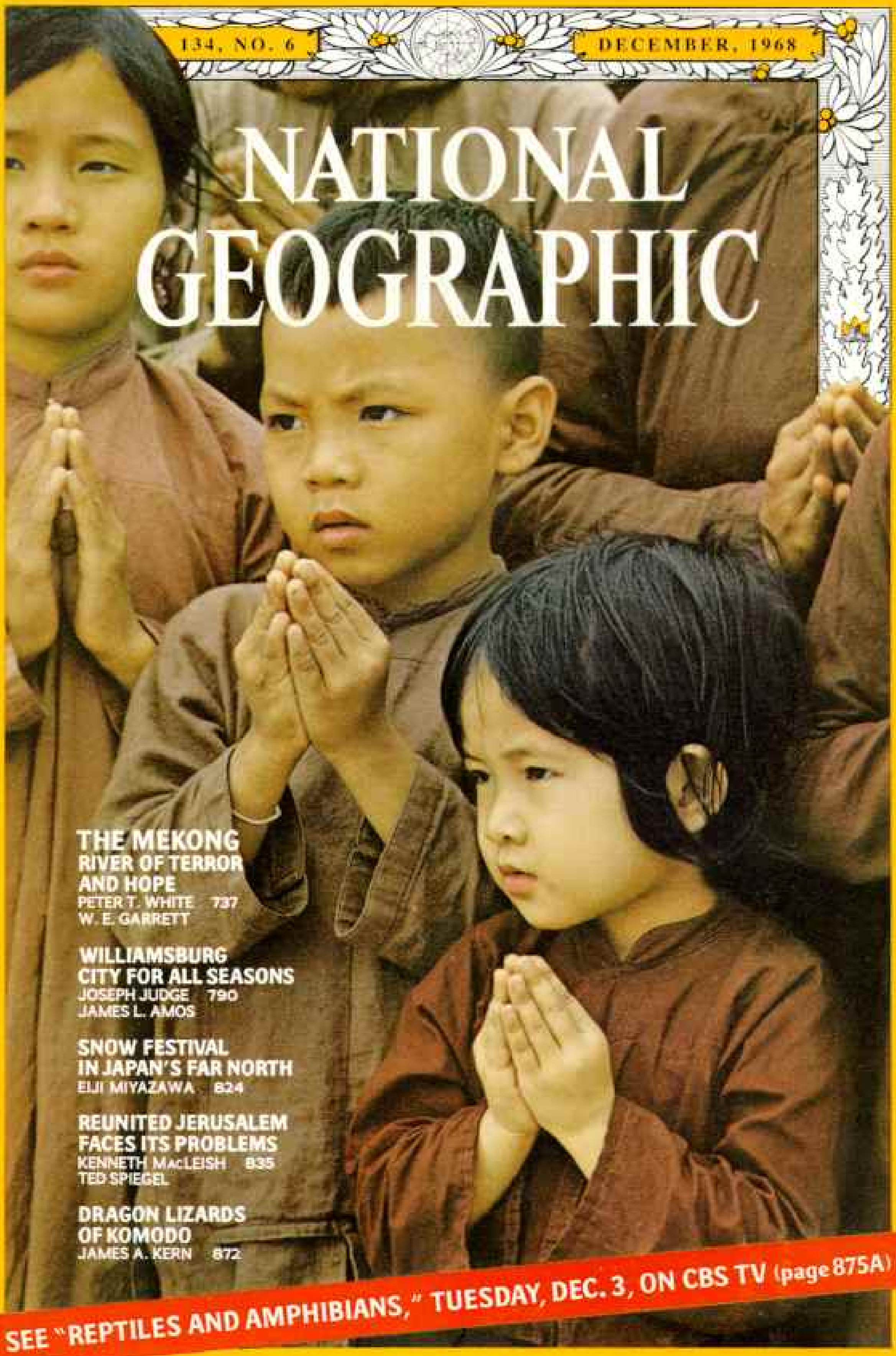
SPECIAL SUPPLEMENT: WALL MAP OF SOUTHEAST ASIA (page 788)

134, NO. 6 DECEMBER, 1968

NATIONAL GEOGRAPHIC



SEE "REPTILES AND AMPHIBIANS," TUESDAY, DEC. 3, ON CBS TV (page 875A)

OFFICIAL JOURNAL OF THE NATIONAL GEOGRAPHIC SOCIETY WASHINGTON, D.C.

December, 1968

NATIONAL GEOGRAPHIC

The Mekong
River of Terror and Hope

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FIRST I STUDIED the maps. Then a U. S. Army plane carried me high and low over all the likely places, where muddy beaches and mangrove swamps meet the South China Sea. I did my best, but I could find only eight dragons.

Yet how could that be, when the Vietnamese call the Mekong River the Cuu Long Giang—the River of the Nine Dragons?

In Vietnamese imagery, a waterway is a benign, life-giving force, a dragon; and as the great river, nearing its end, splits to form the many-mouthed Mekong Delta, the number of dragons correspondingly multiplies. To as many as eight, as far as I could see.

Dragons Watered by Monsoon Rains

I consulted my friend Ton That Thien, long a mentor on matters Vietnamese. Now he was Minister of Information in Saigon.

He smiled. "There really are only eight," he said. "But eight is not a lucky number. It has to be seven or nine. So we had to find another one, and we did. But it is very small, very narrow, and less than ten miles long. I hope you are not too unhappy to have missed it."

I wasn't. After all, there was much more to the Mekong than one could hope to see—in a month, in a year, in a lifetime.

Its snow-fed sources lie more than 16,000 feet high on the Tibetan Plateau, beyond the Himalayas. The Tibetans call it Dza-Chu, the Water of the Rocks. Next, the Mekong tumbles southward through the bleak gorges of Yunnan Province in China, under the name of Lan-Tsan Kiang, or Turbulent River. All those first 1,100 miles, alas, fall under the sway of Communist administrators in Peking, who do not welcome Americans.

And so I drew a limit to my travels where Burma, Laos, and Thailand converge, at the northern edge of the Lower Mekong Basin—an area seven-eighths the size of Texas, and intriguing enough for any man.

Here the Mekong flows placidly, for the most part, for 1,500 of its 2,600 miles (see the supplement map **Southeast Asia** accompanying this issue, and pages 744-5). It is the world's eleventh longest river. But in volume

(Continued on page 744)

THE MIGHTY MEKONG, *lifeline for millions of Southeast Asians, courses past Phnom Penh, capital of Cambodia. Ocean freighters and tankers churn up this broad international waterway to the port, largest on the river even though it lies 206 miles inland from the South China Sea. Every two weeks South Vietnamese gunboats escort a convoy through the troubled Mekong Delta to the Cambodian border.*

The time is May, during the monsoon season. As the Mekong flows southward from upper right, it splits into two arms—the slender Bassac, lower left, and the broad main channel, lower right. When the rains come, the winding Tonle Sap river, upper center—normally a tributary of the Mekong—reverses its direction. Pouring upstream, it floods its namesake lake near the famed ancient temples of Angkor.

Terror . . .

WAR, on any battlefield, is a nightmare. The Mekong Delta compounds the horror. To fight here means tortuous slogging through snake-ridden swamps, where sucking mud grips the legs like wet concrete. The enemy may be only five feet away, yet unseen in the thick jungle.

These men, members of South Viet Nam's tough 5th Marine Battalion, penetrate a Viet Cong sanctuary on the edge of the U Minh, the Forest of Darkness.

The photographer, GEOGRAPHIC Assistant Editor W. E. Garrett, landed with these Marines last July. "It took us three hours," he reported, "to move a third of a mile through the jungle. Even before we contacted the enemy, a man ahead of me collapsed from exhaustion and one behind me was bitten by a poisonous snake." The Marines finally overran the enemy headquarters, killing more than 100 VC and capturing several tons of weapons and secret documents (pages 778-9).

. . . and hope

YET EVEN as war raged in the Mekong Basin, men of many nations worked on the giant Mekong Project, a plan that promises to revolutionize life for millions of Southeast Asians by harnessing the river for power and irrigation.

High above rice fields in Laos, a rigger fastens insulators to high-tension power poles. Through the lines electricity now flows from a dam on the Nam Phong, a Mekong tributary in Thailand, to light Vientiane, the Lao capital (map, page 745). The venture raises a bright hope for the future in an area where nations traditionally distrust their neighbors. The four members of the Mekong Committee—Cambodia, Laos, Thailand, and South Viet Nam—jointly own the segment of power line that bridges the river.

KODACHROME BY W. E. GARRETT © N.G.S.

of water discharged, it ranks tenth in the world and first in Southeast Asia; and three-fourths of that discharge stems from the monsoon rains bursting down on the Lower Mekong Basin.

As wet seasons alternate with dry, a major tributary actually reverses and flows upstream. On damp nights fish walk across the land on their fins—perch of the species *Anabas scandens*, in search of better puddles.

Here too, across the millenniums, varied peoples adapted their rice growing and their lives to the rhythm of the monsoon and the Mekong. They created the temples of Angkor, and the politico-military machine called the Viet Cong.

The Lao and the Thai of the Lower Mekong Basin share a common tongue and speak of the river as Mae Nam Khong, meaning "mother river khong." What does "khong" mean? Nobody can be sure. The contraction of Mae Nam Khong into Mekong was made by Westerners. The Cambodians, or Khmers, call the river Tonle Thom, the Big Water.

The Terror: Rockets in the Greenery

Counting Lao, Thai, Cambodians, and Vietnamese, the people of the Lower Mekong Basin add up to scarcely 28,000,000. But as I lived among these Southeast Asians, I could never forget how far their importance now exceeds their numbers, for two compelling reasons.

First, the war. I saw it blazing most fiercely in South Viet Nam, where the U. S. Navy's "miniature battleships," painted green and built expressly for combat along the Mekong Delta waterways, pitted their rapid-fire cannon against Viet Cong rockets made in the Soviet Union and in China.*

Those deadly rockets spewed from bunkers hidden in dense greenery, sometimes along canals so narrow that the boats could not turn around (pages 778-9). "It's like the old days," said the commodore of the River Assault Flotilla, "exchanging broadsides at 15 to 20 yards, point-blank."

Quieter but deadly too was the war in Laos, where scores of Americans, chiefly civilians, supported tens of thousands of government soldiers facing tens of thousands of insurgents supported by North Vietnamese troops.

In Thailand, an ally of the United States, terrorism mounted in step with Communist-directed infiltration across the Mekong. Not even Cambodia, determinedly neutral and comparatively calm, remained free of armed subversion and the fears induced by psychological warfare.

In short, the people of the Lower Mekong Basin found themselves enveloped by a struggle whose course might well determine the actions of Washington, Moscow, and Peking—and hence the fortunes of some 1,170,000,000 people—Americans, Russians, and Chinese, a third of mankind.†

Second, as hope kept rising for a settlement in Southeast Asia, the Lower Mekong Basin promised an unprecedented spectacle of peace: the Mekong Development Project.

The aim is to pump prosperity into an area where eight of ten inhabitants subsist as rice farmers—most of them poor, suffering from malnutrition and disease. The means is the

*Dickey Chapelle described the "Water War in Viet Nam," in the GEOGRAPHIC for February, 1966.

†Author Peter White has also written "Behind the Headlines in Viet Nam," NATIONAL GEOGRAPHIC, February, 1967; "Hopes and Fears in Booming Thailand," July, 1967; and "Report on Laos," August, 1961.

Harnessing a giant

THE MEKONG rises beyond the Himalayas, a trickle of water from melting snows. Ever widening, it sweeps 2,600 miles through China and the heart of Southeast Asia to the South China Sea. In the 236,000 square miles of its lower basin live 28 million people, four-fifths of them rice farmers.

No bridge has ever spanned the Mekong; no dam has ever slowed it. But today teams representing 28 countries, cooperating under the auspices of the United Nations, are engaged in the research, planning, and actual construction of an enormous water-control system. To erect all the dams and power lines (opposite) will require decades, planners estimate.

The Mekong Development Project will cost billions. The United States and other nations have promised massive support. In pledging American aid in a speech at Johns Hopkins University in 1965, President Johnson said: "The vast Mekong River can provide food and water and power on a scale to dwarf even our own Tennessee Valley Authority."

Yet another hope of the project concerns thousands of square miles of coastal South Viet Nam where, in the dry season, salt water from the South China Sea intrudes into half the Mekong Delta. When peace comes, major drainage efforts may halt this invasion of salt.

Mekong Development Project

Power line ——— Dam

Proposed reservoirs

Limit of salt water intrusion during dry season

Green shows Mekong watershed

New ways for a Lao farmer

PROSPERITY began for Thyt Sum in 1962. In that year the United Nations established an experimental farm on the banks of the Mekong. Thyt Sum and 19 other subsistence farmers received seed, fertilizer, and insecticide. Under supervision of Israeli and Lao advisers, the U.N. project pumped river water into irrigation canals and thence through ditches to farmers' fields. Today 250 farmers cooperate in the project. Where once they grew only one crop a year—in the wet season—they raise two and three now, and not rice alone but tobacco, peanuts, maize, vegetables, sugar cane, and sorghum as well. Thyt Sum owns two cars—one used as a taxi—a new home, and half interest in a tractor (right), far more efficient than his two water buffaloes (above). In the shade of his new stilt house, he discusses farm problems with Israeli adviser Amos Ben Mayor, center, and Kham Khamphay Kongdara, a Lao agricultural agent working with Mr. Ben Mayor.

Pumped from a river of plenty, Mekong water irrigates Lao land and, incidentally, provides a refreshing shower for two boys.

The water spurts from one of two diesel pumps that wet the acres of Thyt Sum and his fellow farmers in the U.N. experimental project (preceding pages). For five months one pump did not run, depriving many of the farmers of water. The old man on whose land it stood refused permission. Tears streaming down his face, he told supervisor Ben Mayor that a *phi*, or spirit, had been offended by the pump, and whenever the pump ran he was sick. "I know our people need the water, but I will die if it runs again."

Mr. Ben Mayor solved the dilemma by having a Buddhist monk placate the spirit with offerings and prayers. Reassured, the old farmer allowed the pump to run again.

Back-bending task of transferring rice from seedbeds to fields keeps a member of Thyt Sum's family busy in the hot sun; youngsters watch from the shade of baskets.

building of dams, along Mekong tributaries and on the mighty mainstream itself.

Those dams would produce great reservoirs holding back water in the rainy season, from June to November, to put a check on floods. The rest of the year they would release water to alleviate drought, to irrigate vast areas now unproductive, and to grow on land already cultivated a second crop of rice each year, or even a third.

Controlled release of impounded water into the mainstream would also drown rapids, and so improve navigation. Turbines in the dams could generate electric power the year round, to light cities and foster industry.

Altogether, the benefits envisioned would dwarf the achievements of the Tennessee Valley Authority. No area in the world ever planned such regional economic development on so massive a scale.

Nations Join to Harness a River

The Mekong Project, moreover, was conceived as a joint effort of the countries of the Lower Mekong Basin, in the hope of reducing the resentments piled on by wars of the past. As a seasoned European diplomat told me: "Let's face it, the Lao dislike the Thai. The Thai hate the Cambodians. The Cambodians detest the Thai and the Vietnamese, and the Vietnamese look down on Cambodians, Thai, and Lao." Yet since 1957 delegates of these four nations have served

together on the so-called Mekong Committee, under the auspices of the United Nations.

Gradually the Mekong Project took on reality. Engineers and scientists came from Europe, Asia, and North America. By 1961 surveyors, mainly Japanese, had selected likely sites for the dams. Leaders of 24 outside countries—most eager among them the President of the United States—have agreed to consider investing the necessary billions of dollars.

As for me, I was becoming more dam conscious every day. I had seen power lines sprouting from a dam completed in 1966, with a German loan, across the tributary Nam Phong in northeastern Thailand. Much of the power would go to Laos (page 743). There, within the year, a Canadian would supervise construction of the dam across the tributary Nam Ngum.

Now I huddled in an open outboard cruiser, en route to the site proposed for the Pa Mong Dam, the first to be built across the Mekong itself. I was wet to the skin. The monsoon rain had nearly dissolved my notebook, and I tried to preserve some of it by sitting on it.

Next to me, equally wet, sat the Pa Mong Project Engineer, Lyle W. Mabbott from Dubois, Wyoming (page 753). A veteran of the U. S. Bureau of Reclamation, he had built dams in Arizona and on the Blue Nile. He said, "I keep my wallet in a plastic bag."

Twenty Years—and a Billion Dollars

That morning when we set out from Vientiane, the administrative capital of Laos, the skies had been blue. The Mekong, heavy with silt in the wet season, glistened a rich brown, the color of coffee with a lot of cream. Now the rain hit the water so hard the drops bounced back up, white, like pearls strewn over a sea of coffee.

Here the Mekong forms the border between Laos and Thailand. We went ashore on the Thai side, 15 miles upstream from Vientiane.

Rice fields pattern islands and riverbank alike near Pakse in southern Laos. Farmers and their families dwell in stilt houses beneath food-bearing trees—coconut palms, litchis, papayas, mangoes. Monsoon rains have flooded the fields. Here, close to the Mekong, there is always ample water—even in the dry season. Dams envisioned by the Mekong Project would extend the boon to regions far from the river's present banks.

As evening falls, a Lao farmer paddles homeward along the Mekong. From a river rich in fish, he can always fill his needs. But the building of dams will prevent some species from swimming upstream to spawn. Fish experts working with the Mekong Committee are even now studying the problem with a view to introducing new varieties.

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The slope was slippery and steep, the sun was out again, and as we made our way up, I felt as if the heat and the humidity might soon dissolve me.

We stopped 280 feet above the river. A sign said Pa Mong Dam Site, Hole 108. Energetic Thai technicians and a Swedish drill powered by a noisy Volkswagen motor were bringing up three-inch-thick cylinders of rock.

"Samples of siltstone," said Mabbott. "You've got to seal them fast, in hot wax, or they'll disintegrate. We send them to Denver for analysis. You can't design a dam until you know the geology."

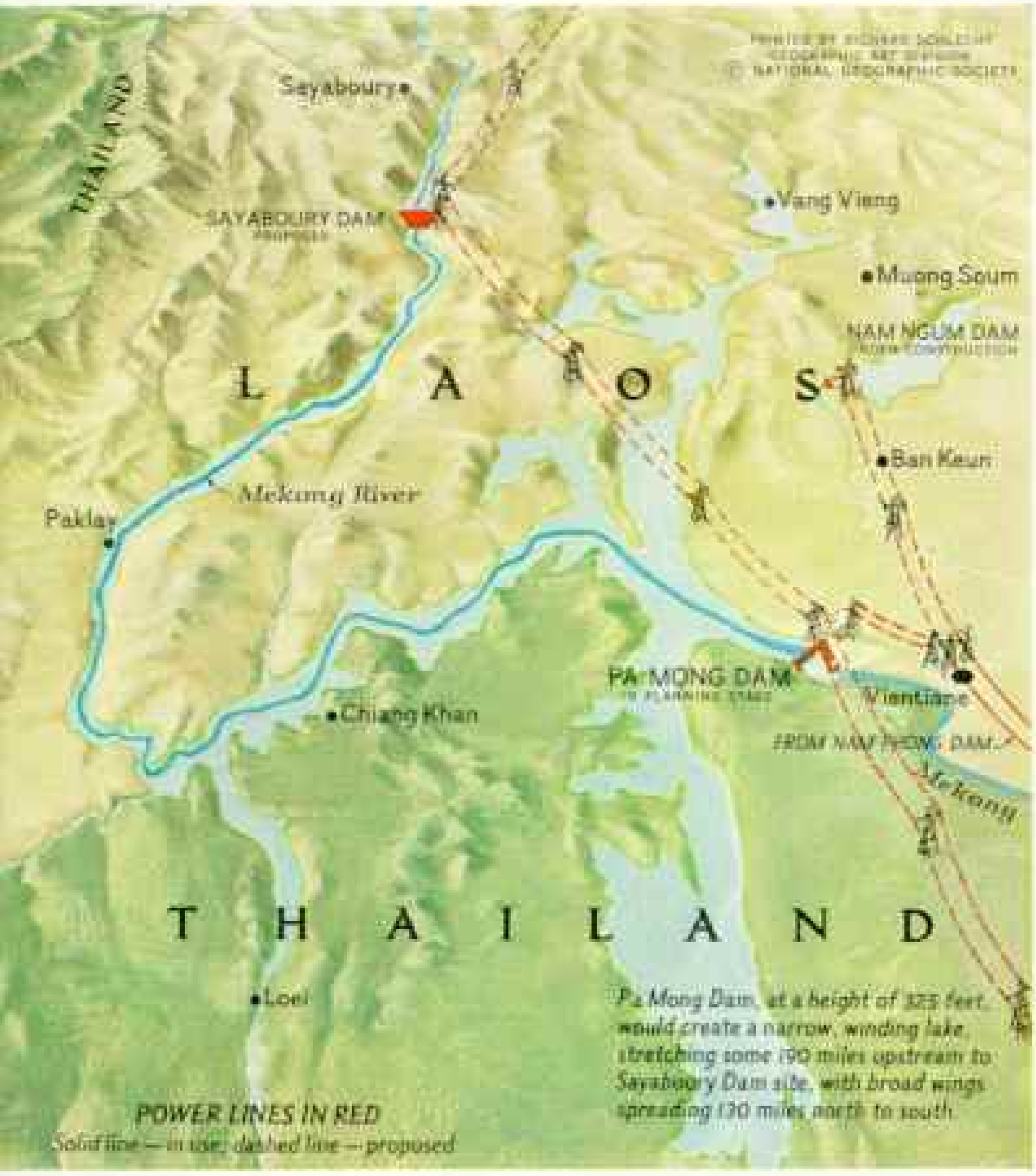
And the topography. As Mabbott explained the problems, I began to see why, with all the money in the world, the Pa Mong Dam couldn't possibly be finished in a hurry.

The quality of the rock determines how heavy and high a dam it can support. Enormous areas must be surveyed to calculate how much water would be stored at various heights. These factors would dictate the strength of the dam, its thickness and shape.

Mabbott drew a graph. "Pa Mong at 325 feet above the riverbed would hold 3.4 trillion cubic feet of water. Now we think we can go to 360 feet, to give us 5.7 trillion—two and a half times as much as Hoover Dam in the States. Maybe we could go to 390. . . ."

When would he know?

"We'll have good guesses by 1969, and the



Statistics to stagger the imagination: The Pa Mong Dam will stand at least 325 feet high, stretch close to a mile, and back up more than twice as much water as Lake Mead holds behind Hoover Dam —enough to irrigate 5 million acres in Thailand and Laos. Annual power output will be 20 billion kilowatt-hours—1⅔ times that of Grand Coulee Dam, largest U. S. hydroelectric producer.

Americans carry on vital roles in the Mekong Project. Lyle W. Mabbott, right, chief engineer for the Pa Mong Dam, confers with Jay Olson, who supervises geological studies at the site. Both are in Thailand on loan from the U. S. Bureau of Reclamation.

answers, as well as we can get them, in 1971." Then three years to make designs, six to eight years for construction, ten years before the power plant comes to full output. Altogether, more than 20 years! And nearly a billion dollars, not counting the cost of irrigation works.

Lao Guerrillas Threaten Officials

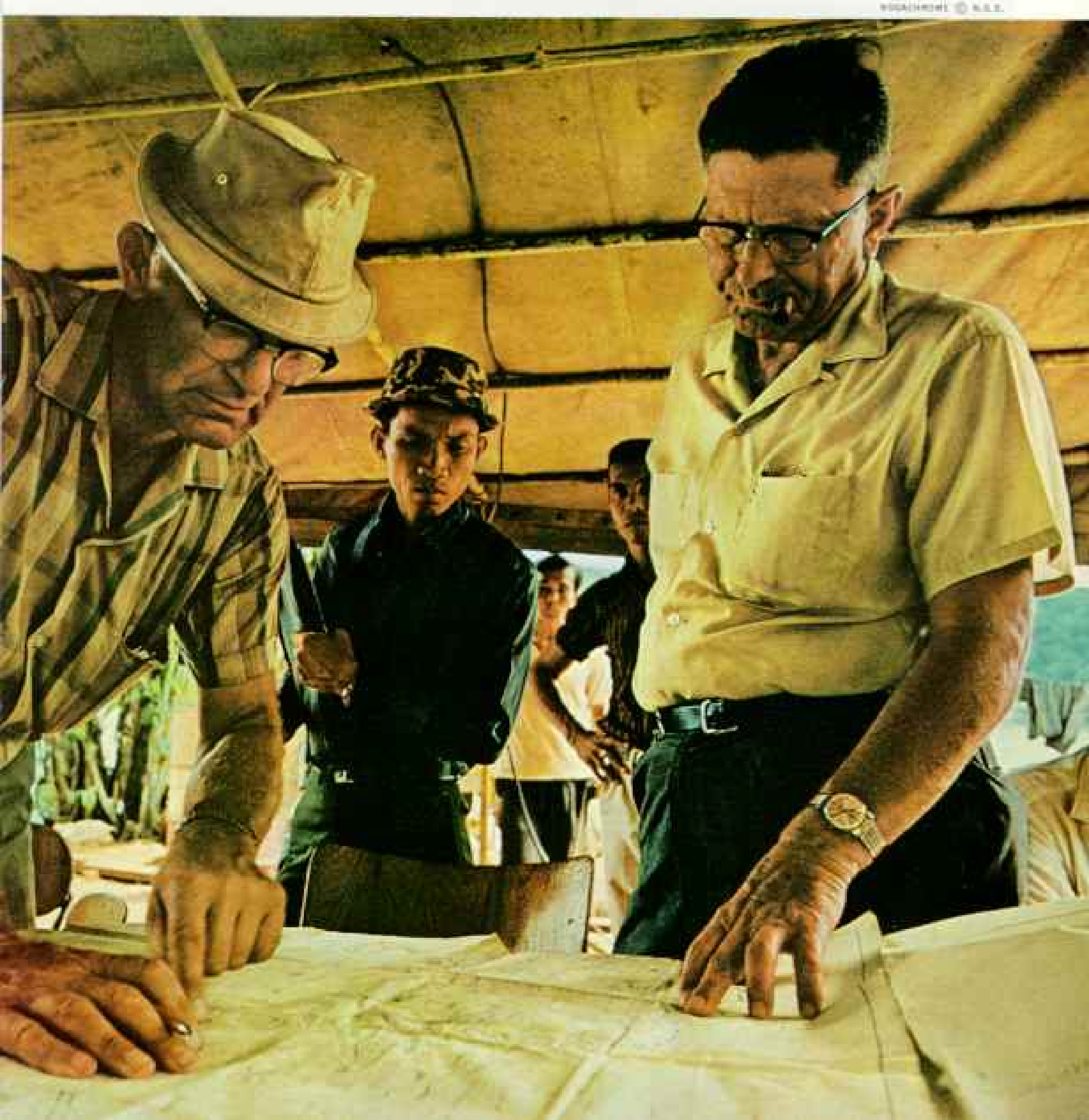
A Lao economist joined us at Hole 108 and injected another sobering note. Gesturing at the Laos shore, he said: "In this area we are not certain of the loyalty of the people. If officials from Vientiane come in a big group, they receive them as honored guests. If a little group arrives, they may kill them."

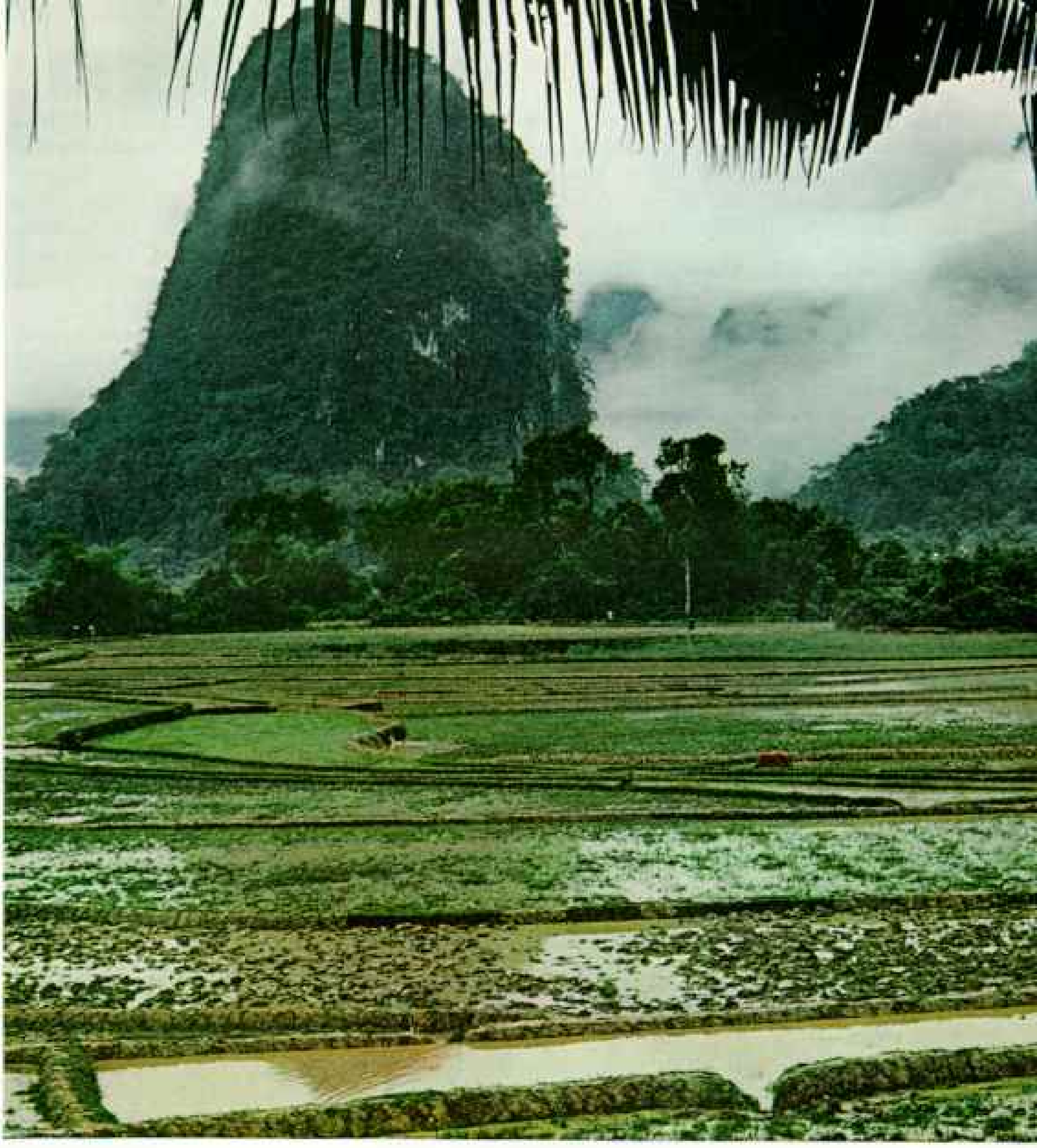
Back in Vientiane I talked to Lt. Gen. Kouprasith Abhay of the Royal Lao Army. He had long fought the insurgents known as Pathet Lao. Now he called them Lao-Viets—Lao rebels reinforced by North Vietnamese.

General Kouprasith said, "We advance in the dry season, when the roads are passable and the flying weather is good. They attack in the rainy season. Their bases are in the mountains. Our lifeline is the Mekong."

He named the larger towns along the river: Luang Prabang, Vientiane, and Paksane; Thakhek, Savannakhet, Pakse—airbases all. "Our fighter bombers are hitting the enemy hard. But he infiltrates more troops, and heavier weapons. Look."

The office was decorated with a captured





DKZ recoilless rifle and a 14.5-millimeter antiaircraft gun, both Russian.

The general sighed. "In 1954 there were 6,000 North Vietnamese troops in Laos. Now there are more than 40,000. The population is fleeing from the Lao-Viet zone. . . ."

Refugees were one of Laos's most pressing problems. "We're feeding 135,000," said an official in the Vientiane headquarters of USAID, the United States Agency for International Development. "We also give them seed and tools. In a year or so they are resettled and growing rice again."

Keo Viphakone, the Lao Secretary of State for Social Welfare, told me there were probably 600,000 people in Laos uprooted by war.

That is a quarter of the country's population, including a majority of its mountain people—hardy, colorfully clad Meo, Lisu, Kha Mou, Akha, and Yao (pages 757 and 758). The tribesmen sought safety in enclaves along the Mekong and its tributaries, and in clearings in the forest. Tens of thousands had to be supplied with rice from abroad, carried to them in planes hired by USAID. Where planes couldn't land, the rice bags were dropped from the air (pages 760-62).

Danger Charted on Airmen's Maps

The pilots, cheerful American civilians, kept their charts up to the minute. Blue squares indicated friendly airstrips, red squares unfriendly. More than half the country was said to be held by unfriendlies. Red

triangles represented hits suffered by planes.

Along 400 miles of the eastern edge of Laos —a mountainous region where North Vietnamese regiments marched south, and on into South Viet Nam—a band 40 miles wide was marked off as especially dangerous: antiaircraft, possibly radar-controlled.

I headed northwest, 215 miles to a friendly blue airstrip labeled Lima-25. This was Houei Sai (map, page 745), administrative seat of Houa Khong, or Upper Mekong Province.

From the air the flooded rice fields on the Vientiane plain looked bright as mirrors. Soon wooded hills and mountains stretched to the horizon, and in the valleys snaked coffee-brown waterways—the Lik, the Mekong, then the Beng, and the Mekong again. Here

Soaring above the clouds, limestone pinnacles rise nearly a thousand feet from the plain near Vang Vieng in Laos. Construction of the Pa Mong Dam to its highest projected level would flood this region 40 feet deep, unless a secondary dam were built to save the valley.

Flailing rice on a log, Lao farmer Paw Pai litters the ground with grain beneath his house north of Vang Vieng. The IR-8 rice, a hybrid developed in the Philippines, is the first crop grown by Paw Pai and other farmers in his region by means of dry-season irrigation. Young Americans of the International Voluntary Services assisted in the project. IR-8 yielded three times as much grain per acre as the native rice.

Paw Pai's legs were tattooed from hip to knee in his youth. The designs would, he believed, make him handsomer and more desirable to girls.

was a path, there a hut—lonely, lost in the sea of green.

Houei Sai is a Mekong town with two hills. One is crowned with a Buddhist wat, or monastery. On the other sit a 50-bed hospital of the Thomas A. Dooley Foundation of San Francisco, the house of the province chief, and a brick fort the French built when they were masters here. They left in 1954.

