Saudi Aramco World

May/June 2004

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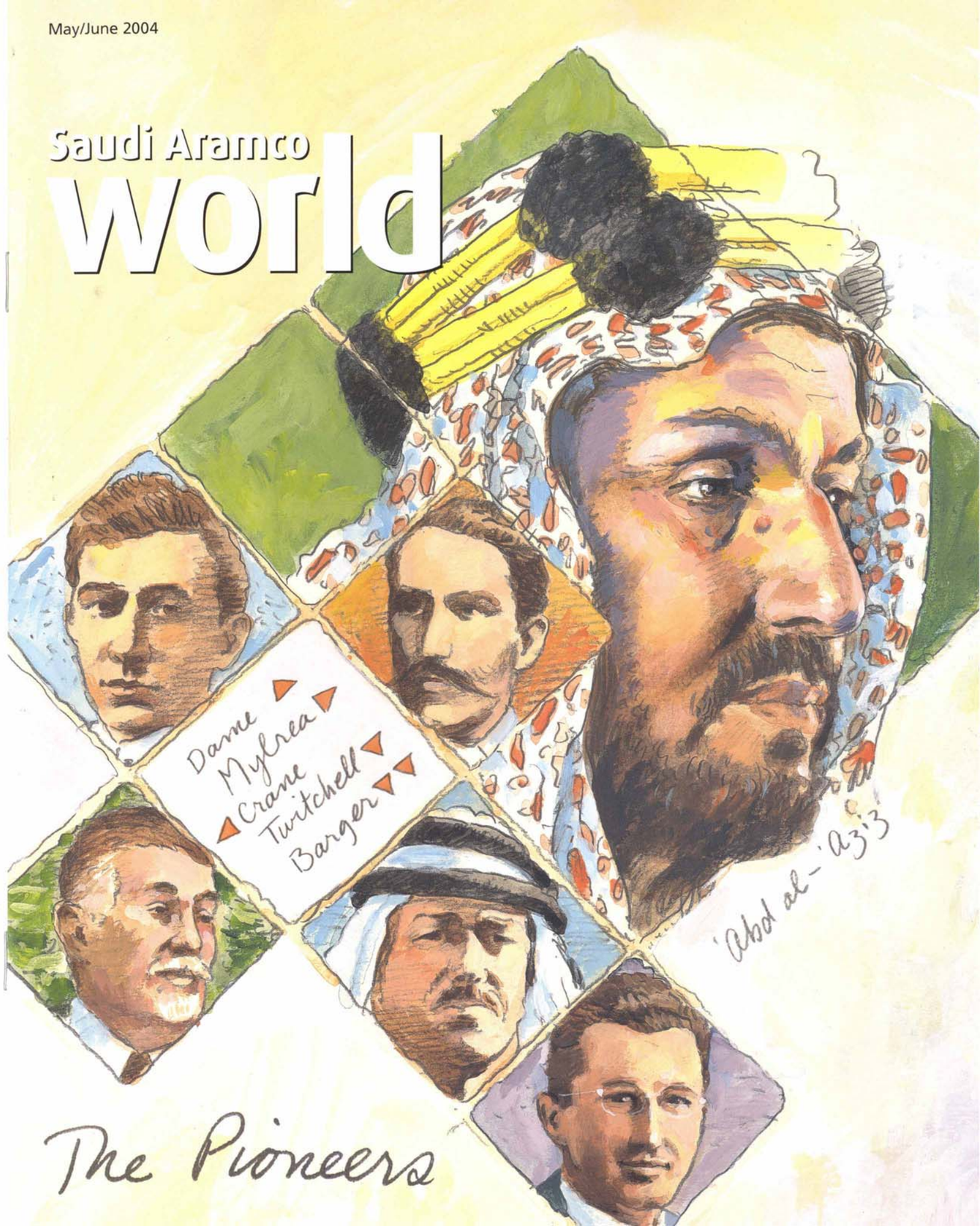

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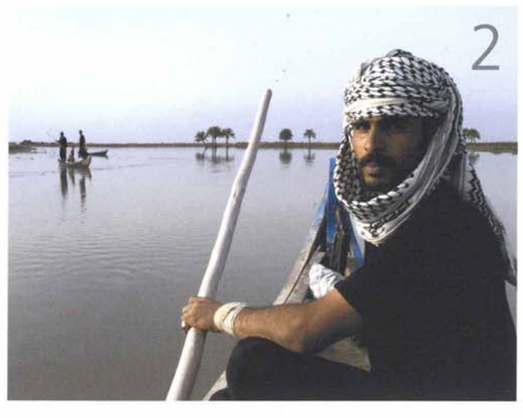
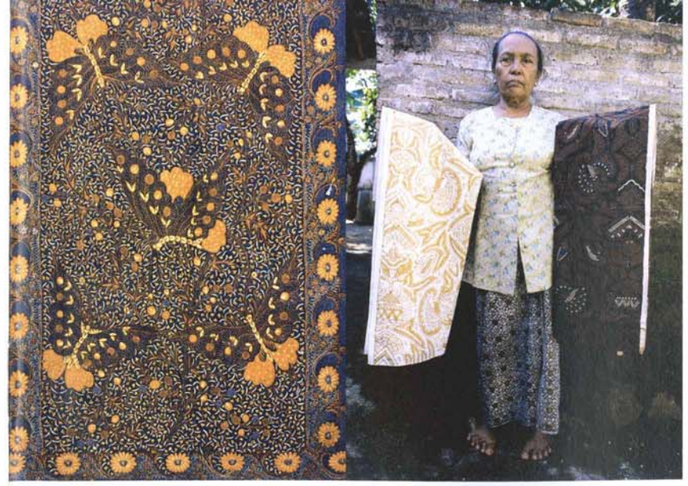


2 Reviving Eden

Written by Pat McDonnell Twair
Photographed by Dana Smillie

Until the 1990's, the reed marshes of Iraq were Eurasia's most extensive wetlands, with a unique ecology that supported the Marsh Arabs' distinctive way of life. Then the marshes were drained and the people scattered. Azzam Alwash, the émigré son of an Iraqi hydrologist, now works with international aid groups and Iraqi authorities to restore the desiccated marshlands. Reeds are sprouting, birds and fish are returning—and so are people. "A 7000-year-old culture doesn't die in a decade," he says.



22 Sarongs: From Gajah Duduk to Oey Soe Tjoen

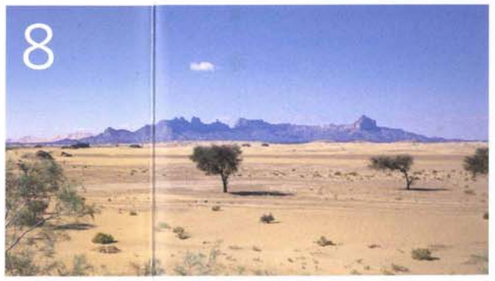
Written and photographed by Eric Hansen

Even the simplest *pelicat* sarong, woven by the mile on thundering power looms, is a garment as cool, comfortable, versatile and elegant as any in the world. Then you can move up the scale to printed batik designs, block-printed batik, hand-drawn *batik tulis* and finally the lushly floral signed creations of Oey Soe Tjoen and his successors—wrapsodies of color and line.

The Mexican Kitchen's Islamic Connection

Written by Rachel Laudan
Photographed by Ignacio Urquiza

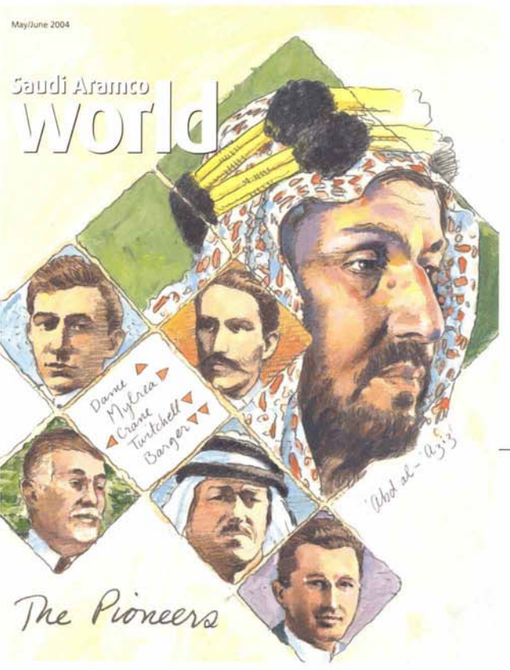
Brown, spicy aromatic curries in India and brown, spicy aromatic *moles* in Mexico—both are sauces in which meat or vegetables are cooked, both are made with carefully ground selected spices—sometimes, in fact, with the same spices. But this is not coincidence: Though cooked in kitchens some 16,000 kilometers apart, these dishes are the easternmost and westernmost vestiges of the great cuisine of medieval Islam.



Libya's Forgotten Desert Kingdom

Written by Louis Werner
Photographed by Toby Savage

They appear in the pages of Herodotus, Pliny and Strabo. They're depicted in rock art, hunting, herding and driving their four-horse chariots. Now Libyan and British archeologists are standing on the threshold of new discoveries about the Garamantes.



14 The Pioneers

Written by Thomas Lippman
Photographed by Norman MacDonald

At the foundations of Saudi Arabia's nearly century-old relationship with the United States lie not geopolitics, not ideology, not money—but rather the personal qualities of a few individuals: the dedication of American physicians, the respect and forthrightness of an American businessman, the disinterested expertise of an American engineer and the clear-eyed decency of an American executive. All these were noted and appreciated by the upright and pragmatic ruler of Saudi Arabia.

Back Cover:

Sarong designs, as well as the graceful garments themselves, were traded among British and Dutch colonial centers, the north coast of Java, China, Japan and other points, and classical court designs, wallpaper patterns, plaids and florals all found their admirers. Here an intensely detailed flower design on silk from Apip's Batik. Photograph by Eric Hansen.

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REVIVING EDEN

The moist, fertile delta where the Tigris and the Euphrates rivers converge in southern Iraq was Eurasia's largest wetland: two-thirds the size of Switzerland, larger than the Florida Everglades and roughly equal in area to Massachusetts. Its unique ecosystem has supported a unique human culture for at least 7000 years.

Written by PAT McDONNELL TWAIR
Photographed by DANA SMILLIE

Its abundance of fish, wildlife and birds, together with soil suitable for growing barley, made possible the rise of the Sumerians and their city-states about 3000 BC.

A 5000-year-old engraved cylinder seal shows a house built of reeds that uses recognizably the same architecture that Iraq's indigenous marsh dwellers, the Ma'dan people, used in the 20th century. These same reed houses also appear in a relief carved in the seventh century BC, during the reign of the Assyrian king Sennacherib, which shows men in battle among the famously impenetrable reed beds.

Around the same time, the marshes served as a haven for the Chaldeans, who defeated Sennacherib's son Sargon II. In the ninth century of our own era, the Abbasid rulers of what is now Iraq couldn't defeat the Zanj, a rebellious slave army that took refuge in the vastness of the wetlands. In their time, the Ottoman Turks proved unable to dominate the Ma'dan people, whose slim small boats gave them freedom of movement through the reeds. It was this protective aspect of the marshlands' dense reed beds that, in the final decade of the 20th century, brought about their deliberate destruction.

In 1991, frustrated by stubborn political opposition in southern Iraq, Saddam Hussein launched a vast punitive assault that burned and poisoned the reed beds. He then built a system of locks, dikes, embankments and canals that turned the wetlands into a dust bowl. "It is absolutely phenomenal to see the destruction of an ecosystem on that scale in just five to six years," says Hassan Partow of the United Nations Environmental Program (UNEP).

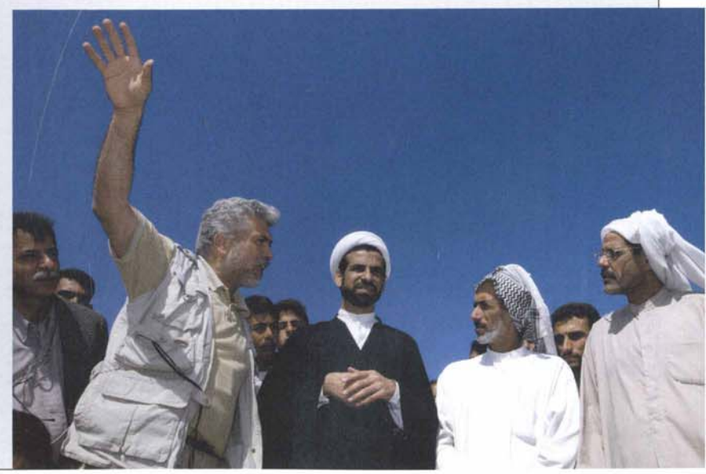
An estimated 250,000 Ma'dan people were killed or dispersed throughout Iraq and Iran. Many bird and animal species, some of them endemic to the marshes, were deprived of large portions of their range.

Few people outside the region can have been as heartsick over this as Azzam Alwash, a Los Angeles engineer whose father had been one of Iraq's preeminent irrigation engineers. As a boy living in Baghdad, Alwash had often visited the marshes with his father and traveled through them in motorized boats as his father recorded water levels and inspected irrigation systems. Of all his father's tasks, the marshes were his deepest passion, and they constituted some of Alwash's fondest memories of the country he left in 1978. As the younger Alwash read of their destruction, the marshes became his passion, too.

In 2001, Alwash and his wife, Suzie, a geologist, founded Eden Again, a non-profit organization that plans for the revival of the marshlands. Alwash consulted his retired father, who shared his lifelong knowledge of river routes and estuaries to support the planning.

In 2002, Alwash received a grant from the US Department of State to construct computerized models simulating reflooding of the marshes. He also hosted a restoration

The region known as Abu Zirig, left, **is one of the marshland regions re-inundated last year, bringing the total area flooded to about 40 percent of the original expanse. Alwash and staff members of the year-old Center for the Restoration of Iraqi Marshes (CRIM) make regular journeys in the slim, poled boats of the Ma'dan people to record water levels, salinity, pH and temperature, and to count birds and fish.** Below: **Wherever he goes, Alwash talks to residents displaced in the 1990's. "I was born here and know the culture. When I arrive for an inspection, I talk to the local *shaykh*," says Alwash. "I don't ask questions. I just listen."**

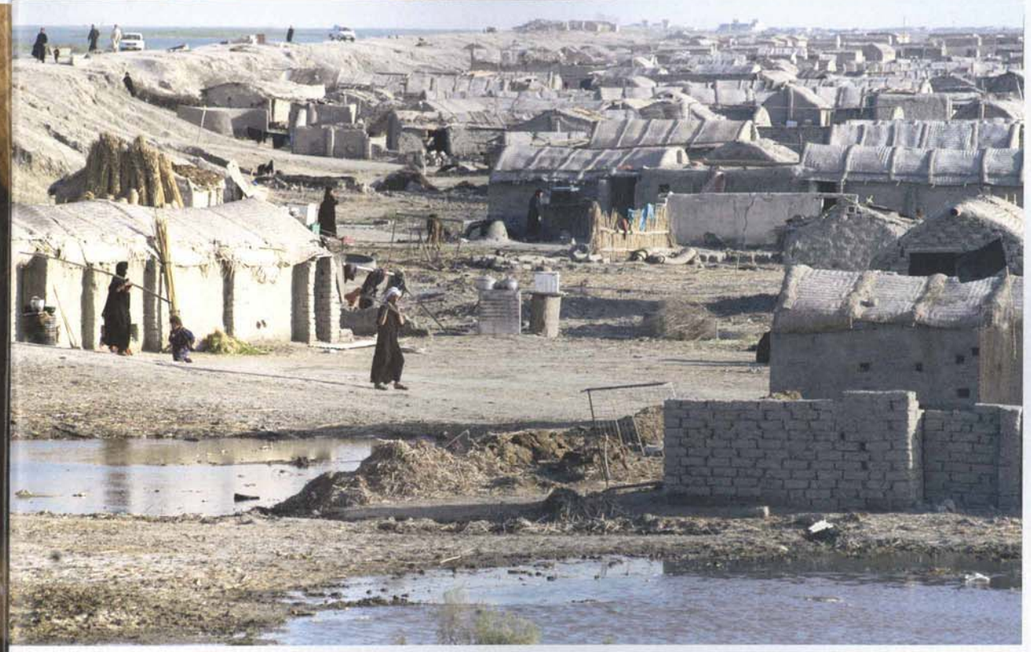


planning workshop at the University of California at Irvine in early 2003 that 20 international experts attended. There, Dr. Thomas Crisman of the University of Florida called the Alwashes' goal much more daunting than restoring the Florida Everglades—but achievable nonetheless.

The couple took their results to UNEP. And as the US invasion of Iraq grew imminent, they talked to government officials to persuade them not to bomb dams or dikes in the region: If new water flowed in too suddenly, Alwash knew, it would be contaminated by salt and toxins that had built up over the past decade, hampering future restoration.

In June of last year, Alwash resigned from his engineering firm and traveled to Baghdad as the project director of Eden Again, which now works closely with the Iraqi Ministry of Water Resources. His goal: to realize his plans to restore the Iraq marshes.

One year into the project, Alwash is optimistic. Roughly 40 percent of the marshlands have been re-inundated, and some 20 percent of the original marsh population—about 6000 to 7000 Ma'dani families, or 42,000 people, he believes—have returned over the past year.



Left: **Alwash talks with representatives of three marsh tribes in Amarah. "I'm more than an engineer. I'm a diplomat, a mentor, a counselor, a problem solver," he says.** Below: **One of the man-made channels built during the 1990's to drain the marshes was named the Glory River. Some displaced residents took refuge along its massive levees and earthworks. But their efforts to farm proved largely futile, and—after more than 6000 years of successful subsistence—most of the population became dependent on government social services.** Opposite, main: **In Chubaish, the "Venice of Iraq," a grand *mudheif*, or communal reception hall, has been built. It shows the strong, light, flexible arches of bundled reeds that are the most striking feature of the once common traditional architecture of the marsh tribes.** Opposite, lower: **Kermashia Marsh has seen water again for nearly a year now. "Look at how dense it is!" exclaims Alwash. "It's a jungle!"**

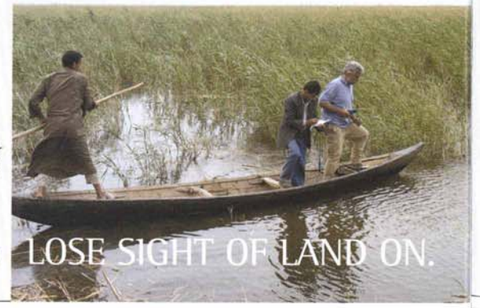
On the other hand, returning families have not all been able to settle on the sites they previously inhabited, and Ma'danis who had been forced to begin farming the drained marshlands may themselves be displaced by the new inundations. So there is a clear need for conflict resolution and detailed planning. But "only about 10 percent of the relocated people want to continue farming," Alwash says. "At most, these agricultural experiments are no more than five or six years old. Farming practices are primitive: The yields are about one-fourth what they would be in the US. It is more practical for them to cultivate rice on the perimeters of the wetlands."

The traditional economy of the marshlands was based on fishing, reed weaving, production of water-buffalo dairy products and seasonal migrant farm work.

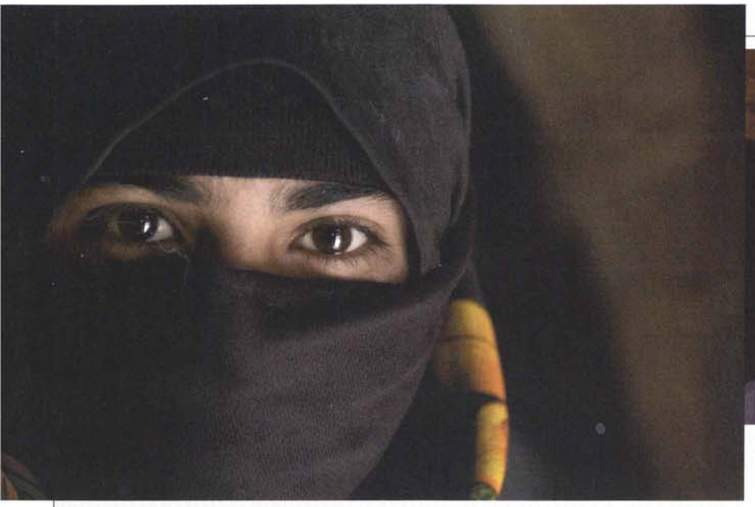
"Water buffalos are being brought back," Alwash says with characteristic enthusiasm. "Their meat is no good, but their milk is rich, high in fat and protein. Water-buffalo *gaimer* [heavy top cream] fills the stomach for hours. Best of all, the buffalos forage for most of their food in the water, and need little or no supplemental feeding. Reeds are used for traditional house construction; almost no manufactured products are needed for housing. The mats the Ma'danis weave are bartered for necessary goods from the cities. And in late summer, the men traditionally hire themselves out to harvest rice and dates."

