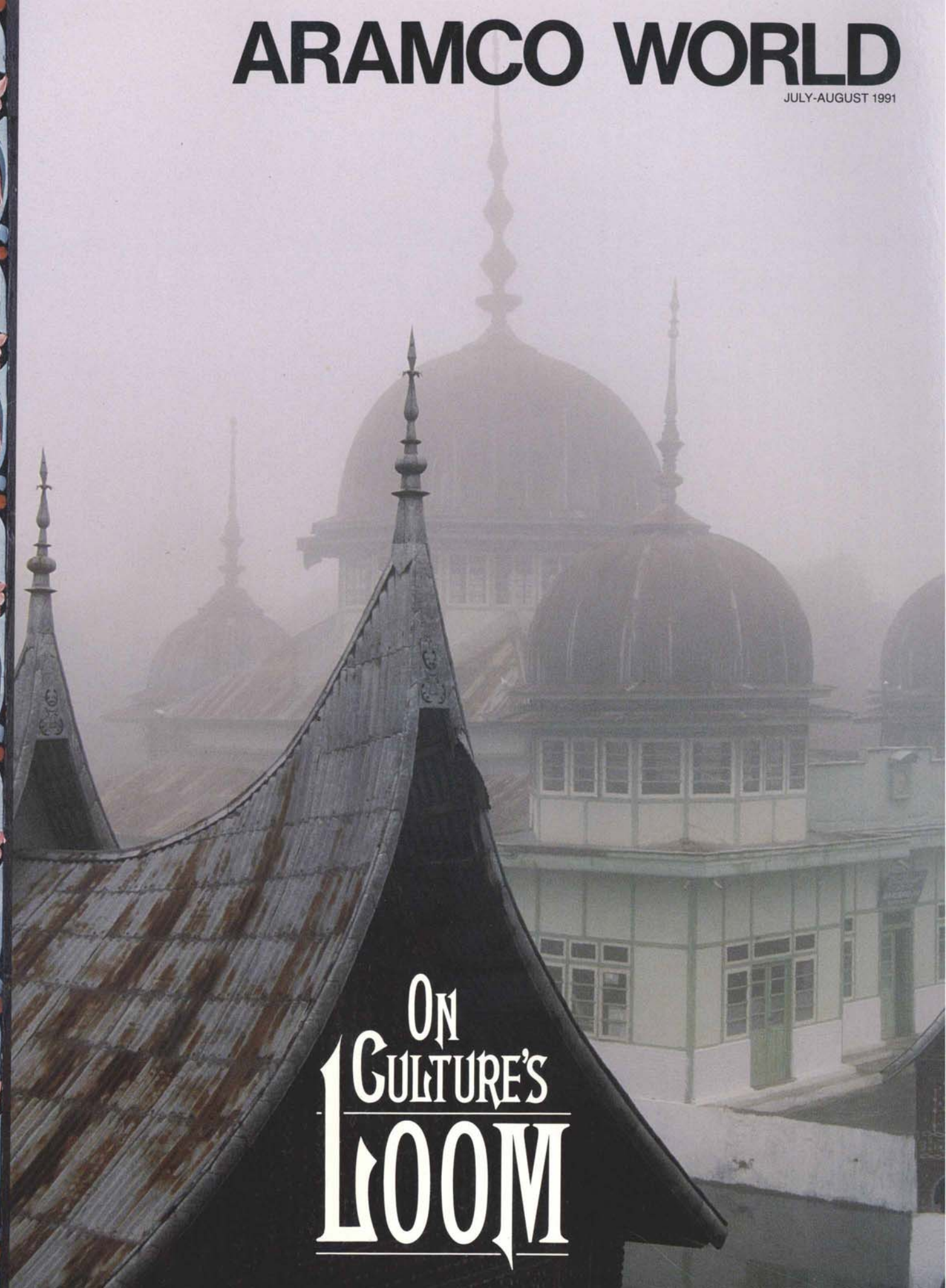


ARAMCO WORLD



ON
CULTURE'S
LOOM



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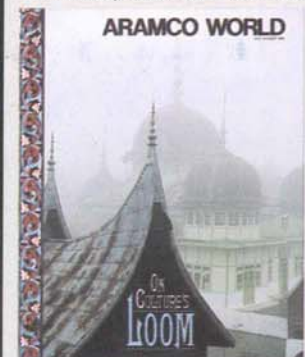
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Cover: Early-morning mist rises to reveal the domes of the mosque of Kotu Baru and the distinctive roof-lines - designed to resemble the sweeping horns of the water buffalo - of buildings in the mosque compound. Surrounded by a lake, the mosque is one of the most famous in the rantau, the region of west Sumatra inhabited by the Minangkabau people. Photograph: Hermine Dreyfuss. Back cover: Sudanese camelleers ride past Kushite pyramid tombs near Jabal Barkal. Photograph: Enrico Ferorelli.

◀ Minaret of Testour's 300-year-old mosque shows Andalusian heritage.

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Sudan: The Land of Pyramids 2

By Krzysztof Grzymski

The little-known pyramid fields of ancient Kush are one of the most romantic archeological sites in the world. Some tombs were dismantled by treasure-hunters a century ago, but many more remain.



GRZYMSKI



Exiles From Andalusia 10

By Susan T. Rivers

In the 200 years after 1492, the reconquista drove the Arabs from southern Spain. Many found refuge in Tunisia, where they implanted the crops, architecture, dress and customs of Andalusia - and remember their homeland.



RIVERS



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Playing, listening and learning all the way from a Nubian village to Tokyo, 'ud virtuoso Hamza El Din embodies the world-music movement. Yet it is the melodies and rhythms of his Nile-side youth that shape his music.



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The textiles of Sumatra's Minangkabau express adat, rules that structure society. Headdresses and roofs emulate horns of the water buffalo, foundation of Minangkabau history.



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Knee-deep in fragrant shavings, the craftsmen of this Minangkabau town carve traditional patterns, derived from nature, that also express adat principles and decorate the walls and gables of their swept-roofed houses.



LAING



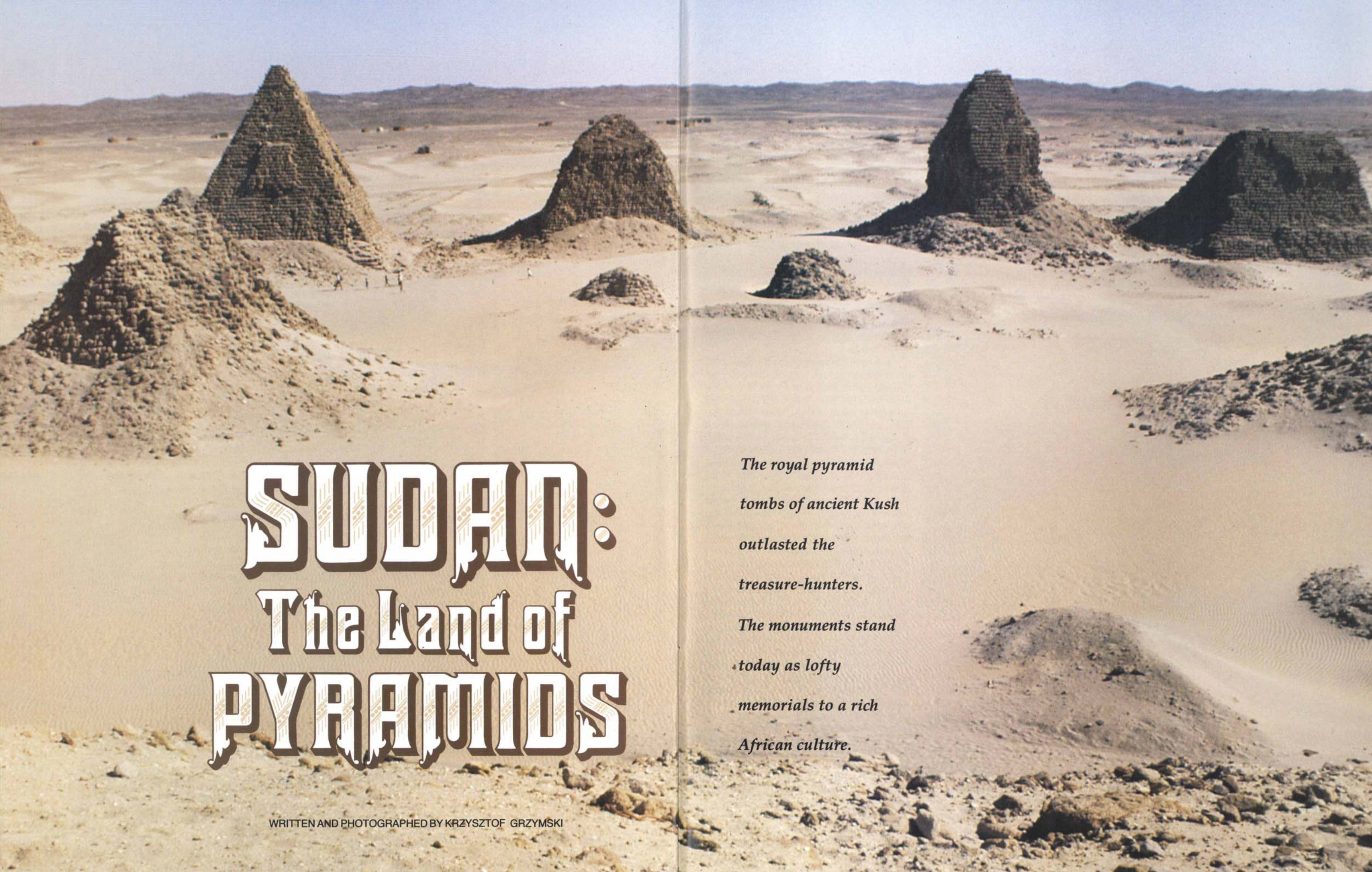
Diving in the Southern Red Sea 32

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Among the reefs and wrecks, divers find both a rich variety of species and dense populations of sea life. For interest, watch a squid change color in a fraction of a second; for thrills, hitch a ride on a manta ray.



BJURSTROM



SUDAN: The Land of PYRAMIDS

WRITTEN AND PHOTOGRAPHED BY KRZYSZTOF GRZYMSKI

*The royal pyramid
tombs of ancient Kush
outlasted the
treasure-hunters.*

*The monuments stand
today as lofty
memorials to a rich
African culture.*

There are probably more pyramids in Sudan than can be found in all of Egypt. Yet the wonders of ancient Egypt are known worldwide, while those of its southern neighbor stand forgotten on the banks of the Nile. The checkered political history of Sudan, combined with the country's rugged terrain and lack of modern conveniences, has kept tourists away from some of the most romantic archeological sites in the world, among them several whole fields of pyramids.

The oldest Sudanese pyramids, dating back to the eighth century BC, stand near the modern city of Karima, downriver from the Fourth Cataract of the Nile. They were built for the kings of Kush, as the land was known in antiquity, who – after conquering Egypt around 730 BC –

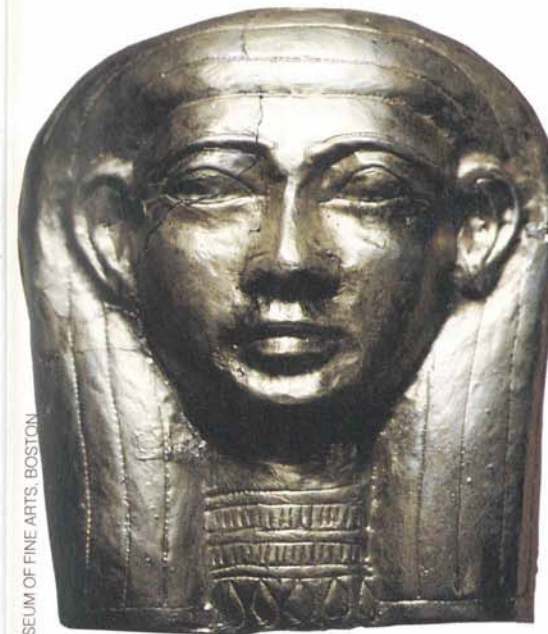
adopted the old pharaonic tradition of erecting monumental tombs for themselves and members of their families. These pyramids were smaller than the Egyptian ones, and were located near the Kushite capital city of Napata, which once existed in the neighborhood of Karima.

These Napatan conquerors of Egypt, despite their adherence to Egyptian customs and religious beliefs, preferred to be buried not in the land they won but near their home town; after their eventual expulsion from Egypt by the Assyrians, around 660 BC, they really had no other choice, and the burials continued.

It was also near Napata that one of the most important temples in the entire Nile Valley, the Great Temple of Amun, had been erected by the Egyptian pharaohs in the 15th century BC, at the foot of an impressive mountain called Jabal Barkal. Its massive ruins can still be seen in the desert sands.

