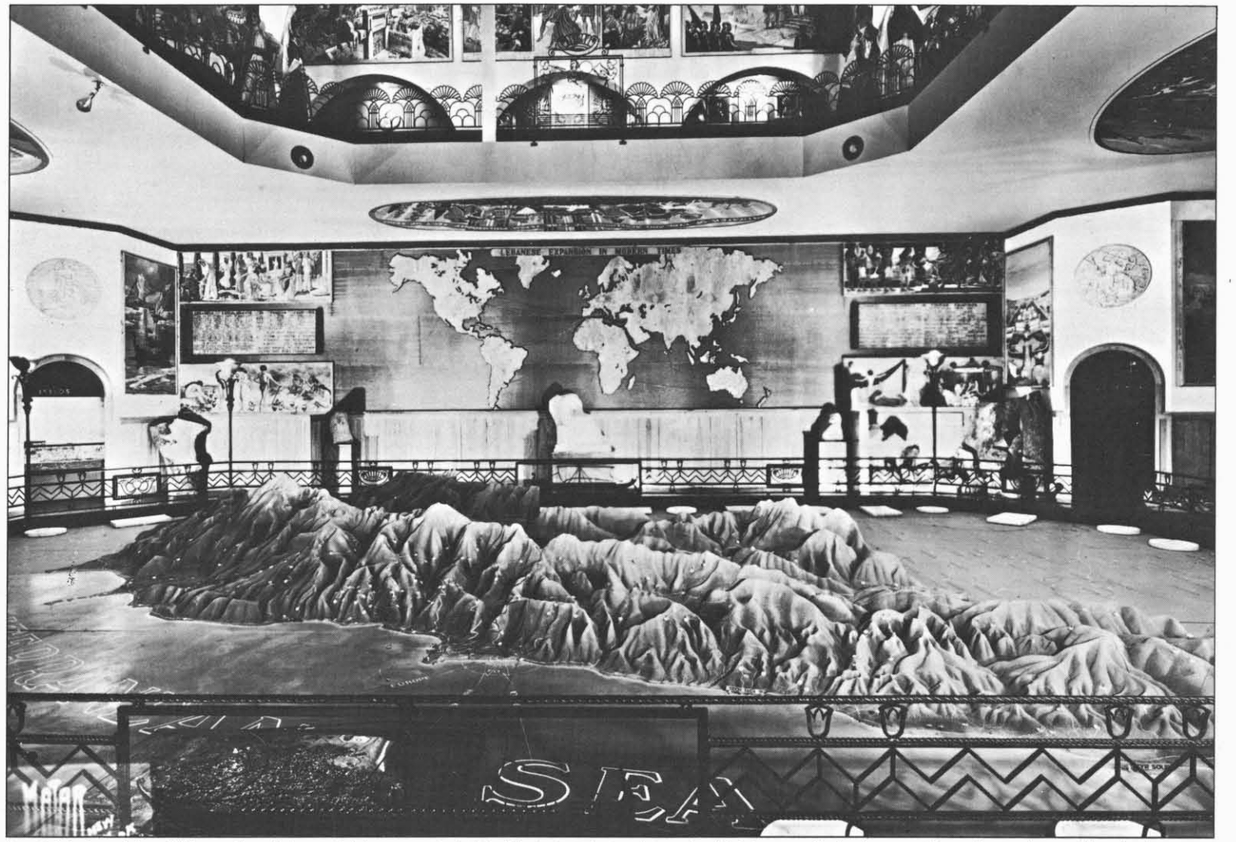
The hit of the exhibition, however, was the Lebanese cedar tree. Great cedar branches, trimmed from a surviving grove, shipped to New York and used as frames for Lebanon's exhibits, quickly attracted the attention of the press. The cedars' "fragrance fills the pavilion as you enter and their beauty fills the eye with delight," wrote a reporter from the old *Brooklyn Eagle*. "The wood as you touch it feels alive and tradition says that if you have a cold and touch the sacred cedar your cold will be cured." "Lebanese immigrants," he continued, "have kneeled down in tears and kissed the sacred branches."

That many visitors considered the cedars to be sacred, and treated the pavilion as if it were a house of worship, is confirmed by Mrs. Corm. "People did kiss the cedars. It was a sight I will not forget."

Everybody was so interested in the cedars that Lebanon eventually decided to give some to New York and according to *Today at the Fair*, the exposition's daily newspaper, did so on September 1, Lebanon Day at the fair. "Visitors witnessed the presentation of 1,000 seeds of the famous cedars of Lebanon to Allyn R. Jennings, superintendent of the Department of Parks of the City of New York... by 20 beautiful Lebanese girls. (The seeds) are to be planted in city parks."

For the Lebanese immigrant, of course, the pavilion was a must—as Professor Philip Hitti (*Aramco World*, July-August, 1971) made clear in a letter to Charles Corm. "I am sure I voice the sentiments of our people throughout the land when I say that all of us felt proud of it and considered it very much worth the effort and the investment on the part of the Lebanese Government and on your part. The results will become clearer as Americans visit Beirut and tell you that they received their inspiration from the inspection of the pavilion." His words were immediately echoed by a Lebanese-American garment manufacturer, Jamile Najeeb Kiamie, who wrote that "it is a great satisfaction to all our Arabic-speaking people to hear from thousands of our prominent fellow Americans of the marvelous showing Lebanon displayed in its pavilion."

It was not only Arab immigrants who responded. At the rate of 5,000 visitors a day, people from everywhere came to the fair. There were New York subway riders, taking advantage of free entertainment in grim depression years. There were clergymen and scholars in search of a vicarious trip to Bible country and sightseers from all over the country. Queries came in from such diverse people as F. O. Benson, president of



A central feature of the exhibit was the relief map of Lebanon, constructed by Beirut art students and covered with Lebanese soil, showing mountains, valleys and every village in the country.

the Iola (Kansas) State Bank, who said that since he had returned from the fair his friends had been asking him for further information about the cedars; Virginia B. Starin, a Basking Ridge, New Jersey, decorator who wanted pictures of the model of Byblos to help her in her work; Augustus A. Munson, a Minneapolis attorney, who wrote that "at the Lebanon exhibit I was overcome with emotion." And Herman Jaffe, editor of the *Book of Nations*, confided, "I am happy to say that your pavilion is my favorite..."

It was many people's favorite, but with another world war threatening, attendance was dropping—too swiftly for the taste of Mayor LaGuardia. His Honor decided to make a cross-country tour to boost the fair. During the tour he told a Chicago audience that New York's fair would not, like Chicago's exposition, depend on Sally Rand's fans for success. New York's fair, he said, had a 10-cent hot dog and the pavilion of Lebanon.

The mayor's tour was successful—attendance jumped—but the Corms, after seven exhilarating months, had to leave. Their infant sons David and Hiram were still in Lebanon and, fearing they would be separated from their children for the duration of World War II, the Corms went back. In leaving they turned over supervision of the pavilion for the second season to Mrs. Corm's brother, Jamil Baroodi. Mr. Baroodi has been in New York ever since and has represented Saudi Arabia in the United Nations from the time of its inception.

Because of the war, the various components of the exhibit could not be shipped back to Lebanon after the fair closed and so were dispersed. Some exhibits went into storage. Some went on temporary display in the Semitic Museum at Harvard University. Some were sold—Edsel Ford bought the rugs with the Phoenician patterns—but many were lost in the confusion wrought by the war.

But the Corms had achieved their goal and the memory of their work still inspires, to a significant degree, their family in their own careers. David Corm, is now a Beirut architect whose activities extend throughout the Middle East. He has his own firm, employing his brother Hiram, now a civil engineer, and their two young sisters, Madeleine, an interior designer, and Virginia, a graphic artist. "We are in a position," David says, "to put into practice our father's ideas about taking the best from the past and using it to reestablish our culture in the modern age."

There is one lingering disappointment, however. To this day no one knows what happened to the cedar seeds that were to leave throughout New York's parks living reminders that, in 1939, little Lebanon went to the fair.

Frederick King Poole is a novelist and free-lance magazine writer living in Beirut.

AHMAD AND OIL

ILLUSTRATIONS BY DON THOMPSON

Halfway between a textbook and a comic book...

In the last 10 years the Public Relations Department of the Arabian American Oil Company (Aramco) has received and entertained approximately 250,000 visitors at its Oil Exhibit Center in Dhahran, the company's headquarters, in Saudi Arabia.

The Oil Exhibit Center, which opened in 1963, and the traveling oil exhibits which have criss-crossed Saudi Arabia for 15 years (**Aramco World**, January-February, 1972) are efforts by Aramco to explain in detail to the Saudi Arab public and foreign visitors the industry which has played, and will continue to play, such a vital role in the life of the kingdom. The company has paid particular attention to school children, whose well-being and progress are directly affected by the ever-increasing economic benefits stemming from oil operations in the kingdom.

To a great extent, the program has been successful. At the Dhahran center nearly 170,000 curious Arab youngsters have seen the exhibit, and about 500,000 have visited the traveling exhibit. What was needed, however, was something in writing for the students to take home with them to refresh their memories of the highly technical details of one of the most complex of all industrial operations. Those responsible for the exhibits, therefore, recommended publication of a simple, colorful, but technically complete booklet summarizing for the young visitors in a more lasting form some aspects of what they had seen.

Such a booklet has just been published. It is called **Ahmad and Oil** and 50,000 copies were recently delivered in Dhahran for distribution to the school children who visit the Dhahran center or the traveling exhibit. It will also be sent to schools throughout the kingdom and to children (or their parents) in Saudi Arabia who write for it. Plans call for another printing if the booklet proves as popular as sponsors expect.

