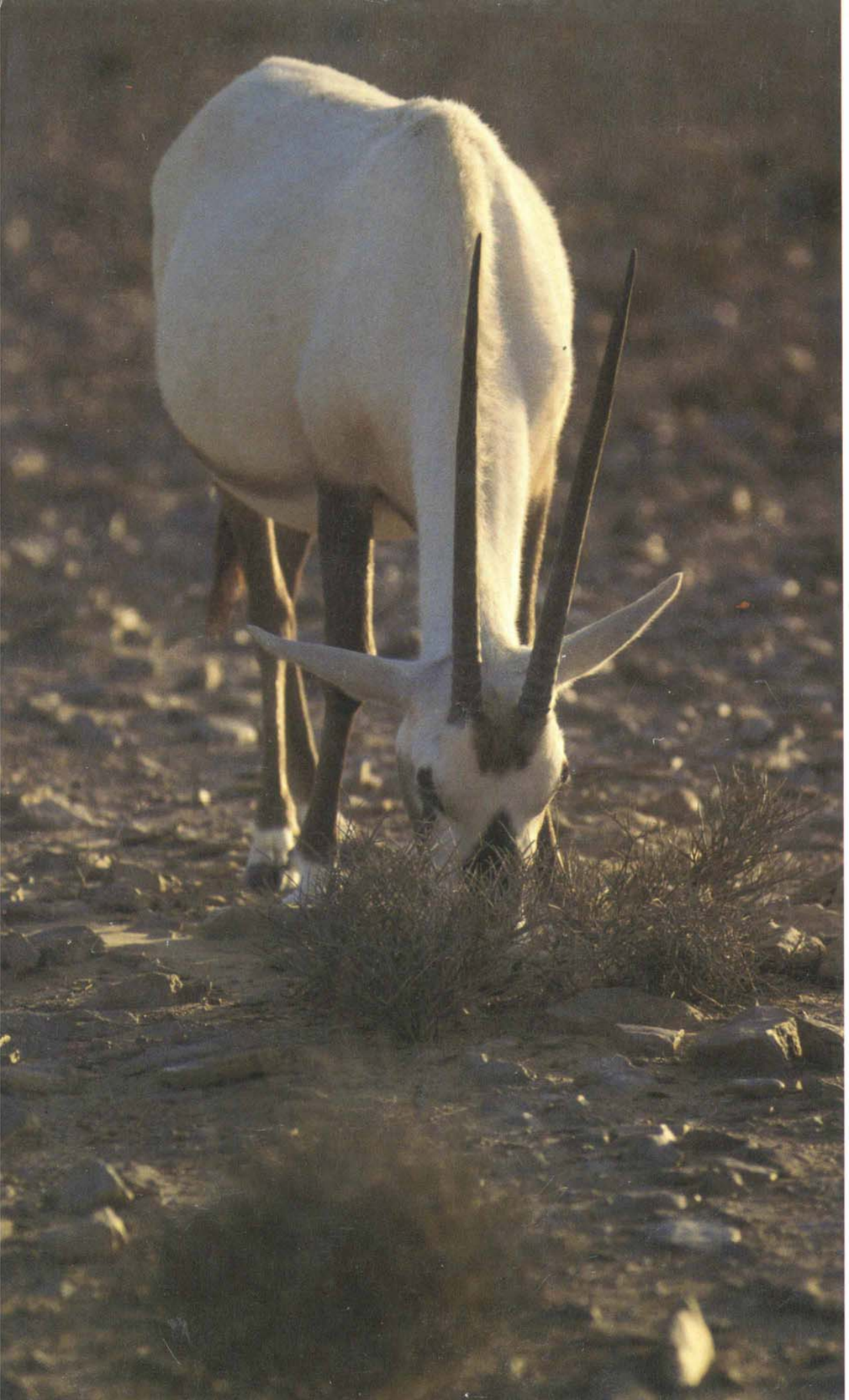

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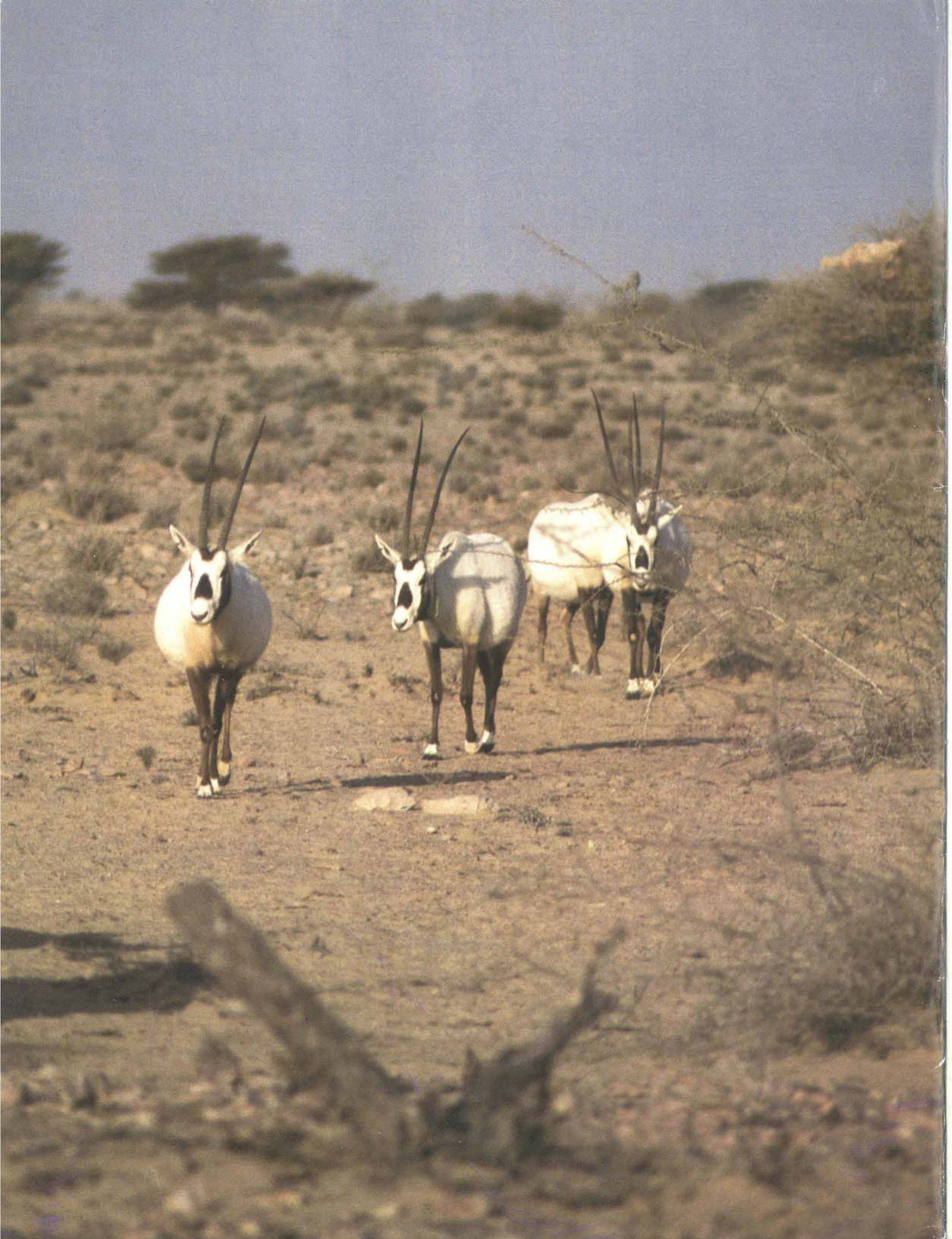
JULY/AUGUST 1982

THE WORLD'S FAIR 1982
A Special Report



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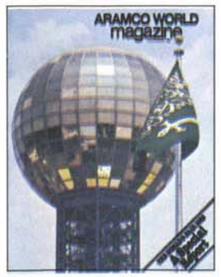


Cover: In Knoxville, Tennessee, the unlikely site of the 1982 World's Fair, the Sunsphere, symbol of the energy theme at the exposition, dominates the 67-acre fairgrounds, and contrasts vividly with the green and gold flag of the kingdom of Saudi Arabia, whose immense reserves of petroleum – as well as associated gas – make it the single most important country in the history of energy. Photograph by David Luttrell. Back cover: In the central desert of Oman, the oryx, a beautiful but endangered antelope, grazes in a vast enclosure prior to its long awaited return to the wild. Photograph by Paul F. Hoye.

In Knoxville,

fun, flags and fireworks...

FAIR PLAY

WRITTEN BY SYBIL THURMAN PHOTOGRAPHED BY DAVID LUTTRELL

They're used to it now–the crowds, the bands, the laser beams raking the sky at night, the brilliant bloom of fireworks – but back in May, Knoxville's people were openly and unabashedly excited as the guns went off, the balloons went up and a presidential cavalcade swept up to the Court of Flags to open the 1982 World's Fair.

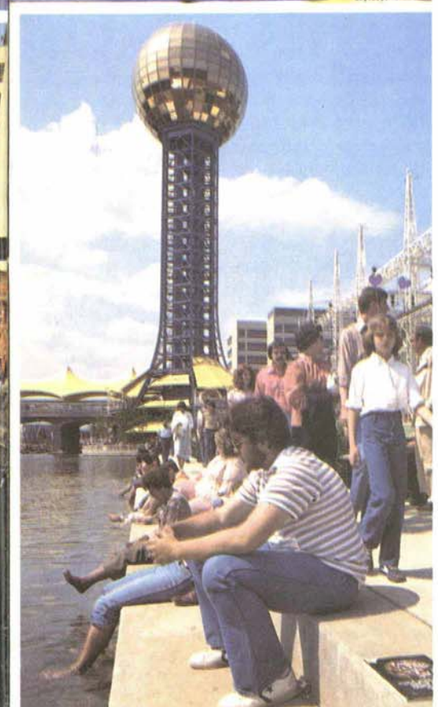
To an extent, this sense of excitement still permeates the city. Despite early fears of failure, and fierce opposition, most of Knoxville has come to agree with what Joe Rodgers, commissioner of the U.S. pavilion, said about the fair: "The focus is on the fun."

To the promoters and backers of the fair, of course, the pressure and problems of the fair were hardly fun. They, after all, were responsible for what the *Economist* later described as Knoxville's "cheeky" gamble: the $800-million effort to hold a genuine world's fair in a small, relatively unknown southern city. And during the first weekend, when opening day crowds seemed to sag a little, cab drivers and the owners of motels and inns were heard to inquire – with just a faint note of concern – "What did y'all think of our fair?"

Most of Knoxville, however, just took it as it came, doing what they could and shrugging if they couldn't. The night before the opening, for example, as construction crews raced to complete unfinished exhibits and pavilions, clusters of visitors and what seemed to be most of Knoxville's population gathered on the green slopes of the University of Tennessee above the fairgrounds or strolled casually along Broadway – where a great billboard had, for 1,000 days, ticked off the days remaining until the fair opened. Others dined leisurely in such places as the balcony of the old L&N (for Louisville and Nashville) railroad station, a huge, 19th-century monument of red bricks and granite slabs converted, by imaginative architects, into a warren of shops and restaurants for the fair.

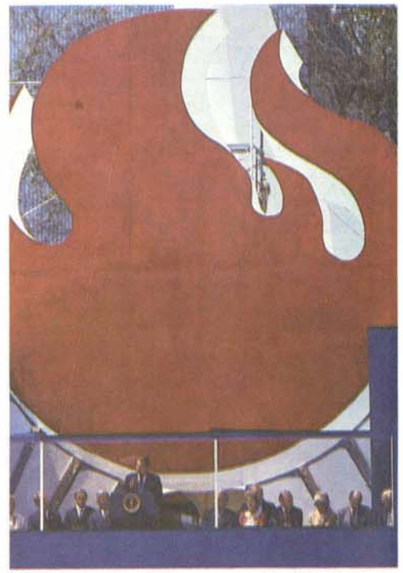
From such perches, and from the bridges that cross the ravine where the fairgrounds lie, these early crowds patiently watched and waited. They were amiable. They were casual. They were relaxed.

Since then, this easy-going attitude has become an outstanding feature of the fair. On opening day, for example, when tight security for President Reagan kept thousands waiting outside the fairgrounds in the sun, most simply shrugged and waited while the bands played, the majorettes marched, the choirs sang and – a spectacular finale – thousands of multicolored balloons went soaring into the sky – a symbol that the fair, after seven years work to get it off the ground, was aloft at last.



It had, nevertheless, been a race against time. From the moment the Bureau of International Expositions okayed Knoxville, fair officials were never really sure they could do it. Even while Dinah Shore sang and President Reagan spoke, a woman in heels was still vacuuming the rug at North Carolina's exhibit, while a carpenter noisily piled strips of aluminum paneling into a cart.

Some exhibits had worse trouble than that. Panama, for some reason, simply didn't open its pavilion at all. A rare Rembrandt scheduled to headline an art exhibit was delayed five weeks because of insurance troubles. And, across the fairgrounds, the Peruvian pavilion faced a crisis: a leak in the ceiling that occurred when waiters in the 140-seat Peking style restaurant above the exhibit spilled a 20-gallon vat of won ton soup.



U.S. President Ronald Reagan opens the 1982 World Fair.

The next day there were still more problems. Ticket sellers at the gates ran out of change and thousands of visitors piled up at the gates in the sun getting angrier by the moment – until quick-thinking fair officials decided to let them in free.

In the small, but well-appointed press center in a brand new hotel adjacent to the fairgrounds, some of the more than 1,500 reporters who poured into Knoxville for the opening were also given a run-down on the kind of troubles the fair could expect during the long, hot summer ahead: police spotted and rousted six pickpockets; emergency squads treated a man with a heart condition and firemen extinguished three small fires.

Later, as the nation's schools let out and the tourist tide began to break over the Great Smoky Mountains National Park the problems worsened. But though the traffic did get a bit heavy and the prices just a mite too high, the people of Knoxville continued to delight in the fact that their small, green city had actually gotten itself a real world's fair.

It is true that fair officials and world press coverage have stressed the playful aspects of the fair – and they should. Each day has offered a marvelous variety of sparkling entertainment: marching bands, strolling magicians, mimes and jugglers. Big hits include Appalachian folk dancing, the arts of basket-making, woodcarving, quilting and blacksmithing. Above the south end, America's largest ferris wheel swoops visitors 148 feet above the ground and each day the famous Anheuser-Busch Clydesdale horses, known for their elegant carriage and fleecy white "stockings," lead parades through the fairgrounds. Finally, every evening, the festivities culminate with spectacular fireworks, and a laser show billed as "the largest laser sky show in history" – swirling colors and sheets of lights visible for miles.

But the pavilions – sponsored by 23 countries and 91 corporations – do not neglect the fair's serious theme either. And though the topic – "Energy Turns the World" – may seem dry, scientists, graphic designers and technicians from around the globe have, with imagination and taste, humanized the most sophisticated technology.