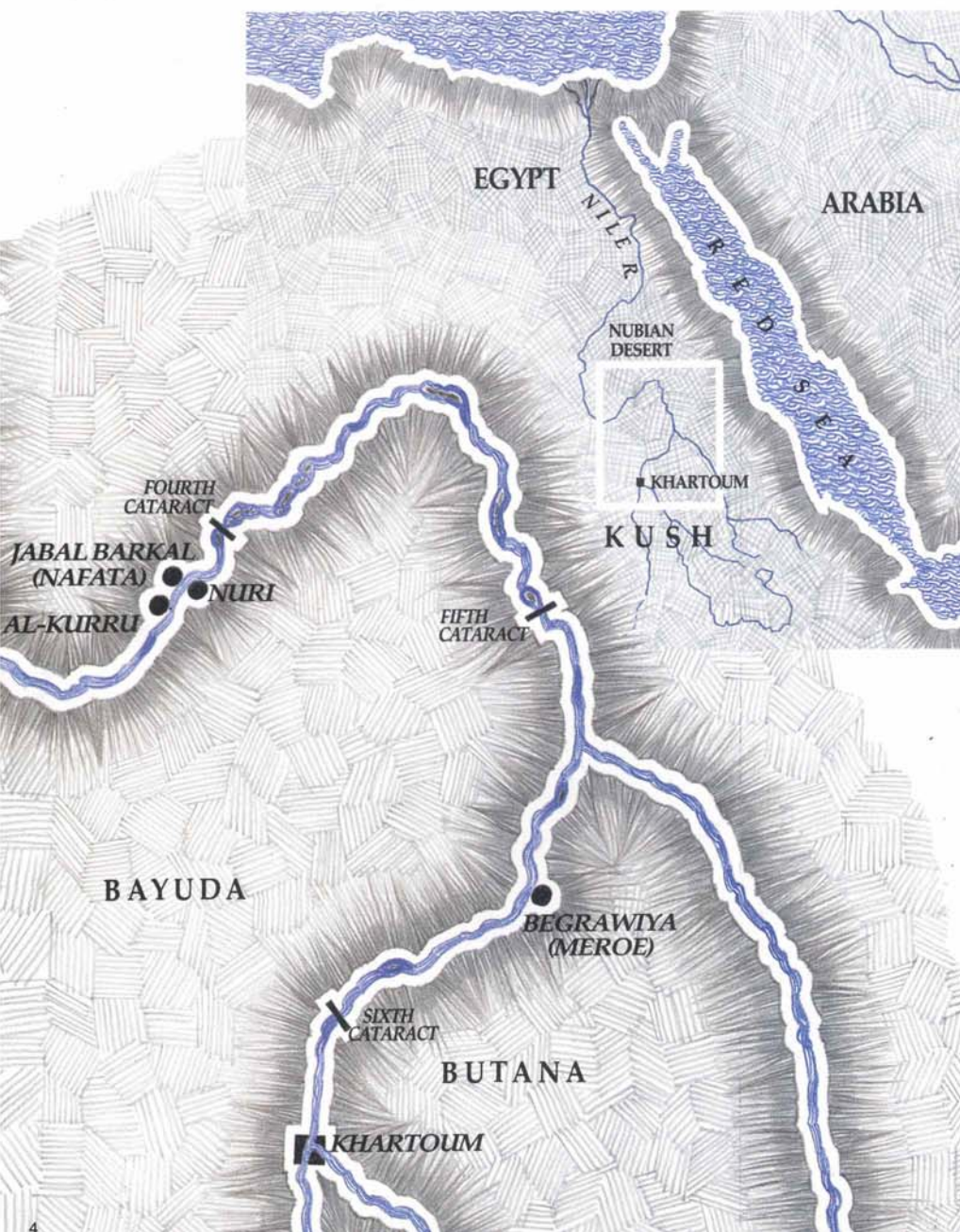
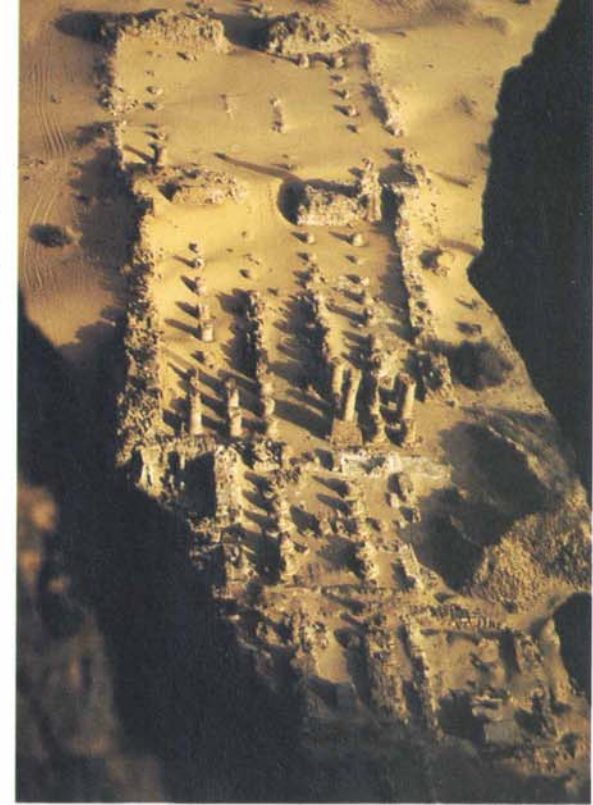
We owe our knowledge of the Sudanese pyramids to an American archeologist, George A. Reisner, who on behalf of the Boston Museum of Fine Arts and Harvard University spent several winters between 1916 and 1923 excavating the Napatan pyramids as well as those at Meroë, a site only 210 kilometers (130 miles) north of Khartoum. While his work represented the first truly scholarly examination of these monuments, he was not the first to explore them. A hundred years before Reisner, various European travelers had passed by and left descriptions, often very detailed ones, of the Napatan and Meroitic pyramids (See box, page 9).

One of those travelers, an Italian doctor turned treasure-hunter by the name of Giuseppe Ferlini, went a step further and in 1834 began "exploring" the monuments. His goal was simple: to find the great treasures that rumor claimed were hidden inside the pyramids. According to his published account, he employed a very "efficient" – today we would say "barbarous" – method of conducting his treasure hunt: a laborious and systematic dismantling of the structures, one after another, from the top down. The tragedy, from the point of view of the modern archeologist, is that he did indeed find beautiful gold jewelry in one of the Meroë pyramids! These royal treasures eventually found their way to the museums in Munich and Berlin, and since that time have often been displayed in international exhibitions, such as the one that toured various American and European museums in 1978 (See



The gilt-silver mummy mask of Queen Malaqaye, late seventh or early sixth century BC, discovered among the treasures of Nuri.

The Temple of Amun at Jabal Barkal, companion site of the Napatan pyramids, was built by the Egyptians on their southern frontier.



Aramco World, July-August 1979). Fortunately, despite the explorations of Ferlini and his followers, many of the pyramids survived intact.

Reisner began the first legitimate archeological exploration of the pyramids in January 1916. As a scholar of great repute, the Sudan Railways provided him with a special first-class sleeping car, complete with kitchen, for his travel across the Nubian Desert from Wadi Halfa to Karima. The British governor of the time, Jackson Pasha – who, after a lifetime of service in Sudan, was eventually buried beneath a pyramid-shaped tombstone himself – offered the Americans a local government rest house, surrounded by a small garden, as living quarters.

During this first year in the field, the work concentrated on excavation of the Egyptian temple at Jabal Barkal and the pyramids located nearby. In the following campaigns, Reisner conducted a systematic investigation of the Napatan pyramids. The oldest, as we now know, were the pyramids of al-Kurru, followed by the cemetery of Nuri, while the two groups at Jabal Barkal were of much later date, contemporary with those of Meroë.

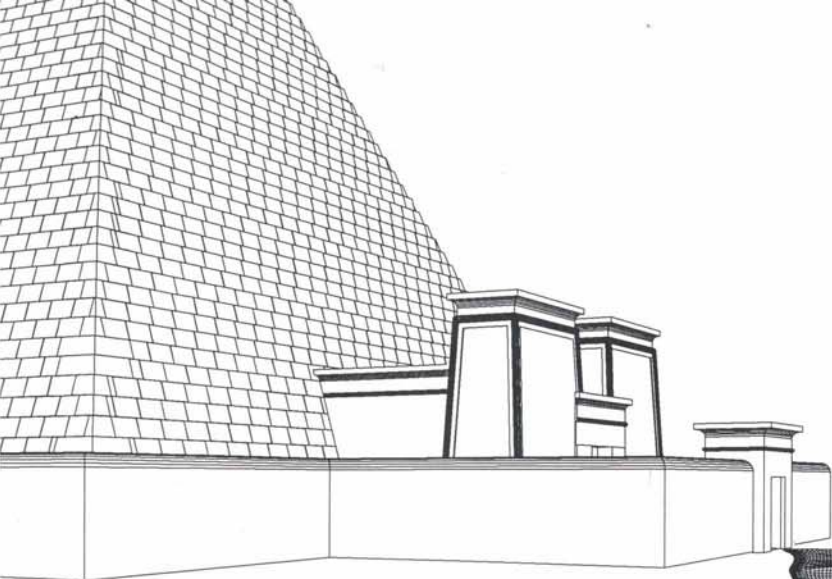
A common feature of all the pyramid fields was their location on high ground, as if to make up for their deficiency in size when compared to the Egyptian counterparts. They were built of sandstone blocks and gave no appearance of having interior burial chambers. These, as it turned out,



The Reisner Expedition's camp at the Nuri Pyramids, 1917. The 1070 stone shawabti figures of King Taharqa are spread out on the ground for numbering.

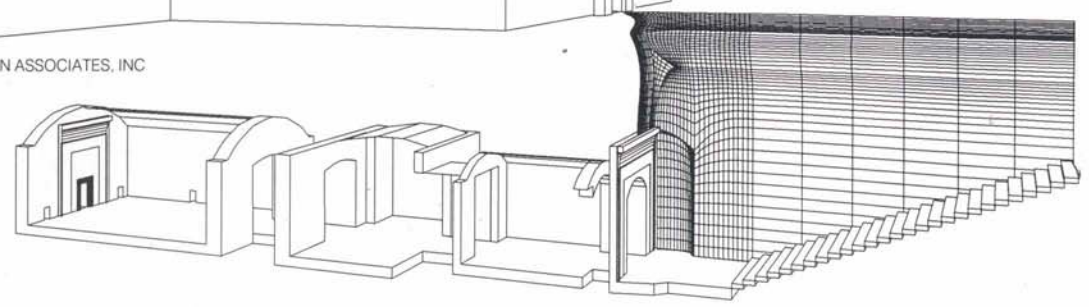
George Reisner (1867-1942) was the first archeologist to conduct serious excavations of Sudan's pyramids.





were cut into the bedrock beneath the pyramid and were reached by a long stairway that began some distance in front of the pyramid and outside the wall that surrounded it. Above the stairway, abutting the pyramid itself, was erected an offering chapel, profusely decorated with reliefs depicting various religious scenes. The reliefs in the chapels and the painted decoration of the burial chambers were largely Egyptian in style, although some elements were more African in character.

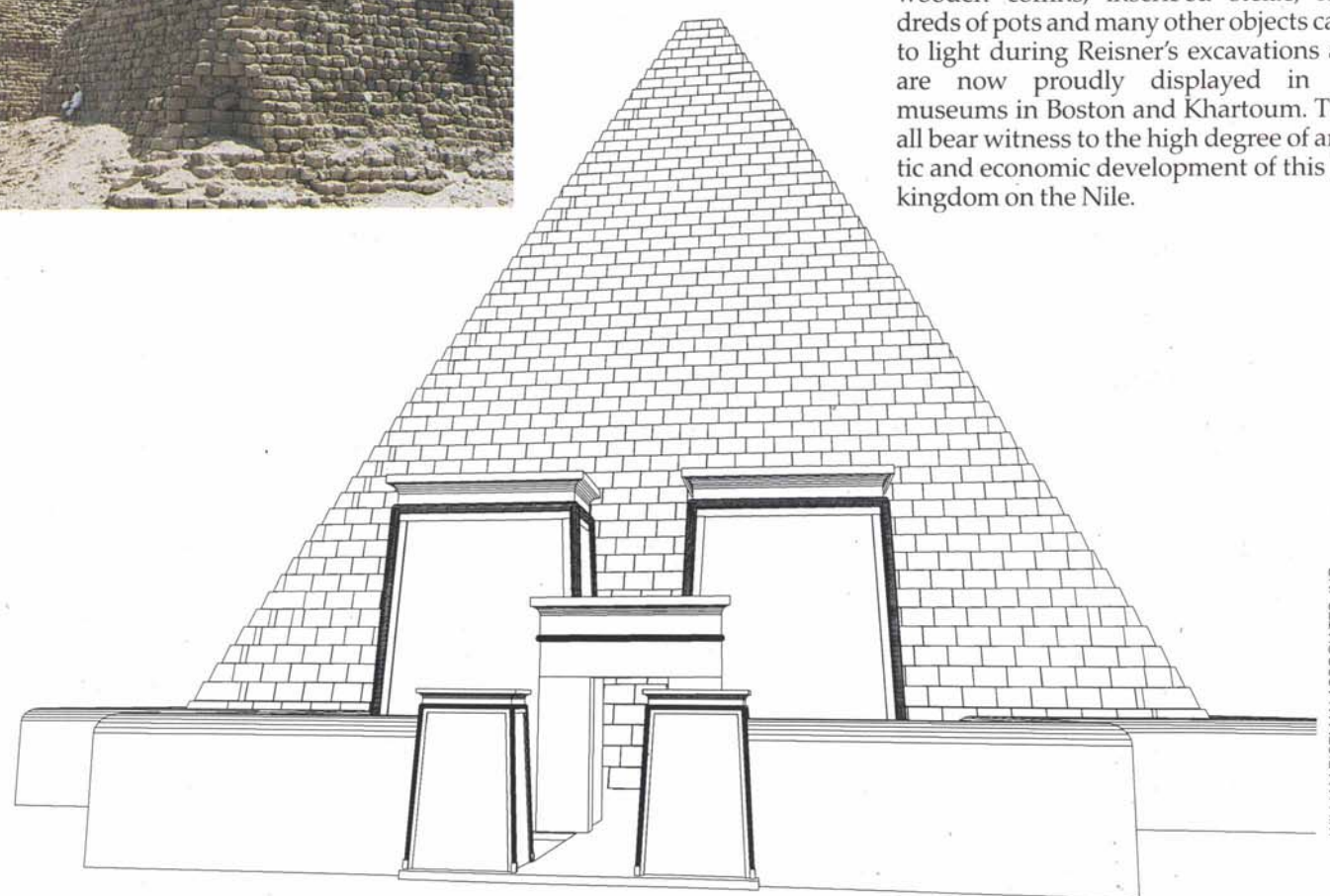
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Computer-generated drawings (left and below) of King Aspetla's pyramid, sixth century BC, show burial chamber and pyloned "entrance"; Nuri pyramids at center left.



While many of the pyramids were robbed in ancient and, as in Ferlini's case, in more recent times, there was still plenty to be discovered, as Reisner quickly learned. Thousands of small funerary statuettes called *shawabtis*, small gold objects, wooden coffins, inscribed stela, hundreds of pots and many other objects came to light during Reisner's excavations and are now proudly displayed in the museums in Boston and Khartoum. They all bear witness to the high degree of artistic and economic development of this lost kingdom on the Nile.



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A detail of the soapstone shawabti of King Senkamaniskien, who ruled Kush between about 640 and 620 BC.



T. KENDALL / MUSEUM OF FINE ARTS, BOSTON

Handle of a silver mirror
that belonged to King
Amani-nataki-lebte in the
sixth century BC.

This gold earring
adorned a Meroitic queen
of the late first century BC.

T. KENDALL/MUSEUM OF FINE ARTS, BOSTON

T. KENDALL/MUSEUM OF FINE ARTS, BOSTON

The pyramid chapel (left)
of an unknown Meroitic
king who ruled in the
second century BC; the
pyramids of Jabal Barkal
(below) were built a
hundred years earlier.

Opposite, stone
shawabtis (background)
of Taharqa, King of Egypt
and Kush (690-664 BC);
below, an alabaster vessel
in the form of a bound
oryx, from an early-
seventh-century BC tomb.

“The Habitations of the Dead”

If the habitations of the living [in ancient Meroë] are destroyed, those of the dead remain. To the east of Assur is the great church-yard of pyramids – I cannot more appropriately denote them – which likewise proves that a considerable city was in its neighbourhood. It is impossible to behold the number of these monuments without astonishment, eighty are mentioned in the plan of Caillaud; but the number cannot be well ascertained, as the ruins of many are doubtful. They are divided into three groups, one due east from the city; the two others a league from the river [Nile], one north and the other south. The most northern one is the largest and best preserved. They certainly appear small in comparison with monuments of a similar kind in middle Egypt, the height of the largest not being more than eighty feet; but they are more wonderful from their number. They are built of granite like the Egyptian, but do not seem so massive in the interior. The highest of them was ascended, and, as its top was thrown off, the interior seemed nothing beyond a heap of shapeless masses. As no one, however, examined the interior, it might be premature to decide anything respecting it. Most of the largest of them have a temple-like fore-building in the Egyptian style; a pylon and a door which leads into a portico, and this again through a sanctuary into the pyramid. It does not appear therefore that they desired here, as was the case in Egypt, to conceal the entrance, unless a real entrance was somewhere else. Until an interior has been examined, it will not be known whether sarcophagi and mummies are to be found within; I am not aware of any having been found beyond Egypt, south of Philae and the cataracts.... The corners of the pyramids are partly ornamented; and the walls of the pylones are decorated with sculpture. That on the largest pyramid, drawn by Caillaud, represents an offering for the dead. In one compartment a female warrior, with the royal ensigns on her head, and richly attired, drags forward a number of captives as offerings to the gods; upon the other she is in warlike habit, about to destroy the same group, whose heads are fastened together by the top hair.... Upon a fourth field appears Anubis, accompanied by the *Schakal*, the watchman of the lower world, with a burning light in the hand. This representation, together with the magnitude of the pyramid, renders it probable that it is the sepulchre of a king. That all pyramids here were not monuments of kings is evinced by their great number. Other grandees of the empire, especially priests of high rank, or such as had obtained the sacerdotal dignity, might have found in them their final resting place.”

– Arnold Heeren, *Reflections on the Ancient Nations of Africa*, Vol. I, 1832.

