

VOL. 144, NO. 1

JULY 1973

NATIONAL GEOGRAPHIC

HOMeward WITH ULYSSES TO THE IONIAN ISLES OF GREECE

MELVILLE BELL GROSVENOR 1
EDWIN STUART GROSVENOR

VOLCANO OVERWHELMS AN ICELANDIC VILLAGE

NOEL GROVE 40

CUBA'S EXILES BRING NEW LIFE TO MIAMI

EDWARD J. LINEHAN 68
NATHAN BENN

BANGKOK, CITY OF ANGELS

WILLIAM GRAVES 96
JOHN LAUNOIS

NATURE'S LIVING, JUMPING JEWELS

PAUL A. ZAHL 130

NATIONAL GEOGRAPHIC

THE NATIONAL GEOGRAPHIC MAGAZINE VOL. 74, NO. 7
COPYRIGHT © 1973 BY NATIONAL GEOGRAPHIC SOCIETY, WASHINGTON, D.C.
INTERNATIONAL COPYRIGHT SECURED

July 1973

THE STORM, Poseidon's wrath, was behind us as we entered the Ionian Sea, which washes the western shores of Greece. *White Mist's* sails bellied in the fair wind, and dolphins sporting at the bow gave friendly escort toward the isles of Ulysses.

We had put our little ship in the water near Athens, at Salamis, where 25 centuries ago Greek freemen crushed the Persian fleet of Xerxes and launched Greece into her Golden Age. We headed west through the gulf named for Corinth, where St. Paul preached.

And now the water sparkled blue as we came gamboling out of the Gulf of Patras. From April, when wild flowers riot on the sea slopes, to September, when grapes yield their ripeness to the press, we would explore the steep-walled Ionian Islands. These rise atop a sunken mountain range that palisades the Grecian shore: islands as popular as Corfu, as unsung as Levkas, as full of surprises as Cephalonia and Zante and Paxos, as private as tiny Skorpios, hideaway home of Aristotle and Jacqueline Onassis. As famed as Ithaca, whence greathearted Ulysses sailed with his black ships to Troy, and to which he returned after twenty years of war and wandering.

Ulysses! From boyhood I had thrilled to stories in Homer's *Odyssey*. It was Ulysses, craftiest of the Greek warriors, who devised the wooden horse that finally won the ten-year Trojan War. It was Ulysses who braved the monster Scylla and the whirlpool Charybdis, who outwitted the sorceress Circe, who had himself lashed to the mast that he might safely hear the Sirens' song that lured men to their doom. Ulysses is the eternal explorer, ever questing for knowledge.

He was King of Ithaca; impatiently now I watched his island—"a rugged place, but a good nurse of men," Homer called it—thrust its shoulders higher above the sun-flecked sea.

We made for "the first promontory," as the *Odyssey* directed. In an emerald-green cove we "loosened the sails... threw over the anchor... made fast the stern cables, and... stepped out onto the break of the sea beach" to seek Arethusa's Fountain and Raven's Crag.

It was at a hut near these two landmarks that Ulysses, home at last, met his son Telemachus and his loyal swineherd Eumaeus. With their help he would reclaim his throne and his faithful wife, Penelope.

A goat path zigzagged up a thirsty gully. We pushed up it, my son Ed and I. Hot and panting, we clambered to a stone dam. But