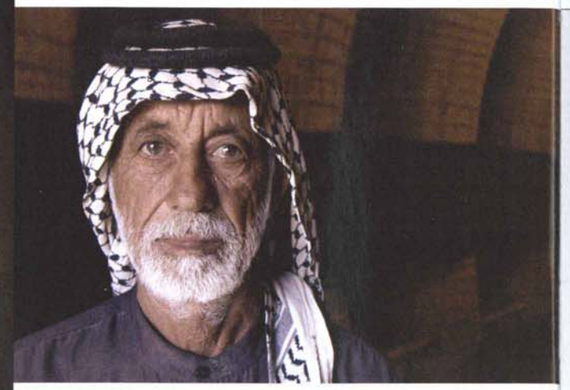
Even though Alwash cautiously estimates that it will take five to six years for new waters to flush toxins and salts out of the newly inundated areas and establish an equilibrium, the perimeters of those areas in the Nasiriya region are recovering better than anticipated. Natural seed beds made the ecosystem resistant to periodic drought.

Some parts were permanent marsh, others seasonal, but all, in flood, were a maze of channels and waterways, many made by driving buffalo through the reed beds when the water was low. There were also lakes large enough to



LOSE SIGHT OF LAND ON.





In an office in Amarah, Alwash looks over a map following a report of a breach in a dike —a problem where controlled reflooding is essential. "For the first time," he says, "I feel that I'm doing something useful—really useful."

Less successful are the Kurmet Ali and Hawr al Adel regions, which cover more than 500 square kilometers (193 sq mi). "This is in the southern interior section, which never dried out," he explains. "Reeds are not as thick there and it will require time to stabilize plant growth."

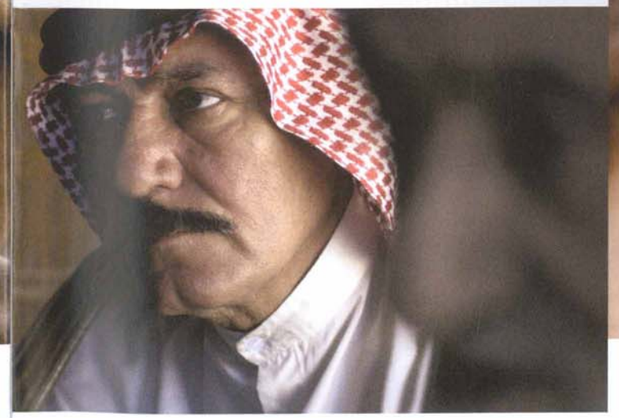
The quality of the water there is poor, too, with salinity ranging from 700 to 2500 parts per million (PPM)—three to 10 times the American maximum for drinking water. "That's good enough for the reeds to grow," Alwash says, "but not for human consumption," and so drinking water is being imported in tank trucks in those areas. Meanwhile, a study is looking at using waste gas from the oil fields in the south, now flared off, to generate electricity to run desalination plants.

Alwash's overall prognosis is for partial, but not full, recovery of the marshes. "We can never expect to restore all the original wetlands," he says wistfully. Dams built far upstream, in southern Turkey, since the 1970's have reduced the water flowing into Iraq by more than 75 percent, while an international agreement between Syria and Iraq assures only that a minimum of 58.6 percent of the water that flows into Syria from Turkey will continue into Iraq.

"Ideally, an agreement among Turkey, Syria, Iraq and Iran to share the water in the river basins would be the long-term goal," Alwash says. "The short-term solution is to restore the marshes with whatever water is available in southern Iraq. The medium-term answer is to improve irrigation techniques upstream in northern and central Iraq" to allow more water to flow to the marshes.

For now, Alwash finds the changes of the past year encouraging. "Ten percent of the original marshlands are in a robust stage of recovery," he says. "The people are trickling back. The best news is that the Ma'danis, though they've been away for 10 years, are still proficient in reed weaving, reed-house construction techniques and water-buffalo husbandry. A 7000-year-old culture doesn't die in a decade."

Marsh residents, most of them recently returned to the Chubaish region from other parts of Iraq, include, above from left, **Zeinab Shaker, 16, and Fuad el Khayoun, 58;** below from left, **Khadim Khalifa Ziarra, 22; Ikhlas, 11; Mohamed Ghazi, 77,** and a girl who gave her name as Israh.



HIS OVERALL PROGNOSIS is for partial, but not full recovery of the marshlands. Upstream dams have reduced the flow of the Tigris and Euphrates by more than 75 percent.

The biggest outside assistance has been the eight to 10 million euros ($9.5–$12 million) that the Italian government has pledged toward a sustainable marsh program that will utilize water-management expertise developed in Venice. There is talk, Alwash says, of a sister-city relationship between the famously wet Italian port city and Chubaish, the economic heart of the marshes between Qurra and Nasiriya. Other help has come from UNEP, from the Canadian International Development Agency and from the US Agency for International Development, which sponsored research trips by wetlands experts such as Curtis Richardson of Duke University.

More good news came in December, he says, when the Iraqi minister of water resources announced that the restoration of the marshes was his ministry's highest priority. "This shouldn't have been surprising," Alwash notes. "The marshes have always held a huge emotional pull for Iraqis, especially the Iraqis of the south." ⊕

Pat McDonnell Twair (sampat@cyberonic.com) worked for six years as a journalist in Syria. Based now in Los Angeles, she is a free-lance writer who specializes in Arab-American topics. **Dana Smillie** is a free-lance photographer based in Cairo and Baghdad.

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Marsh Arabs: N/D 66, M/A 82

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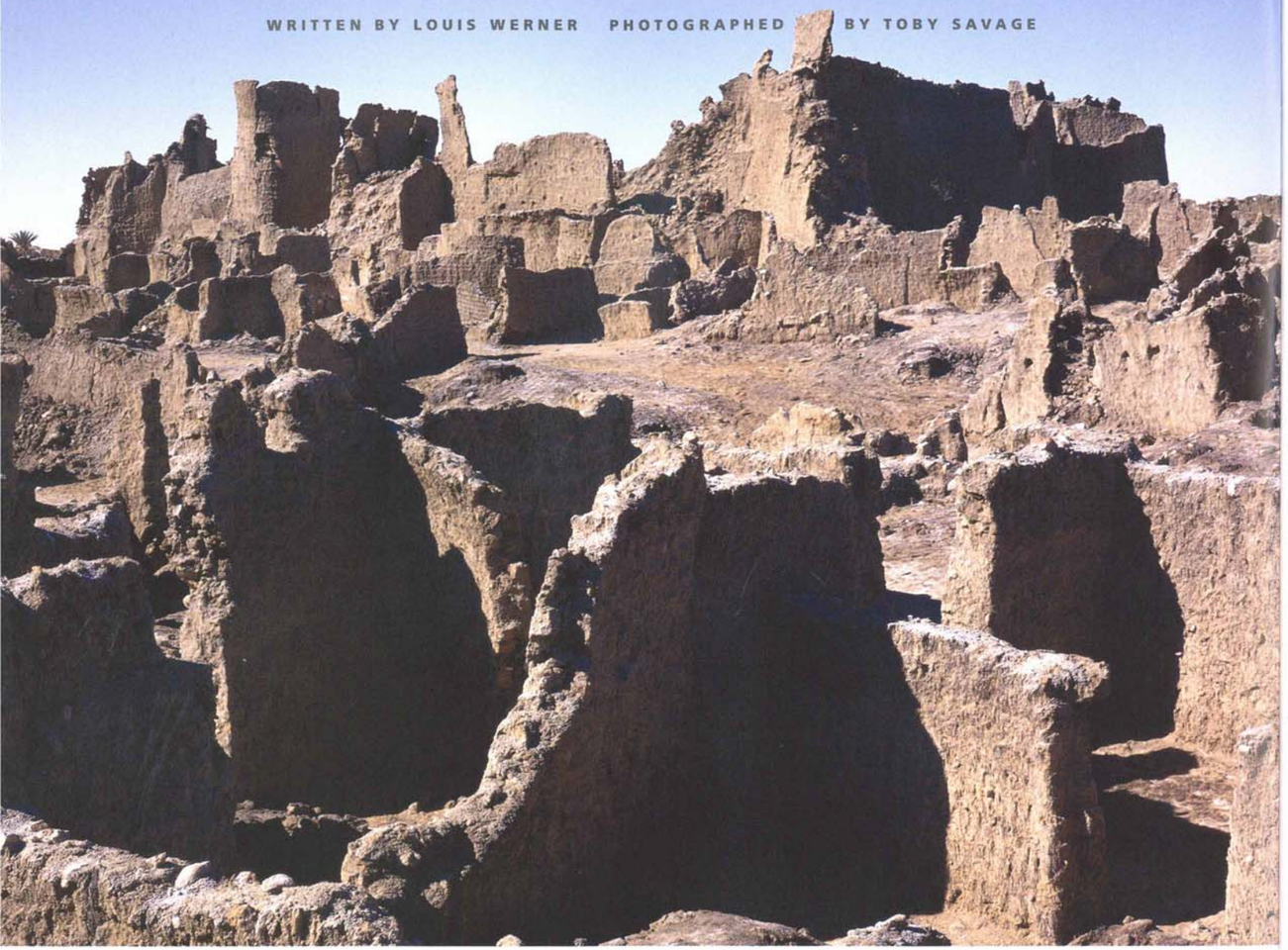
LIBYA'S FORGOTTEN DESERT KINGDOM

WRITTEN BY LOUIS WERNER PHOTOGRAPHED BY TOBY SAVAGE



He looks down on the Wadi al-Hayat, the Valley of Life, from his perch high up on the escarpment. His face is weathered but still shows the firm lines of the pointed chin that distinguished his people in the wall paintings of the pharaohs. To them, he would have been known simply as a Libyan, but among the ancient Libyans there were many different tribes, none stronger or more skillful at desert travel than his. Herodotus was the first to call his people by their proper name, the Garamantes, and to correctly locate his homeland in the Fezzan Oasis, in Libya's southwestern corner.

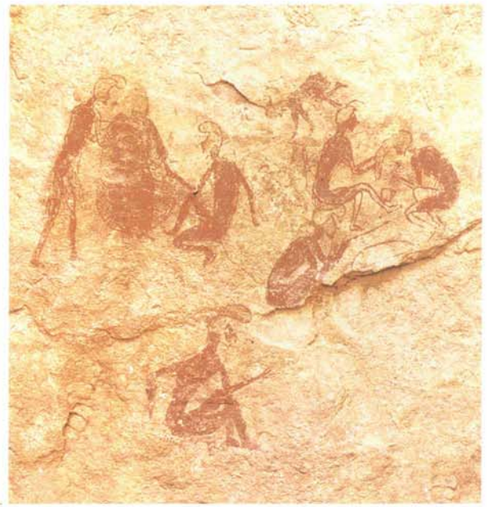
But this tribesman himself remains nameless, and he has been dead for more than 2000 years. His face is carved into the rock at a place called Zinchechra, which overlooks what Pliny the Elder called *clarissimumque Garama caput Garamantum*: "well-known Garama, capital of the Garamantes."It is this Garama, lying today beyond a dried moat and behind crumbling walls, underneath a mud-brick town built early in the Islamic era, that recently has been the object of a British archeological expedition that is slowly bringing this once great Saharan civilization to light.

Once the seat of a power that controlled much of southwestern Libya's Fezzan region, Old Garama exists aboveground as ruins that date from the early Islamic era. Here and in nearby sites, other evidence shows settlement from the ninth century BC.

The Garamantes ruled this central, interior part of North Africa for 1000 years or more, from about 500 BC till about AD 500. Their origins are still being debated, though they were probably of a Berber ethnicity. We do know they developed a stable kingdom based on wadi agriculture, intensive irrigation and cattle pastoralism. Their written language was a still nearly indecipherable proto-Tifaniq, the script of modern-day Tuaregs.

The Garamantes' portrait shares the rock face with other carved images—an ostrich hunt, a giraffe and a horseman—that call to mind the tremendous wealth of rock art, dating from the late Paleolithic through to the early modern era, found throughout the Sahara. It is especially abundant in Libya's Jabal (Mount) Akakus and Messek (Plateau) Sattafet, upon which Zinchechra stands.

Herodotus wrote of the Garamantes' four-horse chariots, which are pictured in rock carvings and paintings at many nearby sites. He also described their agricultural practice of strewing earth upon the salt plain before sowing their crops, noting correctly the high natron (bicarbonate of soda) content of the Fezzan soils. More fancifully, he also wrote that the Garamates bred cattle with horns so large that the animals were obliged to walk backward as they grazed, dragging their horns behind them like plows.



In one of the area's many pictographs, people appear to gather for either harvest or ceremony. The image dates to the beginning of settled life in the Fezzan, which was prompted in part by the desiccation of the Sahara, which by the second millennium BC had greatly reduced the productivity of hunting.

TALL TALES OF THE GARAMANTES ARE COMMON AMONG THE CLASSICAL AUTHORS, AND VIRGIL MADE THEIR LANDS INTO A METAPHOR FOR THE VERY ENDS OF THE EARTH.

Such tall tales of the Garamantes are common among the classical authors who mention them. Pliny wrote about a Garamantes town called Thelgae, near which a spring issued water that boiled at midday and froze at night. Perhaps more realistically, he also described the Garamantes guerrilla tactic of filling desert wells with sand when in retreat in order to throw off pursuers. Tacitus called the Garamantes "an ungovernable tribe and one always engaged in brigandage against its neighbors."

The second-century Greek satirist Lucian, whose *True History* parodies the fantastic geographies of his literary forerunners, wrote that the Garamantes lived in tents and hunted apes. Herodotus, writing from Cyrene on the Libyan coast, got many things right about them but got one big thing wrong, calling them shy and reclusive—"they have no warlike arms at all," he wrote, "nor do they know how to defend themselves."

The Roman poet Virgil made the Garamantes' lands into a metaphor for the very ends of the earth. In Book Six of the *Aeneid*, Anchises speaks to Aeneas from the underworld to prophesy the great Romans yet to come: "This is the man you heard so often promised—Augustus Caesar, who will renew a golden age in Latium and stretch his rule beyond the Garamantes,...a land beyond the paths of year and sun, beyond the constellations, where on his shoulders heaven-holding Atlas revolves the axis set with blazing stars."

Even a contemporary Libyan author, Ibrahim al-Koni, in his 2002 book *The Bleeding of the Stone* (Interlink Books), builds upon the mythology of the Garamantes heartland. In this novel of magical realism about the extinction of the mouflon, a Saharan wild sheep, he writes, "They'd crossed the plain now, and the Massak Satfat was becoming visible. The heights, covered with huge black rocks, burned in the sun's everlasting fire. The peaceful sandy desert, stretched out flat and merciful to God's worshipers, ended, and the mountain desert began, angry and inhospitable, its face set sternly against the wanderer. The rancor was, it seemed, a legacy of those remote times when unending battle was waged between the two harsh deserts, a fiery enmity even the gods in the upper sky had never contrived to soften or reconcile."

Perhaps Strabo the Geographer should have the ancients' last word. "Most of the peoples of Libya are unknown to us," he wrote. "Only do very few of the natives from far inland ever visit us, and what they tell us is not trustworthy or complete."

Sa'd Salih Abedelaziz has information more up-to-date than Strabo's. Abedelaziz is director of the new Garamantes museum at Germa—the present-day name of Garama—and for the past nine years he has been taking part in the British area survey and excavations. As a lad living in what was then Germa village, he remembers the work of the first modern archeologists to examine Garamantes sites: Mohammad Ayoub, a Sudanese official in the Libyan Antiquities Department, and Charles Daniels, an Englishman. "I would ride my bicycle out to see what they were doing,"

says Abedelaziz, "but I was still too young to know anything about the Garamantes."

Even now, however, Abedelaziz and other experts on the Garamantes are better at discounting old theories than at positing anything new and definitive. Abedelaziz notes the long-held bias, classical Greek and Roman as well as modern European, against any thought that the Sahara might once have been a cradle of civilization. Italian archeologists, working in the 1930's at the height of their Libyan colonization, thought the Garamantes must have been of Phoenician, Egyptian or Mediterranean origin. Considerations of how and why they might have arrived in Fezzan across vast tracts of desert were less important than the Italians' need to deny the possibility of indigenous African ingenuity.

Ayoub's work in Old Garama established three sequences of construction: the topmost Islamic city, a middle level of dressed stone foundations, and a bottom level of salt-brick work that seemed to be pre-Roman. Daniels's excavations at Zinchechra established the earliest date for its various defensive and residential walls as the ninth century BC.

Daniels only worked in the area for a few years, and his 1979 book, *The Garamantes of Southern Libya* (Oleander Press), reached only tentative conclusions and ended with a shrug. "That so many questions still remain unanswered is not surprising," he wrote, "for the Garamantes have guarded their secrets long and well, and we in our searching even now stand only on the threshold of their world."

Since 1997, David Mattingly of the University of Leicester has fielded a team in Fezzan, sponsored by the UK-based Society for Libyan Studies, that hopes to cross that threshold. By dating organic remains in Old Garama to the fourth century BC, studying the irrigation tunnels known as *foggara* and documenting the Roman trade goods found in the area, Mattingly has been revising the long-held impression that the Garamantes were mere primitive troublemakers at the edge of the Roman Empire.

From the top of the Zinchechra cliff face, Abedelaziz waves his hand in the four cardinal directions to make his point that the Garamantes were, from a Saharan perspective, at the center of things, and not, as the Romans would have it, at somebody's margin. Their centrality among several sources of highly valuable, low-weight trade goods such as gold, salt, glass and precious gems put the Garamantes on the world stage.

To the west is the oasis town of Ghat, the first in a string of caravan stages that lead first to Algeria's Tassili n'Ajjer and Hoggar mountains and on to the Adrar des Iforhas in modern Mali, ending at the Niger River. To Garama's east, through the oases of Waddan, Augila and Siwa—although not an easy trip—lies Egypt and the Nile.

To the north is the Mediterranean coast, reached via the historically important city of Ghadames, still the Sahara's most perfect example of urban architecture. In AD 69, the Romans under Valerius Festus opened up a more direct route between Fezzan and the coast that Pliny called the "*iter praeter caput saxi*" ("the road past the head of broken stones"). This is uncannily close to what the modern Libyans still call this route via the towns of Gariyan and Mizda: *Ras al-Hammada*, or "the head of the stony plain."

South of Fezzan, along the Chad border, are the Tibesti mountains. Looking at the map, one can imagine why the Nile, the Niger and the Mediterranean would be destinations of importance—but the Tibesti? If Pliny can be believed, Mount Gyri, source of the classical world's highly treasured "carbuncle," or garnet stone, is to be found there. The Emperor Trajan sent two trading expeditions in that direction, one led by Septimus Flaccus, Legate of Numidia, and the other by a merchant named Julius Maternus, who, again according to Pliny, arrived at "Agysimba, a province of the Aethiopians where the rhinoceros congregate."

FROM A SAHARAN PERSPECTIVE, THE GARAMANTES WERE AT THE CENTER OF THINGS—ESPECIALLY TRADE IN GOLD, SALT, GLASS AND GEMS—AND NOT, AS THE ROMANS WOULD HAVE IT, AT SOMEBODY'S MARGIN.

The steep pitch of some 100 salt-brick funerary pyramids resembles counterparts in Sudan at Meroë, and stelae under the monuments resemble those of the Phoenicians, all testifying to the Garamantes' far-flung connections.

Within eyesight of Zinchechra is more tangible evidence of the Garamantes' connections with lands beyond their own. Their foggara, or irrigation tunnels, are similar in design and function to the *qanats* of contemporaneous Persia. Their steeply pitched pyramids mirror those of Meroë in the Sudan, and they usually contain tripartite funerary stelae that recall those of the Phoenicians. A fine mausoleum of dressed stone that the locals call Qasr Watwat, or "Castle of the Bats," is decorated with

A pre-Islamic mausoleum of dressed stone is inscribed in the proto-Tifaniq script of the Garamantes, foundation of the modern Tuareg script.

Tifaniq inscriptions and columns with Corinthian capitals. Bits of Roman glass and fig seeds, pomegranate seeds and olive pits—all fruits imported from the coast—were common grave goods.

When in the second millenium BC the Sahara's climate began to change from wet to dry and then toward its present extreme aridity, humans adapted, in part by shifting from nomadic hunting to settled pastoralism and agriculture: In rock painting, imagery of the time shifts from big animal hunts to scenes of cow milking, goat herding and human grooming. But this shift was not without its trials. A Libyan invasion of the Nile Valley in 1200 BC, documented in the Egyptian record, may have been prompted by this climatic discontinuity. More evidence is among the petrified tree trunks that lean against the walls of the Germa museum. "I know where forests of it still stand," says Abedelaziz.

Settled agriculture required large-scale irrigation works that linked the near-surface water table at the escarpment to the fields of the central valley, a distance varying between one and three kilometers (1000 yds–1.8 mi). The underground foggara, built as early as the sixth century BC with bricked and cemented galleries and vertical cleaning shafts at regular intervals, are like those built in Egypt's Bahariyya Oasis in the 26th Dynasty and by the Romans centuries later in Tunisia and Algeria. Abandoned long ago, traces of the foggara are still visible everywhere in the wadi. The mounded debris pulled from their shafts looks like evenly spaced dots linking cliff face to farmland.

These foggara required intensive labor for both construction and maintenance. Within one six-kilometer (3.6 mi) stretch, some 60 individual systems have been counted. A staggering total of as much as 20,000 kilometers (12,000 mi) of south-to-north foggara may have existed within the wadi's 130-kilometer (80-mi) east-west length. Based on demographic models, the estimated 120,000 tombs imply that the stable population of the valley may have reached 10,000 people. How the labor was organized and how the workers were motivated remain outstanding questions, but perhaps there was a central authority: a Garamantes king.