The airstrip buzzed with planes loading supplies for isolated settlements farther north. From a USAID warehouse, Lao in sweat-shirts stenciled "More Sweat, Less Blood" dispensed blankets and pots, salad oil and rice. Also bulgur wheat from America. That's crushed wheat, processed to be cooked and eaten like rice. Said a laborer, "People eat it when they are very, very hungry."

Thailand Guards a Precarious Peace

Across the Mekong, on the western bank, basked Chiang Khong, in Thailand's Chiang Rai Province. I took a ferry across.

In a cafe men sat chatting and comparing tiny images of the Lord Buddha around their necks. Nearby a hardware store offered Japanese motorcycles and a rice-mill motor from Czechoslovakia.

A family of Meo walked down the main street. I followed them as far as the Shell Oil Company station overlooking the landing. A Thai police corporal with binoculars gazed at girls bathing far below, modest in wet smocks up to their throats. The corporal said, "Binoculars are fun." All seemed at peace.

Then a helicopter with Thai markings came clattering up the Mekong, on patrol. In the past year Meo tribesmen had begun to cross over from Laos with Chinese automatic rifles. Seeking to set off a Meo revolt in Thailand, they attacked police posts in Chiang Rai Province. Now Thai planes had begun bombing Meo villages inside Thailand.

I hired a Thai boatman and his motorized pirogue, and we set out upstream to see how far we could go toward China. We putted past green shores lightly settled with houses on stilts, past people paddling and people fishing, through sunshine, mist, and cloudburst. I didn't care; this boat had a roof. But I was moved to melancholy by the sight of vegetation struggling against the rising river: leafy branches, bent by the brown current, straining to right themselves, eventually drowned.

With me came my Thai friend Khamsing Srinawk. He is a writer and a farmer who speaks English; and because he comes from northeastern Thailand—where people are closer akin to the Lao than to the Thai of Bangkok—he feels at home on both sides of the river. Khamsing is a man of the Mekong civilization, and he likes to talk about it. Now he told me about the songs called *long khong*.

"Long" means to go along, to drift, and so one can translate the two words to mean drifting along the Mekong. These are melodious, joyful songs, starting slowly, turning brisk—often sung for hours in duets, by boys and girls courting. The words tell how happy they would be if they were married, floating down the Mekong in a boat.

"To us," said Khamsing, "the Mekong is a symbol of travel and of happiness."

After three hours we stopped on the Lao shore, at the Yao refugee settlement of Ban Nam Kueung, and bought pineapples and corn boiled in the husk. Easily peeled, and tasty.

Nearly 4,000 Yao had settled here since 1964, refugees from Pathet Lao, from North Vietnamese, from bombings by Royal Lao planes. They had their own little army in wide blue trousers and black berets. The Chinese merchants at Nam Kueung had small pack horses for trade across the mountains.

On we chugged in a great S-curve of the Mekong—past drowned islands, whirlpools, and mountains with occasional clearings planted in rice. Habitations were scarce now. On the Lao bank stood an elephant, wiggling his ears. Then we passed Chiang Saen, capital of a Thai kingdom in the 14th century. The town looked prosperous, with neat villas and blooming flame trees; white tobacco sheds dotted the outskirts.

Chinese Soldiers Hold Corner of Burma

After eight hours on the river, we went ashore at the Lao village of Ban Kwan. It was getting dark, but even in daylight our boatman would have gone no farther. The hundred miles north to the Chinese border was a twilight zone, fitfully controlled by motley forces no government cared to discuss.

Across the river lay Burmese territory, held by armed men known as KMT's—for Kuomintang, the name of the Chinese Nationalist regime. They were Chinese soldiers who had fled their homeland after the victory of Mao Tse-tung. Now they served shadowy paymasters, some of them dealers in opium.

En route back to Houei Sai we stopped in a small Lao village with a sawmill. On

the wall of the village chief's house, I noticed a photograph: father, mother, three children, a happy family.

The village chief's wife said the picture had been taken five years before, after they came from another village overrun by the Pathet Lao. Then two units of KMT's, clashing over an opium caravan, spilled across the Mekong and fought nearby.

The family sought escape by boat, downriver, at night. The boat hit a rock and sank. Her three children drowned. She said, "We have two more now."

Foreigners Crowd Into Vientiane

On my flight back to Vientiane, I stopped off in Luang Prabang, the royal capital of Laos, nestling amid green mountains on a great hairpin curve in the Mekong. Restored wats sparkled in gilt glory. The royal palace had a new throne hall, inset with glass brick.

At the river, I heard a Mozart melody played in brass. The band of the royal guards was practicing the national anthem of Austria. Then came the anthems of Australia, Pakistan, Turkey. Ambassadors were arriving for the wedding of a royal prince.

Luang Prabang had 24,000 people. Vientiane, where I landed later that day, had nearly 150,000. Construction here had added a high school, a huge police headquarters, a grandiose monument to dead Lao soldiers.

The mayor of Vientiane noted other changes, without enthusiasm: "Europeans, Americans, Thai, Chinese, Vietnamese, more of them come all the time." Most of the Americans worked for USAID and lived with their families at Kilometer 6—a suburb with neatly squared-off streets, a baseball field, and a Boy Scout troop.

But the mayor was not objecting to them. After all, the guns, rice, and pay of the Royal Lao Army came via USAID; and, directly or indirectly, the United States provided for more than half the government's needs.

The mayor said, "The big change here, you see, is that life has become competitive, a fight for existence." I asked if competition wouldn't be a good thing. The mayor replied, "As a Lao, I say it is not good. We cannot stop others from coming here, but we would prefer a more quiet life."

One quiet morning, I saw a little girl fishing in a mud puddle with a basket. I asked to see what was in her pail. Four frogs, a dozen small fish, a fat beetle, crisp watercress.

Little boy with a big burden trudges into a Lao refugee village on the banks of the Mekong near the Thai-Burmese border. He comes from the hills of northern Laos, home of the Yao, one of the dozens of tribal minorities in the country. Fighting between government forces and Lao-Viets (Lao insurgents and North Vietnamese) has made the northern region unsafe. Lao officials estimate as many as 600,000 people—a quarter of the country's population—have fled the war zone. If they remain behind in Communist-controlled territory, Royal Lao forces consider them enemies, subject to bombing. They also risk being drafted by the Lao-Viets to work as porters on the Ho Chi Minh Trail and having their rice crop confiscated.

What was her best catch so far? "The big frog," she said. "He's the meatiest."

I tried fishing with her basket, up to my ankles in mud. On my second try I caught a one-inch fish. She laughed.

She had just begun, she said. In an hour she could gather enough food for a meal for two families. With rice, of course.

In the dry season she dug for crabs. They are easy to find then, she said, and fat.

I thought about that and wondered. Would the Lao be happier if they were left to the simple life along the Mekong?

I asked Oukeo Souvannavong, the Lao member of the Mekong Committee. He said: "Our people have a happy nature. They are not ambitious like you. They have few needs, and no desire for more and more things. Even if they are hungry, they do not complain."

Mr. Oukeo's mood changed abruptly. "The happiness of our people is based on ignorance. We have no reliable figures, but I believe our population is decreasing. Infant mortality is 60 to 70 percent.

"Think of that! Out of every ten babies, six or seven are dying! No official of Laos can be happy about such a state of things."

He went on quietly: "It is more than a question of food. There is so much sickness too. We must improve the whole standard of living. That is why the Mekong Project is so terribly important."

Rice Crop Fertilized by Monsoons

I drove to an experimental farm: the Vientiane Pilot Project, a joint endeavor of the Royal Lao Government and Israel. It was the Mekong Committee in action—helping 250 families to raise more rice, while changing their attitudes in preparation for the days of dams to come.

Amos Ben Mayor, an Israeli from the hills of Galilee (page 746), showed me irrigation canals and test plots with new varieties of rice. Twelve varieties were from Taiwan. From the International Rice Research Institute in the Philippines came the famous IR-5, IR-8, IR-52. Such varieties, he said, could raise agriculture in the Lower Mekong Basin from a subsistence basis to a market basis.

"A single rice crop a year can be grown with water of the monsoon rains alone," he explained. "The thunderstorms of the wet season produce a modest fallout of nitrogen compounds from the air. These help fertilize the soil—enough for a modest yield.

"To grow a second crop, in the dry season, one needs not only irrigation; one must also buy fertilizer. To convince farmers that it pays to borrow the necessary money, they first had to be shown that our new rice varieties would give them spectacular yields.

"And we showed them. Their usual yield is 1,300 pounds of paddy per acre. We showed them two tons in one dry-season crop. First on our land, then on theirs. Now the farmers here are raising a second crop."

Scientific Farming Offends a Spirit

Had it really been all that easy?

Not quite, said Mr. Ben Mayor, and he told of his encounter with something that is as much in the air in Southeast Asia as nitrogen. Namely the spirits.

"A farmer provided land for our first pumping station. But when it had pumped for a while, he wouldn't let us use it any more. After five months, he finally told us why: Ever since our pump got going, he had been sick. Obviously some spirit had been offended. If we kept pumping, he would surely die.

"And so we asked a Buddhist monk to come. With the proper rites he pacified that spirit, and we could go ahead and pump."

Perhaps the deepest challenge of the Vientiane experimental farm does indeed lie in the field of psychology. Mr. Ben Mayor had said earlier, "Can you imagine how much desire is created when a neighbor gets a little transistor radio? Or when a second crop buys a motorcycle? Now we'll start on a third crop."

And create cravings for air conditioners? The diesel generators of Vientiane produced barely 6,000 kilowatts. Refrigerators and air conditioners repeatedly broke down because the current fluctuated, from weak to weaker.

But a flood of electricity was on the way. The dam at the tributary Nam Ngum was

Bright gowns belie the grim life of Meo refugees from Laos's strife-torn north. They have just trudged in from a battle area and await the distribution of rice at Houei Tong Ko, delivered by helicopter and cargo plane. Each family also receives a large pot, small pot, spoon, plate, bowls, soap, black cloth, blankets, and iron bars from which to make knives. Some of these tribespeople have been displaced five or six times as battle lines have changed.

"**Rice comes from the sky,** many Lao kids believe, because that's the only way they've ever received it," a pilot told photographer Garrett. Skimming low above the rugged, roadless hills of northeast Laos, a C-46 drops rice and corn meal (above) to a duck-shaped refugee village, Phong Sai (left). During the past year the United States has dropped $3,000,000 worth of rice to 135,000 displaced hill people. The drops, as complicated as bombing runs, earn hazardous-duty pay for the civilian pilots, who often draw guerrilla fire when they come in low. They fly for Air America, one of the world's largest charter airlines. Newly cleared rice fields mantle slopes in green velvet. The refugees' first crop should make them self-sufficient, bringing the air drops to an end.

scheduled for completion in 1971; the reservoir might fill by 1972 (map, page 752). Long before that power arrived, Vientiane was to receive electricity from a new German-built power station as well as from the Nam Phong Dam in Thailand. The transmission line across the Mekong, owned by the Mekong Committee, was already up. A power distribution station was rising, supervised by Japanese.

From Vientiane the Mekong flows 525 miles to Cambodia (map, page 745). For 415 miles of the way it continues to form the Lao-Thai border—but hardly a barrier to terrorists, ferrying arms hidden under innocent cargo in quiet pirogues.

The commander of the Thai Marine Police, Maj. Gen. Javalit Tamthai, had just received 13 new river patrol boats, 40-footers with .50-caliber machine guns, built with money from USAID. Now he had 23. He told me, "I need at least fifty." But how could even a hundred boats keep track of the comings and goings of so many Lao and Thai who simply do not look upon the Mekong as a border?

A Thai colonel said infiltration was as bad as ever. He was from the Communist Suppression Operations Command, and he worried especially about the airbase at Nakhon Phanom, opposite the Lao town of Thakhek. From this Thai base the United States Air Force mounted daily raids against North

For a time, freedom from want

SMILES BESPEAK the gratitude of refugees in Phu Hae in northeastern Laos. Rice has been dropped from 1,000 feet in new plastic bags—tough, waterproof, and almost as welcome as the food itself.

Inspecting the bags to see how they withstood the drop is Edgar "Pop" Buell, left, of the United States Agency for International Development. He has spent the past eight years tending the homeless and helpless of northern Laos. Photographer Garrett, long a friend of Mr. Buell's, flew with him to the village and saw the extraordinary rapport he enjoys with refugees.

"The people were afraid of the Lao-Viets just beyond the ridge," recalls Mr. Garrett, "so they had put up only temporary shelters. They had refused Pop's offer of a sawmill; it would have made it possible for them to build permanent houses, but then the Communists would surely come. They wanted instead to move to the main settlement center of Sam Thong.

"Pop called a meeting. It went on for hours. Speaking fluent Lao, he used local jargon and invoked local customs to convince them they should stay. The people claimed there was a bad phi in the village and that they had offended it. Pop admitted there might be a bad phi in Phu Hae, but insisted there were *two* bad spirits in Sam Thong. Besides, Sam Thong was overcrowded, and the people there smoked opium and didn't care about their children. The refugees should stay in the village, not run from the Lao-Viets, and make permanent homes and a new life for themselves. To do this, they should build a school and a dispensary, and he, Pop, hoped to see the buildings finished the next time he came to Phu Hae."

They agreed to stay. Next morning the Meo butchered a pig for Pop as a sign of continuing friendship.

After Mr. Buell's conference, Donald Dougan held sick call. Here he examines a youngster suffering from a respiratory infection, common among hill people. The boy's father steadies his son's head. Mr. Dougan, a former U. S. Special Forces medical corpsman, has trained dozens of hill people to treat fellow villagers.

Viet Nam. Rescue flights brought back American airmen downed in North Viet Nam and Laos.* Terrorists were known to be planning an attack on Nakhon Phanom.

Against this uneasy background, instruments installed on both banks continued to gather data for the Mekong Committee. They took sediment samples and recorded stream flow and the changing river height. From Pakse, Jacques Van Remoortere, a Belgian, took me along with his surveying team to the wide falls at Khone (pages 788-9).

The Pathet Lao were watching us. They sent word through one of Jacques's Lao assistants: They would not interfere with work of the Mekong Committee, as long as we didn't seek the protection of soldiers or police.

City Built Where Floating Buddhas Stopped

Eventually I reached Phnom Penh, capital of Cambodia and, with 600,000 people, the largest city on the Mekong. The people say it was founded in 1372, on a spot thought propitious because four images of the Lord Buddha, floating on the water, had come to a stop here.†

Phnom Penh exuded calm. Uncrowded sidewalk cafes basked under striped awnings. In the evening, on uncrowded streets, pedicab drivers put candles in their lanterns. At dawn, Chinese did their calisthenics in the parks.

Main streets were named for ancient Khmer kings and for Charles de Gaulle, Jawaharlal Nehru, and Mao Tse-tung. I saw a Russian-built hospital and a glass factory donated by Communist China. American aid had created a great highway, south to Sihanoukville on the Gulf of Siam. Then, in 1963, Cambodia refused further United States aid; disagreements had mounted over U.S. policies in South Viet Nam. Relations were broken in 1965.

Inside the palace compound, sweltering tourists admired carvings in the Throne Hall and coronation robes in the museum. The pavilion for distinguished visitors had added air conditioning in 1967. Since then it had cooled Marshal Tito, President Suharto of Indonesia, and Mrs. Jacqueline Kennedy, who came for the naming of a street in Sihanoukville in honor of her late husband.

A palace functionary said, "We wish for peace with everyone. I like Americans. They are gracious, like the beautiful widow Kennedy."

At the royal landing, a little floating palace rises and falls with the annual rhythm of the Mekong. The view is majestic, across the watery junction known as the "four arms" (pages 738–40).

One arm is the mainstream, flowing down from

*Howard Sochurek told of "Air Rescue Behind Enemy Lines" in the September, 1968, NATIONAL GEOGRAPHIC.

†See "Cambodia, Indochina's 'Neutral' Corner," by Thomas J. Abercrombie, GEOGRAPHIC, October, 1964.

Secluded shrine above the Mekong, this sacred cave near Pak Ou offers special blessings. Here a single girl pays her respect to the Lord Buddha in the hope of finding a husband. The swift-flowing Mekong carries a pirogue downstream toward Luang Prabang. The King of Laos makes a yearly pilgrimage to Pak Ou, where hundreds of images brought by monks line the ledges.

Cotton strings around his wrists, guardians of the 32 souls of the body, will bring good luck to a bridegroom at a Lao *baci* ceremony. Weddings, births, farewells, or any occasion for well-wishing call for the ritual of baci. Here the *tassieng*, a village official, ties a string on Sourak at his wedding feast. His bride, Boua Lien, beams her joy.

the northeast, from Laos. Here it splits into two great rivers flowing on into South Viet Nam—the second and third arms.

The fourth arm is a reversible tributary called the Tonle Sap, meaning "sweet water." In the dry season, it flows into the junction. But now, in the rainy season, the swelling mainstream rises as much as 45 feet, and its water flows up the Tonle Sap to the Great Lake, also called Tonle Sap, 80 miles to the northwest (map, page 745).

When the rainy season ends in November, the river switches again. Phnom Penh then celebrates the Festival of the Retreat of the Waters, with merrymaking on boats and barges, with pirogue races and fireworks.

The Queen watches from the little floating palace; so does her son, Prince Norodom Sihanouk, the Chief of State. Her Majesty is handed a sea shell filled with Mekong water. She sprinkles her face and hair and salutes the rising moon.

I drove along the Tonle Sap toward ancient Angkor, the outstanding tourist attraction in Southeast Asia. Angkor means "city." All of it—the whole gigantic complex of moats and buildings, delicate and huge—is a monument to man's mastery over water in the Lower Mekong Basin, once upon a time.*

Angkor Wat is considered the finest of the temples. The Bayon, in the 2-mile-square enclosure called Angkor Thom, is the most

*See "Angkor, Jewel of the Jungle," by W. Robert Moore, NATIONAL GEOGRAPHIC, April, 1960.

REDUCTIONS (ABOVE) AND DETAILS © N.G.S.

grandiose (pages 768-9). The Baphuon, the Bakheng, Takeo, Preah Khan—more than a dozen major structures rise within a rectangle of 9 by 5 miles. Farther away there are more.

The Lake That Heals All Ills

I liked Neak Pean best. It is a tower in the middle of a square artificial lake, now dry; it symbolizes a miraculous lake in the Himalayas where all illnesses are cured. Pilgrims long ago came to Neak Pean to bathe in its healing waters.

This explanation came from the man who knows Angkor best, Professor Bernard Philippe Groslier, Curator of Angkor. He poured out a heady brew of history.

"In the fifth and sixth centuries the Empire of Funan, in the marsh lands of the Mekong Delta, built canals to avert floods and the intrusion of salt water. In the sixth and seventh centuries the civilization of Chenla, in the center of the basin, captured water on the slopes that run down to the Mekong, to use it on terraces for agriculture.

"And then, beginning in the ninth century, the Khmer civilization of Angkor learned both to capture and to drain away water. The Khmers settled on the shore of the Great Lake, which floods and dries with the seasons. They tamed it with canals and dams, and they made huge *barays*, or artificial lakes.

"Thus they could grow more than one crop a year. This was the basis of the economic power you see reflected in these monuments."

The professor has laboratories and 1,000 workers to save Angkor. The funds come from Cambodia and France, half from each. The enemy is water.

"It percolates up through the stone," the professor explained. "Sandstone consists of hard minerals in a paste of sand; the water dissolves this paste. If nothing is done, Angkor Wat may disintegrate in the coming decades. We must tear it down and rebuild it on a waterproof foundation of concrete. We'll pull down a section of the gallery this winter."

His men had nearly finished rebuilding the Baphuon—one of the biggest jobs of reconstruction in the world. Professor Groslier said: "If we can keep up this level of activity for 20 years, all Angkor can be preserved. A million dollars a year is not so much. The problem is the will to do it, and peace."

I wandered on among 150-foot-high trees and testy monkeys, past exhausted tourists and insistent sellers of souvenirs. In the nearby provincial capital of Siem Reap, I talked to Governor Lok Lean.

The governor said, "A king of Angkor built the great Western Baray, and you must see it. Many improvements were made there with U. S. aid, when Cambodia and America were good to each other." He meant before Cambodia broke off diplomatic relations.

The Western Baray is a rectangle, 5 miles long and 1¼ wide. Half was silted, but the rest was green water rippling in the breeze. Through reconstructed channels, water once more flowed in from the Siem Reap River, as it had centuries before. Water flowed out into 136 miles of irrigation canals, into a landscape of contentment, where 2,000 farm families lived the two-crop life—radio, motor scooter, wooden house with tile roof.

"They used to be poor—they had thatched houses," said the agricultural engineer of the province. "The young people used to go away. Now they stay and earn much money."

Back in Phnom Penh, which is as far as big ocean-going ships come up the Mekong, the port records showed automobiles arriving from Japan, pigs going off to Hong Kong. The assistant director general of the port hoped it would soon move to a better location, where there were no sandbanks to be dredged.

In the Tonle Sap Restaurant I ate fish paste on sour slices of green mango, and bony bits of fried frog. Very Khmer. Then I was again on the Mekong, chugging upstream, this time in a 60-foot cruiser graciously provided by the royal government of Cambodia.

Hormones Stimulate Aging Trees

The river revealed glimpses of rural prosperity—banana plants and sugar palms, tobacco, sweet potatoes, corn. Bags of rice waited at landings. In an open-sided steamer heading downstream, rice shared the steerage with a trio of water buffalo. We didn't stop, not even at Kompong Cham, with its cotton mills and tobacco marts. We were expected by nightfall at Prek Kak, at the only rubber plantation on the Mekong.

The director, Mr. Henri Seguin from Paris, spoke of 1,800,000 trees on 12,000 acres, and of glorious averages: 1,700 pounds of crude rubber per acre per year—one of the highest yields anywhere. Of the highest quality, too. His rubber went around the globe, some to the United States, the very best to France. Freighters came upstream as far as Kompong Cham to load it.

Mr. Seguin said four years ago the plantation was in difficulty. "The price of rubber was falling. What to do? We took thought. We cut costs. We raised production. We modernized." The French-owned Mekong Rubber Company was once more making money.

In the morning, in the emerald twilight in the rubber forest, modernization was clearly to be seen. Trees were tapped in two places, both high and low (page 773). Some old trees

A mother's anguish and love reach out to her tiny son, ill with multiple infections, as a Thomas A. Dooley Foundation doctor examines the child in southern Laos. The foundation carries on the work of Tom Dooley, the young U. S. doctor who ministered to the Lao until his death from cancer in 1961. Dooley doctors travel the Mekong by boat to make village sick calls. Their craft and those of the Mekong Project have seldom been attacked by Communists.

Ghostlike faces surround two saffron-robed Buddhist monks in a window of the extravagantly carved Bayon, central temple of Angkor Thom. Here, in northwestern Cambodia, rise the splendid temples of the Khmer kings, ancient rulers of Southeast Asia. Not only does the architectural grandeur speak of a brilliant civilization; complex canals, reservoirs, and ponds—some still in use—reveal a remarkable system of irrigation, forerunner of the Mekong Project.

EXPOSURE AND RESPONSE (FOLLOWING PAGE)

were stimulated with hormones, carefully painted on.

The director's white-stucco villa, overlooking the Mekong, sat on a lawn amid violet bougainvillea, near a tennis court and a pool. A couple of times a week his private plane took him to Phnom Penh, in half an hour, for a day in the office. His wife and daughter might come along, to shop and meet friends for lunch.

The rest of my trip upstream in Cambodia evokes mixed memories. Late in the golden afternoons, the people and the buffaloes come down from the banks to wash and soak. Most river people bathe before the midday and the evening meals. Fastidious ladies bathe four times a day.

I remember the Mekong in the moonlight. From the bank drifts a smell of charcoal. In the silence and the darkness a kerosene lamp looks bright half a mile away. And early in the morning, how refreshing it is to have a shave and a soak in the Mekong. Fish may nibble at you, but they are little; they hardly tickle.

I remember dam sites. Someday a great dam may rise at Sambor. An even greater mainstream dam is projected at Stung Treng (map, page 745).

And I remember talking to the superior of a monastery on a hill. Muffled thunderings came from the direction of South Viet Nam, from Tay Ninh Province some 40 miles away—explosions of bombs from B-52's of the U. S. Air Force. Were such sounds heard often? The superior said, "Not every day. Sometimes my mirror is shaken. It frightens the people."

Dams Hold Promise and Problems

Sambor and Stung Treng, Pa Mong and Nam Ngum —all these projects are coordinated from Bangkok, capital of Thailand. Bangkok lies outside the Lower Mekong Basin, but it is one of the busiest cities in Southeast Asia and the seat of ECAFE, the United Nations Economic Commission for Asia and the Far East. Here hums the offshoot of ECAFE, the Mekong Committee. Here the experts and the data converge.

An engineer from Taiwan said, "They laughed when we started in 1957. What can you do without data? How much water do you have? What's the population? We made a lot of guesses, and now we find we were pretty close. Pa Mong is becoming a reality. Nobody laughs any more."

Pa Mong, Stung Treng, Sambor: How could they work together, eventually, to make the most of the Mekong? How should they be designed for joint effectiveness? An IBM computer was at work; U. S. and French experts coached Thai and Lao programmers.

Economists pondered the geologists' reports. No bauxite. Would it pay to import it, and make aluminum with all that cheap electric power to come? Lots of rock salt. What sort of chemical plants could use it?

A lot of experts worried. What would the dams do to the environment? What would happen when areas now flooded annually would be dry all year, thanks to flood control? Unless soon irrigated and fertilized,

Lake dwellers harvest fish-rich waters

KODACHROMES BY W. J. BARRETT © N.G.S.

VILLAGE ON STILTS rises from Cambodia's Great Lake, the Tonle Sap. The men of Chong Knea sail homeward (below) after filling their nets in one of the world's richest fishing waters. Domesticated storks, kept like chickens or ducks, gobble part of the catch. A young boy (above) force-feeds a bird to fatten it for the family kettle. During the monsoon season the flooded Mekong reverses the flow of the Tonle Sap river, sending it pouring upstream into the Great Lake. Normally covering 200 square miles, but scarcely five feet deep, the lake spreads to fifteen times that area. As it rises, villagers dismantle homes and transport them on flatboats to new locations. When the lake ebbs, they move back.

they might turn into dust or into soil hard as rock. It had happened in Pakistan.

Reservoirs create longer shorelines. Would these bring more shoreline-loving snails, carrying disease? It is happening in Egypt.

What about the fish of the Mekong?

"I think the *pla bük* is doomed," said a fishery biologist from India. The pla bük is a gigantic catfish, up to 10 feet long. The biggest ever caught weighed 1,216 pounds. Pla bük live only in the Mekong, and the Lao and Thai catch them with much ceremony.

"The pla bük must migrate to spawn, and the dams will stop his migrating," said the fish man. "The pla bük is of no great economic importance—the catch is only about 30 a year. But I shall be sad to see him go."

Dams do pose fish problems of economic importance, the fish man added, since they affect all fish, migrant or not. Fish spawn in response to clues from the surrounding waters —the temperature, say, and the speed of the current. Change those surroundings abruptly, as dams always do for great stretches, and many species won't survive.

One might introduce other species. But unless scientists and government officials moved in time, the great dams might lead to drastic reductions of fish. That, in turn, could lead to drastic proliferation of undesirable aquatic plants; they might choke the reservoirs. It had happened in Zambia.

New Lake Brings Prosperity

And what would the dams do to people?

A laboratory, so to speak, did in fact exist to illuminate that question. I drove to arid northeastern Thailand, to see what was happening around the dam on the Nam Phong.

It was a miraculous sight, that newly created lake, stretching to hazy hills on the horizon. Deep inside the powerhouse I stood before a turbine made in Germany—a huge pipe with a rotor turning inside. Around me was a thundering, pulsing sound. The Thai engineer said, "167 revolutions per minute, 63.1 cubic meters of water per second. . . ."

On the shore of the new lake sprawled a new village. The daily market handled fish by the ton. Fishermen had moved here from small rivers all over the northeast.

Small taxi boats brought rice and pigs across the lake, to be picked up by small trucks coming on the new road. But the trucks came primarily for fish. A Chinese trader bought a load of labeo, a carplike fish. He said he would sell them to a middleman, who would take them to market in the big town of Khorat; his predecessor on this route had made a small fortune in a year.

Fish That Can Ruin Fishermen

A truck had come all the way from Vientiane for a load of fish called snake-head. The fish expert in Bangkok had told me about these predators, up to three feet long, with several rows of teeth. People liked to eat them. But snake-heads could spell disaster for the fishermen. It had happened in Cambodia.

After a reservoir fills for the first time, the fish man had explained, drowned vegetation makes for much food; fish grow plentiful and large. The fishing is fine. But the predators may increase. Then the fishing will slump, and eventually even the predators will decline. They will be eating each other.

The thing to do at Nam Phong was to destroy the snake-heads, quickly, and introduce grass carp and silver carp. As yet the officials had done nothing.

I spent the night in the town of Khon Kaen, enjoying electricity in a new air-conditioned hotel, a brightly lit new bowling alley, and an old Chinese movie. In the morning I toured the Nam Phong resettlement area, five miles from the new lake. Here lived families displaced when the lake drowned their land.

The administration building displayed a map showing 28 little communities, each built around a community center. I went to Resettlement Village No. 5 and got a shock.

In a hut lay a woman wasting away with tuberculosis. She had pills, and a spirit doctor had come from Khon Kaen. In the hut were the husband, six neighbors, and the headman of Village 5. The husband said, "She is very tired, she cannot walk or stand."

(Continued on page 778)

Ever-broadening slashes scar trees of the Mekong Rubber Company at Prek Kak, Cambodia. To increase production, the company taps them both high and low. Each day an expert swiftly enlarges each slash by no more than a millimeter to make the latex flow. The French-owned plantation produces one of the greatest yields of high-quality rubber per acre in the world.

Brown-robed elders belonging to one of some half-dozen offshoots of Buddhism in South Viet Nam join in prayers for peace on an island in the Mekong. The founder of their group, Nguyen Than Nam (right), stands before an immense incense burner with a plastic key, his symbol of peace, at his waist. In his hand he holds a ball-point pen; he always writes, rather than speaks, his messages to his followers. They say he has not lain down for 20 years, and that he lives only on coconut milk.

Nam's nickname, the Coconut Monk, also refers to his birthplace, Kien Hoa Province—"the land of the coconut trees." His disciples, called the Coconut People, practice Buddhism mixed with Christianity. In 1964 Nam erected his island shrine (below). Its archway rests on a platform in the shape of North and South Viet Nam, with one pillar in each—symbol of reunification. A painting in the shrine portrays Buddha and Christ side by side.

Last July Nam urged the South Vietnamese Government to fly him and three members of his family to Hanoi to arrange a peace conference. He promised that if he failed, he and his relatives would expose themselves to death from bombing. His offer was rejected.

Gift of the Mekong: Rich alluvial soil of the delta, brought by the river in its monsoon floods, produces abundant crops of rice. Bunds, or embankments, border the fields to hold in the water. When the fields are flooded, water buffaloes draw harrows through the muck (upper left) to prepare it for planting. Women follow, setting shoots that have been grown from seed. The local Viet Cong, who control much of the delta and depend upon it for food, are known to supply farmers with hybrid rice in an effort to increase the yield. A concealed VC machine gun opened fire on the U. S. Army helicopter from which this picture was taken.

The husband said he was in his sixties. "I married at 22, and we always had rice stored in our barn. Now some of my family must go out and beg."

The headman said irrigation had been promised, and low-cost loans from the Thai Government. What were promises worth? The people had been here since 1964. They had gone from one crop of rice a year to none.

Outside, the soil was dry and sandy. I had met New Zealanders laying irrigation pipes, but only to 12 of the 28 villages; even there, they would provide only enough water for small gardens. Wasn't there plenty of water behind the dam? A New Zealander said there was. There wasn't money enough for pipes.

The headman said, "Some rich people came from Bangkok and left packages. Clothes, they said. We were so glad. We thought we would have nice clothes. We opened the packages and found old rags. We were so hurt. It was like pushing us into the earth. We kicked those clothes into the dust."

One of the men in the hut said, "The Communists tell us about people like that."

Back in Bangkok, officials of the Mekong Committee explained to me that they could not tell any government what to do. Their hope lay in data and persuasion.

Watery Hideout of the Viet Cong

In the end I headed for South Viet Nam. In Saigon I met my friend Chu Quoc Trang, a companion on previous visits. I also gained an American perspective of the Mekong Delta.

"That's where the Viet Cong have their heart, their greatest strength, control, and influence." So said an embassy official.

A U. S. Army general said, "The delta is the haziest area of all. No North Vietnamese to speak of, but the VC have new weapons. Imagine, 5,500 miles of interconnecting waterways. It's hairy to operate down there."

The delta begins 30 miles south of Saigon. The South Vietnamese Government calls it the IV Corps Tactical Zone: 16 provinces and 92 districts in an area larger than the Netherlands; nearly 6,000,000 inhabitants, many with religions peculiar to the delta (pages 774-5). Going along on military flights gave me an awesome picture: a great green flatness, laced with canals small and large—as if some unfathomable spiders had spun endless cobwebs of water. Through it all poked the great brown branches of the Mekong.

Where the largest canals connect with the rivers, there are towns—Soc Trang, Long Xuyen, Can Tho. Many towns had bridges

Column of ironclads, crowded with South Vietnamese Marines, penetrates a Viet Cong stronghold in the delta. Running a gantlet down the Cai Lon River, the U. S. Navy assault flotilla expects an enemy attack at any moment. "Surprisingly, there was not one ambush on the way in," reports photographer Garrett.

EKTACHROME (BELOW) AND KODACHROME BY W. E. GARRETT © N.G.S.

who made this picture from the lead ship, a heavily-armed monitor. The secret strike was a success. The Marines took the jungle-shrouded VC headquarters (pages 741-2) and captured Chinese carbines, Russian rifles, French submachine guns, U. S.-made mortar rounds (below), howitzers, mines, grenades, and an 81-millimeter mortar. Hundreds of pounds of VC documents and the scripts, costumes, and stage props for propaganda plays were left behind. A crewman at left inspects a Chinese bugle found in the camp.

"Please help my baby!"

A VIETNAMESE mother pleads with an interpreter aboard a U. S. Navy patrol boat in the delta. The patrol, seeking VC craft on the waterways, had stopped her sampan shortly after sunup—before the 7 a.m. curfew ended. Finding neither VC nor contraband, the sailors helped her sick child as much as they could from the vessel's first-aid kit and moved on.

At night, when all river traffic is prohibited, Navy patrols use Starlight Scopes, electronic devices that amplify light 50,000 times (above). VC craft show up in the ingenious scopes as clearly as does this Navy patrol boat.