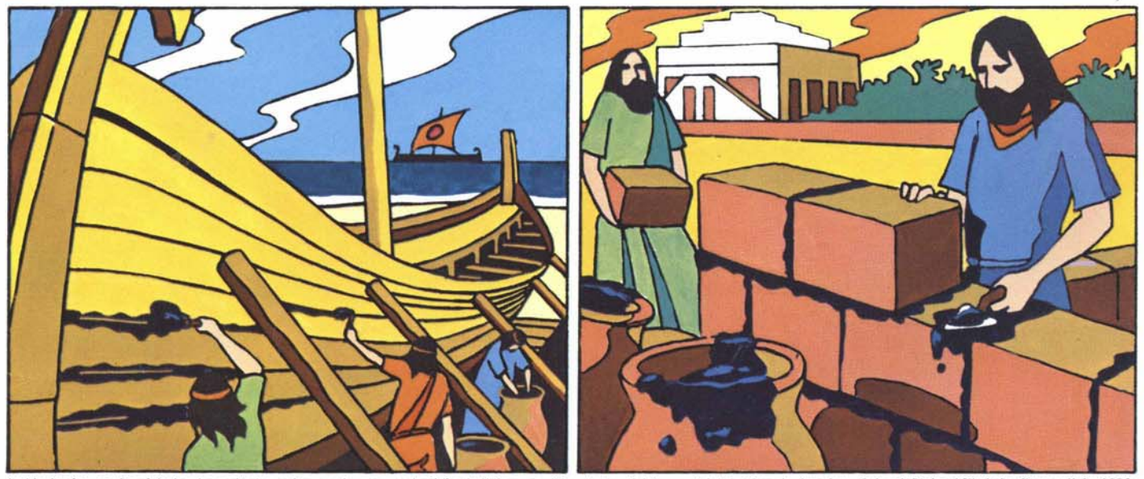
Ahmad and Oil is halfway between a textbook and a comic book. Planned and written by Ali Khalil, staff advisor on public relations, and illustrated by Don Thompson, one of the foremost designers and illustrators in the Middle East, the booklet draws upon the traditional Arab love of storytelling for its theme: a father, an employee of Aramco, taking his son, Ahmad, on a trip through the Eastern Province and explaining to the boy as he goes along how oil was formed, when it was first discovered, how it was used in ancient times, how Aramco finds, moves, processes and ships it and how it is used throughout the world today. The story is clear and simple, but complete, and the illustrations are not only technically exact, but—as the following pages suggest—also colorful and interesting. ●

THE ORIGINS OF OIL: Ahmad's father begins by explaining to his son that oil was formed by great heat and pressure acting on the remains of enormous quantities of plants and animals which were deposited at the bottom of ancient seas millions of years ago and buried under layers of silt, rock and lava.

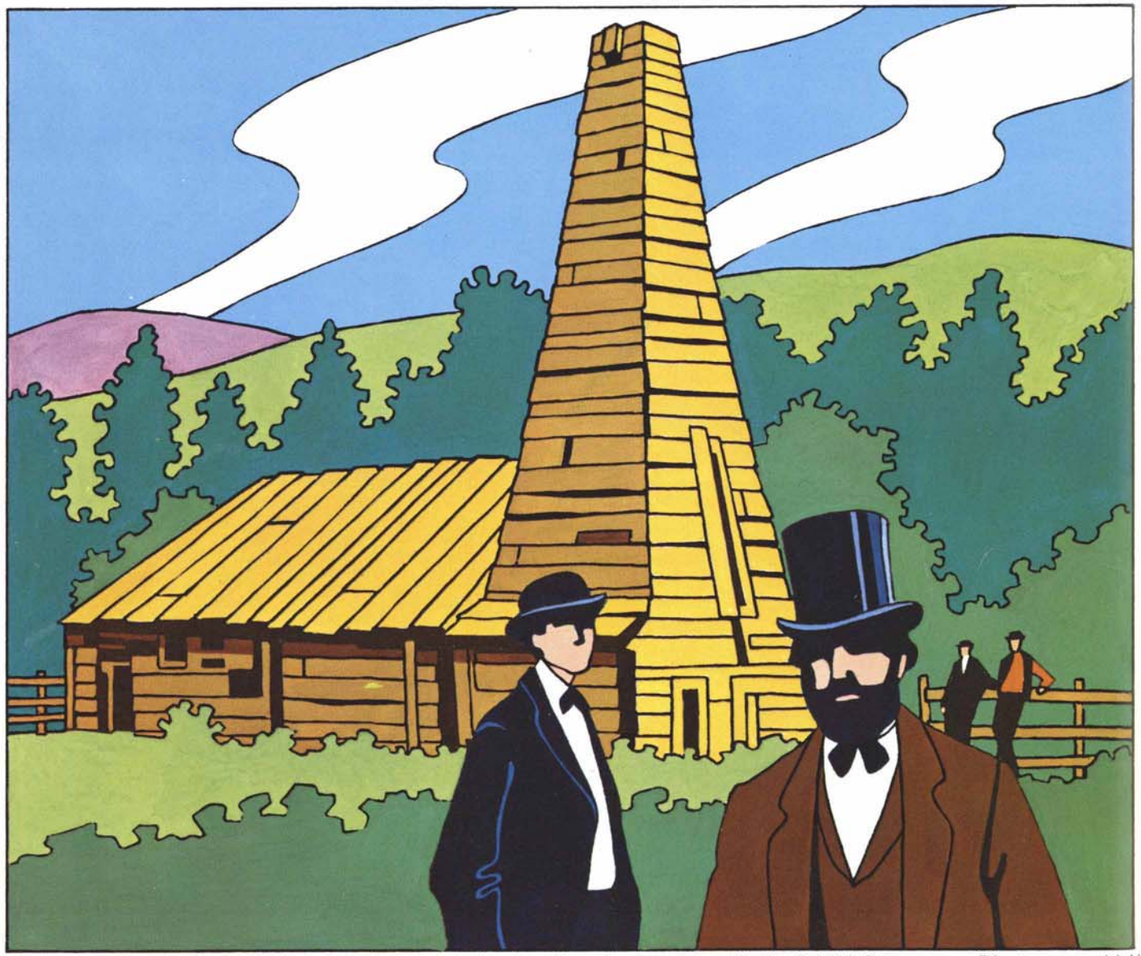
كيف اكتُشِفَ الزّيت

يوجد الزيت في جوف الأرض محصوراً في مسامات الصخور التي تشبه الاسفنج ، والتي يوجـد فوقها طبقة صخرية صلبة تمنع تسرب الزيت الى سطح الأرض .

ولكن بعض هـذا الزيت تسرب من الشقوق الموجودة في طبقات الأرض ووصل الى سطحها وعرفه القدمـاء ومنهم العرب . واستخدموه في الانارة والبناء وطلاء السفن والتشحيم والطب وعندما زادت الحاجة اليه زاد البحث عنه .



وابتكر المنقبون طريقة للوصول اليه في جوف الأرض بواسطة جهاز الحفر . حيث تمكن الكولونيل دريك من حفر أول بئر للزيت في أمريكا عام ١٨٥٩ ميلادية .

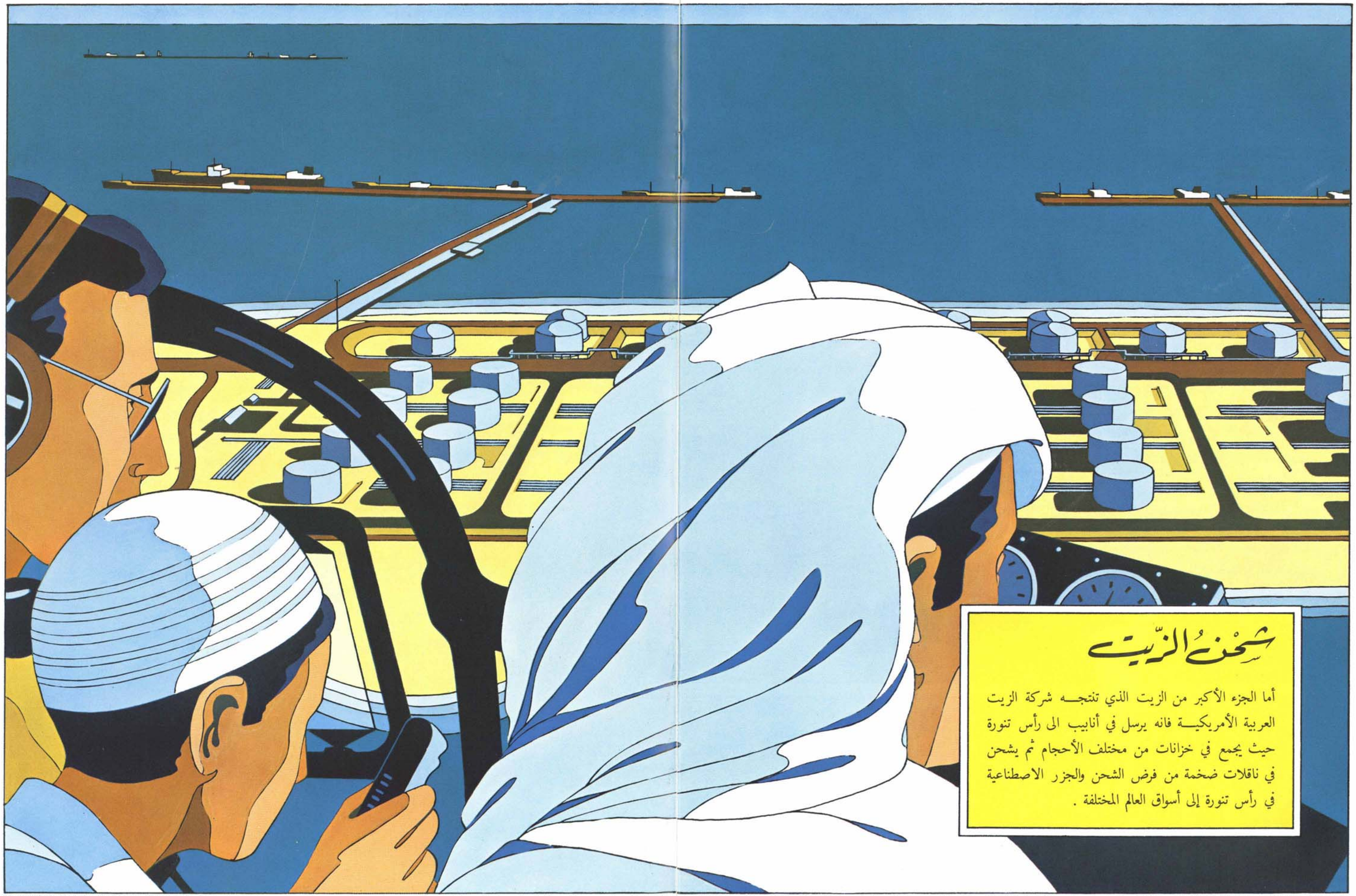


HOW OIL WAS DISCOVERED: Next he tells how some petroleum escaped to the surface of the earth and was discovered by Ahmad's Middle Eastern ancestors. This two-page spread (which in Arabic begins on the right-hand page) shows how early man used oil for building, caulking boats, lighting and lubrication. In America, Colonel Drake drilled the first well in 1859.

التّنقيبُ عَنِ الزّيت

وقبل البدء في عملية الحفر يقوم المنقبون عن الزيت بالبحث عن الأماكن التي قد يكون الزيت موجوداً فيها .

EXPLORING FOR OIL: In this spread Ahmad's father points out that any number of diverse and complex steps precede the actual drilling of a well to see if there is oil in the ground. Exploration teams crisscross the desert using the most up-to-date methods and equipment in an effort to pinpoint those underground structures most likely to have trapped and held petroleum.



شحن الزّيت

أما الجزء الأكبر من الزيت الذي تنتجــه شركة الزيت العربية الأمريكيـــة فانه يرسل في أنابيب الى رأس تنورة حيث يجمع في خزانات من مختلف الأحجام ثم يشحن في ناقلات ضخمة من فرض الشحن والجزر الاصطناعية في رأس تنورة إلى أسواق العالم المختلفة .