The wadi's best-known cemetery is nearby at al-Hatiya, where some 100 tightly clustered, salt-brick pyramids once stood five meters (16') tall. Most contained stone offering tables and stelae in off-center graves, connected one to another through crawl spaces. Abedelaziz notes how grave robbers often missed the tombs by digging directly underneath the pyramids rather than beside them. Even so, the pyramids are in fairly good condition because, in rain, salt-brick hardens rather than softens. According to Pliny, the Garamantes "built their houses from salt extracted from their mountains like stone."

Salt proved helpful in another way. Its presence on the surface helps to hold the water table up close to the ground. When the Garamantes spread earth on the salt to plant the crops, as Herodotus reported, they may have been taking advantage of this principle. Even so, over the last century, the wadi's water table has been dropping. In 1820, the English explorer Walter Oudney counted some 340,000 date palms in the oasis. As the water table fell, many died, and the shallow wells have gone dry; however, where there are high salt concentrations in the soil, palms survive.

This surprising link between water and salt is illustrated also in the so-called *daw-wada* ("worm people") lakes, some 20 kilometers (12 mi) north of the wadi, in the midst of the Zellaf dune fields that are the easternmost extension of the Ubari Sand Sea. These saline lakes, so high in natron that it is difficult to keep one's overly bouyant legs beneath the body when treading water, are the products of fractures in strata between the surface and a deep, underlying aquifer.

The lakes got their name from the original human inhabitants of their shorelines, who annually harvested the crustacean *Artemia salina* (brine shrimp) from the lake waters. Oudney came upon 20 camels waiting for their "worm" loads, and he described the cargo with some disgust: "small animals, almost invisible to the naked eye, surrounded by a large quantity of gelatinous matter, of a reddish brown color and strong slimy smell."

Ancient Garama was not finally abandoned until 1937, when the Italian colonists decided that its soil, which had grown progressively more swampy, had become a public health hazard. Abedelaziz remembers as a boy swimming in the moat that surrounded the 10-hectare (25-acre) city, and he recalls his grandmother returning by day to water her palms and garden. "One of her neighbors is Abdul Hafiz Abu Bakr Raghrughi, now 116 years old," says Abedelaziz. "He still walks to the mosque every day with a straight back, just as when he left his house in the old city 65 years ago."

For archeologists, the dating and sequencing of human habitation in Garama is still far from clear. The old city had three mosques which are now, like the rest of the city, in ruins. Under two of them have been found cut-stone foundations with some indication that they had been temples to the Phoenician goddess Tanit, who in another guise was worshiped at Meroë in the Sudan—perhaps under the distant influence of the Garamantes.

The Romans did not conquer the Garamantes so much as they seduced them with the benefits of trade and discouraged them with the threat of war. The last Garamantes foray to the coast was in AD 69, when they joined with the people of Oea (modern Tripoli) in battle against Leptis Magna. The Romans intervened and marched south. According to Edward Bovill, author of *The Golden Trade of the Moors*, this campaign marked the Romans' first use of camels in the Sahara, which convinced the Garamantes that their advantage in desert warfare no longer held.

THE DATING AND SEQUENCING OF HUMAN HABITATION IN GARAMA IS STILL FAR FROM CLEAR.

Top: **A high water table continues to support modern agriculture in old Garamantes territory. Pumps and pipes have replaced the network of stone *foggara*, or underground irrigation tunnels, that once may have totaled as much as 20,000 kilometers throughout the valley.** Above: **A fragment of a decorated pot and an inscribed stone are among the artifacts under study both by Libyan specialists in the nearby modern town of Germa and by British archeologist David Mattingly,** opposite, standing, **who has been excavating in Old Garama since 1997.**

The Italian historian Mario Liverani thinks that the Garamantes' greatest legacy to the outside world is in fact their prowess in Saharan travel. The measured routes, daily stages, mapped mountain passes and rough bypasses around such no man's lands as the basaltic Haruj al-Aswad ("The Black Narrows") were used by centuries of later caravaneers, and many are still followed by today's truck drivers. That in the Islamic period the Fezzan's capital shifted one wadi south from Garama to Murzuk meant simply that the north-south trade axis between Tripoli and Nigeria had gained in importance, and Garama had fallen off the main route.

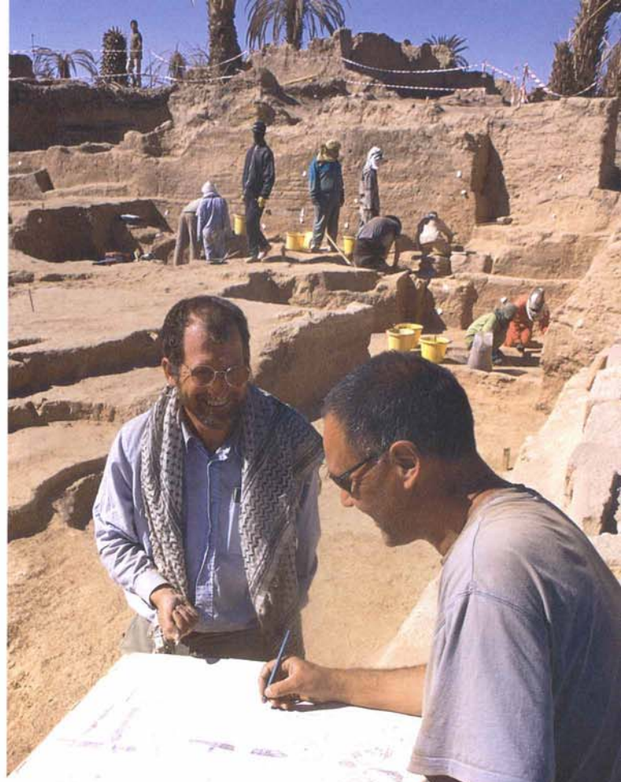
But when in 667 the Muslim conqueror of North Africa, 'Uqba ibn Nafi, reached the Libyan town of Waddan, he asked the townspeople if there was any place of importance further into the desert. Only Garama, he was told, 10 days' march away. This echoed Pliny, who wrote that "you reach the territory of the Garamantes after marching westward for 11 days across the Syrtis Major." So Ibn Nafi set off, according to Ibn Khaldun, with 400 horsemen and 400 camels and 800 waterskins, and brought Islam to the Garamantes.

Garama's most recent building of significance dates from the year 1557, when its *kasbah*, or citadel, with seven three-storied towers, now in ruins, was constructed. It was the work of Garama's overlord from Fez, Muhammad al-Fassi, undertaken as he was returning from a pilgrimage to Makkah, says Abedelaziz. Al-Fassi's sons, al-Nasir and al-Muntasir, married locally and it was they who moved the capital to Murzuk.

Garama's star was long faded by 1818, when Britain assigned the 29-year-old Scottish surgeon Joseph Ritchie to serve as consul in Murzuk. He arrived quite unprepared for the rigors of Saharan life and was dead of fever in less than six months. Some of his least appropriate gear, including a camel-load of corks to which to pin collected desert insects, was passed to fellow entomologist Walter Oudney, who wrote amazed from the Fezzan of "the number of ants of species different from any I have seen elsewhere in North Africa."

The re-exploration of ancient Garama by the British—archeologists, not entomologists, this time—would seem to take up where the colonial past left off, were it not for the participation of local scholars like Abedelaziz. Much remains to be learned, and their work to date has been as much surveying across the wadi as it has been digging into it.

But perhaps the answer to the mystery, "Who were the Garamantes?" is right under our nose. An aged grandfather of the Tuareg, today's dominant tribe in the central Sahara, was recently asked to look at an old inscription found in the village of Bint Bayya and dating perhaps from the Garamantes period. With great difficulty, he was able to decipher the proto-Tifaniq script. "My name is Konja," he read, and the name is a common one among the Tuareg today.



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http://museums.ncl.ac.uk/garamantes/feztop.htm
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The Pioneers

WRITTEN BY THOMAS LIPPMAN ILLUSTRATED BY NORMAN MACDONALD

In the early decades of the 20th century, the people of what is today Saudi Arabia lived lives of considerable austerity. Formal education was uncommon, and the conveniences of the industrial era were mostly unknown. By the time 'Abd al-'Aziz ibn 'Abd al-Rahman Al Sa'ud—known to westerners as Ibn Sa'ud—merged his central Arabian realm of the Najd with the western Kingdom of the Hijaz to form the Kingdom of Saudi Arabia in 1932, the new nation was deeply in debt. The principal source of national revenue—a tax on pilgrims to Makkah—had declined sharply as the worldwide Great Depression reduced traffic to the Holy Cities.

'Abd al-'Aziz

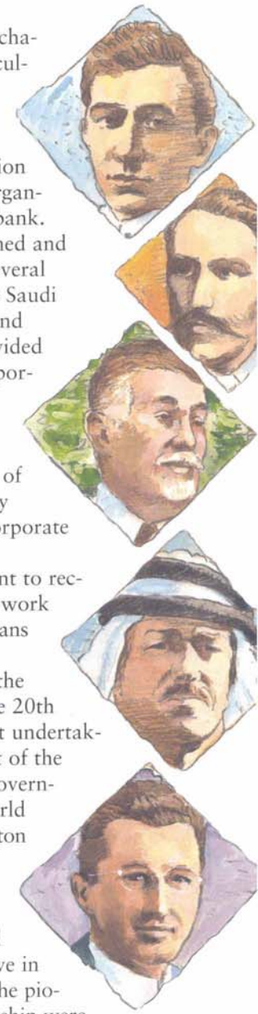
The king's reasons were also personal. He had never traveled outside the Arabian Peninsula and had met few foreigners, but over the years he had come into close contact with a handful of Americans who had won his trust.

Oil, of course, would soon liberate Saudi Arabia from hardship, and most accounts of the kingdom's stunningly rapid modernization begin with the narrative of its oil industry: the 1933 signing of the concession agreement with the Standard Oil Company of California (SOCAL), the 1938 gusher at the now legendary well called Dammam No. 7 and, in 1939, the first export shipment of crude oil.

And yet the full story began several years before SOCAL arrived on the scene. There were reasons why 'Abd al-'Aziz chose far-off America as his partner in development rather than Britain, then the dominant foreign power in the region. Some of these reasons were geopolitical: The king was protective of his independence and his new sovereignty, he mistrusted Britain because of its record as a colonizer, and the Americans offered more money.

But beyond these, the king's reasons were also personal. He had never traveled outside the Arabian Peninsula and had met few foreigners, but over the years he had come into close contact with a handful of Americans who had won his trust. As often happens, respect between individuals opened the doors of commerce and built the foundation of an otherwise unlikely partnership between an industrialized United States and an as yet undeveloped Saudi Arabia.

For the better part of a century, Americans have participated in the development of almost every aspect of contemporary Saudi life except religion. In addition to setting the oil industry in motion, it was Americans who helped mechanize Saudi agriculture, create the national airline, set up the national television network and organize the central bank. Americans trained and equipped the several branches of the Saudi armed forces, and Americans provided educational opportunities for countless thousands of students, many of whom are today national and corporate leaders.



It is important to recognize that the work of those Americans who won the king's favor in the first third of the 20th century was not undertaken at the behest of the United States government. Until World War II, Washington had no official interest in Saudi Arabia, and it stationed no representative in the kingdom. The pioneers of partnership were private individuals, and it was a measure of 'Abd al-'Aziz's wisdom that he took advantage of what they offered to improve the lives of his subjects.

THE DOCTORS

Two camel-riding couriers suddenly appeared out of the desert with an urgent message for Louis Dame, MD: The sultan was seriously ill. Though he was already en route to Riyadh, the couriers asked Dame to leave his slow-moving traveling party and race to Riyadh on the fastest camel available.

It was November 12, 1923, nine years before 'Abd al-'Aziz would proclaim the Kingdom of Saudi Arabia. 'Abd al-'Aziz ruled al-Hasa, the leading oasis of the eastern Arabian Peninsula, and the central Najd, but not yet the west, the Hijaz. He was acquainted with Dame, who was part of a medical team that already had treated hundreds of his subjects.

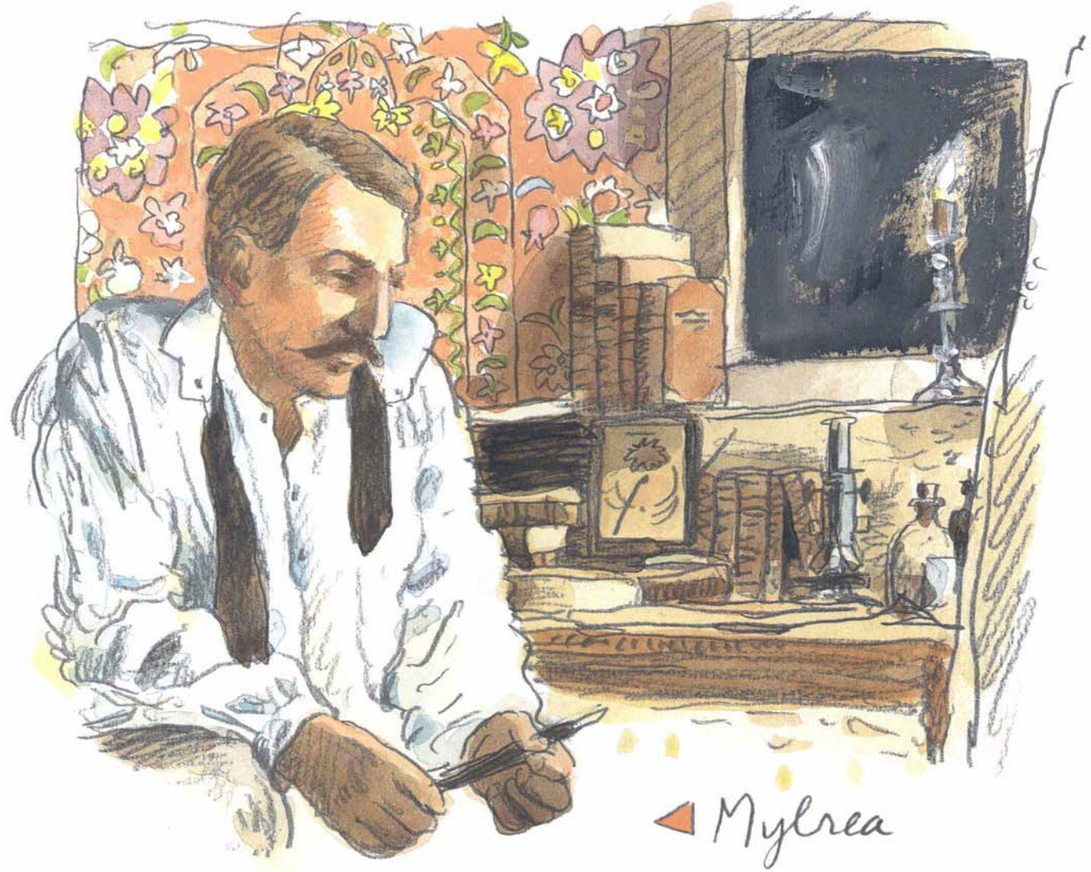
Accompanied only by one of the couriers and a medical assistant, Dame rode until midnight and all through the next two days and evenings, arriving at 'Abd al-'Aziz's bedside after almost 40 hours aboard a camel.

Dame found 'Abd al-'Aziz suffering from a "cellulitis of the face" that had swollen one eye to the size of a baseball. The surgeon lanced the inflammation and changed the dressing three times daily for the next several days. After less than a week, 'Abd al-'Aziz was on the mend, soon "quite himself again," according to Dame's narrative in Paul Armerding's *Doctors for the Kingdom*, which tells the story of the first western physicians to systematically treat Saudi patients.

Dame was not only a physician; he was also a Christian missionary—not the sort of person often encountered in Riyadh in 1923. He was based at a mission hospital in Bahrain that had been established just after the turn of the century by the Reformed Church in America. The doctors there were all Arabic speakers, and their assignment was to minister to the health-care needs of anyone on the Gulf littoral who was willing to receive them, from southern Iraq to Oman. They were enjoined not to preach, but to attract by example, using as the instruments of their message the scalpel and the hypodermic needle, not the Bible and the pulpit.

'Abd al-'Aziz's knowledge of their work can be traced back as far as 1911, when 10 of his warriors were wounded in a battle over pearl-fishing proceeds. They had been ferried across the strait to Bahrain to seek treatment at the mission hospital. After 'Abd al-'Aziz expelled the Turks from the eastern Arabian Peninsula in 1913, local rulers began to invite the doctors to visit. At that time, and for years afterward, there were no formally trained doctors among the Saudi population.

The first American 'Abd al-'Aziz ever met appears to have been the Bahrain mission's C. Stanley Mylrea, MD, who in 1914 went to Kuwait to treat a group of 'Abd al-'Aziz's followers who were suffering from malaria. "He impressed me immensely," Mylrea wrote. "Every line of him, face and figure, told of intelligence, energy, determination, and reserves of compelling power."



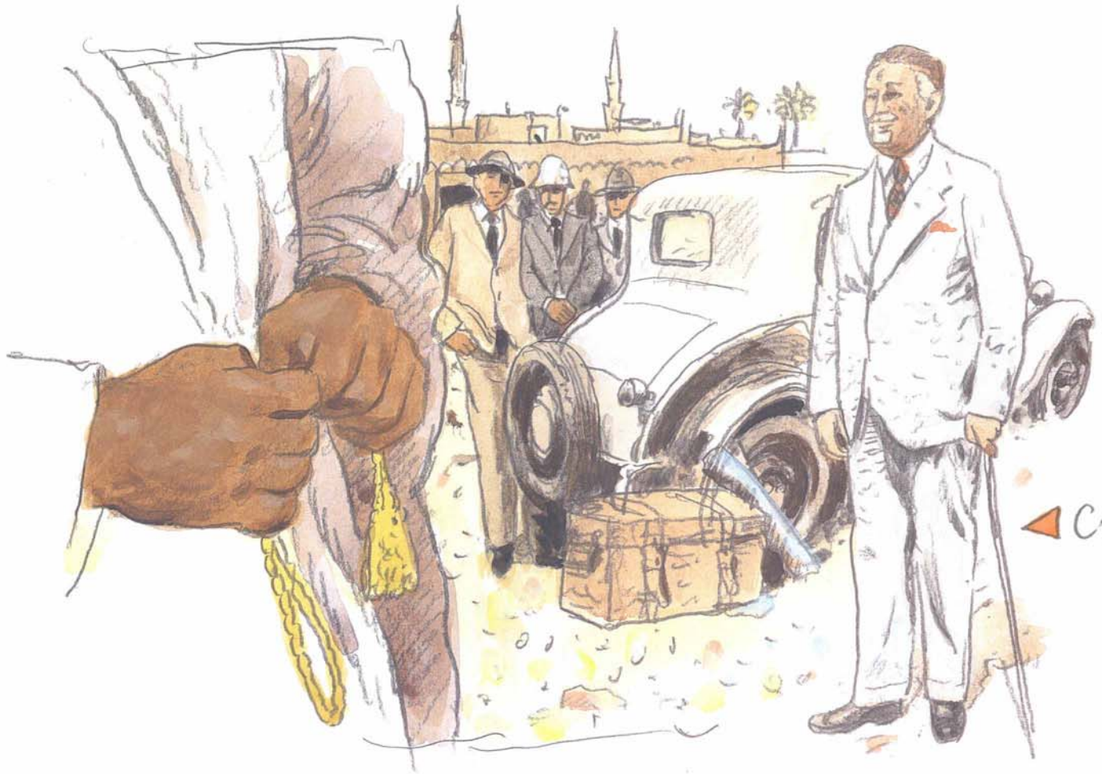
The doctors there were all Arabic speakers, and their assignment was to minister to the health-care needs of anyone on the Gulf littoral who was willing to receive them.

By the time Dame joined the Bahrain hospital in 1919, the doctors were traveling frequently into what is now Saudi Arabia and, upon invitation from the sultan, they had begun to visit as far inland as Riyadh. There they would stay a month or six weeks, until their medical supplies ran out, then return to Bahrain. 'Abd al-'Aziz understood that his people's need for medical care was acute and, as he did throughout his life, he found a way to import western technological services without breaching social or religious traditions. He welcomed the doctors as generous Americans who helped the Arab people and asked for nothing in return.

Dame returned to Saudi Arabia periodically and, by 1923, 'Abd al-'Aziz knew him well enough that he invited him back to Riyadh to treat his aged father. Thus Dame and a mission medical team were already in Arabia, making their way slowly toward the capital, when the King's facial infection developed.

Doctors and nurses from the Bahrain mission worked in Saudi Arabia until 'Abd al-'Aziz's death in 1953. According to Armerding's account, in some 42 years the mission doctors treated nearly 300,000 patients, of whom 3500 required major surgery.