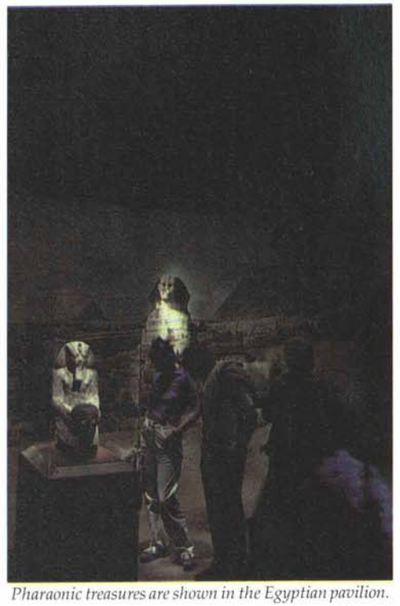
The U.S. pavilion, for example, offers a debate on energy that includes Jane Fonda; China provides river rides in a 20-foot solar-powered dragonboat; the Tennessee Valley Authority allows visitors to try to match energy demands with available supply in a simulated load-control center; and France shows the core of its nuclear breeder reactor. There is also a look at oil shale, a glimpse of the bottom of the North Sea – via a British oil drilling rig – and an uncomfortably realistic coal mine from West Virginia.

The fair also provides a forum for every exhibitor to show off its state-of-the-art technology. Talking robots discuss energy topics in Japan's pavilion, France presents an electrified model of the Bullet Train – the world's fastest – and Australian windmills up to 75 feet tall pump water to irrigate eucalyptus trees and ferns inside the pavilion.

One of the more memorable attractions is the IMAX theater – with a screen 67 feet high and 90 feet wide – in which the U.S.A.

offers an enormous, three-dimensional film on the story of America's energy – past, present and future. Elsewhere in the six-level cantilevered pavilion, visitors can push buttons on 33 "talk-back" computers to get answers to their energy-related questions, and stroll among 12-foot murals and artifacts from six previous fairs and museums in the United States.

Some exhibits mix energy with culture. Korea, for example, demonstrates an ancient floor-heating system called "Ondol" – along with folk dance performances, Tae Kwon Do karate exhibitions and a restaurant serving traditional Korean cuisine.



Pharaonic treasures are shown in the Egyptian pavilion.

Germany showcases an 18th-century waterwheel; the Italians pay tribute to the 40th anniversary of the first self-sustaining nuclear chain reaction; and the Canadians operate a 22-foot working model of the world's largest wind turbine.

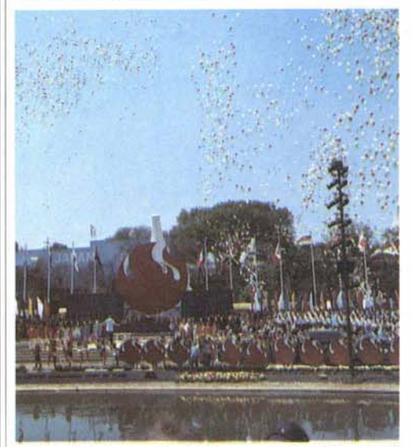
Although the Hungarian Pavilion addresses world energy problems too, it will be remembered primarily for its Rubik's cube, a giant version of the puzzle invented by Hungarian architect Dr. Erno Rubik. The huge cube, which solves itself mechanically every few seconds, is the focal point of Hungary's presentation, but a restaurant serving Hungarian goulash, cabbage rolls, and strudel may be equally memorable.

History, art and culture are also stressed at the fair, particularly at one large pavilion housing China, Egypt, and Peru. The Chinese, who see the fair as an opportunity to establish a cultural dialogue with the world, offer a portion of the Great Wall of China, along with scores of soapstone and jade carvings, modern and antique porcelain, rattan and silk goods, furniture, and tapestries woven with pearls. The pavilion does not neglect energy entirely, however; in addition to the solar boat, it offers a display on the collection of marsh gas for conversion into propane gas. The fair's biggest hit, China's pavilion has crowds waiting up to three hours.

Egypt's exhibit also focuses on history – with a collection of treasures from the Pharaonic, Coptic and Islamic periods. Similarly, Peru celebrates its past with gold and silver relics and a 3,000-year-old mummy.

Some of the exhibits are quite candidly sales promotions – but enjoyable anyway. Many U.S. states make pitches for their tourist attractions with "visual vacations" to Tennessee's Grand Ole Opry, North Carolina's Kitty Hawk, South Carolina's Myrtle Beach, the Kentucky Horse Park, and the Mississippi and North Florida Gulf Coast.

Several states, though, go a step past strict promotion. West Virginia is one, with an exhibit on coal mining that has received international recognition for its accuracy and fairness, and Tennessee, taking its role as host to the world seriously, built a $4 million open-air amphitheater in the center of the fair, where an extravagant music and dance production called "Sing Tennessee" is performed; the amphitheater is a futuristic fiberglass tent, one of the few permanent structures on the site.



Aloft at last: thousands of balloons — and the fair as well.

Outside the fair, Knoxville is offering still more entertainment. At the Knoxville Civic Auditorium and the Civic Coliseum, for example, seats are already booked for October with such drawing cards as Rudolf Nureyev, dancing with the Boston Ballet,

A Welcome to the World

Author John Gunther called it the ugliest city in America. The Wall Street Journal *called it a "scruffy little city on the Tennessee River." Nevertheless, Knoxville, Tennessee — to the surprise of virtually everyone — became the home of the 1982 World's Fair.*

Until a few years ago, the very idea of a World's Fair in Knoxville was unthinkable. Small, seemingly undistinguished, Knoxville also had more than its share of urban blight: empty, dilapidated buildings, a depressed business district and — remnants of its industrial past — abandoned warehouses, factories and rusting railroad tracks.

Worse, perhaps, Knoxville's traffic was such a mess that Saturday home-football crowds often brought the city to a halt. Its poorly-designed and obsolete highway system, in fact, was notorious from coast to coast; truckers dubbed one particularly awful bottleneck "Malfunction Junction."

The question then is inescapable: why Knoxville?

One answer is that Knoxville's leaders wanted a World's Fair as a vehicle for urban revitalization that the city itself simply couldn't afford. But there were other, more persuasive arguments, too.

Knoxville, for example, lies athwart the tourist route to Florida from the midwest and the northwest and is only one hour away from the Great Smoky Mountains National Park — the most visited park in the United States. Fair promoters also pointed out that the city sits smack in a rich lode of potential fairgoers: more than 52 million people live within 400 miles of the Fair site.

Another argument turns on the theme of the fair. As sanctioned by the Bureau of International Expositions in Paris, the theme is "Energy Turns the World," and Knoxville, though many people forget it, can make a respectable case for its contribution to U.S. energy needs.

Knoxville, for example, is at the heart of a region that one leader described as the "Saudi Arabia of Coal." This region — Tennessee, Kentucky and Virgina — produces 200 million tons of coal annually.

In addition, Knoxville is the home of the world-famous — and once controversial — Tennessee Valley Authority (TVA), a 1930's experimental New Deal agency that tried to show how planned development of natural and energy resources could transform the economy of an entire region.

To a large extent TVA succeeded. Now the third largest electrical utility in the world, TVA operates a system of 49 hydroelectric dams, 12 coal-fired steam plants, two nuclear plants, one hydroelectric pumped-storage project, and four combustion-turbine units.

Thirty miles from TVA offices in Knoxville is still another famous installation: Oak Ridge, known for its role in the World War II "Manhattan Project," and the center today of such highly sophisticated Department of Energy research projects as the Clinch River Breeder Reactor, which produces more plutonium than it consumes. Though it is under attack from some who consider it obsolete, and others who fear nuclear proliferation, the $3.2 billion project is, according to DOE spokesman Wayne Range, "...on the leading edge of this technology."

One of the world's largest research centers, the Oak Ridge National Laboratory also works on improvement of the fission process, does environmental research on power plant effluents, develops solar and geothermal energy and — the greatest challenge in energy technology — nuclear fusion, which has been called the "next generation experiment."

The University of Tennessee is also involved in energy — by frequent participation in Oak Ridge efforts and experiments, but also on its own in solar, wind, geothermal, tidal power and fusion experiments. Energy, as a result, is responsible for one obscure statistical fact about Knoxville: on a per capita basis, it ranks 11th in the world in residents with Ph.D. degrees.

Even the scholars were skeptical, however, when civic leaders first proposed Knoxville as the site of a World's Fair. Who, they asked, would pay for the fair? How — with only one downtown hotel — could Knoxville possibly house millions of visitors — and solve its traffic problem?

Anticipating many of those questions, proponents of the fair had studied the experience of Spokane, Washington — a city much like Knoxville — in hosting the 1974 World's Fair, and were able to not only reassure local opinion leaders, but also obtain seed money from local banks and win political support from both Tennessee's senators and President Carter.

Later, with growing international interest in a Knoxville fair, they were also able to obtain larger amounts of money from national and international sources and the taxpayers, assured that they would not have to foot the bill, began to offer support.

One key problem — "Malfunction Junction," where two interstate highways met in downtown Knoxville — was solved early. Though improvements had been on the drawing boards at the Tennessee Department of Transportation previously, the fair's deadline — May 1, 1982 — forced completion of 10 years of work in two years: $225 million worth of highway construction, much of it for a bypass.

Almost simultaneously, commercial interests started construction of three more downtown hotels: a new Hilton, a Holiday Inn, and a Quality Inn. Together with the older Hyatt Regency, that gave Knoxville 1,352 rooms. In addition, dozens of new motels were opened, other buildings were renovated or converted — one a tobacco warehouse partitioned into cubicles — and a fleet of houseboats was moored along the riverbank.

The expectation of quick profits, of course, spawned abuses — as the national press has made abundantly clear. Parking lot fees commonly jumped 200 percent; some motels hiked prices 400 percent; and some landlords even evicted tenants from their apartments. Yet, surprisingly, Knoxville, by opening day, had rallied behind the fair.

Local citizens, for example who had once sneered at the idea of a fair, now bristled when national reporters questioned how a "scruffy little city" could even think of hosting a World's Fair. Furthermore, with the city's reputation at stake, a remarkable spirit of enthusiasm surfaced. In nearby Clinton, three-quarters of the businesses painted their buildings and in Knoxville itself the business community cleaned up downtown alleys, fixed storefronts and sidewalks, planted trees, ordered benches and even steam-cleaned downtown buildings.

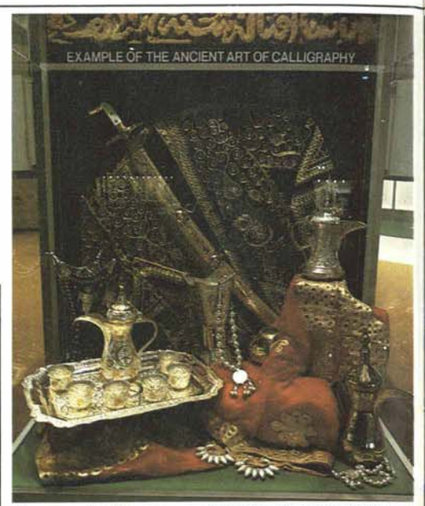
At the same time, private individuals, garden clubs, Girl Scout troops and others have helped spruce up the city through the "Adopt-a-Spot" program in which volunteers, assigned one spot in the city, not only cleaned it, but also planted flowers and trees on their adopted property.

The results? A bustling, eager Knoxville that, all summer, has been offering a Tennessee welcome to the world — with no apologies.

The Saudi Pavilion

Increasing America's awareness of the Islamic world

The Kiswa, the gold-embroidered covering from the Ka'ba, a cubical stone structure at Makkah (Mecca), holy to Islam.



Swords and coffee pots — artifacts from Saudi Arabia's past.

Display panels depict progress in present-day Saudi Arabia.

In its first appearance at a world's fair, Saudi Arabia won plaudits and drew crowds with a modest pavilion that featured some sand from the dunes at Dahna and a glass oil well. Now, in its second try, the kingdom is achieving still greater success with a more serious theme – the eternal values of Islam.

The first exposition was Expo '70, Japan's extravagant mix of fantasy and futurism in Osaka. The second – much smaller, but also more fun – is Knoxville's international energy exposition.

Like the rest of the Knoxville exposition, the Saudi pavilion is an understated, low key effort. It touches lightly on such subjects as Saudi Arab-United States trade, education in the kingdom and, in keeping with the fair's theme, includes a modest mention of petroleum, especially the use of petroleum revenues.

Quite deliberately, these exhibits try to counteract the numerous misunderstandings in the United States about Saudi Arabia, and, says Commissioner General Ibrahim F. Khoja, to show that "Saudi Arabia is a friend and a partner of the United States."

The focus, however, is summed up in the pavilion's motto – "Eternal Values in a Dynamic Nation" – and is represented in the pavilion's centerpiece: a painstakingly detailed scale-model of the Grand Mosque in Makkah (Mecca), the Holy City of Islam.

"Because the nature of Islam, with its 800 million adherents, is so seldom a topic of conversation in America, we felt that a dramatic presentation was called for," explains Commissioner General Khoja. "Now, a brief, stimulating portrayal of worship in Islam's holiest place is available to the estimated 10 million who will attend the Fair."

Not all the visitors, certainly, will take in the Saudi pavilion, but so far attendance has been surprisingly high. "There were 80,000 people here to see Reagan on opening day," said one of the pavilion's 35-man staff, "and I think most of them visited the Saudi pavilion."

In a sense, the Saudi Arab pavilion provides an oasis in the midst of the busy sunlit fairground. Under a flat black ceiling, amid carpeted silence, visitors find neat, well-lit green and white panels and a modest collection of artifacts: a sword, a *ghutra*, the traditional Arab headgear, a khanjar – the handsome decorated curved dagger – a camel saddle and other items from what was once a largely nomadic culture.

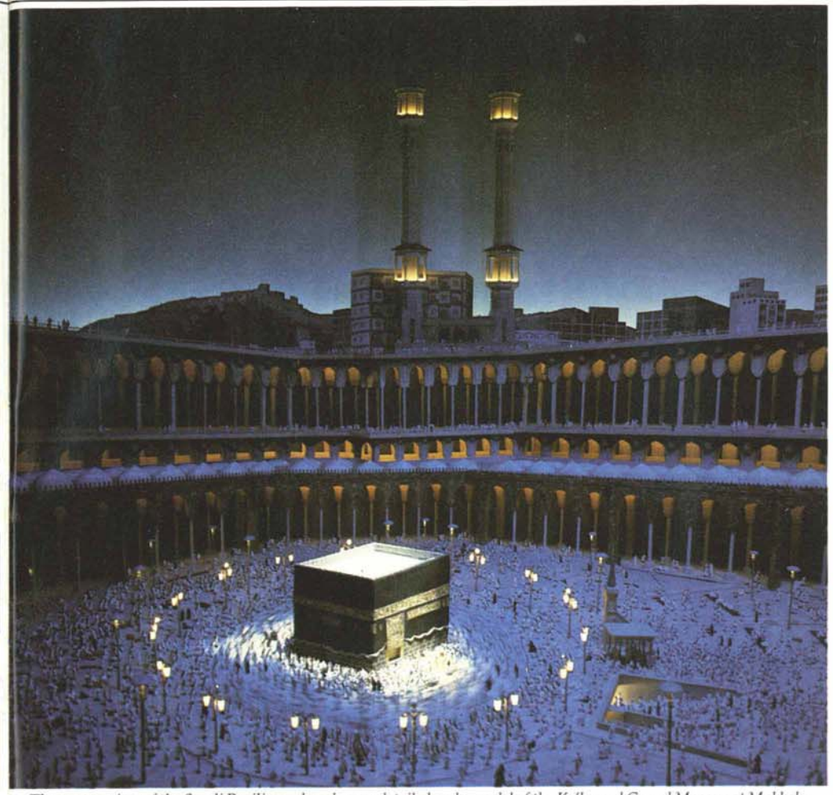
In sharp contrast to that phase of history, there is also a panel pointing out that every billion dollars of Saudi imports from the U.S. creates 35,000 American jobs, a fact that commissioner Khoja elaborated on during an interview with *Aramco World:* "We are friends; we're not a burden on you. We prefer a low profile, but sometimes we need to let our friends know these things."