KATHLEEN BEVIE JUDGE

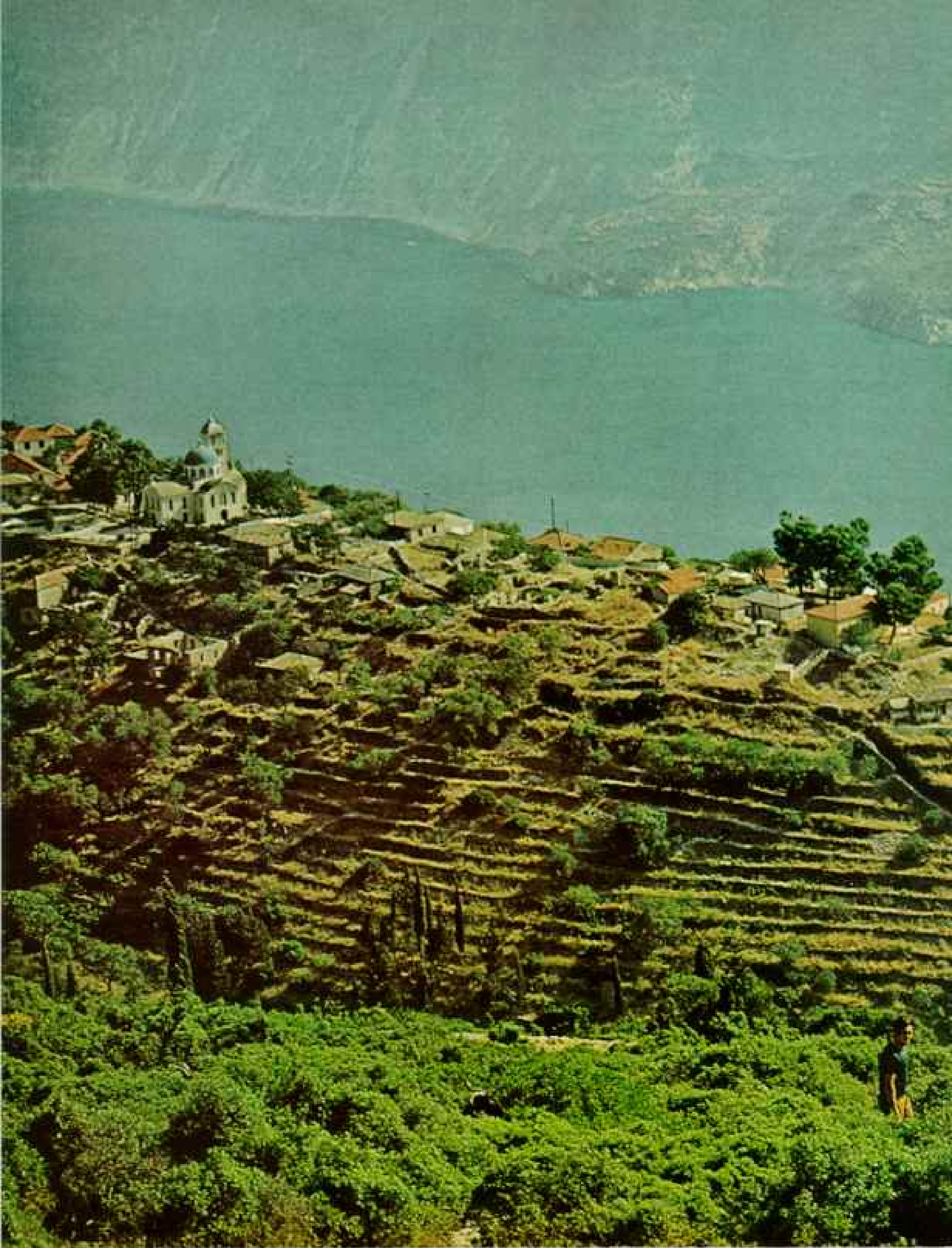
Breasting the wine-dark sea of Homer's *Odyssey*, the yawl *White Mist* sails among the Ionian Islands of western Greece—home waters of the most fabled sailor of antiquity.

HOMeward WITH ULYSSES

By MELVILLE BELL GROSVENOR
LL.D., Sc.D., Litt.D.