Dame left the mission in 1936, but he did not go far: He moved to the new frontier town called Dhahran, where he joined the medical team at the California Arabian Standard Oil Company (CASOC), the predecessor of Saudi Aramco. The American doctors from Bahrain had demonstrated to 'Abd al-'Aziz and his people the power of modern medicine, and due in part to this record, the king insisted that the emerging oil-producing company provide medical care as part of its operations. As a result, for decades, Aramco was the primary supplier of medical care to Saudis as well as Americans in Saudi Arabia's Eastern Province. Today, Saudi Arabia's hospitals are among the most modern in the world, and they are staffed largely by Saudi doctors trained in American medical schools.



Crane

He spent much of his adult life and a great deal of his fortune supporting economic development in Arab countries and the dissemination of knowledge in the US about Arabs and Islam.

THE PHILANTHROPIST

By the mid-1920's, 'Abd al-'Aziz knew by reputation of another American, a world traveler and philanthropist, who might be helpful in a different way. Charles R. Crane became the improbable catalyst for the rise of Saudi Arabia's oil industry.

Born in 1888 in Chicago, Crane was heir to his family's plumbing-fixtures fortune. As a young man, he briefly held the position of president of Crane Bathroom Equipment Company, but sinks and toilets bored him. He was far more interested in affairs of the world—and in particular the affairs of the Arab world. He spent much of his adult life and a great deal of his fortune supporting economic development in Arab countries and the dissemination of knowledge in the United States about Arabs and Islam. As early as 1914, he financed a lecture series at US universities by the renowned Dutch scholar-diplomat C. Snouck Hurgronje.

Crane had been a generous contributor to the 1912 election campaign of Woodrow Wilson, and the two men became close friends. Wilson responded to Crane's interest in Asia Minor and the Middle East by appointing him to an advisory commission on Palestine and the Levant, along with Henry King, president of Oberlin College.

After extensive travels and interviews in Palestine and Syria, the King-Crane commission recommended that Wilson support only limited Jewish immigration to Palestine so as not to interfere with self-determination for the Arabs, newly free of Ottoman rule. Crane's endorsement of the Arab cause caught the attention of prominent Arabs, including 'Abd al-'Aziz. Throughout the 1920's, Crane financed water exploration and road-building projects in Yemen. In those years, he developed a deep respect for Islam and Arab culture, and even commissioned a new translation of the Qur'an into English.

Crane's first meeting with 'Abd al-'Aziz took place in February 1931, arranged by St. John Philby and Shaykh Fawzan al-Sabik, 'Abd al-'Aziz's representative in Cairo. Nominally, the subject was horses: Crane admired Arabian horses and had heard of Shaykh Fawzan's renowned stables. When the shaykh made him a gift of two prize steeds, an astonished Crane offered on the spot to send a geologist to Arabia to help the new country prospect for minerals. Shaykh Fawzan communicated this offer to the king, who promptly accepted and invited Crane to visit him. So high was Crane's reputation that the king himself traveled to Jiddah from the capital to receive him.

Their conversations extended over four days. Crane formally restated his impromptu offer to provide the services of a geologist who would explore the hinterlands for water and minerals. This was not so simple a proposition as it sounds: In those days, foreigners were generally restricted to Jiddah, and it would be a sharp break with tradition to have outsiders roaming the country's interior. But the king was pragmatic. He accepted Crane's offer for the same reason he had accepted the medical services of the doctors from Bahrain—he knew he needed help. The engineer dispatched by Crane was one whom Crane had employed on bridge-building projects in Yemen. His name was Karl S. Twitchell.

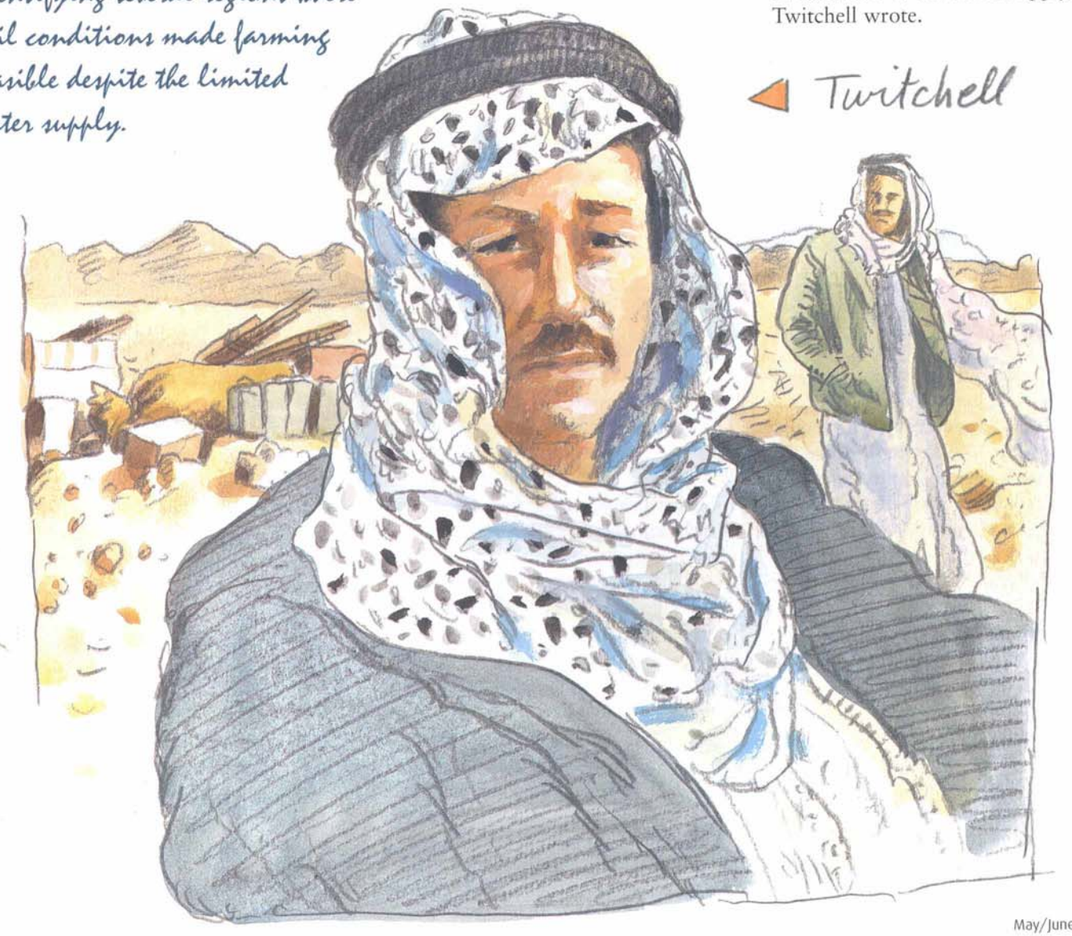
THE GEOLOGIST

An industrious Vermonter, Karl Twitchell wrote in a 1947 book about his work in Saudi Arabia that "I have probably been longer and more closely associated with King ibn Saud and his country than any other American." It seems beyond dispute.

Twitchell arrived in Jiddah in the spring of 1931, together with his wife Nora, and they set out immediately on an exploratory trek through the Hijaz. On the subject of water, they brought disappointing news to 'Abd al-'Aziz and his finance minister, Abdullah Suleiman: There was none. Small amounts might be captured with catchbasins and wells, but there was no possibility of large-scale development of water resources because they didn't exist. However, Twitchell did report good prospects for mining gold and other minerals, but an extensive geological survey of the kingdom would be required. Crane agreed to finance it.

Upon returning to Jiddah, which was importing drinking water by boat across the Red Sea from Egypt, Twitchell and an Arab colleague repaired and expanded an aging network of pipes and water tunnels and constructed a windmill that raised 150 liters (40 gal) a minute from a well outside the city, "making an appreciable addition to the water supply," as Twitchell wrote.

In 1942, he led a team that traveled more than 16,000 kilometers through the kingdom to assess prospects for agriculture, identifying several regions where soil conditions made farming feasible despite the limited water supply.



Twitchell

Twitchell was supervising a search for gold in the mountains near Taif when he received a request to travel to Riyadh to see the king. Going to Riyadh was difficult, as there was still no paved road, but he set off immediately. The king, thinking of the financial future of his kingdom, wanted to discuss the possibility of finding oil in al-Hasa, on the east coast of Arabia. The geology there was similar to that of Bahrain, where SOCAL was already prospecting. Twitchell advised the king to wait for the results of the exploration in Bahrain: If oil was found there, it was likely that it would also be found on the Saudi Arabian side of the strait.

SOCAL met with success in Bahrain in 1932 and, at the king's request, Twitchell returned to the US to seek mining and oil companies that might be interested in Saudi Arabia. It was the midst of the Great Depression, and all turned him down except SOCAL.

So it was that Twitchell was part of the SOCAL team when the oil company's chief negotiator, Lloyd Hamilton, arrived in Jiddah in February 1933 to begin talks with Abdullah Suleiman about an oil exploration concession. Hamilton was responsible for the legal terms; Twitchell, trusted by both sides, was responsible for the geographic provisions that defined the area to be explored. Hamilton and Suleiman signed the concession agreement on May 29, and the first SOCAL geologists arrived by boat at Jubail on the shore of the Gulf on September 23.

"These oil men deserve great credit for their faith in America and American enterprise," Twitchell wrote, praising SOCAL for its willingness to invest during a time of economic hardship.

Twitchell spent another two decades in Saudi Arabia. In 1942, he led a team that traveled more than 16,000 kilometers (10,000 mi) through the kingdom to assess prospects for agriculture, identifying several regions where soil conditions made farming feasible despite the limited water supply. The resulting agriculture is today increasingly important in the Saudi economy.

Barger ▲

THE MINER

Once the oil exploration concession was granted and American geologists and engineers set up the permanent encampment that became Dhahran, the oil men faced the challenge of running an American operation in a foreign country. These early Americans were well aware of the difficulties their colleagues in the oil business had brought upon themselves in other countries by high-handed or insensitive treatment of local populations; they wished to develop a positive relationship with their hosts. Doing so required the Americans to educate, train and care for Saudi workers and their families to a much greater extent than corporations usually did and, more generally, to treat the people, their customs and their religion with respect. The concession agreement actually mandated the use of Saudi workers wherever possible, and this requirement could be met only through extensive training and education. Moreover, the king and his countrymen were proud that their country had never been colonized, and at no time did they feel themselves inferior to their more technologically advanced guests. It was essential for the Americans to learn Saudi ways and treat Saudis as partners and co-equals. Few did so more completely, or with better grace, than Thomas C. Barger.

Barger was one of what became known as "The Hundred Men," the core American staff of the company then known as Aramco who stayed on in Dhahran to maintain the oil installations, mothballed until shipping lanes cleared.

Unlike Crane, Barger had had no particular intention of going to the Arab world. He was a young mining engineer who found himself out of work during the Depression. He desperately needed a job so he could marry Kathleen Ray, a young woman he had met while teaching at the University of North Dakota. There, he also had met J. O. Nomland, a SOCAL geologist who was heading a crew looking for oil in the state. With no prospects of work in mining, Barger asked Nomland for a job, and SOCAL hired him in 1937—and put him on its Saudi Arabia project. Though having a job meant he could marry Ray, the assignment also meant he would be separated from her right after the wedding because she could not—yet—accompany him to Dhahran, then a bachelor camp without amenities. His letters to her, now compiled and published by his son Tim, provide the most extensive firsthand reports about the early years of American life and work in Dhahran.

"When I agreed to work in Saudi Arabia, I didn't even know where it was," Barger wrote late in life. He learned where it was, and much more, in the 32 years he spent there.

His career began with the most basic of tasks: roaming al-Hasa with Arab guides, mapping the land, looking for likely drilling sites. This required days of hot, dusty travel and nights in tents. In the enforced intimacy of these explorations, Barger learned Arabic, and he developed a lasting appreciation for his Arab companions' navigational skills and inventive storytelling.

During World War II, Barger was one of what became known as "The Hundred Men," the core American staff of the company, by then known as Aramco, who stayed on in Dhahran to maintain the oil installations, mothballed until shipping lanes cleared. After the war, joined at last by his Kathleen, he transferred to the company's government relations department, which was responsible for keeping lines of communication open between Aramco and the king and his government. By all accounts, Barger was the Aramco executive most committed to training and educating Saudi employees. He spoke Arabic, understood the need for medical care and housing, and took to heart the company's contractual commitment to promote Saudi workers.

This meant that within a single generation, Aramco's Saudi workers were transformed from a largely uneducated corps that performed manual tasks to a broadly trained workforce that today fills technical and executive positions at every level, including that of Saudi Aramco's CEO. It was an evolution that did not just happen; rather, it came about because Aramco, through Barger and others like him, abided by the wishes of King 'Abd al-'Aziz to raise his people's living standards and provide opportunities. Barger put this commitment in writing in the early 1940's in an 83-page document stressing that Aramco's future success would depend on its relations with its Saudi workers, whose aspirations would have to be met.

Beginning with elementary-level instruction in Arabic for a handful of eager young men, Aramco became a virtual university of training. Its schools and training centers taught English, arithmetic, basic science, hygiene, nursing, typing, driving, geography, industrial management and oilfield operations to thousands. By the early 1950's, more than half the workforce was enrolled in one training program or another. The proportion of Saudi workers classified as "skilled" rose from nine percent in 1953 to 57 percent a decade later. The company sent the most promising to Beirut, Cairo and the United States for advanced education.

Barger, a principal architect of this policy, became president of Aramco in 1959, chief executive officer in 1961 and chairman in 1968, a year before his retirement. When one of the company's early trainees, Ali Al-Naimi, became the first Saudi president of the company in 1984, Barger sent him a congratulatory message. In reply, Al-Naimi paid Barger this compliment: "I am honored that you were one of the pioneers in shaping many a young Saudi Arab career. You…had the greatest vision when you supported the training effort of Saudi Arab employees during its early days." In 1995, Ali Al-Naimi was appointed Saudi Arabia's Minister of Petroleum. ⊕

Thomas Lippman is an author and journalist who has specialized in Middle Eastern affairs and US foreign policy for more than three decades. A former Middle East bureau chief of the *Washington Post*, he also served as that newspaper's oil and energy reporter, most recently visiting Saudi Arabia in May. His most recent book is *Inside the Mirage: America's Fragile Partnership with Saudi Arabia*. **Norman MacDonald** (kingmacdonald@wxs.nl) is a Canadian free-lance artist who lives in Amsterdam and specializes in illustrative reportage. His art is in private collections on five continents.

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Tom Barger: S/O 69, M/J 01
Early Exploration: J/F 99

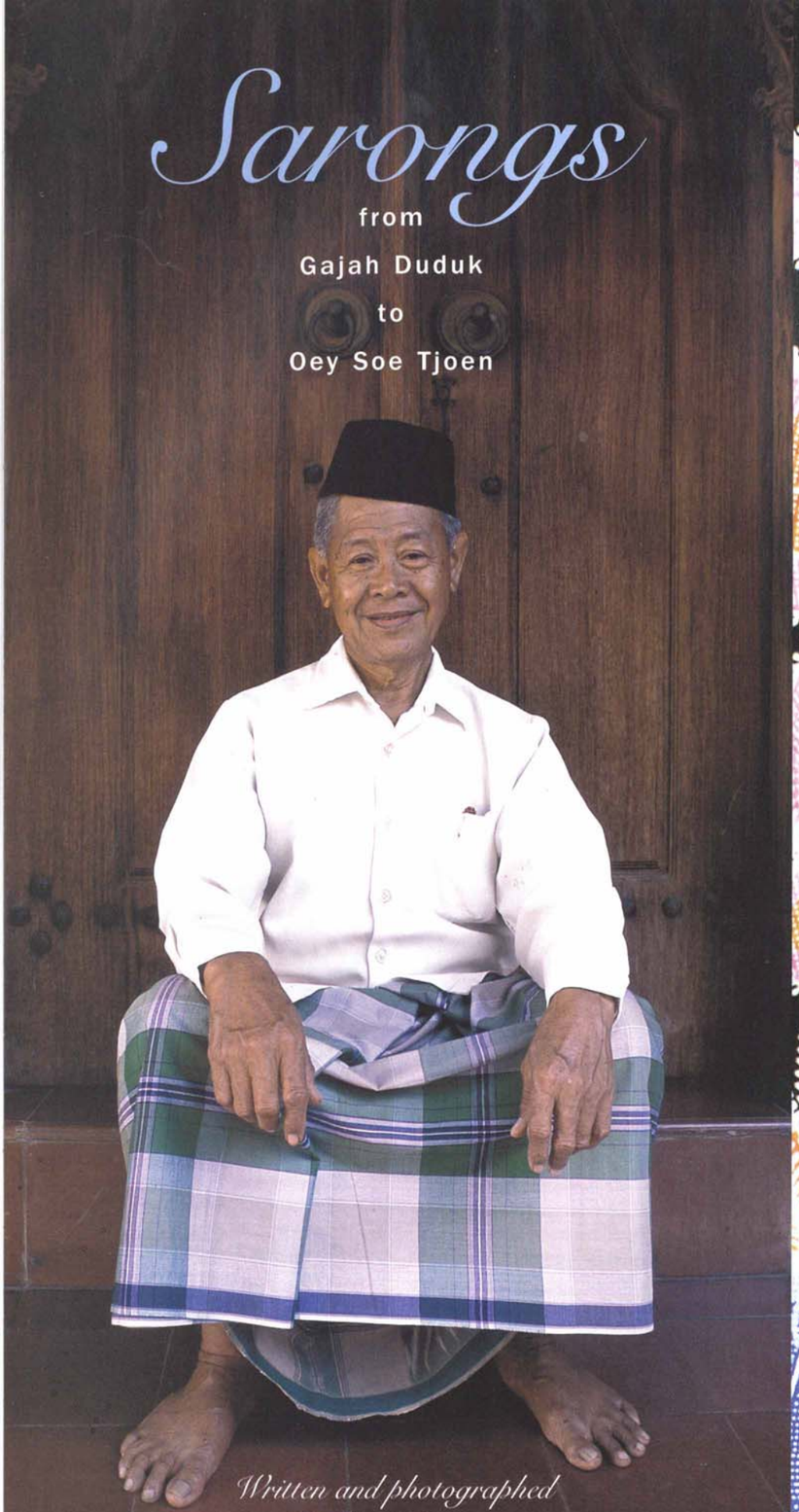
Sarongs

from

Gajah Duduk

to

Oey Soe Tjoen



Written and photographed by Eric Hansen

In 1975 I made my first visit to the sprawling public market of Jogjakarta on Indonesia's third-largest island, Java. I was looking for a simple plaid cotton sarong to sleep in during the hot tropical nights, but as I wandered the dim and crowded aisles of the covered market, I found myself lost in a section devoted to second-hand batik sarongs. A woman held up an old one that caught my eye. The design, of butterflies and flowers, was entirely unlike the plaids and traditionally patterned batik sarongs common in central Java.

I sat down to look through her collection. I noticed that many of these flowered sarongs were signed. She told me that most of her inventory came from Pekalongan, a medium-sized city on the north coast. For a few dollars each, I bought several, choosing the ones with the most distinctively bright yellows, blues, reds and soft pastels. They all used designs with floral borders, birds and butterflies, and one of the sarongs had a patterned background that looked very much like a wall of Delft tile.

These, I thought, seemed more like collector's items than sleepwear. Later, I found a plainer, *pelicat* (plaid) sarong in a different part of the market, and an old man showed me several ways to tie it. (See page 27.)

Then about a year ago, on the western end of Sacramento Street in San Francisco, I discovered Indoarts, a shop that specializes in Indonesian fabrics and artifacts. The owner, Noeleke Klavert, has a collection of rare sarongs and an encyclopedic knowledge of the designs and famous workshops from the early 1930's. We fell into conversation about the sarongs from Pekalongan. He showed me examples of *hokokai*, the brightly colored floral style that was developed for the Japanese market during World War II, and a much older, classic diagonal design known as *parang rusak* that arose in the royal courts of central Java. A few days later, I brought him one of the sarongs that I had bought in Jogjakarta more than a quarter-century earlier. He unfolded it, held it up, turned it around and then closely examined the signature.

They are simply the most comfortable garments to wear.

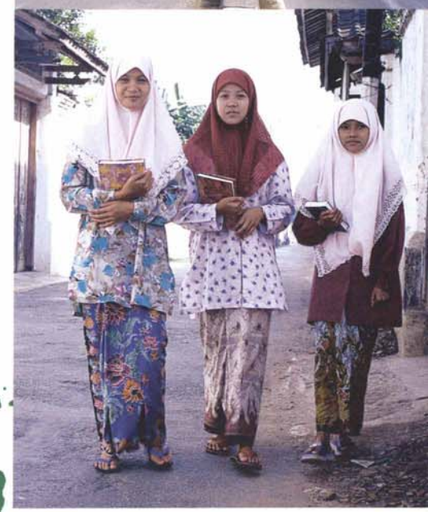
"Oey Soe Tjoen," he read. "You know who this is, don't you?"

I didn't, of course. All that I knew was that in 1975 I had paid $2.50 for it, that it has a small tear, that the colors, executed with both natural and chemical dyes, have not faded and that the design is a classic from the late 1930's. Klavert told me more: A serious collector would pay from $1800 to $3000 for an Oey Soe Tjoen sarong like mine. He lent me several books on the history of Indonesian sarongs, and three months later I was driving on my way to Pekalongan in hopes of finding the workshop of the late Oey Soe Tjoen.