On display too are graphs, photographs and models – such as a reconstruction of the University of Petroleum and Minerals in Dhahran – suggesting the vast program of education and modernization now underway in Saudi Arabia.

Pavilion manager Jean Abinader made it clear that Saudi Arabia's goal was a modest one. "If visitors leave the pavilion knowing the country is named Saudi Arabia and not 'South Arabia,' he said, "we'll be happy."

"But," he adds, "we also hope that they'll leave knowing that we share certain fundamental values." Among them, he says, are a "strong sense of individuality, hospitality, a desire for peace, opposition to Communism, belief in one God, and dedication to the sacredness and dignity of life."

An ornate camel saddle serves as a reminder of desert life.



The center-piece of the Saudi Pavilion: a handsome, detailed scale-model of the Ka'ba and Grand Mosque at Makkah.

A smiling welcome from a Saudi guide for a young visitor.

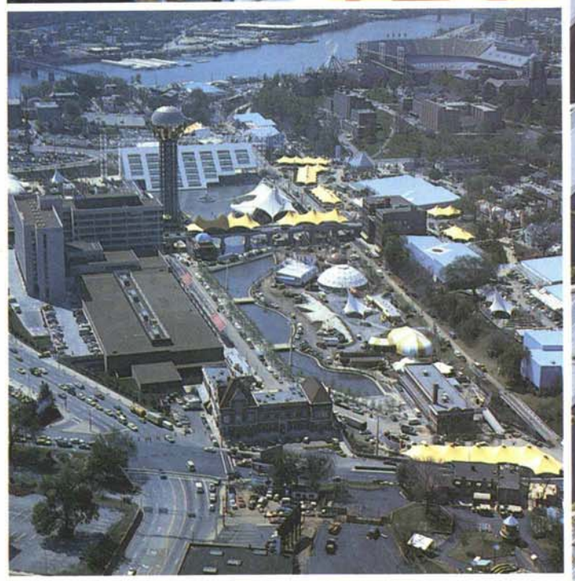
Minister Solaiman al-Solaim visiting the Pavilion.

On opening day, it was instantly apparent that Islam was the big draw. Crowds lined up immediately, for example, in front of the Kiswa. A great black cloth with verses from the Koran embroidered in gold, the Kiswa is a covering for the Ka'ba, a cubical stone structure in Makkah called the House of God. And even bigger crowds lined up at the Grand Mosque exhibit; visitors, in fact, waited in line for up to 90 minutes and were pleased that they had. As one girl put it, "It sure beats the other exhibits."

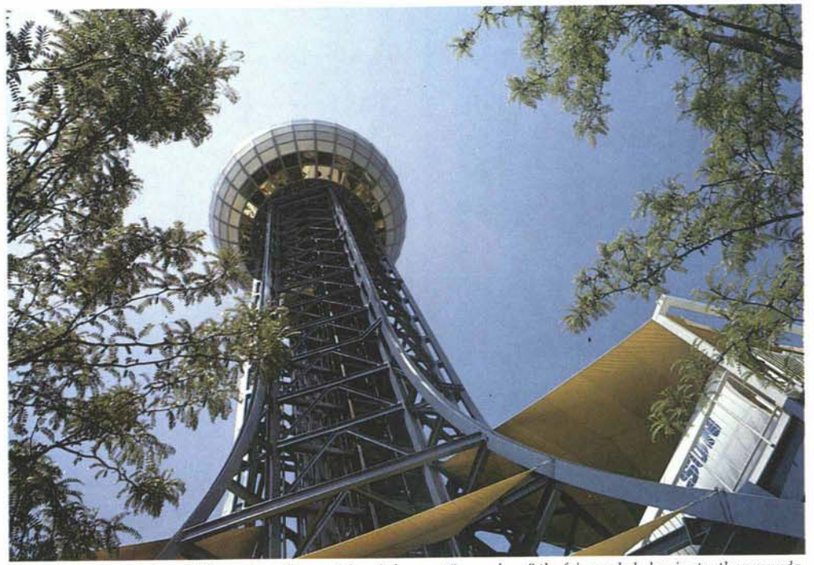
The exhibit *is* impressive. As visitors enter the curtained enclosure in which the Grand Mosque diorama is placed, the enclosure is dark and silent. Then, as the sky lightens, the voice of a muezzin is heard chanting the dawn prayer and suddenly the pavilion crowd is transported to the great courtyard outside the Grand Mosque in Makkah. There they plunge into the throngs of white-robed pilgrims circling the Ka'ba; this is the *Tawaf*, one of the first rituals in the pilgrimage to Makkah.

Traditionally, exhibits are supposed to be fast and fun; fairgoers, it is thought, don't have time for lectures. But at the Saudi pavilion the crowds came, saw and listened to an explication fully 15 minutes long, of the faith of Islam, and the reaction has been attentive interest. "A fine exhibit," said a couple from Florida. "Very interesting," said a teenage girl. "Best thing I've seen so far," said a man with glasses.

To the staff, the pavilion manager and the Ministry of Commerce, the pavilion sponsors, this reaction was important. As the Minister of Commerce, Dr. Solaiman al-Solaim, said in an interview with *Aramco World:* "In the United States, there has been a substantial change in knowledge and awareness of the Islamic world. U.S. understanding is slowly catching up with the realities and if this pavilion can help increase that understanding, it will have been worthwhile."



A bird's eye view of the fair, and (top) closeups of the dancers, carousels and clowns.



◀ The U.S. pavilion is shaped like a solar reflector; (above) the great "sunsphere," the fair symbol, dominates the grounds.

the Royal Tahitian Dance Co., Carlos Montoya, the Scottish National Orchestra, the Prague Symphony, Al Hirt and Pete Fountain, the Dance Theater of Harlem, and The Grand Kabuki of Japan.

In a spirited effort to offer something for everyone, the fair also scheduled 19 sporting events, including a round-robin baseball tournament with teams from the U.S., Korea, Japan, and Australia, and a round-robin basketball tourney with teams from the U.S., China, Canada, and Yugoslavia. Among other events are a National Football League exhibition game between the Pittsburgh Steelers and the New England Patriots, a National Basketball Association exhibition game, and PGA Cup matches pitting nine U.S. golf pros against nine pros from Britain and Ireland.

The list goes on, with rowing, canoeing, kayaking, boxing, cycling, gymnastics, hockey, racquetball, rugby, soccer, softball, swimming, tennis, volleyball, weightlifting, wrestling, and road racing. And if that weren't enough, four University of Tennessee home football games will be played during the fair in U.T.'s 91,249-seat Neyland Stadium.

Then there's food. For people who have dreamed of eating and drinking their way around the world, the fair is the answer to a prayer. Fair officials call the site "the largest restaurant in the world," with 81 eating locations. Fourteen restaurants, other than the four operated by Mexico, China, Hungary, and Korea, offer homemade pasta, fresh fish (flown in daily), and such Bavarian fare as sauerbraten and wiener schnitzel. Visitors on the move can choose from an enticing assortment of snacks, including stuffed potato skins, fried catfish, baklava, Filipino egg rolls, bagels and lox, New Orleans jambalaya, French pastries, Belgian waffles, country ham and biscuits, and muffins of every description. Fair management predicts that more conventional appetites will tackle some 500 tons of hamburgers, 250 tons of hot dogs, and a million ice cream bars.

From the start, the mood in Knoxville was festive. Color is everywhere. Flags, streamers and banners span the spectrum. Aerial gondola chairs are painted in vibrant reds, oranges and yellows, and the facade of the pavilion housing the European Economic Community is alive with a sunburst mosaic. Even a Knoxville Utility Board substation, located on the site long before anyone dreamed of a World's Fair, has dressed up with bright colors for the occasion.

Knoxville, of course, won't know the results of its "cheeky" gamble until the gates close in October. But higher than expected attendance has given the city – and its creditors – hope that they may not only recoup their investments but recoup them early. If so everyone will have gotten their money's worth – in cold cash, national attention and fun.

Sybil Thurman, formerly a reporter for the Knoxville News Sentinel, *is now an editor in the information office of the Tennessee Valley Authority (TVA) and author of* A History of the Tennessee Valley Authority.

In the deserts of Oman, the birth of a calf signals - the

Return of the ORYX

WRITTEN BY PAUL F. HOYE
PHOTOGRAPHS BY MARK STANLEY-PRICE; COURTESY THE ADVISOR FOR CONSERVATION OF THE ENVIRONMENT

PAUL HOYE

With a last backward glance at captivity, a zoo-bred Arabian Oryx heads for freedom in Oman, fulfilling a 10-year plan to re-introduce this once near-extinct antelope to the wild.

Born free: the first oryx calf born outside a zoo since 1972 seeks shelter and shade under an acacia tree in Oman.

On January 31, in central Oman, the Arabian Oryx, a rare and beautiful antelope, returned to the wild – from the very verge of extinction.

It was a dramatic moment. Though the 10 animals, grazing peacefully in a large, chain-link enclosure did no more than drift hesitantly through an open gate, one by one, onto an arid plateau stretching off toward the desert they call the Empty Quarter, it was, in fact, the fulfillment of a 20-year-old dream and a milestone in man's effort to preserve the world's endangered species. On the Arabian Peninsula, in fact, it marks what may be the single most important victory in a struggle to preserve such endangered creatures as the fleet-footed Arabian gazelle *(Gazella arabica),* the nimble mountain goats called the *tahr (Hemitragus jayakar)* and – a prize – the white Arabian Oryx *(Oryx leucoryx)* whose great, gently curved horns may have spawned the myth of the unicorn.

To desert hunters, the oryx has always been a prize, but the oryx, which can for months live in totally waterless terrain, was an elusive quarry and, despite the hunters, managed to survive. Back in the 1940's, in fact, the Arabian oryx seemed to be everywhere. In Kuwait, Violet Dickson, wife of the famous H. R. P. Dickson, had a pet oryx given to her by King 'Abd al-'Aziz of Saudi Arabia, and in Saudi Arabia geologist Tom Barger, later to be Aramco's chairman, saw two herds in a matter of days.

In the 1950's, however, hunters in Arab countries began to use modern weapons and vehicles and by the late 1960's were routinely using helicopters and two-way radios in the hunt – with a devastating impact on the Peninsula's wildlife. Spotted by aircraft or chased in rugged, off-road Land Rovers and picked off by marksmen, creatures like the oryx – exposed on the open desert – didn't have a chance. By the 1960's, the herds were decimated; according to one estimate there were no more then 100 still alive in the wild.

Somehow, though one herd continued to survive in the region called Jiddat al-Harasis, an immense gravel plain in Oman until, in October 1972, near a remote well called al-Ajaiz, the hunters closed in, engines roaring, guns chattering. From that day on, the oryx was never seen in the wild again.

By then, fortunately, concerned individuals and organizations – such as the Fauna Preservation Society in London (FPS) – had already taken what have subsequently proven to be crucial steps. As early as 1962, for example, the FPS, seeing that the oryx might not survive the ruthless and unequal contest with modern weaponry, had, with financial help from the newly organized World Wildlife Fund (WWF), dispatched an expedition to South Yemen – then Aden – to scour the frontier in search of surviving specimens.

The expedition, led by Major Ian Grimwood, was successful. It found and captured two males and one female and these animals – with four others donated by King Sa'ud of Saudi Arabia, one lent by the Zoological Society of London and another presented by the Ruler of Kuwait – became what was to be called the "World Herd," in the Phoenix Zoo in Arizona.

Even at that early stage, the ultimate goal of the FPS, WWF and the International Union for the Conservation of Nature and Natural Resources (IUCN) was to return the oryx to its own habitat – a desert wilderness – as soon as one key question could be answered: how could the safety of the oryx be guaranteed? Since the oryx had been hunted to the verge of extinction once, couldn't it happen again?

Obviously, it could. With modern automatic weapons, even a handful of hunters could wipe out any new herds that might be bred from the survivors in Arizona.

Another problem concerned adaptability. If the oryx did breed in captivity, would they then be able to survive in the wilderness on their own? In what is, unquestionably, one of the most difficult habitats in the world?

On the basis of past evidence, most laymen would have immediately said yes; the oryx and its kin have lived and flourished in or near such deserts as the Kalahari, the Sahara, the Rub al-Khali, or Empty Quarter and the Jiddat al-Harasis, an area in Oman that, at the time of the oryx returned to the desert, had had no rain in five years.

Survival in such habitats, obviously, required special adaptation and the Arabian Oryx had indeed adapted. Its

The Yalooni Transfer

WRITTEN AND PHOTOGRAPHED BY MARK STANLEY-PRICE

When the world's environmental groups first came to the defense of the Arabian oryx, one plan was to establish a herd in Kenya — where another species of oryx already lived and flourished. Because of an outbreak of hoof-and-mouth disease, however, the Kenya plan was dropped and the oryx destined for Kenya were shipped to Arizona instead.

Arizona was chosen because that state's climate was not unlike that of the oryx's natural habitat, and it proved to be successful beyond any expectations. By November 1979, offshoots from the herd were so numerous that the Arabian Oryx World Herd Trustees decided to transfer ownership of the animals to zoos which had been sent World Herd offspring.

At the same time, the trustees recommended dissolution of the World Herd Trusteeship, since, in effect, its work was done. As Oryx magazine said in April 1980: "The World Herd had become a small proportion of the Arabian oryx now in captivity, so successful has the breeding of these animals in captivity been in recent years."

By then, obviously, the project was on the road to success — thanks to a variety of national and international organizations: the Fauna Preservation Society (FPS, now the Fauna and Flora Preservation Society), originator of Operation Oryx, the World Wildlife Fund (WWF), whose money once saved the project at a crucial point, the Arizona Zoological Society and the Zoological Society of San Diego, whose zoos actually housed and bred the animals in captivity, as well as governments and individuals.

Nevertheless, the project at that point was still incomplete. From the beginning, the ultimate goal was restoration of the oryx to the wild — which was not to be achieved until the 1980's when 10 oryx were transferred from the San Diego Wildlife Park to a small desert station called Yalooni.

Counter-clockwise: from Arizona, where the World Herd was first located, offspring of the captive oryx were sent to other zoos in the U.S.A. and Europe and then, in 1980, by truck and aircraft, to Yalooni in the desert of Oman.

This transfer was by no means simple; the logistics of moving large animals halfway around the world on scheduled cargo flights are formidable. On the initial 1964 transfer, for instance, four oryx from Saudi Arabia's Riyadh Zoo, carefully crated, had a long, complicated flight to the States: by Trans-Mediterranean Airways (TMA) to Beirut, by Pan American to Rome and, after two days in quarantine in Naples, to New Jersey for another 30 days in quarantine, before going on to Phoenix. Now, in 1980, as their offspring were to make the return journey, we discovered that though the flights were faster, the logistics were virtually unchanged: documentation for the export of an Endangered Species from the U.S. as well as clean-bill-of-health certificates required for import to Oman, was copious, for example, and last minute arrangements made over the telephone were hampered by the 12-hour time difference between California and Oman.