Firing an M-60 from a helicopter (top), Airman James G. DeLore strafes a VC contingent in response to a call from ground forces. His squadron, the Navy Seawolves, patrols the waterways both day and night.

over the big canals; most of the bridges had been blown up by the Viet Cong. The countryside showed defoliated trees here and there; and everywhere craters—small from artillery, larger from the B-52's.

What was the Mekong Committee doing here? It pondered the old problem of too much water. Already there had been experiments to dike the land and drain it, as the Dutch do. Or could the flow of some major canals be reversed—to carry water to the Gulf of Siam and help drain the land? This had worked in the ancient Empire of Funan.

Either project would reduce the undesirable inflow of salt water from the South China Sea; in the dry season, when the Mekong flow lessens, this intrusion reaches half the delta.

But no such plan could be realized now, when the movements of government officials and foreigners had to be so severely restricted. I found that out not far from Can Tho, the delta's biggest city, in the little town of O Mon.

Danger Lurks Where the *Son Ca* Sings

I wanted to sample the moods of the Vietnamese countryside, the moods of the paddies. I hoped to hear again the *son ca*, the skylark who is the farmer's friend because he sings from dawn to sunset. Could I go a mile outside O Mon and sit in a rice field?

The district chief said no, he couldn't spare 30 men to protect me. Last year, when things were better, a dozen would have done.

Could I have one policeman and go just a

hundred yards beyond the town and sit there?

"No, a sniper might get you."

Could I sit in a cafe then, in the center of town, along the canal?

No, there were snipers across the canal. They didn't bother the Vietnamese, as a rule, but a foreigner was a welcome target.

The chief may have been overcautious; a dead foreigner means unhappy superiors and much paper work. But that's pretty much how things are in the delta nowadays.

And so I sat in a cafe on the waterfront back in Can Tho, watching ferries and barges and small boats. Many had red eyes on the bow, to scare the bad spirits in the river. A little girl slid down the embankment on a folded-out cardboard box, again and again.

Richest Men Sought Can Tho Brides

My friend Trang said that Can Tho is famous for its girls—beautiful girls of proud carriage, with delicately reddish complexions. In the old days, he added, the richest men of the south thought themselves fortunate to marry girls from good Can Tho families.

I had the good fortune to be introduced to such a young lady. I said, "I have heard that in times past the great men of Viet Nam sought out the ladies of Can Tho, bewitched by their remarkable complexions. . . ."

She replied, "You are a well-educated man."

I: "Do Vietnamese gentlemen still prefer the enchanting young ladies of Can Tho?"

She: "I am happy to say, yes. But unfortunately I have not yet found the right man. Will you stay here a long time?"

I said that to my sorrow I would be obliged to leave in a couple of days. I dare say I was a bit red-faced myself.

The University of Can Tho symbolized what happened in the delta early this year. The main building had been a handsome four-story structure of concrete and tile. Now it was gutted, a ruin of broken girders, a reminder of the VC offensive that erupted at the Vietnamese New Year, or Tet.

Bui Chi Huy, an aide to the rector, told me that on the morning of February 6 a company of VC with recoilless cannon moved into houses near the university, including his. "They wore camouflage uniforms like our Vietnamese Marines." The bitter fighting ended after the area was blasted by artillery and aircraft, both South Vietnamese and American. The allies hated to do this, but there was no other way to dislodge the VC.

Mr. Huy said: "The VC made my family lie on the floor. The children cried all the time. A big bomb hit near us. I thought my children would go out of their minds." He added that American officials in Saigon had offered funds to rebuild the university.

In My Tho, second largest delta city, Viet Cong held parts of the town for five days. The VC attacked 13 provincial capitals. They demonstrated with terrible impact that no longer was there safety even in the towns.

Another capital badly shocked was Ben Tre, in Kien Hoa Province. A U. S. Army man told me: "They had us squeezed into three square blocks. We thought we wouldn't make it." Here too American planes came to the rescue, but in the end much of Ben Tre was destroyed by the planes and VC rockets. The debris was gone, but not the bitterness and the fear. What would happen next time?

Even in Saigon it was acknowledged that the VC in Kien Hoa Province controlled more of the population than the government did.

No wonder. Ben Tre, the intellectual center of the delta, had a tradition of strong-willed Vietnamese dying for political causes. The province chief's office displayed a portrait of the general and diplomat Phan Thanh Gian. In 1867, having failed to crush the French invaders or to negotiate with them acceptably, he poisoned himself.

It was from Kien Hoa Province that the rebellion against the French first flamed through the delta in 1945. And when, after the French withdrew in 1954, the Viet Cong took arms against the new rulers in Saigon, Kien Hoa became one of their first strongholds.

Colonel Nhien Brings Peace to Ba Tri

All the more surprising, therefore, that Kien Hoa Province now furnished a bright spot in the U. S.-financed pacification program. This was in Ba Tri District.

"Stagnation in 1966, now prosperity! Electricity! Many more buses!" So said the ranking American pacification expert, Robert W. Komer. I hurried to Ba Tri, which is bordered on two sides by branches of the Mekong and on the third by the South China Sea.

I saw paved roads, wells, a four-room school, a maternity ward, a five-room school, a market hall with a TV set locked in a wooden box. The box was opened in the evening, to let every villager see the government programs. All this had been built in two years.

Behind it all were swarms of the black-

clad men from RD, or Revolutionary Development, with carbines and RD songbooks. Also two battalions of Vietnamese regulars. And above all, Lt. Col. Tran Thanh Nhien.

He told me about the confidence of the people. "When we came, they didn't want to see us. Now they are easy to approach; they approach us. They trust me because I can protect them. Many commanders come with heavy guard. The people say to me, 'You come alone? Aren't you afraid?' I tell them, 'I have soldiers, but I trust you.' I have faith, you see, faith in my mission, and that is to build and not to destroy."

VC Set Fish Traps for Patrols

Unfortunately there were few Colonel Nhiens in the delta. But there was firepower aplenty, in awesome varieties, on land and water and in the air. The latest thing was the American helicopter called the Huey Cobra, with the dread 6-barreled Minigun, firing 50 rounds a second. In military parlance, Miniguns "hose down" an area.

In response, the VC employed simple tactics. Fish traps, for example, positioned to steer a patrol boat to a place where rockets waited. And ground fire at the helicopters. I know of a young helicopter gunner who took one of their bullets in his brain; he is paralyzed from the neck down.

I went on a mission with the unique Mekong Delta Mobile Riverine Force. The troops came from the U. S. Army's 9th Infantry Division. The U. S. Navy contributed River Assault Flotilla One, specialized armored craft up to 60 feet long (pages 778-9): troop carriers, boats with tiny landing pads for helicopters, flame-thrower boats, monitors carrying mortars and turrets with cannon. But for all their armor, ever vulnerable to VC rockets.

The Riverine Force normally sought out so-called VC main-force units along the canals. But now there would be a sweep of an island in the Song Tien Giang branch of the Mekong. I heard the briefing on the flagship.

Thoi Son Island, five miles long, one mile wide, eastern tip just south of My Tho. Known VC liaison route. From here the 516th VC Battalion could mortar My Tho. One of its platoons might be on the island; probably also elements of the 332d Sapper Company, to set booby traps and snipe at shipping. Our artillery stood ready near My Tho; air strikes were on call.

Our assault boats would surround the island before dawn. A plane would play a tape, telling the people not to run—whoever ran would be considered VC. "We want to walk up to them and question them."

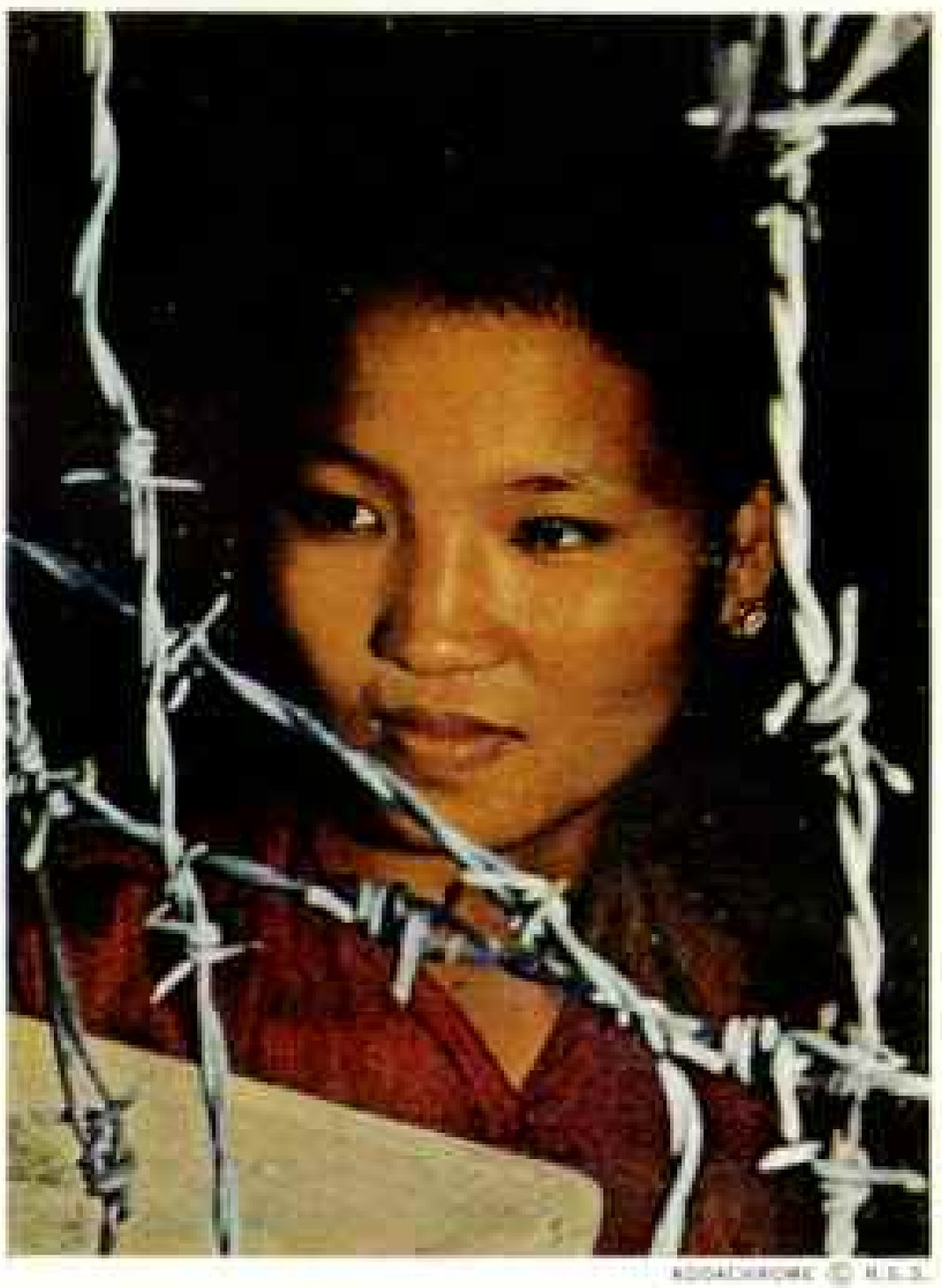
A major said the island was heavily booby-trapped. "They use captured grenades or shells that were duds. Do you know what a daisy chain is? Grenades strung along a trail. The point man trips one, and they all go off, so the men behind him get zapped too."

I rode aboard the monitor that ran the operation. The radio room buzzed. Our first element to land had run into fire. The skipper beached the monitor, to steady the guns.

From the island: "Every time we move we receive fire." The colonel in the monitor: "Don't spread out in there; we can lose a company that way." The island: "Search party ambushed." Near us, a helicopter lifted the first casualty.

Said a Vietnamese liaison officer aboard: "The people call this Coconut Island. Full of VC, hard core."

A chopper took me to the island. It took



KODACHROME © N.G.S.

The world through barbed wire: Improvised defenses ring countless homes, villages, and fields in the Mekong Delta to deter Viet Cong attackers. This woman, the wife of a Regional Force soldier, lives in Chau Phu. Families go with such soldiers wherever their units are moved.

back a man wounded by a booby trap. He smiled. He was safe.

There were sharp, fast cracks from our infantrymen's M-16 automatic rifles, and the booming of rifle grenades. We all crouched. Then quiet. We walked gingerly among the palms and banana plants. I thought of daisy chains.

Capt. Wayne Greene, commanding Bravo Company, had a radio too. It reported 30 to 40 VC farther down, with AK-47's; those were *their* automatic rifles. The captain said, "One guy is firing at you, and you feel like it's fifty."

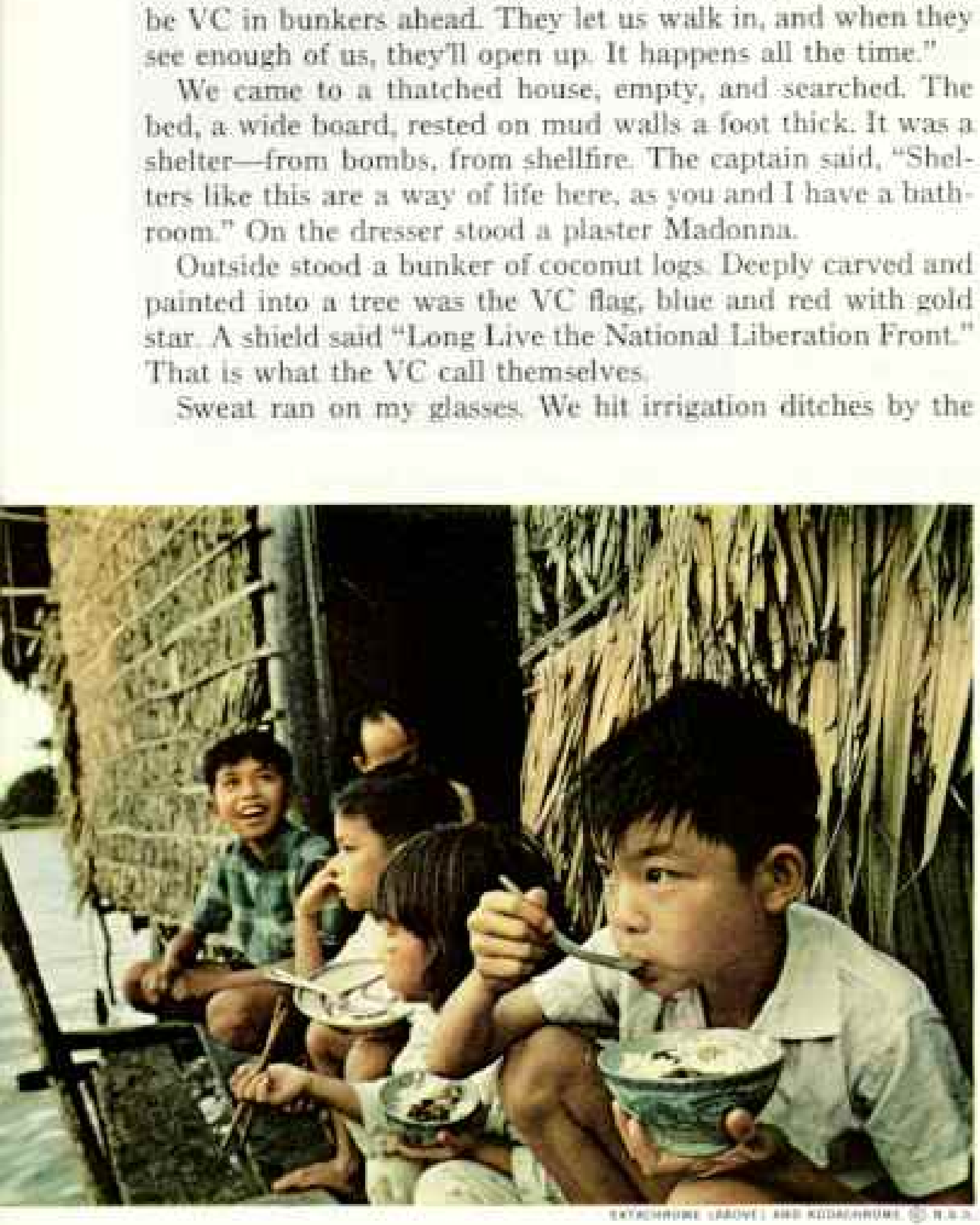
It was hot. My steel helmet and my jacket of nylon armor made me hotter. An explosion sent a blast of air into my face. Our engineers had blown up a booby trap.

"Don't bunch up!" the captain kept repeating. "There could be VC in bunkers ahead. They let us walk in, and when they see enough of us, they'll open up. It happens all the time."

We came to a thatched house, empty, and searched. The bed, a wide board, rested on mud walls a foot thick. It was a shelter—from bombs, from shellfire. The captain said, "Shelters like this are a way of life here, as you and I have a bathroom." On the dresser stood a plaster Madonna.

Outside stood a bunker of coconut logs. Deeply carved and painted into a tree was the VC flag, blue and red with gold star. A shield said "Long Live the National Liberation Front." That is what the VC call themselves.

Sweat ran on my glasses. We hit irrigation ditches by the



EKTACHROME (ABOVE) AND KODACHROME © N.G.S.

Riverside diners watch the passing boats in Can Tho. They use spoons or chopsticks to scoop up their meal of rice mixed with chunks of vegetables, fish, and meat. These children live a relatively secure life in the protected delta city.

Food flotilla heads for the market in Saigon. Hundreds of rice barges —some filled, others to be loaded on the way—travel in a guarded convoy up the Cho Gao Canal, a link between the delta and the South Vietnamese capital. Most of the traffic in the delta moves on the canals, a complicated pattern of man-made waterways that take the place of highways in a nearly roadless land.

dozen, each about 10 feet wide. I slid down the banks, slogged through black mud and soupy brown water, and struggled up, over and over again. I reached for a branch. It had two-inch thorns. A trooper gave me a hand. I cursed irrigation.

We crouched and rolled into a ditch. Sniper. About 100 yards? The M-16's went to work. Silence again.

In my three hours we had encountered only a handful of people. They walked behind us,

Popping to the surface for a breath of air, a Vietnamese fisherman struggles to close the mouth of his net in the Mekong. He will scoop large fish out with a hand net; small ones will be picked from the mesh like berries off a bush. Whether war rages or not, everyday life along the great river must go on.

with a Vietnamese from the Special Branch of the National Police. He would interrogate them later. How could he tell a VC?

"A man with soft hands is no farmer," he said. "If his face and hands are pale, he operates at night and sleeps by day. Perhaps he carries mortar shells, or messages. That girl, she is from the Women's Liberation Association." Her voice was soft and high-pitched—a girl of good family. Some VC mortar squads were made up entirely of women.

I was wrung out when we came to a stream with a bridge—a thick bamboo trunk with a thin bamboo rail to steady oneself. I'd never make it. I'd swim across. I lurched in.

Trang, who was still with me, shouted: "Stop! VC put booby traps under these bridges!" They think the big Americans with all their equipment are so heavy they might crash down.

A trooper calmly said, "Wait. I'll go first and make sure." A brave young man. How could I let him do it? I floundered back out, and somehow I made it across that cursed bridge. I don't remember how; I just remember feeling scared to death the whole day.

There is something else I cannot forget. We had picked up an old man with a medal of the Blessed Virgin around his neck, and then we came across a body. The old man looked down on the bloody corpse. He said, "He is my son-in-law. He has five children."

He stood up straight. His face was frozen, with a little tear in each eye. He said, "He was not VC. He was not VC."

Wasn't he? I don't know. The report of the operation on Thoi Son Island includes him as one VC KIA—killed in action.

Every Man Has Seven Spirits

On my last day in the delta, I sailed down a canal in a wooden gunboat of the Vietnamese junk fleet. We headed for the Ham Luong, not far from where this branch of the Mekong reaches the sea, with small fish jumping up and forward like dolphins in miniature.

We made great waves in the canal, and nearly swamped a small sampan with an old couple in it. I asked that we stop; I wanted to tell the man we were sorry.

He said he could not hear well, and he had been intent on keeping watch for floating mines. They had hurt people he knew. I asked if we had frightened him.

He said, "I was so frightened, I thought all my spirits had left me."

Did he say spirits? More than one?

"Here we believe that every man has seven vital spirits in him. Every woman has nine." I asked the old man to explain.

He said, "I cannot tell you why. I believe that it is so."

I waved goodbye. And my mind conjured up a day when no Vietnamese need fear for his spirits along the River of the Nine Dragons; when Lao, Thai, and Khmer—and everyone in Southeast Asia—will somehow be happy.

Would such a day ever come? I want to believe that it will. THE END

New Map of Southeast Asia, Focus of World Attention

AT THE VERY CENTER of the National Geographic Society's new wall map, **Southeast Asia**, lies a large area of the South China Sea labeled Dangerous Ground. Here myriad shoals, reefs, isolated fangs of coral, and tiny islands jut up from the depths —a nightmare maze for mariners.

Unhappily, the term "dangerous ground" might well be applied to much of this area, a vast region bled by conflict and upheaval for nearly three decades.

The map, distributed as a supplement with

Foaming Somphamit Falls, major cataract of the Mekong's Khone Falls, tumbles over tiers of rock in southern Laos. A team aiding the Mekong Development Project typifies the international effort to harness the mighty river. A Belgian hydrographer

this issue of the magazine, charts an area inhabited by 358,000,000 people, more than a tenth of the world's population.* Southeast Asia produces a fifth of the world's rice, 45 percent of its tin, 85 percent of its natural rubber. But none of its major countries is free of the clash of arms.

World concern has focused on the tragic conflict wracking North and South Viet Nam. The backlash of that war has been felt in the neighbor states of Laos, Cambodia, and Thailand. Communist-led insurgency flickers in the Philippines, in Burma, in parts of Malaysia along the Thai border and beyond the South China Sea. Violence recently reappeared, guerrilla-style, in Indonesia, where government troops battled insurgents in the area around Blitar in eastern Java. And Malaysia and the Philippines renewed their dispute over ownership of Sabah, the former British colony of North Borneo.

So swift and numerous have been the changes in Southeast Asia that in the past decade the Society has published seven maps covering all or parts of the region. Historical boundaries have shifted or vanished, familiar regions have taken on strange new names, and former colonies have emerged as independent nations. Singapore, a sovereign republic and Commonwealth member since 1965, faces final withdrawal of British forces by the end of 1971. The former Dutch possession of West Irian on the island of New Guinea will decide in 1969 whether or not to remain part of Indonesia. In all Southeast Asia there now survive only four vestiges of the colonial past—Hong Kong and Brunei, both administered by Great Britain, and Portuguese Timor and Macao.

Indonesia's 3,000 islands sprawl across 3,000 miles, as an inset graphically demonstrates by superimposing the outline of the contiguous United States. One of the islands gives its name to the world's largest lizard, described and pictured in this issue in "Dragon Lizards of Komodo," pages 872-80.

Another inset offers a close-up of Taiwan, stronghold of Nationalist China; a third completes the eastern reaches of West Irian, lying outside the area of the main map.

New place names reveal Southeast Asia's strong trend toward nationalism. In West Irian a mountain formerly called Wilhelmina Top, in honor of the Netherlands' late Queen Mother, has become Puntjak Trikora in Indonesian; Geelvink Baai, or Yellow Finch Bay, the largest in the province, now appears as Teluk Sarera.

Yet the surveyors shown at left typify this restive region's move toward an international approach to its problems. They help tame Southeast Asia's greatest river in the ambitious project set forth in the preceding article, "The Mekong, River of Terror and Hope."

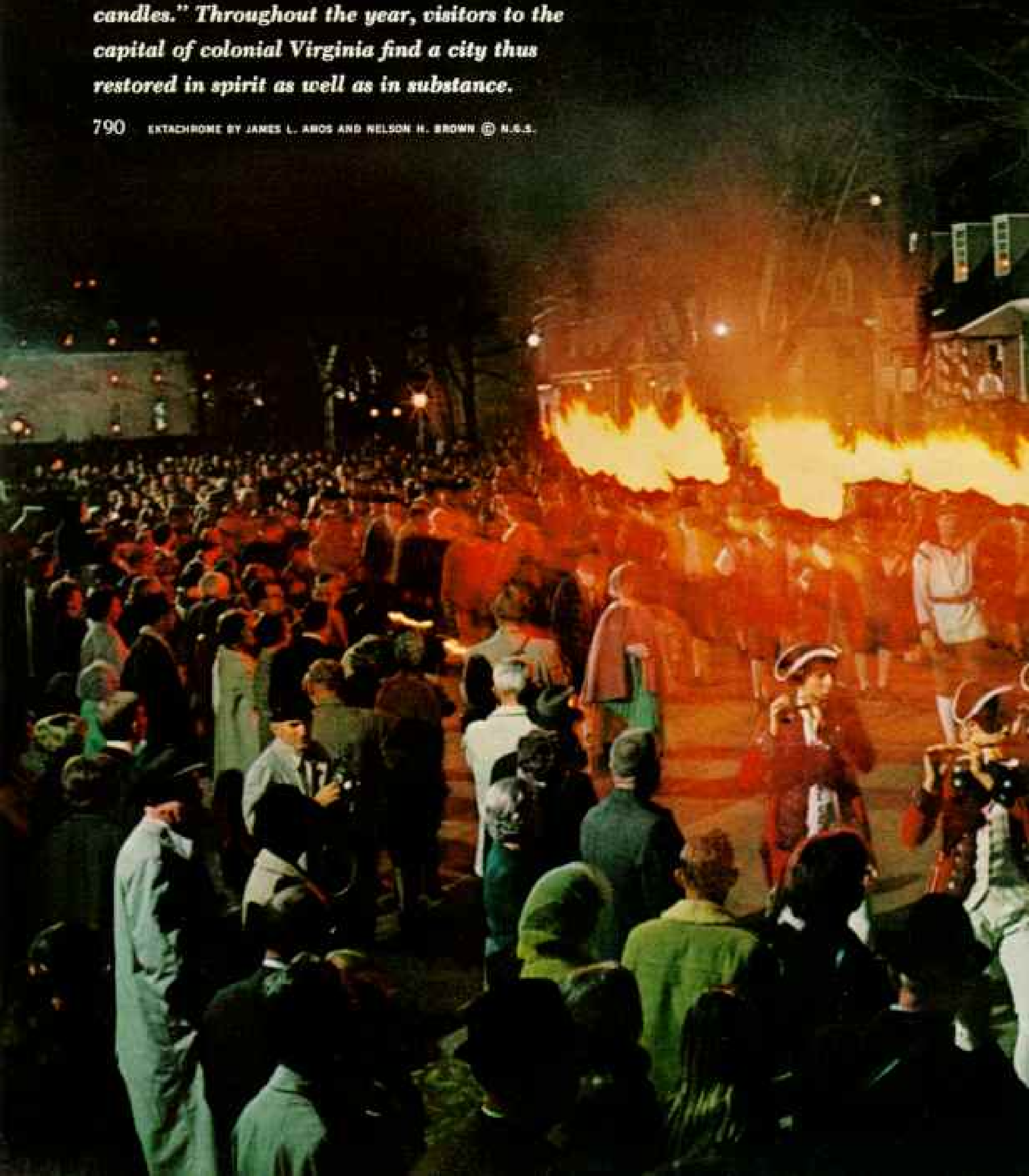
heads Lao surveyors reading elevations along the rapids, using a New Zealand-donated jet boat with a Maori name.

*Additional copies of the map, and an index to its 5,270 place names, may be ordered from Dept. 61, National Geographic Society, Washington, D. C. 20036. A large-scale map of **Viet Nam, Cambodia, Laos, and Thailand** is also available, with index. Maps, $1 each on paper, plus 15 cents postage; $2 on plastic, plus 30 cents postage. Indexes, 50 cents each, plus 10 cents postage.

Williamsburg,

LIGHTING THE WAY TO YESTERYEAR, ***Williamsburg welcomes Christmas. As torch-bearing militiamen, led by fife and drum, parade along Duke of Gloucester Street, the Night Watch cries to residents, "Light your candles." Throughout the year, visitors to the capital of colonial Virginia find a city thus restored in spirit as well as in substance.***

790 EXTACHROME BY JAMES L. AMOS AND NELSON H. BROWN © N.G.S.



City for All Seasons

By JOSEPH JUDGE, National Geographic Senior Staff

Photographs by JAMES L. AMOS

THE NIGHT WATCH held his lantern high above his head. Drum Major George P. Carroll raised his mace. The sturdy yeomen of Capt. Nicholas Payne's militia swept their pine-tar torches through the bonfire and formed a flaming column.

Paradiddle double diddle flam! beat the drums. From cupped hands the fifes sang out "Joy to the World," and away we marched through the December dusk of Williamsburg.

"Mr. Wetherburn, light your candles!" tolled the voice of the watch. Light sprang up in every window of Wetherburn's Tavern.

Rotamacue, rotamacue, rotamacue, flam!

I glanced behind to see that each window in the Capitol had opened a golden eye. I saw, too, the throng behind us, a happy hurly-burly of men, women, and children flowing down mile-long Duke of Gloucester Street, through the heart of this restored capital city of the royal colony of Virginia.

"Mr. Prentis, Mrs. Paradise, light your candles!" With each swing of his lantern, the watch summoned shining candles from the dark, until a wake of twinkling windows spread behind us. We were illuminating our city for the holy season. We were bringing in Christmas as it used to be (preceding pages).

And it seemed there were others parading with us, ghosts of Christmas Past—Lord Botetourt, the governor, dressed all in red with trimmings of gold braid, laughing a regal laugh as his spirited team stepped its way invisibly through the crowd; young Tom Jefferson and his friend John Page, two college lads prancing with holiday excitement; the rollicking company of James Craig, the goldsmith, William Parks, the master printer, John Galt, the apothecary, and Christiana Campbell, tavernkeeper, described by a patron as "a little old Woman, about four feet high & equally thick."

Up ahead would be Patrick Henry, in buckskin breeches; George Washington, who had married the local widow, Martha Custis; Peyton Randolph, a portly giant going at a fast gait; elegant William Byrd III, anxious to get to a game of cards; and the slender ghost of the lady whose house I now inhabited, Mary Stith.

"Christmas is coming, the geese are getting fat," shrilled the fifes. *Paradiddle diddle flam!*

beat the drums, and the multitude churned past the Magazine and the Court House of 1770, past the glowing round windows of Bruton Parish Church, until we swirled to a standstill before the historic Wren Building of the College of William and Mary.*

Dr. Davis Y. Paschall, president of the college, was waiting on the steps. He read from St. Luke: "And suddenly there was with the angel a multitude of the heavenly host praising God, and saying, Glory to God in the highest, and on earth peace, good will toward men."

I strolled home through streets warmed by reflected candlelight, smelling the promise of wet snow in the still air. In the far dark

KODACHROME BY JAMES L. AMOS © N.G.S.

Good cheer rings through the crisp night as carolers proclaim "God Rest You Merry, Gentlemen" in front of the reconstructed Mary Stith Shop, now a guesthouse.

The Grand Illumination a week before Christmas (pages 790-91) begins the holiday festivities of concerts, sports events, feasting, cannonades, fireworks, and caroling by the costumed employees of Colonial Williamsburg.

During the author's seasonal visits to Williamsburg, he lived in the Mary Stith Shop. In addition to hotel accommodations, 19 houses in the restored area may be rented by visitors.

the Palace, residence of colonial governors, glowed with dancing diamonds. From its high cupola a lantern shone over Williamsburg like the Christmas star.

I was delighted to find embers still glowing in the hearth of my little house. Although it is called the Mary Stith Shop, no one knows what was sold there, or if Miss Stith, a cousin of Jefferson, made it her home. She may have rented out her property; archeologists unearthed a tinsmithy in the back yard—hardly a likely pursuit for an elegant lady.

My house—that's the way I had come to think of it. Of course it belonged to Colonial Williamsburg and had only been lent to me, but I lived for part of each season of a year in that comfortable brick home on Duke of Gloucester Street, in the middle of the 18th century. I came to know the gentle, generous folk of Williamsburg, the men and women who tend its 90 acres of gardens and greens, exhibit its crafts, live in its original and reconstructed homes, taverns, and shops, care for its exhibition buildings, interpret its past, play its music, and protect its heritage.

Here, where time has restored rather than destroyed, it is difficult to realize that four decades have passed since the late Dr. W. A. R. Goodwin, then rector of Bruton Parish Church, found in John D. Rockefeller, Jr., a man to share his vision of capturing the past.† Their city is a house that history designed, and it now has that lived-in look. Yet the more familiar it becomes, the more meaningful it is.

The miracle of restoration made possible by Mr. Rockefeller and his family, at a cost of $79,000,000 over 41 years, is only now coming to full fruition. Protected by a verdant green belt, the 130-acre historic area today includes 85 restored buildings of colonial date and 49 major buildings, plus many smaller ones, that have been reconstructed (map, pages 798-9). A craft program that began with a handful of small shops in 1939 now represents 30 crafts. The familiar silversmith, weaver, printer, bootmaker, and blacksmith still go about their daily business, but so do many others new to the Williamsburg scene —harnessmaker, gunsmith, sand caster, flax breaker, shingle- and basketmakers.

THE FIRST THING I discovered as a part-time native is that you do not sit in your pajamas in the morning, stir your coffee, and look out to see what is happening —because what is happening is liable to be you. When I mentioned to my neighbor Hugh DeSamper that all those smiling, curious faces always peering in my window gave me goldfishitis, he laughed and said: "The secret is to watch *them*. You'll get the hang of it."

I did, finally, get the hang of it and caught

*See "Williamsburg: Its College and Its Cinderella City," by Beverley M. Bowie, GEOGRAPHIC, October, 1954.

†The NATIONAL GEOGRAPHIC for April, 1937, included "The Genesis of the Williamsburg Restoration," by John D. Rockefeller, Jr., and "The Restoration of Colonial Williamsburg," by W. A. R. Goodwin.

KODACHROME © NATIONAL GEOGRAPHIC SOCIETY

the rhythm of the city, a remarkable serenity broken by periods of public clamor.

For 81 dramatic years, between moves of the colony's capital from Jamestown in 1699 and to Richmond in 1780, the same kind of rhythm prevailed. During drizzly winters and sweltering summers, the town slept—stirring a bit to weed a garden, mend a shoe, cut firewood, bleed a sickly patient. But spring and fall, when the General Assembly and the General Court met in the Capitol, were wild, crowded periods called "Publick Times."