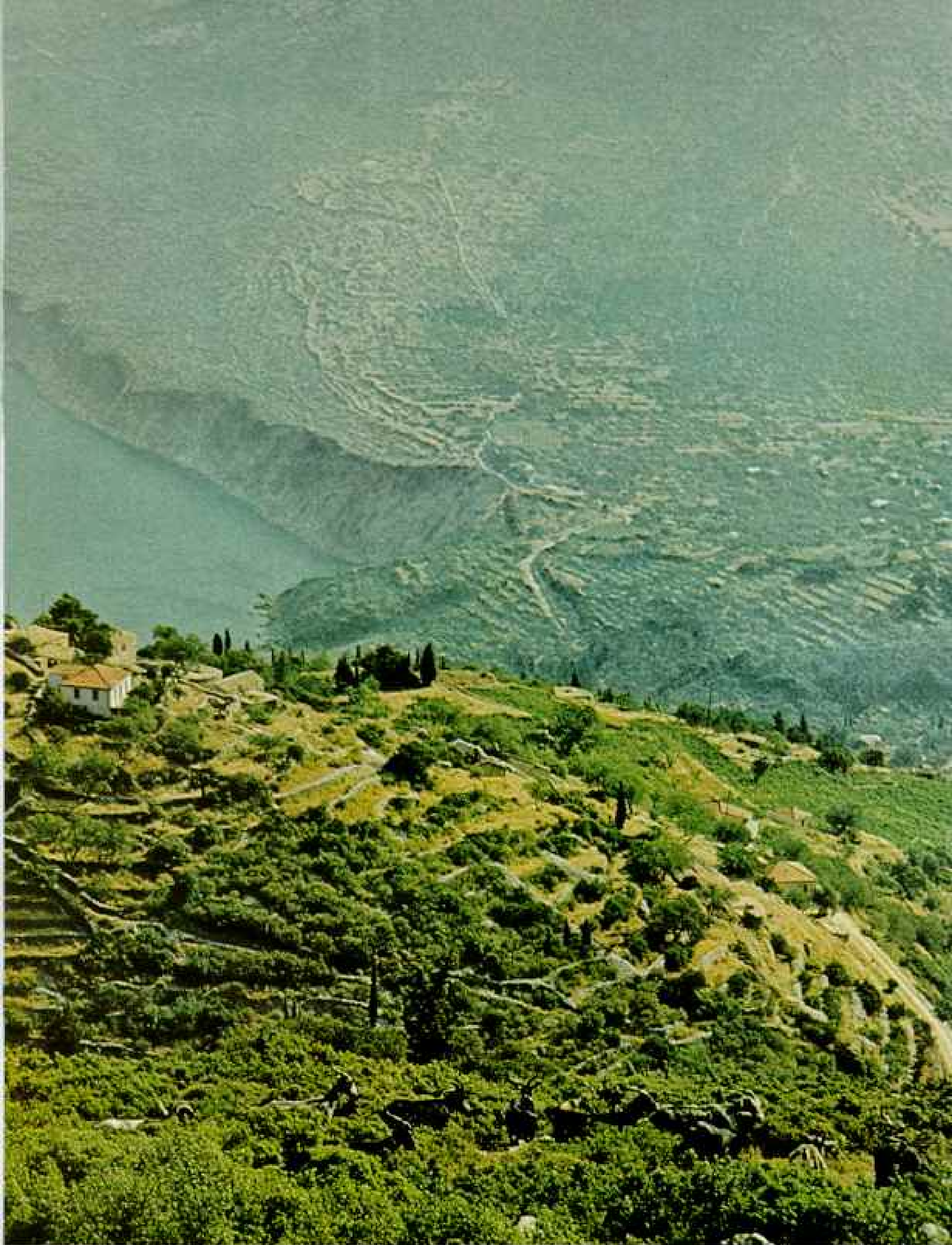
EDITOR-IN-CHIEF AND CHAIRMAN OF THE BOARD
NATIONAL GEOGRAPHIC SOCIETY

Photographs by
EDWIN STUART GROSVENOR



"A rugged place, but a good nurse of men," the poet Homer called seagirt Ithaca, domain of Ulysses, wandering hero of the *Odyssey*. The island

ruler won renown far from here, fighting in the decade-long Trojan War and battling incredible obstacles in a ten-year effort to return. Now as



JOSHUA P. BLAKE

then, hardy Ithacans coax olives and other fruit from hand-hewn terraces and water their goats at springs below the hilltop village of Exoyi. Perhaps

Ulysses' palace commanded these very heights above Afales Bay; indeed, on a nearby ridge, ruins prove a citadel existed in 1200 B.C.—Ulysses' day.



what had once conserved life-giving water now brimmed with fallen boulders.

We searched higher. On a ledge beside a wild olive tree, we found a hollow angling back into the rock. In it stood "darkling water," clear and cool. We refreshed ourselves, grateful for Arethusa's Fountain.

A hoarse cawing made us look up. High above, near a reddish cleft in the cliff-top, ravens soared and tumbled. Raven's Crag!

Herdsman Offers a Homeric Welcome

Through stunted oaks and wiry shrubs a stony path beckoned us to the heights. As we reached the top, we heard tinkling bells and a barking dog. Through a silvery veil of olive trees we spied a goatherd bringing his flock home for the evening milking.

The milking over, the herdsman invited us into his hut. Seated on a goat-hair blanket on a cot, sipping cups of thick coffee, we watched his wife make cheese—a time-honored cottage craft, but man's work in Homer's day.

The good herdsman surprised us by asking us, complete strangers, to have supper with his family. Then we recalled Eumaeus' hospitality, for "all strangers and wanderers are sacred in the sight of Zeus. . . ."

By lantern light, on low three-legged stools, we feasted on spitted kid, crusty fresh-baked bread, salad of tomatoes, cucumbers, olives, onion, and delicious soft white feta cheese laced with olive oil and sprinkled with wild oregano. Robust Ithaca wine washed it down, and conversation warmed our hearts.

How long had he tended herds here, we asked our host, Pantelis Chintilas (left).

"All my life," he said, "and my father and my grandfather before me."

Then he might be descended from Ulysses' herders?

"Perhaps," he smiled. "Perhaps."