Eventually, though, the oryx from the San Diego Wild Animal Park — crated individually in timber boxes, well ventilated with hay on the floor to eat or lie on — left California. After routings through New York and Europe and changes of planes, they headed for Muscat International Airport. There were, as noted, two consignments and I personally accompanied the first batch.

At Muscat, the crated oryx were shifted in Skyvan planes of the Oman's airforce and flown to Yalooni 500 kilometers (300 miles) into the desert, to be greeted by an enthusiastic crowd of Harasis rangers and spectators.

Released from their boxes one at a time, into 20 by 20 meter pens, the oryx, even though

crated for 90 hours, sprang out and explored the new quarters at a spirited trot. After the first batch had arrived — restoring this species to Oman soil — the Bedu rangers murmured in agreement that these certainly were the same animals that they knew long ago and were not impostors.

At Yalooni, of course, preparations had been underway to insure that the oryx would settle into their new home as swiftly and easily as possible. In addition to a research laboratory and a number of cabins, offices and tents — to house 30 people — we also built a series of pens, the two 20 x 20 pens (60' by 60') and five smaller ones — so that the animals could be isolated when necessary — and the large one-kilometer-square enclosure with chain-link fencing two meters (seven feet) high.

The enclosure was important. Since past experiments showed that large mammals returning to the wild tend to scatter, and die as a result, we had decided to establish a cohesive herd — that is, a herd that would stay together when released. We hoped that in a large enclosure with conditions identical to their natural habitat, the physiological and behavioral adaptations needed for survival would be revived: the oryx's legendary ability to survive without drinking water, an essential characteristic in the Jiddah's waterless conditions, and knowledge of how and when to graze to mitigate the extremes of the desert climate.

Although confident that the oryx still possessed these capabilities, we weren't sure that zoo animals would know — or would learn — what vegetation might lie over the next rise in the Jiddat-al-Harasis — and survival might depend on that knowledge.

Initially, the trustees of the World Herd had agreed to provide six male and six female oryx and we had hoped to get an already "integrated" herd. Unfortunately the park had no facilities for this integration process, so the oryx arrived in Oman in batches, the March, 1980 batch, consisting of three males, of varying ages, and two females.

Nine months later, five more arrived: a male and two females from San Diego and a male and a female from the Gladys Porter Zoo in Brownesville, Texas. The newcomers in the pens proved an attraction to the herd in the enclosure, but it was two months before we released the Texan pair and three weeks more before the remaining animals joined them.

Initially, each addition resulted in antagonism between the established herd members and the newcomers, in the form of threats and lunges between females, or fighting between adult males. Within a month, however, a stable social order was established, the newcomers finding their places.

As a result, the herd, by the fall of 1981, was foraging as a coherent group, usually spread over a front no more than 100 meters wide, and began to exploit the vegetation more efficiently.

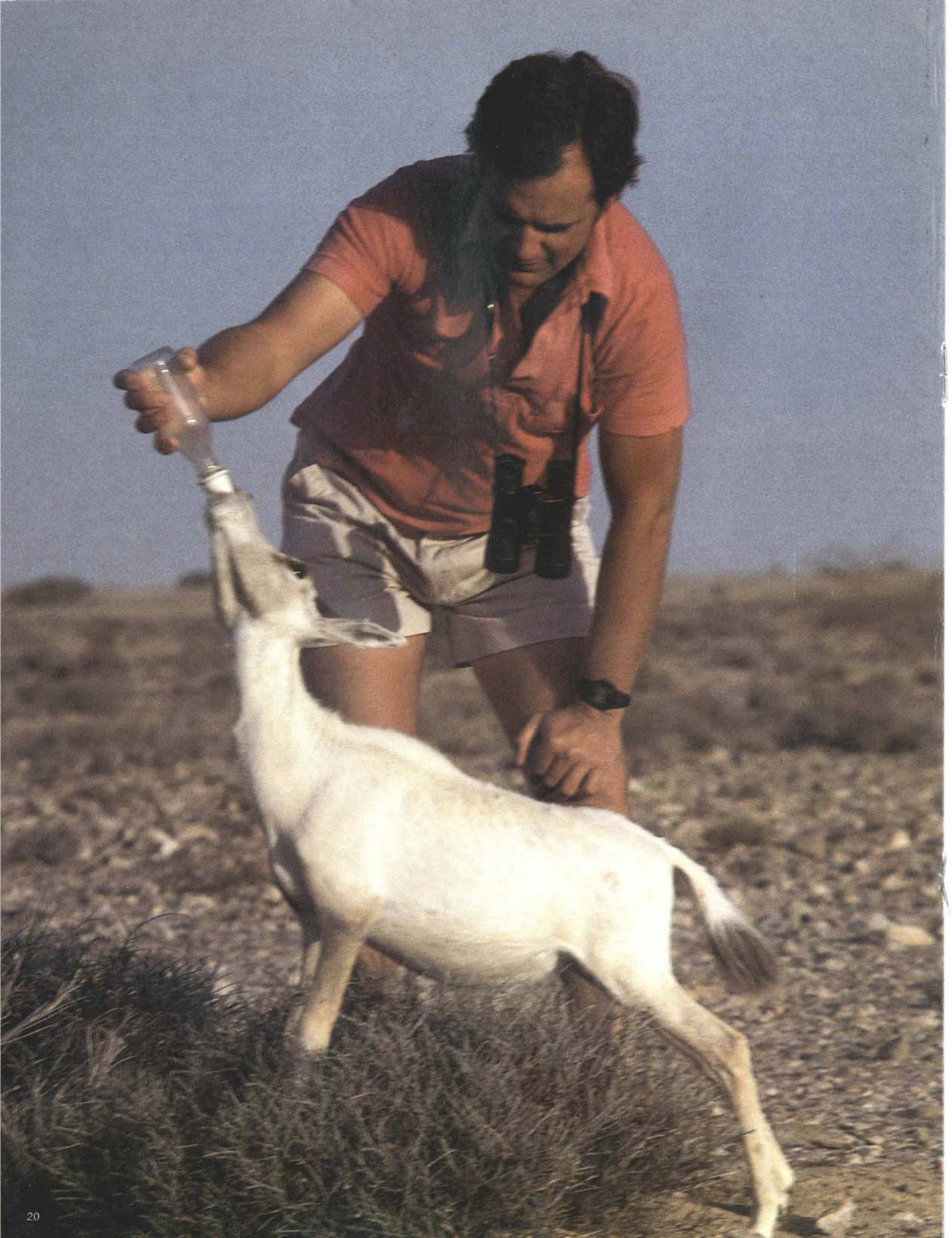
Problems did occur. The youngest male was bitten by a carpet viper (Echis carinatus) and died, and the first calf born — in May 1980 — was rejected by the mother and had to be hand-reared. But our fears that the zoo-bred oryx would not know how to exploit their native environment seemed groundless. The first animals released in the enclosure started to graze on grass clumps almost immediately.

The oryx also realized quickly that the umbrella-shaped Acacia tortilis – with its dense canopy – is a fine refuge from the sun and that the Acacia ehrenbergiana, a lower, scrubby form, can be used as a night-time wind-break.

Because the desert climate is extreme — the daily temperature variation is about 20°C — the oryx must "fine-tune" the times at which they enter or leave the shade in accordance with each day's weather. In the 1981 summer, furthermore, all adults developed sparse, short coats of a blinding whiteness. These coats are thinner than those developed in the less extreme California climate; one visible proof of gradual acclimation and physiological adaptation to the climate of their new home environment.

At last, then, satisfied that the herd was as ready as it ever would be, we fixed a date for the release — January 31, 1982 — and watched them go — rather like mothers taking their children to kindergarten. Though we had done all we could — and were going to be around for help for a long time — it was now up to them.

Mark Stanley-Price, a former game warden in Kenya, heads the Yalooni project in Oman.



hooves, for example, are larger than those of the African Oryx – to give increased purchase in sand; its coat is whiter, to reflect heat; it can, in effect, survive on little more than dew or condensation for up to a year by licking it off leaves during the night. Another characteristic is the ability to somehow detect rainfall from great distances. As a result the oryx travel swiftly and spontaneously; they have moved up to 55 miles in 18 hours, according to one biologist.

On the other hand, wildlife experts warned, there was the distinct possibility that life in an Arizona zoo might erode these finely tuned survival mechanisms. In captivity, for example, the oryx was drinking up to nine liters of water a day – a far cry from a few drops on a leaf at night.

The decision, therefore, was to find a proper habitat, assemble a herd and, in effect, try to revive the animals' dormant instincts before releasing them.

The first need – a habitat – was provided by Qaboos ibn Sa'id ibn Taimur the Sultan of Oman.

A young, relatively untried leader when he assumed his father's throne in 1970, Sultan Qaboos ought to have been the last person on the Peninsula concerned with ecology. Since his accession he has been inundated with other problems: rebellion in his southern province, upheaval in Iran and the unsettling realization that Oman, with more than 1,600 kilometers of coastline (960 miles), was the guardian of the strategic Strait of Hormuz, gateway to the Arabian Gulf – and much of the world's oil.

Surprising everyone, however, the Sultan turned out to be very interested in conservation of the environment and its wildlife. He supported efforts to protect Oman's turtles, *tahr* and ibex and, to one correspondent, made it clear that the oryx was special. "We intend to make sure that the oryx is preserved," he said.

Earlier, he had signaled his special interest in the oryx with a question to

The home of the oryx: Jiddat al-Harasis in central Oman.

These "woodlands" provide food and cover for the oryx.

Ralph H. Daly, now Advisor for Conservation of the Environment. "What," he asked Daly, "are we to do about the oryx?"

Until then, Daly had not been directly involved in any way with ecology. As a member of the Sudan political Service, Daly had come to Oman with an oil company; his only real connection with ecology was a passion for bird-watching. But he had, in 20 years of service, been inescapably involved in numerous rural development projects, and when the Sultan, realizing that Oman's wildlife was in trouble, asked him to "stay and look after the oryx," he did.

"At that stage," Daly said, during an interview in Muscat, "the World Wildlife Fund had hardly even heard of Oman . . . but then it went into action, and that led to our marine turtle and Arabian *tahr* projects [also endangered] and then to the oryx."

One step was to engage a WWF expert – Dr. Hartmut Jungius – to find a suitable area for the reintroduction. In 1977, after a feasibility study, Dr. Jungius reported that he had found the perfect place: the Jiddat al-Harasis. Ironically, yet logically the Jiddat al-Harasis is the same area in which the last wild herd was wiped out in 1972.

Meanwhile, Daly himself, at the Sultan's urging, was moving to establish a home for the oryx in Oman. One step was to employ Mark Stanley-Price to be manager of the project.

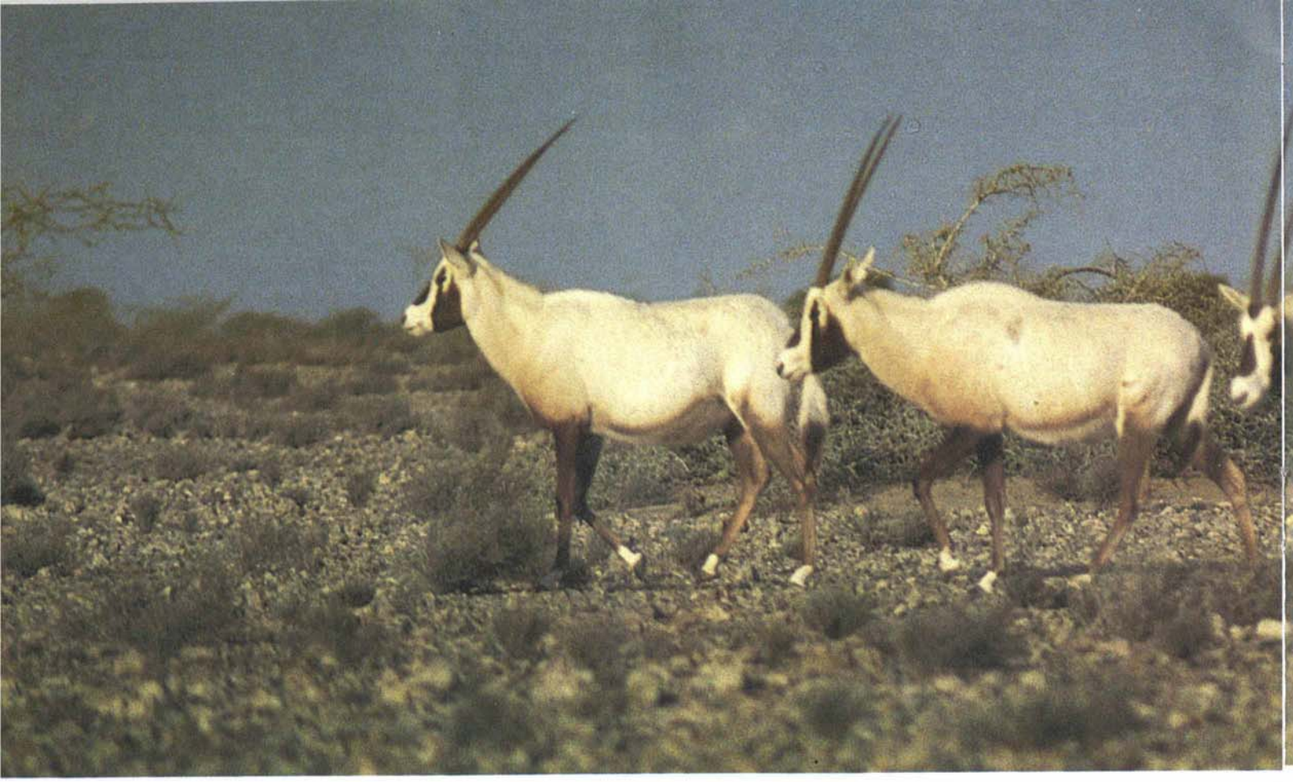
A Yorkshire man with a distinct resemblance to a younger Teddy Kennedy, Dr. Stanley-Price had spent nearly six years in Africa attempting to domesticate the eland and the African oryx. "Because," he explained, "both the eland and the oryx are naturally immune to the tsetse fly. We thought it might be possible to develop them as livestock."

In a sense, that experience would seem useless in Oman since the Omani goal was precisely the opposite; instead of domesticating the oryx, Stanley-Price would be trying to wean it from the habits of domestication, and train it to live in the wild. In fact, though, his experience with oryx herds in Kenya was vital, since no one knew very much about the behavior of the oryx in its natural habitat – an environment that Stanley-Price described as a "remarkable desert eco-system."

A stony limestone plain measuring 50,000 square kilometers (19,300 square miles), the Jiddat al-Harasis stretches from the edge of the Empty Quarter in the west and north to the shore of the Indian Ocean, and, deep in the interior, offers something that the oryx and other desert creatures very much need: vegetation.