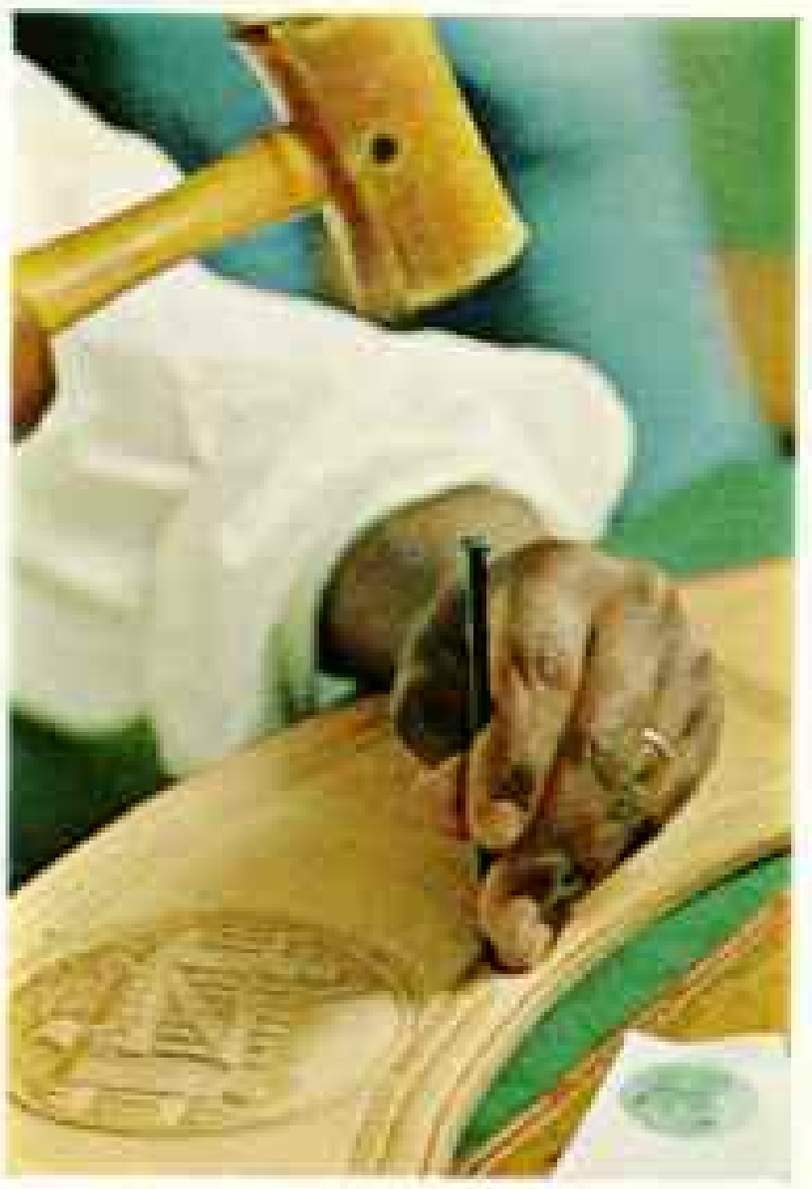
The great planters and their retinues rode in from estates like Carter's Grove and Westover and Rosegill, many to occupy their own town houses. Male travelers fell three to a bed in the Raleigh Tavern or slept in the halls and stair well of Christiana Campbell's, while cousins (who wasn't a cousin of somebody?) crowded into the Randolph and Page houses.

Lawyers, plaintiffs, and defendants flocked to the taverns. Politicians, some with the red mud of the frontier on their boots, others wearing the fine linens of gentility, gathered to discuss taxes and tyranny. Businessmen assembled behind the Capitol to buy and sell merchandise, coordinate ship sailings, set prices for the year's tobacco crop.

It was matchmaking time as well. The wasp-waisted maidens of important families met society at balls, attended puppet shows or the theater, and tried to lure swains away from their favorite pastimes —cards, cockfights, and racing blooded horses.

In recent years the restoration has seemed all too faithful to those bustling Publick Times. On one memorable day during the summer of 1966, a record 4,952 men, women, and children shoved themselves through the Governor's Palace, while 9,000 others crowded the city. What to do about it?

Under the spirited leadership of President Carlisle Humelsine, Colonial Williamsburg embarked on the



Crafts keep the past alive

SHOES TO EASE THE FEET, books for the mind, a tankard to soothe the spirit, and a gun for safety—Williamsburg craftsmen catered to every need.

Today's visitors watch a bootmaker (left) finish a leather mug, to be lined with pine pitch. Shoes in foreground fit either foot, in 18th-century fashion.

An apprentice bookbinder (upper right) impresses a design on moist leather with a heated tooling roll. Printers often sold stitched but unbound books. If the buyer decided a volume was worth protecting, he brought it back to be bound in decorative leather.

Incising and punching adorn a leather tankard (center right). After cutting a design, the craftsman pounds a depression around the cut to achieve a three-dimensional effect.

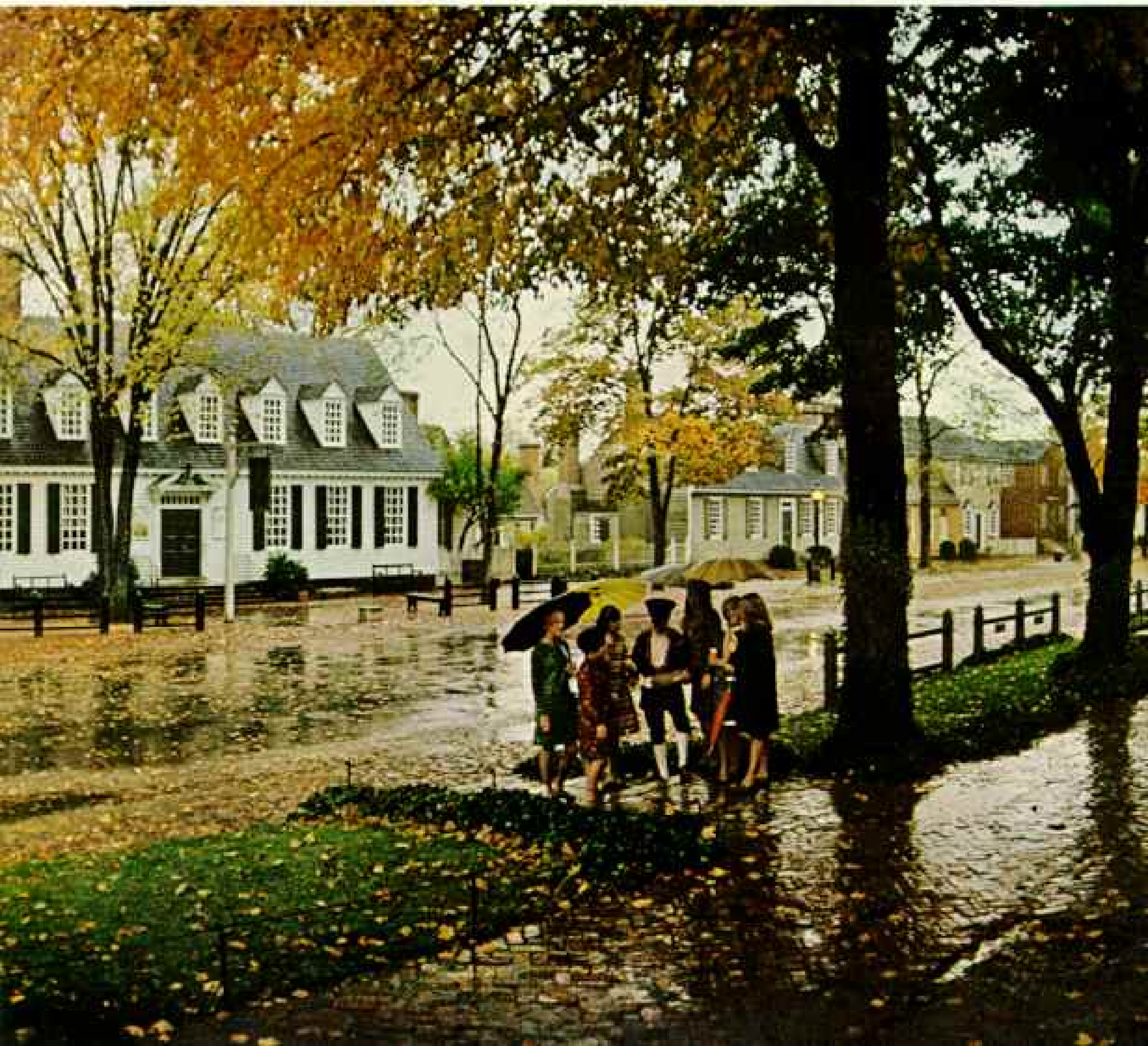
Hand-carving also decorates a Kentucky-style flintlock pistol (right) fashioned by Williamsburg's gunsmith.

largest expansion program since Mr. Rockefeller first came to town. Four additional exhibition buildings became part of the Williamsburg tours last July. All are important 18th-century survivals:

- The college's Wren Building, oldest academic structure still in use in the United States. Its original design attributed to the great English architect Sir Christopher Wren, but modified by the Virginians who built it, this centerpiece of the William and Mary campus has stood in quiet dignity at the western end of Duke of Gloucester Street for 269 years. The Chapel, Great Hall, and colonial classrooms evoke memories of Jefferson, John Marshall, and James Monroe, who studied there (page 811).
- Wetherburn's Tavern, changed remarkably little by the passing decades, with its Bull Head Room and spacious Great Room for balls and banquets.
- The elegant Peyton Randolph House, reflecting the wealth and taste of a prominent patriot.
- The James Geddy House, home and shop of a family of colonial smiths, at the corner of the Palace Green and Duke of Gloucester Street. On this corner, from 1738 onward,

Its glory forgotten, Williamsburg slumbered in Virginia's backwater from 1780, when the capital was moved to Richmond, until 1927. Then the Reverend W. A. R. Goodwin of Bruton Parish Church, whose steeple rises in the distance, persuaded John D. Rockefeller, Jr., to restore and preserve it. This view, taken in the 1880's, shows broad, dusty Duke of Gloucester Street, later described as "a mile long, 99 feet wide, and a foot deep" (page 815). Ludwell-Paradise House (right center) was the first purchase of the restoration.

Cinderella city glistens in an autumn shower. Across today's leaf-speckled Duke of Gloucester Street the reconstructed Raleigh Tavern, left, faces the King's Arms barber and wigmaker's shop (page 805).



COURTESY COLONIAL WILLIAMSBURG, ENTAGLIOGRAPH BY JAMES L. ANGE © N.G.S.

COLONIAL WILLIAMSBURG

In this painstakingly restored capital of Virginia, eighteenth-century America lives again for the twentieth century to observe and enjoy. In preparing the painting, the artist has omitted many trees to better show buildings and streets. Only those structures rendered in color are parts of the historic area.

1. ABBY ALDRICH ROCKEFELLER FOLK ART COLLECTION C1
2. ALEXANDER CRAIG HOUSE B3
3. ALEXANDER PURDIE HOUSE D3
4. ALLEN-BYRD HOUSE C2
5. ALLEN-BYRD TENEMENT C2
6. ANTHONY HAY'S CABINET MAKING SHOP C2
7. ARCHIBALD BLAIR HOUSE B4
8. ARCOUDOY HOUSE (GUNSMITH) B3
9. BENJAMIN WALLER HOUSE F6
10. BLAIKLEY-DUPUY HOUSE A2
11. BOOT AND SHOEMAKER'S SHOP B2
12. BRACKEN-CARTER HOUSE C2
13. BRACKEN HOUSE C1
14. BRICK HOUSE TAVERN C4
15. BRUSH-EVERARD HOUSE B4
16. BRUTON PARISH CHURCH B2
17. BRYAN HOUSE A2
18. BURDETTE'S ORDINARY D6
19. CAPITOL E6
20. CAPTAIN CRAIG'S DWELLING C4
21. CARTER-MOSE HOUSE E5
22. CARTER SAUNDERS HOUSE B4
23. CHARLTON HOUSE E5
24. CHISWELL-BUCKTROUT HOUSE D4
25. CHOWNING'S TAVERN B4
26. CHRISTIANA CAMPBELL'S TAVERN F7
27. COKE-GARRETT HOUSE E7
28. CONFERENCE CENTER B1
29. COURTHOUSE OF 1770 B4
30. CRAFT HOUSE C2
31. CURTIS KITCHEN B1
32. CURTIS-MUNFORD HOUSE B3
33. DAVID MORTON HOUSE F6
34. DAVIDSON SHOP C5
35. DR. BARRAUD HOUSE C4
36. DRAPER HOUSE E6
37. ELIZABETH CARLOS HOUSE E7
38. ELIZABETH REYNOLDS HOUSE C6
39. ELKANAH DEANE HOUSE B4
40. ELKANAH DEANE SHOP AND TORCH (BLACKSMITH, HARNESSMAKER) A4
41. EWING HOUSE D4
42. GEORGE JACKSON HOUSE AND STORE F7
43. GEORGE WYTHE HOUSE B4
44. GOVERNOR'S PALACE B3
45. GREENHOW-BRYTON BRICK OFFICE B3
46. GREENHOW-BRYTON HOUSE B3
47. HARTWELL-PERRY'S ORDINARY B3
48. HOLT'S STOREHOUSE C4
49. HUNTER'S STORE C4
50. INFORMATION CENTER B6
51. ISHAM GOODSON SHOP F7
52. JOHN BLAIR HOUSE A3
53. JOHN CARTER'S STORE D2
54. JOHN COKE OFFICE D3
55. JOHN CRUMP HOUSE E1
56. JOHN GREENHOW HOUSE AND STORE B2
57. JAMES ANDERSON HOUSE C4
58. JAMES GEDDY HOUSE AND SHOP (SILVERSMITH) B3
59. KING'S ARMS BARBER SHOP (WIGMAKER) C2
60. KING'S ARMS TAVERN D2
61. LEVINGSTON KITCHEN B4
62. LEWIS HOUSE C2
63. LIGHTFOOT KITCHEN C4
64. LIGHTFOOT HOUSE C4
65. LUDWELL-PARADISE HOUSE C4
66. LUDWELL TENEMENT B5
67. MAITLAND'S APOTHECARY SHOP B4
68. MAGAZINE B3
69. MAGAZINE GUARDHOUSE C2
70. MARGARET HUNTER SHOP (MILLINER) C5
71. MARKET SQUARE PUMP B2
72. MARKET SQUARE TAVERN C2
73. MAROT'S ORDINARY B5
74. MARY STITH SHOP C4
75. MASONIC KITCHEN C4
76. MOIR SHOP D6
77. MOODY HOUSE C4
78. NELSON-GALT HOUSE B5
79. NICOLSON HOUSE F7
80. NICOLSON SHOP D4
81. NORTON-COKE HOUSE B2
82. ORLANDO JONES HOUSE C4
83. ORRELL HOUSE C2
84. PALMER HOUSE B5
85. PASTEUR-GALT APOTHECARY SHOP D3
86. PETER HAY'S SHOP C4
87. PEYTON RANDOLPH HOUSE B4
88. PITT-DIXON HOUSE C4
89. POWELL'S TENEMENT E7
90. POWELL-WALKER HOUSE E8
91. PRENTIS HOUSE C3
92. PRENTIS STORE C4
93. PRESIDENT'S HOUSE, COLLEGE OF WILLIAM AND MARY A2
94. PRINTING OFFICE, POST OFFICE AND BINDERY C3
95. PUBLIC GAOL D7
96. PUBLIC RECORDS OFFICE D6
97. RALEIGH TAVERN AND BAKERY D2
98. ROBERTSON'S WINDMILL B1
99. ROSCOW COLE LAUNDRY A3
100. ROSCOW COLE OFFICE B2
101. RUSSELL HOUSE C5
102. ST. GEORGE TUCKER HOUSE B4
103. SCRIVENER HOUSE D2
104. SHIPLE HOUSE F1
105. SIGN OF THE RHINOCEROS C4
106. SPINNING AND WEAVING HOUSE B2
107. TAZEWELL-COLE HOUSE A2
108. TARPLEY'S STORE C4
109. TAYLOE HOUSE C3
110. THE BLUE BELL D7
111. THE BRAFFERTON A7
112. THE GOLDEN BALL (CLOCKMAKER, JEWELER, ENGRAVER) D3
113. THE QUARTER C3
114. THE RED LION C4
115. TRAVIS HOUSE A1
116. UNICORN'S HORN D5
117. WATKE-COLEMAN HOUSE C3
118. WETHERBURN'S TAVERN C3
119. WILLIAMSBURG INN C1
120. WILLIAMSBURG LODGE C1
121. WILLIAM RANDOLPH LEWIS HOUSE C5
122. WREN BUILDING A2

5 6 7 8

A

B

C

D

E

F

Geddy and his sons carried on the trades of brass founding, gunsmithing, and silver- and goldsmithing.

IN THE STEAM HEAT of early summer, I unlatched the gate at the rear of the Geddy House and found five young people hauling buckets of marl and mud out of a colonial well. From a smaller hole in the back yard rose a mirage from old Mesopotamia—a large man wearing a white pith helmet, holding a steel probing rod, and looking for all the world like Sir Leonard Woolley excavating Ur of the Chaldees.

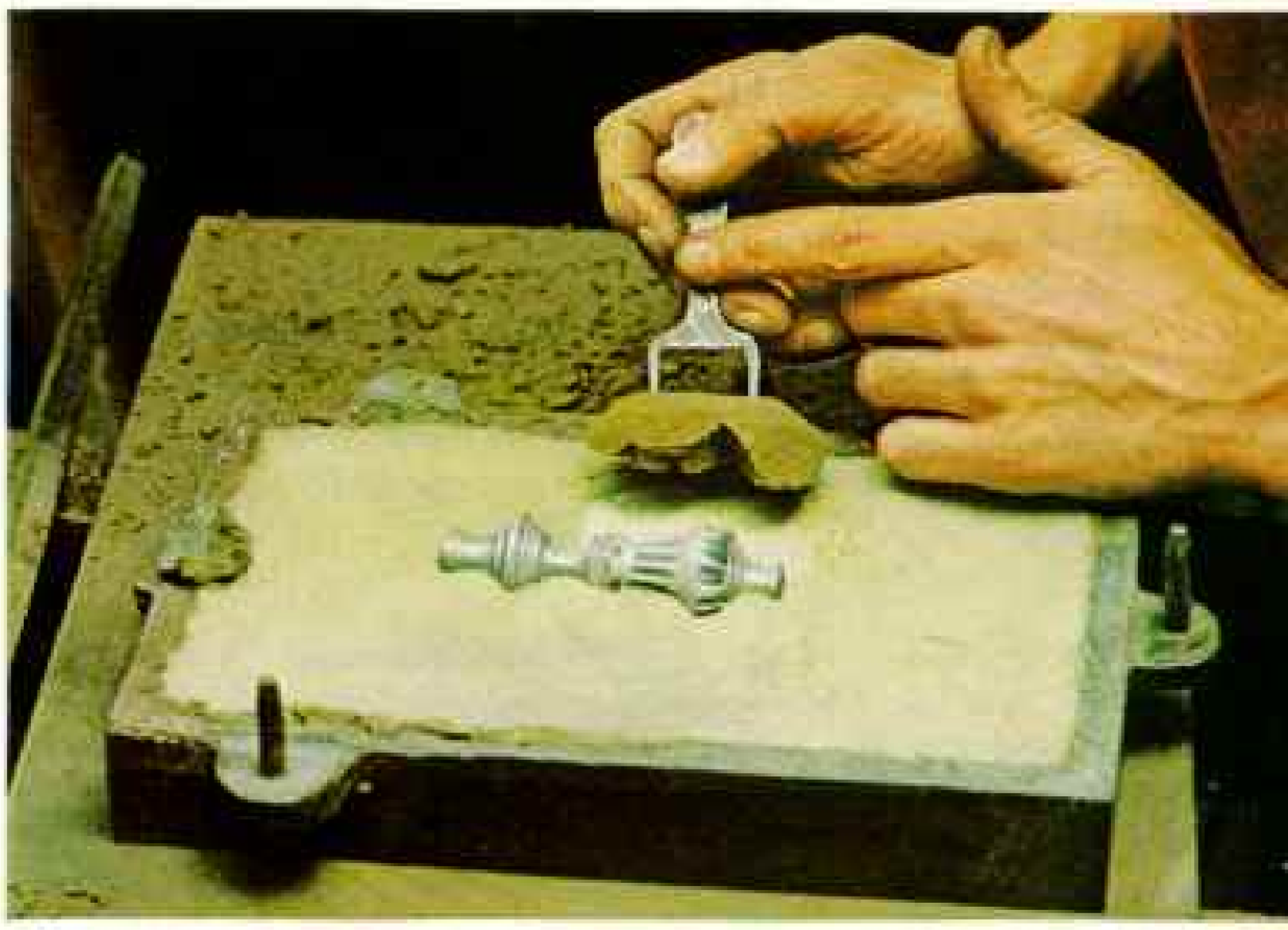
"You're not far off," said this apparition, introducing himself as Ivor Noël Hume, British-born Director of Archeology for Colonial Williamsburg (opposite). "When the restoration began in 1930, the world was still afire about King Tut and Egyptian archeology. The men who first dug here followed that classic discipline. They found a lot—Williamsburg has the best-documented 18th-century archeological collection in the world. But they missed a lot, too." He handed me a small piece of brass that had some ridges on it.

"That is one of the most interesting pieces to come from this dig. It is a rough casting for the side plate of a flintlock pistol. We used to think that kind of fine work was all imported, but this indicates that Geddy was making such things right here on this site during the colonial period. We hope to find more evidence of this sort."

Telltales of the past line the work tables of Ivor Noël Hume and his wife Audrey, Williamsburg's archeologists. Bricks and bowls, plates and slates, gleaned from the yard and abandoned wells, aided restoration and furnishing of the James Geddy House and Shop (below).

Song of a hammer sounds again from the Geddy silversmith shop. Apprentice Gene Sutton shapes a bowl in an 18th-century English pattern. A finished example sits on the table at left with a goblet and another bowl. The house, shop, and back-yard forge opened last July, together with three other new exhibition buildings.

Sand from France's River Seine contains just the right amount of clay for casting metal. Using a prong, a Geddy craftsman lifts a lump from a candlestick section to show how easily the substance receives an impression. When the mold is made, the craftsman locks the halves together and pours molten metal through a previously cut channel to fill the cavity. Coating of white powder keeps the two sections from sticking together.



Colonial Williamsburg's Research Department, final arbiter of all that is seen, heard, and done in the city, had made an exhaustive study of all the documents relating to the Geddy site. Now Mr. Hume's trowel would add to that record another dimension—a jigsaw puzzle of broken cups, rusted sword hilts, blackened brooches, cracked wine bottles, and bent spoons. He showed me a cigar box containing items found that morning in the bottom of the well—two musket balls and the cold, black bones of a colonial cat.

THE POP-POP-POP of a small hammer led me across Duke of Gloucester Street to the open window of the Boot and Shoemaker's Shop (page 794). Art Devletian was trimming leather while his assistant, Eugene Brown, tacked a sole. Art held up his tool, a small curved knife, and twanged it with his finger. It gave a clear ring.

"Eighteenth century," he said. Then he lifted an identical tool. When he flicked it, it went *thunk*. "Twentieth."

Inside, I watched Eugene, whose forebears might have been servants here, use a last, the wooden form around which a shoe is built.

"Is that for a child?" I asked.

"That," said Mr. Brown, "is the typical 18th-century foot. A grown woman then had feet about the size of a young girl's today."

He handed me the last. I could not tell if it was for a right or a left shoe.

"Most of them were straight," Art said. "You could put either shoe on either foot. They switched them to keep them straight."

As visitors started drifting toward the window and easing into the shop, Art began stitching a shoe. "This is a calf shoe. But a really comfortable shoe was made of dog."

"Pardon me?" said a lady.

"Dog. You've heard of putting on the dog. They meant it literally. When a dog died, Alexander Craig, the harnessmaker, would come by, skin it, and the cordwainer, or shoemaker, would make a pair of shoes out of it."

He reached down and patted the head of a collie curled up in a corner. "Right, old girl?"

Evening is the gentle time at Williamsburg, for it is in evening, when the summer sun dies with lingering radiance in the gardens and leaves the last and warmest wash of gold across the Capitol, that all the great events of history take their proper place in the human scale.

I was pondering such a thought while sitting on my front stoop. Across the street, a craftsman led a "Lanthorn Tour" along the cobblestone curb. The lanterns bobbed in the twilight like a string of giant fireflies.

A melodic voice floated on the warm air. That could only be my friend Tayler Vrooman, Williamsburg's minstrel (page 804), who sometimes wanders the streets serenading passers-by.

"I like walking around," he said, "watching all these fellows taking pictures of me with their lens caps on."

"That's a beautiful song you were singing."

"I am the world's leading expert on 18th-century popular music, by default, since I am probably the only man living who now devotes full time to it," he said. "Most 18th-century songs are hard to sing. Look at the old tavern tune that became 'The Star-Spangled Banner.'"

We ambled along together to the Capitol, where Carlton Jackson was igniting fire baskets of pine chips to light the way in to a harpsichord concert for tourists.

"Sure," Tayler said. "My friends say I am a good tavern singer because any singer who can sing doesn't sing in taverns. How do you like this one?"

He lifted his clear voice in a dreamy ballad —"Come to my chamber, love, come, the wind and the rain will not bother thee again."

As he sang, he disappeared behind a fence. On the last note, there was a thundering roar, and the minstrel, astride a red motorbike, shot out of a parking lot and disappeared toward the Palace in a cloud of dust.

Only once a year does the Palace swathe itself in candlelight and resume its former social glory. In early summer, when Williamsburg celebrates the period that led to independence, an invited company once more

In the window of The Golden Ball, master clockmaker and engraver Joseph P. Grace pursues his craft with the exacting skill and unhurried pace of his 18th-century counterpart. With his quill he inscribes a design for an engraving on a beeswax-covered silver medallion. In an adjacent room he makes and repairs clocks and watches. James Craig, colonial owner of The Golden Ball, advertised in the *Virginia Gazette* in 1774: "... just got an eminent hand in the watch and clockmaking business. ... He makes and repairs repeating, horizontal, and stop watches, in the neatest and best manner."

assembles in the blue of evening, at the great gate surmounted with the stone lion and unicorn of English royalty (pages 806-7).

Here lived seven royal governors, an exceptional lot of men. Their political sagacity and high purpose have been obscured by the flying coattails of Lord Dunmore, the last, who fled at the outbreak of the Revolution.

MY OWN FAVORITE was the first to inhabit the Palace, in 1716, and the man who gave it the look we see today. He was Col. Alexander Spotswood, a no-nonsense veteran of Flanders battlefields captivated in the end by the easygoing society he tried so hard to reform.

The Virginians, a long and hazardous way from London, at the edge of a howling wilderness, were apt to run their own affairs. They respected a governor's royal instructions, and his interpretation of them, to the extent they did not counter Virginia's self-interest.

The good colonel and his successors often found themselves in a political no man's land —balked by a headstrong House of Burgesses, the elected lower body of the Assembly, sidetracked by British merchants influential at the English court, and second-guessed by their own Council members.

Among the latter, a governor sought allies —but rare was the Council that did not set out to make itself master of the governor. Appointed by the King, these tobacco tycoons did not hesitate to go over the head of a governor to the Board of Trade, which administered colonial affairs for the empire, to the Bishop of London, even to the King.

Worse yet, the Council was, in effect, a single family of wealthy planters closely interlocked by blood and marriage. Since the General Court was composed of Council members, they applied the laws they helped make. Spotswood and the men who followed him had to learn to live with the grandees.

With other guests, I went up the steps and into the hall, where racks of muskets glinted in candlelight and the walnut paneling glowed from its very grain. In the small dining room

Long hair of the '60's—the 1760's—brings shouts of glee as a visitor tries on a "big wig" in the King's Arms barbershop. Wigmaker Mary Magee delivers a sparkling commentary on the talents of the colonial barber. He not only fashioned, curled, and powdered wigs, but also cut hair, trimmed beards, extracted teeth, and occasionally bled the sickly.

"**Sing care away,** with sport and play, in pastime is our pleasure . . ." Tayler Vrooman entertains diners with popular songs of the 18th century in Christiana Campbell's Tavern. Mr. Vrooman, who renders romantic, humorous, and topical tunes of the times, also performs in concert in the Capitol.

just off the hall, Spotswood's portrait looked down on a silver service gleaming under a solid-silver chandelier. This intimate room recalls the memorable dinners attended by Jefferson, then reading law, George Wythe, William Small, a professor at the college, and the sophisticated Governor Francis Fauquier. Years later Jefferson remarked, "At these dinners I have heard more good sense, more rational and philosophical conversations, than in all my life besides."

Lilacs piled in purple mounds perfumed the large state dining room; at the end of the hall, the wide ballroom echoed with the soft strains of stringed instruments and a harpsichord.

In that ample room, elegant balls, such as those held on the King's Birthnight, might begin with a stately minuet, but soon the flutes, French horns,

hautboys, violins, and spinet would swing into a marathon round of lively jigs and reels—somewhat disdainfully called "country dances" in England.

Once again the Palace was fully alive. I wandered outside to the Guardroom where, in dim candlelight, I tried to make out the names on a 1755 map of eastern North America, drawn by John Mitchell. The map speaks of the importance of the Palace, the administrative center for a vast, largely unknown country stretching to the Mississippi, the Great Lakes, and beyond. That, at least, is what royal ambition had bitten off, but the colonists could chew only a little of it.

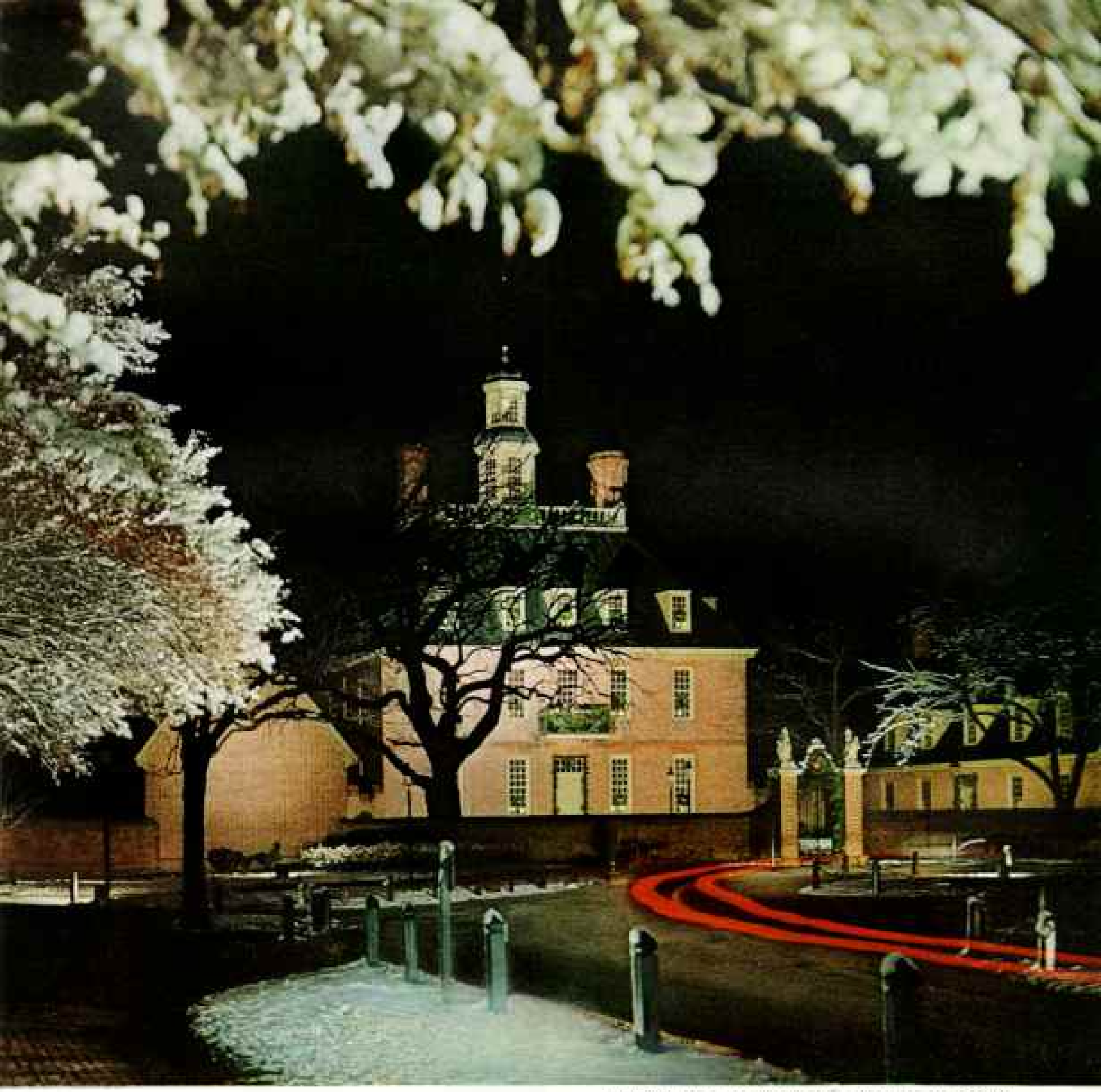
Before Spotswood retired as a Virginia landowner and aristocrat, he led the first expedition into the western mountains. Men like Col. Hugh Drysdale, William Gooch, and Robert Dinwiddie, good and honest governors, watched the lines of settlement change. They knew well that the French and their Indian allies were hacking out paths to empire in the broad river valleys beyond the Virginia mountains—the fleur-de-lis flew from Canada to Louisiana—and that inevitably the issue would be joined.

Another small outbuilding in front of the Palace was the Governor's Office. To it came a hard-riding young man, lean as a leather strap, one winter day in 1754. His name was George Washington, and he was just back from an incredibly dangerous mission, far into the western wilderness, where he had parleyed with French military commanders. Governor Dinwiddie listened to his report of French hostility, of savage tribes hungry for scalps, and asked him to write it all down. Published in Williamsburg, Washington's account of his perilous journey and its result was the prelude to the bitter conflict, the French and Indian War, that followed.

Night had fallen as I walked past the old cemetery.

Winter's snow-white magic, frosting crape myrtle, frames the reconstructed home of colonial governors, agleam in floodlight. Gov. Alexander Spotswood completed the original building about 1720. His grand plans, and constant levies to support them, led disgruntled colonists to dub his house "the Palace."

Williamsburg executives take a turn about town in a horse-drawn landau. Governor Winthrop Rockefeller of Arkansas, left, Chairman of the Board of Colonial Williamsburg, and Carlisle H. Humelsine, President, confer on future plans. Governor Rockefeller, son of the restoration's founder, has been chairman since 1953.



CATACHROME (ABOVE) AND KODACHROME © NATIONAL GEOGRAPHIC SOCIETY

through the garden walk overlooking the canal. Under that broad lawn sleep 156 Revolutionary soldiers, victims of the Battle of Yorktown, and two unknown women. Candlelight flickering from the Palace looked like a blaze—a fitting reminder of the original Palace's sudden and fiery end.