Many of the earliest objects were inscribed with Egyptian hieroglyphs and thus provided clues to the identity of the owners, enabling Reisner and his assistant, Dows Dunham, to establish an outline of the royal chronology. Such clues, however, were not always available, and Reisner was faced with the double problem of identifying the “owners” of the remaining unassigned pyramids, and finding out where they probably fell in the regnal sequence. This task was further complicated by the introduction, in the third century BC, of a native writing system which, to this day, has not been deciphered (See *Aramco World*, July-August 1983).

Reisner's solution was remarkable in its simplicity; he simply assumed that the most attractive and visible position in any given cemetery had been occupied first, and that the succeeding burials had been arranged farther and farther away. By combining this locational approach with a stylistic and architectural analysis of the pyramids, Reisner was able to establish a chronology which, with modifications, is still used by historians today.

The modern visitor is less apt to travel to far-away Karima, but a day trip from Khartoum to Meroë is quite easy. Reisner himself worked on the three pyramid fields of Meroë (300 BC to AD 350), and other scholars excavated the ruins of Meroë city, which the well-known British writer Basil Davidson described as one of the largest archeological sites in the world. Since the Meroë pyramids are now a prime tourist attraction, the Sudanese authorities have launched a conservation and reconstruction program to make good the deeds of Ferlini and his ilk and to develop the site for tourists – including the restoration of some of the pyramids to their original state. However, tourists are not yet flocking to Meroë in great numbers. This makes the place uniquely attractive compared with other, usually overcrowded ancient sites, and gives the visitor a chance to admire some of the most magnificent monuments of the African continent in peaceful solitude. Spending a night in the desert under the beautiful southern sky, near pyramids built centuries ago for the powerful kings of Kush, is an experience without compare. 🌐

Krzysztof Grzymski, an archeologist, is associate curator of the Egyptian Department of the Royal Ontario Museum in Toronto.

MUSEUM OF FINE ARTS, BOSTON

T. KENDALL/MUSEUM OF FINE ARTS, BOSTON

Hajj Hamadi Ben Ezzedine peered through his heavy glasses at a crimson cap, or *chechia*, that he had crafted just as his Andalusian ancestors had. He smiled when his visitors were surprised to learn that, like the rest of his traditional Tunisian costume of *camise*, *farnlah* and *jibbah* – shirt, vest and long outer garment – his distinctive red felt cap had originated in southern Spain.

"This is actually Andalusian," Ben Ezzedine said from behind his work table. Respectfully, he raised the downy scarlet hat in his hands. "My forefathers brought their *chechia* trade with them when they left Spain."

The traditional *chechia*, a distant cousin of the European beret, is just one example of how Andalusian Arabs, fleeing the harsh aftershocks of the Spanish Christian *reconquista*, have transformed even the most prosaic aspects of Tunisian life over the past 500 years. Their contribution to Tunisian culture is so great that it is almost impossible to picture how Tunisians ate, dressed or entertained themselves before their brethren from the West sailed into the Gulf of Tunis.

The proud Andalusians who came to Tunisia worked hard to retain their cultural identity, according to University of Tunis Professor Abdejelil Temimi, an internationally recognized expert on Andalusian history. Urban Andalusians from such cities as Granada, Cordoba, Seville and Valencia carved out an Andalusian niche amidst the bustle of Tunis. A whole quarter of the Tunisian capital, near its ancient medina, is still called Zuqaq al-Andalus – literally "Andalusia Alley," but referring to the entire surrounding community.

Other Morisco families built whole new cities within a day's journey of Tunis, such as Sidi Bou Said, Ariana, Zaghouan and Galaat al-Andalus. These Andalusian towns were near the cosmopolitan hub of Tunis, yet were still distant, and distinct, enough to preserve their founders' Moorish identity for centuries.

Meanwhile, Andalusian farmers and plantation owners, longing for their fertile lands left behind on Spanish hillsides, searched for the corners of Tunisia most like home. Many put down roots and prospered along the rolling green banks of the winding Medjerda River northwest of

EXILES FROM ANDALUSIA

Andalusians, also called Moors or Moriscos, were Arabs who presided over a rich and unparalleled fusion of Islamic, Christian and Jewish civilizations in Spain for more than half a millennium (See *Aramco World*, September-October 1976, May-June 1982). But by 1492 the spectacular social and political ferment of Andalusian civilization had gone flat. The Christian Spaniards, under King Ferdinand and Queen Isabella, wrested political control of the Iberian Peninsula from the Arabs.

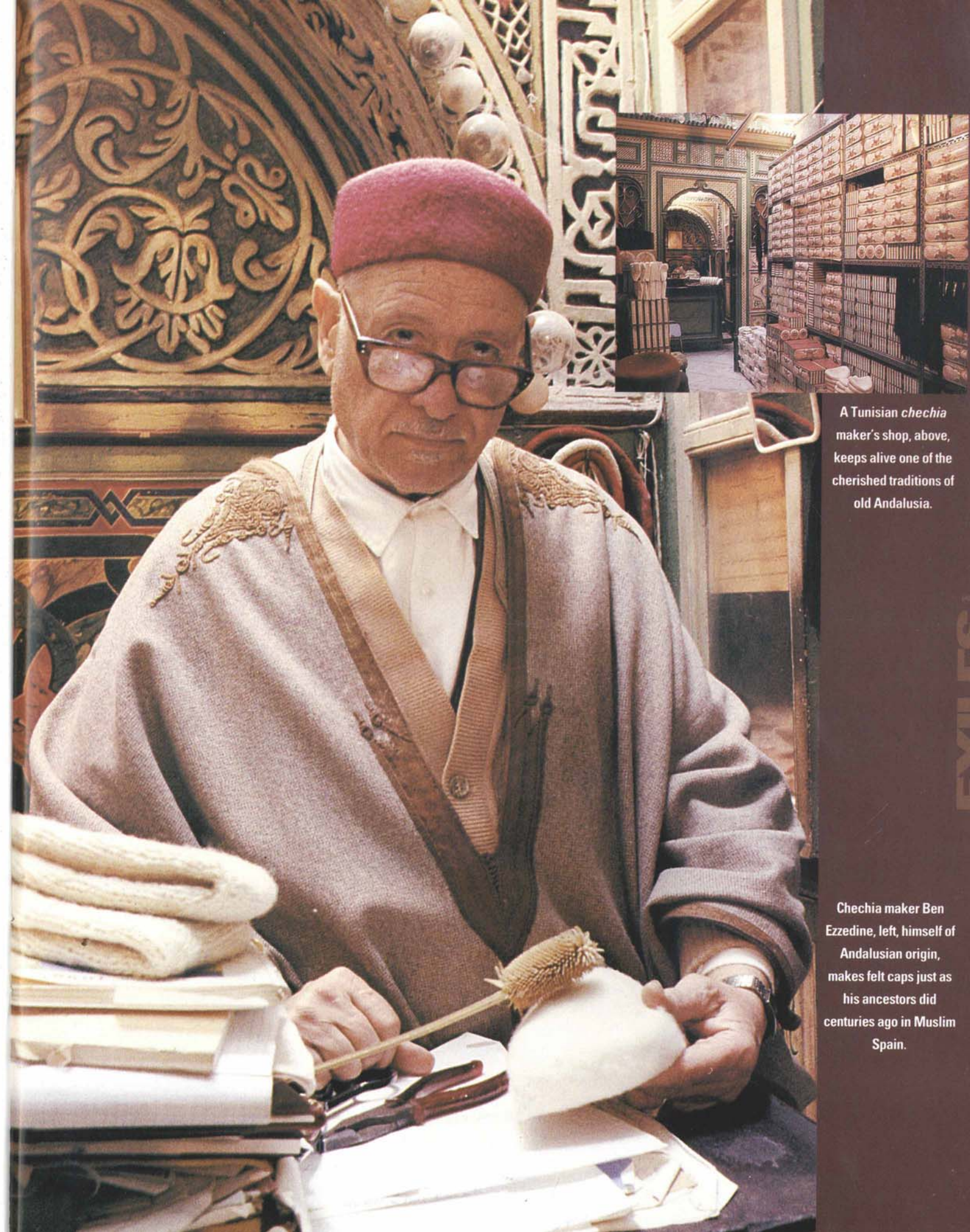
In the next two centuries life grew increasingly repressive for the dwindling Arab population of Spain. After forbidding the practice of Islam, the Christians eventually expelled everyone of Arab descent. Waves of Moriscos fled to France, the eastern provinces of the Ottoman Empire, or North Africa. Scholars estimate that by the 17th century, well over 100,000 Andalusian Moors reached the shores of Tunisia.

Tunis. Other farming families moved southeast from Tunis to the orchard-carpeted Cap Bon peninsula.

Even today, Andalusian towns like Testour and Sloughia in the Medjerda Valley, or Soliman, Menzel Bou Zelfa and Grombalia in the Cap Bon region, feature the pleasing blend of Spanish and Arab architecture so unique to Andalusian tastes. In those towns one finds the proud descendants of the original immigrants from Spain as well.

Streets in modern Soliman and Testour are still named for old Andalusian cities, such as Rue Grenade and Rue Valencia. In Tunis and in many Morisco towns, one can find a Rue des Andaloux, or streets named for important families, such as Rue BenAicha in Soliman.

"It was very rare for Andalusians to marry 'outsiders,' that is, Arabs not of the same origin. This is one of the biggest



A Tunisian *chechia* maker's shop, above, keeps alive one of the cherished traditions of old Andalusia.

Chechia maker Ben Ezzedine, left, himself of Andalusian origin, makes felt caps just as his ancestors did centuries ago in Muslim Spain.



A neo-Andalusian style house in Soliman, where streets bear names like "Rue Grenade."

reasons so much of their heritage still exists today," said Professor Temimi, the founder and director of the *Centre d'Etudes et de Recherches Ottomanes, Morisques, de Documentation et d'Information* in Zaghouan. The indefatigable professor is among the first Tunisian scholars to undertake a systematic study of the country's Andalusian traditions. (See "The Independent Scholar," page 14.)

Andalusian and Tunisian architecture share their basic cube-like shape and a fondness for whitewashed stucco and inner courtyards. But to soften the sternness of traditional Arab construction, the Andalusians added elegant touches found in their former homes: courtyard fountains, crenelated facades, sloping tile roofs, domed cupolas and stubby turrets.

The Andalusians were also fond of attractive and practical wood-lattice windows jutting out from the stark white exterior walls: Even the hottest days are more bearable when large windows funnel cooling breezes to residents inside. At the same time the shady wooden grills ensure the occupants' privacy from curious passersby.

Local mosques are an easy way to track Andalusian influence in Tunisian towns. For example, Testour's 300-year-old mosque boasts a richly patterned minaret with tooth-like crenelations and surprisingly well-preserved tile work. In the last decade Soliman has completely restored its Moorish mosque, replacing crumbling tiles and sagging carvings with new materials in traditional designs.



Andalusian doors, like this one in Sidi Bou Said, reflect the strong Moorish influence in Tunisia.

Tunisia's most popular decorative arts are ceramic tile, stone carving or pottery in bold colors and complex geometric patterns borrowed from old Andalusian designs. One of Tunisia's most prestigious and successful ceramic companies, Al Kharraz of Nabeul, is owned by descendants of an enterprising Andalusian craftsman who first fired his kiln three centuries ago. Outside Nabeul, Dar Chabaane's stone carvers still chisel much-prized honeycomb patterns in chalky limestone, an art form the Andalusians called *naqsh hadida*, or carving with chisel.

Meanwhile, traditional Andalusian music, called *ma'louf*, has so deeply enriched Tunisian music that most of the country's non-Bedouin traditional songs today have Andalusian roots. Andalusian songs often poignantly recall the lush Spanish countryside and the Moriscos' longing for home, as in this fragment from a traditional ballad sung all across Tunisia:

May rain lavishly sprinkle you as it showers!

Oh, my time of love in Andalusia:

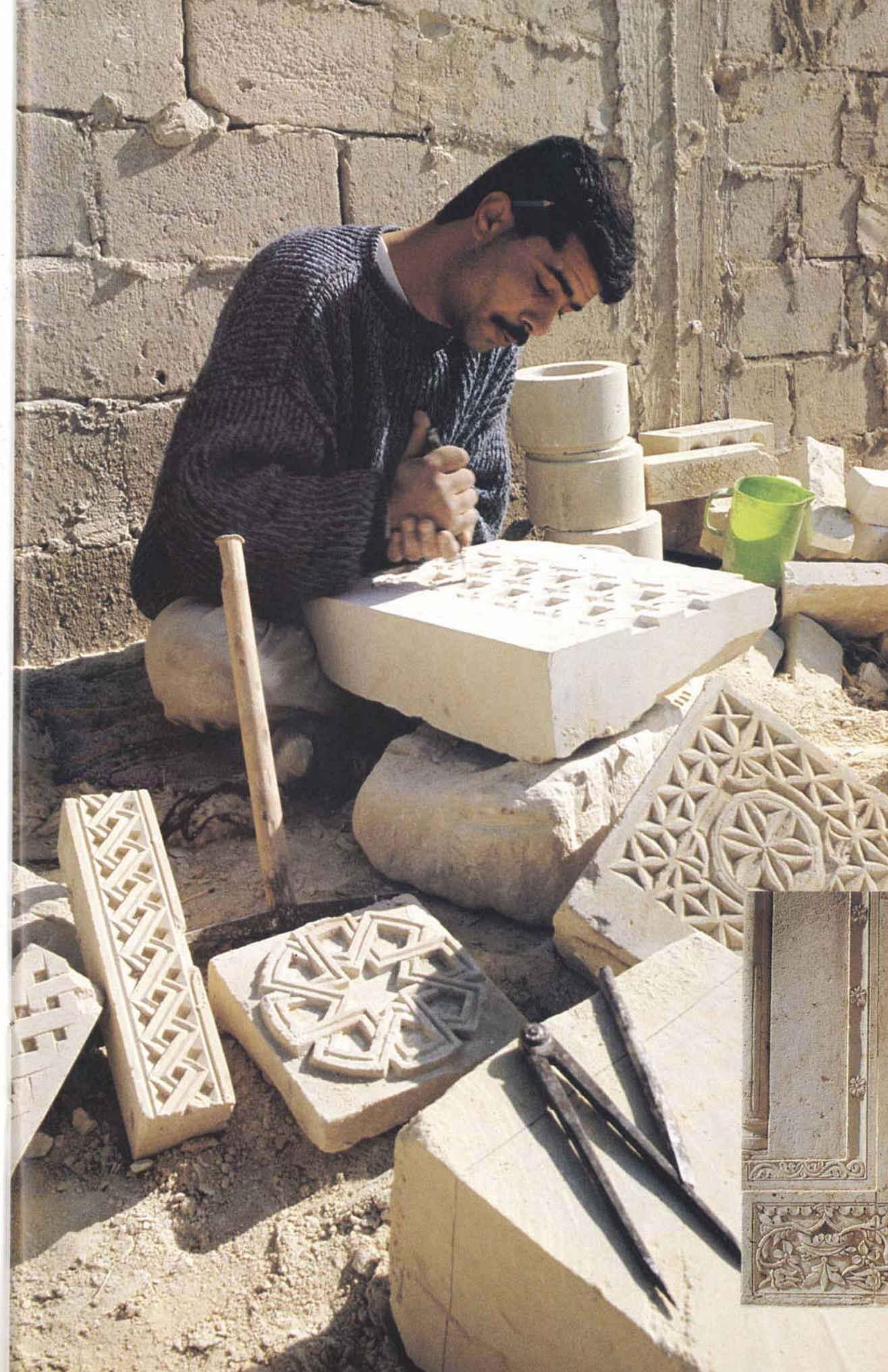
Our time together was just a sleeper's dream

Or a secretly grasped moment.