If Homeric hospitality runs deep in the Greek character, so does the sea. We found this particularly true of Ithaca's principal town, Vathi—which means "deep."

Coyly, Vathi kept hidden as we sailed into the Gulf of Molo, which nearly cuts Ithaca in two (map, page 8). Mountains rim the deep blue bay. Then, turning past an old lookout tower, we flew down a fjord with a fresh evening breeze behind us. The setting sun flooded Vathi's pastel houses, striking fire in the windows and washing the terraces with gold. Rounding up smartly, we came to rest among fishing boats, interisland caïques,



Cradle of curds, dripping whey, dries into feta cheese in a highland cottage near Raven's Crag on Ithaca. Mrs. Ourania Chintilas and her daughter Thelxinoy earn the family income with this age-old method.

Nanny in an olive tree lords it over sister goats until her turn to be milked by Mrs. Chintilas or her husband, Pantelis (facing page). The returned Ulysses, disguised as a beggar, was befriended by his swineherd Eumaeus. Though strangers, the author and his son were made equally welcome by the Chintilases and invited to supper.

Attuned to austerity, a cousin of Pantelis, Polychronis Chintilas, still herds sheep on rocky Ithaca, despite his 80 years. The widower lives alone in this stone cottage, cooking over an open hearth.

Masses of rock roses blanket slopes on Ithaca, where a riot of many-colored blooms erupts each spring. Virile warriors of antiquity relished after-bath rubdowns with rose-scented oil.



"Votive offering to Ulysses."

These words, scratched in Greek on a terra-cotta shard of the second century B.C., show that the people of Ithaca revered their hero a thousand years after his own day. Archeologists found this fragment of a mask in a crumbled cave shrine on Polis Bay; another inscription unearthed there honors Athena, the goddess who aided Ulysses on his homeward quest.



and yachts, right in the heart of the town.

We joined townspeople promenading on the quay, sipped beverages at tables that sprout on the waterfront at dusk, and dined in a restaurant where a roasting pig revolved on a spit over live coals.

We followed gossiping mothers, tugging children, and doting fathers to a sweetshop for flaky nut-filled baklava dripping with honey. And at another quayside café we sipped our coffee *metrio*—medium sweet.

Each Ithacan boy grows up with a ship in his heart. Reaching manhood, he sails in it to seek his fortune—in America, Africa, or Australia, or on the seven seas. Souvenirs at home in the parlor, pictures on a bedroom wall, tell of the odyssey of a husband, son, or fiancé. Many a Penelope waits in Vathi today, confident that despite all perils and temptations her man will come home.

We hired one of Ithaca's few cars to continue our quest for Ulysses. We overtook donkeys, bicycles, and motor scooters as we skirted Mount Aetos and climbed the dragon-back ridge that joins southern and northern Ithaca. The island of Cephalonia loomed to the left, the Gulf of Molo lay to the right.

We wound up to a rocky plateau studded with crumbling house foundations, abandoned terraces, threshing grounds, and cisterns—melancholy reminders of a once larger population. Around the sere shoulder of Mount Neritos, the village of Stavros cheered us with its red-tiled white houses, its flowers, its friendly people.

When a Palace "Smoked With Blood"

From here, north Ithaca falls away in fertile, cypress-spiked terraces to four bays: Afales to the northward, Polis on the southwest, Frikes and Kioni facing east. Ships plying between Greek and Adriatic ports stream past the island. As in Ulysses' day, Ithaca commands sea highways to the Gulf of Corinth.

What a site for a robber baron's stronghold! Keeping sharp lookout for rich galleys, he could plunder them or exact tribute.

Ulysses, "sacker of cities," may well have been such a sea raider. Indeed, archeologists have uncovered remains of a fortified Bronze Age settlement that could have been his capital. Crowning the heights, it was easily defensible and well watered. Springs near these crests irrigate the orchards of oranges, pomegranates, lemons, tangerines, figs, and almonds that green the northern terraces.

There is a little stone museum near the supposed palace site, and there I met Sotirios Kouvaras, the village schoolteacher who serves as its curator. He showed me large-handled jars used for grain and oil. Bronze spearheads evoked the battle and booty that warriors gloried in. Goblets and wide-lipped kraters recalled the arrogant suitors who crowded into absent Ulysses' home, swilling his wine, butchering his cattle, while wooing his wife and plotting to kill his son.

A terra-cotta spindle whorl bespoke the dutiful Penelope, who insisted she could not choose among the clamorous suitors until she finished weaving a shroud for Ulysses' aging father, Laertes. At night, pining for her lost husband, she undid what she wove each day—until the goddess Athena helped Ulysses reach home disguised as an aged beggar.