In December of 1781, the great residence was filled with American soldiers wounded at Yorktown. Three days before Christmas, an hour before midnight, flames sprang up in the lower rooms and roared upward as the crippled and maimed struggled to escape. In three hours the great mansion was a smoking ruin, its blackened walls gaping over charred paneling, smashed chandeliers, tumbled fireplaces, broken delft tiles. One soldier was trapped, and his bones remained in the rubble for 150 years.

None thought the Palace would ever rise again. In the early 1900's, a large school building occupied the front yard. Then, in 1934, the country's loveliest phoenix sprang again from the old ashes, rising on its original foundations, to the delight of countless republican multitudes, the sons of sons of revolutionaries ready to admire still the glamour and elegance of the aristocratic life (above).

NEXT MORNING, feeling somewhat in need of a chirurgeon, I hied myself to the Pasteur-Galt Apothecary Shop. Among the "white swellings, asthmas, Apoplexies, Sciaticks" and other apt descriptions

of my condition, I considered that a twinge of the gout hit it most nearly. Would a swig of Turlington's Balsam of Life cure it?

"I would suggest a little syrup of colchicum," apothecary William Cabell said. "What's happened here is an imbalance in your humors. The four elements, fire, water, air, and earth, also appear in the matter of your body in the form of blood, phlegm, yellow bile, and black bile. The first two are moist and the other two dry; they are also warm and cool. Step in the back room and I'll bleed you."

He took out a grisly-looking little machine that resembled a box studded with razor blades, as indeed it was. When snapped down on the arm or leg, it made numerous cuts and must have hurt plenty.

JUST THE THOUGHT of the cure cured me immediately, and I ran for the King's Arms barbershop, arriving just in time to hear Mary Magee (page 805) proclaiming that our wig-wearing Founding Fathers were shaved bald as billiard balls.

"Surely not Thomas Jefferson," I remonstrated. "Surely he was opposed to such pomp."

"Not on your life," said Mrs. Magee in her delightful Scottish accent. "When he came here as a young Burgess, he bought a brown wig, one with a pigtail. Then he switched to a tie wig, and ended up with a dress bob."

Wigs, the product of court fashion, remained in Virginia a badge of breeding, the mark of a small social elite. One traveler to our shores in the 1740's thought that the majority of the gentry were "all sick, or going to bed," because of the general absence of wigs.

"You men complain about women wasting time in a beauty shop today," Mrs. Magee went on. "In those days a man would come to the barbershop and spend four or five hours being shaved, clipped, powdered, and perfumed. We'd even pull an aching tooth for him."

A tooth extraction was extraordinary torture. The patient was first pumped full of rum in a nearby tavern and then brought reeling to the wig shop. The extractor itself was a slightly curved rod with a little hinged paw whose claws gripped the tooth—through the gum—from the bottom, and riipp!

"After it was over," laughed Mrs. Magee, "they looked to see if they got the right one."

Powdered, pompadoured, perfumed, a Virginia gentleman might have made his way to the Capitol for a meeting of the Assembly. I slapped on some shaving lotion and headed

Sitting in a "shoo-fly chair," Mrs. Matilda Wilson pumps a treadle that swings cloth strips overhead to keep flies away. "This leaves my hands free to grind coffee," she explains to visitors in the outlying Palace Kitchen. The

DRAWING © NATIONAL GEOGRAPHIC SOCIETY

giant fireplace, measuring six feet high, nine wide, and four deep, could accommodate many different foods cooking at one time. With family, servants, and constant guests, the kitchen often prepared meals for sixty or more. "Fifty-two dined with me yesterday," wrote the governor, Lord Botetourt, in 1769, "and I expect that number today." The last British governor, Lord Dunmore, fearing for his life in the restive Colonies, stationed 40 guardsmen around the Palace, adding to the cooks' chores

BOOKSHOWS BY JAMES L. AMOS © N.G.S.

"**A stately Fabrick** . . . with the magnificent Name of the *Capitol*," a contemporary historian described the original of this building. The House of Burgesses met in the right wing, the General Court and Council in the left, with a conference room between. Swept by fires in 1747 and 1832, the Capitol rose again in 1934.

Where liberty spoke and sparked a revolution: A guide in the Hall of the House of Burgesses recalls Patrick Henry's flaming words protesting the Stamp Tax: "If this be treason, make the most of it." Among those who learned their politics here were George Washington, Thomas Jefferson, and James Madison.

Treasured printing plate provided essential details for major restorations. Top panel: the Wren Building flanked by the President's House and The Brafferton, the three original buildings of the College of William and Mary. Middle panel: the Palace, rear view of the Wren Building, and the Capitol. The lower panel depicts Indians, a beetle, spider, and sea horse, seaweed and herbs.

In 1929 Colonial Williamsburg researchers discovered the copper plate in the Bodleian Library at Oxford University in England. It was engraved about 1740 to illustrate a book that was never issued.

there myself. Williamsburg's summer glory, its crape myrtle, was splashing the brick walks with a shower of bright-magenta petals.

Inside the Hall of the House of Burgesses, my footsteps echoed in the empty chamber. How small and simple a room for the momentous events that occurred in it: opposing rows of benches for the legislators and, centered in a graceful apse, the original tall chair used two centuries ago by the Speaker.

In the tranquillity it was hard to imagine Patrick Henry's oratorical thunder on that memorable May day in 1765 during the Stamp Act crisis.

Britain, victor in America, was learning that empires cost money. But, almost from the day that the French and Indian War ended, the tide in America set toward resistance to taxation.

"What then?" asked Prime Minister George Grenville. "Must America be defended entirely by us, and be themselves quite excused . . . ?"

To Parliament it seemed a fair argument that the Colonies should help pay for their own defense. It obviously thought so when it passed a stamp tax, similar to the one that Englishmen had been paying since 1694, on newspapers, tavern licenses, playing cards, legal documents, and dozens of other things.

In Virginia, the Assembly had been dutifully going through the motions of a comparatively dull session, due to end on June 1, when news of the Stamp Act burst like a bomb. All but 39 of the 116 Burgesses had already gone home.

An old colonial hand might have noticed the change that had come over the Assembly in recent years. The Tidewater planters were there, still the ruling power, still the proud masters of estates with deep roots in England. But new men were on hand—plain-spoken and plain-dressed, chatting in the German and Scotch-Irish

accents of the back country. Some were dissenters from the established church. Their leader, Henry, was a new member who never before had attended an Assembly as a Burgess.

Somehow a copy of the Stamp Act "crept into the House." On May 29, Henry rose and offered five explosive resolutions defying the King's right to tax.

I could imagine the scene in the little capital city. Shocked suddenly into action, worried legislators hurried to late meetings in the taverns. The next morning, young Thomas Jefferson heard the news and came running with his friend John Tyler to eavesdrop on the great debate.

The two boys stood in the hall outside the half-open door, along with other curious and fearful spectators. Inside sat men of moment like Edmund Pendleton, Robert Carter Nicholas, Peyton Randolph, and George Wythe. But all eyes were on the lean, hard-eyed firebrand from the frontier.

None, not even his later rival, Jefferson, could deny Henry's power to sway an audience. The students and the Burgesses were enthralled as Henry poured out a torrent of incandescent language. Jefferson thought it was as mighty as anything in Homer's pages. The Tidewater Burgesses, shocked at Henry's audacious references to oppression but sorely lacking their usual majority, were suddenly frozen when Henry reached the climax of his speech: "in former times Caesar had his Brutus, Charles the First, his Cromwell, and George the Third. . . ."

"Treason! Treason!"

"And George the Third," Henry concluded, or so an uncertain history tells us, "may profit by their example. If this be treason, make the most of it."

The resolutions, now put to the vote, squeaked by, the last on a 20 to 19 count. Peyton Randolph, storming out the door, exclaimed: "By God, I would have given one hundred guineas for a single vote!"

But it was too late. Seven resolutions, including two so violent that Henry had not even presented them, had already been sent

Hands, respectful and knowing, transform cherry wood into a homeowner's treasure. Master cabinetmaker Johannes Heuvel fashions a secretary—five months of intermittent work worth some $3,000. Colonial Virginians usually ordered large pieces from England; local men made simpler pieces.

Lesson from a papermaker enthralls a school class behind the Printing Office. A demonstrator picks up a sheet of fibers on a screen dipped in a thin soup of macerated linen and cotton rags. When squeezed dry and sized, the sheet will be ready for the printer's press.

Clangor of hammer on iron rings from the Elkanah Deane Forge as master blacksmith John Allgood shapes a hinge. The forge makes lighting fixtures, fireplace equipment, candlesticks, ladles, and other items for the restoration. "I came to stay three weeks," says Mr. Allgood. "That was 19 years ago."

off to the other colonies. The *Boston Gazette* printed them on July 1. There, said Governor Bernard, they were "an alarm Bell." When the hated stamps arrived in America that fall, angry mobs wrecked the homes of the distributors and stoned law officers who tried to stop them.

The day was hastening when Williamsburg's Capitol and its Hall of the House of Burgesses would witness events that were to shake not only Virginia but the world.

TO THE WEST of the Capitol a path ambles through a cool little gully, where on a honeysuckle-sweet summer morning Randolph Black was chipping out roof shingles in the shade of a lovely sycamore tree. The trail angles up steeply to the road; beyond rise the stocks of the Public Gaol.

Those gloomy precincts are today full of nervous laughter. Lighthearted boys boast to one another they could probably break out of it. Other children rattle and thump great leg irons against the stout wooden floors. Adults stare in bemused shock at "the throne," a cumbersome ironbound toilet in the form of a stepped pyramid.

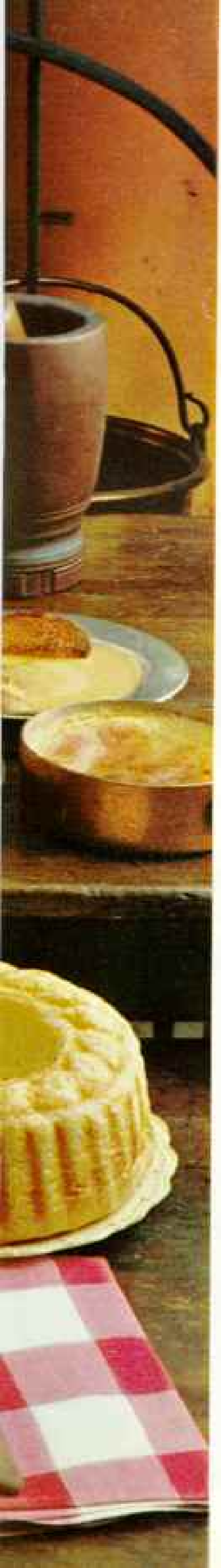
"Women could be pilloried for gossiping and for showing their ankles," the guardsman said. Almost everyone glanced at a young girl in a mini-skirt. "You could legally beat your wife," he continued, "if you used a rod no thicker than your thumb."

"I'd like to see him try it!" responded an authoritarian female voice, and murmurs of approval followed, while more than one man cast a furtive glance at his thumb.

There was very little laughter here in colonial times. Virginia justice of that period has more fitting symbols than tourists smiling in the stocks; they are the forlorn skeleton and two pairs of leg irons and a padlock uncovered in a brick-walled pit during the excavations of 1934.

No one knows whose bones these are; but they recall the colonists' use of the lash and the gallows, and the severity of the criminal codes. But then it was a rough society, as is

EXTACHROME (ABOVE) AND KODACHROMES BY JAMES L. AMOS © N.G.S.



evidenced by the Gaol's lengthy guest list—marauding Indians kept as hostages; Blackbeard's pirates, 13 of whom were tried and hanged in Williamsburg; and runaway slaves, in addition to the usual run of murderers, debtors, lunatics, and thieves.

The doors of the Gaol remain open now on a sunny pavement; wisps of straw give the four cells an air of clean simplicity. Standing there, I thought of Peter Hansbrough's slave named Sharper, accused of administering medicine (strictly forbidden for fear of poisoning) and promptly hauled off to a county jail.

In December the justices failed to appear for an examination, because the weather was so bad. Meanwhile, Hansbrough found that Sharper, languishing in a frigid cell, was "bitt by the Frost to Such a Degree that it Commanded Pity. . . ." No judicial hearts were moved, however, and the trial was postponed until May. Sharper was found not guilty. Hansbrough then "took the Poor distressed Slave home," where he died.

SUMMER DEEPENED. In the garden of the John Blair House, still afternoons were broken by the song of honeybees plundering a hollyhock. At the corner of Nicholson and Botetourt Streets, a field of the finest tobacco I ever saw lifted with each day—great plants with leaves the size of kites and a bloom towering six feet tall. Beyond the Benjamin Waller House, a field of rich corn nodded its green tassels in the gentle summer wind. I wondered what old Williamsburg had been like before the restoration.

"Williamsburg?" said Mayor H. M. "Polly" Stryker in his raspy but gentle voice. "Shucks, I don't know nothin' 'bout Williamsburg. I've only been here since nineteen and eleven."

We sat in his dental office in Merchants' Square, near the college.

"I suppose you've seen those old pictures of what the place looked like? Everything in town was stretched all up and down Duke of Gloucester Street. What a street—a mile long, 99 feet wide, and a foot deep [page 797]. Down where Chowning's Tavern is now was the old Colonial Hotel, run by the Spencers. They had a rooster, don't you know. Well, sir, when old man Spencer's rooster chased Mrs. Filbate's hen across the road, you couldn't see the other end of town for the dust for thirty minutes!"

Polly chuckled to himself and went on:

"Before Mr. Rockefeller—and I can't tell you what kind of man he was because I admire him so much, a fine Christian gentleman—there was only $300 cash money in the whole town. Everybody got to touch it once during the week and the same men got it back on Saturday night. We had the state mental hospital here then, and folks used to say we were 500 lazy watching 500 crazy. That's what caused the big mystery when Dr. Goodwin started buying property.

"'What's the preacher doing with all that money?' people would ask. When they found out, some folks didn't like it any too well. I suppose that most people, though, felt like Miss Emma Lou Barlow. When she sold her house to Mr. Rockefeller, she said, 'Well Polly, I reckon now I can have my gall bladder drained and get me some pink bloomers.'

Favorites of colonial trenchermen please the palate and stick to the ribs: fresh trout and succulent mutton chops, hearty Welsh rabbit on toasted bread, spoon bread and feather-light Sally Lunn teacake, rich rum-cream pie, and cherry tarts. Specialties of Williamsburg's three operating taverns—Christiana Campbell's, the King's Arms, and Chowning's—they feast the eye in a display at the Raleigh Tavern Kitchen. "Virginia doth afford many excellent vegitables and living creatures," wrote Capt. John Smith, and the colonizers quickly created culinary treasures from the bounty.

"Williamsburg had a militia, too, you know," the mayor said. "When Capt. Billy Gilliam died, they gave him a military funeral. They put the coffin up on a wagon and hooked up a horse and the band got in front and off they went, the militia marching and the band playing 'Hop Light, Ladies, the Cake's All Dough.' They got up to about the Raleigh Tavern and a boy came running up the street hollering: 'Hey! Hey! You done left Cap'n Billy down the road! You ain't got him!'

"So they went back and put him in the coffin and started out again and got down to the cemetery there at Cedar Grove. Of course, being militia, they had to fire a volley after the service, and when they did, they shot down one of the Eastern State Hospital cows. The hospital made the boys pay for it. The only way they could raise the ready cash was to sell their uniform pants. They didn't have nothin' but the coats left, but they kept marchin' around all winter anyway.

"Yes, sir, the only thing sure was that this town had to change."

INDIAN SUMMER LINGERED, day following day of golden weather—cool mornings, warm afternoons filling toward dusk with the blue haze of southern autumn, pumpkins in rich orange piles before Chowning's Tavern, cornstalks like stacked guns on the porches of houses.

I followed the clip-clop of a carriage—cars are banned for much of the year—through small windrows of red and brown leaves to the Peyton Randolph House.

Here lived for 30 years the man who might have been our first President. He opposed the Stamp Act resolutions as too radical, but as Speaker of the House of Burgesses, later as president of Virginia's four Revolutionary Conventions, finally as first President of the Continental Congress, Randolph presided at the birth of the Nation. He was hailed as the "Father of His Country," until death came suddenly in Philadelphia in 1775.

The house resounded as I approached. *Thump*, it said. *Boom*, it said. Could that be Randolph's shade pounding his gavel?

Inside I found a swarm of carpenters and painters. Some scraped two centuries of dust from between floor boards; some carefully wiped at the walls with brushes. They were preparing the house for its new role as an exhibition building. The beautifully paneled rooms were filled with assorted cartons and ladders, but their very character still gave them dignity in the rich sunlight.

Their finest hour is beyond dispute: a windless August day in 1774 when a group of worried men gathered here.

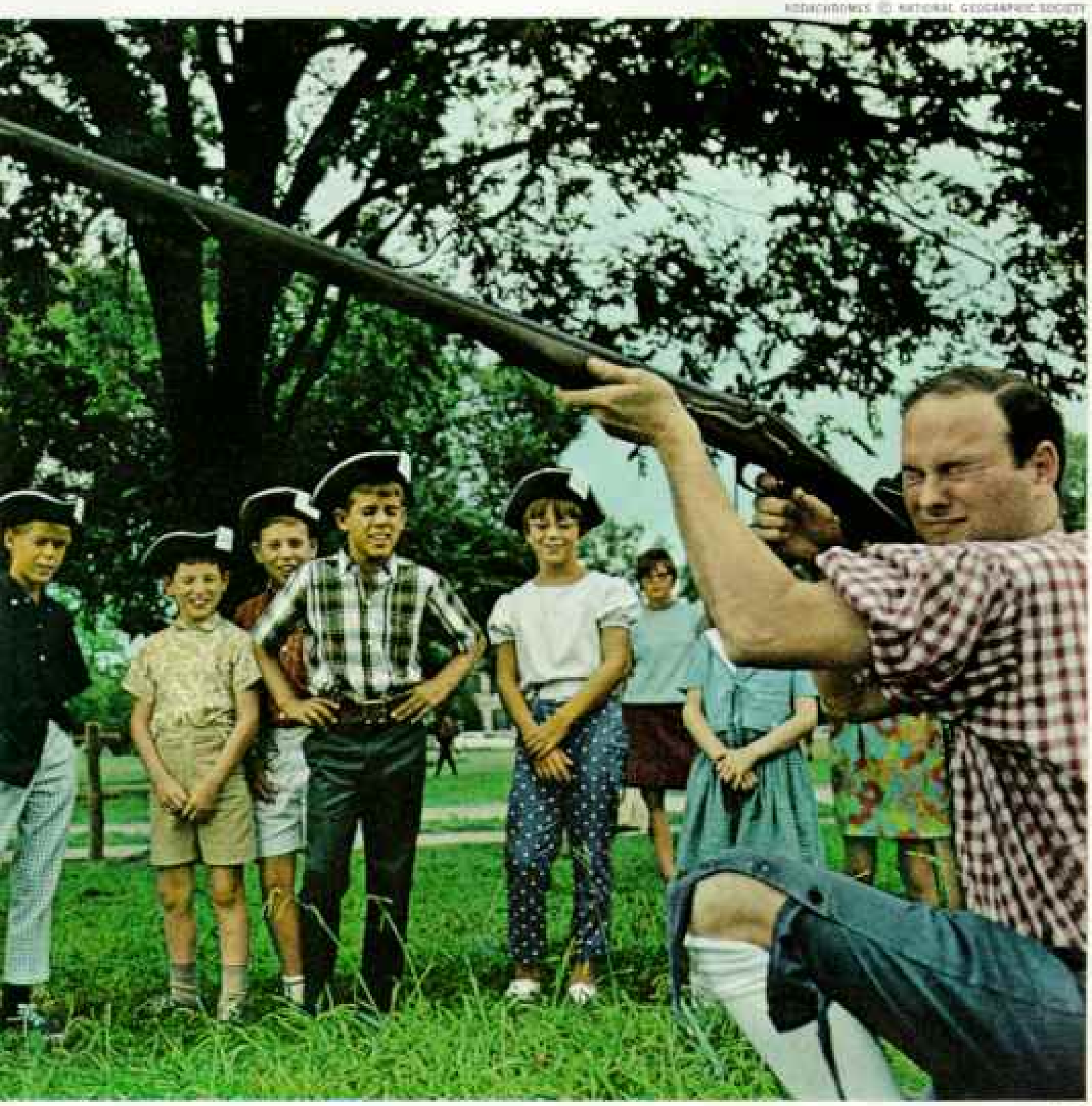
In May of that year the Assembly had received news of the Boston Port Act and other coercive measures taken by an angry Parliament. The Burgesses had declared June 1, the day Boston was closed by warships, a day of fasting and prayer—and were immediately dissolved by Governor Dunmore. The patriots then assembled in the Raleigh Tavern and called for a Continental Congress and a Virginia convention to elect delegates.

The course before them was clouded. None wanted an open break with Britain, under whose laws they had lived and prospered for as long as we have now been an independent country. Yet few wanted to yield on issues upon which they felt their liberty depended.

Now, in August, the patriots again met,

Ramming home the charge, the Colonial Williamsburg Militia Company prepares to fire a six-pound siege cannon at muster. Like their 18th-century forerunners, today's Williamsburg craftsmen also serve as members of the militia.

Braced for the blast of his musket, a guardsman mugs to the delight of his audience. The youngsters are enjoying the 2½-hour Tricorn Hat Tour, which offers races through the holly maze at the Palace gardens, cookies from the Raleigh Tavern Bakery, and a game of bowls on the green at Market Square (background).



One of America's first planned communities, Williamsburg "is laid out regularly in lots . . . sufficient each for a house and garden and . . . affords a free passage for the air which is grateful in violent hot weather," wrote a colonial observer. These gardens of flowers, herbs, vegetables,

and trees—all familiar to 18th-century residents—reach back from houses, shops, and the Raleigh Tavern, far left. Some 100 gardeners and landscape experts maintain the plots, both privately occupied and open to the public. Former stables, bottom left, now serve as garages for residents.

this time at Peyton Randolph's house. One member could not make it. Young Thomas Jefferson was taken ill along the road, but he sent on a paper he had intended to present, a blistering attack upon King and Parliament.

Edmund Randolph, who was there, remembered that many of the paragraphs were greeted by applause, but the more violent ones left the patriots chilled. "They marched," he said, "far beyond the politicks of the day." Accordingly, the men who went to Philadelphia took along "tamer sentiments."

Jefferson's views, however, were printed by Clementina Rind, Williamsburg's only woman printer, under the title *A Summary View of the Rights of British America*.

The document swept northward with its reasoned defiance of Britain. Instantly, the little-known Burgess from the interior of Virginia stepped to the front rank of revolutionary spokesmen. The ringing words of the *Summary View* made it inevitable that Jefferson be chosen to pen the Declaration of Independence.

On my way back, a dark wind sprang up under racing clouds, exploding a harvest of maple leaves across Duke of Gloucester Street.

"Hey!" someone yelled from a window. "There's a tornado warning!"

The shutters were banging and dogs were barking all over town. A great sea sound washed through the trees. But it turned out not to be a tornado—only winter blowing in.

A COLD DRIZZLE polished the silent streets. At the DeSampers' a lone light glowed from the kitchen window as sleepy children, gazing out, lost their thoughts in the lazy puddles. Here and there a few visitors, shoulders hunched under umbrellas, hurried along in silence. The old city was dead quiet but for the chiming rain.

Screening the humdrum from the visitor's eye, a fence encloses the drying yard of Mrs. William H. Phillips, wife of an architect with Colonial Williamsburg. The Phillipses and their children live in the Nicolson Shop, one of the restored buildings. All modern facilities must be hidden. Television antennas lodge in attics or trees, phone and electric lines run underground, and barrels camouflage drinking fountains.

In Bruton's naked graveyard, flat tombstones gleamed like islands of black glass. This church has the deepest roots in all Williamsburg. It was here first. The men who came to man the palisade against the Indians in the 17th century built on this spot a ponderous little chapel of Jacobean design.

Because the church was here, the college came, and because both church and college existed, Williamsburg became the capital. The man directly responsible was James Blair, an Anglican minister who had founded the college. As Bruton's rector, he was a domineering spirit of stupefying religiosity.

In colonial Virginia church and state were one. Only Anglicans could hold public office. For 50 years Blair reigned over body politic and English soul. He had two governors recalled, and a third remembered him, because of his constant interference and intolerance, as "a very vile old Felow."

Today the visitor to the church is greeted by Mr. James Driver, a mild and gentle citizen attired in a verger's gown. But something of an old pugnacious spirit still lingers. For Mr. Driver, one of the University of Virginia's premier athletes in his youth, had a famous battle on the football field when Jim Thorpe's Carlisle Indians broke his nose and four ribs. His eyes glowed happily with the memory of that encounter.

"That man could run through a wall," he said in a hoarse whisper, as the visitors assumed prayerful attitudes near the altar.

"To bring him down," he said, clenching his gnarled fist, "you had to hurl yourself before him!"

At that moment a young couple passed on their way out of church.

"Thank you, Father," the man said. Mr. Driver's eyes, intent on the rushing colossus of Jim Thorpe, unfocused for a moment, then

Home from the shop, journeyman silversmith Philip Thorp plays with his daughters. The Thorp family lives in the original Lightfoot House. Mr. Thorp served as an apprentice silversmith while a student at the College of William and Mary and decided to continue in the trade after graduation. He works with wood as a hobby and has built a replica of the Raleigh Tavern bar for the basement of his home.

his fist unclenched and lighted softly as a dove on the young man's shoulder.

"Bless you, my son," he murmured.

I hopped over shaking puddles and trotted to Chowning's Tavern, where my favorite seat by the fire glistened with warm wood and the pewter spoons invited a taste of Brunswick stew. When I left, winter was waiting at the door—a blue-gray afternoon in a ghost town. Down Duke of Gloucester Street, though, I noticed men carrying tables and chairs into Henry Wetherburn's famous old tavern.

John Graham, the tall and slightly rumpled curator who furnishes Williamsburg's buildings, was conjuring up a new exhibit from his warehouse labyrinth packed with incredible wonders of textiles, furniture, ceramics, clothing, and tableware.

"I searched in England and this country for more than a year," he said, "to furnish this tavern. It was one of George Washington's favorite places, you know; he dined here many times. I needed 20 beds, 60 chairs, dozens of tables, 84 pieces of silver."

I tried to estimate the value of the antiques.

"What is truly valuable to us," the curator told me as we followed a giant table, "is what you and I throw away. The small and unimportant things of life disappear and become rare. Take my advice. Buy yourself a can of tomato soup and save it for 250 years."

AFTER OUR MERRY Christmas came the long, dark days of deep winter. But also spring, and, long hidden deep in earth, a new world—like that yearning that stirred in men's souls two centuries ago, to bring something new and better into the society and government of men.

I sat before my house, half-dozing in the May sun. Shadows of the sycamore dappled the backs of horses drawing carriages by.

Then muffled thunder made a distant echo. Doors opened. Garden gates swung wide. People gathered on the street as the thunder rumbled into the steady roll of drums and the defiant trill of fifes.

Paradiddle double diddle flam!

From the Magazine, the Fifes and Drums wheeled onto Duke of Gloucester Street. They played "The World Turned Upside Down"—the march played at Cornwallis's surrender—and "Yankee Doodle." Behind them, sunlight flashed from musket barrels. Leaping up, I ran with the rest to join them.

We hurried toward the Capitol, but as I neared it my stride was broken by the roar of cannon. A cloud of wind-whipped powder smoke obscured the paper mulberry trees.

Williamsburg was celebrating the climactic days of its 81 years of history—the Prelude to Independence. In the spring of 1776, long decades of struggle toward self-government, of responsible public service by men who cherished their rights, came to fruition in a series of great documents.

Some parts of America were already aflame. Washington had driven the British from Boston with an amateur army. Benedict Arnold had broken his way through the northern wilderness and failed before Quebec. In Philadelphia the small company of Virginians attending the Continental Congress marked time, awaiting instructions. Throughout the Colonies, men paused at the threshold of treason and looked toward Virginia.

From May 15 to June 29 in an incredible fury of will, the Virginia Revolutionary Convention set the foundations of a free country. It instructed Virginia's delegates in Philadelphia "to declare the United Colonies free and independent states." In support of that resolution, the Declaration of Independence was written. The delegates in Williamsburg adopted George Mason's declaration of rights, creating a separate judiciary and guaranteeing freedom of the press and religion and trial by jury. It continues to inspire men in all nations and all times. Finally, the delegates wrote a constitution for Virginia that became a lasting model. Then they went home to the long and bitter war that would give their words life.

And Williamsburg, its great work done, died. In 1780, to escape British warships, the legislators moved to Richmond, leaving behind only memories and decaying buildings.

The crowd drifted away from the Capitol as dusk descended, blue in the cool shadows. It was time, also, for me to leave. I went back and locked up my house. It was not easy, for I had grown more than a little fond of that still-living century. THE END

Sinuous instrument, fittingly called a serpent, growls in concert with a sackbut, left, progenitor of the trombone. Fifes, flutes, hautboys, horns, clarionets, bassoons, trumpets, and drums complete the Colonial Williamsburg Band of Military Musick, performing in the Palace gardens. Music pervaded the Virginia colony, whose citizens sought to preserve the gaiety of their English heritage on the edge of the frontier. "They dwell comfortably, genteely, pleasantly, and plentifully in this delightful, healthful, and (I hope) thriving city of Williamsburgh," wrote the Reverend Hugh Jones in 1724.

ICY KING KONG *seems to devour visitors at the 1968 Sapporo Snow Festival on Hokkaido, Japan. They trek warily down a glazed path leading from an observation platform on the giant ape's back. Frozen sculptures draw throngs of vacationists each February to Sapporo, prefectural capital of Japan's northernmost main island, for a festive salute to winter.* [illegible]

Snow Festival

Picture story by EIJI MIYAZAWA, Black Star

in Japan's Far North

Mid-festival snow flurry fails to stop an elderly sightseer, though it blurs the features of many exhibits. Fire trucks with ladders must sometimes be called out to help dust surplus flakes from towering ice sculptures.

THE CRISP WINTER AIR rings with shouts and the shrill clang of metal biting into ice. Numb-fingered men, women, and teen-agers scurry around constructions of ice as big as dinosaurs. In fact, two of them *are* dinosaurs (page 829). Others assume the shapes of gods, demons, cartoon characters, and a Shinto shrine —all rising in frozen fantasy from the white landscape.

These curious and furious preparations signal the start of the gala Snow Festival of Sapporo, frosty capital of Japan's northernmost main island, Hokkaido. Known for its bountiful fisheries, smoking volcanoes, and aboriginal Ainu people,* sparsely populated Hokkaido hopes to melt its reputation as Japan's geographical deep freeze and lure settlers from the jam-packed islands to the south.

Each February the island experiences a short-lived population explosion as multitudes of ear-muffed holiday-makers flock up from Tokyo and other cities to the Snow Festival. There they marvel at the towering sculptures of ice, challenge nearby mountain slopes on skis, and finally, perhaps, thaw out in the delicious warmth of hot mineral springs in neighboring Jozankei or Noboribetsu.

Unlovely God of Love Takes Form

Days before the 1968 festival's official opening, early-bird spectators—like the first snowflakes of a coming storm—drifted onto the grounds at Odori Park and at Makomanai military base on the city's outskirts. Fascinated, they viewed such spectacles as the emergence of horrific Aizen Myo-o, Buddhist god of love (opposite).

Soldiers from Makomanai, as a contribution to the festival, toiled over Myo-o for 19 days—using 220 truckloads of snow for his earthly substance. Within a wood frame they first packed a 62-foot-square, three-foot-high platform of snow. Into this they anchored wood shafts to support the torso and head. Then, tier by tier, day by day, they constructed a huge layer cake of ice around the supports. Heavy-booted squads stomped each successive layer into its temporary frame and doused it with water to freeze in overnight temperatures of 15° to 25° F. Again and again they repeated the process until the basic shape emerged, a stepped pyramid that towered 33 feet.

The soldiers then began hacking out the god's rough contours. To fashion his six arms, they molded water-softened ice around wood cores wrapped in straw. Finally, hatchet-and-chisel-wielding sculptors fashioned the fine details of the enormous figure. Their model was a 700-year-old wood carving of the god only a foot tall.

The festival's success has snowballed beyond the wildest expectations of civic leaders, who launched it in 1950 with the modest hope of breaking the bleak monotony of Hokkaido's long winter. That first fete boasted seven ice sculptures and attracted 50,000 visitors. The nineteenth Snow Festival, held last February 1-4, featured 150 sculptures and drew crowds totaling 3,900,000.

Snow itself caused something of a problem this year.

(Continued on page 832)

*See "Japan's 'Sky People,' the Vanishing Ainu," by Sister Mary Inez Hilger, NATIONAL GEOGRAPHIC, February, 1967.

FIERCE FIGURE *of Aizen Myo-o, the Buddhist god of love, emerges from a platform of snow. Soldiers stir "cement" —a quick-freezing mixture of snow and water used to mold and shape the deity's features. Temporary scaffolding gives shaky support to carvers.*

Clang! Clang! Tape-recorded bells jangle a nostalgic "All aboard!" from a copy of a U. S.-made locomotive that rattled over the rails between Sapporo and other Hokkaido towns from 1880 to the 1920's. Frozen in its tracks, this icy duplicate will never make it to the station.

Blocks-long museum of ice and snow spreads ephemeral splendor across Odori Park in modern downtown Sapporo. Capitalizing on Hokkaido's rigorous climate—similar to Maine's—this booming city of more than 900,000 will host the Winter Olympics of 1972. Sapporo's wide, tree-lined streets, so unlike the tortuous lanes of many Japanese cities, were laid out in 1871 by American engineers who had been invited to the city to help spur its development. Billboards in the foreground boost Expo 70—the Japan World Exposition scheduled for 1970 in Osaka.

Giants with glowing eyes loom above nighttime crowds at the Snow Festival. The sculpture portrays Kintaro and the Bear—rough counterparts, in Japanese folklore, of American woodsman Paul Bunyan and Babe, his Blue Ox.

Frigid dinosaurs take shape, to the delight of their creators, a group of high-school students.

Joining the fun were visitors from Lewis and Clark College in Portland, Oregon—Sapporo's "Sister City." The Sister City project, part of the People-to-People program, pairs towns in the U. S. and foreign lands to promote world understanding. The Oregon visitors fashioned a beaver for their exhibit.