Sarongs are the most important articles of clothing in Indonesia, and they are worn by men, women and children. They are simply the most comfortable garments to wear in hot, humid weather. As a general rule, cotton pelicat sarongs, with their woven plaid designs, are the choice for men, while women often wear machine-printed cotton with batik designs. (*Batik* is a general term that refers to a wax-resist fabric-dyeing technique; *tulis* is the name of the highest quality freehand batik, whose makers use a hot-wax applicator known as a "canting." Hand-blocked designs are called *cap*, and the most common batik fabric is mass-produced.) The most finely executed tulis sarongs can take nine months or more to produce, and these indicate wealth, social rank and style.

A sarong is made from a length of fabric slightly less than two meters (6' 4") in length by about one meter (39") in width. The far ends are brought together and stitched to create a tube-like garment that is tied at the waist. A typical sarong, whether batik or plaid, has two parts. The *kepala* ("head") is a vertical panel that takes up about one-quarter of the fabric. The *badan* ("body") fills the remaining area, usually with a repeating pattern that serves to highlight the kepala.

Formal batik sarongs, printed on high-quality cambric cotton fabric, are worn by both men and women at weddings, circumcision ceremonies, funerals or other important occasions. A formal sarong is always carefully tied full length. The more utilitarian batik sarongs, known as *batik kampong* ("village batik"), or *sarong sehari-hari* (a generic term for everyday sarongs such as pelicats), are worn as casual dress at home. A *sarong mandi* is a bath sarong, generally made of lighter, quick-drying fabric. These sarongs are casually tied at the waist by men or under the arms by women. Men



Left: **The *kepala* ("head") section of a traditional Javanese *pasisir* (north-coast) sarong.** Opposite, from top: **Bolts of machine-woven plaid fabric known as *pelicat* are ready to be cut and stitched at the Gajah Duduk factory. A billboard in Pekalongan advertises Gajah Duduk ("Seated Elephant") brand sarongs. Schoolgirls in the town of Kudus walk home wearing machine-printed batik sarongs.** Previous spread, left: **At his home in Kudus, Pa Haji Maksum wears a pelicat sarong.** Previous spread, main: **Detail of a finished Oey Soe Tjoen *tulis* sarong, in which each dot and line is applied freehand in hot wax.**

often shorten the length of an everyday sarong by turning down the hem at the top before tying it. A sarong shortened in this fashion allows for comfort in hot weather as well as greater ease of movement while working. A sarong permits good air circulation around the legs and is thus far more comfortable to wear than long pants. In terms of practicality, the only drawback to wearing a sarong has to do with the fact that it must be constantly tied and re-tied throughout the day.

After nearly three decades of traveling and living in Southeast Asia, I have concluded that the sarong is one of the world's most versatile garments: By tying together the four corners, it becomes a carrying sack. Turned sideways, gathered at the top and hung from a flexible sapling or a hook on a spring, it forms a gently bouncing cradle-like sling for a sleeping baby. In a similar fashion, the sarong can be knotted to a shorter length, then draped over a shoulder and hung at the opposite hip to form a baby carrier. To create a private changing room at home or when bathing in public, the upper edge of the sarong is held in the teeth while the tube of fabric encircles the body with a privacy screen. Worn over the shoulders and head, a sarong functions as a wind-breaker; wrapped around the neck, it becomes a muffler or scarf. Men, women and children use sarongs as pajamas or, when necessary, as a lightweight, open-footed sleeping bag.

Opposite: **Detail of a freehand *tulis* sarong made by Ibu Djogo Pertiwi of Imogiri Village.**

Because fabric is not as long-lasting as stone or even wood, it is impossible to establish with any degree of certainty when sarongs were first used in Java, but one of the earliest historical records of sarongs can be seen on the bas relief stone figures of the temple complex at Borobudur, built in the eighth and ninth centuries of our era in central Java.

North from there, the entire north coast of Java is known as the *pasisir*, an Indonesian term meaning "coastal area." Trade between ports of this coast and India and China started as early as the fifth century and increased greatly from about 1400, when Arab Muslim traders from Gujarat and the Coromandel coast of India, as well as Chinese ones, set up more permanent trading ports. Like the nearby Straits of Malacca, the north coast of Java was ideally positioned to take part in the spice trade that connected the Indonesian archipelago with the Middle East, India, China and Europe.

Starting in the early 1500's, the spice trade attracted the Portuguese, Dutch and, eventually, the British East India Company. There were seven principal pasisir trading ports: Cirebon, Pekalongan, Semarang, Demak (the birthplace of Javanese

How to Tie a *Sarong*

As with a turban, a ghutra, a sari or a shawl, there is a fine art to tying a sarong. Men and women fasten them differently and there are regional styles that, in combination with specific designs, will identify where a person comes from and what his or her social class is. Throughout Southeast Asia, there is great importance placed on getting the hem perfectly straight and making sure that the kepala is properly centered either in the front or back. Women often fold a sarong in such a way as to display the entire kepala, while men frequently conceal this section with two overlapping front folds. Beyond these aesthetic considerations, it is essential to carefully position the spacing and angles of the front folds to allow for ease of walking. The most common and useful tying technique is a side-to-side, overlapping front fold with a flat roll, as shown here.

Islam in the late 15th century), Lasem, Gresik and Surabaya. In their markets, fine batik sarongs from central Java as well as pelicat sarongs—originally imported from India—were exchanged for cloves, nutmeg and other spices from the Moluccas. The pelicat sarongs were very popular, and they quickly caught on as everyday wear for the seagoing traders of the time. According to the venerable *Hobson Jobson: The Anglo-Indian Dictionary*, the pelicat sarong gets its name from Pulicat, the first Dutch possession on the Coromandel coast of South India, just north of Madras, from where a Dutch cotton factory exported both checked and plaid sarongs to the pasisir and other points in Southeast Asia as early as 1611.

The intermingling of cultures along the pasisir eventually led to distinctively regional styles of batik sarongs that flourished from approximately 1800 until the mid-1940's. Fusions of Islamic, Javanese, Chinese, Dutch and Indo-European designs, pasisir sarongs used color more freely as well as new motifs, layouts and patterns—including European wallpaper designs—all of which stood in contrast to the more formal and subdued classical patterns. The center of pasisir batik sarongs was Pekalongan. By the 1880's, the workshops of Indo-Europeans such as Eliza Van Zuylen were experimenting with new aniline chemical dyes in combination with traditional vegetable dyes; these latest sarongs were traded throughout Southeast Asia and eventually became part of an Indo-Malay-Chinese style.

By the time I arrived in Jogjakarta, I had a long list of sarong makers that I wanted to visit. One of the first was Apip's Batik, a high-end family operation on the outskirts of the city. Apip and his workers specialize in fashionable batik designs on silk. I looked at this beautiful work briefly, but my primary interest lay in his collection of traditional freehand batik tulis sarongs. I was not disappointed: An entire room of his home was lined with glass-faced cabinets that held thousands of sarongs. For more than an hour, I learned about such little-known designs such as *tiga negiri* ("three countries"), and within minutes of hearing about it, one of Apip's assistants would bring me several examples to inspect. While he was showing me a particularly fine Oey Soe Tjoen sarong, I asked Apip whether the old workshop was still open. Apip knew the village near Pekalongan where Oey Soe Tjoen had originally worked, but he didn't have a phone number nor a street address, and he was not sure if the family were still in business.

The following afternoon I met an expert in fine batik sarongs, Pa Sumarwoto, or Pa Woto, as he is more commonly known. (In Indonesian, "Pa" is an honorific meaning "father"; its female counterpart is "Ibu.") He suggested that to know sarongs best, we drive first to the northern edge of town to visit a *madrasa* where we could photograph boys wearing the pelicat style.

That afternoon we met with the director of the madrasa, who led us to the mosque where the boys, dressed in a beautiful assortment of pelicat sarongs, were seated in pairs, face to face, as they took turns reciting passages of the Qur'an. The recitation went on for nearly two hours and during that time the boys took hardly any notice of me or my camera.

The next day, Pa Woto took me to Imogiri Village to visit Ibu Djogo Pertiwi, a 96-year-old batik master. Ibu Pertiwi has been practicing batik since she was 13. She still works every day, but she also employs approximately 100 women who work from home on a piecework basis. Ibu Pertiwi knows most of the intricate designs by heart, and she no longer needs a printed master pattern to trace from. Working with sure strokes of her canting, she started drawing a complicated design without any sort of guide or measurement. She began in one corner of the fabric and then steadily filled in the intricate pattern until she reached the far end. During the process she paused only briefly to refill her canting with hot wax. When I asked if she ever made mistakes, she told me that after 83 years of experience, mistakes were infrequent.

On the far edge of Imogiri Village, we visited an older couple by the names of Pa and Ibu Muchtar. Ibu Muchtar wasn't working that day, but she pulled out several sarongs that were at different stages of completion. She specializes in expensive, fine batik sarongs for weddings. Each pattern had a name, such as *sido luhur*, "will be respected."

After looking through Ibu Muchtar's collection, her good-natured husband obliged my request to photograph him tying a plaid sarong. This request was somewhat similar to asking a stranger to demonstrate getting dressed in pajamas, so ordinary were the actions for him. Then we all sat down for tea, coconut-sugar sweets and stories about their recent pilgrimage to Makkah. Before we left, Pa Muchtar brought us two very small cups with a few sips of water in each: a souvenir from Makkah's holy spring, Zamzam.

The following day, a driver took us north along winding, two-lane roads through terraced rice fields and coffee plantations in the central mountains. We arrived in Pekalongan late in the afternoon. As we eased our way into the city center through a crush of trucks, buses, private cars, bicycles, pedal cabs and pedestrians, I noticed a billboard that read: "Gajah Duduk." Seeing these words, I could hardly contain my excitement. Gajah Duduk may mean "seated elephant," but it is also the brand name of my favorite pelicat sarongs. I was taken by surprise

This page, from top: **An artisan applies a hot wax pattern using a hand block at Apip's Batik in Jogjakarta; other blocks hang on the louvered wall. A master at batik tulis sarongs, Ibu Djogo Pertiwi, 96, applies wax using a pencil-like *canting*. To complete the manufacture of this Oey Soe Tjoen sarong, the two ends will be stitched together to form a tube.** Opposite: **A pattern from Apip's Batik.**

because I had had no idea that the company was located in Pekalongan.

We decided to set aside our quest for Oey Soe Tjoen temporarily, and the next morning it took Pa Woto and me the better part of an hour to explain ourselves to the security guard and public relations office of the Gajah Duduk sarong factory. By mid-morning we entered a textile mill illuminated from all sides by natural light, where thousands of power looms were pounding out miles of pelicat sarongs, a full seven million every year. The sharp clack of flying shuttles and the pounding of the weft threads were deafening, and the humidity and temperature stifling.

Each loom was making a continuous piece of sarong fabric approximately 183 meters (nearly 600') long. After sizing the fabric with a dilute solution of tapioca, drying it, ironing it and checking it for flaws, workers cut the fabric by hand, with scissors, into individual lengths measuring 130 centimeters by 200 centimeters (51" by 78"). These pieces were then stitched into sarongs in a vast room full of young women. The man who guided us through the factory explained that pelicat sarongs had been mass-produced in Pekalongan since the middle of the 19th century. It was also his opinion that the local pelicat industry had helped to set the scene for Pekalongan's rise as a producer and exporter of the much finer batik sarongs.

Pa Woto and I eventually found our way to the rambling neighborhood of Kedungwuni. We drove by the workshop of Oey Soe Tjoen several times before Pa Woto finally saw a nondescript storefront with a small, hand-painted sign that read simply "Batik Art." Glancing up and down the street, I found it hard to believe that I had just traveled halfway around the world to visit a workshop in this inauspicious place.

We pounded on the front door for several minutes and eventually a woman unlocked the door and invited us in. Oey Soe Tjoen's middle-aged son, Pak Muljadi Widjaja, soon joined us. Oey Soe Tjoen had died years earlier, but Pak Muljadi and his wife were carrying on the business and maintaining the same high standard of work. Batik Art is probably one of the last master batik workshops in Indonesia.

We were served tea. We sat in the sparsely lit reception area, where we looked at old pattern books. The son talked about the history of the pasisir sarong style, and he showed us original pencil sketches that his father had copied or adapted from Dutch postcards and horticultural books from the 1930's. Chinese designs included peacocks and leaves, as well as Feng-Huan, the mythical phoenix bird. But as interesting as this background information was, what I really wanted to do was visit the workshop in the back.

The sweet smell of beeswax and dye permeated the place.

The sweet smell of beeswax and dye permeated the place. After more tea and more talk, we were led down a narrow hallway toward the back of the building. We passed through a storage room, then the dyeing section. We arrived at the edge of a circle of young women. Each was seated on a low stool as she worked on her piece of fabric. With delicate strokes and holding the tool like a pen, the women used very finely tipped cantings to apply hot wax to the cloth, which was supported on a hardwood frame.

Natural light flooded the tall workroom from two sides. The corrugated metal roof creaked in the midday heat, roosters crowed, cauldrons of hot water that kept the wax liquid sent up billows of steam, and the gentle buzz of conversation gave me a profound sense of timelessness. The astonishing detail of the handwork was mesmerizing. Within minutes I understood why the Oey Soe Tjoen workshop had a reputation for batik tulis of the highest quality. After our mind-pounding tour of the Gajah Duduk factory, it was reassuring to know that a small workshop, specializing in highly skilled, labor-intensive handwork, could still thrive.

The canting, with its reservoir of liquid beeswax and its fine applicator, works like a cross between an old-fashioned oil can and an airbrush. The women dipped their cantings in the hot beeswax to refill the reservoirs, blew on the tips to stimulate the flow, and then leaned forward to continue applying row upon row of thin lines, squiggles and barely noticeable wax dots. Their concentration was intense, and the entire process of waxing would be repeated for each new color. One woman was working on a tiny portion of a voluptuous peony in full bloom, and I couldn't help wondering how much time it would take her to complete one petal or a single flower. From what I had been told, I knew the entire process of producing an Oey Soe Tjoen sarong could take anywhere from six to nine months.

The Oey Soe Tjoen workshop is a modern survivor: It saw the Japanese occupation and the struggle for independence from Dutch rule following World War II, and it has dodged the greater threat of cheap, machine-printed sarongs. Experts still claim that Oey Soe Tjoen sarongs are the finest produced in Java, and perhaps in all of Indonesia.

Before I left, I asked if I could buy a sarong; I was told that there was a nine-month backlog of orders. The price for a new sarong with one of their traditional flower, bird and butterfly designs was around $450. They had several older pieces for sale, but I didn't ask the prices. It seemed unlikely that I would be able to find anything as reasonably priced as the Oey Soe Tjoen for which I had paid $2.50 30 years earlier.

Driving back to Jogjakarta, I looked at people in the villages and at work in the fields. A few were dressed in shorts and T-shirts, but many still wore everyday cotton sarongs tied so the bottom hem reached just below their knees. In the city, I caught sight of people on the street wearing sarongs: an older man riding a bicycle, a women carrying a baby on her hip, schoolgirls returning home and groups of boys walking to the mosque. I saw pelicats and mass-produced floral-print batik sarongs—nothing of significant value, but every time I spotted one, I thought about the history of this garment and how sarongs seemed so comfortable, dignified and timeless.

Above, right: **The Oey Soe Tjoen workshop in Pekalongan is home to some of the finest batik tulis artisans in Indonesia; each sarong takes as long as six to nine months to complete.** Opposite: **Design on a silk sarong from Apip's Batik.**

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THE MEXICAN KITCHEN'S ISLAMIC CONNECTION

WRITTEN by RACHEL LAUDAN PHOTOGRAPHED by IGNACIO URQUIZA

When Mexico's leading writer, Nobel Prize laureate Octavio Paz, arrived in New Delhi in 1962 to take up his post as ambassador to India, he quickly ran across a culinary puzzle. Although Mexico and India were on opposite sides of the globe, the brown, spicy, aromatic curries that he was offered in India sparked memories of Mexico's national dish, *mole* (pronounced **mo**-lay). Is mole, he wondered, "an ingenious Mexican version of curry, or is curry a Hindu adaptation of a Mexican sauce?" How could this seeming coincidence of "gastronomic geography" be explained?

For a Mexican, this was no trivial matter. Laborious to produce, mole is served for weddings, festivals and national holidays. The legend of its origin in the convents of 18th-century Puebla, the second city of New Spain—as Mexico was then called—is part of the nation's popular history, recounted time and again in newspapers, school textbooks, guidebooks and even on paper placemats in restaurants. Mole comes in many varieties, but it usually contains ingredients such as cinnamon, cloves, peppercorns, anise, coriander, chocolate, chiles, almonds, pumpkin seeds, raisins, bread and tortillas—all ground together and cooked in a light

Opposite: **The most common ingredients for the endless varieties of mole include** (from top left in a clockwise spiral) **tomato, onion, cinnamon, tortillas, chiles—including anchos, pasillas, mulattos and chipotles—pumpkin seeds, raisins, star anise, cloves, sesame seeds, almonds, tablets of chocolate, tomatillos, oil, garlic, salt, allspice and serrano chiles. Nearly half these ingredients arrived in the New World with the Spanish.** Above: **The grinding of mole ingredients is a culinary ritual in Mexico.**

broth to make a harmonious brown sauce that is served with turkey, chicken or vegetable dishes.

Chocolate seems a curious ingredient to non-Mexicans—indeed, outside Mexico mole is sometimes referred to as a chocolate sauce—but in fact not all moles contain chocolate and even those that do use it in small quantities to balance the flavor of the other spices. More complex and less piquant than the better-known, fiery, tomato-based sauces that have spread around the world with Tex-Mex cuisine, mole, as Paz observed, does have a color, flavor and texture reminiscent of many

of the Indian dishes collectively known as curries in the rest of the world. And in raising the question of the uniqueness of mole, Paz was challenging the idea that mole was the cornerstone of a uniquely Mexican culinary heritage.

But while Paz was right to point out that mole resembled curry, he was wrong to imagine that Mexican cooks had created mole as imitation curry, or that Indian cooks composed curries in an effort to emulate mole. He would have done better to picture both moles and curries as vestiges of the cuisine of medieval Islam, a cuisine that was enjoyed from southern Spain in the west to northern India in the east.

The high cuisine of medieval Islam, one of the most sophisticated the world had seen, flourished from the eighth century on. It originated in Baghdad, where cooks had the advantage of being able to adapt a Persian cuisine that had developed over the past thousand years, and it was quickly adopted in the other cities of Islam. With the diffusion of Islam, the cuisine was transplanted to new territories. One of the most important was the Iberian Peninsula, whose southern two-thirds came under Arab rule in the eighth century. Watered by five rivers and greener than either their arid homelands or the other lands they had conquered, al-Andalus, as Muslim Spain was called, held out to the Arab and Berber settlers the promise of being a culinary paradise on earth. In the valleys, farmers grew wheat, grapes and olives. In the hills, shepherds tended the sheep and goats that the Arabs favored for meat dishes.

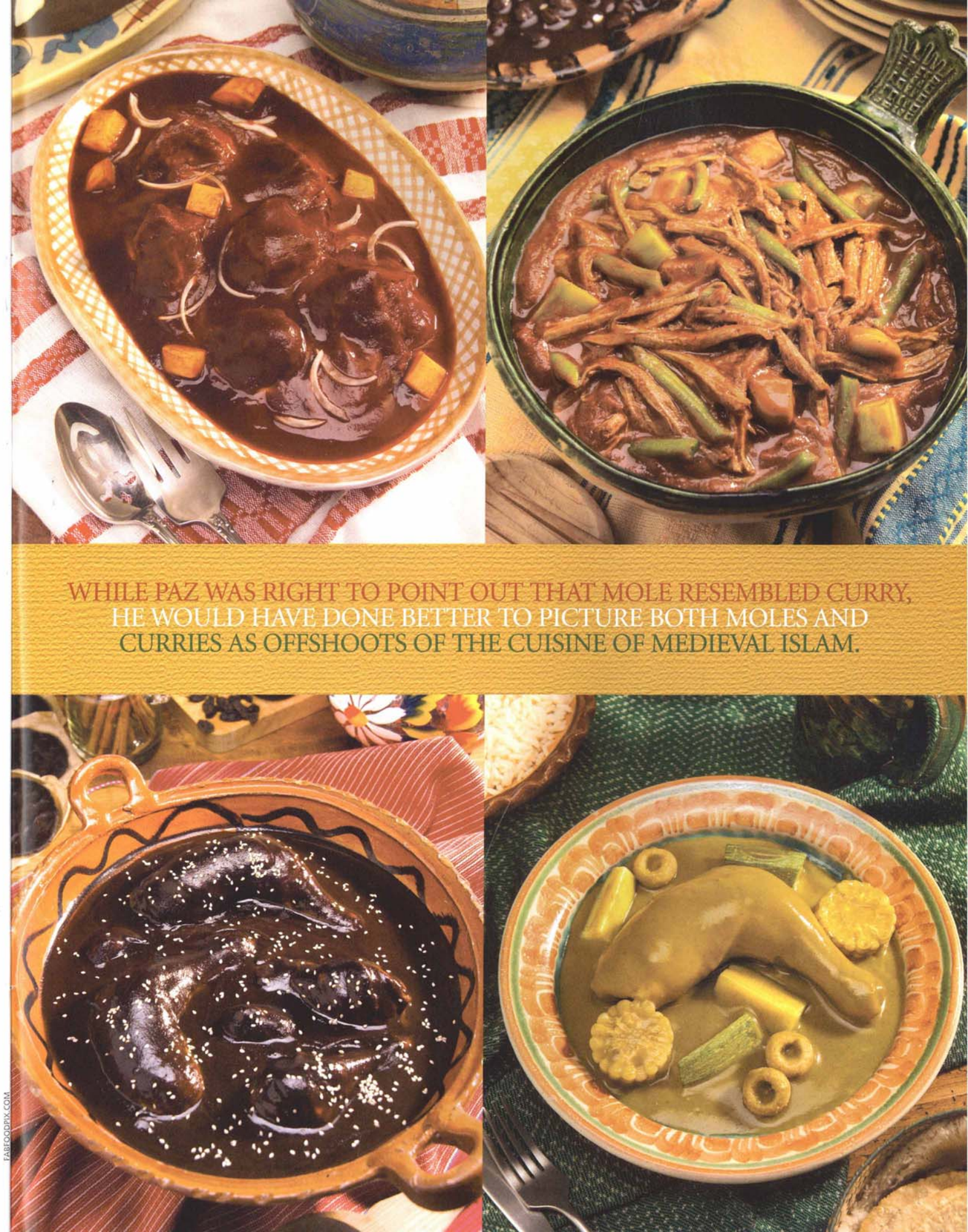
But other culinary resources that the Arab elite had come to expect were lacking. The settlers immediately set about correcting this, transforming the landscape of al-Andalus and the cuisine it supported. They built stone irrigation channels through orchards and fields and filled them with river water raised by towering water wheels (*norias*). They installed walled gardens (*huertas*) where they could raise slips and cuttings of their favorite fruit trees. As early as the eighth century, the amir 'Abd al-Rahman I introduced the date palm into Spain, and he happily accepted a pomegranate variety from Damascus offered to him by the chief judge of Córdoba. A century later the poet al-Ghazal returned from a mission to the East with a fine fig cultivar that he had smuggled out of Constantinople in a package of books.