His return was dramatic. He threw off his beggar's rags at a feast, strung the mighty bow that no one else could bend, and began to slay the wolfish suitors. One by one they perished, until "the floor smoked with blood."

Earthshaker Erases History's Trail

Some of the museum's artifacts had come from a cave on Ithaca's Polis Bay. Perhaps it was from this very shore that Ulysses launched his 12 black ships for Troy. I told Mr. Kouvaras that *White Mist* had put into Polis Bay, but when we looked for the cave, we found only tumbled rock.

"No wonder," he said. "An earthquake shook the cliff face into the sea. In the 1930's Miss Sylvia Benton, the British archeologist, excavated these ancient treasures from under the rubble."

An earthquake! Poseidon, Earthshaker, god of the sea, had been Ulysses' implacable enemy during his decade of wanderings. Was he still pursuing his shade?

The blast of a ship's whistle interrupted my reverie. Mr. Kouvaras rushed outside, beckoning me to follow. Excitedly, in half Greek half English, with elaborate pantomime, he told of another time that Ulysses' realm had "smoked with blood." When Italian occupation troops on Cephalonia resisted a German take-over in World War II, the Nazis, on Hitler's order, massacred several thousand Italian prisoners.

"One officer survived by playing dead," Mr. Kouvaras said. "He swam Ithaca Strait and was pulled ashore by a fisherman, who hid

(Continued on page 12)



CORFU: Olive groves, many planted during Venetian days, silver gentle slopes that resemble 18th-century English manor parks. Tourism, farming, and fishing support 100,000 people on this fertile, well-watered, and most prosperous of the Ionian islands – the jagged crowns of a submerged mountain range.

PAXOS: Few vehicles disturb the serenity of this island, a favorite daylong excursion for visitors from Corfu.



ITHACA: In Ulysses' traditional homeland, sailors can always find shelter, moving from bay to bay along the rugged coastline as the prevailing winds shift with the seasons. Most of the 4,200 islanders ply the sea or farm the terraced slopes in the north.

BATTLE OF ACTIUM: Fighting for mastery of the Roman Empire, Antony and Cleopatra pitted their fleets against Octavian here in 31 B.C. — and lost. Their defeat made Octavian — the future Caesar Augustus — sole ruler of the Mediterranean world.



LEUCAS (LEVKAS)

LEVKAS: About 650 B.C. Corinthian settlers dredged the first canal through the isthmus, turning a peninsula into an island. Ottomans ruled Levkas in the 18th and 17th centuries. Now Christian villagers celebrate the feast of the Virgin, August 15, with folk dancing.

AREA ENLARGED AT LEFT

CEPHALONIA: This largest island of the Ionians grows olives, grapes, and citrus on its scarce arable land. Flint tools attest to man's presence here during the Ice Age, when sea level was 300 feet lower and a land bridge led to Zante.



AREA OF BLOCK DIAGRAM PAGES 20-21

CEPHALONIA (KEFALLINIA)

ZANTE: "Wooded Zacynthos" of Ulysses' realm lost most of its forests to boatbuilders through the ages. On its eastern plain, currants and olives thrive. Venetian rulers enriched Zakinthos, a main port of call, dubbing it the "flower of the East."

BATTLE OF LEPANTO: Christian and Moslem fleets clashed in this area in 1571 in the last great naval battle between oared vessels. Gallies of Spain, Venice, Genoa, and the Papacy, commanded by Don John of Austria, defeated the Ottoman fleet of Ali Pasha, ending a legend of Moslem invincibility.

☼ Rain ✈ Airport
Elevations in feet





PAINTING, BELOW, BY STAFF ARTIST ROBERT C. MADDI, ABSTRACT, RIGHT, PHOTOGRAPHER IN STAVROS WISDOM BY JON SCHNEIDERER, NATIONAL GEOGRAPHIC STAFF

Shedding light on the past, archeology gives plausibility to the *Odyssey*. These tombs were cut into living rock on Cephalonia when it and neighboring Ithaca were part of Ulysses' realm. Marino Cosmetatos, center, guides the author and Mrs. Grosvenor among graves that yielded bronze weapons like those used by warriors who followed the Ithacan leader.



Bronze brings to life an intriguing aspect of the *Odyssey*. Homer wove many realistic details from his own day—the eighth century B.C.—into his saga, which told of events that took place 500 years earlier. The bard wrote that Ulysses received 13 coveted tripod caldrons as parting gifts from the Phaeacians of Scheria, traditionally the island of Corfu. He brought them home to Ithaca and hid them in a cave.