Despite the inroads of Western rock-and-roll on Tunisian culture, the *ma'louf* remains very popular among Tunisians of all ages. In a popular cliffside café overlooking the Mediterranean at Sidi Bou Said, a group of exuberant high-school and college students gather to sing *ma'louf* songs and sip cups of tea in the deepening twilight of a spring afternoon. Led by an expert 17-year-old *'ud* player, the group gathers regularly every Saturday afternoon. "We do it because we like it," explains the musician.

It is fitting that the group should gather in Sidi Bou Said: Not even two kilometers – just over a mile – north of Carthage, Sidi Bou Said is one of the best preserved of Tunisia's Andalusian towns. The town was a prime location by Andalusian standards: Perched on dizzying heights overlooking the Gulf of Tunis, it offered cooling breezes, spectacular views, steep elevation and a ready supply of fresh water for the fountains in every Andalusian courtyard.

Today Sidi Bou Said serves as a monument to Andalusian style and elegance. Huge, cerulean-blue arched doors bear heavy black studs ecumenically patterned with crescents, crosses, and six-pointed stars. In its quiet, narrow side-streets, tiled benches built into the whitewashed walls beckon the weary to stop and enjoy a sheltered rest from the bleaching sun. And



Stone carver Mohammed Ben Ali of Dar Chabaane chisels Andalusian honeycomb patterns in Tunisian limestone.

A carved stone door frame in Sidi Bou Said echoes the style of Arab Spain. The cliff-top village, founded by Moriscos, is one of the best preserved of Tunisia's Andalusian towns.



Hunkered against Tunisia's jagged Zaghouan Mountain, historian Abdejelil Temimi's silver-domed center for Andalusian and Ottoman Studies is proof of his independence and perseverance.

Officially named Le Centre d'Etudes et de Recherches Ottomanes, Morisques, de Documentation et d'Information, it "is the only institute of its kind in the world," according to Temimi, who used his own money to pay for much of the 1100-square-meter (12,000-square-foot) building.

A professor of contemporary history at the University of Tunis and a recognized expert on Ottoman and Andalusian studies, Temimi is convinced that future scholarship and research must come from private institutions. "By staying independent and outside bureaucracies, these [research centers] can be more productive and will encourage more lively intellectual exchanges among scholars from all over the world," Temimi said in a recent interview.

Nestled in a green meadow about 60 kilometers (37 miles) from Tunis, the multi-domed white stucco building is a blend of futuristic and traditional Arab features. And despite the hushed serenity of the center's soaring interiors, it is clear that scholarship and ideas are lively, almost entrepreneurial, pursuits for its founder.

From his comfortable office, Temimi nods to his visitors as he speaks into a cordless phone. Sporting jeans, a crew-neck sweater and an easy smile, he darts from his desk to his bookshelves and back again, says a quick goodbye and turns to welcome his guests.



Silver domes mark Temimi's research center in Zaghouan. The building itself blends futuristic and traditional Arab features.

He has greeted a stream of scholars, diplomats and dignitaries from the US and Europe – as well as Saudi Arabia, Morocco, Syria and Egypt – since the center, still under construction, was started about six years ago. Its library was dedicated in 1989. While it focuses on Ottoman and Morisco history, the institute's third mission is to serve as a center for library and information sciences in the Arab world as well – a broad mission that reflects the breadth of Temimi's own polymath background.

Fluent in Arabic, French, Turkish, Spanish and English, Temimi modestly bills himself as "a historian with an affinity for library science," but his résumé reveals a far more profound and global education. After earning a bachelor's degree at the University of Baghdad in the 1960's, he studied Turkish language and Ottoman history in Istanbul and at the University of London before skipping over to America to earn his Master of Library Science degree at the University of Pittsburgh.

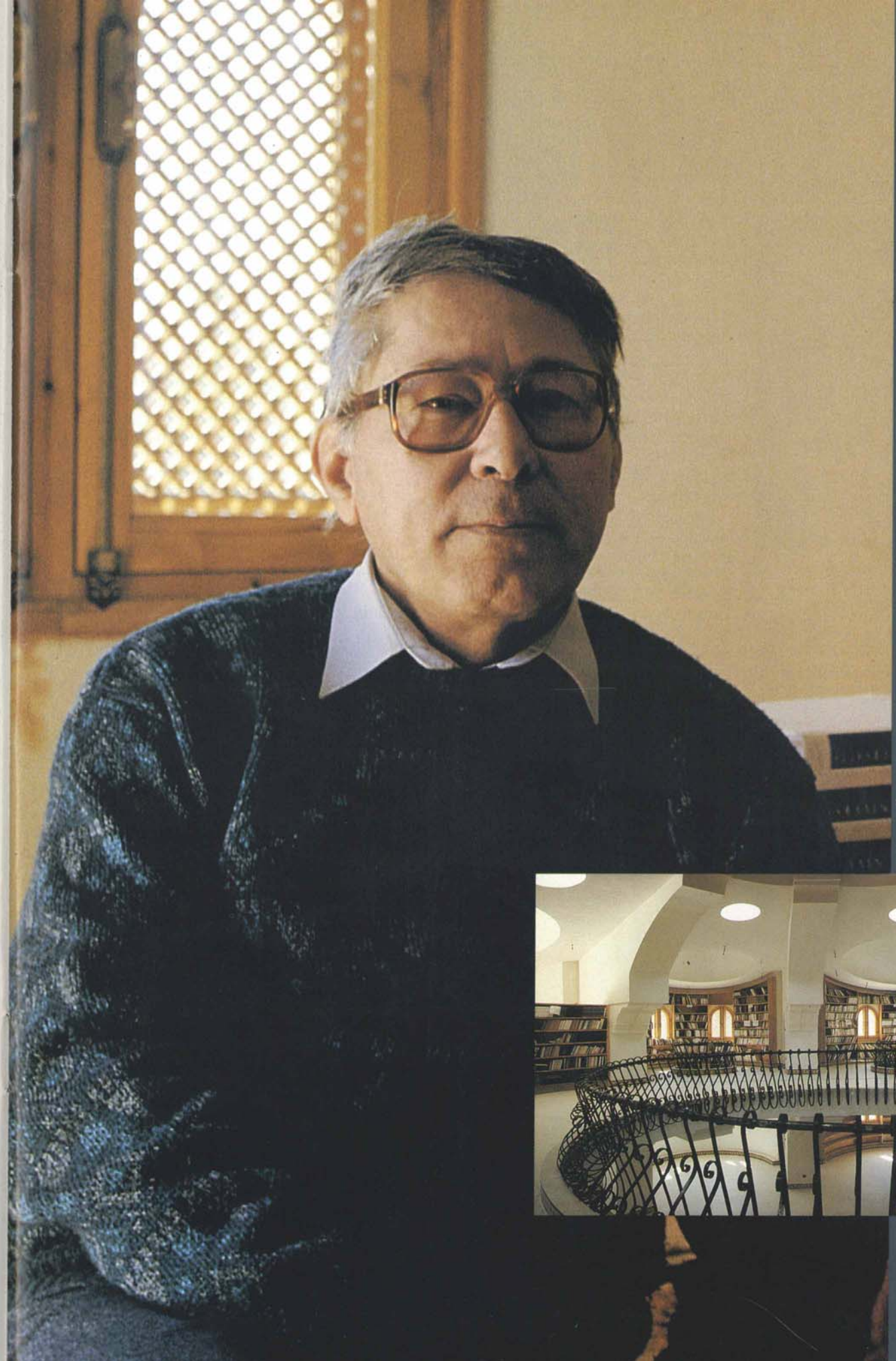
In 1970 Temimi completed a doctorat d'état in history from the University of Aix-en-Provence (today the University of Aix-Marseille III) and became professor of contemporary history at the University of Tunis, where he's been ever since.

Although the Kairouan-born Temimi is not Andalusian himself, he became fascinated with the enormous social, economic, and political impact the Andalusians had all over the Arab world, and grew frustrated that no institute for Ottoman or Andalusian studies existed in the region. He decided to build one himself. After selling his own property to finance the venture, Temimi picked a site for his building outside Zaghouan, a town founded by Andalusian immigrants centuries ago.

Temimi can now add certified skills as an organizer and scholarly fund-raiser to his résumé. "We have had a great deal of interest and support from many countries in the Arab world," he says. "Saudi Arabia, for example, has helped us continue with our plan. But we keep hoping to attract more support from all over, including the United States."

Temimi has hired four staff members to manage his enormous correspondence and pinch-hit as assistant researchers. "But soon I will hire permanent staff for research and to produce the centers' publications," he says. Under his guidance, the center has sponsored several international conferences on Andalusian or Ottoman history and has published a prodigious quantity of conference notes and proceedings – all part of the work Temimi does in the five days a week he spends at the center. He teaches on Saturdays at the University of Tunis.

"It is a demanding enterprise, this labor of love," he says.



Professor Temimi, a versatile scholar and intellectual entrepreneur, is a dominant figure in Andalusian studies.

Inside Temimi's center in Zaghouan, hushed serenity coexists with a lively interchange of ideas and scholarship.





The tiled walls of a Tunisian parlor, now a banquet room, capture the flavor of old Andalusian designs.

The Valencia orange trees of Cap Bon mark it as an area where many expelled Moors settled.



tilled courtyards and entrances, with their riot of color and pattern, break the blank monotony of whitewashed walls.

Cap Bon, another area favored by the Andalusian immigrants, boasts rows and rows of leafy Valencia orange trees, heavy with ripening fruit, and spidery apricot trees – both fruits that were cultivated in Spain centuries ago. Northern Tunisia also features a patchwork of almond orchards, producing one of the country's most popular snack foods.

The whole country is fragrant with jasmine: from shaded city gardens to rural meadows and roadsides, and even to the tiled balconies of suburban apartments. And of course there's the prickly fig, a huge sprawling cactus making crooked stitches in the bumpy quilt of the Tunisian landscape. All these plants did not exist in Tunis before the Spanish Moors brought them as poignant reminders of their paradise lost.

But beyond such charms, the Andalusian touch reaches past the rural Tunisian landscape and to the very dinner table. Couscous, Tunisia's national dish, owes much of its character to Andalusian tastes and farming skills. The tomatoes on which its distinctive sauce is based, and the potatoes usually included in it, are both native to the Americas and were unknown to Europe or the East before 1492. Having savored the New World delicacies brought back by Spanish explorers, the Andalusians wasted no time learning to cultivate and enjoy them, and brought them along to Tunisia in the 16th century.

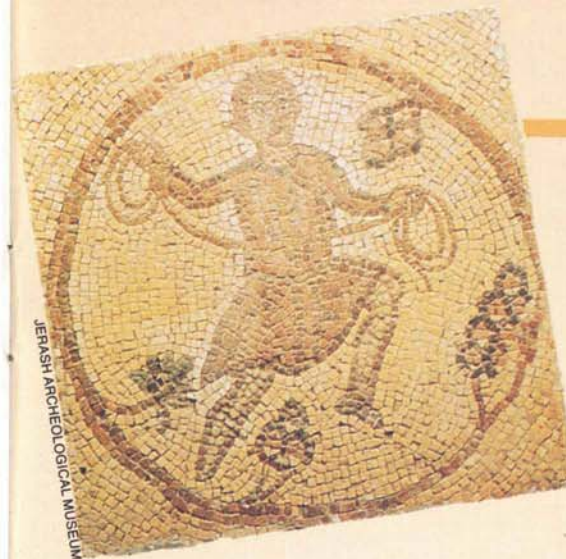
Even the fiery spiciness of Tunisian couscous, *chakchouka*, *harissa* and *merguez* was made possible by Andalusian farmers who introduced an astonishing assortment of New World peppers and chilies, along with other seasonings, into the local diet. And no Tunisian holiday, wedding or celebration would be complete without delicately flavored pastries such as *kaak warqa*, *tagine louz* and *kaaber*. The texture, shape and taste of these sugar, almond and butter confections are so favored by the Tunisian sweet tooth they have become traditional treats – and their relationship to the Andalusian sweets of today is clear (See *Aramco World*, September-October 1989).

The last major influx of Andalusian immigrants arrived more than two centuries ago. Yet their descendants are still so steeped in the Andalusian heritage that it sometimes seems the settlers have only been there for a generation. Most Tunisians of Andalusian origin can pinpoint which part of Spain their ancestors came from, as well as when they arrived in Tunisia, and many of the Spanish-sounding family names, such as Pasquale, Blanco, Giorgi or Morishco, have resisted assimilation into more Arabic forms until today.

One young man from Soliman described the special importance of a traditional Andalusian sausage called *kwaris* to his family. He told how fleeing ancestors slipped their jewels into the plump sausage casings to keep them safe from thieves and avaricious boat captains, who often preyed on the Andalusian refugees. His Andalusian ancestors were able to purchase choice land in their new country, thanks to those few jewels, he said – and he remembered the story because every year at Eid al-Kabir, or 'Id al-Adha, the greatest Muslim feast, his grandfather recited it as the family ate the traditional *kwaris* sausage.

Meanwhile, the Tunisian government has begun to take a more active role in preserving worthwhile specimens of Andalusian architecture. For example, authorities say, plans are in the works to restore the former home of Habiba M'Sika, a wealthy Testour widow of Andalusian descent. Once restoration is complete, the building, resplendent with Andalusian tiles and marble, will serve as a cultural center for the whole town, perhaps signaling yet another golden age for a remarkable people whose legacy outlived the greatest of calamities five hundred years ago. ☉

Susan T. Rivers, a photojournalist from Princeton, New Jersey, lived in Tunisia and writes frequently about the Arab world. She gratefully thanks Hedi BenAicha and Oussama Romdhani for their assistance with this article.



Mosaic of hunter with lasso from Jerash chapel

Jordan: *Treasures from an Ancient Land.* Petra, "the rose-red city half as old as Time," and Jerash, the finest surviving example of a provincial Roman city, provide most of the artifacts for the first-ever exhibition in the United Kingdom of the art and archeology of Jordan. This presentation at the Liverpool Museum brings together more than 600 of the finest objects from top collections in Jordan, France and Britain. Highlights include ghostly, 8500-year-old plaster statues from Ain Ghazal and intricate mosaics from the floors of early churches. The exhibition shows ancient Jordan as a region with a separate artistic identity. "It is an art of synthesis encompassing the influences of countries like Egypt and Mesopotamia. But for all that, its art is original," says Dr. Piotr Bienkowski, Liverpool Museum curator of Egyptian and Near Eastern antiquities, who coordinated the exhibition with the help of Jordan. Liverpool Museum, through November 3, 1991.

The Afghan Folio: Luke Powell's impressive photographs of Afghanistan in the 1970's displayed as dye-transfer prints (See *Aramco World*, May-June 1991). Gallery at Kimball Bourgault, Boston, through July 31, 1991; Dickenson College's Trout Gallery, Carlisle, Pennsylvania, through September 9, 1991; Meridian [Mississippi] Community College's Castel Gallery, August 25 through September 29, 1991; Washington County Museum of Fine Arts, Hagerstown, Maryland, September 1 through 29, 1991.

The Coroplast's Art: *Greek Terracottas of the Hellenistic World.* This exhibition features over 50 terracotta artworks illustrating the everyday life and spiritual expression of Hellenized communities in the Mediterranean, Asia Minor, Egypt and even the island of Failaka in the Arabian Gulf. Harvard University's Arthur M. Sackler Museum, Cambridge, Massachusetts, through July 28, 1991.