OIL SHIPPING: Much later in the story, Ahmad and his father get a bird's-eye view of the great oil terminal on the Gulf at Ras Tanura. The largest part of the petroleum produced by Aramco is sent here from the oil fields, stored in tanks of different shapes and sizes, then shipped in huge tankers from the loading terminals and artificial islands to markets around the world.

تكرير الزّيت

وهناك قسم من الزيت يضخ الى معمل التكرير في رأس تنورة حيث يكرر ويستخرج منه منتجات مكررة مثل الأسفلت ، زيت الوقود ، زيت الديزل ، الكيروسين (الكاز) ، وقود النفاثات ، البنزين وغاز البترول السائل .

وبعض هذه المنتجات يستهلك محلياً في المملكة العربية السعودية ، ولكن الكثير منه يشحن إلى أسواق خارج المملكة .

OIL REFINING: There is also a refinery at Ras Tanura, Ahmad learns, where some of the crude oil is processed to produce such products as (right to left) asphalt, fuel oil, diesel oil, kerosene, jet fuel, gasoline and liquefied petroleum gas, some consumed in Saudi Arabia and some shipped to markets abroad. Later in the booklet Ahmad's father also talks about petrochemicals.

Passage from The Desert King *by David Howarth. Copyright 1964. Used with permission of Curtis Brown Ltd., London, and McGraw Hill Book Co. Inc., New York.*

ARAMCO'S BEDOUINS

WRITTEN BY WILLIAM MULLIGAN
ILLUSTRATED BY PENNY WILLIAMS

Back before Aramco became Aramco, its geologists leaned heavily on local guides. Some were great, some amusing, and all provided at least one story for the files of such self-appointed historians of company folklore as William Mulligan, long of the Arabian Research Division, who recently submitted the following recollections.

When American geologists, exploring what became the Aramco oil concession in Saudi Arabia, asked the Amir of Dammam to recommend a guide, the Amir sent them a man named Sa'id ibn Nasir al-Mu'ammam, (meaning Sa'id, the Son of Nasir, the Turbaned One). Sa'id was known to his friends as "the Sinafi," roughly translated as "Squire," and his badge number was 132, which makes him virtually a founding father.

Although hired to help find water, the Sinafi, by 1947, had landed work more suited to his talents and his predilections. He became one of Dr. George Rentz's trusty Bedouin "relators" in what became the Arabian Research Division. The "relators" were Bedouins employed by Rentz as ambulatory encyclopedias of Arabian geographical, historical and ethnographical information in what would have been the first "oral history" project if Rentz had only thought to call it that.

One of the Sinafi's more interesting contributions was to stimulate an unexpected interest in natural history among the company's secretarial staff. He wandered through offices pulling out a terrifying collection of live lizards, snakes, hedgehogs and turtles from his pockets and presenting them to pale, quaking American secretaries. On occasion he even brought hawks and falcons.

Sa'id ibn Nasir al-Mu'ammam

The Sinafi was of slender build, but he was stuffed to overflowing with proverbs and maxims. One of his favorites was *al-dunyah buq'ah:* "The world is spotted," better translated as "In the world there are good spots and bad." Once, pressed for a definition, he quoted another Bedouin saying: "Three things that prolong life are riding horses, being with young girls, and walking in greenery; three things that shorten life are fighting with other men, being with old women, and walking in funerals." This was presented as a simple fact. He left it up to you to decide if any value judgment were involved.

Since the Sinafi had a striking white beard (which he later dyed orange with henna) he was a natural for the movies, and when Aramco decided to produce *Miyah*, a film about water conservation, there was the Sinafi in what we old types still call Technicolor. For the same reason he was much in demand as a model and at one time or another his distinctive features appeared in *Life*, *National Geographic* and most of Aramco's and its owner companies' own publications. And for years he was the principal provider of a handy Bedouin setting —tent, coffee making equipment, and camel saddles—whenever visiting journalists and other dignitaries asked to see a "real Arab."

Like most Bedouins of that period, the Sinafi accepted the new marvels of technology and the strange customs of Aramco's foreign employees without surprise. Airplanes, hospitals, and binoculars were obviously very useful. On the other hand, it was evident to him that Americans thought highly of aspects of Bedouin life.

They spent enough time asking him questions about it! The Sinafi was particularly good at adapting Western concepts to his style. When he received a gold pin after 15 years' service with Aramco, he soldered it to the hilt of his dagger.

Since he started early the Sinafi never got really enmeshed in company bureaucracy, but his cousin 'Ali ibn Hadi did, when years later he became a consultant and had to put his thumbprint on a very formal contract with several "whereas" clauses, one of which reads: "Whereas, Consultant states that he is an experienced and qualified expert in the fields of geographical names, tribal customs and field guiding..."

* * *

Another "relator" who rose to stardom was Muhammad ibn Khursan. Muhammad, who won kudos for his sensitive handling of key roles in such Academy Award contenders as *The Fly* (a company film on public health, not science fiction) and *The Explorers*, a film about Aramco geologists. Also, he was once a guide for former Aramco President Tom Barger when Barger was a young geologist. He was also the man who arranged for Barger's first meeting with the imposing King 'Abd al-'Aziz in 1939. As related by David Howarth in *The Desert King*, this is how Ibn Khursan remembered the event years later:

"My boss Tom Barger said to me: 'Muhammad, we would like to pay a courtesy visit to King 'Abd al-'Aziz and invite him to coffee, but I do not know Arabic.'

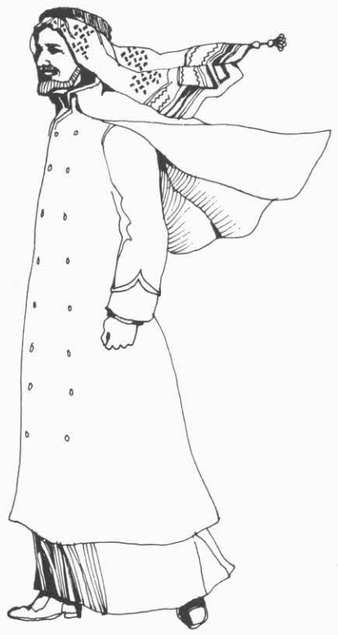
"I said: 'That's not a bad idea, but, after greeting him and sipping our coffee, you should speak all the Arabic you can the minute the coffee boy leaves ... Then I, Muhammad, will speak to the King all the good words you desire.'

"Then we went by car to the King—I, Tom Barger, and also Berg (Ernie Berg, a geologist). We reached him and, by God, we found him sitting there. We greeted him, and he ordered us to approach. He bade us sit down. As we sat down coffee was brought, and the King ordered it to be served to us, which we drank. When we finished, Tom Barger said: 'We wish to make you some coffee.'

"Replied the King: 'What are you saying? What is he saying?'

"I said, 'Yes, Your Majesty, may God

'Ali ibn Hadi



Khumayyis ibn Rimthan

prolong your life. This boss, Tom Barger, wishes to invite you to coffee at the time you choose, any hour you like. His aim has been to call upon you since your arrival at this place where we are both camping.'

"The King said to me, for Tom Barger spoke no more: 'It is a blessed hour. This night dinner at my place, you and all your companions. At two o'clock, the day after tomorrow ... we shall be with you, God willing. This companion of yours, this boss of yours, Muhammad ... how long has it been since the day he arrived in the kingdom?'

"I said to Tom Barger ... 'The King asks how many years you have been in Arabia.'

"Tom Barger replied: 'I have been in Arabia 22 months ...'

"The King said to me: 'This companion of yours will not be here more than a couple of years more before becoming a real boss because he is a first-rate man. It is evident that he is one of those excellent men who undertake to do things properly.' "*

* * *

Aramco's Bedouins played a part too when, in 1947, the King came to visit Aramco for the first time. The guides, Khumayyis ibn Rimthan, Aramco's chief guide, and 'Abd al-Muhsin ibn Jum'an, an employee of the Transportation Department, were trotted out to meet the King, and Ibn Jum'an, who had composed a poem for the occasion, recited it. Since the King was pleased with the poem—interrupting Ibn Jum'an several times, apparently to discuss meter, rhyme and so forth—Ibn Jum'an from that time on has been known in Bedouin circles as "The Company's Poet."

Khumayyis, better known as Khamis, holds a very special place in Aramco's history. Pulitzer Prize winner Wallace Stegner tells a couple of yarns about Khamis in *Discovery*!, Col H.R.P. Dickson writes of him fondly in *Kuwait and Her Neighbours*, and many Aramco officials have hung photographs, drawings and paintings of his handsome head, his fine features and well-trimmed beard on their office walls.

As a guide, Khamis had an uncanny knowledge of the land, and built-in navigational skills. But in addition, he was a real leader of men—wise, decisive and diplomatic. He combined humility, respect for God, and manliness in proportions that would have done credit to a Knight of the Round Table. When, for example, the Saudi Arab Government undertook to survey a railroad route from Riyadh to the Hijaz, its officials sought the services of Khumayyis for the foreign surveying crew. The surveyors didn't need a guide so much as an advance man and a readily identifiable guarantor that the work of the survey party was proper and approved by the authorities. When Khumayyis went on ahead to call on the next village amir, the surveyors not only got maximum cooperation, but usually also got invited to a feast.

In the winter many Bedouins wear heavy olive-drab army surplus overcoats. They are inexpensive and extremely practical. But Khumayyis one year somehow came across a light blue West Point cadet winter overcoat, complete with brass buttons and cape, and began to wear it every winter. Although at first it seemed odd, it was in fact very suitable on Khumayyis's fine, military figure. It looked so good that West Pointers would have been proud to see it worn so well.

* * *

Guides like Khamis and Sari ibn Mukhaili, a chubby, jolly guide who had served with Jordan's Arab Legion and Syria's French Legion (and could therefore shout the manual of arms in French and English although he didn't speak either language), were extremely valuable to the Arabian Research Division. But they only summered, as it were, in the Dhahran offices. Others, like 'Ali ibn Humaid of the tribe of the Manasir, were year-round "relators."

'Ali could write and not many Bedouins then could claim as much. 'Ali had been taught to write in a dream, he said, and people who saw him write were prepared to believe it. 'Ali drew, not wrote, his letters. He tackled them from different sides at different times. It was as though he sometimes started with the bottom part of a "g" and sometimes with the top. Sometimes he dotted his "i" or crossed his "t" before he did the body of the letter.

'Ali's voice was shrill and cracked with age, so it helped Westerners, especially, to check what they thought he said with what he wrote. Even more valuable was his ability to convert a wide variety of Bedouin dialects into one written standard, no matter how crude.

As a poet, 'Ali was highly regarded by other Bedouins. He once wrote of a young secretary that her face lit up like a flashlight

Sari ibn Mukhaili

'Ali ibn Humaid

Thu'ailib ibn Saqr

and that "her breasts were like goose eggs, but soft." He reached his greatest poetic heights in angry tirades against other Bedouin poets with lines like: "May God, when he dies, place him in hell, and may the eye that bemoans him meet with everlasting blindness."