PIONEERS OF THE FUTURE *pay homage to pioneers of the past at a Snow Festival exhibit promoting Hokkaido's 1869-1969 centennial. Japan maintained only a toehold on this home isle of the Ainus until 1869. Then fear of a Russian territorial grab sparked large-scale Japanese colonization. Icy version of the first government headquarters building flies the Pole Star flag of Hokkaido's early settlement; model of the yet-to-be-built Centennial Tower represents the future. Sculptured group of workers symbolizes the builders of modern Hokkaido. Sign credits the Japanese Signal Corps as creator of the exhibit.*

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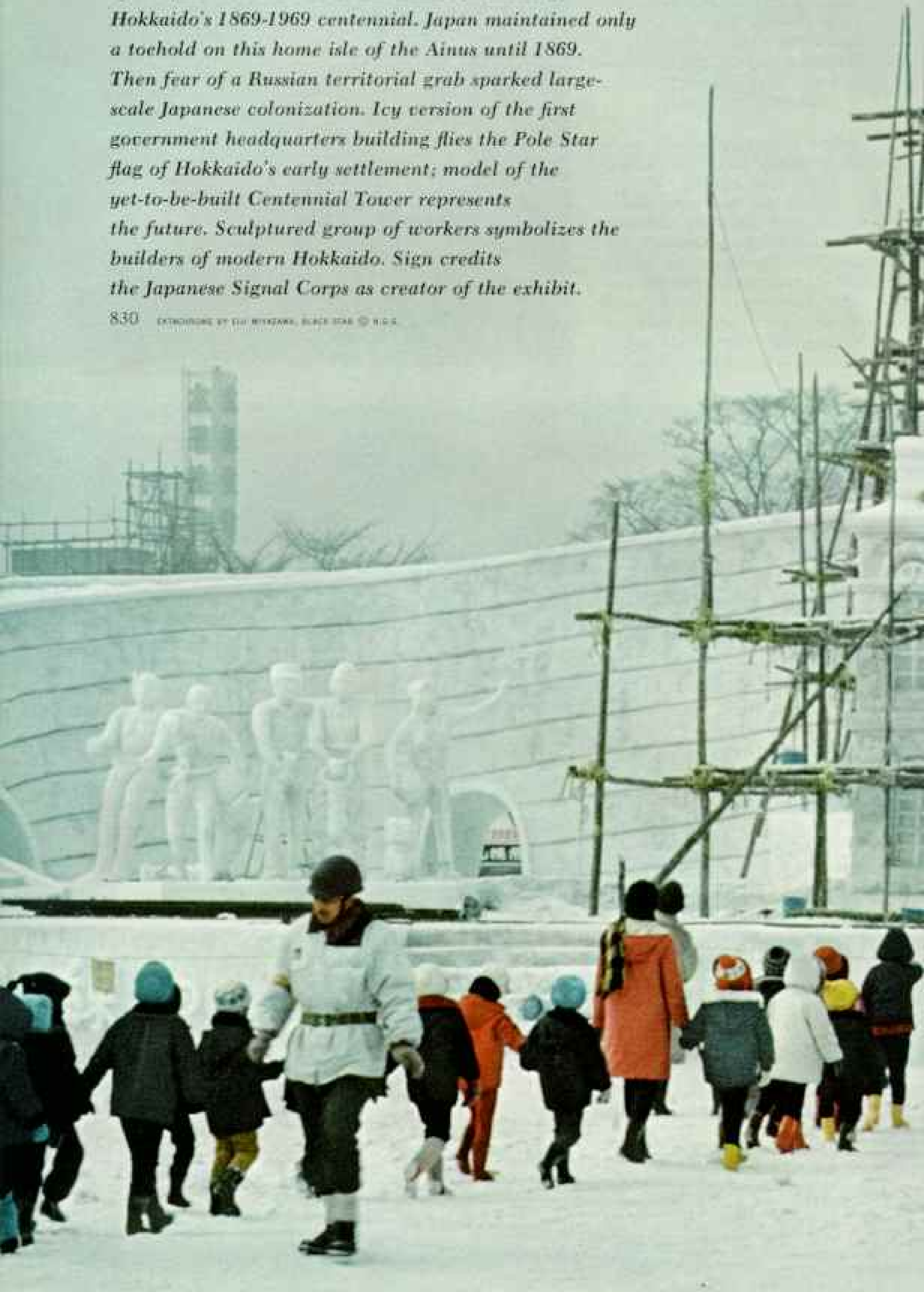


北部方面通信隊

(Continued from page 826)

Before the fete, only about half as much as normal fluttered out of Hokkaido's usually prodigal winter skies, creating the local oddity of a snow shortage. When festival sculptors had scraped Sapporo's streets clean of usable snow, caravans of military trucks roared off into the countryside and returned with heaping cargoes—7,000 truckloads in all.

Then, on the first and third days of the festival, unwelcome barrages of flakes veiled the finely chiseled features of many icy visages. Exhibitors frantically brushed snowflakes from the sculptures. Snow didn't mar the final day, but climbing temperatures caused some constructions to glisten wetly and form silvery pools at their bases. Here and there unsightly wooden framework elbowed through dissolving white surfaces.

Next morning, the festival over, details of soldiers slogged onto the quiet grounds. Prismatic colors glinted from the sculptures in the early sunlight. With farewell murmurings of *sayonara*, the men shouldered picks and shovels and leveled the outdoor museum of ice lest melting ruins cause accidents.

Visitors often bemoan the brief existence of such striking sculptures. But Japanese art, poetry, and philosophy have always dwelt on the impermanence and fleeting nature of all things, whether cherry blossoms, snowflakes, ice sculptures—or human life itself. THE END

Last rites for the god of love: Aizen Myo-o, Buddhist guardian deity of lovers, receives a final libation of saki before suffering the ungodlike indignity of being hacked to bits. His military destroyers start at the top and work their way down, until the fearsome divinity has been reduced to icy rubble.

All constructions are destroyed at the end of the Snow Festival—a precaution taken to forestall any chance of melting pieces falling off and hitting passers-by. The destruction also protects venturesome children who might clamber up the slippery and unstable structures.

The objects clasped in Aizen Myo-o's six hands have specific meaning in Buddhist lore. His two front arms, seen here, hold a *vajra*, or lightning bolt, symbolizing wisdom, and a bell, whose perishable sound signifies impermanence. Other objects associated with the god include a lotus for purity and a bow and arrow, symbols of love and protection against forgetfulness and evil.

Reunited Jerusalem Faces Its Problems

By KENNETH MACLEISH

Senior Assistant Editor

Photographs by TED SPIEGEL

THE CLERK at the Jerusalem Intercontinental Hotel scanned my registration. "You've been here before, sir."

"I have. But then your hotel was in another country."

The clerk, an Arab, smiled carefully.

The Intercontinental, which lies east of the Old City, had been in Jordan then. When my work there was done, I had been permitted to cross into Israel through the Mandelbaum Gate. Once in Israel, however, I could not return to Jordan or enter any other Arab country without first flying to some neutral nation. Mideastern travel had been both complex and costly.

"Now, you can go anywhere," the clerk said. "It will seem strange to you. It is as if Jerusalem were one city again."

"As *if* it were?"

"I mean, the barricades that split the city are down, but. . . ."

"But other barriers are not down?"

"Please, sir, the boy will show you to your room."

Which, translated, meant: "There are some things better left unsaid."

I followed the boy through the familiar lobby, now filled with unfamiliar guests: American Jews, come to visit the sacred city so long closed to them. They, at least, were taking full and delighted advantage of the new freedom of movement possible within it. I wondered whether the Arabs of the Old City, in like manner, explored the modern Jewish town once inaccessible to them.

"Do you go over to the New City, now that you can?" I asked the Arab roomboy beside me.

"No, sir. What for to go over? Maybe I have trouble there."

A VISITOR'S first over-all view of Jerusalem should be from the east, where the Mount of Olives stands separated from the town by the precipitous Valley of Kidron, and so offers an unobstructed look at the Old City. The Intercontinental shares this hallowed hilltop with the shrine commemorating Christ's ascension to heaven. I left the trim

"Glorious things are spoken of thee, O city of God." Thus the 87th Psalm praises Jerusalem, here shining at sunset beyond a Benedictine nun gathering poppies. But through the centuries violence has rent this city sacred to three faiths. Warfare in 1948 split Jerusalem between Israel and Jordan. After the Six Day War in June, 1967, victorious Israelis annexed the Arab sector, vowing never to give it up. KODACHROME © N.G.S.

modernity of the hotel to find a spot on the valley's edge from which to absorb the vision of the city in solitude. For the Kidron is quiet, as befits a valley of the dead.

All around me, on the Mount of Olives' western slope, were the graves of Jews. On the narrow floor of the valley lay the bones of Christians. On the far side, near the edge of the city, stood Moslem tombs (pages 850-51). The corpses of the Kidron are favored above the populations of other cemeteries, for they lie at the site which local people of all three faiths connect with the resurrection of the dead. They will not have far to travel when the Day of Judgment comes.

Between the old stones grass grew rankly. Poppies nodded over small blue and yellow flowers. An old Jew, bearded, black-hatted, lovingly retouched the faded lettering on a timeworn slab. I searched for a seat that was not a grave and found one, disconcertingly, on the concrete lip of a Jordanian gun emplacement dug into the sepulchral slope.

THE OLD CITY of Jerusalem, as you see it today, presents a spurious impression of unity born of the similar substance of its buildings (pages 840-41). Almost all are made of the tawny local limestone which long ago gave the place its nickname "the Golden." But the town is actually a cultural composite. The visible masonry spans two thousand years, and contains the settings of the New Testament. The concealed stones hark back to the Old.

Newcomers to Old Jerusalem are sometimes struck by the smallness of this walled enclave which is the spiritual center of the

Side locks and a costume harking back to Polish ghettos of a century ago distinguish a pious Jew pausing for a shoeshine in the Old City. In sidewalk cafes Arabs smoke water pipes and tune in Radio Cairo on transistor radios. Despite their fears, most of the Arab sector's 60,000 Jordanians remain.

"Shalom!" An Arab merchant greets a new Israeli customer with the Hebrew word for peace. The tradesman offers olivewood carvings, sheepskin rugs, Hebron glass, prayer beads, and wine from the Trappist Monastery at nearby Latrun. Some sellers closed in protest after the war, but reopened when Israeli authorities threatened to revoke their licenses. Here, along the shadowed lanes of the Old City's *suqs*, or bazaars, business goes on almost as usual. An Israeli policeman patrols, young girls browse, and an Arab lad trots by, balancing a tray of bread.

Western World. But the modern equation of size with importance has no relevance in this raw, unsubtle land which stimulates instead of soothing, which provokes and evokes thought instead of comfortably closing the mind. Only in such a place could great and difficult ideas be cultured, through turmoil and torture, into philosophies to shape the ways of nations.

Jerusalem nurtured Judaism, Christianity, and Islam, whose adherents have slaughtered each other in its twisted streets throughout centuries of nominal civilization. It has been burned and pillaged, wrecked and razed, always to grow again from its own rubble. Today it remains poor, lovely, and troubled, infinitely greater as a symbol than as a city. No other has so profoundly touched the lives and laws of men. Hundreds of millions who have never seen Jerusalem honor it in thought and prayer.

Until a century ago, Jerusalem's walls contained all there was of Jerusalem. They do so no longer. In the 1850's suburbs began to grow outside the Old City. As the Arabs overflowed the wall-bound community, they built a modern extension to its north. As Jews poured into Palestine from all over the world, their western "suburb" became a second town, far bigger than the original but spiritually centered in it (maps, page 847).

A PAIR OF JETS ripped the lucid air overhead. Armed vehicles, returning from a brief skirmish on the uneasy Jordanian border, rolled homeward along the Jericho Road. Then pebbles clinked behind me, and I turned to see a young nun with wild flowers in her hand.

"Good morning, Sister," I said. "Do you find the best flowers among the tombs?"

"Oh, it's not the flowers that bring me here. It's the sight of the city. I've been thinking of one of our psalms, which speaks of Jerusalem as Zion, and doing what it commands:

"'Go about Sion, make the round, count her towers. Consider her ramparts, examine her castles, that you may tell a future generation. . . .'" Then she turned, and stooped for a poppy.

"That states my own task too, Sister," I said. "And I'd better be about it." And so I, a Protestant, left this gentle Roman Catholic in a Jewish cemetery and headed for the Moslem city that was Zion, to "go about" her.

I WENT DOWN through the graves, past the peaceful walled Garden of Gethsemane, up the far slope of the Kidron, and circled the city counterclockwise. I followed the east wall, the north wall, part of the west —and then my scalp crawled with a memory of menace. I had just walked into a region where, on my last visit, a casual stroller could have expected a burst of machine-gun fire and sudden death. The narrow no man's land between Jewish and Arab Jerusalem had been a dreary, lethal, rubble-cluttered place. The great gates in the Old City's western ramparts were sealed. Concrete anti-sniper walls provided ugly shelter for the Jewish community a few hundred yards away.

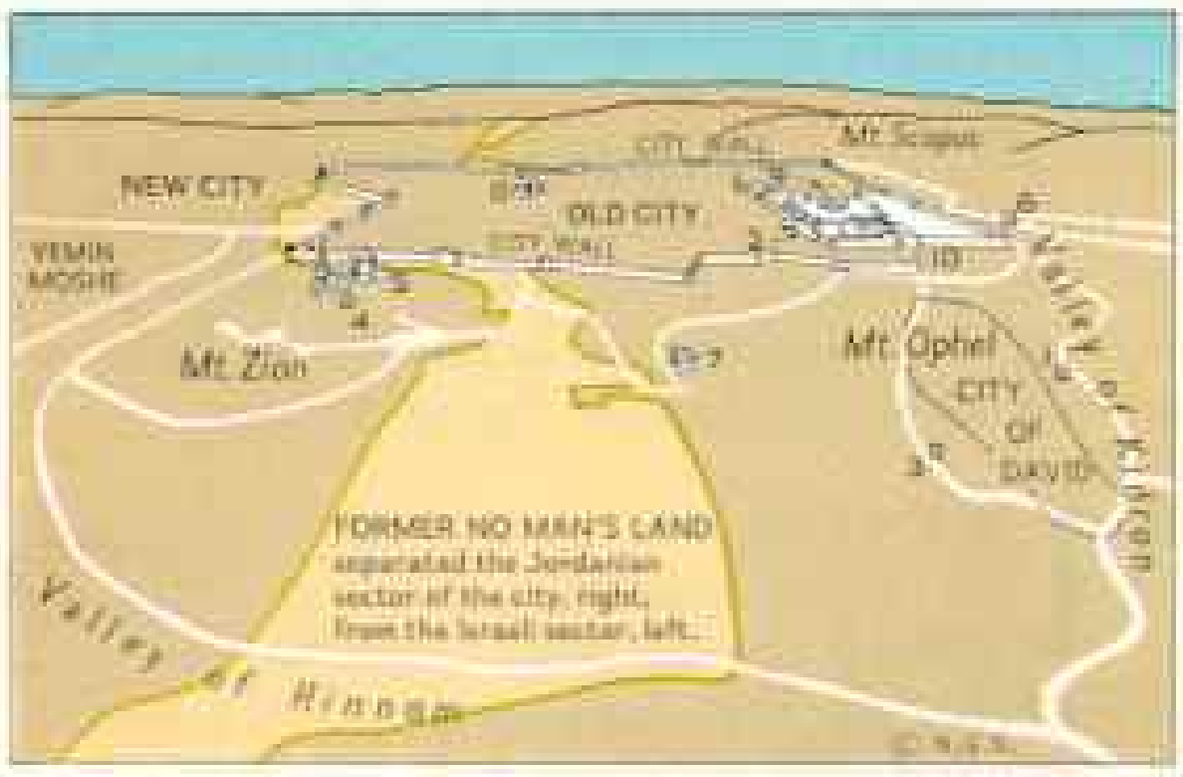
Nothing moved then in this grim strip, commanded by both Arab and Israeli weapons. The red-checked headcloths of Jordanian soldiers appeared along the Old City's parapets. Slit-eyed gun emplacements squinted back from housetops on the Israeli side. Explosions in the sleepless night signaled the demise of some dog or donkey that had stumbled upon a land mine.

Now the concrete defenses were gone. The old wall was stripped of modern fortifications and stood unencumbered, in antique grace. The barricades across the Israeli streets had vanished. Fresh earth had been spread on the war-torn soil, and green grass grew in it. Hard-surfaced roads circled the Old City, and trucks and taxis traveled them.

But it was the gates—once sealed, now open—the gates, and the people who passed through them, that spoke most eloquently of the united Jerusalem. I stopped at the Jaffa Gate, the main passageway from New to Old Jerusalem, and watched.

A frock-coated ultra-observant Jew, with side curls swaying under a broad-brimmed hat, went in as an Arab woman in native dress came out. Three Israeli soldiers, carrying Uzzi submachine guns, stepped aside for a little

Emotion as fierce as pain seizes a Jew in prayer shawl as he worships at the Wailing Wall, one of Judaism's most hallowed sites. The Wall's mammoth blocks, unlike the smaller, mortared stones in the background, supported the platform of King Herod's Temple, destroyed in the year 70 by the Romans. In our own time, Jordan barred Jews from worshiping here for 19 years. By assuming ownership of the Wall, Israelis feel they have fulfilled the hopes and prayers of their ancestors.



"A city that is compact together." The description of Jerusalem in the 122d Psalm applies as strongly today. This aerial view looks north from above a onetime no man's land. Shrines sacred to Judaism, Christianity, and Islam crowd the 4,000-year-old city.

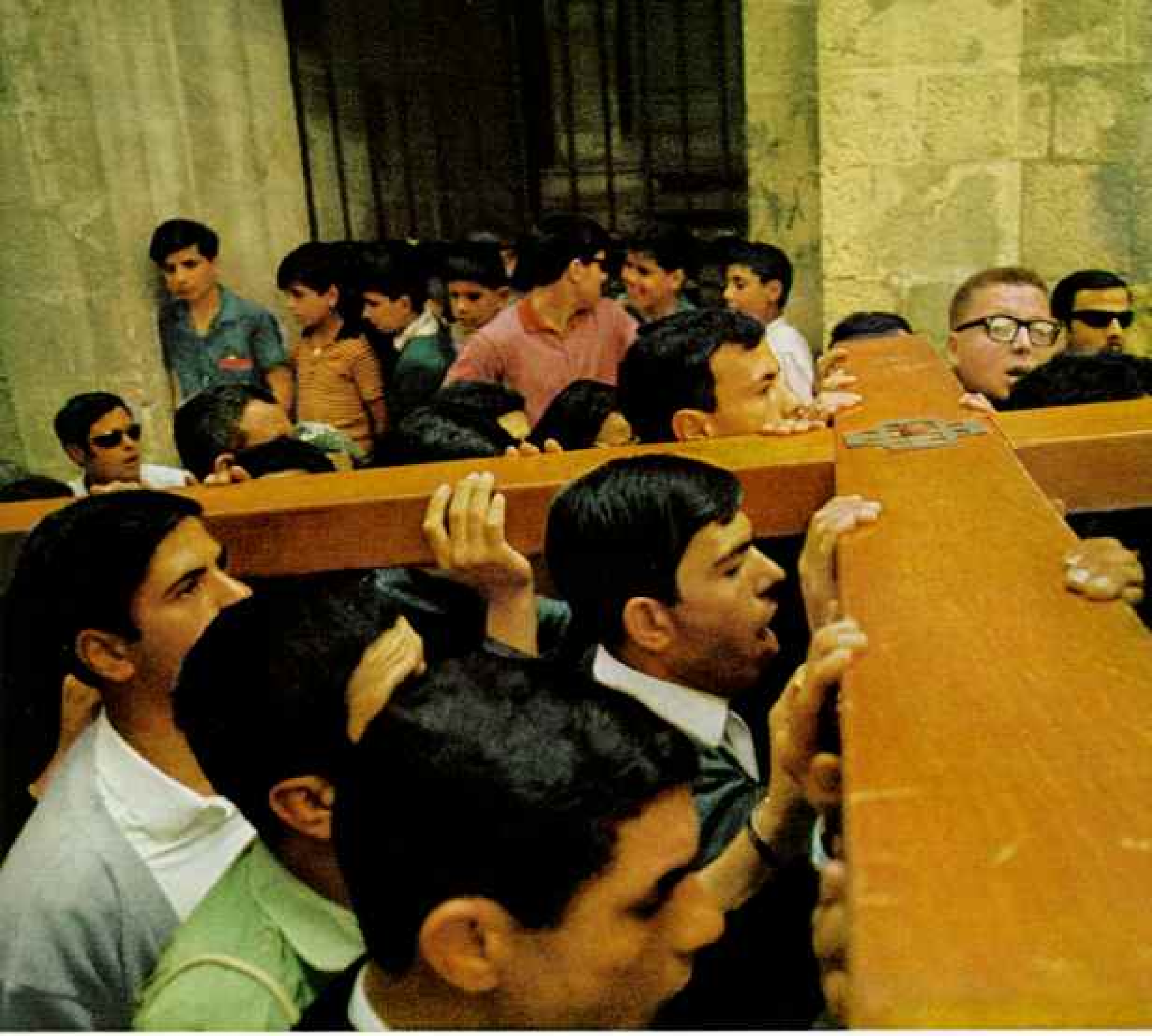
Jerusalem became a focus of Israel's history about 1000 B.C., when King David captured a Canaanite city (within the chart's dashed line) and made it his capital.

After David's son Solomon was anointed king near Gihon Spring (1), he built a splendid Temple on a huge platform. In 587 B.C. the Babylonians razed it, but by the time of Christ,

King Herod had rebuilt the Temple on a platform (white area) five times the size of the Acropolis in Athens. The Wailing Wall (**2**) remained after the Temple's destruction by the Romans. Following last year's war, the space in front of it was cleared of homes to accommodate Jewish worshipers.

Christians cherish the city for its associations with the life of Christ. At the Pool of Siloam (**3**), a blind man sent by Christ to wash his eyes found his sight restored. The Coenaculum (**4**) beside the Church of the Dormition (**5**) marks the traditional site of the Last Supper, whence Jesus walked to Gethsemane (**6**). The Church of St. Peter in Gallicantu (**7**) memorializes the Disciple who thrice denied his Lord but repented with the cock's crow. The Church of the Holy Sepulcher (**8**) enshrines sites revered as those of the crucifixion and burial.

In the seventh century the Moslems conquered Jerusalem and cleared the Temple platform for their "Noble Enclosure," crowning it with the Dome of the Rock (**9**) and the Aksa Mosque (**10**). Turks in the 16th century raised the present city walls over ancient foundations. In the 1850's the first modern Jewish suburb, Yemin Moshe, rose outside the walls—the seed of the New City. After 400 years under the Turks, Jerusalem in 1917 passed to the British, who ruled under a mandate that lasted until the creation of modern Israel in 1948.



Arab girl with a basket of groceries on her head. She passed with only a glance at the weapons. An Israeli housewife bustled out, clutching a package. (There are bargains to be found in the Old City, where prices are sometimes lower than in the New.)

Since modern Israel's birth in 1948, no such casual contact had occurred between the segregated citizens of Jerusalem.* They communicated with bullets. They shared no streets, they passed through no common portal. To me, the very normalcy of their present comings and goings seemed almost miraculous.

As I watched and marveled, some of the urchins who haunt the gate spotted me and moved in to assure me in fragments of several languages that whatever I might want they could provide, and at ridiculously low cost.

"Buzz off," I suggested. And since they would not, I did, joining the flow of humanity pouring into the ancient town.

The sacred city appeared unaltered by the violence of the Six Day War of 1967.† Israeli troops had deliberately accepted unnecessary losses by restricting themselves to light weapons—even knives—to avoid harming holy and historic places. The Holy Sepulcher and other shrines are intact, and are now protected by Israeli law.

The streets, as always, were blessedly free of vehicular traffic. They are not really streets at all, in the Western sense, but a jumble of stairs, tunnels, alleys, arcades, and passageways. All have something strange and exciting to offer the eye, the ear, the nose—or all three. If squalor abounds in many a soiled

*John Scofield wrote of "Jerusalem, the Divided City," in the April, 1959, NATIONAL GEOGRAPHIC.

†The Six Day War and its aftermath were described in "Eyewitness to War in the Holy Land," by Charles Harbutt, in the December, 1967, GEOGRAPHIC. In the same issue, Howard La Fay visited the roads and byways "Where Jesus Walked."

DITRACHROMES © NATIONAL GEOGRAPHIC SOCIETY

Stone tracery takes shape beneath the hands of Selim Nicola Abou Roumman, who helps restore the Church of the Holy Sepulcher. "Here my work becomes a permanent monument," he says. The church serves Roman Catholics, Copts, and three Eastern Orthodox denominations: Greek, Armenian, and Syrian.

Eager hands lift a heavy cross as pilgrims surge along the Via Dolorosa, the Street of Sorrows, toward the Church of the Holy Sepulcher. For centuries the devout from distant lands have joined to commemorate Christ's Good Friday agony; this year many Christian Arabs boycotted the Holy Week observances in protest against Israeli occupation.

Sharing wonder, two worshipers with an elaborately woven frond await a Palm Sunday procession. It celebrates Christ's triumphant entry into Jerusalem, when welcoming crowds "took branches of palm trees, and went forth to meet him" (John 12:13).

and shadowy corner, it coexists with beauty.

I wandered down David Street to the triple-aisled, covered *suq*, or bazaar, which stands as the Crusaders left it. There tinsmiths, cobblers, tailors, carpenters, and tanners called cheerfully from stall to stall. Farther on, butchers, poultrymen, confectioners, and sellers of grains and spices hawked their wares. Beets boiled in a tin can over a kerosene torch (even the poorest porter could afford a boiled beet), and golden *felafel* balls—fragrant spheres of seasoned fried chick-pea dough—bobbed in basins of bubbling oil.

I turned down the Via Dolorosa, the Street of Sorrows, along which are Stations of the Cross, sacred to Christ's trial and crucifixion (preceding pages). Stones as old as Christianity underlay the stepped street. Minarets recalled later, Islamic times. Toward the foot of the street the serene Church of St. Anne suggested medieval Europe.

In time I returned to the Jaffa Gate and continued my circling of the town. I passed the Zion Gate, bullet-riddled but open to all, and the wounded trees outside it. Soon I swung south of the walled town, across a sparsely settled spur of land called Ophel, where David had first established Jerusalem as his capital about 1000 B.C.

NOTHING of the City of David is left above ground. His people had been wanderers; they occupied the Canaanite town of Urusalim and left it much as it was, for they knew little of building. When David's son Solomon raised the first Temple on a rocky mound north of the town, he had to call in Phoenician artisans. He sent word to Hiram, a king of the Phoenicians, saying: "Unto thee will I give hire for thy servants according to all that thou shalt appoint: for thou knowest that there is not among us any that can skill to hew timber like unto the Sidonians" (I Kings 5:6).

In the eighth century B.C. the city faced invasion. The Assyrians were moving west. Jerusalem was in the way. It must fall.

But it did not fall. The town survived because of a remarkable engineering accomplishment that exists intact today, simply because it is below ground. It is, in fact, a tunnel, cut through solid rock at the command of King Hezekiah, that carried the water of the Spring of Gihon from its location in the Kidron Valley east of the city walls to a pool west of the ridge on which the city perched (maps, page 847). The Assyrians found the spring walled up. The Jews had water; they had none. They left.

THE MODERN ARAB NAME for the spring is Umm el Daraj, or Mother of Steps, in reference to the 32 steps that lead down to the pool (page 857). Though Jerusalem is now provided with adequate water from distant sources, local women still come to Umm el Daraj with jugs (and oil cans) balanced on their heads. Behind the pool at the foot of the stairs is a narrow aperture from which extends a 600-yard-long lightless passageway, hip-deep in cold water.

I decided to have a go at it, and found an Arab youngster willing to lead me through.

As the Assyrians approached his city, King Hezekiah had ordered two gangs to start burrowing from opposite ends of the proposed waterway. That they ever met is wonderful in the extreme, for compasses were unknown in those days. The feat is even more amazing to anyone who has traveled the tunnel, which twists like a wounded worm. Hezekiah's engineers themselves considered the meeting noteworthy, for they carved an inscription about it on the tunnel wall:

"This is the story of the boring through: . . . whilst three cubits [yet remained] to be bored [through, there was heard] the voice of a man calling his fellow, for there was a split in the rock. . . . the tunnelers struck, each in the direction of his fellow, pick against pick. And the water started to flow. . . ."

A sudden jog in the tunnel marks the spot where the two groups suddenly changed course to cut toward each other.

Emerging, soaked, into the dazzling sunlight, I was grateful to have seen something that dates from Jerusalem's early centuries. Excavators have found nothing else intact. Nevertheless, the English archeologist Dr. Kathleen Kenyon, whose six-year exploration

Parade of pedestrians funnels through the Damascus Gate from the Old City. Acclaimed for its majesty, the gate rose in the 16th century during the reign of the Turkish Sultan Suleiman the Magnificent. Light stones mark recent repairs. The entrance stands over remnants of Crusader, Byzantine, Roman, and Herodian gates, excavated by the Jordanian Government and visible beneath the modern bridge.

Problem solver, Meron Benvenisti, left, deals with daily crises as Israel's Administrator of East Jerusalem. Here he compensates a Jordanian displaced from his dwelling near the Wailing Wall after the Six Day War. A Moslem religious trust had owned and rented many of the demolished homes. This former tenant receives the difference between his old and new rent for two years.

To meet the pressures of a growing population, Israel expropriated some 800 acres near Mount Scopus. Plans call for 1,250 housing units for Jews and 150 for Arabs.

Shirt-sleeved mayor of Jerusalem, Teddy Kollek, left, hears complaints from residents of Kiryat Mattersdorf, a housing development settled by Jews who left Mattersdorf, Austria, in 1938, the year the Nazi occupation began. The mayor also encourages Arab Jerusalemites to discuss their problems. "I recognize their political animosity," he says. "I want only their cooperation in practical, municipal matters." Aiming at peaceful union, he has integrated Jordanian teachers, policemen, and appointive officials into the city's administration. All residents will be able to vote in the mayoral elections next year.

of Jerusalem the National Geographic Society helped to support, has determined the position of David's walls: the western close to the top of the ridge of Ophel, the eastern low on the slope, with a gate opening upon the Gihon Spring.

Though houses of the first Jewish capital have vanished, examples of their contents can still be found. I came upon a shop specializing in such antiquities near the old town site. Here were lamps, dishes, jugs, and bowls from the time of David and later periods (page 865). Although the population of the lower Kidron Valley is almost entirely Arab, the man in charge of this one-room hardware store of history was an educated Israeli.

"We are the first postwar Israeli-Arab business concern," he said, "and humble proof that our peoples can work together."

He presented his partner, who spoke to me in Arabic. "He offers you a Turkish coffee. While you drink it, I will give you what information I can."

My amiable mentor led me through the events of Jerusalem's evolution from the days of David to the time of Herod, illustrating his

Jerusalem reunited

Municipal area

Built-up areas

Parks

Israel-Jordan armistice line, 1949-1967

Seasonal watercourses

Elevations in feet

DRAWN BY LEE ECKERT
GEOGRAPHIC ART DIVISION
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Core of controversy: After annexing Arab Jerusalem in June, 1967, and occupying parts of Egypt, Jordan, and Syria (map, above), Israel pushed city boundaries out as much as four miles. Bulldozers smashed barricades and opened linking roads. Planners began to landscape a park circling the Old City.

Both the Security Council and the General Assembly of the United Nations have protested the Israeli annexation by overwhelming votes, asking for international control of the disputed city according to the Palestine partition plan of 1947.

account with occasional examples from his dusty shelves.

Arab-born, Rome-oriented Herod had set about winning over his Jewish subjects by spectacular gestures. He expanded Solomon's Temple platform to a staggering 35 acres, and replaced the much-repaired old Temple with a magnificent new one. It was there, some 30 years after Herod's death in 4 B.C., that Jesus addressed the Disciples. As He then predicted, the Temple would soon fall. Titus, destined to be Emperor of Rome, burned it in A.D. 70 to punish rebellious Jewish Zealots. Hadrian completed the destruction of Jerusalem.

But parts of the Temple platform remained. Of these, the most symbolically significant segment is the western, or Wailing Wall, where for centuries Jews have bewailed the loss of their Temple (page 838). For centuries, yes; but not from the rebirth of Israel in 1948 until the Six Day War of 1967. During those 19 years it was in Jordanian hands and inaccessible to Jews.

I visited the Wall often, and at all hours, to watch the endlessly varied meeting of modern man and ancient masonry. Once I took an American Jewish friend there, a sophisticate, protectively cynical, bringing him to the place in darkness, through the sleeping city. I stood aside, allowing him the privacy of the night, and in time he returned, stiff-gaited as a sleepwalker, his eyes blinded as much by exaltation as by the tears that filled them.

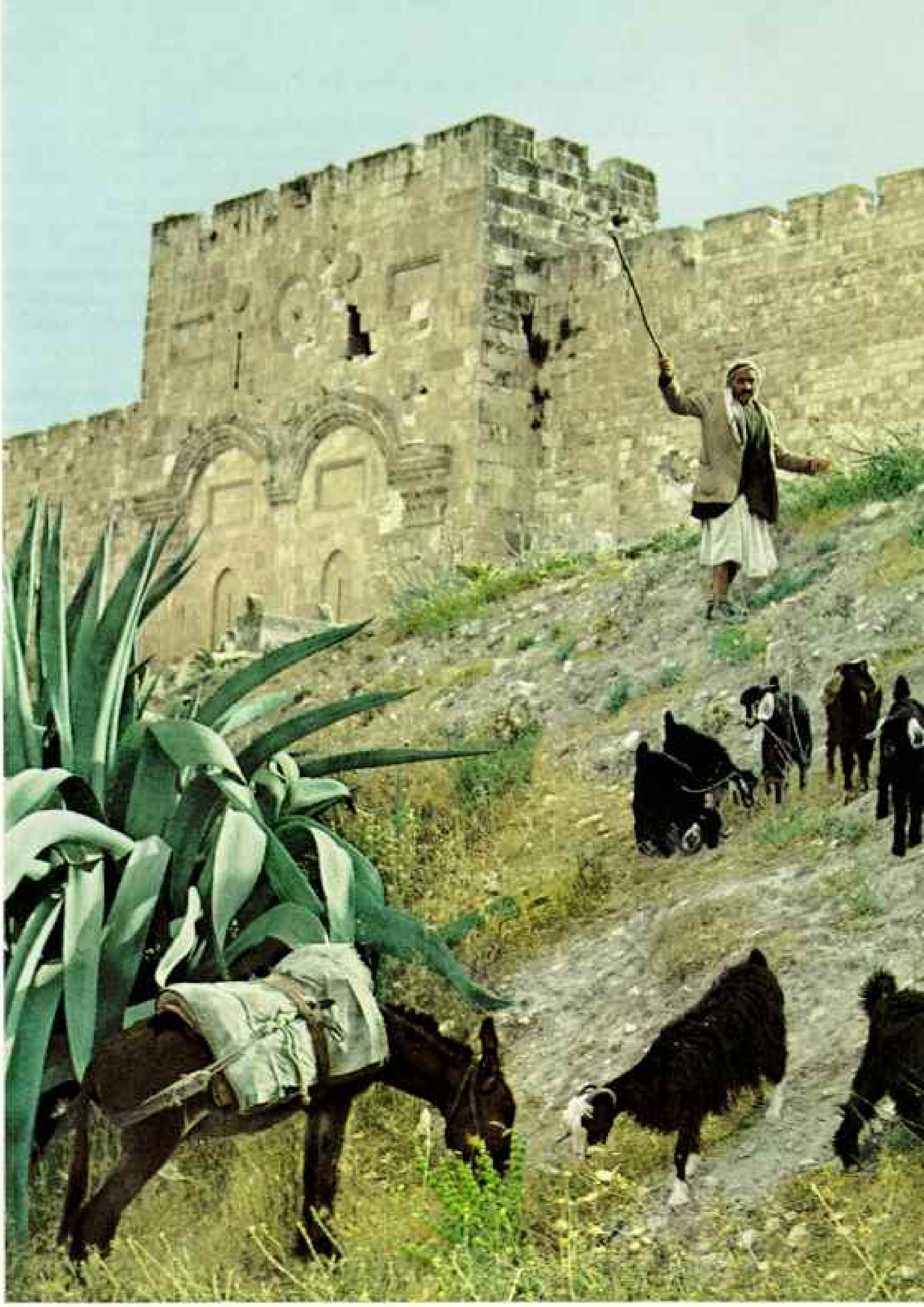
"There are no words," he said. And we spoke none.