The Muslims also introduced rice for fine pilafs, sugar for drinks and sweets, saffron to add aroma and color to their dishes and a wide variety of their favorite fruits and vegetables, including apricots, oranges, limes, artichokes, carrots, spinach and eggplant. They grew coriander, mint, thyme, fennel, cumin and caraway; the spices and aromatics that they could not grow—such as black pepper, cinnamon, spikenard, ginger, cloves, nutmeg, galingale, musk and camphor—they imported.

As in the rest of Islam, the Spanish Muslims built granaries (*alhóndigas*) to store grain to be distributed in case of hardship. And they set up their characteristic food-processing plants: distilleries to produce rose- and orange-blossom water to perfume their foods and refineries to make fine white sugar.

In the court kitchens of Córdoba and Granada, cooks could now produce the dishes of high Islamic cuisine. There were the *pilaus*, made by frying rice or thin wheat noodles and then simmering them in an aromatic liquid until it was fully absorbed. Another family of dishes consisted of delicate dumplings (*albondigas*) of meats pounded with seasonings. And there were the most characteristic meat dishes: meltingly tender spicy stews. Flavored with a variety of herbs and spices, these stews were cooked in earthenware pots nestled in circular holes in charcoal-heated masonry bench stoves. Some were green with spinach and coriander. Others were golden with saffron. And the most

Distant cousins of Persian and Mesopotamian ancestors are, at left, **the diverse Indian family of sauced-meat dishes known as curry, represented here by *rogan josh*, and the four major families of Mexican moles,** opposite. **For both, it is the sauce that carries the dish's name, and both are made with diverse ingredients.** From top left, clockwise: **Red mole is nationally popular but best known in central Mexico, and it is shown here with cubed beef, onion and carrots. Yellow mole is typical of the southern state of Oaxaca, here served with shredded beef and green beans. Green mole is common on the Gulf coast, where it might be served over chicken with chayotes (also called christophine, vegetable pear or mirliton), corn and ring-shaped corn dumplings. *Mole poblano* is from Puebla, near Mexico City, and it is the best known of the moles for its use of chocolate—a uniquely New World variation.**



WHILE PAZ WAS RIGHT TO POINT OUT THAT MOLE RESEMBLED CURRY, HE WOULD HAVE DONE BETTER TO PICTURE BOTH MOLES AND CURRIES AS OFFSHOOTS OF THE CUISINE OF MEDIEVAL ISLAM.

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complex were flavored with cinnamon, cloves, peppercorns, almonds and raisins and thickened with eggs or breadcrumbs.

Other great creations of the Muslim kitchen were based on clarified white sugar. Sweetened drinks (*sharbat*) were flavored with ground nuts, citrus fruits and pomegranates. Jams were made of rose petals, oranges and apricots, and dense pastes of quinces. Figurines were modeled from a white paste of sugar mixed with gum (*alfenique*). And a wide variety of confections such as marzipan was created from sugar and nuts.

It is small wonder that Spanish Christians eyed the cuisine of the Muslims with envy. Over the centuries, they adopted their rice and noodle pilaus, their albondigas, their aromatic stews of lamb, kid and chicken, and their sharbats, jams, fruit pastes, alfenique and marzipan. The modifications that they introduced, such as adding pork to the list of meats, baking raised breads instead of flat breads and distilling wine and molasses instead of flower petals, did not change the basic structure of the cuisine. By the late Middle Ages, this Christian version of the cuisine of al-Andalus was famous as the finest in Europe. In 1611, Francisco Martínez Montiño, the head cook of King Philip III, recorded it in the 500 densely packed pages of his *Arte de Cocina, Pasteleria, Vizcocheria, y Conserveria (Art of Cooking, Cake Making, Biscuit Making and Conserving)*.

Almost a century earlier, Christian Spanish cuisine had already reached the Americas. In 1492—the very year in which the Christians took Granada, the last Muslim outpost in al-Andalus—Columbus had set sail. Within 30 years, Cortés had captured Tenochtitlán, the Aztec capital that we now know as Mexico City. He sent back glowing reports of the lavish banquets of Moctezuma as proof that he had conquered a rich and powerful empire. But he and his men had embarked on their perilous adventure to create a New Spain, and they had not the slightest intention of adopting Aztec cuisine, with its maize (corn) flatbreads and unfamiliar dishes. They were going to replicate the cuisine of their homeland.

So once more, the cuisine of medieval Islam was transplanted. Within five years of arriving in Mexico, Cortés had established a sugar plantation. Galleons arrived from Spain laden with seed wheat, sheep, goats and cattle, and wooden planters carrying citrus, fig and pomegranate trees. Within a generation or two, the culinary landscape of Mexico had been transformed to resemble that of the Islamic world. Shepherds followed their flocks through the dry scrub on the mountain slopes of central Mexico. Stone irrigation channels filled by the traditional noria threaded their way across the landscape. Fields of foreign wheat jostled against fields of native maize. Rice was well established. Towns constructed alhóndigas to store these grains. Stills transformed molasses into *aguardiente* and refineries processed sugar for confectionary.

The houses of Mexico, like those of much of Islam, presented blank walls to the street. But behind the doors and central courtyard were *huertas* filled with trees heavy with limes, pomegranates, quinces and figs. Inside, the kitchens were equipped with masonry bench stoves covered with Islamic-style tiles. Niches in the walls held pottery canisters of cinnamon, cloves, thyme and black pepper. The wealthiest kitchens boasted copies of Martínez Montiño's *Art of Cooking*; others relied on manuscript recipe collections that still survive today.

In these kitchens, the cooks of New Spain adapted the medieval Islamic cuisine of al-Andalus to the resources of Mexico. They substituted turkey and other American game for the stewed chickens or roasted partridges of Spain. They used indigenous beans as well as the traditional Iberian chickpeas. They added tomatillos to green sauces, annatto to golden sauces and, in a pinch, replaced almonds with peanuts or pumpkin seeds. Native fruits, such as guava, cherimoya and cactus, as well as introduced citrus and quinces, went into confectionary and drinks. They adopted spiced chocolate as a hot drink and, occasionally, as a spice too. Most important, they substituted chiles for black pepper.

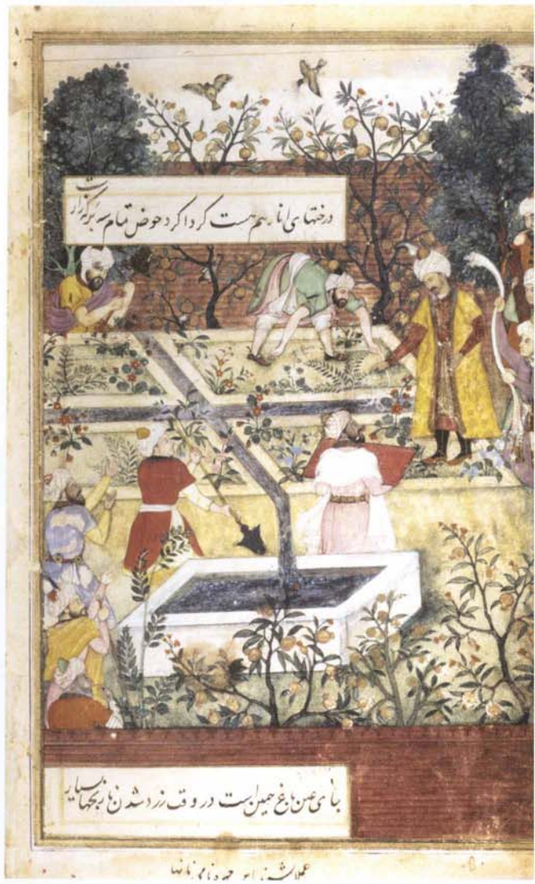
In one set of manuscripts, the *Recetario de Dominga de Guzmán (Recipe Book of Dominga de Guzmán)*, compiled around 1750, it is possible to catch a glimpse of the cook in the act of adapting the traditional dishes of al-Andalus to the circumstances of New Spain. In the first of two recipes for braised fowl, the ingredients include onion, oregano, mint, parsley, garlic, cumin, ham, sausage, cloves, cinnamon, black pepper and capers. This is simply titled "Morisco" to indicate Muslim origins—although the ham and the sausage are obviously Christian, not Muslim. The second, called "Mestizo" or "mixed race," drops the typically Islamic cloves, cinnamon and black pepper and substitutes Mexican tomatoes and chiles.

Sometime in the 18th century, though, the brown sauces took on the collective name mole, even though some of the older Spanish names also persisted. Mole had multiple resonances in the Mexican kitchen. In the Aztec language, Nahuatl, still spoken by many servants, *molli* meant "sauce." In Portuguese, *mollo* (pronounced something like "molio" in English) also meant "sauce," and many recipes in Martínez Montiño's collection went by this name. And in Spanish, *moler* means "to grind," the crucial technique used in preparing these sauces. Mole therefore was a word easily recognizable by everyone in the kitchen and one that made it easy for the mistress of a house or a head cook to communicate with the servants who carried out all the menial tasks.

But for all these substitutions and changes in terminology, the basic techniques and structure of the Islamic cuisine persisted in New Spain. The manuscript cookbooks contain recipes for pilaus of rice or thin noodles that could have come straight from the court of Córdoba. So too could the acidic, herby green sauces, rich in coriander. Or the recipe for "Rabbits in Sauce" (*Conejos en Mollo*), consisting of a base of fried onions to which pieces of rabbit were added, seasoned with pepper, nutmeg and ginger, stewed with stock, and finished with vinegar and saffron. Or, again, the "Chicken in Nut Sauce" (*Pollo en Nogada*) in which quartered chickens were simmered with cloves, cinnamon, black pepper, saffron and a little vinegar, then fried and sauced with a mixture of ground cloves, cumin, garlic, breadcrumbs and nuts. And the complex, expensive confections—marzipan and nut brittles, candied fruits, luscious jams, fruit pastes and leathers and fruits preserved in syrup—not only derive from the Islamic tradition but often retained even the Arabic names, such as *jarabe* and *almibar* for syrups.

Today Mexican families still sit down to dinners that reveal their Islamic origins. They begin with a "watery" soup (*sopa aguada*), such as a broth with tiny albondigas. Then comes a "dry soup" (*sopa seca*), such as "Spanish rice," which is none other

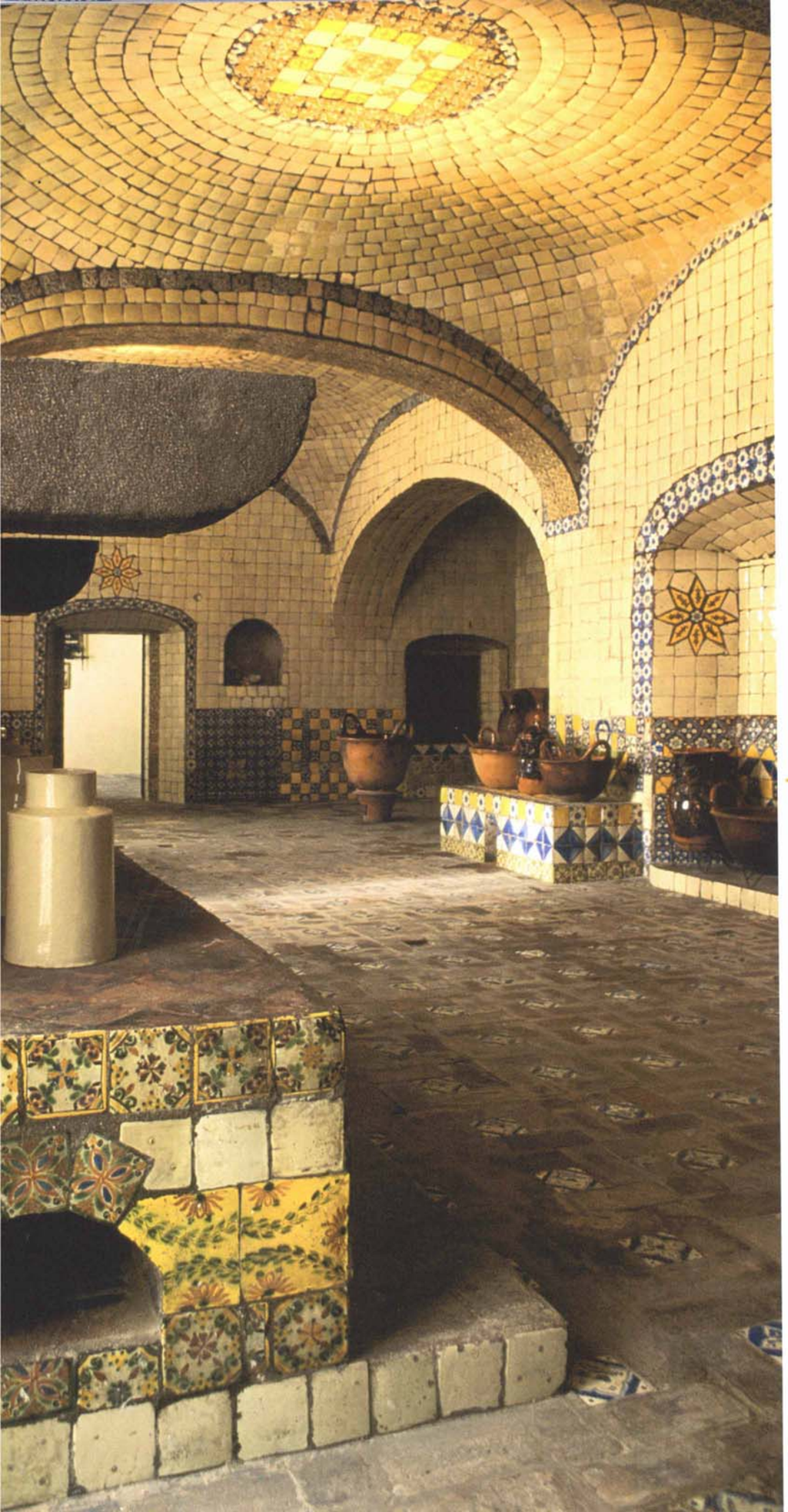
The agricultural technology first developed in Persia and Mesopotamia traveled both to the New World with the Spanish and east to Afghanistan and India with Babur, founder of the Mughal Dynasty. To "New Spain"—as the Spanish called it—the colonizers brought sugar, wheat, sheep, goats, cattle and fig and pomegranate trees, transplanting as much of al-Andalus as galleons could carry and Mexican soil could grow; for his part, Babur was renowned for his irrigated gardens (right) **that were as important for their products as for the pleasure they provided.** Opposite, top: **Mexican *aguas frescas* are descendants of the *sharbat* of the East, the ancestor of "sherbet." The jugs here likely include popular favorites such as watermelon, hibiscus, *horchata*, tamarind and—a favorite fruit in the early Islamic era—melon.** Opposite, lower: **"Spanish rice" is *sopa seca*, literally "dry soup," a quintessentially Mexican dish that is descended from the Asian *pilau* (pilaf) in which the rice is first fried and then simmered in spiced or flavored water.**



VICTORIA & ALBERT MUSEUM / ART RESOURCE

PERSIAN CULINARY HISTORY

The influential Persian culinary tradition is yet to be studied in detail. When the Abbasid dynasty established its capital in Baghdad in the eighth century, the Islamic world was able to draw on a sophisticated Persian culinary tradition that stretched back a millennium. The ancient Greeks had been awed by the luxurious cuisine of the Persian emperors Darius and Cyrus. Successive dynasties had continued to refine the cuisine that became the model for fine dining throughout the Islamic world. After the Mongols destroyed Baghdad in the first half of the 13th century, the center of Persian culture and its cuisine shifted back to the Persian heartland. It was here that the Moghuls learned the style of cooking that they took with them to northern India.



than the pilau of the Islamic world. The main course is a piece of chicken or meat accompanied by a green sauce, a nut sauce (*nogada*), an almond sauce (*almendrada*) or a spicy reddish-brown sauce (*mole*). After the meal comes a quince paste, with a little fresh cheese. Accompanying the meal is a refreshing drink—an *agua fresca*, as the Islamic sharbat is called in Mexico—a colorful, lightly sweetened homemade beverage of lime, melon or milky ground rice with almonds and cinnamon.

If, after the meal, the family takes a stroll and it is the week leading up to the Day of the Dead, they will find the streets filled with stalls selling *alfenique*. Households dedicated to the task have labored since the preceding year making figurines of white sugar paste, a mixture of gum from a Mexican orchid, egg whites and sugar. Children buy lambs, pigs feeding their piglets, platters of food, skulls, television sets and skeletons that pop out of coffins, all modeled from the paste, and wander along licking on their treats.

With this background, it takes only one more step to see why Mexican moles resemble Indian curries. In the early 16th century, as the Spaniards were introducing their version of Muslim cuisine to Mexico, the Mughals conquered northern India half a world away. They came by way of Persia, which had become the cultural and culinary center of the region since the Mongols had ruined Baghdad more than 200 years earlier. It was this Persian version of Muslim cuisine that their cooks adapted to Indian circumstances, creating the sophisticated Mughal cuisine of New Delhi. By the mid-16th century, then, a belt of high cuisine could be traced from northern India westward to Mexico. Although in every area it had been adapted to include local ingredients, the basic techniques and the basic dishes of medieval Islam continued to form the basis of all the local variants.

THE SIMPLE PICTURE OF A BELT OF ISLAMIC HIGH CUISINE THAT STRETCHED FROM MUGHAL INDIA WESTWARD TO SPAIN AND THEN TO MEXICO WAS CLOUDED AS INDIA AND MEXICO EACH DEVELOPED REASONS TO PLAY DOWN THE ORIGINS OF THEIR CUISINES.

Today, it is difficult to perceive this earlier global gastronomic geography. Over the centuries, one event after another clouded the simple picture of the belt of Islamic high cuisine. As time passed, Spain, northern India and Mexico all had reasons to play down the origins of their cuisines. In Spain, the growing prestige of French cookery over the 18th and 19th centuries meant that cooks and diners abandoned much of their earlier cuisine and adopted French techniques and French dishes.

In 19th-century India, the British lumped all the rich stewed dishes of the Mughal court together as curries rather than using their traditional Islamic names. In the mid-20th century, independence from Britain and the partition of India and Pakistan meant that India became a predominantly Hindu nation. It was not so odd, therefore, that Octavio Paz identified the high cuisine of New Delhi, with its roots in the court cuisine of the Mughals, as made up of Hindu curries.

In Mexico, the early 20th century saw the Mexican Revolution, which lasted the better part of 20 years and tore the country apart. Following the war, politicians and intellectuals struggled to create a sense of national unity. Among many other tactics, they turned to cooking as one of the formative national traditions, portraying their food as a mestizo cuisine in which Spanish elements were added to an Aztec base. Setting to one side the multiple derivations of the term *mole*, they concentrated on its Nahuatl roots. This derivation, they suggested, proved that mole was basically an Aztec sauce to which Spanish ingredients such as cloves and cinnamon had been added. The tale of the invention of mole in the convents of Puebla appeared for the first time.