* * *

Another year-round "relator," Thu'ailib ibn Saqr, whose name means "Little Fox, Son of Falcon," was of the southern, sand-dwelling tribe of the 'Awamir. He was working on a roofing gang in Dhahran in 1948 when his fellow workers identified him as someone who had crossed the great Rub' al-Khali desert a half dozen times. His boss was truly sorry to see the strapping young fellow go when he was pirated by the Arabian Research Division.

At first Thu'ailib was so self-conscious in conversation with Americans that he was nearly unintelligible. He hid his saturnine face in his hands or covered it with his headcloth, and he giggled and squirmed like a schoolgirl. But in time Thu'ailib became one of the most intelligent and responsible of Aramco's "relators." He made unique contributions to the mapping of the Arabian Peninsula, and he was borrowed frequently by Aramco's Exploration Department and by the Governor of the Eastern Province to speak authoritatively about the most distant reaches of the desert.

Thu'ailib, like most Bedouins, belched freely and loudly. H. St. John B. Philby described the belch of one of his guides in *The Empty Quarter* as "deep drawn from the uttermost recesses of a healthful, untroubled stomach, loud, lingering, lusty and eloquent." Acquaintances of Thu'ailib's would have welcomed a chance to hear these two Bedouins in competition. Thu'ailib's belch was not only loud and lingering, it was almost volcanic. It mildly surprised even his Bedouin associates, and it startled occupants of nearby offices who were known to rush to windows and doors to seek explanations for the phenomenon.

It was Thu'ailib who wisely dismissed someone's theory that the world was round like an orange with the observation that, if that were so, the Americans would drill for the oil under Arabia from their side.

William E. "Bill" Mulligan, manager of Aramco's Government Relations Services Department, joined Aramco in 1946 after wartime service in Aden.

SANTORIN!

The blue sea, a crescent of towering cliffs, dazzling whitewashed villages...

In the Eastern Mediterranean, about midway between Crete, the Greek mainland and the Turkish coast, is an island that the gods and the Greek Government call Thera. To romantics, and some scholars, it may be lost Atlantis (*Aramco World*, May-June 1972). To the rest of us, that island is Santorin, the most fascinating—and most fateful—of the circle of Aegean islands known as the Cyclades.

From the air, Santorin looks like a ragged crescent, open toward the west. Between the crescent's points lies the satellite island of Therasia, and just below Therasia the tiny islet of Aspronisi. With Santorin itself, these two islands define an oblong patch of water almost completely surrounded by land. In its center lie two further islands that even from a 5,000-foot height seem different from the others: hard, black, and without sign of habitation.

WRITTEN BY ROBERT ARNDT
PHOTOGRAPHED BY ROBERT AZZI

Therasia from the west, and Santorin from north, east and south, slope gently upward from the Aegean toward the 32 square miles of encircled sea; there the land plunges suddenly downward in near-vertical cliffs.

From this aerial perspective, it is easy to believe what we are told: that we are looking at the three remaining fragments of what was once a single, roughly circular volcanic island; that in one cataclysmic explosion the volcano blew its insides out and collapsed into the sea, leaving only this broken ring of sloping shore above water. The Atlantis legend begins to appear credible.

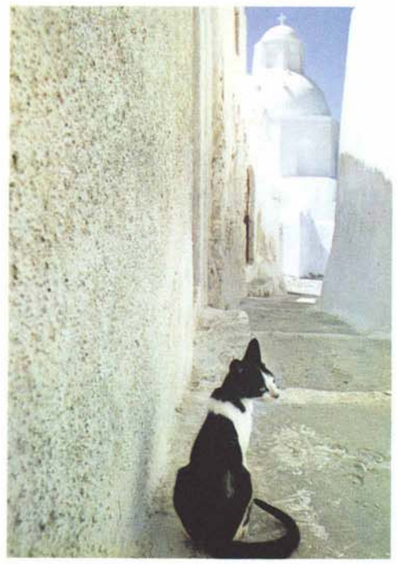
We can see more if we sail to Santorin. Furrowing the blue-black water, our ship sails through one of the gaps in the island ring, into the circle of sea, into the ancient crater of what was once—and someday may again be—the most violent volcano on earth since the last ice age. The underwater crater, or caldera, is so deep no ship can anchor in it—up to 1300 feet in places—and small boats ferry us ashore. There we stand and look up at the sheer 800-foot cliff, brown, gray, red, yellow, black and dazzling white, at whose top edge is perched Santorin's largest town, Phira, dazzling too in its coat of whitewash.

This cliff that rings the caldera is the island's history made manifest. Formed by the shearing collapse of most of the volcano into its own empty magma chamber, it is composed of layer upon layer of lava, slag, pumice and ash. The cliff's uppermost level is the surface of all of Santorin—a layer of ash still 100 to 150 feet deep after the erosion of 35 centuries.

No aspect of past or present life on this small tatter of land can be considered separately from the one central fact of the volcano that was—and is—Santorin. The volcano gave the island its crops, its exports, its terrain, its very shape—and the volcano, growing even now in the center of the caldera, has the last and final word on the future of Santorin.

For the present, though, we face more than a mile of steep, winding step-street —587 steps—that takes us zigzagging up the cliff to Phira, where new construction, financed by a growing influx of summer visitors, is well on the way to wiping out the signs of the 1956 earthquake, when Santorin's sleeping monster stirred and 2,000 houses were leveled in 45 terrible seconds.

Phira's streets, whitewashed along the gutters, are of black lava pebbles tamped into concrete, and its fieldstone lanes follow their own random paths as they trickle over the lip of the cliff and downwards from house to house and chapel to chapel. Many of the houses, square and flat-roofed, are built directly into the cliff, one atop the other at irregular angles; others, free-standing, are simple rectangles with barrel-vaulted roofs—a style that requires no timber for beams and that resists earthquake shock as well. All the houses are whitewashed every spring, and from a distance the whole town looks as though a giant hand had scattered sugar cubes along the cliff-edge to gleam in the sun.



From the cliffs around the caldera, the land slopes back again toward the Aegean in gentle hills. Their every inch is terraced, held back by dry walls of red and black lava lumps, often six feet high. Even the dry stream-beds are lined with rock against the winter rains, for all of Santorin's soil is weathered volcanic ash, light, mineral-rich and dry; one good rain can erode a ravine six feet deep in an unprotected surface. From Mount Elias, the island's highest point and site of a windblown 250-year-old monastery, the terrace walls look like flow ripples on a sandy stream bottom. Less pleasant from a closer viewpoint, though, the terracing, Japanese in its careful intensity, makes it almost impossible to walk crosscountry on the island, unless one sticks to the stream-beds or goes only downhill. And then the fields themselves make walking difficult: cultivated for centuries, the loosened, almost fluffy soil drags on our feet like snow.

What grows best in this soil is grapes, and on Santorin they are cultivated in a manner used nowhere else in the world. The vines are trained to form round baskets three feet in diameter and—in the case of older plants—two feet high or more. Each year's new growth is interwoven with the old. The grapes grow inside these dense, earth-floored wicker circles, protected against Santorin's steady north wind and shaded from the worst of the sun. The shade also conserves precious dew, important on an island with no summer rainfall and only one year-round stream. In three wineries, thirsty Santorinians make four different wines from these grapes: a broad-shouldered wine called *brusko*, halfway between rosé and red; a rough, dry, full-bodied red wine locally called "bordeaux"; a delicious dry, fruity white wine, called *nikteri* ("up all night"), because the grapes have to be pressed as soon as they are picked; and *visanto*, a sweet, sherry-like wine made from grapes dried almost to raisins before pressing.

But although some of the wine is left undrunk for export (along with tomatoes and early spring peas), Santorin's most important product is itself. The billions of tons of volcanic ash that mantle the island are the main ingredient of pozzolanic cement, used in underwater construction for its property of growing harder the wetter it gets; shiploads of it have left the island for Athens every week since the 1860's, when the builders of the Suez Canal first mined ash from the southern cliffs of Therasia. Santorinians put the pozzolana to good use as well. Those who build a boathouse, a shed, or their home into the ash layer, either on the cliffs or in one of the ravines that gash the island, need only wipe the walls of the newly excavated rooms with a wet cloth to "plaster" them permanently, and any light concrete construction requires only lime and a few shovelfuls of this island topsoil. Since half of Santorin's population of 13,000 left the island after the 1956 earthquake, many of the remaining farmers use areas of vacant land as water catchment surfaces, plastering them with concrete and leading the winter rains into cisterns for crop irrigation during the short, early growing season. The ash, soft enough to dig with one's hands, also allows Santorinians to excavate temporary shelters, dug into terraces or road embankments, to protect themselves, their mules or donkeys, or an occasional load of hay or basket of grapes from wind or sun. The island is dotted with these arched niches, some large enough for a mule and wagon; one or two have been made into roadside shrines. The ash dug out to make them is generally used for construction.

Commercially, large quantities of ash are mined in several cliffside quarries near Phira, by methods of hair-raising simplicity. Crews of workmen dig tunnels from the cliff face horizontally into the lowest part of the ash layer, then cross them with more tunnels to form a grid that seriously weakens the foundations of a large volume of ash. The foreman's senses are sharpened by years of experience and the crudest kind of good luck; when he feels the time is right, tunneling stops and the workmen withdraw. Cracks appear in the pillars of ash that separate the tunnels, and soon the entire mass collapses, to be bulldozed or shoveled down the cliff to the ships. Pumice, which underlies the ash layer all over Santorin in depths of 12 to 15 feet, is also exported, used in building for its lightness and its insulating properties and in furniture-making as a finishing agent. Shoals of floating pumice pebbles often stain the surface of the water in the caldera below Phira, the leftover debris of a departed shipload, and not a few tourists have innocently stepped off the concrete dock onto the apparently solid, concrete-colored layer of floating stone.

The mass of ash and pumice that covers the island, along with the 32-square-mile caldera, are the evidence still at hand today for the Santorin volcano's latest major eruption, which probably took place in two phases, some 30 years apart, around 1500 B.C. For violence and sheer destructive power, nothing like that eruption has been seen since the glaciers last receded, and no other eruption has had such a momentous effect on history. The eruption of Krakatoa in 1883, carefully observed and well-documented, was the similarly paroxysmal end of a volcano of the Santorin type. There, the final explosion was heard over 3,000 miles away; windblown ash fell 3,300 miles away; seaborne islands of pumice spread over 100,000 square miles; tidal waves killed more than 36,000 people; and airblast cracked house walls 100 miles from the volcano. Yet Krakatoa's coat of ash was only 200 feet deep immediately after the eruption; at Krakatoa only eight square miles of land collapsed into the sea—a quarter of the area lost in the Santorin eruption, whose soft ash layer now, three and a half millennia later, is still up to 150 feet thick. The final explosion of the Santorin volcano must have been of unimaginable, unspeakable violence.