Saudi Arabia: *Yesterday and Today*, having completed its highly acclaimed US run, has moved on to Canada. The exhibition portrays the kingdom's land and people, past and present, and features a live *suq*, traditional foods and dances, artifacts and a laser slide show. Palais des Congrès, Montreal, through July 28, 1991; Ontario Government Building, Toronto, August 11 through September 2, 1991.

Sassanian Seals: *Symbols, Status and Technology in Ancient Iran.* These miniature gemstone intaglio sculptures, crafted in Sassanian Persia from AD 224 to 651, were used to seal documents and goods. University of California at Berkeley's Lowie Museum of Anthropology, through August 11, 1991.

The Sculpture of Indonesia features some 135 masterpieces from the classical 8th to 15th centuries of the world's most populous Muslim country. Metropolitan Museum of Art, New York, through August 18, 1991; Asian Art Museum of San Francisco, September 28, 1991, through January 5, 1992.

EVENTS & EXHIBITIONS

Mirror of Empire: *Dutch Marine Art of the Seventeenth Century* includes paintings and charts reflecting Dutch trade and colonization efforts in parts of the Islamic world. Los Angeles County Museum of Art, Los Angeles, through September 1, 1991.

Court Arts of Indonesia. Some 160 works of art dating from the eighth to the 20th century reflect the 1000-year traditions of the royal courts of Indonesia. The Smithsonian Institution's Arthur M. Sackler Gallery, Washington, D.C., through September 2, 1991; Natural History Museum of Los Angeles, Los Angeles, October 19, 1991, through January 5, 1992.

A Diplomat's Orient. French diplomat Jacques d'Aumale collected more than 1000 costumes and pieces of jewelry from the Near and Far East while posted in Istanbul, Cairo and Jerusalem from 1914 to 1938. Musée de l'Homme, Paris, through September 2, 1991.

The Arts of the Persian World: *The A. Soudavar Collection.* Some 100 works trace the evolution of Persian art and its impact on other cultures from prehistoric times through the 19th century. Los Angeles County Museum of Art, Los Angeles, from September 5 through November 10, 1991.

Dragons, Heroes & Lovers: *Revival of Manuscript Painting Traditions in Uzbekistan and Iran* features the work of two living master-artists, Shah Mahmud Muhamedjanov of Tashkent and Mohammad Bagher Aghamiri of Tehran. Drawing on themes from classical Persian literature, both artists have revived painting techniques forgotten in this century in their own societies. Wing Luke Asian Museum, Seattle, September 5 through October 20, 1991.

The Sigmund Freud Antiquities: *Fragments from a Buried Past.* On display are 65 Greek, Etruscan, Roman, Egyptian and Asian artifacts from the Sigmund Freud collection in London. University of Houston's Blaffer Gallery, September 7 through October 20, 1991; Jewish Museum, New York, November 7, 1991, through February 18, 1992.

The Here and the Hereafter: *Images of Paradise in Islamic Art.* An exhibition of more than 50 carefully selected artworks, demonstrating the cultural importance of the rich and complex Islamic vision of the afterlife. The Asia Society Galleries, New York, through September 8, 1991; Bowdoin College Museum of Art, Brunswick, Maine, September 26 through December 5, 1991.

Yemen: *A Culture of Builders* takes an artistic look at Yemeni architecture. University of New Mexico School of Architecture & Planning, Albuquerque, September 9 through October 18, 1991; Ball State University College of Architecture & Planning, Muncie, Indiana, November 4 through December 13, 1991.

An Old Turkish House. Visitors to the Textile Museum will experience the ambience of a late Ottoman house in 18th/19th-century Istanbul. The Textile Museum, Washington, D.C., September 13, 1991, through February 16, 1992.

Traditional Crafts of Saudi Arabia. The John Topham collection of weavings, jewelry, a Bedouin tent, and metal, wooden and leather handicrafts. High Museum at Georgia-Pacific Center, Atlanta, through September 13, 1991.

The Art of Asia: *Chinese, Indian and Islamic Painting and Calligraphy.* The Islamic sector features examples of the written word, the highest Islamic art form, and small elegant paintings from books and art albums. Paintings from India reflect Mogul rule and Muslim dominance of India in the early 16th century. Cincinnati Art Museum, through September 15, 1991.

Forty Indian Paintings from the Collection of Howard Hodgkin. These paintings and drawings from India depict village and court life in the Subcontinent's three major regional styles: Rajput, Deccani and Mogul. The Smithsonian's Arthur M. Sackler Gallery, Washington, D.C., September 15, 1991, through January 12, 1992.

Islamic Art and Patronage: *Selections from Kuwait.* More than 100 masterworks of Islamic art of the 8th to 18th centuries, drawn from one of the world's foremost private collections. Emory University Museum of Art & Archeology, Atlanta, through September 22, 1991; Virginia Museum of Fine Arts, Richmond, November 5, 1991, through January 19, 1992.

Sifting the Sands of Time: *The Oriental Institute and the Ancient Near East.* This special exhibition traces the history of the University of Chicago's Oriental Institute, a leader in ancient Near Eastern research and scholarship. University of Chicago's Oriental Institute Museum, Chicago, October 6, 1991, through December 31, 1992.

Palestinian Costume. Richly ornamented traditional costumes, headdresses and jewelry of Palestinian villagers and Bedouins. Photographs provide context. Museum of Mankind, London, through October 1991.

Arms and Armor Galleries Reopening. The first major facelift in 30 years for the Metropolitan Museum of Art's permanent arms and armor collection, featuring about 1000 objects of Islamic, European, American and Japanese origin. Metropolitan Museum of Art, New York, from November 1, 1991 (postponed from May 11, 1991).

Crushed Lapis and Burnished Gold: *The Art of Illumination* explores the embellishment of manuscript pages with designs in gold, lapis lazuli and other vibrant colors, an integral part of book production in the Muslim world since the ninth century. The Smithsonian's Arthur M. Sackler Gallery, Washington, D.C., through December 8, 1991.

Armenian Art: 3000 Years of History. A panoramic look at the artistic achievements of the Armenian people over the centuries. The Armenian Museum, Paris, Thursdays and Sundays through December 31, 1991.

Silk: Legend, Power and Reality. This exhibition, a Spanish contribution to UNESCO's "Silk Roads, Roads of Dialogue" program, acknowledges the important role of the Arabs in introducing silk to Western Europe via Andalusia in Spain. Museu Textil, Terrassa, Spain, through December 31, 1991.

Beyond the Pyramids: Geometry and Design in the Carpets of Egypt, 1450-1750. The Textile Museum's unparalleled but rarely seen collection of classical Egyptian carpets is featured in an exhibition exploring aspects of geometry and design in the Mamluk and Ottoman periods. Textile Museum, Washington, D.C., through February 16, 1992.

Pre-Islamic Arabia. A preview of pre-Islamic antiquities to be exhibited later at the Louvre. Featured are pre-Islamic artworks from Yemen, alabaster sculptures, portraits from Palmyra, Imru al-Qays epitaphs, ceramics, etc. Institut du Monde Arabe, Paris, until 1993.

Nomads and Nobility: Art From the Ancient Near East. Spectacular artifacts from the pre-Islamic Middle East, primarily gold, silver and bronze, but including ivory and ceramic objects. The Smithsonian's Arthur M. Sackler Gallery, Washington, D.C., continuing indefinitely.

The Aramco Exhibit. Centered on the Arab-Islamic technical heritage, this permanent interactive, "learn-by-doing" scientific exhibit relates the historical background to today's petroleum exploration, production and transportation. Dhahran, Saudi Arabia.

Information is correct at press time, but please reconfirm dates and times before traveling. Readers are welcome to submit information for possible inclusion in this listing.



WORLD MUSICIAN



The teeming, neon-lit streets of Tokyo are a long way from the mud-walled village he once called home along the Nubian reach of the Nile. But for virtuoso 'ud player, composer and ethnomusicologist Hamza El Din, the rhythms and melodies he first heard as a child have remained with him on the many stops in his life's musical journey.

Perhaps it isn't unusual that, after living in Egypt, Italy and the United States, Hamza would choose Japan as his home for the past ten years. There he has found a receptive and knowledgeable audience, recording contracts, lectureships and, most important, an opportunity to play with the masters of the Japanese lute, drum and bamboo flute. "The traditional music of Japan," he says, "has taught me to compose and play my own work with more precision and concentration."

Hamza is not a strict traditionalist. For San Francisco's avant-garde Kronos Quartet, he recently rescored for Western string instruments his epic piece "Escalay" – the word means "water wheel" in Nubian – which he originally composed for voice, frame drum and solo 'ud, or Arab lute. His long association with rock percussionist Mickey Hart of The Grateful Dead resulted in a recording collaboration called "Planet Drum."

Hamza's itinerary through the world's musical traditions can make the head spin. In Cairo he studied music theory and 'ud performance at the Arab Institute of Music; in Rome he learned classical guitar and western harmonics at the Academia di Santa Cecilia; and in Greenwich village he played for coffeehouse audiences at the height of the 1960's folk music revival.

"But my best lesson ever," Hamza notes, "was to see Umm Kalthoum sing in concert."

Wherever Hamza performed, he also listened and learned. "When I played at the Newport Folk Festival in 1964, and at the Woodstock Festival in 1969, I was sure that very few

people understood me. But because I saw they tried so hard to listen, I realized I too must try hard to understand their music. I opened my mind to whatever was good."

His music nonetheless remains unmistakably Nubian. Even on his new compact disc, "Nubiana Suite," recorded live in Tokyo with Japanese *wadaiko* and *shakuhachi* accompanists, Hamza's soaring lyrics, sung in the ancient Nubian language, and his droning 'ud hauntingly evoke the spirit of his homeland.

Hamza's first memories are of his culture's indigenous rhythms: drum-beating, hand-clapping and chanting. Every event in Nubia, mundane or exceptional, is remembered by its musical signature. "Once a fire broke out," he recalls, "and we all formed a human chain from the river to the village. Even in such a moment of crisis, we sang and clapped in order to keep the water buckets passing quickly back and forth."

The fact that a Nubian musician can prosper in Japan should be considered in light of the popularity of the "world music" sound all over the globe. Hamza is quite satisfied to be part of this movement. "I don't think I play 'ethnic' music from Nubia any more than a symphony orchestra plays 'ethnic' music from Europe. What I play is the music of the world." 🌐

Author and filmmaker Louis Werner studied at Princeton and John Hopkins SAIS, and lives in New York.

WRITTEN BY LOUIS WERNER
PHOTOGRAPHED BY JACK NADELLE



ON CULTURE'S LOOM

The village was vibrant with an expectant air of victory. Under the watchful eye of the clan chieftain, two men were testing the keen edges of knives they had just sharpened on a nearby stone. Down at the stream, three boys were scrubbing a young – and very hungry – nursing baby water buffalo that had been deliberately kept from its mother for three days. On this day of legend in the mid-14th century, a buffalo fight would settle the question of who should rule the central highlands of the Indonesian island of Sumatra: local residents or invading armies from Java.

When the invaders had first appeared a few days earlier, the village leader proposed to the Javanese a way to save the lives of brave young warriors on both sides. He suggested that the opponents agree to abide by the outcome of a water-buffalo fight: If the local buffalo won, the Javanese would withdraw; if the invaders' buffalo won, the Javanese would become rulers of the rich central Sumatran region.

As the hour of battle approached, the invaders brought their combatant, a huge male buffalo, to the arena at the edge of the village. Then the defenders appeared. They had firmly tied the newly sharpened knives, pointed upward, on each side of their hungry baby buffalo's head. The invaders, overlooking the significance of the knives, greeted the puny adversary with hysterical laughter. But the laughter was soon stilled. When the young buffalo sighted the adult, he rushed forward, expecting food at long last. As he raised his head to nurse, the stiletto-sharp knives pierced the belly of the giant buffalo, killing it.

Since that fateful day, this group of Sumatrans has been called the *Minang* (winning) *kabau* (water buffalo) people. According to the legend, one horn of the losing buffalo was entrusted to the custody of the village of Minangkabau, where it and the knife-sharpening stone are still proudly displayed by the current *pangulu*, or village chieftain.

Who are these inventive Minangkabau people? From where did they come? Since they had no written language before the 16th century, the Minangkabau's record of their own history is oral, and their origins are shrouded in mystery embellished with speculation. One legendary account begins with three sons of Alexander the Great sailing east to the Land of the Sunrise. Along the way the three parted company and one, Maharaja Diraja, landed on the peak of Sumatra's Mount Merapi, then surrounded by water. When the water receded, he and his entourage descended the mountain and established the first village in what is now known as Pariangan, in west Sumatra.

Over the years villagers often gathered in groups to listen to wandering troubadours regale them with interpretations of the oft-repeated, age-old tales of the Minangkabau's origins and history. Given the freedom that a purely oral tradition allows, as tales are passed from generation to generation, these origin stories are probably a mixture of myth and reality. Tracing the Minangkabau's origins back to Alexander the Great, in the fourth century BC, can hardly be documented – yet the strongly democratic system of the Minangkabau in some respects closely resembles that of ancient Greece.

With the acceptance of Islam in the 16th century, a written language emerged. But written Arabic alone could not provide all the characters required to set the sounds of the Minangkabau language on paper, and characters from the Persian alphabet were added. This mixed alphabet was used to transcribe the Minangkabau's oral tradition into their first written history, called *Tambo* (from the Sanskrit word for origins).

According to the *Tambo*, a power struggle once arose between two half-brothers who were clan leaders, Datuk Ketemanggungan, an elitist, and Datuk Perpatih, an egalitarian. The two decided to resolve their differences by a test of strength. Datuk Perpatih took the *kris*, or dagger, from his belt and drove it halfway into a nearby stone to prove his might. Whereupon Datuk Ketemanggungan picked up a wooden stick and thrust it completely through the stone, proving his superior strength and claiming victory. A truce ensued and it was agreed that followers of each could adopt the system of administration advocated by their leader.

To this day the stabbed stone is enshrined in the village of Lima Kaum, where it stands as testimony to the truce that accepted two organizing concepts as equals: Ketemanggungan's Koto-Piliang group recognized a hierarchy of clan leaders and Perpatih's Bodi-Caniago group recognized equality among all clan leaders. Ceremonial houses and meeting houses (*balai*) of the former group have an elevated floor at each end of the house, where higher-ranking clan leaders sit during meetings. Bodi-Caniago houses are all on one level. Both social structures have endured.

A somewhat different origin and history emerges from recently discovered archeological evidence. It is now believed that ancestors of the Minangkabau migrated south from Indochina several thousand years ago, traveling by boat up the Straits of Malacca that separate Sumatra from present-day Malaysia. From the Straits, they proceeded west and north up central Sumatran rivers, finally settling in the rich fertile valleys of the central Sumatran highlands at the base of the volcanic Mount Merapi.