But the great and joyous time at the Wall is Friday evening, after sunset has proclaimed the start of *Shabbat*—the Sabbath. Floodlights drench the broad area before Herod's weathered blocks, where costumes vary from the medieval Polish and Russian garments of the ultra-observant to the sport shirts and skullcaps of the less conservative. Separate and independent groups dance in circles, the modernists bouncing happily, the conservatives shuffling sedately. Their several songs combine into a clamor that would be fearful if it were not so glad.

MOST WORSHIPERS leave alone, bound for their homes in the New City (few now live in the Old, whose Jewish Quarter was heavily damaged during the Arab-Israeli fighting of 1948). But on one notable Shabbat evening a group of young men linked arms and danced their way out through the antique alleys, chanting as they went. I followed, fascinated, to see what sort of response this expression of Jewish solidarity would evoke from the Arab residents.

"*Le-Hayyim!*—To life!" The toast at kibbutz Ramat Rahel begins the week-long observance of Passover, commemorating the Jewish Exodus from Egypt. Celebrants will eat gefüllte fish and sheets of matzoth, or unleavened bread. Last spring the festival of freedom at this agricultural settlement held special meaning: Before June, 1967, Jordanian border posts overlooked the kibbutz, and Arab snipers continually harassed it.

On the eve of Passover, a boy of conservative Mea Shearim (page 869) munches cake, soon to be denied him in favor of homemade matzoth such as that hanging in this religious bookstore.



A foraging flock, a patient donkey, and a stick-swinging shepherd compose a timeless tableau outside Jerusalem's weathered limestone walls. Black Syrian goats graze with fat-tailed sheep; as in earlier times, the animals supply basic wants of herdsmen: milk, wool, and meat. Twenty centuries ago, the skin of such sheep provided parchment for some of the Dead Sea Scrolls (pages 858-9).

KODACHROME © NATIONAL GEOGRAPHIC SOCIETY

Many Jerusalemites believe the resurrection of the dead will occur here in the Valley of Kidron, a hallowed burial ground for Christians, Jews, and Moslems (whose gravestones cluster on this slope). Some foresee the risen entering the Temple grounds through the Golden Gate, left, traditional site of Jesus' triumphal entry into the city on Palm Sunday. The Turks sealed the gate in the 16th century.

Old men, smoking water pipes over games of dominoes in vaulted cafes, peered out at the passers-by without expression. After the singers had passed, they turned to each other with raised shoulders, palms, and eyebrows. Only among the young Arabs in the streets was there any sign of tension. But the Israelis smiled and saluted as they passed, never breaking the rhythm of their dance, and sometimes they won an answering smile.

AN ARAB INTELLECTUAL of my acquaintance had once told me that there could be no coexistence between Jews and Arabs. Yet the very passage of Israelis through the city to worship at the Wall represents a kind of de facto coexistence. I decided to explore the question of unification with the man who knows most about its possibilities and problems, Mayor Teddy Kollek of unified Jerusalem (page 846).

Being early for my appointment with the mayor, I walked the main streets of Israel's capital city: the Jaffa Road, King George V Avenue, and Mamilla Road. These pleasant thoroughfares are lined with office buildings in the Western style and with shops that look large to someone emerging from the booth-lined corridors of the walled town.

Despite the crowds and a considerable flow of traffic, the place is peaceful. It is also unpretentious. The pressing needs of the new state prevent individual affluence, and Jerusalemites do not long for luxury. There are few cinemas, none of them grand, and there is not a single restaurant in town that makes a claim to elegance. But there are bookstores everywhere, as befits the home of a People of the Book.

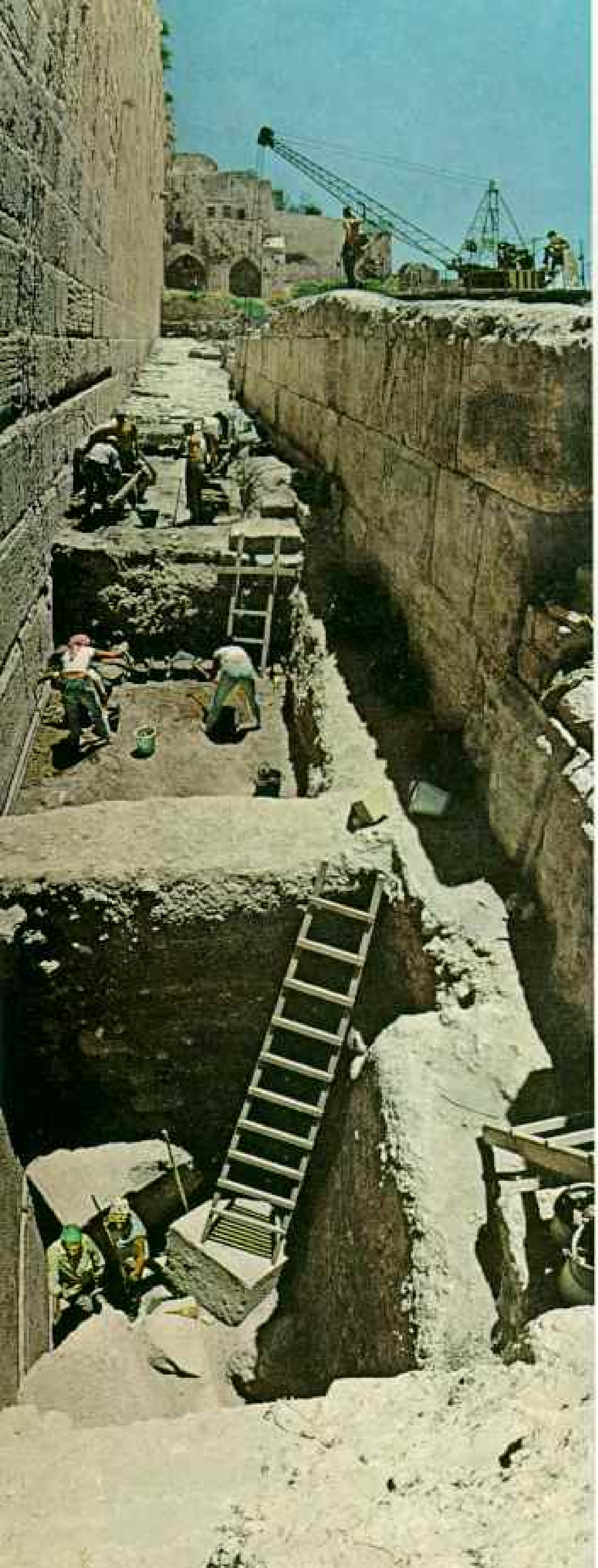
I found Mayor Kollek in a simply furnished office—a stocky, resolute man, obviously tired, obviously determined.

"**Oh ye who believe!** When ye rise up for prayer, wash your faces . . . and your feet." Obeying the Koran, Moslems ritually cleanse themselves before Friday worship in the Mosque of Aksa, from which this photograph was taken. Later, many will visit the golden-crowned Dome of the Rock beyond. It covers the Rock of Abraham (below).

Symbol of a heritage shared, the gaunt stone in the Dome draws the devout to the traditional spot where Abraham, claimed as forebear by Arab and Jew, prepared to sacrifice his son at God's command. From here, Moslems believe, Mohammed was carried up through Islam's seven heavens to the very presence of God.

In a show of strength, Israel's battle-tested machines of war rumble through the former Jordanian sector within sight of the Dome, right. British-made Centurion tanks, along with captured equipment, paraded last May for modern Israel's 20th anniversary. The U. N. Security Council unanimously adopted a resolution "deeply deploring" the Independence Day procession as undermining peace efforts. Many Western diplomats refused to attend; even some Israelis disapproved. No incidents occurred then, but isolated outbursts of violence in recent months have shaken the tenuous calm.

In a spirit of patriotism, units of the Israeli Army, with flowers, guns, and song, join the annual march to Jerusalem, a revival of the ancient Passover pilgrimage to the Temple. Hikers numbering 10,000, many in costume, explored historic approaches to Jerusalem in occupied Jordan. A parader turned photographer drops to her knees to focus on the action.



"It will take time to put things back together again," he told me. "We have a human problem here, not just an administrative one. Administratively the city is already unified; we've kept the Arab police and all but the elected officials of the old town (the political men dared not or would not join us), and we work through them.

"Sanitation, electricity, telephone—all these services function normally in Arab Jerusalem, and we've doubled its water supply. Schools are open, with books and curriculums based on those used by Arabs in Israel.

"It was a cruel war," the mayor continued. "The Arabs want us to vanish, or be driven out. Of course! But we take a straightforward approach: 'Talk as you please about us,' we say, 'but we're here, so let's try to get along.' And the Arab headmen come in and talk about problems.

"One problem is that Israel is a high-tax, high-service country. Jordan is just the opposite, and so was Jordanian Jerusalem. Not all our normal services are yet available there, so we'll raise taxes gradually. It will be four years before the Arabs pay what we do. When they do, they should have all the advantages we have. We have a much higher standard of living than Jordan, and the Jerusalem Arabs know that. They will be better off. But not right away."

"I've met some pretty pessimistic Arabs, Mr. Kollek," I said.

"And you'll meet more. Some have legitimate complaints—the upper-class, professional people in particular. Others will tell you lies—lies they've come to believe: Like the one that says that half the people of the Old City have run away. The true figure is about 6 percent, and we wish it were less. We don't

Unearthing the past: Archeologists, in a 35-foot-deep trench along the southern wall of the Noble Enclosure, reveal great blocks that date from the time of Herod's Temple. Student volunteers of Professor Binyamin Mazar of Hebrew University examine the 1,500-pound blocks, foreground, cut to fit perfectly without mortar.

want them to go. It's their home, too."

I re-entered the walled city by the New Gate, which opens directly to the Christian Quarter. Here live the successors of the priests, monks, and nuns who flocked to Jerusalem in the fourth century, when the Byzantine Emperor Constantine made Christianity a legitimate creed. As the Roman Empire died of cultural senility, Byzantium rose to succeed it and to take over its Palestinian domains. Constantine sent his mother, the Empress Helena, to rediscover Jerusalem's Holy Places and immortalize them by the building of churches.

Of these, only a few stones are left. What is venerated by one people is vilified by another: Invaders burned some; fanatics of several persuasions demolished others.

IN THE CITY at large, the seventh-century transition from Christian to Moslem rule was relatively gentle. Its supreme and superb symbol was the Mosque of the Dome of the Rock, placed on Herod's great Temple platform by Caliph Abd el Malik in 691.

I made my way down the Street of the Chain to the platform. With its new seventh-century status, that fine expanse had acquired a new name: the Haram esh Sharif, or Noble Enclosure. It is indeed noble, with its immense jewel of a mosque set in its center, surrounded by graceful colonnades; and it is certainly an enclosure, as I discovered when I reached it.

The Gate of the Chain, which opens into the Enclosure, was shut. So was the next gate, and the next. A small boy explained with deep satisfaction:

"You no go in now. Is Moslem prayer time."

This, in Jewish-occupied Jerusalem? I went away, delighted, to have a mint tea and await the proper hour.

After the darkness of the Old City's narrow byways, the broad expanse of the Enclosure was blindingly sunlit. The Dome was a hemisphere of glowing gold (anodized aluminum, really, but never mind) set on an octagon of glistening blue tiles (page 852).

The softly lit interior offers a feast for the senses. Jewels of stained glass transform the sun's rays into shafts of color almost as rich as the strong, clear pigments, set off with gold, that decorate the wooden inner surface of the dome. All is symmetrical: Intricate patterns flow restfully and perpetually around the continuous curve, without beginning or end.

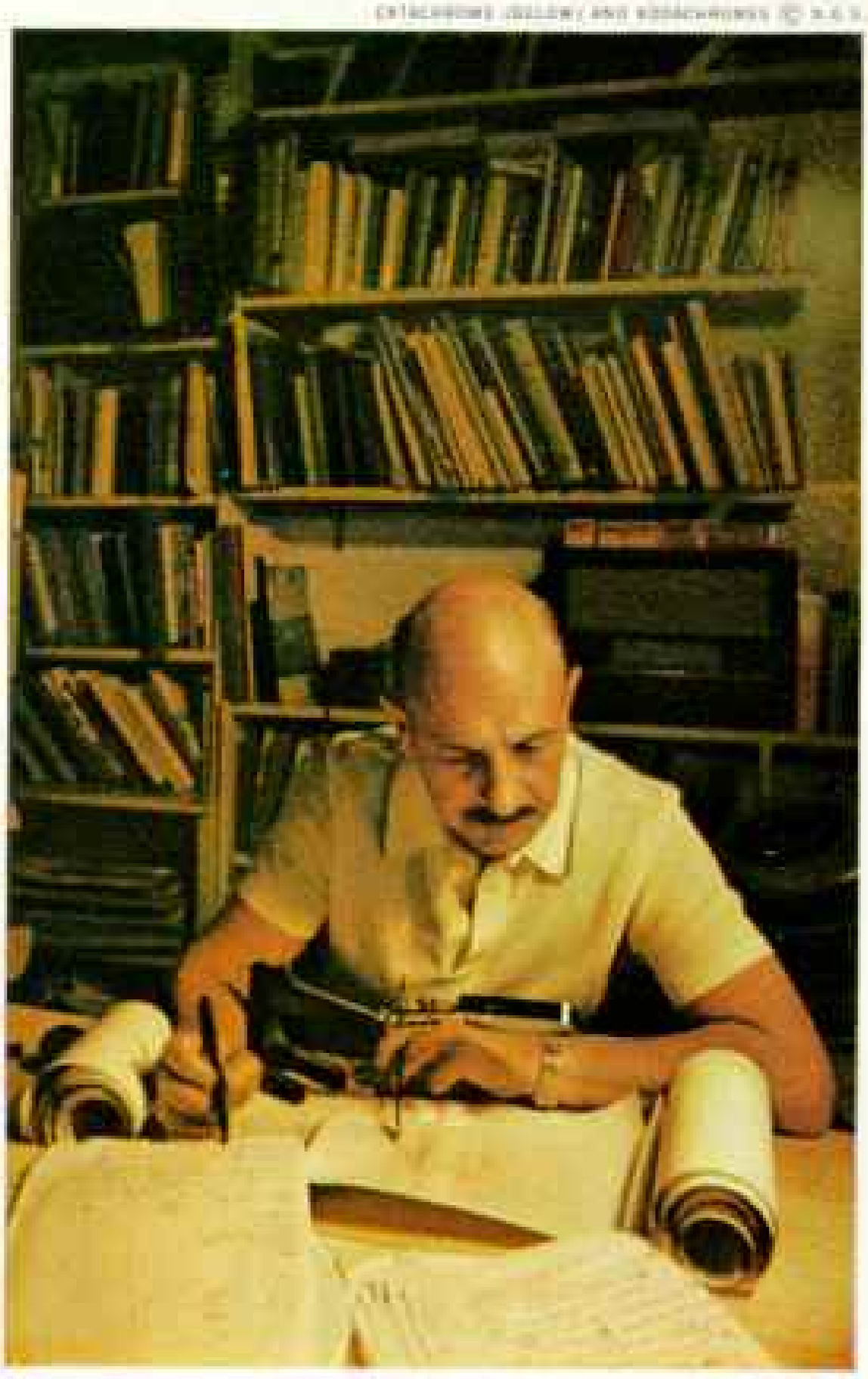
In the center of the rug-strewn marble floor lies the object of all this elegant elaboration, all this fervent artistry: the Rock of Abraham, harsh, weather-worn, unadorned, more impressive than any altar (page 853). Here, it is said, the Patriarch prepared to offer up his beloved son Isaac as a sacrifice.* Here Solomon, 800 years later, built the first Temple. And Moslems hold that from this rock Mohammed rose to heaven.

*See "Abraham, the Friend of God," by Kenneth MacLeish, NATIONAL GEOGRAPHIC, December, 1966.

Ancient engineering triumph, a tunnel leading to the Pool of Siloam still pours sparkling water from Gihon Spring in Kidron. Threatened by Assyrian armies in 701 B.C., King Hezekiah of Judah built "a pool, and a conduit, and brought water into the city" (II Kings 20:20). Teams beginning at Siloam and Gihon met after cutting 1,800 feet through solid rock.

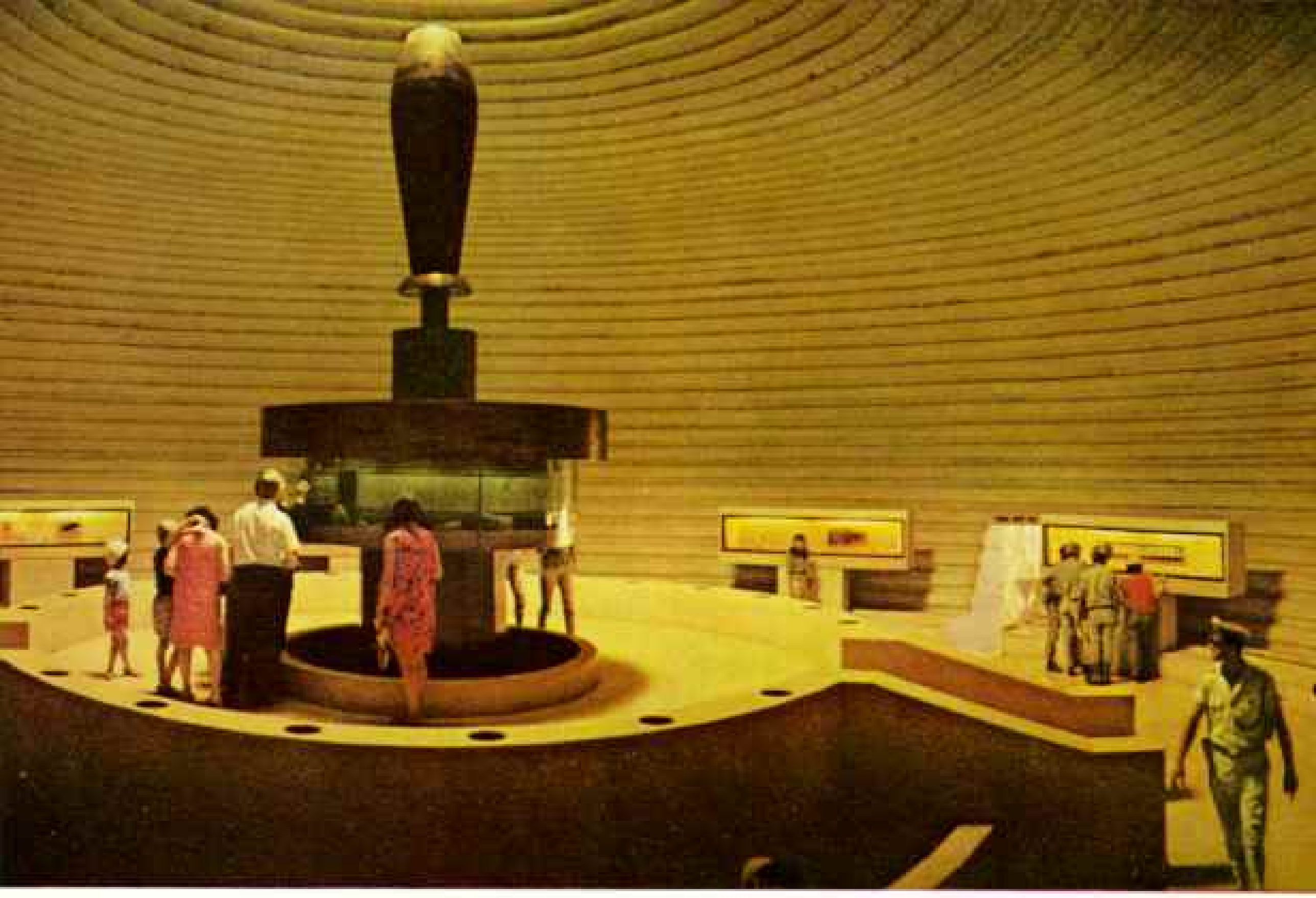
PHOTOGRAPHS BY TED SPIEGEL, RAPHO GUILLUMETTE © N.G.S.

Hushed sanctuary, Israel's Shrine of the Book displays Dead Sea Scrolls in a domed setting symbolic of the caves where they were discovered by a Bedouin in 1947. Carbon-dated to about 100 B.C., they preserve beliefs of the Essenes, an apocalyptic Jewish sect. The scrolls predate other Biblical manuscripts by at least 1,000 years, yet the texts hardly vary from later versions. The central case, whose top resembles the handle of a scroll, contains a 24-foot-long Book of Isaiah. This unusual building, part of the Israel Museum complex, was designed by New York architects Armand P. Bartos and the late Frederick J. Kiesler.



Leading archeologist Yigael Yadin of Hebrew University examines a photographic copy of the Temple Scroll, which fell into Israeli hands during the June war. It is, he believes, an Essene-written addition to the Torah, the laws given by God to Moses. "I am struck," says the professor, "by two of its main subjects: a description of the Holy Temple and detailed mobilization steps for the ruler to take should the children of Israel be threatened by a war of extermination."

Fashion for scholars: Gay print and a pretty model draw applause at a show before the Abraham Mazer Building for the Institute of Jewish Studies at Hebrew University. Most of the 12,000 students have served in the Israeli Army. The 44-year-old institution has also become a center for Oriental studies.



I left the changeless Dome, whose vault has echoed prayers for more than twelve hundred years, to find men with memories of our century's troubled time.

ONE SUCH MAN, whom I will call Mohammed, was a licensed guide who plied his trade at certain hours in the Noble Enclosure. I sought him out. As he escorted me through other wonders of the platform area—the Aksa Mosque at its south end, the immense medieval stables and hidden sanctuaries beneath it—he spoke of modern problems as well as ancient accomplishments.

"It is still we Moslems who give or refuse permission to visit our holy places here. Our religious leaders do not bow to Israel. But what is terrible is this: The Jews can do what they want!"

"Is there reason to fear them?" I asked.

"How can we know? Look: Arabs do not hate Jews, or fear Jews. When I was young, during the British mandate, I lived near the Jewish Quarter here in the Old City. The Jews there were religious people. They were different, but they harmed no one. Jerusalem has always been full of different people, living separately side by side.

"No, what makes us afraid is the Jewish nation, not Jewish people. That nation is very strong, very intelligent. And it has beaten us. So, sometimes we are afraid."

As we approached one of the gates of the Noble Enclosure, a squad of young Israeli soldiers came sauntering in, out of formation, rifles hung casually from their shoulders. They came as sightseers, and they called loudly to each other, and laughed.

Beside me, Mohammed stiffened. Then he stepped forward and spoke quietly, in Hebrew, to the sergeant in charge of the group.

"I tell him no guns can be brought into this holy place." Mohammed was speaking to me, but he stared straight at the sergeant. The non-com called his men to attention and repeated Mohammed's message in a respectful half whisper. Then, with a few terse commands, he marched them out of the Enclosure.

Mohammed exhaled slowly through pursed lips. "Suppose they had become angry, instead of behaving properly?" he asked, dredging up a half smile. "It could have been bad for me."

"But they did behave well," I reminded him.

"Ah, but I could not be sure they would," he countered. "Yet I had to speak to them or else be ashamed of myself for being afraid. We must have respect, even if we were beaten."

How long would it take the Arabs of the Old City to learn that mere words of protest will not bring punishment? Probably as long as the climate of war endures in the Middle East. And as long as the Israelis feel compelled to express their frightening power in sudden and drastic action.

The clearest physical expression of this power lay close at hand, before the Wailing Wall, where many Arab houses had been removed to make space for the crowds of Jewish worshipers. Mohammed led me to a spot from which we could look down upon the rectangle of raw earth.

"There were eighty, ninety houses there," he said. "Maybe four hundred people lived in them. The Jews gave them two or three hours to get out, then they blew up the buildings. Many people didn't have time to take away all their things. They received some money, and they were not hurt. But it is not good to be driven from one's house."

He seized my arm as I started down toward the cleared space. "Please, be careful, they are still pulling down that house just to our left."

As he spoke, part of the wall fell, and rocks rolled across the path.

"That is my mother's house," he said.

NOT ALL RESIDENTS of the Old City are as moderate as Mohammed, or as dignified in defeat. One young teacher stated his resentment plainly, while plying me politely with tea.

"We will never excuse you Americans and the British for encouraging the Jews to make a home in Palestine," he told me in civil tones.

"During the mandate thousands of Jews came to the Old City each year. We protested. The British put us in prison. They succeeded with their nation of Jews because they—and you—had hands around our necks. But that will not always be so. In Jerusalem, everything changes.

"The Jews work and work, they make a material life, not a godly life, and so they triumph over us. But it is you who are the enemy.

"The Jews say they offer us a better existence. It is not true. In our country, when a man is about to die, he is offered sugar water. That is what the Jews are giving us: sugar water. . . . May I pour you more tea?"

I thanked this angry young man for his tea (if not his sympathy) and went up into the heart of the Old City.

KODACHROMES © NATIONAL GEOGRAPHIC SOCIETY

"For all races and creeds." The motto of Hadassah-Hebrew University Medical Centre recognizes neither politics nor frontiers; it treats Arab and Jew alike. Medical students come from as far as Ghana and Nepal. Hadassah, the Women's Zionist Organization of America, began its medical work in Palestine in 1913, and now runs clinics, vocational schools, and research facilities.

Symbolic artistry, stained-glass windows in the synagogue at Hadassah depict the 12 tribes of Israel. French artist Marc Chagall based his designs on the animals, symbols, and colors associated with each tribe in the Old Testament. This photograph was taken through a window broken during the war and since replaced.

Time of parting: An Arab woman wearing traditional tattoos prepares to

On the way a tray passed me at elbow height, an enormous round tray laden with dozens of sugary delicacies. It appeared to be self-propelled, until I made out a pair of tiny feet twinkling along under it. The child beneath was so little that he could not grasp the edges of his burden. Instead, he simply balanced it on his head and trotted down the crowded street, honking like a toy taxi.

I followed him for five minutes, convinced that he would never get wherever he was going without a disaster. But the throngs parted miraculously before his piercing squeaks, and never once did a hungry shopper reach out for one of the succulent sweetmeats that passed so temptingly near.

WAR had apparently not extinguished the standards of good conduct which alone make life possible in a crowded

sell her ewe at the Friday morning livestock market outside the Old City.

and cosmopolitan town. But though Jerusalemites of every persuasion may think as one on the question of coveting one's neighbor's cookies, they still stand as far apart as East and West in cultural accomplishments and values. I walked the 500 yards from the Old City to the New—the world's shortest route from Orient to Occident—to talk to a man whose challenging responsibility it is to combine the two without explosion.

Meron Benvenisti, Mayor Kollek's Administrator of East Jerusalem, is a large, patient Israeli with degrees in both economics and history (page 846). I told him of some of the doubts I'd heard expressed by Old City Arabs. He listened thoughtfully.

"I can sympathize with anyone who says that Israel should not have taken the Old City," he began, "but not with those who insist the city should be divided. This is a place

where Jews and Arabs have lived together and must live together. All of us—200,000 Jews, 60,000 Arabs—belong in Jerusalem. And that's a basis for unification.

"Only, we must move slowly and not, as Israelis usually do, at a dead run. Jerusalem is not like other cities. Its foundations, physical and sociological, are all built on other foundations; and its people have deep historical sensitivity.

"Every step we take in the Old City has to be thought out carefully, even to the collection of garbage. Egalitarian democracy has to be introduced carefully. The Arabs are not used to it. Their rich were far richer than ours, their poor far poorer. But the great majority of Jerusalem Arabs are going to be better off materially than they ever were."

I asked Mr. Benvenisti what he thought of suggestions that had been advanced for making Jerusalem an open, international city.

"We are the only people who ever made Jerusalem a capital and who wanted to make it so. For us, there's never been any other. The ultimate effort needed to make things work will never be made by any committee. Let us try. See what happens in five years."

I sought another opinion on the city's future from Father William Casey, head of the American School of Oriental Research in modern East Jerusalem.

"It should be a unified city," said Father Casey, "and now it is so, administratively. But it isn't psychologically, and won't be for years. It's almost segregated. The Arabs are distressed and confused, perhaps more so here than in the walled city. They probably feel more exposed."

THE SENSE of helplessness to which Father Casey referred was painfully evident in an East Jerusalem family which had offered me hospitality and affection in return for a small favor I had been able to do them. Like many another father of the district, Haj Yasin Abu Ta'a had sent several of his sons abroad. Four worked in Washington, D. C., and I had brought a message and a little money from them to their parents. I hurried now toward Haj Yasin's house, for he had invited me to lunch with him.

I found Haj Yasin standing on his porch, observing with obvious concern the backing and filling of a bulldozer in the road in front of his neat, new house. He embraced me cordially, then explained through his son Ali (for the old gentleman spoke no English) that he was afraid the bulldozer had come to destroy his home. I turned to question the bulldozer driver.

"Of course we will not hurt his house," he said. "We are just widening the road." And he gave the old man a reassuring wave.

At lunch, Haj Yasin put the best pieces of meat before me, speaking in Arabic to Ali as he did so. Ali translated.

In street-corner consultation, an Arab elder, seated, helps fellow Jerusalemites fill out forms for exit permits to travel to Amman, Jordan. On the three-hour trip by bus, passengers cross the Jordan River over the Allenby Bridge, Israel's busiest gateway. They visit Jordan to see families and friends, to draw on bank accounts, or to begin their pilgrimages to Mecca. Almost all return.

"He wants you to know that what he is doing is a mark of respect, an Arab courtesy. He wants you to tell his sons in America that he prepared food for you with his own hands."

After lunch I climbed nearby Mount Scopus to see what had happened to that ill-fated Jewish enclave during the 19 years in which it was isolated by surrounding Jordanian territory. Mount Scopus had been the site of the Hadassah Hospital and Hebrew University. Both stood empty and unused until the Six Day War brought the hilltop within the bounds of Israel.

I looked over the buildings of the hospital and the university, damaged by decay and recent fighting. From them now came sounds of repair, but none would be in use for some time. I decided to visit their replacements, a few miles away in West Jerusalem, where far greater homes for the two institutions had been built after access to Mount Scopus was cut off.

The new Hadassah-Hebrew University Medical Centre, supported by the Women's Zionist Organization of America, is reckoned one of the fine teaching hospitals of the Western World. Its doctors bring to it the skills and special knowledge of the world's civilized nations. And it is deliberately nonpolitical.

I explored this point by asking the Hungarian doctor in charge of pediatrics how many of his infant patients were Arabs. He gave the perfect answer: "I wouldn't know. To us a child is a child."

"To tell you the truth," said a surgeon, "we have more trouble dealing with Jews than with Arabs. The ultra-religious Jews, I mean. They want us to give up autopsies. How can we be a teaching hospital without autopsies? And the Cohens! Did you know that no religious Jew named Cohen can be in a building in which there is a dead body or a piece of a body? Well, our pathology lab is always full of bits of tissue. So we had to build a revolving door between the lab and the rest of the building. A revolving door is always shut; no matter what position it's in, the passageway is sealed. The rabbis accepted the device. Now we can treat Cohens. This, in a secular country ... ?"

He went off, shaking his head.

LIKE THE NEW Hadassah Hospital, the new Hebrew University dwarfs the original in every respect. Its clean-lined buildings are beautifully arrayed on a stretch of land near the New City's western fringes that was, until 14 years ago, a barren hilltop.

More than 12,000 students, men and women, are enrolled at the university, of whom 2,000 come from 40 other countries. In their classes they seemed to me more serious, more intent, and more mature than most students at most American colleges. In fact, they are older, having spent two or more years in military service before enrolling; and they are

Portent of the future, Israel hopes, an Arab and a Jew share ownership of the Siloam Antiquities Shop. Mohammad Abdullah Awad, left, knows the sources of supply; W. S. Meczes brings an ability in languages and a knowledge of archeology. An American tourist considers a 12th-century camel bell and a table full of jars, lamps, and shards, some dating from the time of David.

EXTACHROMES BY TED SPIEGEL, RAPHO GUILLUMETTE © N.G.S.

descendants of a people who have honored learning since the beginnings of civilization.

The university is only part of a panoramic complex of imposing modern structures. The Knesset, Israel's parliament, stands like a temple of tomorrow to the east; museums of art and archeology crown an adjacent summit. And, in perfect counterpoint to all this modernity, the medieval Monastery of the Cross slumbers in massive repose among olive trees below the halls of government and of knowledge.

NOT ALL the New City is so modern, either in appearance or in ideology. The most strikingly nonprogressive district in the Jewish town is the Mea Shearim quarter, some of whose residents are so pious that they do not recognize the State of Israel—they await, instead, the coming of the Messiah—and will not speak Hebrew except in prayers and on holy days. They wear the clothing of their eastern European great-great-grandparents: knee-length frock coat, sometimes knee-length trousers, and broad, round black hat.

Most of Mea Shearim's settlers fled Tsarist Russian persecutions almost a hundred years ago, soon after Jerusalem began to spread beyond its walls, and made their homes around courtyards, each with its ritual bath and Talmudic school (page 869).