It began, according to archeological evidence, with an earthquake—a shift in the deep-lying Miocene limestone basement of

the Aegean that somehow altered the balance of huge underground forces. Earthquakes are a common phenomenon in much of the Near and Middle East (*Aramco World*, May-June, 1971) and Santorin has the misfortune of lying above the intersection of two geologic faults. At this spot the volcano had been rebuilding itself after its last great eruption sometime around 23,000 B.C., and its lately dormant cone had formed an island so round, so beautifully watered and wooded and so delightful that later legend called it Strongyle (Round Island) or Kalliste (Most Beautiful). The earthquake rattled the island severely, and shattered its large, rich Minoan city, reducing the comfortable, beautifully decorated two- and three-story houses to four-foot heaps of rubble, beams and mud brick. Organized rescue teams, perhaps from Crete, the mother island of the Minoan civilization, cleared streets and rebuilt walls, and the city's inhabitants had time to flee with their valuables before the volcano's next blow came.

A rain of hot pumice—lava aerated by volcanic gas to make a sort of rock froth—fell on Kalliste, its city, its sheepfolds, its harbor and the surrounding sea. Falling lumps stripped the trees of leaves, buried the partly-reconstructed walls of the city, and collapsed with their cumulative weight, every roof still whole. Houses that the earthquake had left open had their remaining contents—kitchen utensils, storage jars, altar tables, libation vessels and frescoed walls —buried in the hail of hot light stone. Between 12 and 15 feet of pumice covered the lovely cone-shaped island and left it a smoking desert. A length of time passed, probably a number of years; the sparse Mediterranean rainfall eroded a few channels into the pumice, but rain and surf were the only sounds heard on the island—till the volcano began to boom.

It boomed and threw out spatters of pumice and occasional huge "bombs" of hot hard lava, and sent up a column of dust and vapor miles high. As time went on, the dust and pumice ejected by the volcano increased, dusting passing ships and downwind islands. Steam, the result of seawater leaking into the magma chamber, vented continuously, and loud explosions grew in frequency and in power. Lightning played in the towering column of steam, dust and pumice, and lava, probably visible as far away as Crete at night, rolled down the mountain's slopes.

Then in midnight darkness came the final, indescribable explosion as the mountain emptied into the sky the last millions of tons of fine white ash, dust, lava and rock, and, exhausted, collapsed into itself and the sea.

So earthshaking was this event that its physical consequences reached around the world. Ash fell in appreciable quantities to within 90 miles of the coast of Egypt; tidal waves ravaged neighboring coasts to heights of 250 feet, and some historians speculate that they may have lowered the water level of marshes in the Isthmus of Suez enough to grant dry passage to Moses and his followers, fleeing Egyptian captivity at the

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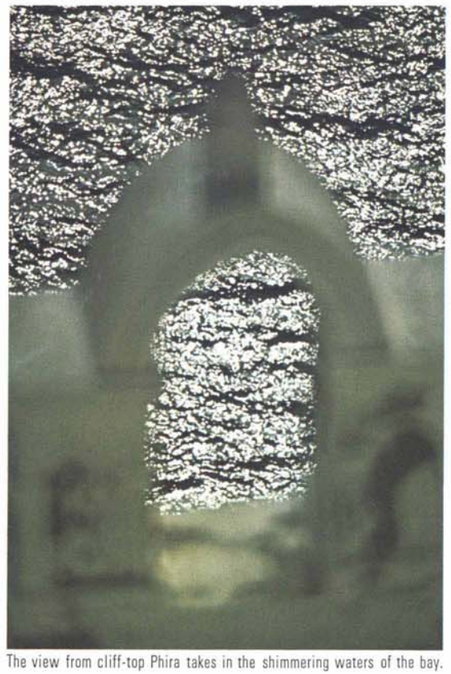
The latest volcanic eruption shook Santorin in 1950, but the island's people know it could happen again any time ...

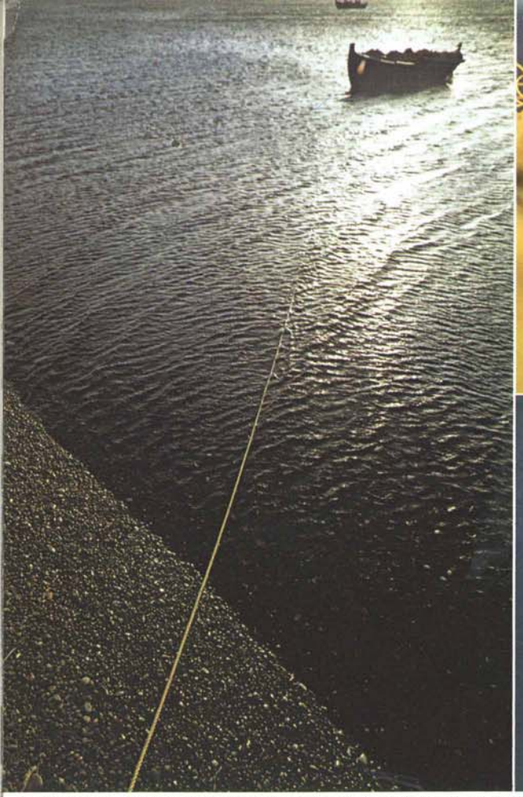
... as the sulphur-bearing gases coming from the nearby crater of Nea Kameni remind them.

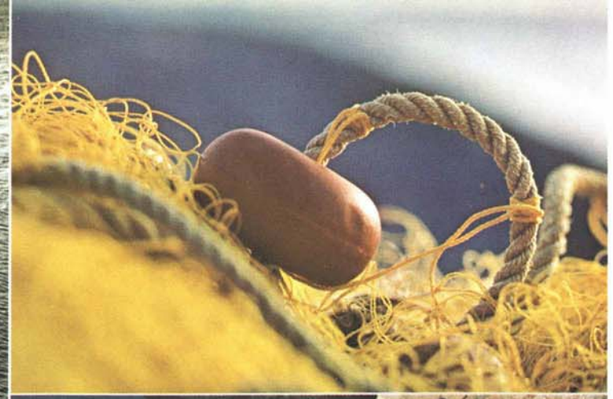
Faces of Santorin: islanders live quiet, peaceful lives despite the rising tide of visitors.

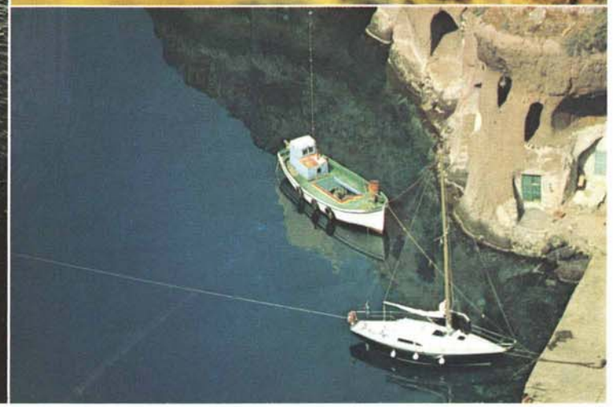


The view from cliff-top Phira takes in the shimmering waters of the bay.

With only the help of donkeys, islanders, tourists and supplies have to negotiate 587 whitewashed, numbered steps (left) twisting up to Phira from the harbor (above).



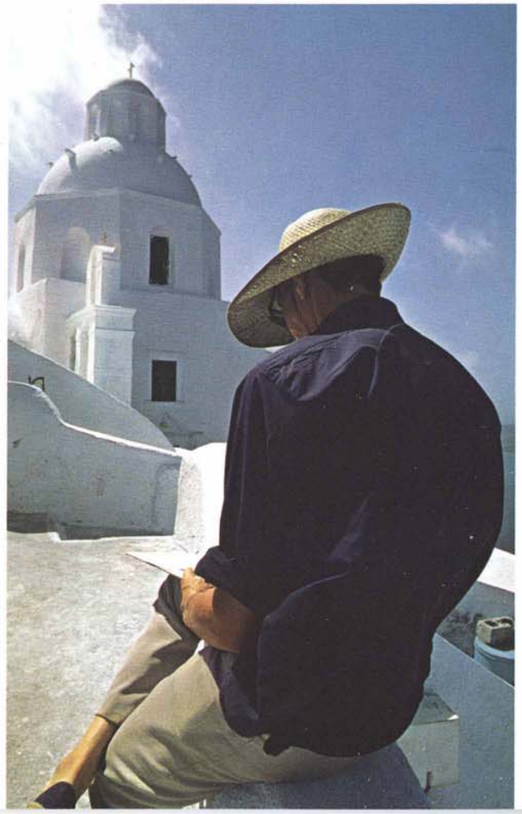


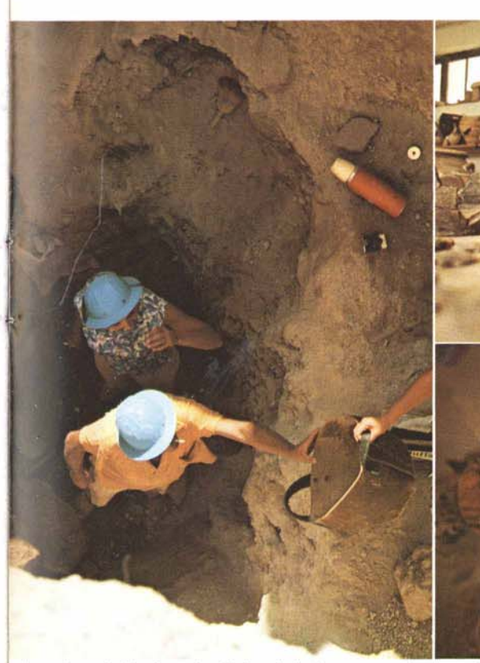


Islanders and tourists bathe from Santorin's volcanic black-pebbled beaches and sail and fish in the sheltered waters of the central volcanic caldera, up to 1,300 feet deep in places.

From atop Santorin's 800-foot cliffs, the dramatic crescent sweep of rock and sea lends credence to the theory that a cataclysmic explosion blew the whole center out of what was once a circular volcanic island.

Visitors come to camp, lie in the sun or (right) capture on sketch paper the island's unique character.





In a ravine on the island's southern limb, archeologists are uncovering the remains of a prosperous Minoan city buried by the great eruption of 1,500 B.C.

Island patterns: blue sky, white church, blue fence.

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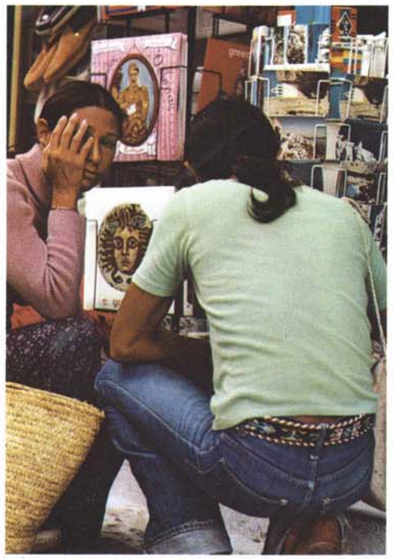
time—new chronological data may make tenable the theory that this exodus coincided with the Santorin eruption.