In 1932 a British archeologist, working in a cave shrine on Ithaca's Polis Bay, found many relics dating from Homer's time and the century before, including this fragment of a three-legged caldron (right). An artist's reconstruction (left) shows the complete vessel. Such ceremonial basins were awarded at athletic games; perhaps the winners donated their prizes to the gods at Ithaca's sacred cave.



him for months. Now he captains a cruise ship."

I saw the ship, a big white steamer lined with waving tourists, as she veered to salute the friends who had saved the captain's life.

Festival-goers Dance the Night Away

We were scheduled to sail for Cephalonia. "Too bad you're not going to be on Ithaca tonight," our driver said. "It is the festival of St. John in Kioni. Everyone will be there."

So we sailed instead for Kioni. Guarded by three windmill towers, its lovely harbor a horseshoe of whitewashed houses and terraced vineyards, the village was all abustle. Strings of lights and banners canopied the quayside. Seating us amid a sea of tables, the taverna proprietor served us from great tubs of roast chicken still steaming from the oven.

Some festival-goers arrived by boat, while others streamed down the corkscrew road on foot, by donkey, scooter, taxi. I heard an Odysseus greet a Laertes, a Mentor welcome Athena back from Athens with her youngsters Telemachus and Penelope. Homeric names still run in Ithaca families.

The orchestra struck up and couples danced bouncy two-steps. Then a circle of men laid arms upon each other's shoulders and moved in rhythmic steps from left to right. Suddenly their leader snapped his fingers, leaped high, dropped in deep knee bends, and began whirling in counterpoint.

As the night wore on and the wine flowed, the dancing grew wilder. Chains of celebrators snake-danced among the tables. Circles closed like human carousels on the square. Ranks broke, interlocked, spun off into trajectories. The music grew louder, faster, more frenzied.

Imperceptibly the crowd melted away until the quayside stood strangely empty and the night sounds took over. Back on *White Mist* I heard the *coo coo* of the tiny Ionian owl, regular as a drumbeat; a donkey's bray, answered by a hee-haw across the way; a dog barking, then another and another; and finally the cock's crow that heralds dawn.

Our voyage next day was short. Cephalonia, largest and loftiest of the Ionian Islands, lies only two and a half miles from Ithaca. And Ulysses still accompanied us, for he was "lord of the Kephallenians."

Timber for his ships came from forests that once darkened the entire mountain core of Cephalonia, namesake isle of *Abies cephalonica*, a fir growing widely in Greece. Even the charred columns of palace ruins at Knossos

on Crete have proved to be of that wood.

We sought signs of Ulysses' day on Cephalonia, whence Homer says many of Penelope's suitors came. We traced ancient ramparts on the hills behind the port of Sami, explored Mycenaean catacombs at Mazarakata, and studied gleaming jewelry of beaten gold in Argostolion's archeological museum.

There are even more impressive ruins at Krani, overlooking Argostolion Harbor. For two miles, walls of giant polygonal blocks run along the crest like the spine of a gigantic dinosaur. Laboriously shaped and smoothed, the blocks were fitted tightly with no mortar.

Walls defend, but they also divide. In the fifth century B.C., the historian Thucydides speaks of four city-states on Cephalonia. Down the centuries, under many masters, the island's towns remained isolated by mountain barriers, its lands parceled among warring feudal nobles and worked by wretched peasants. But the British, during their protectorate over the Ionian Islands, 1815-64, built roads, reformed justice, revitalized agriculture, and sparked a cultural flowering.

To Greece and the world the island gave scientists, statesmen, navigators. Cephalonia still boasts many shipowners, and more professors than any other Greek island. One, Professor Spyridon Marinatos, Greece's Inspector General of Antiquities, had provided valuable insights during our earlier Aegean odyssey.* And now he helped our Ionian quest by introducing us to a Cephalonian colleague, Marino S. Cosmetatos.

Mr. and Mrs. Cosmetatos invited us to their charming Venetian-style home, served us tea, and talked of Cephalonian history. Both are authorities; Mrs. Cosmetatos devotes most of her days to a folk and history museum she is developing in Argostolion.

Road Builders Work Above the Clouds

Mr. Cosmetatos took me north to the steep castle-crowned peninsula of Assos (pages 18-19). Charles Napier, once British administrator of Cephalonia, later famed for his military conquests in India, described road-building operations along this coast:

"The precipice is about 600 feet down, the sea foaming at Bottom; clouds flying under your feet," Napier wrote in 1825. In fact he noted that some of his men were

*The author wrote of "The Isles of Greece, Aegean Birthplace of Western Culture," in the August 1972 NATIONAL GEOGRAPHIC.



unable to work on the narrow road because of the dizzying heights.