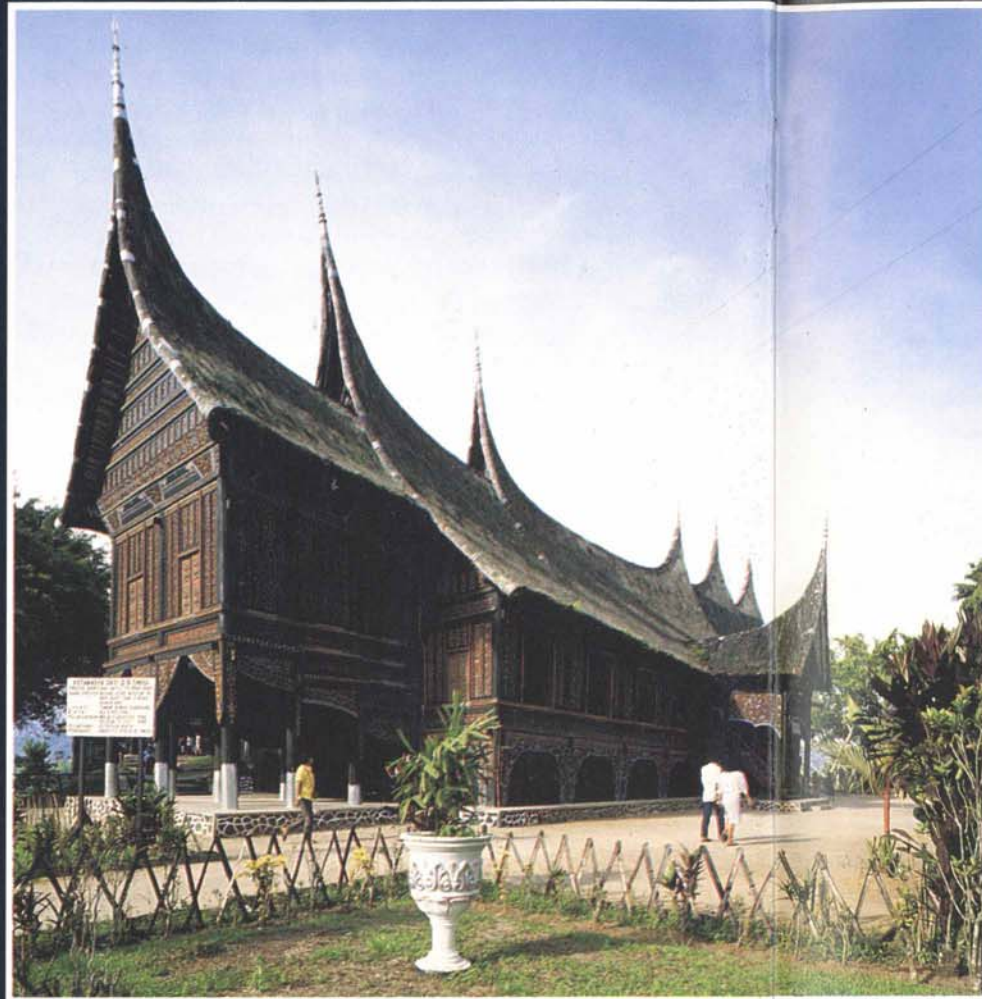
These immigrants apparently were already skilled carvers and weavers. Even today Minangkabau textile motifs bear a strong resemblance to those of the T'ai people of Laos. In addition, however, motifs seen on old carved stone menhirs and in 19th-century weavings may reflect an earlier exposure to the bronze-age Dongson culture of mainland Southeast Asia. The impact of this Indochinese culture was felt throughout the entire region of today's Indonesia. Bronze Dongson frog drums have been unearthed at many sites along the 17,000-island Indonesian archipelago.

Local deposits of gold provided an early trading commodity for the Minangkabau. Traveling down-river to the east coast of Sumatra to exchange their gold for goods and other forms of wealth, they encountered Arab, Persian and Indian traders en route through the Straits of Malacca to China, and Chinese traders on the opposite path heading west. Accordingly, the Minangkabau, shortly after the time of Christ, were probably already in contact with the rich fabric traditions of China, India and the Middle East.



Water-buffalo joust (left) recalls 14th-century battle that gave Minangkabau victory over invaders. Losing buffalo's horn (above) is a treasured trophy today.





One characteristic architectural style links 225-year-old house in Balimbiang village (above) with Bukittinggi Museum (above right), modern shopping area in Batu Sangkar (right) and silver model of traditional house in Museum (below). Far right, a Minangkabau bride in wedding regalia.



As Minangkabau society prospered and expanded, its beliefs and rules of acceptable social conduct became refined and codified into a system known as *adat*, or customary law, an important element in the codes of conduct of most Indonesian ethnic groups. But for the Minangkabau, *adat* is more than traditional law; it encompasses the whole structural system of their society. At every ceremony – birth, circumcision, marriage, thanksgiving, investiture of a leader or funeral – *adat* prescribes the ceremonial garments participants are to wear, seating arrangements for the ceremony, items of food to be served and orations to be delivered. Sumptuous ceremonial textiles richly embellished with gold and silver bring an air of majesty to these many important events in the lives of the Minangkabau.

The Minangkabau are now devoutly Muslim. Yet a keystone of their enduring *adat* is a matrilineal system in which ancestral property, such as rice paddies or traditional houses, is owned by the women and inherited by the eldest daughter. Men undertake the most physically demanding work and are responsible for maintaining and interpreting the *adat*. The Minangkabau have managed through the years to strike an acceptable balance between the teachings of Islam and their inherited traditional rules. What the visitor finds in the Minangkabau highlands today is a society grounded in the joint tenancy of religious belief and customary law.

The arts of Minangkabau society are lively, rich and steeped in tradition. Great skill and artistry are evident in carving, architecture, gold- and silversmithing, dance,

drama, music, oral traditions, literature and, not least, weaving. Walls of the majestic traditional houses (*rumah gadang*) with their pinnaced, upswept roof lines reminiscent of buffalo horns are elaborately carved and painted with *adat* sayings or with motifs that recall *adat*-related aspects of nature.

Exquisite jewelry of gold or silver filigree and granulation, part of the traditional ceremonial costume, resembles traditional Islamic jewelry of the Middle Ages. Techniques for making this precious jewelry were introduced by Ottoman metalsmiths who came to Sumatra in the 15th century or earlier. Minangkabau dances range from simple, unchoreographed general-participation dances to extremely complex and difficult ancient dances of great power. A dance of particular interest is the *pencak silat*, a round dance accompanied by song and through which the dancers practice the physical skills that constitute Minangkabau martial arts.

Perhaps the most widespread of the arts in the 19th century was weaving. Women in most villages were weavers, but not of everyday garments. Everyday clothing was usually made of cloth traded from India or imported from other areas. It was the creation of splendid, elaborate ceremonial textiles that occupied the fabled looms and taxed the skills of Minangkabau women. The splendor of these textiles produces a stunning visual impact in the long, colorful processions associated with important ceremonies.

To a casual observer, what is striking about these ceremonial garments is their sheer splendor. They are rich with gold and silver threads, colorful silks and

sophisticated, intricate motifs, expertly woven. But to the initiated, the magnificent weavings also symbolize aspects of the *adat* that still largely govern the social behavior of the highland Minangkabau. Motifs woven into men's and women's ceremonial garments, and even the structure of the garments themselves, point wearer and observer alike to the proverbs and prescripts of *adat* and to the social status of the wearer. The *pangulu*, or clan leader, may be quickly identified by his hat, his silver-headed walking stick and the silk fabric, often either Indian *patola* or Javanese *batik*, tucked around his neck or draped over his shoulder.

Married women are easily distinguished from unmarried women. Certain shoulder cloths may be worn only by married women. Some sarongs may be worn only by women who have three or more children. A particular sarong, the *lambak empat*, worn by unmarried young women of the district of Limo Pulu Koto, is bordered on the bottom with four woven metallic bands. Each band stands for a behavioral skill the ideal young woman should possess: frugality, serenity, managerial ability, wisdom. Women's ceremonial garments often depict their role in society. Family relationships are spelled out in the choice of ceremonial costume. In a Payakumbuh village wedding procession, an onlooker can easily distinguish women of the bride's family from women of the groom's family by noting which of two sarongs each participant is wearing. Family wealth may be evident from the amount and quality of gold a woman is wearing.

Perhaps the most spectacular part of her ceremonial

costume, a woman's headdress is often folded to represent the horns of the water buffalo for which the society is named. Because women own the houses, it seems appropriate that their headdresses should imitate the upswept lines of the house roofs. These headdresses that today identify the wearer as coming from the Minangkabau province of west Sumatra often go beyond that to pinpoint her specific village.

Reference to *adat* is not limited to the folds or structure of a ceremonial garment. The Minangkabau say, "Nature is our teacher," and instructional motifs woven into their ceremonial textiles frequently refer to animals or plants that are mentioned in age-old sayings or proverbs. The motif called *katupek* refers to a fist-sized rice container made of interwoven strips of coconut-palm fronds. Uncooked rice is packed into the container, which is then boiled until the individual grains blend into a soft, homogeneous mass. The frond container is peeled away as the cooked rice is eaten. *Katupek* is used especially as a ceremonial food during the *lebaran* festival ('Id al-Fitr) that marks the end of the Muslim fasting month, *bulan puaso* (Ramadan).

According to Indonesian lore, however, each constituent of *katupek* also has symbolic significance. The rice stands for material goods, the container stands for the light of faith. In Indonesia the coconut frond from which the container is made is called *janur*. *Nur*, a word of Arabic origin, means light. The *katupek*, then, is considered to be a symbol for one whose faith is strong enough to provide for all material needs. As a *katupek* is boiled, the frond container becomes stronger, just as a



Kuring, or "enclosed," motif (left) identifies textile from Batu Sangkar. Above, weaver in Pandai Sikek cooperative. Ceremonial *sirih* purse (right) bears token implements that refer to cleanliness. Weaver's daughter (far right) wears necklaces of Tibetan coral and silver-gilt Minangkabau beads.



person's faith becomes stronger and more durable as it faces and overcomes obstacles.

In textiles woven more than a century ago in the Minangkabau village of Koto Gadang, the *katupek* is represented as a large diamond that contains an X made up of two crossed bands decorated with S's. Additional small circular motifs also contained in the diamond are symbols for ceremonial rice.

Pacuak rabuang is the bamboo shoot, represented in weavings as an isosceles triangle. Bamboo has important connotations for the Minangkabau. They say that man should be like the bamboo: When it is young, it serves as a nourishing food. It is useful. When bamboo grows taller, it becomes tough and can no longer be eaten, but is helpful, serving many uses such as in scaffolding, containers, and musical instruments. Just so, when a man is young and strong and works hard, he is useful. When he becomes older, he is not as strong but is in a position to be helpful.

The bamboo motif also stands for the leaders of the community. Each of the three corners of the triangle represents one of the three leaders; the *adat* leader or *pangulu*, the religious leader or *mufti*, and the *cerdik pandai*, the intellectual or scholar. A row of "bamboo" triangles forming a decorative band across a textile is called the *paga nagari*, or village fence, representing the leaders who protect the spiritual and intellectual life of the inhabitants.

Triangle motif depicts bamboo shoots but refers to leaders who protect village society.



Itiak pulang patang is a weaving motif whose name translates literally to "ducks go home in the afternoon." The meaning is derived from the actual behavior of ducks that have spent the day swimming in the rice paddies, eating insects and fertilizing the growing rice: They waddle home in a straight line and seldom stray from it, just as a good Minangkabau seldom strays from tradition. Ducks in the rice paddies are also cited as a metaphor for another aspect of Minangkabau social behavior. Baby ducks will swim away from their mothers to explore their surroundings, but they don't swim far away and are sure to return. This activity is a model for the young Minangkabau male, who is expected to leave his motherland to explore the outside world, where he will gain knowledge and, one hopes, fortune. He is expected to bring those gains back to his motherland and reenter her society.

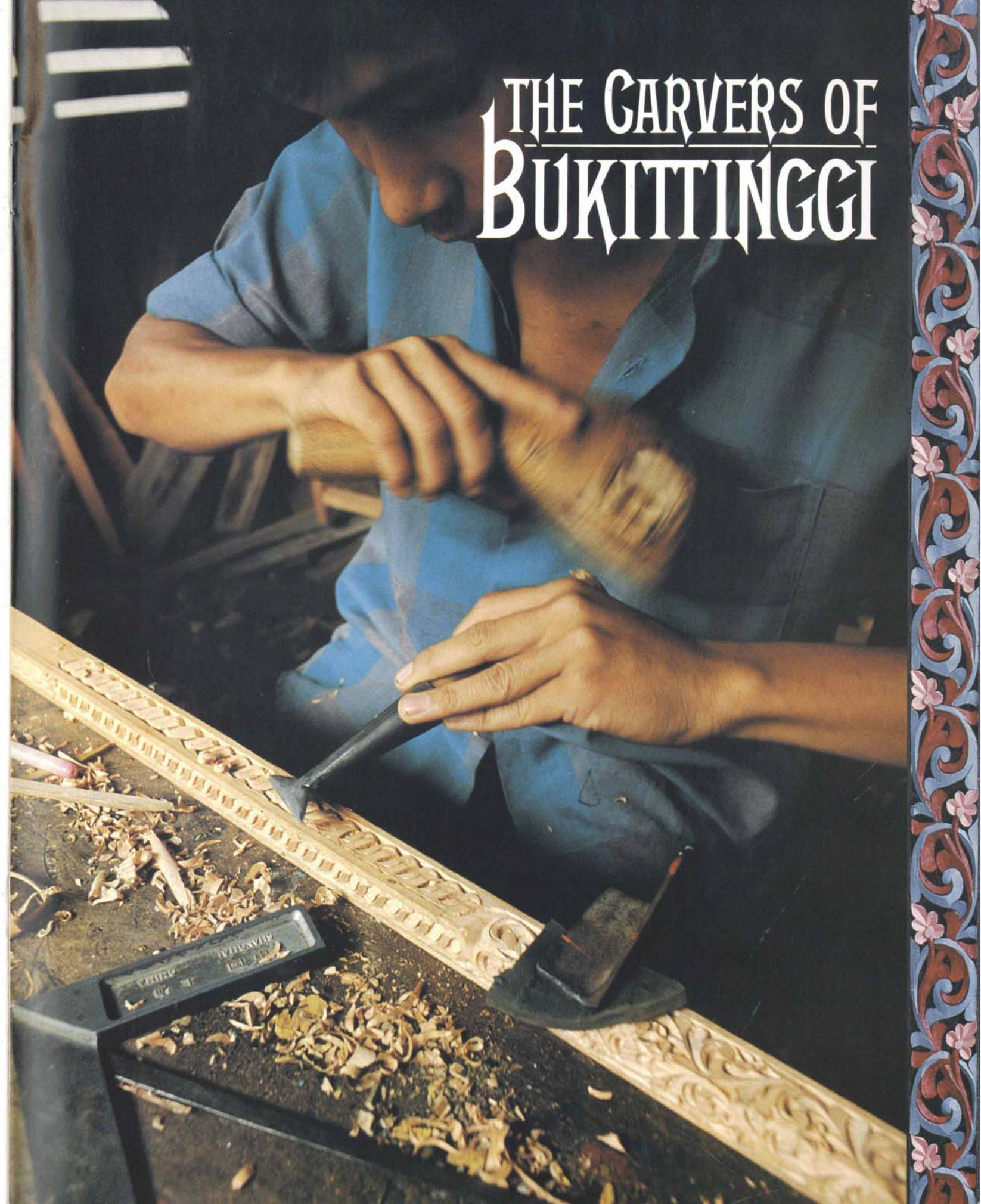
Saik kalamai is a piece of special ceremonial cake made of glutinous rice, coconut milk, and palm sugar. The motif that represents it in weaving is an individual diamond. This cake is also called *wajik*, a word derived from the Arabic *wajib* meaning obligatory, since the host is obliged to serve the cake at ceremonies. Many motifs found in Minangkabau ceremonial textiles represent such ceremonial objects. For example, individual rhomboid figures filled with four S motifs are said to represent *kipang*, a ceremonial cake made of peanuts. Four rhomboid figures arranged in a certain way to enclose a small space are called *sajamba*, a single plate from which four persons eat ceremonial food.