The indirect consequences were no less dramatic. At the time of the eruption, the Aegean Sea had been a Minoan lake for over 1,000 years. Piracy had been suppressed, colonies and trading routes had been established, and a brilliant, rich, luxuriant civilization had grown. In 1500 B.C., the Minoan culture had reached its peak: so secure that no city was walled or fortified; so far-reaching that Minoan keeled ships traded with Britain and Egypt; so artistic and inventive that Minoan frescoes found on Santorin show attempts at perspective rendering ten centuries before the Greeks. This civilization, the most advanced west of Egypt's Old Kingdom, was snapped off in full flower by the Santorin volcano and, unable to recover, effectively disappeared within 50 years.

With much of their fleet smashed by tidal waves, their farmland covered and poisoned by volcanic ash, their orchards stripped of leaves, their buildings flattened and their survivors panic-stricken and starving, the Minoans abandoned eastern Crete for the less heavily affected but less hospitable western third of the island, for the Peloponnese and mainland Greece, and for new homes more distant. Sailing along their own old trading routes now as refugees, they settled in southern Italy and Sicily, on Rhodes and Cyprus, and in Egypt. Resettling Minoans became the "Atlantes" of Tunisia (probably) the Carians of southwestern Turkey (possibly) and the Philistines of southern Palestine (certainly), and they brought with them wherever they went their social organization and their peaceful genius.

Greek first became a written language when Minoan scribes adapted their script, now called Linear A, to the new language. The Minoan religion shaped the Greek pantheon and gave it its character. The Minoan spirit became the leaven of the later Greek civilizations, and remained as a haunting memory of a lost golden age throughout the classical period. And now, even the legend of lost Atlantis, which Plato received from Egypt, has been convincingly shown to be a memory of the fall of the Minoan civilization and the collapse into the sea of the Santorin volcano.

The man who first proposed that the widespread desolation of Crete was due to Santorin's eruption, and who has illuminatingly interpreted the Atlantis legend in the light of Cretan archeology, is now digging on Santorin. On the island's southern limb, near the village of Akrotiri, Dr. Spyridon Marinatos has begun to uncover the city buried by the great eruption of 1500 to 1470 B.C., and his is surely the most exciting archeological dig in progress today. The site, sheltered under a sprawl of asbestos roofing to keep Santorin's relentless wind and winter rain from affecting the work, is located in a small seaward ravine, where years of erosion have removed most of the ash overburden and left the pumice within reach.



Dr. Marinatos' dig is probably very near the place where a group of scientists, on Santorin to observe the volcano's 1866 eruption, found and excavated stone walls, pottery, tools, gold trinkets, animal bones and an exquisite bronze blade inlaid with gold—a lord's weapon. A better-organized dig in 1870 excavated several houses and found brilliant frescoes (later reburied), pottery still containing barley, lentils and fava beans, a copper saw and other items; but the greatest treasures and the most informative and suggestive finds have come from Marinatos' six years of work in the Akrotiri ravine. There the Minoan city is undergoing a strange resurrection, its streets cleared but empty, the tools of the rebuilding teams lying abandoned, the footprints in its large square now made in flour-fine ash. Whole quarters of the city have been cleared, and though its fleeing citizens left no valuables, their full storage cellars, their plumbing systems, their single-family houses, the "palace" of unknown dimensions just beginning to emerge from the earth, and above all the exquisite frescoes all leave no doubt that this city was rich, prosperous and peaceful. Its citizens ate and drank well, did not stint sacrifices to their gods, bathed, traveled, boxed and observed the natural world around them. If the masonry and pottery found on Therasia when ash was mined for the Suez Canal should turn out to be remains of the same city—a city that would then be shown to stretch some five and a half linear miles—then others may join the one expert who today believes that the Minoan city on Santorin was "Atlantis" itself, was the glittering mother city of what we now call the Cretan Minoan civilization.

Santorin never again reached the heights it knew as a Minoan island. Though Mycenaean Greeks occupied Knossos on Crete after 1470 B.C., they seem not to have visited Santorin itself. Herodotus writes that Phoenicians used the island as a station on their trading routes, which webbed the Mediterranean and Aegean seas. Perhaps through the Phoenicians, their neighbors on the Eastern Mediterranean coast, the once-Minoan Philistines heard again of the island that had made them refugees—though if so they could not have recognized it from descriptions of its new Vulcan-formed shape.

Through the centuries that followed, Santorin faced first west, then east, then west again as the winds of empire shifted. With the coming of the Dorians at the end of the second millennium B.C., Thera, as it then became known, became Hellenized. Today still, so-called Antika Thera stands on the island as a Dorian site, largely overbuilt by an Egyptian Ptolemaic garrison that later claimed the location because of its command of all of the island as well as of wide sea reaches southeast toward Egypt. After this Greek and later Egyptian period, control over the island gradually passed back westward to Rome, as what were originally trade connections beginning as early as 200 B.C. solidified to become governing power.

Christianity came to Santorin as early as the third century, and left the remains, visible today, of three early basilicas on the island's eastern slope—the "classical side." With the shift of power and influence toward the Roman Empire's eastern half, Santorin too turned east again. Sometime between 324 A.D., when Constantinople became the eastern capital, and the sixth-century reign of Justinian, the island came fully into the Byzantine sphere of influence. That period, which lasted till 1204, left the great monastery and Orthodox archepiscopal seat of Episkopi at the north edge of Mount Elias' abrupt limestone slope.

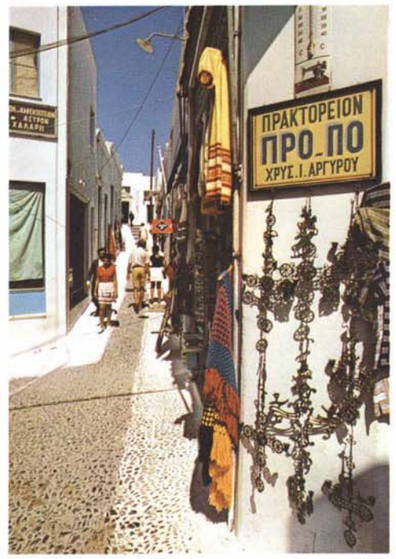
In the backwash of the Fourth Crusade, Santorin became a part of the Venetian duchy of Naxos under the Barotsi and Crispi families, and the island's present familiar name derives from their patron saint, Irene. Religious dispute occupied much of those years, as the Roman Catholic bishops spread their influence in the island under the shield of Venetian hegemony and at the expense of the Greek church.

In 1537 the last Venetian duke became a tributary of Sultan Suleiman the Magnificent, not by force of arms but by the irresistible expansion of Ottoman influence. Though the Turco-Venetian War 60 years earlier had, according to Greek sources, reduced Santorin's population to 300 souls, the Ottoman Empire was now content to leave the island untouched and even unvisited. In contrast to the Venetians' three centuries, the Ottoman rule, almost as long, left not a trace on Santorin itself.

The Ottomans only occupied fertile areas," says one student of that time, and indeed, records in Istanbul seem to show that the Empire's harvests from Santorin consisted largely of complaints: thanks to the Ottoman practice of allowing each minority substantial self-rule—the *millet* system—the Ottoman rulers found themselves arbiters of continuing religious disputes between Santorin's Roman and Eastern churches over mutual infringement of episcopal rights, and, especially, questions of land. In Ottoman records, Santorin is called Değirmenick (Little Mill), after the dozens of cloth-sailed windmills that once dotted the landscape. Only a few survive today.

As those centuries and their changes washed over the surface of Santorin, the volcano far below was not idle. The geological fault-junction that had spawned beautiful Kalliste was still there, and still provided an outlet to the surface for the elemental forces of the earth. Only a few centuries after the great eruption, the Santorin volcano began the work of rebuilding its mountain cone, and by the beginning of the second century B.C. the peak of that cone had appeared above the water's surface in the southwest corner of Santorin's caldera.

The island that resulted was called Iera at the time, and its emergence was chronicled—after the fact—by the Greek geographer Strabo. According to him it grew "as if forged by implements out of a red-hot mass until it reached a circumference of 12 stadia"—a little over one and a third miles. Its dramatic and frightening formation—Strabo says that flames came bursting out



of the sea and that the water seethed and roiled—forged a link in men's minds with the gods; one group of Rhodian sailors erected on the island an altar to Poseidon Earth-Shaker and then retreated from those awesome precincts. Later eruptions added to Iera's size until, in 1457, an earthquake and an eruption split the island—by then called Palea Kameni (Old Burnt) by the Greek-speaking population—into two halves, and parts of it sank again beneath the waves.

The volcano's main vent was apparently plugged by this collapse, and molten tentacles began a search for new side vents inside the 900-foot-high mountain built up from the caldera floor. The result came in 1573, when another outbreak produced another island, Mikra Kameni (Little Burnt), a little east of the first. Gases vented inside the caldera have given the waters around the volcanic islands the property, sailors say, of killing barnacles and other marine growth on a ship's hull: "Three days lying off the Kamenis is as good as a careening," they say.

A third island in the caldera, Nea (New) Kameni, appeared gradually during a period of activity that lasted over four years, beginning in 1707; and the 1866 eruptions which brought to Santorin those volcanologists who first began archeological work there, enlarged the new island through two new crater vents. A further new vent between Nea and Mikra Kameni spewed out almost 150 million cubic yards of lava in 1925-1926, filling the strait and joining the two islands, and 1928, 1938 and 1950 saw new eruptions. Today, though several vents on Nea Kameni still release sulphur-bearing gases, other, more gentle natural forces are at work making the two Kamenis hospitable. Over 20 different plant species grow there now—some of them will not grow in Santorin's soil at all—and one fig tree graces the islands. In just this way did the volcano produce round Kalliste over the millennia following the eruption of 23,000 B.C., and the distant future will probably again see an island Most Fair on the site of Santorin, bearing in it, like its predecessors, the seeds of incredible violence.

Yet none of the horror of past eruptions —or the potential of future horrors—can be felt in Santorin's salt air, or seen on the faces of the Santorinians, all of whom live within five and a half miles of the Aegean's sole active volcano. They till the island's volcanic soil, mine its volcanic pumice, build with its lava and pozzolana, fish in its volcanic caldera, and bathe from its volcanic black-sand beaches—their most everyday activities are connected with this most un-everyday phenomenon, the volcano. It is the paradoxical linkage that is so fascinating: on the one hand the spreading dark mass of lava in the middle of the caldera; on the other, the colors of the cliffs, the ripples of the terracing, the silence of the Minoan city, the wind over the mountain's ancient limestone, the movements of a farmer tending his vines—the peaceful beauty of Santorin.

Robert Arndt is a Turkish-American free-lance writer now living in Istanbul.

BACKGAMMON COMES BACK...

Or Was It Ever Away?