"Imagine it," said a liberal, tough-minded friend of mine, who has seen a lot of the world and the inside of at least one concentration camp. "Imagine setting up a ghetto in the heart of a Jewish city. But that's what they've done."

I walked the Old World streets of the quarter with a new acquaintance, a 21-year-old Orthodox Jew named David Groner, whose American family had moved to Israel in 1962.

"I'm a religious person," David told me. "I observe our basic laws. I keep the Sabbath. But I don't follow all the old customs. I thought these people, with their different ways, would seem strange to me. But they're not so strange. You'll see."

The family to whose home he led me had no warning of my coming. The mother was washing the floors, while the older of her ten children fed the younger ones on a terrace just big enough to contain them.

She rose, a fair-skinned, sweet-faced woman with the special serenity of those who know their precise place in the scheme of things. She ushered me into an inner room no wider than the span of my two arms, seated me at a table, and sent the older children for fruit.

The younger ones stood close, as unafraid as only well-loved children can be, and studied me with friendly fascination. They spoke in their accustomed Yiddish; I spoke English. But instead of turning away in embarrassment at my unintelligible words, they leaned forward, smiling, to examine my mouth (which could not communicate with them) and then my eyes (which could).

Conversation being thus limited, they decided to entertain me. For this task they singled out two-year-old Yakov, the smallest ambulatory member of the family, and placed him on a shelf.

"*Zing*, Yakovele," his brothers and sisters urged. And Yakov sang.

Botticelli should have had Yakov as a model for the ultimate in cherubim. Being technically a baby, he still had a halo of blond ringlets which at the age of three would be shaved to leave only side curls. His eyes were bright blue, long-lashed, and merry.

As Yakov sang, David shook his head in amazement.

"I wouldn't have believed it," he said. "He's singing a hit song, and in Hebrew. A song about Jerusalem and how it was divided, but is reunited. It ends like this:

"We've come back to water cisterns,
To marketplace and square.
The shofar calls on Temple Hill
In the Old City."

The mother stood leaning against the wall, cradling an infant, smiling proudly at her ninth-born.

Yakov finished his song, and his sisters took him off the shelf and kissed him.

The mother said something to David.

"She says this is only a poor house, but something is always happening and everyone is happy."

"Give full measure and full weight, in justice," commands the Koran. At the entrance to an Old City market, a village woman carefully weighs tiny apples fresh from her orchard. Under stone arcades dating from Crusader days, vendors sell bread, oil, vegetables, pots and pans, meat and sweets. On Friday Moslems going to the mosque for weekly worship do their marketing, and Jews stock up for the Saturday Sabbath.

I left the warmth and security of this crowded little home, grateful for the glance I had had behind the carefully closed gates of Mea Shearim. I had David to thank for it; his benign presence had served as a guarantee of my own good will.

I NOW FACED a similar closed-door policy in the Old City, whose citizens, though more cosmopolitan and less exclusive than those of Mea Shearim insofar as their workaday activities are concerned, guard no less jealously the privacy of their homes. But I had a new friend there who had promised to help.

"I want you to see everything," Sheik Nizar Attiyeh had said. "Even though everything here is all mixed up like a salad and gives every person a big headache."

I found the sheik (so entitled because of his eminence as a merchant) standing in the doorway of his spacious shop near the Holy Sepulcher, a robust, round-faced gentleman with gray hair and wise gray eyes.

"*Ahlan, ahlan!*—You are welcome," he said. "Let us have a coffee together."

I inquired into the state of business.

"It is not like before the war," he admitted, "but one must be grateful. He who makes no trouble, who gets no flies on his body, as we say, he can get along.

"Frankly speaking, between you and me, Jerusalem was always under somebody. I think no one is very good and no one is very bad, Moslem or Jew or Christian, so what's the difference? I want only to die here where I was born, and live in dignity until I go under the ground."

I asked him if he thought that the Arabs might win the city back.

"There are many Arabs," he said, noncommittally. "But some Arab leaders, they must to have too big bellies, they must to have too many womans. They spend money as if it were the River Jordan. They do not work together. The Jews work side-by-side, and they are very clever. Whatever happens will be God's will."

The sheik paused, then bent a benevolent gaze on me. "Do not feel that you must buy from me, simply because we are friends. But if you wish to buy, I will sharpen my pencil to the very end, to work out a good price for you." I bought a silver bracelet without once contesting the price. This, I felt, was the finest compliment I could offer.

"Now," said Sheik Nizar, "we will go to visit my sister. My son will watch the shop."

Sheik Nizar's sister lived, it turned out, on the edge of the clearing made by the Israelis in front of the Wailing Wall. Since all intervening houses had been demolished, it commanded an unobstructed view of the great rampart and the worshipers at its foot. It was a fascinating and disturbing situation for an Arab family, but they had made a courteous and cautious adjustment.

"In the old days," said the sheik, "this house had one entrance, facing the street. Now it faces the Wall. So the family has made a rear entrance too, in order to come and go without disturbing the Jews at their worship."

He and his sister showed me the house. There were four rooms, and a simple but functional kitchen with a kerosene stove and

Like a cherub painted by Botticelli, thought author Kenneth MacLeish, center, when he saw two-year-old Yakov Turenheim during a visit to Mea Shearim (opposite, lower). A brother captures the child's interest with metal cubes used in a game similar to jacks. At three the boy's curly blond hair will be shorn except for the earlocks, according to the custom of many ultra-observant Jews.

KODACHROME (BELOW) AND EKTACHROMES © N.G.S.

Hand-painted scroll details the ancestry of fez-topped Ismail Tahboub el Amawi, an Arab patriarch. His sons and guest Sheik Nizar Attiyeh read family names dating back to Noah. Desert tribesmen recite such genealogies around campfires as a form of entertainment. A star ornaments the ceiling of this 13th-century home near the Damascus Gate.

In sequestered serenity, Jews of Hungarian descent live around their own courtyard in Mea Shearim, a citadel of the most conservative Jews. In the 1880's immigrants from eastern European ghettos brought their customs and Yiddish language to this community, where even today only quiet visitors in modest dress are tolerated.

running water. But nowhere was there adequate furniture.

"All their good furniture was stolen," said the sheik as we settled down in two of the remaining chairs to enjoy the tea and cakes provided by our hostess. "But frankly speaking, between you and me, it was taken by their Arab neighbors, not by the Israelis. They took it when the family ran away, during the fighting."

We sat for a time in the bare room, the mother seeing to our cups and plates, the daughter speaking quietly, shyly, in her schoolroom French. From the open windows, where tuberoses bloomed in tin cans, came a murmuration of Jewish prayer. Only the sheik sat at ease, committed by his old-man's acceptance of circumstance to the achievable goal of survival with dignity. The girl at last put aside platitudes and spoke the humiliating thought that haunts her people's hearts: "They can do anything they please. We can do nothing."

Nowhere but in Jerusalem, sacked repeatedly and conquered a score of times, can that sad concession have been so often made.

AS EVENING DIMMED and quieted the streets, Sheik Nizar led me to other friends in other homes.

A judge, learned and exquisitely courteous, showed me through his luxurious house outside the walls. Neither his family nor his property had been harmed during the fighting, he said. The Israeli soldiers had even brought him food when he had not enough for his children. Nothing had changed—except that he was now a noncitizen in a foreign country.

Next, a man of noble blood, reduced to relative poverty by the partition of Palestine in 1948, welcomed me to his 700-year-old quarters inside the Damascus Gate (page 869). Saladin had slept here, he said, and I believed

Relics of battle give way to a monument for the fallen in former Arab territory. The Israeli tank was knocked out during the Six Day War within sight of the Franciscan Church of All Nations, beside the Garden of Gethsemane. When the wreckage was cleared, Israeli paratroopers erected a memorial to comrades nearby (right). Elsewhere in the city Arabs raise memorials to their lost brothers. Though disagreeing on the means, both peoples pray for the same end—peace for their beleaguered Jerusalem.

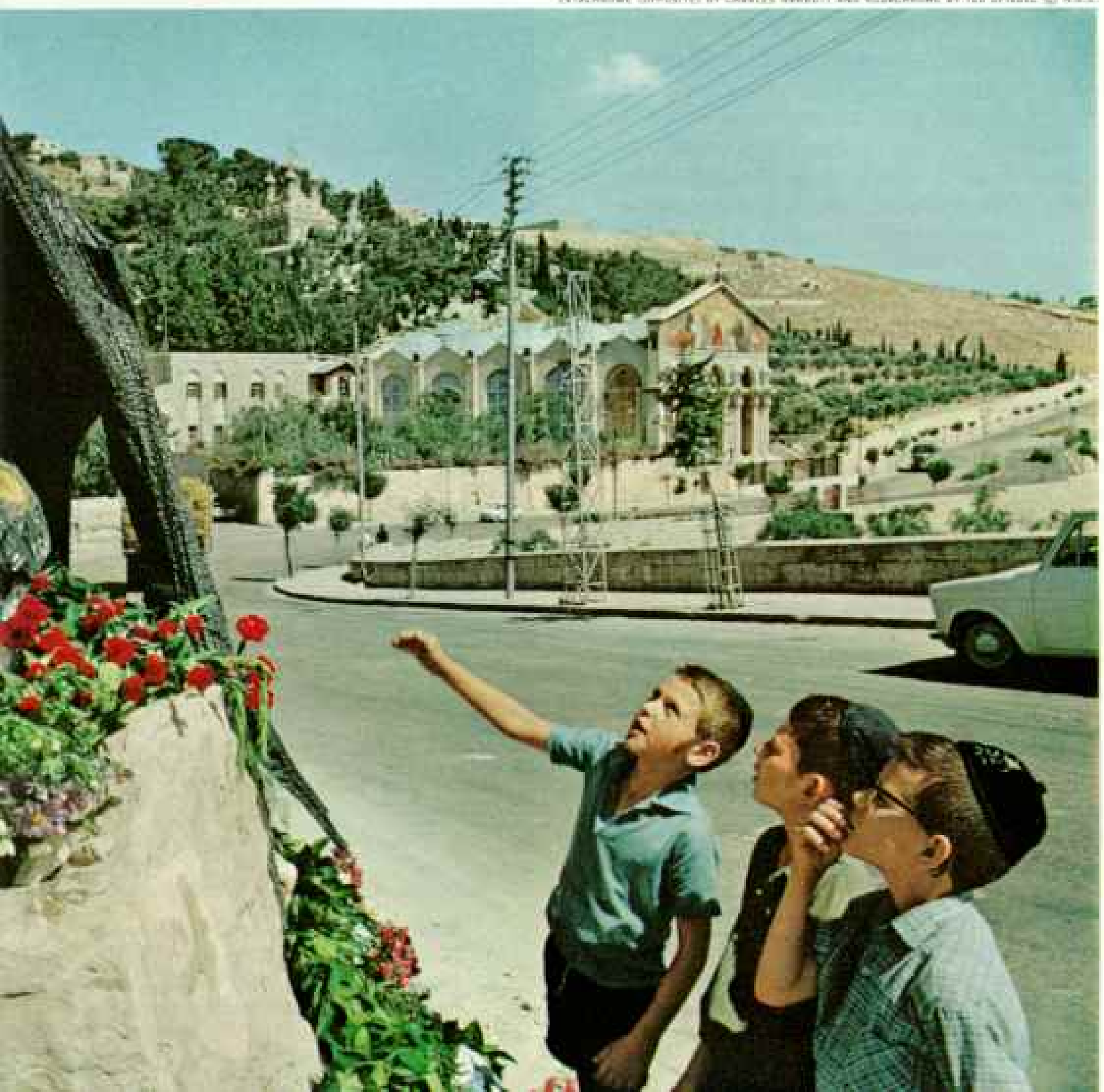
him. Double domes, richly ornamented, topped a single, spacious, overcrowded room in whose darkest corner his centenarian mother snored. He knelt on the painted tiles of the floor, spreading out for my inspection marvelous documents, signed by sultans and caliphs of the days of Islamic empires, conferring rights and privileges upon his family. He had escaped to the immutable past, where current conquerors could not follow.

Sheik Nizar had business elsewhere. We parted in the Street of Sorrows, and I wandered off without conscious purpose, along the now familiar ways. The shops were shuttered and the walls freed of their daytime clutter of bales and barrows and bags of goods. The lovely lines of once proud buildings lay revealed to the rising moon as never to the sun. Yet there was a sense of sadness in the silenced streets, from which people had vanished as if into hiding.

This strange, ambivalent scene recalled to my drifting thoughts an old Hebrew saying. I recited it, half aloud: When God created beauty, He created ten parts of it and gave nine to Jerusalem; when He created knowledge, He did the same; and the same when He created suffering.

Throughout her 4,000-year lifetime Jerusalem has seemed to reflect just such a disparate endowment, to be unnaturally blessed and cursed. She remains today replete with beauty, knowledge, and suffering.

But perhaps the balance is changing. Beauty is increasing, as new creations are added to—but never substituted for—the old. And knowledge is increasing, for nowhere is knowledge more venerated, particularly man's knowledge of himself. In the face of such knowledge, suffering must diminish; though how soon, only the God who bestowed it upon Jerusalem can know. THE END



Dragon

IT WAS A MEDIEVAL LEGEND come to life and lumbering directly toward me: the armor-plated head, the thick forked tongue, the baleful eyes, the long, sharp claws, and the nine-foot body encased in hide like polished gravel. All that was missing were the jets of fire from the nostrils.

Crouched in a blind of flimsy woven mats, I focused my camera on the approaching creature—snapping the shutter at twenty feet, twelve, seven, five—until the massive head overflowed the view finder. Glancing through a second peephole, I found myself confronted by a large and seemingly hostile eye.

There came a rustling on the other side of the mat as the great tongue probed for an opening; then, apparently satisfied that nothing here was worth eating, the reptile gave a low hiss and swung away. Uncertain of its intentions, I was frightened yet delighted to have had this intimate encounter with one of the giant dragon lizards of Komodo.

Dragon's Origin Clouded by Mystery

I had come to Komodo Island in Indonesia's Lesser Sundas to study and photograph the Komodo dragon in its natural state. *Varanus komodoensis* is one of the group known as monitor lizards, which range through Asia, Africa, and Australia, and take their name from the ancient belief that they warn of the presence of crocodiles. The world's largest living lizard, the Komodo monitor remains something of a mystery.

Fossils suggest that the ancestors of the huge reptile evolved in Australia fifty or sixty million years ago—long before its present habitat, the volcanic isles of Komodo, Rintja, and Padar, and a part of Flores, rose from the sea. How did the dragon reach these islands some 500 miles off northwest Australia? At best a mediocre swimmer, *Varanus komodoensis* could hardly have survived the swirling tidal currents that whip through the Lesser Sundas. (See maps, page 876, and the supplement map **Southeast Asia**, distributed with this issue.)

Yet the same tides may have contributed to the dragon's survival, once it reached the islands. Even today, few but fishermen brave the currents to call at Komodo. The island's human population numbers only about 400.

The world first learned of the giant monitor in 1912 when Maj. P. A. Ouwens, director of the zoological museum in Buitenzorg (now called Bogor), Java, published a description of it. Since then, man has moved slowly to understand and to protect this great holdover

Forked tongue flicking the sand, a nine-foot Komodo dragon prowls the beach of its island home in the Lesser Sunda chain of Indonesia (map, page

Lizards of Komodo

Article and photographs by JAMES A. KERN

876). About a thousand of the lizards—largest in the world—survive on four tropical islands: Komodo, Rintja, Padar, and the southwestern corner of Flores. Hoping to save *Varanus komodoensis* from extinction, the Indonesian Government has proclaimed part of Rintja a dragon sanctuary and has restricted export of the giants.

Tearing apart sun-ripened goat meat with saw-edged teeth, Komodos gorge on bait hung from a tree limb. Though the dragons commonly feed on carrion, they have been known to kill live animals as large as goats.

Crouched in a blind only 14 feet from the lizards, the author focuses on the feast. Mr. Kern, a Floridian who has filmed quetzals in Costa Rica, proboscis monkeys in Borneo, and the varied wildlife of the Everglades, journeyed 15,000 miles to study and photograph the dragons.

from a vanished age. Early investigators on Komodo and the neighboring islands aimed more at capturing specimens for zoos than at detailed observations. Naturalist W. Douglas Burden, however, presented his findings in NATIONAL GEOGRAPHIC and there first used the popular term "dragon" in describing the species.*

Burden reasoned that the dragons owe their great size as well as their survival to the absence of large competing carnivores. He noted that the huge lizards fed almost exclusively on carrion—the carcasses of goats, wild pigs, deer, and water buffalo. Later observations have shown that Komodo monitors occasionally attack live animals.

Very young dragons are fast and excellent tree climbers, like other lizards, and they undoubtedly feed omnivorously on geckos, snakes, and birds' eggs, as well as on carrion. Some adult dragons, though slow and clumsy, still hunt when the opportunity arises. A Komodo islander showed me a large scar on the hind leg of a deer he had killed and said, "*Buaja darat*—land crocodile," the dragon's Indonesian name.

A fisherman from Rintja told me the villagers lose some goats to dragons, though more often the goats get away, bearing scars. The medium-length dragons, up to five feet, are the fastest and most likely to capture prey —but an alert man has nothing to fear, for none can outrun him. Adult dragons have been known to surprise and devour a rhesus monkey and even to attack a small pony.

At least one of the three Komodo dragons in the United States, a gift of the Indonesian Government to the National Zoological Park in Washington, D. C., is a hunter. Dr. Theodore H. Reed, the zoo director, reports that the animal, a six-foot female named Renée, captured and swallowed a squirrel that had gotten into her cage.

Unhappily for science, Komodo dragons fare badly in captivity and usually succumb in a few years to amoebic parasites. No one yet knows the normal life span of *Varanus komodoensis*, although it is estimated at about twenty years, and virtually nothing is known of its mating habits. The largest specimen ever recorded, a male received by the St. Louis Zoo in 1933, measured 10 feet, 2 inches, and weighed 365 pounds.

Today only eight adults are on display in the world's zoos outside Indonesia. That nation has wisely restricted the capture and export of the lizards, and has declared part of Rintja Island a sanctuary. Recently, a rare and exciting event occurred at the Jogjakarta Zoo in Java, when a clutch of 26 *Varanus komodoensis* eggs was hatched.

Ship Breaks Down in the Bali Sea

It was from Java that I set out last April for Komodo aboard the 15-ton charter ship *Ardjuna*. We left with a crew of 16 and an expedition team of 8, which included Dr. Wayne King, Curator of Reptiles at the Bronx Zoo; Hilmi Oesman, Board Member of the Surabaja Zoo; and Rhea Warren, a biology major at the University of Miami.

Unfortunately, *Ardjuna* broke a drive shaft in the Bali Sea, and we had to be towed to Buleleng on Bali's north coast. A week went by and still the repairs were not completed. We were extremely lucky to find another ship heading east from Bali, the 21-ton *Dampra*, but the delay broke up the team. The scientists, who had urgent duties at home, could stay on Komodo only two days to guide me —very helpfully—in initial preparations.

The *Dampra*, which had been standing by, took my friends off, with the captain's promise to return in about two weeks. Only two members of the expedition remained with me —an Indonesian Forestry Service employee, Widodo Soekohadi, who would be my guide, and Hilmi's youngest assistant at the zoo, Eddy Mamuaya, who would be camp cook and handyman.

We set up camp about two miles from the island's only village, also named Komodo, where we purchased a newly slaughtered goat as bait for the dragons. As Widodo and I prepared to stake the carcass out in a nearby clearing, Eddy approached with a cleaver.

"Excuse me, Mr. James," he said firmly, "goat for the kitchen comes first."

With that, he removed several choice cuts and left us with the remainder for lizard bait.

We soon learned that fresh meat, or at least its scent, holds little attraction for the dragons in the wild. Our goat lay untouched and ripening in the tropical sun for two days, until at 30 yards we were almost overpowered by the stench. Then, and only then, did the dragons take an interest.

The first to arrive were the younger lizards, swifter and seemingly more alert than the

Harmless at eight weeks, a cayman of tropical America narrows its pupils to shut out glare. When grown, it will gulp down whole fish, birds, and small mammals.

About to film a cobra sequence in Thailand, TV producer Walon Green, center, confers with photographer Heinz Sielmann.

KODACHROME BY HEINZ SIELMANN

Reptiles and amphibians: a bizarre world

SOUTH AMERICAN TURTLES suck up fish like powerful vacuum cleaners. African chameleons lock horns in weird slow-motion combat. Gliding lizards swoop from tree to tree through Southeast Asian jungles.

These creatures and many others reveal a fascinating realm of nature on Tuesday evening, December 3, when the National Geographic Society presents "Reptiles and Amphibians," the second of its 1968-69 television documentary programs.

Primeval reptiles and amphibians ruled the earth for millions of years, and modern descendants survive on every continent but Antarctica as well as on many islands.

The double life of Galapagos marine iguanas unfolds in brilliant film sequences on land and sea; time-lapse photography lets you watch as common tadpoles turn into frogs; you visit the Indonesian island of Komodo, home of the huge dragon lizard.

The camera tracks a basilisk as the little tropical American lizard scurries on hind legs like a miniature dinosaur. Amid dunes of the Southwestern United States, a sidewinder rattlesnake "walks" on its coils. You witness the underwater courtship of newts in Germany, and in Thailand you see king cobra eggs hatching—and a monitor lizard eating the young.

This hour-long color special—"Reptiles and Amphibians"—produced by the National Geographic Society in association with Wolper Productions, Inc., is narrated by Alexander Scourby. Sponsors are Encyclopaedia Britannica, Inc., and Hamilton Watch Company. CBS television stations carrying the program are listed overleaf.

LIFE-SIZE, KODACHROME BY B. L. PEARSON

Guarding his territory, a West Indian lizard puffs up his bright pouch.

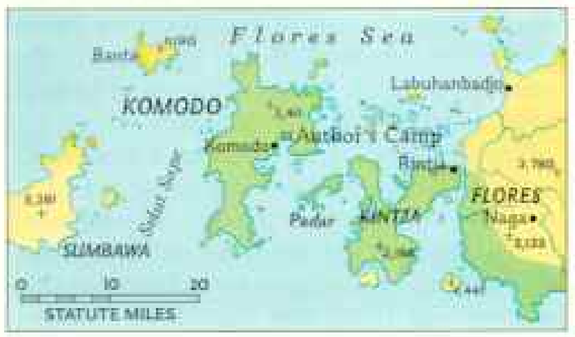
LIFE-SIZE, KODACHROME BY STANLEY BREEDEN

Midget acrobat in gold and green, an Australian tree frog climbs a blade of grass.

Galapagos heavyweight: Four-foot tortoise weighs 500 pounds.

KODACHROME BY DAVID S. BOYER © N.G.S.

OVERLEAF: GALAPAGOS IGUANA, ONE-THIRD LIFE-SIZE, AN EKTACHROME BY ALAN ROOT © N.G.S.



Realm of the dragons: Green tone shows the giant lizards' tiny kingdom.

Trekking volcanic slopes greened by monsoon rains and dotted with lontar palms, the author and a villager explore

Gleam of gold on the hide of a newly hatched Komodo dims with maturity. "The 21½-inch baby weighed next to nothing," said the author. It coiled inside a shell the size of a goose egg.

giants. In time I discovered the reason. If the smaller individuals are to eat, they must come early; when the larger dragons arrive, the younger generation scurries away.

In the days following my encounter with the nine-foot dragon, I photographed a score of other specimens of *Varanus komodoensis*, including a lively little rascal only 21½ inches long, possibly the smallest Komodo monitor ever recorded in the wild (left). Barely out of the egg, it displayed the bold yellow markings that gradually lose their brilliance as the dragons approach maturity.

A full-grown Komodo lizard at mealtime is a memorable sight; its technique is roughly that of a power shovel. Having probed the feast with its long forked tongue, an organ believed to combine the senses of smell and touch, the dragon moves in to feed. With its

Reptiles and Amphibians

SEE IT ON COLOR TV, TUESDAY, DEC. 3

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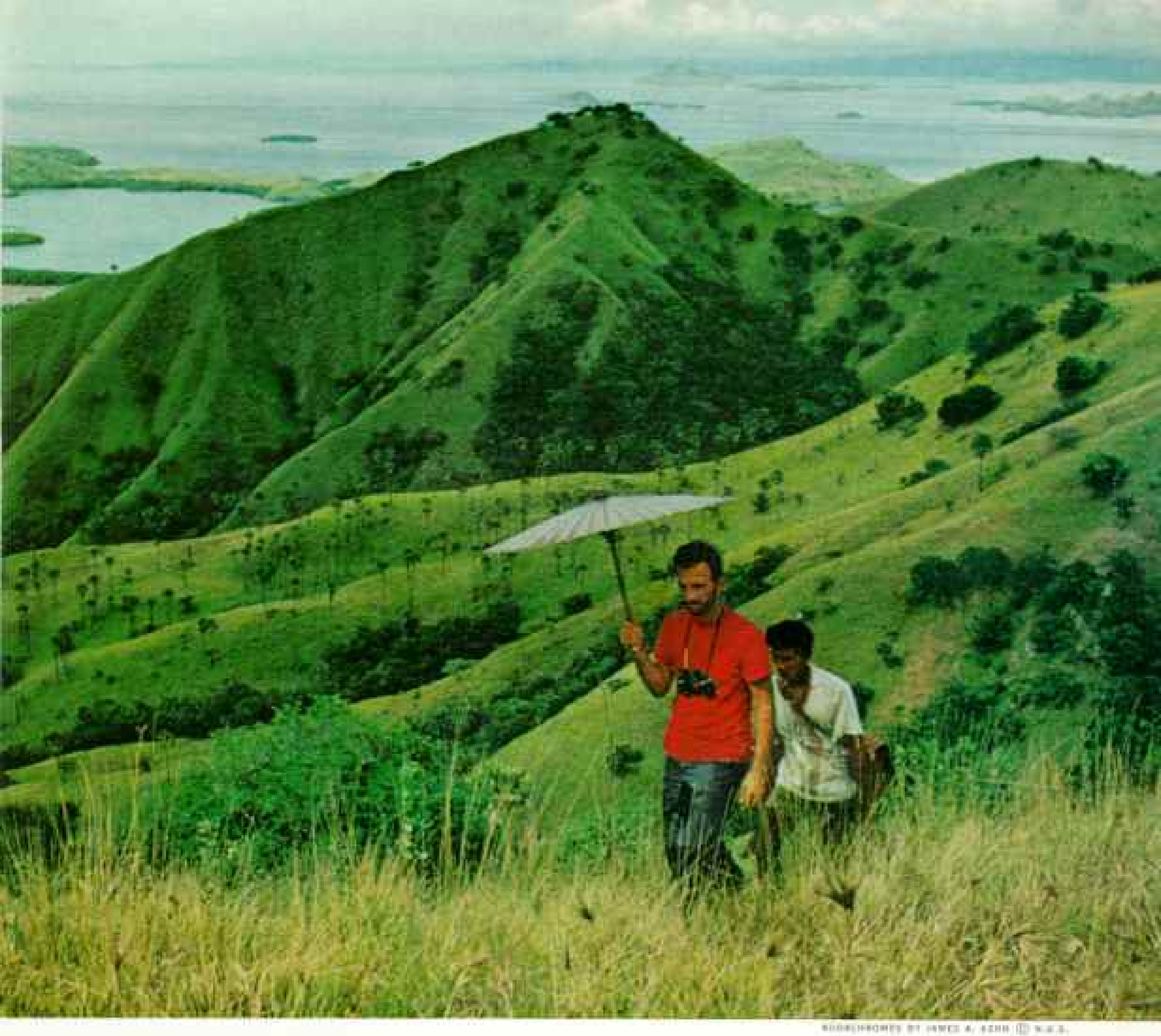

Komodo Island—22 miles long and 12 wide. They step with care, peering closely into the grass ahead, because the land abounds in cobras, vipers, scorpions, and poisonous spiders. In Liang Bay, behind the central hill, swim sharks and sea snakes as deadly as the cobras.

saw-edged teeth set in massive jaws it rips loose whole sections of carcass and bolts them down—bones, hair, maggots, and all. Some observers have reported even less appealing habits, such as disgorging an entire meal at the sight of an intruder.

One Heavyweight Gets Another's Goat

The Komodo dragon has an enormous capacity for food and at maturity attains considerable bulk. A half-grown specimen four or five feet long may weigh only 30 pounds. An older dragon, though only twice as long, may be ten times as heavy.

Savage as the Komodo lizard appears in its feeding habits, it seems otherwise sluggish, unwary, and largely lacking in aggressive temperament. Only once did I witness an apparent case of physical domination of one dragon by another—so far as I know, the first such incident ever reported.

The two dragons, each a 300-pounder roughly nine feet long, were competing for a goat haunch (page 874). The first to reach the bait gave it a tug, lost his grip—and popped the prize straight into the other's mouth, where it quickly disappeared.

There was a moment's pause. Then the first dragon lumbered purposefully over to its neighbor, nibbled its jaw several times, and climbed on its back, forcing its belly and chin to the sand and occasionally raking the scaly hide with long claws. The dragon that was being chastised took the treatment for 15 minutes, until the aggressor finally climbed down and ambled off.

The incident seems best explainable in terms of punishment. The size of the dragons

indicated that they were equally matched males—females don't grow nine feet long—so the behavior was apparently not a mating ritual. Further study of the Komodo dragon may reveal a form of hierarchy among individuals such as exists elsewhere in the wild.

One additional surprise was the giant lizard's ability to climb. Previous expeditions had noted this among very small specimens, yet several times I came on four- and five-foot dragons perched overhead in the trees (page 880). The largest dragons, however, are too heavy and clumsy for climbing.

Between sessions of photographing the dragons at various bait sites, Widodo, Eddy, and I explored the island on foot. Twenty-two miles long by 12 wide, hatchet-shaped Komodo is 10 times the size of Manhattan. It soars sharply up from the sea, rising more than 2,000 feet; grassy slopes and dark volcanic ridges

Their agility belying their bulk, two nine-foot Komodos advance on the bait. Like crocodiles and alligators, they never slither across dry land but always rise up on their legs to move. Wrinkled

are relieved by the tall silhouettes of slender lontar palms (pages 876-7).

Our hikes were a joy, for in the early mornings we saw deer on every hillside, and white cockatoos flashed among the clumps of trees. I recall the haunting melody of friarbirds in the hills, and the sight of sea eagles soaring far out from the land to fish.

Komodo teems with insect and reptile life, not all of it as docile as the dragons. We often had to chase large hairy hunting spiders and land crabs from our mattresses on the ground. While hiking, we tried to avoid the strong yellow webs of *Nephila*, a six-inch spider whose bridge lines are often 20 feet long. Once I almost set my camera bag on a cobra. And one night in camp Eddy shouted "*Ular!*" —snake. Widodo and I fumbled for our flashlights and bounded up to encounter a deadly green viper, which we captured in a jar. Our

folds of skin on their flanks will stretch smooth after a full meal. When angered, the reptiles puff out their necks. Speckles of bony calcium make the scaly hide valueless for handbags and shoes.

Nimble as a monkey, a five-foot dragon scurries up a tree. Larger lizards, some weighing 300 pounds, cannot climb. Determining a Komodo's sex is difficult. Officials at the National Zoological Park in Washington, D.C., which houses one of the three dragons in the United States, believed their prize to be a male—until "he" laid a clutch of eggs.

Dragon's lair, hollowed by powerful five-clawed feet, borders a riverbed. Before monsoon floods inundate their burrows, Komodos head hillward.

swims in the bay were made perilous by sharks as well as by sea snakes that can kill as quickly as a viper or a cobra.

After a lone swim one evening, I arrived in camp to find Widodo and Eddy peering happily into a skillet filled with what appeared to be small fried birds.

"Not birds, Mr. James," Widodo said, grinning. "*Kelelewar*—most delicious."

Kelelewar are Indonesian cave bats; Widodo and Eddy had trapped them with a fine-mesh net hoisted on poles. Overcoming my doubts, I joined in the feast and discovered that kelelewar taste surprisingly like the dark meat of grilled chicken.

Can the Dragons Be Saved?

Nights in camp were pleasant and cool, but daytime expeditions were hot work. Like neighboring islands in the Lesser Sundas, Komodo alternates between a torrential winter monsoon season, from November through March, and a blistering summer drought with temperatures in the 90's. We arrived in April and experienced the beginning of summer.

The Komodo monitors dig both a wet-season and a dry-season home. As we roamed the island, I noticed their burrows along the banks of dry riverbeds, with fresh claw marks at the openings (lower left). During the monsoon season these tunnels could be under several feet of water, and I suspected that the dragons must have alternate burrows on higher ground. Later, among the hills, we did find other tunnels, plainly unoccupied at the time. Apparently the dragons would retreat to them only when the flash floods came. As the high burrows dried out in the long dry season, the dragons would migrate to their riverbed burrows, seeking moisture.

When the charter boat returned to take us off Komodo, I wondered whether there would still be dragons in the Sundas when I came back, as I hoped some day to do. The dragons' present range is so small—three islands and the tip of a fourth—that there cannot be many Komodo monitors left in the world. Naturalists estimate no more than a thousand. The danger of extinction is real.

Will man's goats—as has happened elsewhere—destroy the grass now grazed by the deer and water buffalo on which the dragons depend for carrion or prey? Do the occasional poachers who kill Komodo's deer endanger the dragon in the same way? Ultimately, it is man who must decide whether this living example of the prehistoric Age of Reptiles will continue to exist.

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smoke?

tory experiment. The practicality of making an electrical field powerful enough for commercial application is unlikely. But it does poke a tiny hole in the mystery.

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Statement of ownership, management, and monthly circulation of the

NATIONAL GEOGRAPHIC

OWNER AND PUBLISHER: National Geographic Society

EDITOR AND MANAGING EDITOR: Frederick G. Vosburgh

HEADQUARTERS OF PUBLISHER AND PUBLICATION: 1145 Seventeenth Street, N.W., Washington, D. C., 20036

STOCKHOLDERS, BONDHOLDERS, MORTGAGES, OTHER SECURITY HOLDERS: None

	Average no. copies each issue during preceding 12 mos.	Single issue nearest to filing date
A. TOTAL COPIES PRINTED (Net Press Run)	3,828,263	4,083,000
B. PAID CIRCULATION		
1. Single Copy sales	2,580	877
2. Mail subscriptions	3,626,317	3,972,781
C. TOTAL PAID CIRCULATION	3,628,797	3,978,388
D. FREE DISTRIBUTION (incl. samples) BY MAIL, OR OTHER MEANS	59,857	73,000
E. TOTAL DISTRIBUTION (Sum of C and D)	3,688,654	4,051,601
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*(12" measured diagonally) Picture simulated.

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