In the textiles embellished with these and other motifs, the Minangkabau have captured the brilliance of their tropical homeland, a region filled with blossoms of red and yellow ginger, cannas and purple and orange bougainvillea, among a myriad others. Their countryside provides great visual sweeps of fertile rice paddies that lead the eye to distant volcanic peaks. The Minangkabau have translated the majesty and sweep of these vistas to the roofs of their traditional houses, to women's headdresses, and to splendid processions that frame their major ceremonies. But perhaps a more profound majesty lies in the integrity of these people who, during their long history, have experienced colonization, occupation, industrialization and other inroads of modern civilization without diluting the essence of their culture. 🌐

Drs. John and Anne Summerfield were curators of the first American exhibition devoted to Minangkabau textiles, at the Textile Museum in Washington, D.C., and are co-curators of an expanded exhibit of Minangkabau ceremonial objects to open in September at the Santa Barbara Museum of Art.

Note: In most cases, spellings of local terms are given in the Minangkabau language rather than in the national tongue, Bahasa Indonesia.

THE CARVERS OF BUKITTINGGI





Bapak Fauzi (top) carves a scenic panel; students from a fine-arts school in Padang (above) during their 10-week stay in Pandai Sikek; the master craftsman and his tools (right) before the palace of Pagaruyung.



The world is becoming increasingly familiar with the products of Indonesia's talented artists. The beautiful batik paintings from Java, the slender wood statues from Bali and the local jewelry from Sulawesi can be found in shops in New York or Paris. Fortunately, the natural wealth and beauty of the area around the Minangkabau town of Bukittinggi allowed both time and inspiration for the development of crafts, especially weaving (See page 20), silverwork and wood-carving. Although the wood-carvers of the Minangkabau may not be as well-known as some other Indonesian artisans, their strong sense of tradition and of dedication to detail makes a fascinating story.

Nestled in a high valley between the two volcanic mountains of Merapi and Singgalang is the small village of Pandai Sikek, better known as the "Wood Carving Village." The village is south of Bukittinggi, the cultural center of the Minangkabau, and east of Padang, the capital of west Sumatra. The terraced rice fields, lush tropical vegetation, cool breezes and abundant water of the Anai Valley have made it an ideal spot for creativity and an inspiration for centuries of wood-carvers. The neighboring forest provides an abundance of the wood called *suriyan*, a hard but workable medium for the carvers. Today, more than one hundred carvers claim Pandai Sikek as their home, though only a few can be found at work in the village. Many are away on contract assignments in Malaysia and in major Indonesian cities.

In the village, carvers knee-deep in wood shavings work in little huts along the roadside. Many have two or three apprentices carving repetitive patterns on small items to supplement their incomes. Cigarette boxes, jewelry boxes, ashtrays, bookholders, all can be purchased for sums that seem very modest in relation to the skill involved in making them. Most large items, such as chairs, tables and bed frames, are done on a custom-order basis, and all the shops were busy filling orders, evidence of both the continuing need for their craft and the appreciation of their handiwork.

The village's Handicraft Center is a large framed hall whose outside and inside walls display a wide variety of the work done by the wood-carvers. The hall is also used as a center to instruct future wood-carvers: Recently, 19 students from Sekolah Menengah Seni Rupa, a fine-arts school in Padang, were being instructed, carving the letters of the alphabet and the numbers one through nine. Each student first stenciled a number or letter on a block of wood which he or she then chiseled, carved and sanded to a finished product. The village craftsmen took turns inspecting, advising and encouraging the trainees.

"Pandai" translates as "clever" and Sikek, according to one of several local traditions, is a contraction of Si Ikek, the name of a culture hero who introduced wood-

carving in the area centuries ago. There are many "pandai" carvers in the village of Pandai Sikek today, such as one known as Bapak (Father or Uncle) Fauzi. His skill was developed through 20 years of memorizing, manipulating and mastering the styles and motifs his uncle taught him. As a young boy, Fauzi would intently watch his uncle's hands as they felt, touched, explored and worked the block of wood until an ornately carved treasure was created. Several years ago, Fauzi was chosen along with many of the other village carvers to work on the Minangkabau Palace of Pagaruyung. It was to be an exact replica of the royal palace destroyed by fire during the early days of Dutch colonial rule, and would be used as a museum to recall the wealth and artistry of the Minangkabau at the peak of their power. Fauzi jumped at the opportunity, because he would be able to see, learn and recreate many of the historical patterns used in wood-carving.

The patterns used on many Minangkabau wood carvings are believed by anthropologists to have been adapted from stone carvings found scattered about the Anai Valley. The original settlers of the valley, probably Hindus, believed strongly in ancestral and natural spirits, and portrayed these beliefs on the stones. Other patterns came from the artistic interpretation of the carvers as they observed the local flora and fauna. The designs taken from nature, such as the bamboo shoot, fern tendrils and *sirih* leaf, have been passed down from generation to generation, and have symbolic social and cultural meanings for the Minangkabau.

The early inhabitants arrived in elaborately carved boats, so it was to be expected that they would also carve their houses, and indeed the gables on each end of the roof are decorated with intricately carved wood panels. On these panels adorning the inside walls of their traditional houses, the bamboo-shoot motif is usually placed on the border and is representative of the three male leaders in the Minangkabau culture: the clan chief, the religious leader and the intellectual leader. The fern tendril is thought to represent man as the Father and Uncle, symbolically signifying flexibility to turn inward and outward in dealing with the family unit. The *sirih* leaf is symbolic of male fertility. The traditional colors painted on the wood carvings of Minangkabau houses also have significance in the culture: Red symbolizes life, black stands for independence and yellow for wisdom.

The Minangkabau can be proud of their past and look forward to new generations of master craftsmen following in the footsteps of present-day masters. Bapak Fauzi and his fellow carvers now have the responsibility to pass on to the younger generation the traditions and skills they were taught by their elders. ☉

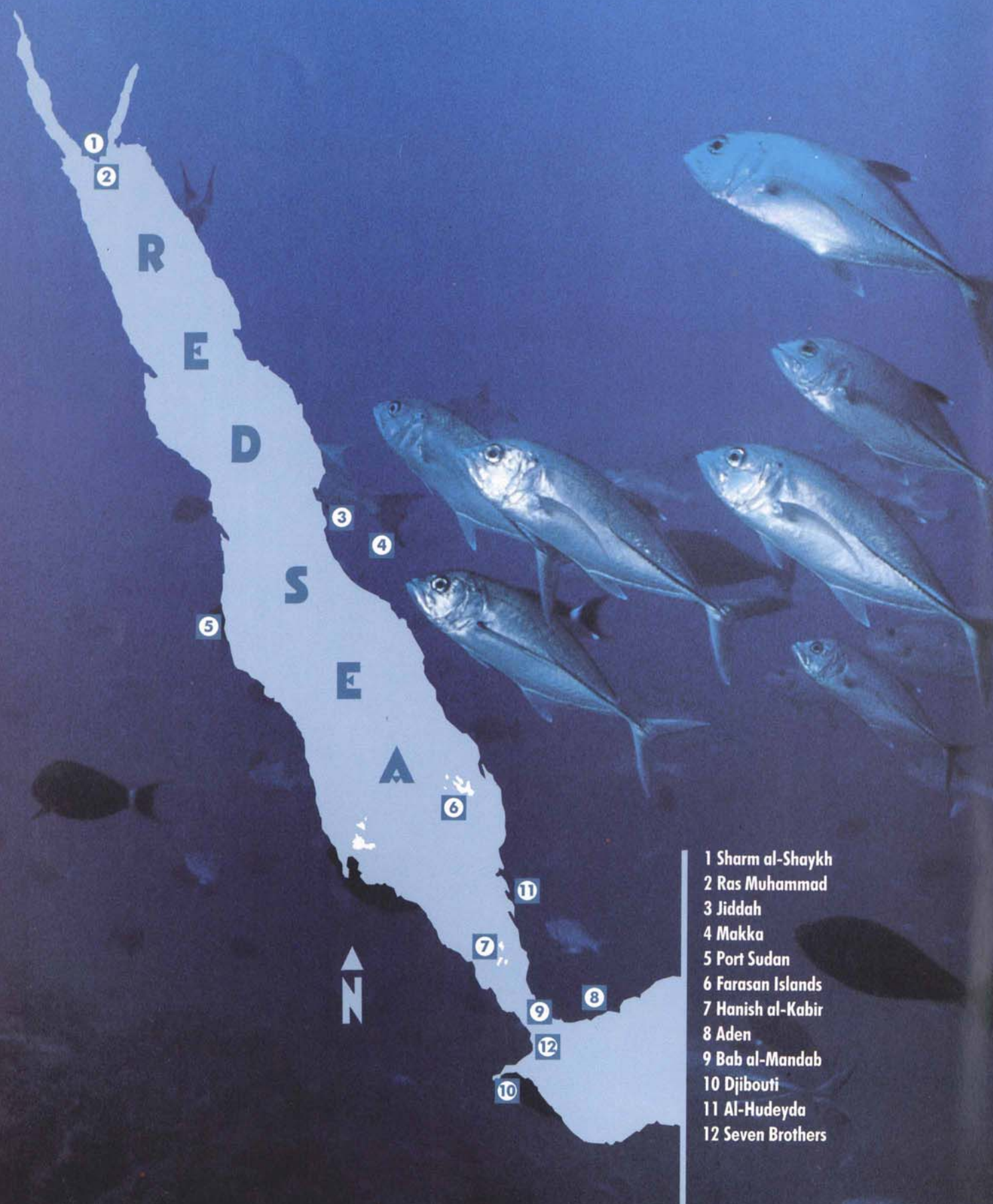
Sigrid Laing is a Canadian free-lance writer who has lived abroad for 18 years, the last five in Sumatra, Indonesia.





When it comes to extraordinary marine life, the reefs and wrecks of the southern Red Sea offer an unusual combination: both a rich variety of species, and dense populations. For interest, watch a squid change color in a fraction of a second; for thrills, try hitching a ride with a giant manta ray.

DIVING IN THE SOUTHERN **RED** **SEA**



Nudibranchs, like the large one on the previous page, combine bright colors, stinging cells and distasteful secretions to keep predators at bay. At left, a school of fast jacks.

A curious silver-tip shark, right, shoots out of the shadows. A potentially dangerous species, the silver-tip is a rare sight.

- 1 Sharm al-Shaykh
- 2 Ras Muhammad
- 3 Jiddah
- 4 Makka
- 5 Port Sudan
- 6 Farasan Islands
- 7 Hanish al-Kabir
- 8 Aden
- 9 Bab al-Mandab
- 10 Djibouti
- 11 Al-Hudeyda
- 12 Seven Brothers

For most divers, "the Red Sea" means the northern waters off the coast of the Sinai Peninsula, particularly its southern tip, Ras Muhammad. Apart from being an excellent dive area, southern Sinai is easily accessible and has well developed diving facilities, with several resorts and dive boats operating in the area (See *Aramco World*, May-June 1989). But seasoned Red Sea enthusiasts are now looking south to new, relatively unexplored areas. Some of the dive boats operating out of Sharm al-Shaykh in Sinai are now making extended trips down to Sudan, and one even sails all the way through the Bab al-Mandab strait to Djibouti and then back up to Yemen.

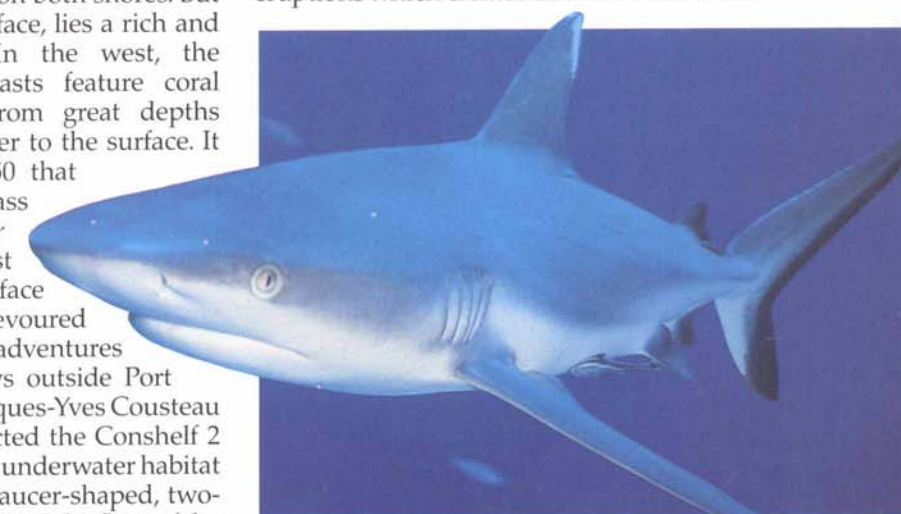
The southern half of the Red Sea is set amid some of the most isolated territory in the world, with wild, barren countryside on both shores. But offshore, beneath the sea's surface, lies a rich and varied underwater world. In the west, the Sudanese and Ethiopian coasts feature coral mountains that shoot up from great depths through crystal-clear blue water to the surface. It was off Sudan's coast in 1950 that Austrian zoologist Dr. Hans Hass shot his celebrated film, *Under the Red Sea*, unveiling for the first time the world beneath the surface here. As a 12-year-old, I devoured Hass's books about his adventures among sharks and manta rays outside Port Sudan. It was also here that Jacques-Yves Cousteau and his team of divers conducted the Conshelf 2 experiment in 1965, living in an underwater habitat for an entire month. Using a saucer-shaped, two-man submarine, Cousteau explored the floor of the continental shelf down to about 275 meters (900 feet) and shot some stunning film, used later in his movie *World Without Sun*.

Names like Sanganeb Reef, Sha'ab Rumi and Sawakin Archipelago are legendary among Red Sea connoisseurs: These are sites where divers can expect to encounter the big pelagic, or open-water, fish like sharks and manta rays, rare in other places. I've had some of my most hair-raising Red Sea experiences at Sha'ab Rumi, where the sharks grew accustomed to humans during Cousteau's prolonged stay there. Today, as soon as a diver enters the water at Sha'ab Rumi, he is surrounded by sharks waiting to be fed.

Some of the charter boats from the Mediterranean have discovered that they can winter profitably in Port Sudan, offering dive charters. A fleet of about six boats, most of them Italian, is now serving an increasing number of divers there every winter.

On the other side of the sea, along the Saudi Arabian coast, is the Farasan Bank, an extensive shoal that runs about 593 kilometers (320 miles) from west of the coastal town of al-Lith down to Karamaran Island. This is a shallow area where the reefs, with their greater access to sunlight, have spread over large areas and been transformed into beautiful coral gardens. Cousteau, in his book *The Living Sea*, describes this area as one of the most interesting coral ecosystems in the world.

To the south lies the Bab al-Mandab – the Gate of Lamentation – where the sea bottom rises from a depth of about 1830 meters (6000 feet) up to just 46 meters (150 feet). The volcanically active rift that separates Africa and Arabia comes close to the surface here, and as recently as the 1950's there were eruptions which created several lava islands.



Plankton is the foundation of the marine food chain. Much of the Red Sea is relatively plankton-poor, compared to the cold, plankton-rich waters of, say, the North Atlantic, where there are fewer species but larger numbers of individuals, the key to survival there. In the Red Sea generally, the protection afforded by the coral reefs allows for a great variety of very specialized species, but since there is more intense competition for food, there are normally smaller numbers of individual creatures. The southern Red Sea, however, enjoys a mixture of conditions – both more plankton and more coral reefs – and thus a mixture of marine life, with numbers characteristic of cooler seas and the diversity of species normally found in warmer seas.

I had an opportunity to join the expedition vessel *Lady Jenny 5* for part of a special trip along the entire length of the Red Sea. She had traveled from her base at Sharm al-Shaykh to Port Sudan to

Djibouti, where I would join her to travel north toward Yemen and then back to Djibouti. On previous dives, I'd explored the eastern, western and northern waters of the Red Sea, but never the southern, and I was looking forward to the trip because of reports of the area's incredibly rich marine life. My imagination soared when I heard names like Ghubat Kharab, the legendary home of the tiger shark, or Seven Brothers, with its manta rays and huge schools of well-known reef fish seen elsewhere only in smaller numbers.