WRITTEN BY JOHN O'NEILL
PHOTOGRAPHED BY KHALIL ABOU EL-NASR
AND WASEEM TCHORBACHI

In the Middle East, backgammon, or "tric trac," is played both in elegant homes and smoke-filled cafes. Left: a Syrian student challenges her Lebanese companion on an ornate Damascene inlaid table. Above: players in Beirut keep water pipes glowing.

Backgammon, the ancient Eastern game which once captured the fancy of European aristocracy with its mix of skill and chance, is currently enjoying a stylish comeback in the West. In the Middle East its popularity has never faded. There, in fashionable hotels and elegant homes—but also in smoke-filled cafés and narrow alleyways—the sounds of rolling dice, followed by the crisp *tric trac* noise of moving disks on a polished table which gives the game its most popular Arabic name, fill the night. Throughout the Eastern Mediterranean region it is unquestionably the single most popular game and in Lebanon, *tric trac*, or *towleh* (table), as it is also called, is practically the national sport.

Men and women, young and old, play it whenever and wherever they have a few minutes free—and sometimes when they haven't. Barbers have been known to keep customers waiting for a haircut and concierges their tenants waiting for a telephone line during a tense game. Middle Easterners often play with great exuberance, slapping the disks on the table, *tric trac*, with the flamboyance of an orchestra conductor. Wherever the game is played it is accompanied by numerous cups of coffee, and often—especially among older aficionados—by the *narguileh* or water pipe, whose charcoal is kept glowing cherry-red as players puff and ponder.

Nobody knows exactly where backgammon originated. Some theorists believe it was in India, at least the version known as Parcheesi, which allows four to play. The Arabs, with magnanimity, credit Iran with its invention and, in rare agreement, so do the Iranians.

The legend goes that an Iranian king named Nardashir once called in his wise men and ordered them to invent a game which, like life itself, depended on an uncertain balance of skill and chance. It should also, he said, sum up human existence in the world of finite time. The result was backgammon, sometimes referred to as *nard*, supposedly after the legendary king.

In backgammon, the 30 disks, 15 to a side, stand for the days of the month. They are black and white, for day and night. The board is divided into four sections or "tables," the four seasons. There are 24 positions or "points" to be followed by the stones on their route, standing for the 24 hours of the day; 12 are on each side of the board, the 12 months of the year. Thus each player has his year. And even the conventional dice used in backgammon are supposed to have something to say about time, for whichever way you add up the opposite faces, six and one, five and two, four and three, you get seven, the seven days of the week.

It's a pretty story, but in fact the game is almost certainly much older. In the ruins of Ur in southern Iraq, for example, archeologists have discovered a table on which a game very like backgammon was played some 5,000 years ago. That's as far as historians have been able to trace it—so far.

In the West the game became very popular in Rome, where it was known as *ludus duodecim scriptorum*, or "twelve-lined game." As in Arabic, one popular variant was called *tabula*, and it was not much different from the game also known as "tables," played in medieval England and mentioned by Chaucer in *The Canterbury Tales*.

The story is told that the Roman emperor, Claudius, was so fond of *tabula* that he had a gaming board installed in his imperial chariot, firmly fixed so as to take the bumps, to offset the boredom of long trips. For his fanatic devotion to the game Claudius was later wittily lampooned by the playwright Seneca in a work entitled *The Pumpkinification of Claudius*—written for the amusement of Nero's court after Claudius was safely dead. Roman emperors were traditionally supposed to become gods after death. But not so Claudius—at least according to Seneca. The philosopher-writer condemned Nero's predecessor to a mean fate in afterlife, portraying him as forced to spend eternity trying to play dice with a cup with no bottom; the cubes always rolled out.

In spite of spoilsports like Seneca, emperors, kings and caliphs continued to play the game through history. In 18th-century England backgammon was considered "always a particularly respectable kind of amusement, quite fitting for country rectors, and not derogatory to the dignity of even higher functionaries of the church." For a time European aristocrats considered it their exclusive preserve: "The game of kings, the king of games." With its lengthy and exotic pedigree, it is not surprising that this is the slightly snobbish sales pitch of the jet-set promoters of today's growing fad for backgammon among high society's Beautiful People and in U.S. gambling circles.

Over the past 10 years Prince Alexis Obolensky has probably done more to popularize backgammon in the West than any man since Claudius. With an assiduous promotion campaign, now backed by a major American distilling company, he has taken it from the gaming rooms of a few exclusive European spas all the way to Las Vegas, and the end is not yet in sight. Hugh Hefner, another big booster, has recently had his *Playboy* bunnies go around to veterans' hospitals distributing backgammon sets, with instructions, free. Others, such as Sir Oswald Jacoby, the bridge expert, are also turning to the game.

The first backgammon tournament in the United States was held in 1964, with a modest total of $40 in prize money. At a tournament attended by international luminaries of café society, sports and films in Las Vegas last January, prize money was a hefty $98,000.

In the Middle East the game is almost always played for the sheer pleasure of matching wits. Tournaments are still held for glory, with silver cups going to the winners. In recent years Elie Zarifé, who is associated with the French-language Beirut daily, *L'Orient-Le Jour*, has been instrumental in organizing the biggest international events. Players representing 10 nations participated in the tournaments held at Istanbul's Divan Hotel in 1971 and Beirut's Carlton in 1972. Lebanon won both times. Competition came from Iran, Iraq, Syria, Egypt, Cyprus, Turkey, Greece and as far away as France and Belgium.

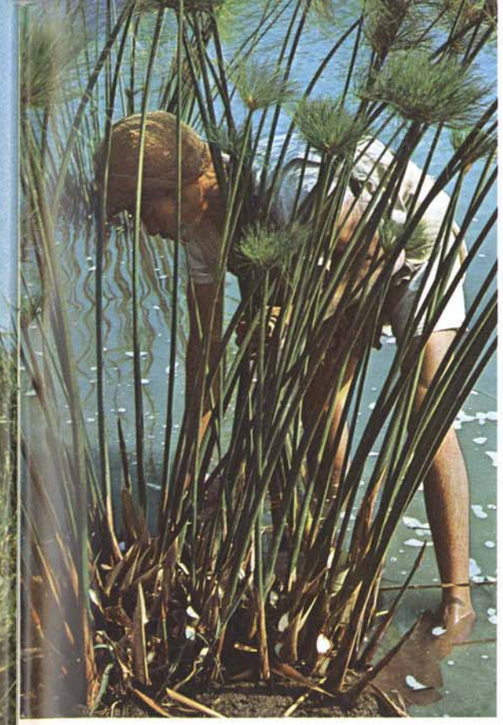
How exactly does the game go? Three common variations are played in the Middle East, but in all of them each of the two players, starting with his 15 disks arranged on one side of the specially marked table, attempts to move all of his pieces around the board and out of the game before his opponent can do likewise. The chance fall of the dice determines the number of allowable steps or "points" to be moved per turn, but the skill of the player determines which pieces he will choose to move, and where.

Say the dice come up three and four. A player can move one disk seven times, or two disks three and four times, respectively, but never coming to rest on a point where his opponent already has two or more of his disks. If the opponent has been able to block a series of consecutive "points" in this way, the player might find himself with no place to move, and thus forfeit his turn. The disks of the opponents pass each other in opposite directions, of course, like two troops of cavalry, and if one of a player's disks comes to rest on an opponent's single disk, that is one unhorsed cavalryman. That disk has to begin all over again, falling far to the rear of his advancing comrades. *C'est la guerre.* In another version, a player's disk can actually capture an opponent's disk and "escort" the enemy all the way until this piece reaches its goal safely. Then the "prisoner" is returned to the point where he was captured and freed to continue.

Strategies must be decided after each throw. Advance recklessly, exposing single disks and risking setbacks? Or move cautiously, constantly closing the ranks by lining men up on a single point for safety and the chance of blocking an opponent's move? Where will the advantage lie, where the risk? Obviously a mathematician has an advantage; he knows the odds. "Not necessarily," says Aziz Sayegh, a mathematics teacher at Beirut's Haigazian College. "When I concentrate on the laws of probability, I usually lose."

Which may be one more reason why backgammon is not only making a comeback, but has never really gone away.

John O'Neill was a reporter in Cuba, Mexico and his native Canada before coming to the Middle East to freelance while working on a novel.

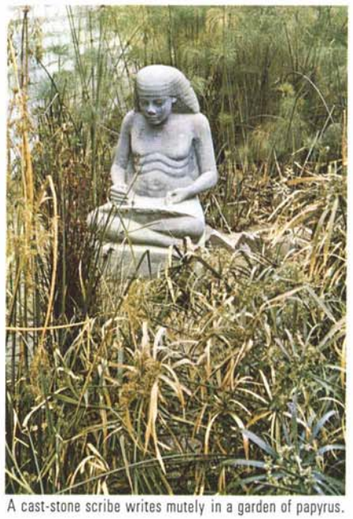


Above: a new plantation of papyrus on the banks of the Nile frames a graceful felucca sailing upstream. Right: a workman cuts the stalks in the first step of the rediscovered process of making papyrus sheets.

"But no one knows how the ancient Egyptians made it," his friend argued. "Then we'll find out," Hassan Ragab replied.

THE RETURN OF PAPYRUS

WRITTEN BY MASON ROSSITER SMITH
PHOTOGRAPHED BY JOHN FEENEY



A cast-stone scribe writes mutely in a garden of papyrus.

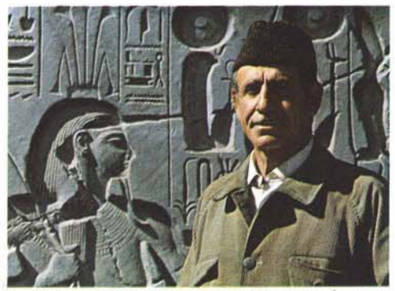
The Papyrus Institute now occupies two old houseboats anchored off the western bank of the Nile at Giza, a Cairo suburb.

After nine centuries, papyrus is making a comeback.

In ancient times papyrus, the first "paper," was second only to linen textiles as an Egyptian export and second to none as an influence on civilization. The Assyrians used it to record their triumphs, Charlemagne used it to keep his records and the Romans came to depend on it so extensively that when, in the reign of Tiberius, Egypt's papyrus crop failed, Roman commerce ground to a halt. Papyrus, indeed, was, until about the 12th century, a key element in the transmission and preservation of man's knowledge of religion, philosophy, literature, science, art, medicine and business.

In the eighth century, however, the Arabs conquered Samarkand and extracted from Chinese prisoners taken in the campaign a new formula for paper. This formula, which blended fibers from mulberry bark, bamboo stalks and rice straw, had been developed in China about 105 A.D. and was so much cheaper that when the Arabs conquered Egypt and introduced it the use of papyrus quickly began to decline.

Even with Chinese paper in the field, papyrus held on for another 400 years. But as new techniques developed—paper making from rags, cotton fibers and then wood pulp—its value continued to lessen. And



Hassan Ragab believes he has uncovered the secret of papyrus.

when irrigation and reclamation of land along the Nile for other agricultural purposes began to wipe out the once prolific papyrus plant, the game was up. Papyrus disappeared, and with it the closely guarded secret of how it was made.