I got much the same effect riding Napier's Assos road today. And Mr. Cosmetatos sent an additional shiver up my spine by pointing out where the Nazis marched Italian prisoners over the precipice to their deaths in the 1943 massacre.

Starting early, Mr. Cosmetatos next showed us the south end of the island. Passing under the brooding ramparts of the Venetian Castle of St. George, we came to the village where Lord Byron, passionate advocate of Greek independence, dwelt just before his death on the mainland.

We took a look at three hotels under construction on sea cliffs with lovely beaches at their feet. Cephalonia's first modern hotels, they are financed by government-approved loans in anticipation of a tourist discovery of the Ionian Islands.

Where Mortals Talk With Saints

We climbed into the clouds atop 5,341-foot Mount Ainos, winding up barren, sunbaked slopes that reminded me of a moonscape. Then wild flowers and ferns peeped through the gray rock. Suddenly we were amid one of the last primeval forests in Greece—dark and jagged ranks of Cephalonian firs marching along the skyline.

At the summit strong winds opened the clouds, revealing spectacular views: A ribbon of green squeezed against the coast at our feet, and, south across the sea, stern cliffs that gird gentle Zante.

Local legend tells of a shrine to Zeus on these heights in Homer's time. Today religious fervor on Cephalonia centers in the Omala, a valley on the mountain's flank. Mr. Cosmetatos took me to the convent founded there in 1554 by St. Gerasimos, patron saint of Cephalonia, venerated for casting out demons.

Cephalonians name many a boy Gerasimos—often "Jerry" to us. To the islanders, their saints seem very close—not awesomely distant, but right there on their islands. People

Exploring a giant cleft in the sheer face of northwest Cephalonia, *White Mist* crewmen steer a Boston Whaler into the unusual rift. Titanic stresses cracked the solid rock, and moving water widened the crevasse—actions once attributed to the sea-god Poseidon, archenemy of Ulysses.



Port of call on the past, Fiskardho basks in the limelight of sunset. The name of the Cephalonian village derives from that of the 11th-century Norman knight Robert Guiscard, who died here of fever while planning an attack on Constantinople. The well-kept homes—a few built when Venice

talk to them, implore their aid, bring them gifts. A dealer will swear by the saints that his fish are fresh; a captain will vow to reward his saint if he survives a tempest. If October brings no rain and the precious olive trees are thirsty, villagers carry their patron saint's image in solemn procession. When rain falls, it is the saint's work.

Human Carpet Marks Procession Route

St. Gerasimos, Cephalonians believe, heals sick minds and bodies. Crew members Sean Baldwin of Baddeck, Nova Scotia, and Ed Grosvenor saw this belief take dramatic form in the mid-August festival. People streamed into the Omala, filling the monastery courtyard. Sean and Ed spread sleeping bags under an olive tree; families bedded down about them; others kept vigil all night.

Next morning, when the clergy in splendid robes emerged bearing the saint's casket, the ailing lay prostrate in its path along the avenue (pages 22-3). Loving hands held down the raving and shaking. After St. Gerasimos passed, they gentled like lambs.

During my earlier visit with Marino Cosmetatos, the avenue had been empty. A white-

bearded father, or *papas*, invited us into the chapel and, descending a ladder, we wriggled into the hermit's cell where Gerasimos ended his years.

The *papas* led us to the ornate casket. Miniature heads, legs, arms, and eyes of silver—gifts of gratitude for cures—encrusted it. Reverently lowering one side to expose the mummy of the saint, the father sang a hymn and said a blessing for Marino and Melville, our Christian names.

A nun lifted the glass and invited me to kiss the feet of the saint.

I put my head into the casket and looked up hesitantly. There was a kindly expression on the saint's remarkably preserved face.

What intrigued me most, on that island of surprises, was seeing the earth swallow the sea.

On the peninsula near Argostolion the sea streams into fissures that indent the shore and disappears underground. In Napier's time, a flour mill tapped this unique water-power. For more than a century scientists came to Argostolion, studied the phenomenon, made experiments, and departed puzzled.

Finally an Austrian team made a hydrological survey of the entire island, then poured



ruled the island—survived the 1953 quake that leveled most villages. Some villas are summer retreats for returning islanders.

350 pounds of dye into one of the fissures that suck in the sea. Fourteen days later traces of the dye appeared on the east coast—on the other side of the island! The water had traveled under Argostolion Harbor and through the island's mountain backbone.

After we were berthed at Sami, we rowed through the cerulean blue cavern at Melissani and saw this water bubbling up—water from the sea mill ten beeline miles away (diagram, pages 20-21).