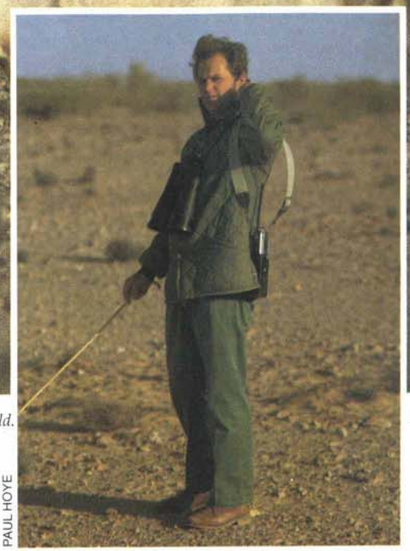
In the patois of the ecologist, this vegetation is referred to as a "woodland" and though occasional clusters of sparse grayish-green vegetation and the

◀ *Left: Project manager Mark Stanley-Price bottle-feeds a baby oryx born in captivity and abandoned by its mother. When released, the same mother nursed another calf born in the wild.*



Follow-my-leader: in the Omani desert the only Arabian Oryx in the wild follow the herd bull in search of food and water.

Fears that oryx born in captivity would have lost their natural instincts proved groundless and they quickly adapted to the wild.



PAUL HOYE

Left: Mark Stanley-Price monitors the progress of the herd.

occasional acacia tree hardly qualify as "woodland" to visitors brought up near, say, the forests of Maine and New Hampshire, Stanley-Price is very serious. To him – and the oryx – this *is* woodland and its existence on the "Jiddah" (the plain) is the reason that the area once teemed with wildlife: the Arabian Gazelle (*Gazella arabica*), the goitered gazelle (*Gazella subgutturose*) and such other creatures as wolves, hyenas, lynx, foxes, reptiles, lizards, and birds. And driving south from Muscat – via Nizwa, with its great walled fort – visitors enroute to Yalooni, the desert station where the oryx were eventually released, soon come to realize why naturalists call that vegetation "woodland."

Outside Muscat, the terrain first offers impressive examples of the strange, harsh geology that is so much a feature of the Omani landscape: massive escarpments lurching out of the ground with great striations clawed into barren, beige-brown flanks. Later, though, as the road dodges Nizwa and heads south, the great ridges of rock begin to shrink and soon, through a gap, the desert appears.

Initially, the Jiddah is simply flat and empty – an almost restful contrast to the harsh cliffs in the north. But then on the horizon you see the soft shape of dunes and eddies of yellow sand flowing east from the Empty Quarter and forming small crescents on the flat, pinkish surface of the plain.

At that point, a gazelle, startled by the sound of the car, may suddenly dart across the road in a frantic race for safety and in the sky, an eagle may glide down for a closer look. Mostly, however, there is only an empty silence, and, occasionally, a dust-devil spiraling at a furious pace by the track.

The track, Stanley-Price said, has been deliberately not paved – nor graded – because they didn't want casual visitors. "It is one way of protecting the oryx," he said, as he led a two-car caravan toward Yalooni, the desert station to which the oryxes were transferred. (See page 18) "We thought that casual visitors would not be a good thing and that anyone willing to hire a proper vehicle to drive this track for three hours would probably have a good reason to come."

At the point where the track left the paved north-south highway – a 1,000 kilometer (600 mile) link between Muscat, the capital, and Salalah the southern capital – central Oman is a dry, deserted region, but as it penetrates the Jiddat al-Harasis, the terrain subtly changes until, on every side, there is vegetation, first shrubs, then the trees identified, with relish, by Stanley-Price as *Acacia-tortilis, A. ehrenbergiana* and *Prosopis cineraria*. And though they are by no means redwoods, in contrast to the arid plain to the north they indeed look, even to a layman, like a "woodland."

To Dr. Jungius, this region was "ideal" for the reintroduction of the oryx. For one thing there are few natural predators, leopards and wolves being as scarce as the oryx themselves. For another, the oryx's original habitat in Oman is only 100 kilometers (60 miles) away. And, unlike Jordan, which was also under consideration as a site for reintroduction, the Jiddat al-Harasis is relatively safe from hunters; except for such intruders as the raiders who entered Omani territory from the Emirates just to hunt the oryx, few strangers visit the "Jiddah."

Eventually, therefore, Oman and the trustees of the World Herd agreed to establish a station at a place called Yalooni: a generator, storehouses, Porta-kabin living quarters and offices, and a complex of pens within a one-kilometer square area of woodland enclosed by a chain-link fence. Here, they decided, the oryx could rediscover its previous origins and resharpen its unique survival mechanism.

There are disadvantages, to be sure. The only water is at al-Ajaiz – 50 kilometers distant (30 miles) – and even that is showing signs of drying up. But because of the heavy fogs that roll in from the sea at night and drift inland on prevailing southerly winds, the grasses and shrubs that the oryx need for grazing stay green, edible and nourishing throughout the year, and the overnight condensation would probably provide enough water for them to survive.

The overriding factor, however, was the decision of the tribe called "Harasis" to protect, rather than hunt, the oryx.

This was partly a practical decision; the tribesmen knew that their agreement would mean jobs as herdsmen or rangers as long as the project went on. But it was also a matter of tribal honor. A peaceful, pastoral people, the Harasis, numbering today about 350, had been outraged when the hunters drove into their territory in 1972 and wiped out the last herd; they thought of the oryx as tribal property and, as a consequence, pledged the support of the whole tribe.

To Stanley-Price, this was not unusual. "The Harasis have an ingrained respect for nature, like all Bedouin. They do not, for instance, tear up or cut any living tree; they only use dead wood. That's instinctive. The oryx is a part of this."

As proof of this, Stanley-Price cited his own 1981 report on the project: "By general consent the area is recognized by the Bedu as a grazing reserve for the oryx and it has not been grazed by goats for nearly two years, now."

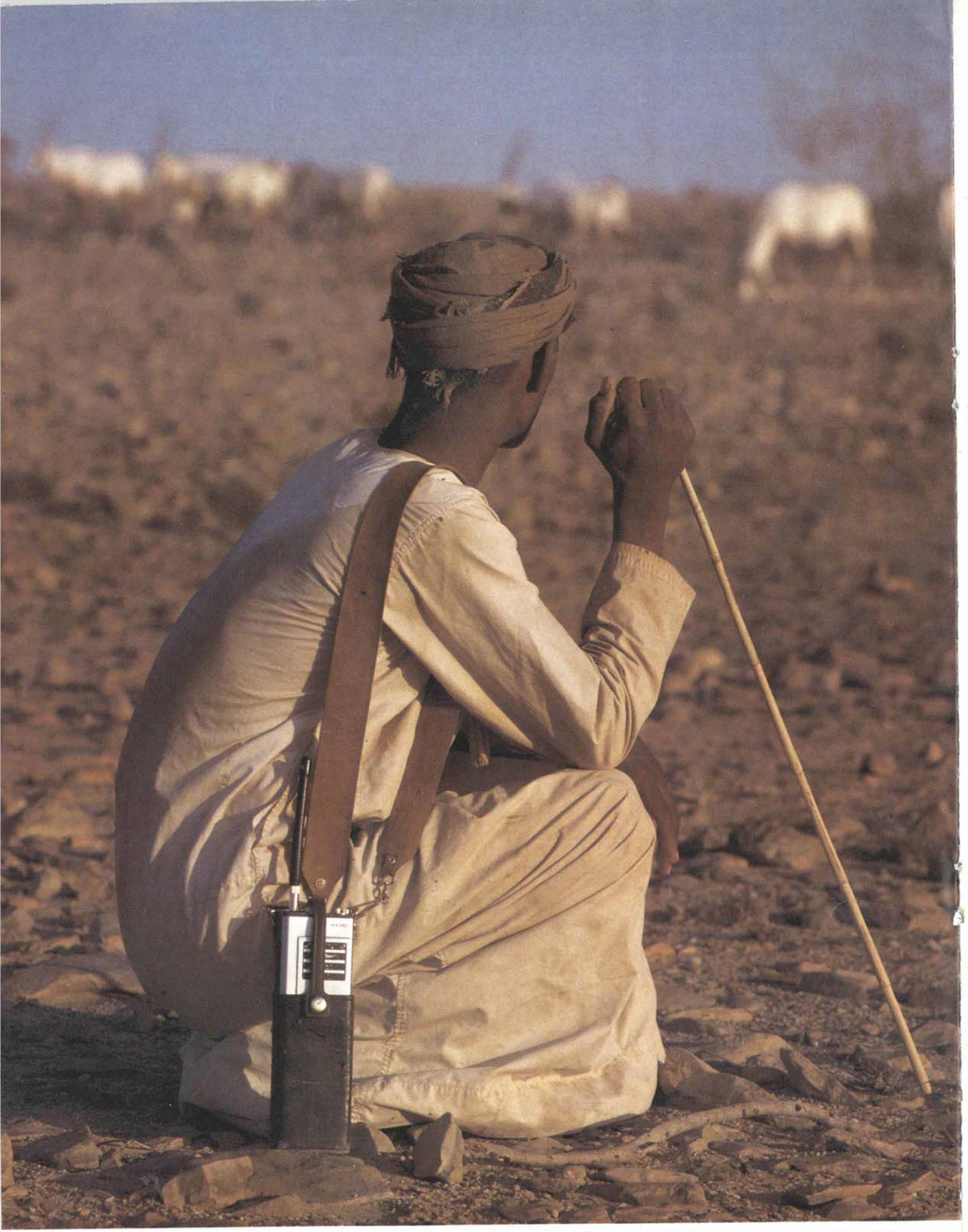
Asked if there wouldn't be a strong temptation for the Harasis themselves to hunt and kill the oryx when food was short, both Stanley-Price and Sa'id al-Harasi, the head ranger, quietly but indignantly said no. Stanley-Price's answer was reasonable – "if goats and camels aren't enough to live on, a few oryx won't help –" and Sa'id's was moving: "They're ours," he said quietly.

Tribal assistance – as well as the cooperation of the Royal Oman Police and the North Oman Border Scouts who patrol the area – will be crucial. Though Stanley-Price and his staff have equipped five animals with radio collars so that they can be tracked even when out of sight of the rangers, the ability of the oryx to sense water, and its instinct to move suddenly toward it, might eventually result in the oryx spreading out over a territory larger than the rangers could easily cover. Should that happen, sightings and information from other tribesmen will be helpful – particularly if any hunters should appear.

At present, the rangers don't expect the oryx to wander very far. As Stanley-Price put it in a report in September:

> We consider it unlikely that the released oryx will travel very far from Yalooni, at least initially... any wanderlust will be tempered by the knowledge that Yalooni is the only source of water and lucerne [alfalfa]. Adjusting and reducing the frequency with which these are available, the amounts as well as their locations, will be the means by which we influence the development of the herd's home range and then increase their independence from man's assistance.

Oman is by no means the only country on the Arabian Peninsula trying to save the oryx. Qatar has a herd of about 90 and by 1980 eight oryx from the San Diego Wild Animal



A ranger from the Harasis tribe guards the oryx herd; because the last wild oryx were slain on their lands, the Harasis consider it a matter of honor to protect the new herd.

Since the oryx can travel over 50 miles a day, some are fitted with radio collars so that rangers can keep track of the herd.

Out in the wild at last, the oryx blend into the landscape.

Park had been shipped to Jordan in hopes that reintroduction might be feasible there too. Near Azraq, Jordan is fencing a 250-square kilometer enclosure for 22 oryx. And in Bahrain, where a major effort is underway, a wildlife park has assembled a herd of 14 oryx and has reported the birth of nine calves.

According to Faisal A. Izzeddin, deputy director of Bahrain's al-Areen Wildlife Park and Reserve, this is not unusual; unlike many endangered species, the oryx has bred well in captivity. In Arizona, for example, the World Herd bred so well that the Phoenix Zoo was able to send animals to several zoos in the U.S.A. and Europe.

One result of this success in breeding is that the oryx is no longer in danger of extinction. As a study by Izzeddin showed, there were 150 animals in the United States and 202 in the Arab World in 1980; by now the total may be 450.

Bahrain's contribution to this project is the al-Areen Park; founded in 1946, al-Areen, roughly 2,000 acres in size, has nine oryx in enclosures in its public park, and five in its restricted reserve.

As in Oman, Bahrain's wildlife people would like to release animals like the oryx, "once we are confident that they would not come to any harm." To that end, a conservation-education and wildlife appreciation program is just beginning at al-Areen, aimed at the public at large and especially at children. "The more successful we are in captive breeding," Izzeddin said, "the more oryx can be released in the wild and the more the release of the oryx in the wild is likely to succeed."

Success with the oryx has also been reported at the al-'Ain zoo in the United Arab Emirates, where, in 1969, Shaikh Zayed, president of the United Arab Emirates, presented three wild Arabian oryx confiscated from a hunter; the herd now counts 22 animals.

At al-'Ain, particular stress has been put on the oryx diet – largely fresh alfalfa, with a 15 percent local cereal mix and hay – but al-'Ain has also compiled breeding data. So far, according to veterinarian Chris W. Furley and curator Peter Dickinson, the success rate in rearing calves is high; only two deaths have been recorded and only one calf had to be removed for hand-rearing.

Currently, though, the spotlight is on Oman where, in the Yalooni woodland, the oryx since January 31 have been exploring their new habitat and, in subtle ways, demonstrating that they feel right at home.

At first, Stanley-Price reported, the staff and the rangers had to encourage the oryx to venture into new territory – by moving the feed troughs further away from the enclosure – except for one evening when eight animals traveled 16 kilometers (nine miles) from their corral in a circle.

"This was expected," he said. However, the picture was altered drastically when, on the evening of February 24, good rain fell on Yalooni and a large portion of the Jiddah…flooding the camp."

As a result, Stanley-Price wrote, "new green grass started to sprout in early March and the oryx gradually became independent of the supplementary feed that we were providing. At the same time they began to ignore the water we provided – apparently because the dew on the grass met their needs."

In another development, three of the females went into heat almost immediately. This in turn upset the herd as females and males started to stray. "Such groups were eventually located by the rangers," Stanley-Price said, "either by using the radio collars on five of the oryx, or by tracking their hoof prints. Interestingly, the oryx – found 20 kilometers (12 miles) from Yalooni – showed that they knew their way back."

Interest in the experiment, of course, remains high. Just prior to the release, for example, the Sultan flew into Yalooni to inspect the project and on February 24 – His Royal Highness the Duke of Edinburgh, president of WWF International, came to see the oryx in the wild. There have also been innumerable requests from the press for information and photographs.

Until March 12, however, neither Ralph Daly nor Mark Stanley-Price was inclined to predict what would happen. Knowing the uncertainties of life in the desert they simply could not say with any confidence that the oryx were definitely going to readapt and survive. Nature simply doesn't surrender that easily.

But, on March 12, the oryx reached a turning point: one of the females went into labor and on March 13 produced a live calf – the first to be conceived in Oman and born in the wild in 10 years.

This, Stanley-Price said, signals a change since, earlier, the same female had borne a calf in the enclosure and had refused to nurse it. This time she took it over instantly and the father, the herd bull, began to stand guard over mother and calf. The oryx, it seems, might make it after all.

Paul F. Hoye is the editor of Aramco World Magazine.