That was the situation in 1956, when Hassan Ragab, Egyptian engineer, soldier, diplomat and cabinet minister—and today president of the Papyrus Paper Institute—was named Egyptian ambassador to China with instructions to see if China would help Egypt construct paper mills. Egypt was particularly interested in getting Chinese help because China was then the world's largest producer of paper made from rice straw. Since Egypt had plenty of rice straw—and little or no wood pulp—the government hoped China would help Egypt make paper from it.

The Chinese authorities welcomed the proposal and arranged for the ambassador to visit their paper mills. As part of his itinerary he stopped by to see a small family paper handicraft operation and saw paper manufactured by manual methods not much different from those employed nearly 2,000 years earlier when China invented the new process of paper production.

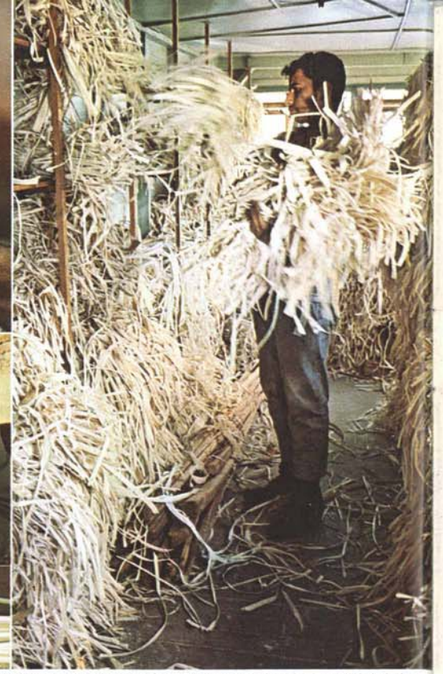
"Surprisingly," he now recalls, "I didn't find much on the industrial level that we didn't already know. I was most impressed, however, by China's cottage paper industry—a real home handicraft. And it occurred to me that if we could set up something like that in Egypt, perhaps it might become another tourist attraction."

He thought about it through two more diplomatic assignments to Rome and Belgrade, and in 1969 eventually suggested it to his government. "Fine," someone replied, "but why not make papyrus? After all, it's part of Egypt's history."

"Because," he replied, "no one knows how the ancient Egyptians made it."

"Well, why not find out how they did?" Why not, indeed, thought Hassan, and the search was on.

One key problem, he immediately discovered, was where to find some papyrus. A perennial, non-woody aquatic plant, *Cyperus papyrus* grows even higher than the



Cut stalks must be immerged in water (above, left) until processing. Workers then strip the outer layer from each stalk by hand before slicing by machine (center). Dried strips can be stored indefinitely.

Dried strips are soaked again in water when needed.

Rolling the wet strips, or beating with a mallet, plus additional soakings serve to eliminate extraneous organic matter and expose the fibers.

proverbial elephant's eye—15 to 25 feet—and has a heavy root system, a triangular stem and a tasseled flower head known botanically as the inflorescence. It used to grow throughout Egypt so profusely that it became the symbol of Lower Egypt, but is today extinct there.

Hassan Ragab, therefore, turned to the original sources in Ethiopia and Sudan and brought in seeds. When that failed, he brought in rhizomes (roots) from both countries and, after years of innumerable experiments, established four large plantations on the banks of the Nile near Cairo, the smallest of which stands beside the Papyrus Institute at No. 3, Nile Avenue in Giza.

And that was just a basic step. Next he had to uncover the ancient secret of manufacture—so jealously guarded by the ancients as a monopoly of the pharaoh that no text of any kind on papyri, no descriptive wall paintings and no tomb inscriptions are known to exist. In his search for information, Hassan says, he consulted all the world's leading encyclopedias and the writings of ancient visitors to Egypt—Theophrastus of Greece, Herodotus and especially the Elder Pliny of Rome. But all he found out was that those reporters were wrong on several counts.

"Probably none of them knew much about paper making, or they had to get the information through interpreters. Or maybe the interpreter wasn't too well informed, or was just pulling the visitor's leg."

In the process he learned that the basis of papyrus was the fibrous core of the papyrus plant—more widely known, perhaps, as the bulrushes in which Moses was hidden. Someone, somehow, had learned how to peel the papyrus, extract the core, press it and polish it ("With an elephant's tooth," said one source), and Hassan was determined to learn too. He hoped to get a government subsidy for his experiments, but when he didn't, he began to experiment, on his own, in his own bathtub.

Now, 12 years later, he is still using bathtubs, but he has transferred the tubs to an old houseboat anchored off the western bank of the Nile at Giza. The houseboat serves as the center of an odd complex that includes a converted yacht, an onshore workshop and the beginnings of a papyrus museum. It also serves as a forum from which Hassan Ragab enthusiastically explains how papyrus is made in 1973.

"Papyrus," he said, lopping off a stem with a large machete, "had many uses in the daily life of the ancient Egyptians. From the flower head, they took garlands to adorn the shrines of the gods. The wood of the root was used for fuel as well as to make various utensils. From the stem, boats, sails, mats, cords, sandals—and, of course, writing materials—were made.

"The lower, softer part of the stem was also a common article of food, either raw or cooked. I've tried it myself, and it's not bad. In short, papyrus was as useful to the Egyptians as bamboo is now to the Chinese and Japanese.

"Among other things, we had to learn the life cycle of the plant itself. Harvesting, usually during October, November and December, is a delicate process. First, as you may have noticed when I cut this stem, the flower head is cut off to disentangle the stem from its neighboring plants. A bruised or broken stem is useless for paper making because the inner pith, normally very white, gets stained with rust-colored spots. Result: a defective sheet."

With the machete, he trimmed off about two feet from the lower part of the stem. "Only this section is useful for sheet making, since only this is broad enough to produce strips of suitable width." With the same blade, he carefully peeled off the green outer rind, exposing the white pith inside. Now, with equal care, he sliced the pith longitudinally into thin strips of nearly equal thickness; like the plant itself, the strips are a bit more than an inch and a half wide.

"We can use these now, as they are," he explained, "but we can also dry and store them for future use. There is only one crop a year, so we need a supply to keep us going the year round."

Inside the factory, beneath elaborate Islamic carving and wall decoration, the main deck of the houseboat was crowded with a surprising array of unusual equipment, including five porcelain enameled bathtubs filled with water and bundles of soaking papyrus, a long table with a white covering and four manually operated, old-fashioned screw letter presses.

"This equipment," Mr. Ragab grinned, "probably would surprise the ancient Egyptians even more than it does you. But we think the process is essentially the same.

"The strips of pith, as you see, undergo several soaking operations, beating by mallet or rolled, then more soaking until they're completely hydrated. By this method, we get rid of all undesirable organic material, thus exposing the fibers at the strip surface in a free state.

"The largest sheet size in ancient times was about 30 by 40 centimeters, so now we cut the strips 30 and 40 centimeters long, the width and breadth of the sheet. We have the waste for smaller sheets.

"Now, let's make a sheet." He placed on the table a thick felt pad, somewhat larger than the finished sheet, then a sheet of cotton cloth on top.

"The ancient Egyptians," he said, "used linen, but modern cotton cloth serves just as well and, furthermore, Egypt has lots of it." Carefully, he laid a 40-centimeter strip horizontally across the top margin of the cloth, then others parallel to it, taking care to overlap the first strip by about one

Wet strips, almost ready to be joined in sheets, hang in the sun before being cut into required lengths.

millimeter. This process continued until the sheet was complete. Now he began to lay the 30-centimeter strips crosswise from left to right, on top of the others and overlapping each other in the same manner. Using a squeegee, he pressed out the excess water, covered the sheet with another layer of cotton cloth and felt, placed it in one of the letter presses, turned the handle, hard, to apply pressure and expel remaining drops of water, these to be absorbed by the felt.

"The wet felt," he explained, "is changed periodically with a dry one until all traces of water are extracted. During the drying process, the fibers in the laid strips hook together and under pressure they set permanently when completely dried—in effect, the strips are firmly cemented together.

"This process differs very little from cementing macerated plant fibers in pulp to produce ordinary paper. The only difference is that in the use of pulp, the plant fibers are in a free and disintegrated state, while in papyrus sheet making, the fibers, free though they are, are still attached to the surface of the pith strips."

He held a finished sheet before one of the colored glass windows in the houseboat. "See the pattern?" The two layers of strips showed clearly.

Sheets produced at the institute, Hassan said, possess almost all the characteristics required in any modern writing or printing papers. "I've tried every method of handwriting—pencil, ballpoint pen, ordinary pen—all with very satisfactory results.

"The same is true for drawing and painting, whether oil, water or gouache colors. Even printing quality is good."

There are weaknesses. Papyrus folds less easily than ordinary papers. And it is expensive. A single plain sheet, 30 by 40 centimeters, sells for five Egyptian pounds (about U.S. $14). But on the other hand, papyrus may have great potential as pulp.

"Papyrus," said Hassan, "grows wild and in great profusion on millions of acres in the Sudan, still more in Ethiopia, Chad and other Central African countries. If pulp mills could be established pulp could make them rich—and Egypt would have an abundant supply close at hand, less need to import from overseas.

"You see papyrus is a perennial. You harvest it and it grows again. It's not like oil—once you pump oil out of the ground, it's gone. Even assuming we could develop forests in Egypt—and this is doubtful—it takes years to grow a tree. But Central Africa can produce two crops of papyrus a year, as compared with only one in Egypt."

A standard part of Hassan's talk is his display of a series of painted sheets, reproductions from ancient *papyri* in Egyptian museums. "The sale of these makes it possible for us to finance our small factory and continue research in the institute. We sell to tourists, Egyptological societies, libraries and museums around the world."

In the workshop ashore, Mr. Ragab has applied his engineering talent and experience to devise mechanical equipment to speed up the production process—slicing machines, wooden rollers, apparatus to squeeze out water more efficiently. But it is to the museum, gradually taking form nearby, that Hassan repeatedly returns. For there is the site of his biggest dream: restoration of the famous library of Alexandria.

"That library, as you may remember, held 800,000 volumes of *papyri*—until Julius Caesar burned them. We can't restore all of them, but there are more than 40,000 papyrus scrolls still in existence today and once we can get some of the originals and copies of others under one roof, we'll have a nucleus.

"That assumes, of course, that by then we will have begun to make papyrus on a large enough scale—and we will, we will."

Mason Rossiter Smith, former editor and publisher of U.S. daily and weekly newspapers and a foreign correspondent during the 1950's, is now director of the university press at the American University in Cairo.

A worker places overlapping parallel strips on a base of felt, adds a layer of strips crosswise on the first, then squeezes out excess water. The fibers hook together as the completed sheet dries under pressure.

Inset on a finished sheet is a copy on papyrus of a wall painting.