Today Mexicans flock to the Alhóndiga of Guanajuato, the scene of the first successful skirmish of Mexico's war of independence, when the insurgents dislodged the representatives of the Spanish crown who had barricaded themselves behind its massive walls. It is a national shrine, and few visitors but the occasional historians remember the Islamic origins of this former granary. Similarly, mole is celebrated as the national dish. It is of course typically Mexican. But it—and much of the rest of Mexican cuisine—has roots that go back to medieval Islam, roots that have been lost from sight. Octavio Paz was absolutely right when he detected the parallels between Mughal and Mexican cuisines: They are linked by Islam in the global gastronomic geography.

Opposite: **In Puebla, the second city of Mexico's colonial era, the kitchen of the early-18th-century convent of Santa Rosa uses bench stoves, tile, vaults and domed ceilings in a fashion that almost replicates those of al-Andalus and North Africa.** Right: **A parallel adaptation appears in New World courtyard architecture, exemplified by the Alhóndiga de Granaditas, a warehouse built in Guanajuato in 1798.**

Trained as a historian of science, **Rachel Laudan** now writes as a free-lancer on food history. She has received the Julia Child and the Sophie Coe Awards, the two major prizes in the field. She lives in Mexico. **Ignacio Urquiza** (www.estudiourquiza.com) is one of Mexico's leading photographers of food, travel and architecture. He has recently contributed to *Savoring México* (Williams-Sonoma) and *Modern Mexican Flavors* (Stewart Tabori & Chang).

Related articles from past issues of *Aramco World* or *Saudi Aramco World* can be found on our website, www.saudiaramcoworld.com; click on indexes, then subjects:

Muslim Spain: S/O 92, J/F 93
Food of Muslim Spain: S/O 89
Marzipan: M/J 96
Mongol culture in Persia: J/F 03

For Further Reading

The Legendary Cuisine of Persia. Margaret Shaida. 2002, Interlink, 1-5665-6413-1, $18.95 pb. A loving account of 20th-century Persian cuisine with some historical anecdotes.

Medieval Arab Cookery: Essays and Translations by Maxime Rodinson, A. J. Arberry & Charles Perry. 2001, Prospect Books, 0-90732591-2, £35 hb. This is the most comprehensive reference available, and includes a translation of a Baghdad cookbook, **Kitab al-Tabikh.**

Reader's Guide

BY JULIE WEISS

For students: We hope this two-page guide will help sharpen your reading skills and deepen your understanding of this issue's articles.
For teachers: We encourage reproduction and adaptation of these ideas, freely and without further permission from *Saudi Aramco World*, by teachers at any level, whether working in a classroom or through home study.

—THE EDITORS

Understanding What You Read

Pre-Reading Activities

Here's an easy way to improve reading comprehension: Flip through the magazine, starting with the Table of Contents. Look at the pictures, and read about the articles. What intrigues you? Go to the article. Read the headline. Look at the pictures. Read the captions. Jot down a few notes about what the article seems to be about, and a question or two you hope it will answer.

Reading Comprehension Activities

The following activities are here to sharpen your reading by pointing you toward the most important parts of the articles.

"The Pioneers" (pages 14–21)
Who formed Saudi Arabia? When? Why did he choose Americans as partners in development? What types of relationships did Louis Dame, Charles Crane, Karl Twitchell and Thomas Barger forge with 'Abd al-'Aziz and the new Saudi nation? Put each of their names at the center of a page. Make a web for each man in which you write all the important facts about him and his relationship with 'Abd al-'Aziz and the formation of Saudi Arabia. How did the Saudi–American partnership differ from colonial relationships in other parts of the Arab world?

"Sarongs: From Gajah Duduk to Oey Soe Tjoen" (pages 22–31)
What are sarongs? Who wears them? What makes them so useful in Indonesia? When were sarongs first used in Java? How was Java involved in international trade beginning in the 1400's? How did different regions develop distinct batik styles? Why did the author go to Jogjakarta? Describe the Gajah Duduk sarong factory. Describe the Oey Soe Tjoen workshop. What does each one do for people who want to wear sarongs?

Analyzing Visual Images

We spend a lot of our time looking at visual images—on television and computer screens, in newspapers and magazines, in art galleries and on billboards. Most of us enjoy them without thinking too much about them. It's a good idea, though, to be able to look at visual images with a critical eye—to know what draws you in, how it does so and what you get from it.

You're probably most accustomed to seeing realistic images, like those on television, where a box of cereal looks just like a box of cereal, and people look (more or less) the way they would if they were actually in your home. But there are other kinds of visual images, such as those that adorn the beautiful batik fabrics pictured in "Sarongs: From Gajah Duduk to Oey Soe Tjoen."

Start with the fabrics on pages 23 and 24. Although these designs aren't realistic, they contain images you can recognize. What are they? What do they tell you about Indonesia, as compared, say, to the Sahara? Flip through some other magazines, or look through wallpaper or curtain catalogues. What kinds of images show up? What, if anything, do they tell you about the places where they were created?

In many parts of the world today, you're more likely to see other kinds of images—McDonald's arches, Nike's swoosh and nations' flags. As a class, brainstorm other familiar modern images. Make a patterned design using one or more of them. Display students' designs in the classroom.

"Sarongs" also explores the value of machine-made versus hand-made batik designs. Machine-made designs are uniform; each repetition of a pattern is exactly the same, and every piece of fabric is identical. Not so with hand-drawn designs. Think of the difference between homemade and store-bought bread. No two loaves of homemade bread are identical. Even if the baker uses the same recipe, each loaf looks and tastes a bit different. On the other hand, store-bought bread is the same every time. In fact, that may be part of the reason so many people like it. What kinds of things do you like better when they are all the same, and what things do you like when they are not? Why?

Class Activities

The activities in this section are designed to engage students with the material in *Saudi Aramco World* while encouraging them to connect it to the larger themes they explore in their other studies. This month's activities revolve around two basic concepts: **Human–Environment Interaction** and **Culture**.

Theme: Human–Environment Interaction

Geography focuses on the interaction between physical and human systems—what exists in nature in a particular area and then how people organize societies there. How do physical and human systems interact? This issue of *Saudi Aramco World* provides several opportunities to explore the question.

When and how do people adapt to an ecosystem? When and how do they change an ecosystem to suit them?
In ancient times, humans had little ability, beyond farming, to alter their environment. They either adapted to it or they moved elsewhere. Adapting meant growing crops that could survive in the local climate—rice in the Mesopotamian delta, corn on the American plains—and making homes out of available materials—reeds in Mesopotamia, adobe in the American Southwest. Over the centuries, people have grown better and better at altering ecosystems to suit their wants and needs. They move rivers to improve industry or traffic flow; transport water hundreds of miles so people can live in the desert; and "fill in" swamps to increase space for human settlement.

Think about the place and culture you live in. As a class, brainstorm characteristics of your physical environment—its climate, landforms, water, vegetation, animals and mineral resources—and write them on chart paper. Divide the items on the list among several small groups of students. With your group, think about how people adapt to these elements of the physical environment. Then think about ways people have changed these elements of the environment. What generalizations can you make about how people adapt to and alter their environments?

Pre-read "Reviving Eden"—read the headline and captions, and look at the pictures. Based on that and on your class discussion, write a sentence about what you expect to discover about how people have adapted to and how they have altered the Tigris–Euphrates delta. Now read the article, underlining or highlighting each of the following: a physical description of the area; how ancient people adapted to it and altered it; how humans nearly destroyed it in the 1990's; and how people now are trying to revive the area. How well does what you read in the article match your expectations?

How have different technologies affected the human ability to alter the environment?
Technologies are tools. As people develop new technologies, they expand the scale of their effects on the environment. Ancient Sumerians built irrigation ditches; 20th-century Americans built the Hoover Dam. The Erie Canal, built in the 1820's, is far less impressive than China's present-day dams on the Yangtze River. For one day, keep a log of technologies you use or see. (It might be a long list!) At the end of the day, jot down some notes about how each one affects the environment. Cars are one easy example: They require drilling and refining oil and paving roads, and their fuel emissions increase carbon dioxide in the atmosphere; they also allow people to do jobs and see things that make possible a complex society such as ours. Have each class member report in detail on one technology and its effects. Which most affect the natural environment? Which affect it least?

What are the intended and unintended consequences of humans altering the environment?
Notice that each of the human actions you identified has both intended and unintended consequences. People plan to drill for oil; they don't plan to displace plant and animal life. They plan to pave roads; they don't plan to destroy ecosystems. But sometimes they do. As a class, revisit the technologies you identified. Make webs for several of them, spinning out the consequences of each. Use color to distinguish intended from unintended consequences. Discuss how people might be able to anticipate more effects of the tools they use.

Theme: Culture

A people's culture consists of their shared values, beliefs and behaviors. It also includes their "products"—art and literature, technology and food. Explore culture using the following activities as your guide.

How does culture spread?
Culture, like a flock of birds, migrates from one locale to another. Today, most cultural migration occurs through the mass media and big business. You can watch MTV and shop at The Gap in most parts of the world now. But it wasn't always that way!

Read "The Mexican Kitchen's Islamic Connection." On a world map, use circles and arrows to show where Islamic cuisine began and where it spread. Now think about *how* it spread. Since there were neither mass media nor multinational corporations, how did Muslim cuisine get from Mesopotamia—now Iraq—to other parts of the world? Imagine a kitchen in Muslim Spain in the 1300's and another in Spanish Mexico 200 years later. What foods might you see in each? How would they differ? With a partner, trace the movement of cuisine. Start with a description of a dish in Baghdad. Follow it to Iberia and then to Mexico, showing how it might change with each migration.

Now read "The Pioneers." According to the writer, individuals brought medicine and technology from the United States to Saudi Arabia. These individuals must have behaved in non-threatening ways; if they hadn't, their hosts would have rejected them, no matter how useful the medicine and tools might have been. Take the role of a cultural adviser and, using the pioneers' behavior as a model, write a letter to the leaders of an American company that wants to expand globally. Advise them how to introduce and market their products so that people will accept them.

Where does culture originate?
"The Mexican Kitchen" shows how Islamic cuisine spread. The article's last three paragraphs explain why so few people know where their cuisine originated. What obscures its origins?

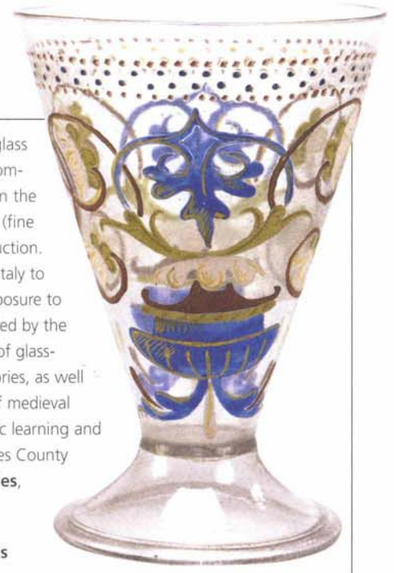
People talk about globalization these days as nations depend on each other more and more. Do you think people today welcome information about where elements of their cultures originated? How strong is people's desire to show that their own cultures are less "foreign," or "foreign" in a different way, than they actually are? Discuss the question. You might find out more about the following issues for your discussion: Europe's adoption of the euro as common currency; or the spread of various ideas about men's and women's roles.

Julie Weiss is an education consultant based in Lowell, Massachusetts. She holds a Ph.D. in American studies and develops curricula and assessments in social studies, media literacy and English as a Second Language.

Events&Exhibitions

The Arts of Fire: Islamic Influences on the Italian Renaissance focuses on the luxury glass and ceramics produced in Italy in the 15th and 16th centuries, establishing taste in European courts and becoming prized items for other collectors for 300 years. Techniques developed by Islamic glassmakers and potters in the Middle East between 800 and 1350 paved the way for the groundbreaking art forms of Renaissance *cristallo* (fine glass) and majolica (highly decorated glazed pottery), which represented high points of Renaissance art production.

This transfer of knowledge was facilitated by Italy's location. In the late Middle Ages, shipping routes linked Italy to Islamic Anatolia (present-day Turkey), Palestine, North Africa and Spain, resulting in meetings of cultures and exposure to varied art forms and technologies. The Islamic influence contributed to the development of glassblowing, invented by the Syrian glassmakers of the Roman Empire, which is arguably the single most important innovation in the history of glass-vessel manufacture. The arrival in Italy of easily transportable objects such as textiles, carpets, metalwork and ivories, as well as ceramics and glass, helped popularize motifs and styles from the Islamic world. By the time the golden age of medieval Islam was waning in the 1400's, the Italian Renaissance began to flourish, partly because of the impact of Islamic learning and culture. Objects on display include bottles, beakers, jars, lamps and tiles from the Getty Museum, the Los Angeles County Museum of Art and the Metropolitan Museum of Art in New York. Catalog ($65/$40). Getty Center, **Los Angeles**, through Sept. 5.



The designs of Islamic tiles influenced the painted ornamentation on Italian luxury objects such as this goblet from Murano, dating from the late 15th or early 16th century.

J. PAUL GETTY MUSEUM

<< May

Ancient Egyptian Technology is the subject of a free lecture at the Egyptian Embassy. ⓘ +44-20-7491-7720 **London**, May 15.

The Many Faces of Hafiz is a lecture about the 14th-century Persian poet Shams al-Din Muhammad Shirazi, known as Hafiz, and the ways his work has been used in the visual arts. British Museum, **London**, May 20.

From Late Antiquity to Early Islam is a lecture at the British Museum, **London**, May 21.

Zipang: Mesopotamian Storytelling is a seminar organized by the Enheduanna Society. ⓘ +44-20-7242-7367. October Gallery, **London**, May 22.

Thematic Tours invite reflection on a theme through the study of artifacts relating to a particular period. They include: "What Is Islamic Art?" (May 22, 2:30 p.m., June 28, 7:45 p.m.,); "Calligraphy in Islamic Art" (May 26, 11 a.m.; June 14, 7:45 p.m.; June 21, 2:30 p.m.); and "Women in Ancient Egypt" (May 26 and June 16, 2:30 p.m.). Musée du Louvre, **Paris**.

Asian Games: The Art of Contest explores the role of games as social and cultural activities in the diverse societies of pre-modern Asia. The exhibition comprises 120 to 150 artworks, including spectacular examples of game sets dating from the 12th to the 19th century, Persian and Indian court paintings and illuminated manuscripts. Sackler Gallery, **Washington, D.C.**, through May 22.

France and Iraq: The Past and the Future is a lecture by the consul of the French Embassy, St. Anthony's College, **Oxford**, May 25.

The Art of the Qur'an is a free lecture at the Courtauld Institute of Art. ⓘ www.hermitagerooms.org.uk. Somerset House, **London**, May 25.

Images of Islam in European Travelogues is a lecture at the **Oxford** Centre for Islamic Studies. ⓘ 44-1865-278-730. May 27.

Recitations in 'Ishq presents Arabic calligraphy by Mustafa Ja'far featuring verses from al-Hallaj and other poets. Clore Education Centre, British Museum, **London**, through May 28.

Arabic Calligraphy is a free workshop at the British Museum, **London**, May 29.

The Maria Theresa Thaler and Oman: The Story of an Austrian Coin in Arabia is an exhibition hosted by Bait Al Zubair. ⓘ +968-736-688. **Muscat, Oman**, through May 31.

<< June

Tours of a Collection include Islamic Art (June 21, 7:45 p.m.), and Coptic Egypt (June 1, 11 a.m.). Musée du Louvre, **Paris**.

Steel: A Mirror of Life in Iran features some 400 objects from the renowned Tanavoli collection and a number of items from the Library's collection of Persian miniatures and manuscripts. Steel was an integral part of the economic, social and religious life in Iran during the Safavid and Qajar periods (16th to early 20th century). Through the display of more than 300 intricately decorated items of steel—tools and implements used at home, in the bazaar, in war and for ceremonial occasions, for religious purposes, and for horsemanship and entertainment—the exhibition tells the story of traditional life in pre-modern Iran. Almost every item, no matter how mundane and pragmatic its function, is an example of the exquisite workmanship of the traditional Iranian craftsman. The exhibition will be held in conjunction with a conference on metalworking in Islamic Iran on September 3–4 and a lecture on September 3. ⓘ www.cbl.ie/whatson. Chester Beatty Library, **Dublin**, June 2 through September 15.

The Halı Fair displays woven and primitive art including Oriental carpets, tribal and village rugs, kilims and tribal costumes, as well as textiles, embroideries and tapestries. ⓘ www.halifair.com. National Hall Gallery, Olympia, **London**, June 3 through 13.

The Silent Film in Concert series presents "La Croisière Jaune" by André Sauvage, covering the scientific expedition, financed by André Citroën, in which 42 men crossed 30,000 kilometers (18,650 mi) from Beirut to Beijing in tracked vehicles between April 1931 and February 1932. FM3, a Chinese electronic-music troupe, accompanies the film. Musée du Louvre, **Paris**, June 4-6.

The Chicago Palestine Film Festival spotlights 20 films by Palestinian, Israeli, American and European cinematographers. The third annual event includes movies in English or in Arabic, Hebrew, German or French with English subtitles, and features several North American premieres and one world premiere. ⓘ www.palestinefilmfest.com, 312-312-3123. Gene Siskel Film Center of the School of the Art Institute, **Chicago**, June 4–17, and (free of charge) Southwest Youth Collaborative, **Chicago**, June 18–20.

Draped, Wrapped and Folded: Untailored Clothing highlights how simple, untailored clothing can reveal a great deal about both the wearer and the culture from which the clothing originates. While some cultures prefer to make highly tailored garments that echo the human form, others favor rectangular lengths of cloth worn draped, wrapped or folded about the body. Despite the latter's simplicity of form, the design and decoration can reflect a high degree of visual complexity and artistic expression, and pieces are often deliberately crafted with the outfit's three-dimensional appearance in mind. The exhibition will also explore how clothing often communicates information about social distinctions within a culture. It features 19 garments from around the world, including Tunisia and Indonesia. Textile Museum, **Washington, D.C.**, through June 6.

Moroccan Ceramics displays the collection of artist Cladio Bravo, a Spaniard who lived in Tangier beginning in 1971 and assembled a body of ancient pottery, essentially for culinary use, that is rich in form and décor. Institut du Monde Arabe, **Paris**, through June 6.

Memento: Müriel Hasbun Photographs features the work of a woman of Palestinian and Jewish heritage, raised as a Catholic in Latin America, who uses her family history as an inspiration for her layered, collage-like images. Corcoran Gallery of Art, **Washington, D.C.**, through June 7.

Archeological Research on Egyptian Antiquities lectures include "New Ruins of Abydos: The Monuments of Pharaoh Ahmosis and his Family" (June 7) and "The Discovery of Heraklion of Egypt in Aboukir Bay" (June 24). Musée du Louvre, **Paris**.

Teaching About the Arab World and Islam is the theme of teacher workshops co-sponsored by the Middle East Policy Council in Washington, D.C., and conducted by Arab World and Islamic Resources and School Services (AWAIR) of Berkeley, California. The program is fully funded and workshops may be requested by any school, district, office of education or university. ⓘ awair@igc.org, www.mepc.org or awaironline.org; 510-704-0517. Sites and dates include: **Monticello, Arkansas**, June 7–8; **Anchorage, Alaska**, June 11 and 15; **Olympia, Washington**, June 28; **Oxford, Mississippi**, July 6–9; **Jackson, Mississippi**, July 12–13; **Notre Dame, Indiana**, July 27–29; **Cheyenne Mountain, Colorado**, August 6; **Davis, California**, August 12–13; **Cambridge, Massachusetts**, August 18–19; **Phoenix, Arizona**, August 28; **West Chester, Ohio**, September 24–25; and **Carmel, California**, October 1–3.

Offscreen: Four Young Artists in the Middle East is the title of a book and an exhibition of artwork by four Britons who drove, painted, photographed, sculpted, wrote and filmed their way through the Middle East from September 2003 to September 2004. They traveled through Turkey, Iran, Kurdish Iraq, the UAE, Oman, Yemen, Saudi Arabia, Jordan, Egypt and Syria, holding exhibits en route. ⓘ +44-20-7613-8500. Prince's Foundation, **London**, June 8–16.

Pharaoh's Creatures: Animals from Antiquity features more than 100 works dating from 3500 BC to the first century of our era that highlight the important role played by animals such as birds, baboons, crocodiles, cattle and cats in early Egyptian culture. Ancient Egyptians believed that deities could take the form of animals, which were considered the earthly manifestation of a god or goddess. Cats, as well as beasts, birds and insects from the marshy areas around the Nile, were frequently depicted. Domestic and grazing animals were of great importance and those that inhabited the desert uplands, such as the ibex, became symbols of life and death. Catalog. Rupert Wace Ancient Art Ltd., **London**, June 9 through July 9.

Urban Textile Traditions of Tunisia is a lecture at the Kufa Gallery, **London**, June 9.

Rug and Textile Appreciation Mornings include: Prayer Rugs (June 12); Caucasian Carpets (June 19); and Turkmen and other Textile Treasures (June 26). Visitors are invited to bring clean, well-vacuumed examples relating to the program. Textile Museum, **Washington, D.C.**, 10:30 a.m.
Noble Workshops presents vestments from the royal workshops in Palermo made during the reigns of the Norman and Hohenstaufen kings of Sicily in the 12th and 13th centuries. Arabic inscriptions indicate that these regalia of the Holy Roman Empire were executed by Muslim and Christian textile artists. The most magnificent work is the coronation mantle, dated 1133/34 and decorated with a kufic inscription and two symmetrical depictions of a lion triumphing over a camel. The exhibition testifies to the spectacular heights of work achieved by an exceptionally heterogeneous cultural mix of artists. Old Ecclesiastical and Secular Treasury, Hofburg Palace, **Vienna**, through June 13.