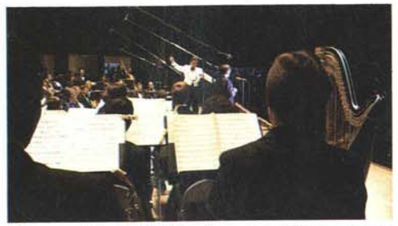
The Wolf Trap Rescue

WRITTEN BY SYBIL THURMAN. PHOTOGRAPHED BY KATRINA THOMAS

For a festival in ruins, timely help from Saudi Arabia

The scene was hardly festive: 2,500 or so Washingtonians braving the unseasonal cold and damp on June 13 to hear the U.S. Air Force Band play at Wolf Trap Farm Park. Nonetheless, as Ed Corn, executive vice president of the Wolf Trap Foundation, made clear, it was a "very, very special evening" – thanks to Saudi Arabia.

Enormously popular, Virginia's Wolf Trap is America's only national park for the performing arts; a gift to the country from Mrs. Jouett Shouse in 1966, it has offered, through 11 summer seasons, such varied fare as jazz, ballet, opera and musical comedy from inside the 3,500-seat open-air Filene Center Theater.



Typically, at Wolf Trap, some 3,000 people would also fill the lawn outside – many with tablecloths and picnic baskets under the stars – an experience that was addictive on concert evenings to the fast-paced Washington crowd, and later to a huge television audience that got hooked on the "Live from Wolf Trap" series on Public T.V. in 1974.

On April 4, however, just two months before the opening of the 1982 season, a fire of unknown origin destroyed the Filene center and both backers and audiences – throughout the east coast – were dismayed. In 11 years, Wolf Trap had already become a tradition – and in Virginia traditions die hard.

They needn't have worried. Even as the flames consumed the theater, 86-year old Mrs. Shouse – the guiding spirit and grande dame of Wolf Trap – quietly resolved to salvage as much of the season as possible. Said Corn later: "We didn't know where, what, or who, but I never heard a mention from anyone that we wouldn't have a season."

Within 24 hours of the fire, in fact, Wolf Trap employees were inundated with

suggestions for such temporary structures as an inflatable hockey rink, a geodesic dome and a concrete balloon – none of which satisfied the crucial requirements dictated by time, space and money.

Three days into the crisis, an information packet arrived from Sprung Instant Structures, Inc., of Calgary, Canada. It described a tent now known as the "Meadow Center," and though dozens of other possibilities had to be weighed, the Sprung tent eventually emerged, according to Larisa Wanserski, director of public relations at Wolf Trap, as "the only structure in the world we could use in the specific time frame."

There was, unfortunately, one monumental problem with using the Sprung tent: it was being used at a tradefair in Dubai in the United Arab Emirates and getting it to Virginia was going to be costly.

At this point, Shaikh Fayfal al-Hujaylan, ambassador of Saudi Arabia to the United States, made his entrance. Veteran Wolf Trap patrons, and personal friends of two foundation board directors, the ambassador and his wife, Nouha, were just as dismayed as everyone else when they heard of the fire and the pressing need to somehow move the tent from Dubai to Virginia. Wolf Trap, they knew, had a $2 million fund raising need even before the fire; without some help its 1982 season would definitely be in trouble.

What happened next is unclear, though it is thought that the ambassador immediately approached his government. In any case, Ambassador Fayfal al-Hujaylan suddenly came forth with the offer that rescued Wolf Trap: Saudi Arabian Airlines (Saudia) would assume all costs for packing and transporting the tent – to the tune of $100,000.

"It's very clear," the ambassador said, "that there is a strong feeling among people throughout the United States that Wolf Trap's Filene Center should be rebuilt. We are very pleased to offer our support as a gesture of international concern for one of the world's true treasures."

Less than six weeks after the fire, as a result, dozens of crates containing the aluminum building components were airlifted to New York's LaGuardia airport – on behalf of Saudia by Air France, which had a scheduled flight linking Dubai to New York, and which had room for the bulky cargo.

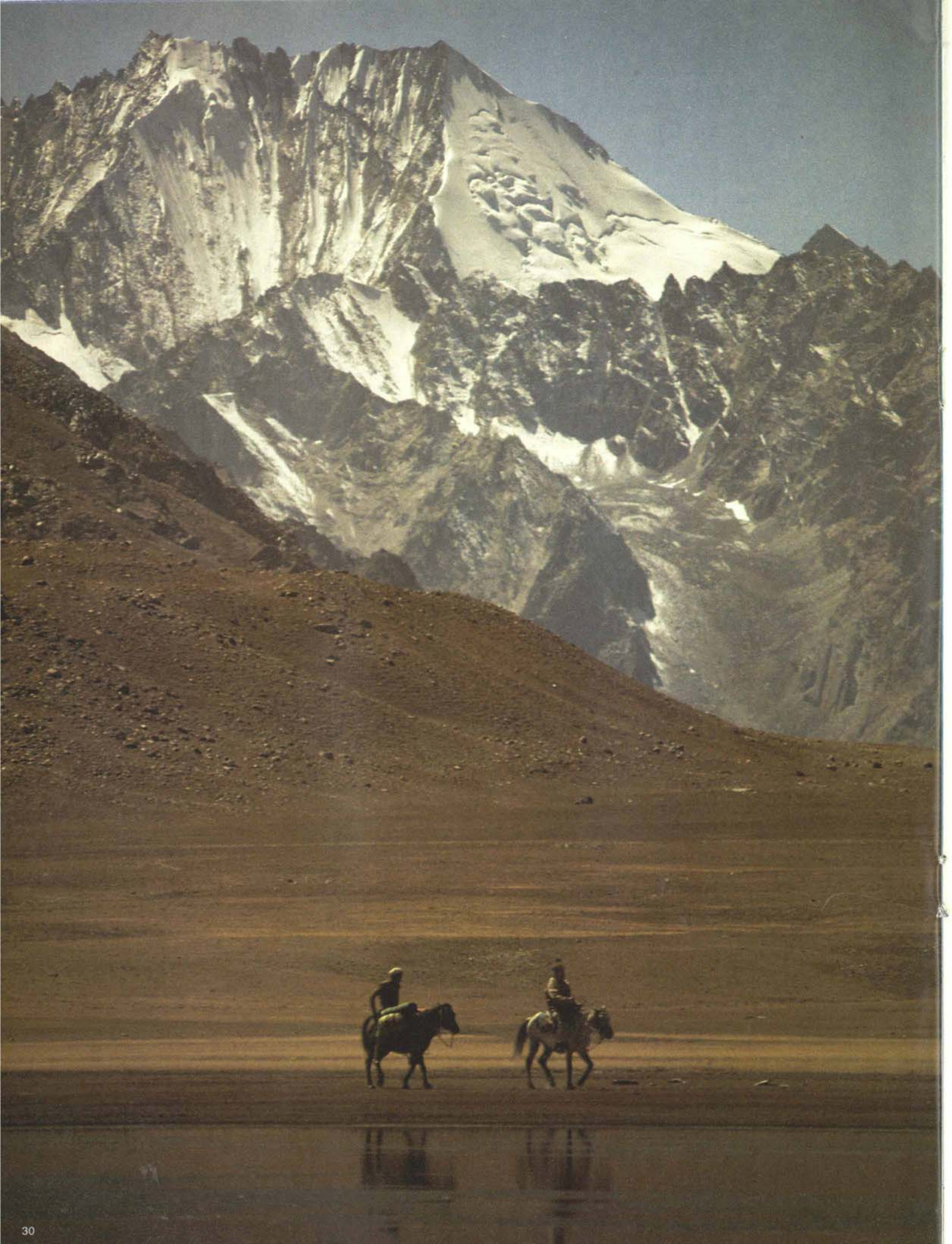
By May 28, the structure was up, and on May 29, construction began on the stage and scaffolding. Equipped with the latest sound and lighting capabilities, the new theater, surprisingly, could accommodate all scheduled performances for the season with only one exception: the New York City Opera, which requires a "fly gallery" for raising and lowering scenery.

While the work proceeded at a breakneck pace, contributions from 6,000 sources topped $1 million. Most contributions were in the $10 to $25 range, but there was one donation of seven cents from a child's piggy bank. Even local department stores donated percentages of a day's sales, and various clubs and individuals held bake sales and sold T-shirts to raise money.

Arriving in New York at 10 p.m. on May 14, the 45-ton shipment was transferred to a four-truck convoy; six hours later the convoy reached the Wolf Trap grounds and about 6 a.m. May 15, some 30 workers assembled in the dawn light to begin unloading the crates. In the meantime, an army of volunteers had rallied to the cause, ready to contribute time and muscle. Volunteers, for example, helped bolt the tent's aluminum arches together in the parking lot, before cranes lifted them into position. Throughout the process, volunteers worked hand in hand with paid workers hired by Sprung.

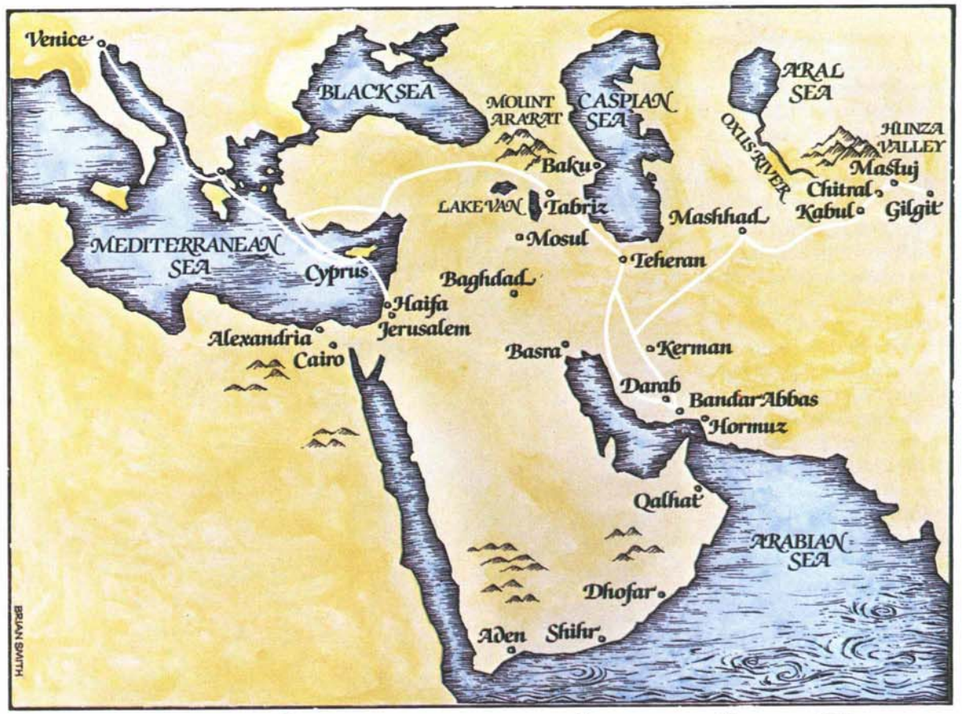
In thanks for what Ed Corn described as "the most astonishing outpouring of grassroots support I've ever seen," Wolf Trap decided to inaugurate the 1982 season with a free "thank you" concert.

Unfortunately, June 13 was cold and rainy – no evening for picnics under the stars. As a result the crowd that turned out to hear the U.S. Air Force Band open the center was sparse. Still, to the Wolf Trap Staff and its supporters, the scene was amazing. "On May 4 this was a field," one said. "Right," said another. "So let's hear it for the Saudis. They're the ones who came to the rescue."



The Marco Polo Route

WRITTEN AND PHOTOGRAPHED BY MICHAEL WINN



From Venice to Cathay...almost

For four nights this spring – May 16-19 – millions of Americans spent long hours watching NBC-TV's 10-hour, $23 million mini-series on Marco Polo. This was the story of the famous – if also controversial – 13th-century Venetian who may have been the first European ever to reach China – and who later wrote one of the most famous books in history.

Because of the film's length and cost – and because it was the first time in decades that a Western film company was permitted to make a film in China – *Marco Polo* began to attract media attention long before it was shown. The *New York Times* magazine ran a long article detailing the difficulties faced – and overcome – by producer Vincenzo Labella who, like his protagonist, also went to China from Italy. These difficulties ranged from page-by-page censorship to blackmail by the peasants; pay us, they said, and we'll get out of the way so you can film the Great Wall.

One article spawned by the pre-showing publicity challenged the entire concept of Marco Polo's travels. Written by scholar Craig Clunas, of the Victoria and Albert Museum, the article, for *The Times* of London, immediately drew replies and the debate was on: did Marco Polo really go to China?

No, says Clunas, and provides evidence. Though Chinese scribes kept meticulous records about visitors to China at that time, Marco Polo does not appear in them. And in his book he fails to mention one of the great inventions of history, then widespread in China: printing. Worse, he fails to mention that the Chinese drink tea. Clunas claims Polo's facts on China are garbled and second-hand.

Not everyone agrees with that view. As Caroline Stone suggests in one of our articles, Marco Polo's *Travels* proved to be extremely accurate, at least with respect to the Middle East. And Harry Rutstein, author of *In the Footsteps of Marco Polo,* is so committed to the traditional Polo story that he has spent years trying to retrace the Marco Polo route to China. On the first leg he had to abandon the journey for five years and on the second leg – where Michael Winn joined him to write the following article – he was stopped at a crucial point: the border of China or, as he calls it, the "back door to Cathay." But, says Rutstein, he hasn't given up; someday he'll go all the way.

The Editors

In the year 1295, the citizens of Venice scoffed in disbelief when a trio of ragged travelers rode into the city, worn and weary, and claimed that they were the Polos – who had left Venice 24 years before to go to China. To prove that they were indeed the Polos – Marco, father Niccolo, uncle Maffeo – the trio sponsored a public banquet and, legend has it, dramatically ripped open the linings of their ragged coats – disclosing robes of satin and velvet, and spilling a hidden fortune in gems onto the tables – proof that they had not only gone to China, but reaped its riches.

Exactly 704 years after the Polos' departure on that historic trip – in 1975 – three Americans gathered on the doorstep of Marco Polo's 13th-century home in Venice to start out on exactly the same trip: Harry Rutstein, a Baltimore merchant fascinated by the Marco Polo story, his son Richard, then 19, and Joanne Kroll, Cornell University anthropologist, artist and nurse.

Fascinated by the Marco Polo story, Rutstein, years before, had decided that one day he would re-trace the Silk Route to China, the road that the Polo family had taken in the 13th century – and that no one in the modern age has completely retraced.

For 3,000 years, the Silk Route was the longest road on earth. Originally connecting the two great empires of Rome and China, the Silk Route in its heyday stretched more than 12,850 kilometers (8,000 miles) from China to Spain. More a system of roads than a highway, the Silk Route and its branches linked regions as diverse as Russia, Africa, Arabia, India and Persia with China and the Mediterranean.

Over the Silk Route, to the West, came nutmeg, cinnamon, and cloves from India; perfumes from Arabia; rubies and lapis lazuli from Afghanistan; pearls from Baghdad; turquoise from Persia; and silk and brocade from China. Sent from the West in return were gold and silver.

Because the Polos were merchants, such riches were, of course, tempting. But their motives for traveling so far were not purely economic. On an earlier trip to China lasting 15 years (1254-1269), the two elder Polos had been asked by the emperor Kublai Khan – ruler of an empire stretching from the Yellow Sea to the Black Sea – to return to China with 100 scholars. To insure that they would, he gave them a "golden tablet" – a pass granting them safe passage in the empire.