From Jiddah, Saudi Arabia, a Djibouti Airways flight took us for the hop across the Red Sea and down the East African coast to Djibouti, a charming, sleepy little seaport with a distinctly French flavor. In the harbor, *Lady Jenny 5* awaited us. After orientation the next morning, we were on our way,



JIM SKOPEK

with the course set north to Seven Brothers, a group of uninhabited islands at the entrance of the Bab al-Mandab. The islands are barren, consisting of fossilized coral.

We anchored at Manta Island, so named by the French divers of Djibouti because this is the territory of the manta ray. The mantas are giants among rays, measuring up to five meters (15 feet) in wingspan and weighing several tons. Yet for all their fearsome appearance, they are harmless eaters of plankton and small fish.

The currents were very strong, and we had to cling to the bottom to keep from being swept away. Visibility was bad because of all the plankton. Suddenly, a huge black shape appeared through the plankton haze and came swimming toward me. It turned right in front of me, and swept past. It was a manta ray, an immense, beautiful creature with a black back and white belly. It seemed to be

interested in us, and kept swimming around us. In front of its mouth swam a school of pilot fish, and attached to its belly were two suckerfish, all typical companions of the big open-water dwellers. With its mouth wide open, seining for food, the manta ray flew through the water with graceful wing movements, looking like a giant prehistoric bird. The mouth was big enough to swallow me.

Later that evening, *Lady Jenny 5* was lying at anchor in a small bay. The lights from the dive boat attracted swarms of small fish, which in turn attracted the manta rays. We heard a big splash and spotted a manta swimming back and forth through the clouds of fish. I quickly donned flippers and mask, grabbed my underwater flashlight and jumped in the water. It was totally black, and my light beam cut through the plankton like a spotlight through fog. Then I saw the huge ray, all of three meters (nine feet) between wing tips. It passed below me, made an upward turn and came back toward me swimming upside down. Clearly, it wanted to check me out. I stretched out my hand and let it brush the creature's white belly. Its skin was sandpaper-rough. One of its big eyes gazed at me curiously for a moment and then, with an elegant flip of the wings, it turned away. I grabbed its tail for a ride. The manta dragged me through the water with irresistible power, faster and faster, until, finally, I had to let go.

Hanging there in black, empty space with this gigantic creature somewhere nearby, I felt as if I had encountered an extraterrestrial being. Never before had I suspected that a manta ray could show this almost human curiosity toward divers.

On the *Lady Jenny 5*, we continued north through the strait to the Hanish Islands, between Ethiopia and Yemen. The shipping channel in the Red Sea narrows considerably there. The ships have to run a gauntlet between sharp coral reefs and lava rocks in strong currents. In the old days, when the area was poorly charted and navigational tools not as sophisticated as today, the strait was a dangerous obstacle on the way to Asia – thus its name – and there are shipwrecks on almost every reef along the shipping channel. They serve as sanctuaries for a fascinating array of marine life.

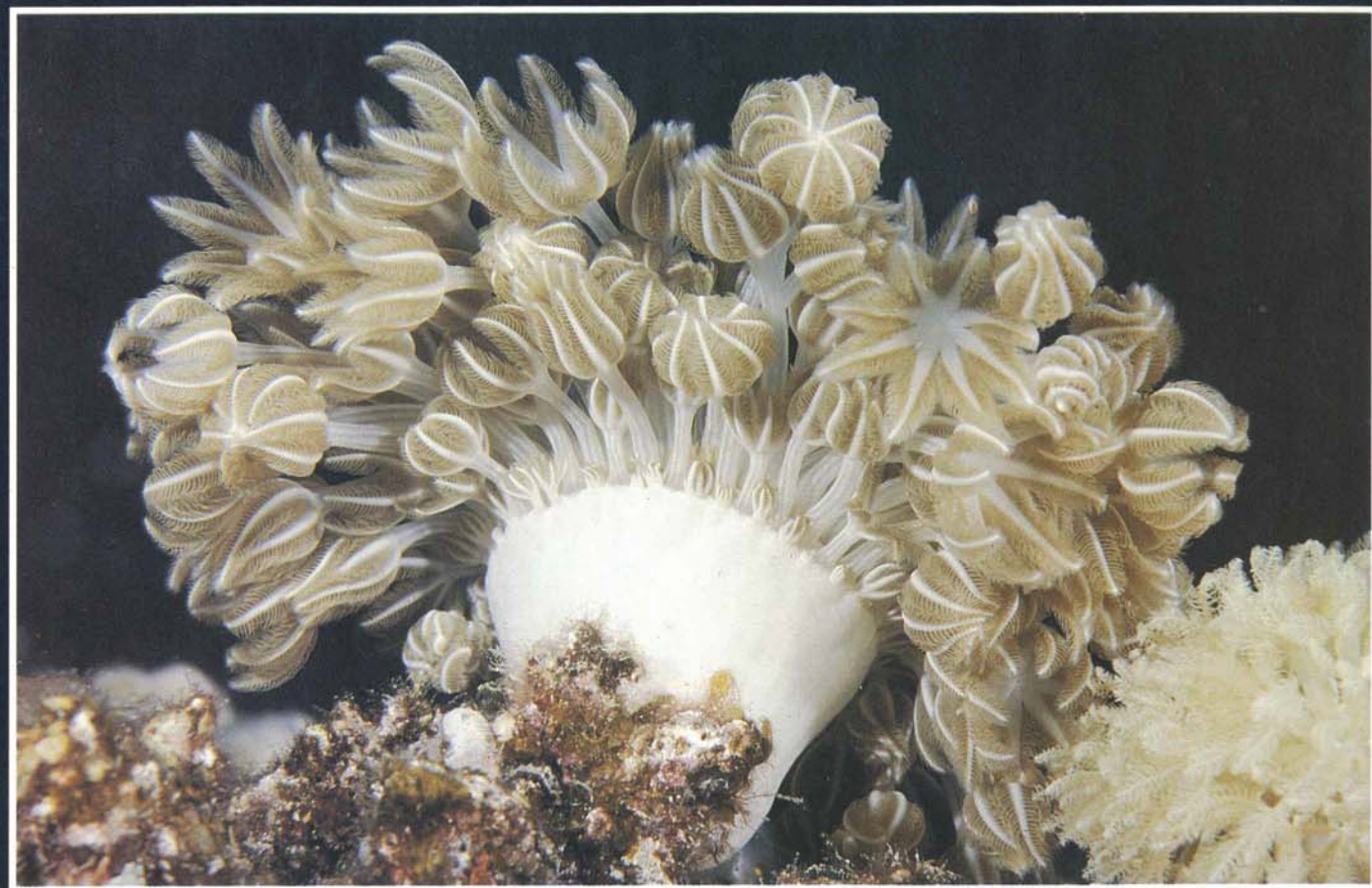
We dived to visit one of these wrecks, at a spot called Ship Rock. The captain of *Lady Jenny 5* told us it was the wreck of a 2000-ton English steamer of the P&O Line which struck the reef in 1859 on her way from Aden to Suez. P&O, the Peninsular and

GENERAL REMARKS.
don along the western shores of Jebel Zukur and Great Hanish Islands.
Cross current—Caution.—Strong currents occasionally set across the Red Sea, so that a good berth should be given to all outlying reefs and shoals; this is the more necessary as the strength of these currents increases rapidly as the shoals are neared. They form one of the chief obstacles to the safe navigation of the Red Sea, and to them has been attributed the loss of several steamers in former years. The knowledge of their existence should impress the mariner with the need of constant vigilance.
The comparison of forenoon and afternoon sights is much affected by refraction, which is apparent cross

These words of warning to mariners appeared in the US Navy's Red Sea and Gulf of Aden Pilot in 1922.

Black, horny and soft corals—types that tolerate strong currents and dimmer light—dominate the seascape (above right). Shell-less molluscs related to clams and oysters, nudibranchs (lower right) carry feathery gills on their backs.

A manta ray shows its white underside (left) as it banks away from a diver. A large ray's "wingspan" can reach five meters (16 feet).





Even normally solitary reef fish sometimes form huge schools (left) that seem to be controlled by a single mind.

Docile and dozy, this nurse shark (right) permitted a close inspection.

Oriental Steam Navigation Company, today the biggest shipping line in the world, started operations in 1826. In colonial days it was one of the symbols of the British Empire, its ships an extension of the Eastern life for the sahibs and memsahibs of the British Raj. We found some old porcelain on the wreck – perhaps fragments of a dinner service – painted with the company device, “*Quis separabit*”, meaning “Who shall divide [us].” I wondered what had happened to the passengers who had eaten from these plates: Here, in the middle of nowhere, their trip had ended in disaster. Did they all drown, or were they saved by a passing ship? I later learned that the ship was the iron passenger liner *Alma*. One day out of Aden, bound for Suez, she hit a reef and sank on June 12, 1859. Baggage and cargo were lost, but all passengers and crew were rescued.

The steamer was very much broken down, but the stem was beautifully intact, with a huge bronze propeller. Under the overhang of the stern we found a big nurse shark lying on the bottom. Nurse sharks are docile creatures and we were able to study this one at close range, but his patience was not limitless: After too many strobe flashes in his face he swung around violently, pushed the divers aside and swam away looking insulted.

For a while, we were puzzled by a strange noise in the water around the wreck. We kept hearing a sharp *crack!*, like the snapping of a tree branch. The mystery was solved when we surprised a huge jewfish – a giant species of the grouper family – on the wreck. The fish shot away from us, making that distinctive cracking sound by closing its gill-covers quickly, perhaps intending the noise as a warning. There were many of these huge groupers around, but they fled as soon as they noticed our presence.

Stony corals need light and relatively warm water to develop into reefs. Because of cold, murky water and strong currents, reef formation has been negligible in the waters around the Hanish Islands. Only fringe reefs could be seen in the shallow water around the islands, all of which consisted of black lava and seemed to have been quite recently formed. Black, horny and soft corals that thrive in strong currents and dimmer light dominated the seascape everywhere. There were huge carpets of *Rumphella*, an Indo-Pacific species. The white coral polyps made the terrain look like an early winter landscape with frost-covered trees – almost appropriately, because the water was very cold. At Hanish al-Kabir, we swam through a forest of pink *Gorgonia* coral, or sea fans. Further north in the Red Sea, sea fans are found only in deeper water, growing as solitary bushes on the reef wall.

This seascape was home for big schools of yellow sweetlips and striped snappers that swam through the soft coral fields like streams of gold. The color contrasts between the yellow fish and the white color of the soft coral were striking. At Abu 'Ali, the fish all seemed to be swimming in the same direction, like crowds of people gathering for a public meeting. They flowed into a cave under a big rock, and I followed after them, eager to see, if I could, what was causing this atypical behaviour.

In the cave was a near-solid mass of fish, teeming, thousands and thousands of them. Starfish and sea cucumbers were releasing their milt and eggs into the water like small trails of smoke. We saw different species of coral fish, normally seen as solitaires or in pairs, now congregating in large schools, as if they had come from far away to meet



and mate at this particular place – bannerfish, angelfish and lemon butterfly fish. Even the sharks had come in schools.

On another occasion, I was taking some wide-angle shots at South-West Rocks. Suddenly I saw a streak of silver-gray pass by in my viewfinder. Five silver-tip sharks, about 1.5 meters (five feet) long, circled around us, trying to find out what we were doing in their domain. They were not aggressive, but curious. I couldn't help admiring their beautifully shaped bodies as they slowly glided through the water in total harmony with their environment, a perfect creation that nature has not found reason to change in 70 million years. More and more sharks arrived; soon we had twenty around us. One by one they came shooting toward us, while the others lurked as shadows in the haze, at the limit of visibility. After satisfying their curiosity, they disappeared.

The silver-tip shark, *Charcharinus albimarginatus*, is an open-sea dweller rarely seen by divers. I had only seen one or two before in Sudanese waters. They are considered a potentially dangerous species. My experience, though, is that sharks are only dangerous to divers if provoked: if the diver charges them in their own territory – this is especially true of the gray reef shark – or if he or she is carrying dead fish that trigger the sharks' incredibly effective sense of smell. If a diver avoids these things, there's no reason to fear a shark attack.

On our way back to Djibouti, we passed Seven Brothers again. We decided to stop at the South Island for the last dive of our trip – a dive that proved unforgettable. We descended in crystal-clear water, the first we had seen during our trip. I estimated visibility to about 60 meters (200 feet).



Before us stretched a rugged undersea landscape of clefts and rocks covered with soft coral.

It was as if we had jumped into an aquarium. A school of fast jacks and barracudas came up and turned in front of us. The amusing ocean triggerfish were everywhere. They are shaped like the fast-swimming open-water fishes, but they swim like reef triggerfish, with wobbling movements of their back fins. It looks as if they are using a propeller to move forward. These fish are native to the Indian Ocean and not found anywhere else in the Red Sea. We descended, following a ridge toward deeper water.

Other species came up to us to have a look – batfish, bannerfish and angelfish. Three small manta rays glided gracefully through the seascape. A curious blenny looked out from a pipe-shaped bright red sponge. Beside the sponge was a lionfish. In the coral kingdom, its bizarre appearance is a

warning to steer clear: Its dorsal spines are highly poisonous. In my eagerness to get a close-up, I was lightly stung. It felt as though I had touched an open flame.

A squid came hovering over the bottom. As he moved, his body changed color continuously, like a neon sign. When I triggered a flash, he turned completely white. The squid has the ability to change its color to match the environment as a form of camouflage. In this case, it turned white to match the photo flash. Yet on my film, the squid was white, meaning that it had changed color in less than a sixtieth of a second, the shutter speed I had set on my camera!

I focused next on a little fish fry lying on a coral head. He looked at me with big surprised eyes. Unbelievably, he let me come all the way up to him for a closeup. The intricate shape of the hard corals makes them an excellent nursery for all the small fish that would otherwise be easy prey for bigger predators. This is the basis for the great variety of species on the coral reef. Every species fills its own niche in the ecological balance where it is most efficient in the struggle for survival.

We reached the end of the ridge and found something unexpected on the bottom – two giant nudibranchs, each about 30 centimeters (one foot) long. Their colors were beautiful pale shades of white, pink and yellow, the work of a master decorator. These were bigger than any other nudibranchs I had seen in the Red Sea, including the famous Spanish dancer (See *Aramco World*, May-June 1989). Nudibranchs are shell-less mollusks related to clams, oysters and scallops that use other protective measures instead of shells: They have stinging cells and secrete a distasteful liquid to discourage predators. Like the lionfish, they combine these defenses with very conspicuous colors to get their warning message across.

We went over the cliff edge and followed a reef wall covered with bright red bigeye fish, nocturnal creatures that cling to the shadow of the rock. I found a strangely shaped sponge there, bright yellow with dangling appendages like stalactites, oddly vertical in this weightless world.

Down on the bottom, gray reef sharks patrolled back and forth. We stayed for a while, admiring them, until our air began to run out. Then we reluctantly headed back to the surface, our exit from this underwater Garden of Eden. 🌐

Dr. Erik Bjurström, a consultant at King Faisal Specialist Hospital and Research Center in Riyadh, has spent seven years in Saudi Arabia and explored the length and breadth of the Red Sea.

The century-old wreck of a P & O steamer (right) provides a melancholy answer to the line's motto, "Who shall divide us?" A curious blenny (left inset) and a venomous lionfish (right inset) were among nearby sea life.

White replaced the changing colors that had rippled across this squid's body (left) a moment before the photograph was taken.