Textiles from the Islamic World features items from the Lloyd Cotsen Textile Traces Collection, one of the most important groups of historical textiles in private hands. The collection is made up mainly of small pieces, often in fragmentary condition, dating from pre-Islamic times to the 18th century, from Egypt, Iran, the Mongol Empire and Ottoman Turkey. Ashmolean Museum, **Oxford, England**, through June 13.

The **Yerevan Choral Society** will perform a concert of Armenian music. Lexington High School, **Lexington, Massachusetts**, June 13.

Secret Splendors: Women's Costume in the Arab World. Noosa Regional Gallery, QLD, **Australia**, through June 14.

Maimonides: The Man and His Image is a conference featuring leading academics from the Middle East, Europe and North America who will discuss the scholar, born Moses ben Maimon in 12th-century Andalusia, and his influence on poetry, theology, law and philosophy. ⓘ +44-20-7679-3520. University College, **London**, June 15.

Gallery Talks include "Art and Hieroglyphs of the Egyptian Funerary Cult" (June 16) and "Sharifs, Pirates and the Salcombe Treasure" (June 22), both at 11:15 a.m. British Museum, **London**.

From Homer to the Harem: The Art of Jean Lecomte du Nouÿ displays more than 100 of his paintings, oil sketches and drawings, including some Orientalist pictures whose subjects were derived from his travels to Egypt and Morocco. This is the first retrospective of Lecomte du Nouÿ's work since his death in 1923. Dahesh Museum of Art, **New York**, June 22 through September 19.

Homelands: Baghdad–Jerusalem–New York is a retrospective of the sculpture of Baghdad-born artist Oded Halahmy that combines abstract elements with organic forms. Halahmy's monumental but engaging sculptures originate in modernist attitudes but pay homage to the art of the ancient Middle East, existing between abstraction and representation. Greater **Washington, D.C.** Jewish Community Center, through June 24.

The Study of Persian Culture in the West is a conference organized by the State Hermitage Museum and Iran Heritage Foundation. ⓘ www.iranheritage.org/hermitageconference, +44-20-7493-4766. State Hermitage Museum, **St. Petersburg, Russia**, June 24.

Challenging Limitations: The Redefinition of Roles for Women in the Gulf Cooperation Council is a conference that explores the emergence of new roles for women in the Arabian Gulf states of the GCC. Presentations by women in the fields of business, education, politics and the media/literature will be featured, with analysis by experts from the Gulf, Europe and the US. School of Oriental and African Studies, **London**, June 24.

Heavenly Bodies: The Egyptian in French 19th-Century Art is a lecture organized by the Friends of the Petrie Museum. ⓘ 44-20-7679-2369. Institute of Archeology, **London**, June 25.

Ivories: From the Ancient East to Modern Times focuses on the techniques and the materials used by artists over the millennia to create these works of art in ivory, which has been used by artisans and artists in Egypt and the East since the fourth millennium BC; most civilizations on five continents have valued ivory for its intrinsic beauty and quality and for the exquisite objects that can be made from it. Catalog. A colloquium July 7 includes a lecture on the restoration of the ivories of Ras Shamra Ugarit, on the coast of Syria. Musée du Louvre, **Paris**, June 25 through August 30.

Windows of Light, an exhibition by artist Leila Kubba, features works on paper inspired by Andalusia in Spain. George Mason University, **Arlington, Virginia**, through June 25.

A colloquium on **The Thousand and One Nights in the Western Eye** is among the events focusing on Islamic art that feature in the reopening of the Auditorium. Musée du Louvre, **Paris**, June 26.

The Seventh Biennial Arab Film Festival presents more than 100 feature and documentary films in four categories, including one devoted to Egyptian actress Madiha Yousry and one focusing on Iraqi cinema in retrospect. Institut du Monde Arabe, **Paris**, June 28 through July 4, and **Marseilles**, June 28 through July 3.

The Hunt for Paradise: Court Arts of Safavid Iran 1501–1576 explores the origins and evolution of the distinctive Safavid style that emerged during the first half of the 16th century. The show focuses on the great hunting carpet by Ghyas al Din Jami in the Poldi Pezzoli Museum and includes other carpets, ceramics, metalwork, lacquer and hardstones, as well as important examples of miniatures, bindings and other arts of the book. Poldi Pezzoli Museum, **Milan**, through June 28.

Kings on the Tigris: Assyrian Palace Reliefs highlights five restored Assyrian wall reliefs, four from Dresden and one from Berlin, that have not been exhibited since 1945. Skulpturensammlung, Albertinum, **Dresden**, through June 30.

July >>

Mummy: The Inside Story uses cutting-edge computer graphics and the latest scientific and medical research to allow visitors to view a "virtual unwrapping" and autopsy of the 2800-year-old Egyptian mummy of Nesperunnub, priest of Karnak. Visitors sit in a state-of-the-art immersive theater where, wearing 3-D glasses, they can scrutinize the mummy's body and objects inside the wrappings. British Museum, **London**, July 2 through March 27, 2005.

Byzantium: Faith and Power (1261–1557) focuses on the artistic and cultural significance of the last centuries of the Byzantine Empire. The exhibition explores the impact of its culture on the Islamic world and the Latin-speaking West. It begins in 1261, when Constantinople was restored to imperial rule, and concludes in 1557, when the empire that had fallen to the Ottoman Turks in 1453 was renamed Byzantium. Catalog. Metropolitan Museum of Art, **New York**, through July 4.

Luxury Textiles East and West: Dress and Identity celebrates the 50th anniversary of the Museum's costume and textiles department with the second part of a tripartite presentation highlighting more than 75 items dating from the 14th through the 20th century, including an Ottoman sultan's ceremonial barbering apron, a Mughal velvet tent and an Indonesian gilded wedding skirt. **Los Angeles** County Museum of Art, through July 5.

Chocolate, Coffee, Tea focuses on the utensils developed to serve these drinks that were introduced into 17th-century Europe as the result of sustained seagoing contacts with the Arab world, China and Mexico. Metropolitan Museum of Art, **New York**, through July 11.

The Continuous Stroke of a Breath: Calligraphy from the Islamic World portrays the art of ornamental writing that is the quintessential visual expression of the Muslim faith. Arabic script, the medium of this expression, evolved into a powerful and flexible form of esthetic and spiritual art. Muslim scribes were inspired to improve the legibility and artistic qualities of this script by the need to preserve and disseminate the Qur'an. Over time, calligraphy spread from the written page to become a major decorative element in virtually every medium of Islamic art. The exhibition takes its title from a traditional expression that likens the movement of the pen in the master calligrapher's hand to the flow of breath in his body. Included are masterpieces of calligraphy from the ninth through the 20th century from Arab, Indian, Persian and Turkish regions of the Islamic world. Sackler Museum, **Cambridge, Massachusetts**, through July 18.

Palace and Mosque: Islamic Art from the Victoria and Albert Museum in London presents more than 100 works from one of the world's premier collections of Islamic art. The four-section traveling exhibit covers the full range of the decorative arts, including ceramics, textiles, metalwork, glass and woodwork, and treats the Islamic art of the Middle East as the product of a culture in which not everyone was Muslim but in which Islam played a dominant role. The sections are: The Written

Continued from previous page

Word, featuring calligraphy from the 10th to the 18th century; Court and Courtiers, displaying decorative objects made for the ruling elite; Mosques, Shrines and Churches, including the six-meter (20') *mimbar* (pulpit) of Sultan Qait Bay, made for a mosque in Cairo; and Artistic Exchange, displaying works of Islamic, European and Chinese manufacture. An eponymous book accompanies the exhibition. National Gallery of Art, **Washington, D.C.**, July 18 through February 6, 2005.

<<< August

Cleopatra in the Mirror of Western Art focuses on various visual interpretations of the legendary queen of Egypt. A selection of works traces the complex and fertile trajectory of the image and idea of Cleopatra in western culture. Musée Rath, **Geneva**, through August 1.

Timeless Connections: Exploring Tapestry Weave demonstrates the broad geographic dispersion and historical continuity of one of the world's oldest and most versatile textile techniques. The exhibition includes Tunisian and Iranian kilims, Egyptian Coptic material and objects from Mali. Textile Museum, **Washington, D.C.**, through August 1.

The 50th International Assyriology Meeting will host Assyriologists, Near Eastern archeologists and scholars in related fields for discussions about the flora and fauna of the ancient Near East. **Skukuza** (Kruger National Park), **South Africa**, August 2–6.

The Quest for Immortality: Treasures of Ancient Egypt presents coffins, masks, jewelry, papyri, sarcophagi and sculpture from Cairo's Egyptian Museum. An IMAX film, "Mysteries of Egypt," and a planetarium program, "Stars of the Pharaohs," are shown in conjunction with the exhibit. **Milwaukee [Wisconsin]** Public Museum, through August 8.

Heaven on Earth: Art from Islamic Lands provides a dazzling introduction to the art and artifacts of the Islamic world. The show features masterpieces from the Nasser D. Khalili Collection of Islamic Art that represent the finest decorative arts of Islam, including textiles, jewels, metalwork, ceramics and paintings dating from the Middle Ages up to the 19th century covering an area stretching from Spain to Persia and the Indian subcontinent. Lunchtime talks Fridays, 1:15–1:30 p.m.: "Persian Miniatures" (June); "Art for Palaces" (July); "East meets West" (August). Catalog. ⓘ www.hermitagerooms.org.uk. Hermitage Rooms, Somerset House, **London**, through August 22.

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Yemeni textiles have been renowned since prehistoric times. A crossroads of the ancient world, Yemen built up privileged relationships with cultures of Africa and the Near, Middle and Far East while still maintaining its own autonomy. The commercial development that accompanied the spread of Islam, beginning in the seventh century, helped Yemeni fabrics reach a wide public. Internally, the country's tribal tapestry had a profound impact on the forms, materials and decoration of Yemeni traditional dress. Today, only a few woolen materials and multicolored, striped fabrics can be tentatively traced back to this thousand-year tradition. But some techniques—such as weaving on horizontal hand looms and resist dyeing using horizontal binding—have survived, along with the natural dyes that have characterized the country's products for centuries: indigo (*nil*), *war*, which dyes yellow and orange, saffron (*zafran*), and woad for dark shades and black.

The Queens of Sheba: Traditional Clothes of Yemen features spectacular women's costumes from the eight geographical regions of Yemen, accompanied by shawls, veils and other accessories, along with men's garments. The exhibition is complemented by a photographic archive locating each of the textiles in its particular regional architecture, landscape and society. ⓘ www.cdmt.es, +34-93-731-5202. Centre de Documentació i Museu Tèxtil, **Barcelona**, through December.

The lavish decoration of this early-20th-century dress from Sanaa indicates that it may have been used in a wedding. It features cotton brocade and gold thread; the neckline is embroidered with silver thread bearing the Kashmiri *boteh* motif.

<<< September

World Archery Traditions: Celebrating Cultures and Their Use of Archery features professional archers from across the globe who demonstrate forms of traditional archery alongside lectures, workshops and live presentations of horse archery. Bowyers from around the world also display their wares. **Fort Dodge, Iowa**, September 9-12.

Kingdoms of the Ancient Nile: Treasures from the National Museum of Khartoum displays many little-known pieces for first time. The exhibition highlights the extremely rich and diverse cultures that flourished in Sudan for millennia and made it not only Egypt's trading partner but its rival on the Nile. British Museum, **London**, September 9 through January 9, 2005.

Urban Islam looks at contemporary Islam in five cities: Paramaribo, Surinam; Dakar, Senegal; Marrakech; Istanbul; and Amsterdam. Young Muslims in the first four cities discuss how they experience their faith and talk about their lifestyle and youth culture—pop music, fashion, television and new media. In the Amsterdam section, people with diverse backgrounds in The Netherlands express their ideas about Islam on-screen, providing a continuous record of public opinion. The exhibition also provides background information about Islam, with explanations of its basic principles, illustrated with classical Islamic objects, including beautifully decorated copies of the Qur'an and 18th-century miniatures from Iran. In addition, different views on Islam are discussed extensively on www.urbanislam.nl. KIT Tropenmuseum, **Amsterdam**, through September 12.

The Silk Road: Trade, Travel, War and Faith presents treasures from the collection of archeologist and explorer Aurel Stein, considered one of the richest in the world. Stein worked at the turn of the last century to uncover long-lost multicultural civilizations that had lain buried for up to 2000 years beneath the sands of eastern Central Asia. The show highlights more than 200 of Stein's seldom-seen manuscripts, paintings, objects and textiles on a journey that moves eastward from Samarkand via Dunhuang to Turfan in China through the Taklamakan and Gobi deserts. Exhibits range from antiwar poetry and court documents to reclaim land from squatters, down to mousetraps, desert shoes and a letter apologizing for behaving badly at a dinner party. British Library, **London**, through September 12.

Petra: Lost City of Stone, a traveling exhibition, features extraordinary art and artifacts from the red sandstone cliff city in southern Jordan. Petra was a major crossroads of international trade routes from the first century BC to the second century of our era, when it was governed by the Nabataeans, who were renowned for their skills in trade, agriculture, engineering and architectural stone carving. The exhibition presents some 200 objects, including stone sculptures and reliefs, ceramics, metalwork and ancient inscriptions, and a selection of 19th-century artworks documenting the European rediscovery of Petra. **Cincinnati [Ohio]** Art Museum, September 14 through January 30, 2005.

The International Conference on Oriental Carpets is organized by The Oriental Rug Society in **Sydney, Australia**, September 16.

From Mind, Heart, and Hand presents 76 masterpieces of Persian, Turkish and Indian drawings from Harvard University's Sackler Museum. The exhibition, one of the few ever to focus exclusively on drawings from the Middle East and South Asia, features works from the 15th to 18th centuries. Asian Art Museum of **San Francisco**, September 17 through November 28; Fogg Art Museum, **Cambridge, Massachusetts,** March 19 through June 12, 2005.

The New Mexico Muslim Women's Association's Ninth Annual Retreat will include a two-part talk on "Understanding the Qur'an" by Kecia Ali, Harvard Divinity School. ⓘ casadelrio@newmexico.com, 505-753-2035. **Abiquiu, New Mexico**, September 17–19.

Encounters: The Meeting of Asia and Europe 1500–1800 brings together a range of more than 200 objects from the period after Europeans discovered the sea route to the Indies and, with it, the appeal of the exotic. Exotica exhibited include rare porcelain and spectacular jewel-encrusted caskets made for European princes and collectors, along with handsome miniature paintings, lacquer, silks, wallpapers and cashmere. The exhibition looks at how East and West perceived each other in a period of intense cultural, commercial and technological exchange. Mughal India features strongly in the show, which also examines Europeans' interest in Asian religions, including Islam. Victoria and Albert Museum, **London**, September 25 through December 5.

Treasures from the Royal Tombs of Ur returns to its Philadelphia home for a limited engagement following a five-year, 10-city tour and before traveling to additional sites. The show features more than 200 Sumerian treasures revealing traditions of royal life and death, excavated in the 1920's by Sir Leonard Woolley. They include the famous "Ram in the Thicket"—a statuette of a goat nibbling the leaves of a tree—jewelry, a comb, a wooden lyre decorated with a gold-and-lapis bull's head, games, furniture, seals and vessels of gold, silver and alabaster, many found in the intact tomb of a woman—a queen or high priestess—named Pu-abi who died between 2600 and 2500 BC, a high point of Sumerian culture. Catalog $75/$50. University of Pennsylvania Museum of Archeology and Anthropology, **Philadelphia**, through September.

<<< October

A Garden of Shawls: The Buta and Its Seeds reflects the natural grace of the gardens of Mughal India, as shown in the patterns of trees, vines and flowers that decorated textiles such as Kashmir shawls of the period. The exhibition presents spectacular variations of the *buta* or *boteh*—a design based on the flame-shaped leaf, tree or cluster with a bent tip—in both Asian and western shawls, and explores its history. Textile Museum, **Washington, D.C.**, October 1 through March 6, 2005.

Tutankhamun—The Golden Beyond: Treasures from the Valley of the Kings is a worldwide exhibition of artifacts from the tomb of Tutankhamun and other royal tombs of the 18th Dynasty (15th and 14th centuries BC). Many of the artifacts are being shown for the first time outside the Egyptian Museum in Cairo. **Basel [Switzerland]** Museum of Ancient Art and Ludwig Collection, through October 2.

Pharaohs retraces major steps in the history of ancient Egypt through its rulers, including Kheops, Khephren, Akhnaton, Tutankhamun and Ramses II. The majority of the 200 important works displayed have been lent by the Egyptian Museum in Cairo, and are being shown for the first time in France. Institut du Monde Arabe, **Paris**, October 12 though April 10, 2005.

Caliphs and Kings: The Art of Islamic Spain highlights the longevity, continuity and onward transmission of the Islamic sciences and decorative arts of medieval Spain through some 90 objects from the collection of the Hispanic Society of America. The exhibition features works dating from as early as the Muslim conquest of the Iberian Peninsula in the eighth century to as late as the final phase of Muslim life in Spain in the 16th century, including objects from 10th-century Córdoba and 14th- and 15th-century Granada. It was, as Yale scholar María Rosa Menocal has written, "the chapter of Europe's culture when Jews, Christians and Muslims lived side by side and, despite their intractable differences and enduring hostilities, nourished a complex culture of tolerance." The exhibition is part of the Washington-based Mosaic Foundation's 2004 Al-Andalus Festival Cultural Program. Sackler Gallery, **Washington, D.C.**, through October 17.

People of the Red Sea, featuring Islamic and pre-Islamic culture, history and archeology in the regions on both the Arabian and African sides of the waterway, is the theme of the next session of the Red Sea Project, organized by the Society for Arabian Studies. ⓘ www.britac.ac.uk/sas. British Museum, **London**, October 29–30.

Iraq and China: Ceramics, Trade and Innovation focuses on revolutionary and enduring changes in Iraqi ceramics that took place in the ninth century as the character of Islamic pottery responded to a wave of luxury Chinese goods imported by Arab and Persian merchants. During this period, Iraq became a center for Islamic ceramic production as new technologies transformed common earthenware into a vehicle for complex, multicolored designs. Following the gradual disintegration of the Abbasid Empire after the 10th century, migrating Iraqi potters transmitted these techniques to Egypt and Iran, from where they traveled to Europe, giving rise to the great majolica tradition in medieval Spain and Renaissance Italy. A 15-meter (48') boat excavated from a harbor in southeastern China, and a video presentation of Wilfred Thesiger's photographs of the Marsh Arabs of southern Iraq, complement the exhibition. Sackler Gallery, **Washington, D.C.**, October 30 through April 24, 2005.

<<< Later and Continuing

Masterpieces of Islamic Art from the Metropolitan Museum presents some 1000 works from what is considered the finest collection of Islamic works in America. The objects cover a period from the ninth century to zenith of Islamic culture reached by the great empires of the modern era. The most spectacular object is a large enameled and gilded glass bowl, produced in Syria in the 13th century. Other exquisite works come from 10th- and 11th-century Egypt, medieval Iran, 14th-century Granada and 16th-century India. Musée du Louvre, **Paris**, though April 2005.

Mirrors of the East explores the perceptions of three regions, including the Islamic world, ancient Egypt, Persia, India, China and Japan, and their impact on Spain's Catalonia between the mid-19th and early 20th centuries. The themes are "The Legacy of the Moorish Queen," focusing on the rediscovery of the world of Andalusia and Islam; "The Garden of the Rising Sun," focusing on the Far East; and "Mirages of Paradise," highlighting the impact of the Oriental esthetic on art and architecture. Presented in association with Forum Barcelona 2004. Centre de Documentació i Museu Tèxtil, **Barcelona**, through May 5, 2005.

The Bishop Jades brings together a selection of the finest examples of Chinese and Mughal Indian jades from the renowned collection of Heber R. Bishop. Formed in the last quarter of the 19th century, the collection of some 1000 objects was the first of its kind in the United States. Metropolitan Museum of Art, **New York**.

The Lila Acheson Wallace Galleries of Egyptian Art feature several new galleries following reconstruction. The work includes the reconfiguration of the architecture of the tombs of Pernab and Raemkai (ca. 2350 and 2440 BC) to more closely resemble their original settings. Metropolitan Museum of Art, **New York**.

Spanish Sculpture and Decorative Arts: 1500–1750 offers 85 works of art showing the varied strands of influence—Islamic, Flemish and Italian—that contributed to the vibrant material culture of Spain from the early 16th to the mid-18th century. Metropolitan Museum of Art, **New York**.

The Saudi Aramco Exhibit relates the heritage of Arab-Islamic scientists and scholars of the past to the technology of today's petroleum exploration, production and transportation, set against the background of the natural history of Saudi Arabia. **Dhahran, Saudi Arabia**.

Information is correct at press time, but please reconfirm dates and times before traveling. Most institutions listed have further information available through the World Wide Web. Readers are welcome to submit information for possible inclusion in this listing.

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