Harry Rutstein, unfortunately, did not have a "golden tablet," but he did have a better idea of what lay ahead; to pinpoint Marco Polo's exact route, Rutstein, starting in 1971, had painstakingly sifted through the vast literature on the subject, for four years.

It was an exceptionally difficult job. For one thing, Marco Polo described many places that he hadn't actually visited. For another, Rutstein had to decipher a bewildering array of 138 early editions whose texts, written in a dozen different languages, were often in conflict.

Nevertheless, in July, 1975, satisfied that he had exhausted the scholarship on the subject, Rutstein set off from Baltimore to Venice where, from precisely the same place, the Polo family had set out in the 13th century.

Though the building had changed – the main house was now a hotel – the Polo family's coat of arms was still over the stable, and, significantly, the courtyard beside the hotel still carried the pejorative nickname "Del Milione." This phrase, suggesting "teller of a million lies" was applied to Marco Polo by critics of his bestselling *The Travels* and suggests that medieval Venice – jewels or no jewels – considered Marco Polo's fabulous stories to be tall tales, if not outright fiction.

The Rutsteins, however, did not and, not long after, set sail across the Mediterranean to Marco Polo's first stop – the 3,000-year-old port in Palestine known today as Haifa.

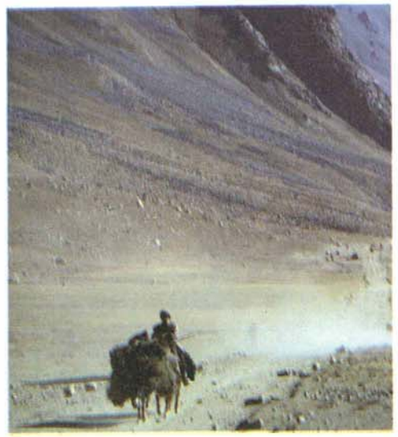
Like Marco Polo, Rutstein also made a side trip to Jerusalem – where Polo had obtained chrism oil from the Church of the Holy Sepulchre as requested by the Chinese emperor. Rutstein's crew then sailed for Cyprus, Rhodes and Turkey and, once ashore, hitchhiked past Mount Ararat – where Noah's ark is said to be buried – and passed one of the battlefields where Alexander the Great and Darius, Emperor of Persia, met in battle in the fourth century B.C. – sites that thrilled Marco Polo.

In Turkey, on the original journey, two Dominican friars sent by Pope Gregory in hopes of converting the Mongols quit the expedition and returned to the Holy Land, thus ending the Pope's plan to wrest control of Silk Route trade from the Muslims. From Turkey, Rutstein, on his journey, headed south for the Arabian Gulf, but as the map showed a 480-kilometer (300 miles) road stretching south through the Iranian desert and the Arabian Gulf port of Bandar Abbas, he and his companions decided that backpacking – an attempt to authenticate the trip – wouldn't do; instead they rented a car.

"We left about 4:30 a.m. because we wanted to get there before the temperature

◀ *The Hindu Kush seen from Lake Shandur.*

Reminders of 13th century travel: (clockwise): a traveler in the mountain pass; crossing a bridge made of vines; resting by the old Silk Road; Rutstein donkey trekking through the Shandur Pass; negotiating a narrow wooden bridge spanning the Yarkun Gorge.

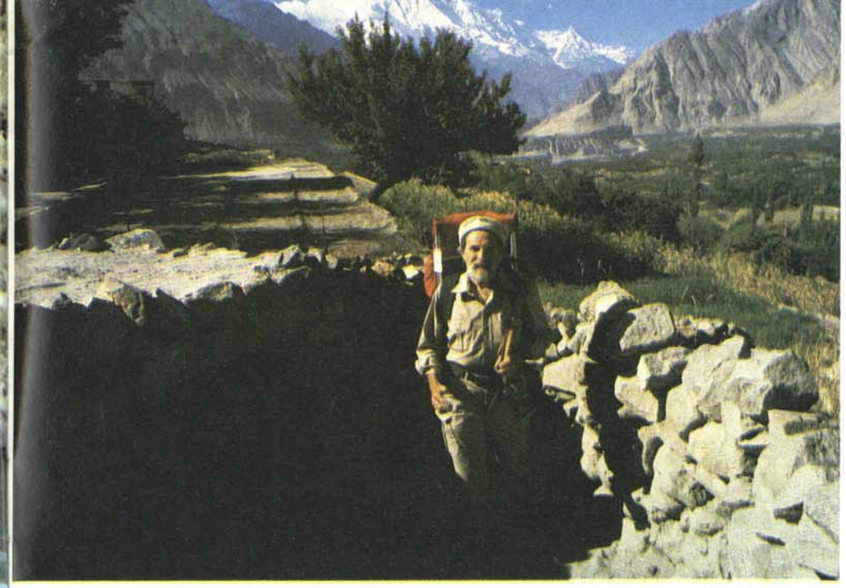


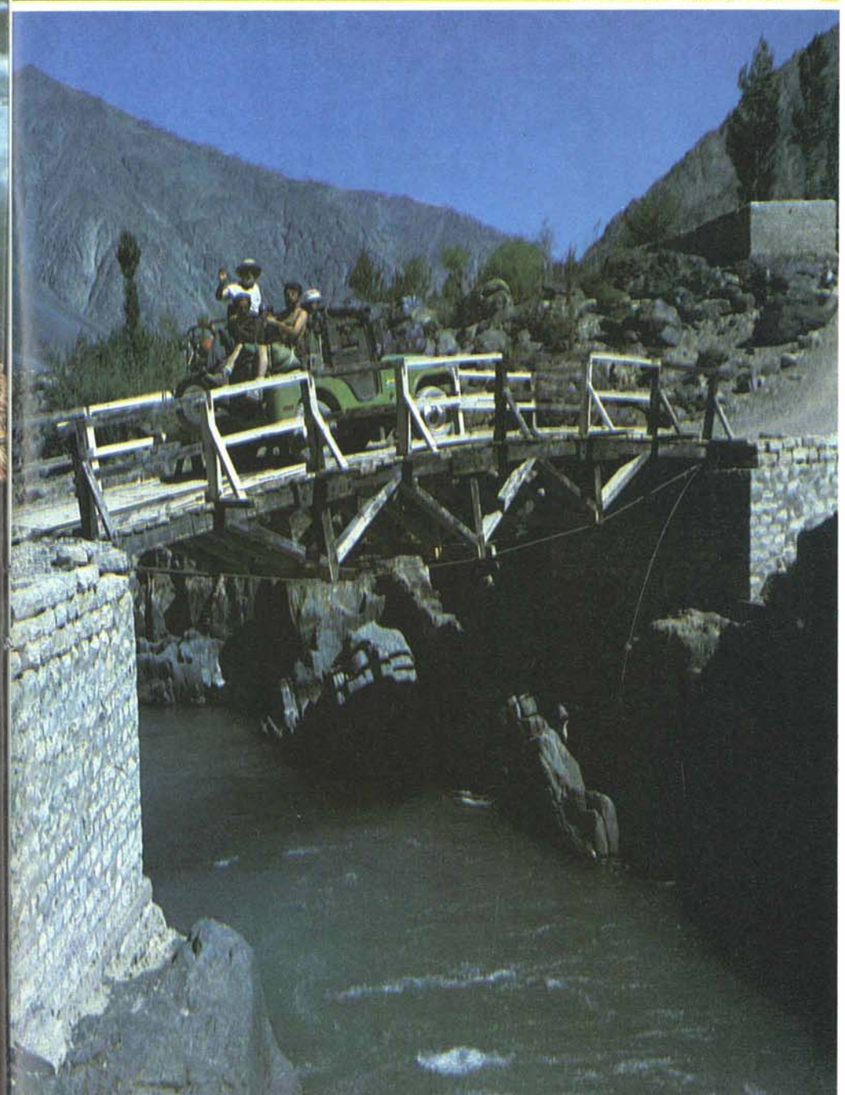
went above 100 degrees," recalls Rutstein. "We expected the trip to take a few hours, but there was no road. We thought it had stopped and would start again, but it did not. There were just ruts . . . In some places we could go only one mile an hour."

It was late afternoon when the party finally arrived at Bandar Abbas. "It was one of those times when I said to myself, 'What in the hell are you doing here?' What kept me going was the thought of how easy I had it compared to Marco Polo. He spent two years traveling the same distance I covered in three months. I had to think like an explorer, not as a tourist."

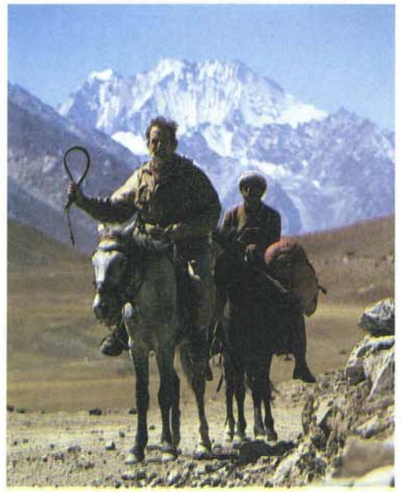
In some ways, Marco Polo did just the reverse; he thought like a tourist instead of an explorer. Polo, for example, on this leg of his journey, described Dhofar and Aden – on the southern coast of the Arabian Peninsula – but, scholars agree, never actually went there. Rutstein, consequently, didn't go either. Marco Polo did go to Hormuz, however, so Rutstein did too, although now it is the village of Minab, not far from Bandar Abbas. He was able to confirm the Polo description: "So hot the houses are filled with ventilators to catch the wind" – a reference to the unique cooling systems still in existence today.

From Hormuz, the Polos decided to continue by land because they quite mistakenly jumped to the conclusion that the Arab dhows, "held together without a single nail," were unseaworthy. Thus Rutstein, heading northward from Hormuz, crossed the great Salt Desert of Iran, and, after a stop in Mashhad, followed the Russian border for hundreds of miles up to the rounded brown folds of the Hindu Kush mountains in Afghanistan. In Afghanistan, Marco Polo





contracted a fever – Rutstein speculates that it was malaria – and, fortunately, climbed to what is today Chitral in Pakistan to recover his health in the mountain air. It was in these mountains, too, that Rutstein was forced – by snow-blocked passes – to break his journey, and return, temporarily, home.

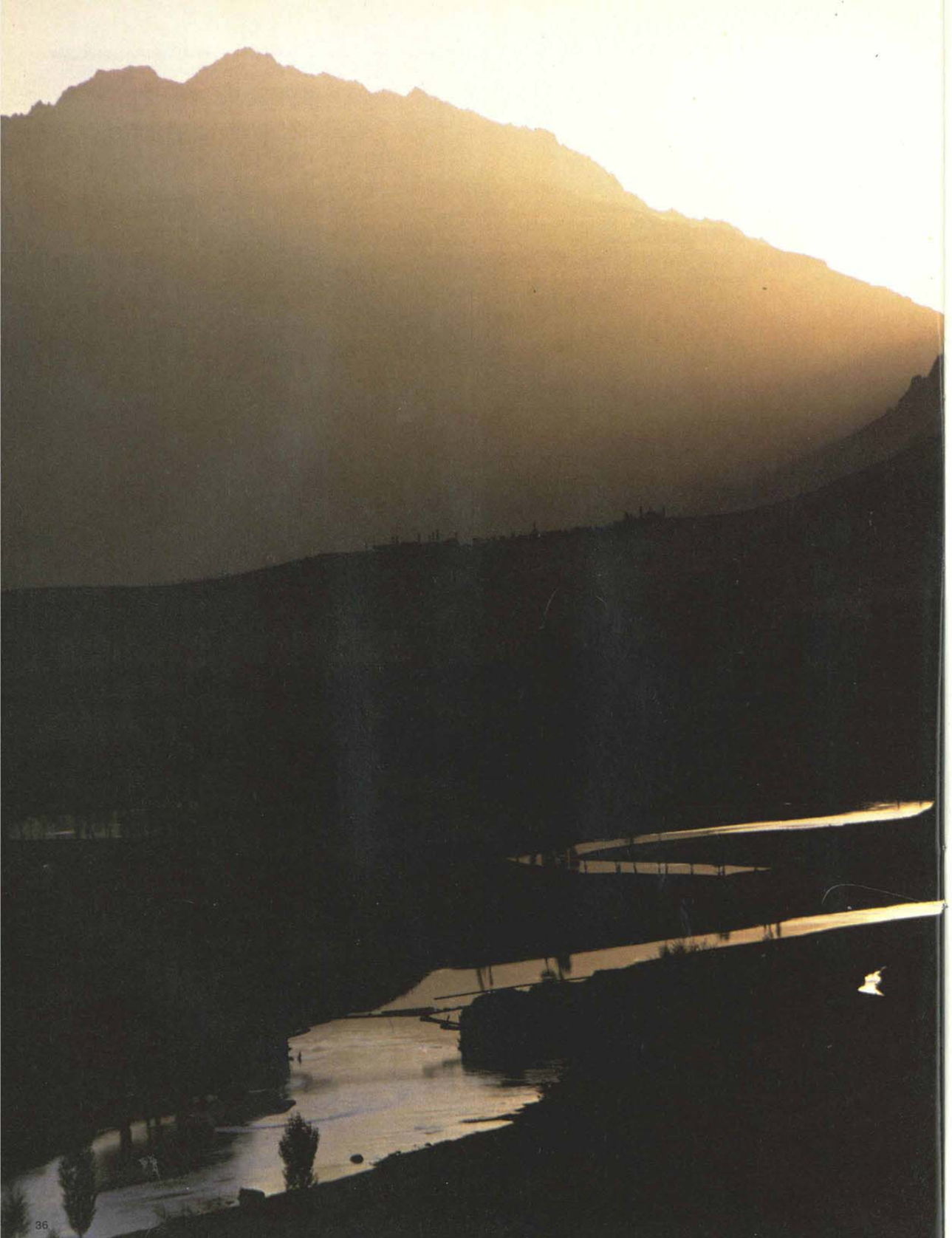


Even today, the town of Chitral seems an ideal place to recuperate from illness–with a climate warm enough to grow rice and fruit, yet cooled with snowmelt, and, dominating the town, the Masjid Shahi, the Grand Mosque, whose towers rise like a vision from Shangri-la over houses of wood and stone built on hills overlooking a string of bazaars two miles long.

As they always were, the streets of Chitral are alive with tribesmen – the local Khowaris in brown woolen caps, turbaned Afghan refugees, sharp-faced Pathans and smiling Gujars – and the markets are filled with woolen goods, antique weapons, fruits of all kinds, spices, and stones of a dazzling variety: amythyst, tourmaline, sapphires and rubies. Since Marco Polo had dealt in precious gems – and had reported that the local king seven centuries ago insisted on fixing the prices on all gems – Rutstein bought uncut rubies and lapis lazuli from a Chitrali who said he found them lying in the mountains.

People of the Chitral region today still wear the *shalwar kamees,* the national dress of Pakistan, which is probably similar to the costume – of short, pleated baggy pants – described by Marco Polo. The pleats on these baggy pants, he said, were intended "to give the impression of plumper hips, because their menfolk delight in plumpness."

(continued on page 40)



A Description of the World

WRITTEN BY CAROLINE STONE

Because Marco Polo, in *The Travels,* stressed adventure and peril, it is easy to forget that his memoirs also included snippets of accurate information about the Middle East.

Indeed, the romantic overtones and exaggerations of the memoirs probably had more to do with the man who, in effect, served as Marco Polo's ghost-writer – a French novelist famous for his love stories and historical romances, who was a prisoner of war with Marco Polo in Genoa from 1298 to 1299, three years after the Polos returned from China. When Marco Polo began to relate his adventures during his 24 years of traveling, the writer, delighted with this unexpected and fascinating material, settled down to write the book of travels that we have today.

A best seller, *The Travels,* also known as *The Description of the World,* was translated into almost every European language, including Irish, and became one of the most successful travel books ever written. Interestingly – in light of the skepticism that greeted publication of *The Travels* – a large number of Marco Polo's amazing anecdotes have proven to be true.

At one point, for instance, he describes "a spring from which gushes a stream of oil, in such abundance that 100 ships may load there at once. This oil is not good to eat; but it is good for burning and as a salve for men and camels affected with itch or scab. Men come from a long distance to fetch this oil..." At first, this sounded like gross exaggeration, but the "spring" turned out to be Baku on the Caspian, one of the great oil fields of Russia.

Marco Polo also describes Iraqi cloth, ("Here are made all the cloths of silver and gold called mosulin [muslin]. And from this kingdom hail the great merchants... who export vast quantities of spices and other precious wares..."), says that Basra "... grows the best dates in the world," and tells an interesting – if questionable – tale about Baghdad. Sacked by the Mongols under Hulagu Khan just 13 years before, Baghdad reportedly fell because the Caliph had failed to spend enough to defend it:

> So the Caliph was captured together with the city. After his capture a tower was discovered, filled with gold... Then Hulagu Khan said: "Caliph, since I see that you love treasure so dearly, I will give you your own to eat." Next he ordered that the Caliph should be taken and put in the treasure tower and that nothing should be given him to eat or to drink. "Now, Caliph," he said, "eat your fill of treasure, since you are so fond of it; for you will get nothing else." After that he left him in the tower, where at the end of four days he died. So it would have been better indeed for the Caliph if he had given away his treasure to defend his land and his people rather than die with all his people and bereft of everything.

From Baghdad, Marco Polo went to Tabriz – then in Iraq, now in Iran – where, again, he gives a vivid impression of the liveliness and cosmopolitan nature of the great trading cities of the medieval Islamic world:

> ... for cloth of gold and silk is woven here in great quantity and of great value. The city is so favorably situated that it is a market for merchandise from India and Baghdad, from Mosul and Hormuz, and from many other places; and many Latin merchants, especially Genoese, come here to buy the merchandise imported from foreign lands. It is also a market for precious stones, which are found here in great abundance...

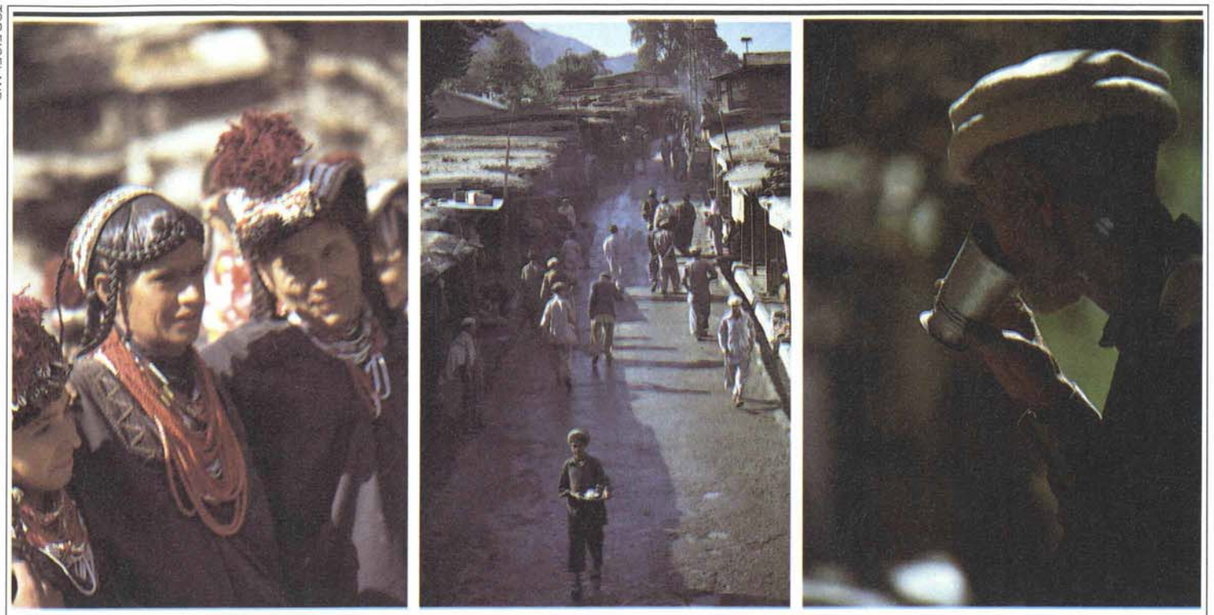
After Tabriz came the cities of Persia, such as Saveh, where he was shown the sepulchres of the Magi, the Three Kings, and where, again, he was impressed by the wealth of the country:

> In this kingdom originate the stones called turquoises: they are found in great abundance in the mountains, where they are dug out of the rock. There are also veins producing steel in great plenty. The inhabitants excel in the manufacture of all the equipment of the mounted warrior – bridles, saddles, spurs, swords, bows, quivers, and every sort of armor according to local usage.

From Saveh, the Polos went on to Kerman and then south to the Arabian Gulf. This part of the trip, he wrote, was "pleasant." "The road," he said, "passes through a fine plain amply stocked with foodstuffs. It is blessed with natural hot baths. Fruit trees and date palms abound."

At its end, this road came out at Hormuz, opposite present-day Oman, which he described as follows:

TOR EIGELAND



Little has changed since Marco Polo passed through Chitral 700 years ago — the streets remain unpaved and the men and women still wear the traditional dress of Pakistan.

Here on the coast stands a city called Hormuz, which has an excellent harbor. Merchants come here by ship from India bringing all sorts of spices and precious stones and pearls and cloths of silk and gold and elephants' tusks and many other wares. In this city they sell them to others, who distribute them to various customers through the length and breadth of the world. It is a great center of commerce, with many cities and towns subordinate to it, and the capital of the kingdom. In Hormuz, the residents do not eat our sort of food, because a diet of wheaten bread and meat would make them ill. To keep well they eat dates and salt fish, that is tunny, and also onions; and on this diet they thrive.

He also describes ingenious methods used by the local inhabitants to protect themselves against the stifling heat of the area – including "ventilators to catch the wind," a method still in use today (see *Aramco World,* September-October 1979). Another town which impressed him was Aden, from which, he said, "spices and luxury goods from India were shipped across the Red Sea in little boats to Ethiopia and then taken by camel and Nile boat to Cairo and Alexandria."

Another town mentioned by Marco Polo is Shihr, further along the coast to the east and the site of a story which sounds most unlikely:

And here is something else which may strike you as marvelous: their domestic animals – sheep, oxen, camels, and little ponies – are fed on fish. They are reduced to this diet because in all this country and in all the surrounding region there is no grass; for it is the driest place in the world. The fish on which these animals feed are very small and are caught in March, April and May in quantities that are truly amazing. They are then dried and stored in the houses and given to the animals as food throughout the year. I can tell you further that the animals also eat them alive, as soon as they are drawn out of the water. There are also big fish here – and good ones too – in great profusion and very cheap. They even make a biscuit out of fish. They chop a pound or so of fish into little morsels and dry it in the sun and then store it in their houses and eat it all the year around like biscuit.

From Shihr, Marco Polo goes on to describe Dhofar and Qalhat. Dhofar, in present day Oman, was particularly important for the incense trade – frankincense grew in profusion and was collected there for export to the West and the East – and was also a center for the export of horses and the prized white Arabian donkeys still seen along the coast. Qalhat, guarding the entrance to the Arabian Gulf, was continually at war with Hormuz on the opposite coast over duties on the highly remunerative Arabian Gulf trade.

In *The Travels,* much of this information came across to the readers as exaggeration, but in time, much of what Marco Polo said proved to be true. The subsequent production of oil at Baku, for example, suggests that his estimates of the oil "springs" was understatement, not overstatement.

Other descriptions of the Middle East also proved to be true. Arab authors completely agree on the architectural beauty of Hormuz at that time; his comments on feeding livestock in Shihr with fish are borne out by the fact that, in Roman times, fish paste was a major export of the region – and dried fish is still fed to livestock today.

His description of the Hormuz diet is beyond challenge; this diet was by far the healthiest for the climate, since meat was apt to be bad and fruit and vegetables unavailable. Salt fish, moreover, would also have had the same effect as modern salt tablets – providing the large amounts of salt required in tremendous heat. In retrospect, it seems that at least some of Marco Polo's tall tales were as accurate as they were fascinating.

Caroline Stone contributes regularly to Aramco World

◀ *Near Homuz, villagers gather masses of fish to feed livestock — a process reported by Marco Polo centuries ago.*

In Chitral, it is impossible to ignore the brilliant white pyramid called Tirich Mir. Towering four vertical miles above the Chitral valley, and exaggerating its lush greenness, Tirich Mir, 7,700 meters (25,264 feet) high is the highest mountain in the eastern Hindu Kush – and the gateway to even greater wonders beyond: the Himalayas. Polo described these mountains as being so high and so cold that not even birds would fly there – yet to get from central Asia to China, he himself had to cross at least one of what are surely the most intimidating mountain ranges in the world: the Hindu Kush, the Pamirs, the Kunlun and Tien-Shan and the Karakorum Himalayas – all converging into a single spiraling massif.

"There are over 10 different routes Marco Polo could have taken through these mountains," Rutstein explains, "with no way of proving absolutely which one he took. It is the most controversial part of his entire route. Most adventurers who have tried to follow Marco Polo illogically assumed that he climbed back down the mountains from Chitral into Afghanistan, and from there up the Wakhan corridor along the Oxus River into China." But when Rutstein resumed his journey in 1981, after a six-year break, he chose the well-marked caravan route from Chitral over Shandur Pass down to Gilgit and up the Hunza Valley into China, because, he explains, "it was the easiest and most direct, and therefore Polo's likeliest route."

From Chitral, Rutstein jeeped for two days up the Yarkhun valley 97 kilometers (60 miles) north to Mastuj, where an old fort with six-meter-high (20 feet) walls marks a spot where centuries of political intrigue among a legion of invaders converged: Greeks, Kushans, Parthians, Sassanians, White Huns, Chinese, Tibetans, Mongols, Turks, Russians, and, later, the British. As a crossroads between the Middle East, China and the Indian subcontinent, this portion of the old Silk Route has always had high strategic value.

In 711, for example, under the brilliant generalship of Muhammad ibn al-Qasim, the Muslims won their first foothold in this region – though it took three successive invasions to consolidate their control.

Traces of this period have been found in the trading centers on the plains of Pakistan, the jumping off point for caravans following the route that Marco Polo took through the Himalayas. In the National Museum of Pakistan, for instance, there rests a gold coin belonging to Caliph 'Abd al-Malik ibn Marwan, and a copy of the earliest known manuscript of the Holy Koran. In four volumes, it is transcribed in Kufic style on deerskin and is said to have been transcribed by 'Uthman the third Caliph.

From these centers Islam eventually passed over the Silk Route through the Himalayas into China and by 950 A.D. Kashgar, the westernmost Chinese trading outpost visited by Polo three centuries later, had accepted Islam.

Rutstein, in Mastuj, met with the local prince, Sikander Ul-Mulk, whose family, descended from the Mongol emperor Tamerlane, ruled the area for 500 years until, in 1972, the Pakistani government took control. The prince now occupies himself with farming and coaching the local polo team – whose games are often played atop the 3,719 meter (12,200 feet) shoulder pass, the world's highest polo field.

As much of Rutstein's travel had been by jeep, he – and I, when I joined him for the second leg of his journey in 1981 – had been concerned that there would be no "feel" for the land. As an alternative to the traditional modes of Himalayan travel – cooks and porters, pack animals bleating, bandits' bullets and rickety bridges – jeeps seemed much too tame. Actually, though, jeeping proved to be a far more terrifying form of transport than hiking, what with unending ribbons of hairpin turns – 15 of them on one cliffside – and tracks so narrow that the side view mirror once had to be bent inwards so the jeep could inch by.

On the other hand, Marco Polo's *Travels* are so filled with the stories of dangers encountered that our jeep hazards hardly compare. He faced shipwreck, brigands, extortion, piracy, wild beasts, torrents, illness, impassable mountains and wars. Neither Rutstein nor I was very surprised, therefore, when, during the Pakistan leg, we felt the first tremors of an earthquake as we pulled into a mud-walled roadside tea house to relax. Since the earthquake measured 8.6 on the Richter scale, loosed landslides on the road ahead of and behind us, and, unbeknown to us at the time, wiped out a village of 300 people, it is no exaggeration to say that elements of unpredictable danger have changed little since the days of Marco Polo's travels on the Silk Route.

Polo, in fact, mentioned a king who had lost many men in these mountains because "the roads were narrow and bad," and our driver, Hassan Abdal from Chitral, who sipped his tea calmly during the tremors, afterwards informed us that five jeeps had fallen into the gorge that year.

As we proceeded, things got worse, not easier. Once, we had to cross a 15-meter (50 foot) bridge made of vines, tied to boulders on either side of the gorge – some of the vines frayed and broken. Another time, while descending from the Shandur Pass to Gilgit (first by horse and later by jeep) we stumbled upon another reminder of travel in the 13th century as described by Marco Polo: a boatman on a raft of inflated pigskins floating by on the river far below.

Gilgit, however, was a disappointment. The roads were pavėd, and the shops filled with modern imports ranging from disco cassettes to American tractors. Only the silk gowns and porcelain from China suggested the trade of Marco Polo's day.

Still, Gilgit, for 2,000 years, has been the terminus of trade with western China in this region and today, that trade has been revitalized by a new Silk Route: the paved Karakorum highway that winds 900 kilometers (560 miles) through the Himalayas. Built with the aid of the Chinese – at the cost of hundreds of lives – the new silk route snakes its way along the headwaters of the Indus River and takes the modern trader whizzing at 110 kilometers an hour (70mph) past Gilgit and up the Khungerab Pass into China. There, unfortunately, the Rutstein expedition, having no "golden tablet" from the Khan, had come to a halt. Though a sign in English welcomed him – and us, later – "Welcome to Honourable Guests" – China did not. We were forbidden to get any closer than 25 miles from the border.

Harry Rutstein, nevertheless, had succeeded in filling Marco Polo's shoes on his travels along the Silk Route. Though he certainly would never boast, as Marco Polo did, that "no man has explored so many parts of the world . . . since our Lord God formed . . . our first parents," there are similarities. Both men began life as merchants, and both, in their fashion, served as cultural ambassadors between East and West. Rutstein, in fact, believing that 700 years after Marco Polo, there is still no mutual understanding, hopes – by eventually completing the last 5,793 kilometers (3,600 miles) of Marco Polo's journey, across China – that he may bridge the gap between the cultures – an adventure as challenging as any found on his travels so far.

Michael Winn is a free-lance writer recently returned from a trip through Muslim areas of the Far East.