Doomsday Comes to Zakynthos

"Did you know that Cephalonia was once connected to Zante by a land bridge?" Mr. Cosmetatos asked. "Scientists say the Mediterranean was 300 feet lower during part of the Ice Age."

We checked the depth sounder as we traveled southward on *White Mist*, our own "land bridge" to Zante, and never did the depth exceed 50 fathoms—300 feet. Yes, Ice Age man could have walked the ten miles across without wetting his feet.

On the island of Zante—the "wooded Zacynthos" of Ulysses' realm—we heard an amazing tale of Poseidon's wrath.



SEAN BALDWIN

Glow of yesteryear warms Fiskardho as a lamp-lighter makes her rounds. Electricity is reaching most islands, dooming the flickering lamps.

The peaceful vista gave no hint of the Earthshaker as we coasted in to anchor before the island's namesake city. Zakynthos spreads thin along two miles of a crescent bay beneath the battlements of a ruined hill-top castle. Its long jetty drew us to the little 16th-century church of St. Nicholas-on-the-Mole. From there we walked into a gleaming white square presided over by the 19th-century Greek national poet, Zante's own Dionysios Solomos, in marble.

Shady arcades, balconies garlanding the plazas with blooms, stately campaniles lofting their bells beside the churches evoked the golden age of Zante, *fiore di Levante*—"flower of the East." From the 16th to 18th century Zante was a principal way station for Venetian trade. Shipowners and merchants grew wealthy on the island's sea trade and exports of currants; they lined the avenues with *palazzi*, built ornate villas, and flocked in finery to hear opera or worship in the cathedral gracing this "Venice of the Ionian Sea."

"All this became dust in just three minutes," Dr. Nicolas Barbianis told me. Pharmacist, historian, and civic leader, he sat in his study amid photographs of the shattered and



burning city. He showed me the copiously illustrated volumes he has written on the 1953 earthquake.

"I was in my laboratory when the quake hit—around noon on Wednesday, August 12," he said. "Suddenly the ceiling began falling. I dashed to the street in my shirt sleeves, just as the front wall and balcony crashed. Walls fell all about me as I ran to the square. There, with the earth shuddering beneath my feet, I saw the city die.

"Dust blotted out the sky; it became dark as night. A dreadful silence fell."

Cries of the injured pierced it.

Dr. Barbianis helped organize rescue crews to pull victims out of the rubble and treat them. Fortunately, thousands—including his wife—had already fled into the countryside because of ominous tremors on preceding days. Then he joined in a search for Zante's irreplaceable art treasures—dangerous work, for walls were still collapsing. But the flames would not wait.

Dense clouds of dust also billowed above Cephalonia and Ithaca, for quakes devastated them too. But Zante suffered most. There more than 100 people died (pages 30-31).

Treasures Saved From City's Ruins

Dr. Barbianis took us to the beautiful new museum built to house the art he and his friends had rescued. Icons set in carved and gilded altar screens glowed like jewels. Zante's 18th-century clergy, nobility, and guildsmen passed in stately procession across a 25-foot-wide canvas.

A Rembrandt quality drew my eyes to chiaroscuro canvases by Nicolas Kandounis, among Zante's finest painters. The play of light and dark lent poignant drama to his "Crucifixion," painted around 1800. A Virgin by Emmanuel Tzanes also appealed to me; Dr. Barbianis had helped recover it from the debris of a church.

I mentioned to Dr. Barbianis the plain concrete cubes we had seen in restored villages on Cephalonia.

"With more people, they had greater need for housing, so they built quickly and simply," Dr. Barbianis explained. "Here we

wanted to reproduce our old town. That's why you see the Venetian motif."

But it did take time. Dr. Barbianis and his wife, who had lost their 13-room home and everything in it, lived in a tent for six years while Zakinthos was rebuilding.

Today concrete replaces stone in the arcades of a Zakinthos shrunk to 9,300 people from 30,000 at its heyday. Gone are the opera house, the mansions, most of the historic churches. Today Zante's singers hold forth to the strumming of guitars and mandolins in the taverna near the end of the mole. The *kantades*, folk songs, coming across the water to *White Mist* moored only a hundred yards away, lulled us to sleep.

Tiny Grapes Bring Acclaim to Zante

One day a Greek merchantman tied up abreast of the taverna. That evening the ship was deserted, captain on down to messboy raising voices with the singers at tables. Came midnight, the whistle blew, and the crew climbed the gangplank still singing. We heard their voices as the ship backed out.

She had loaded currants—the famous *raysons of Coraunte* (Corinth) that had brought prosperity to Zante.

"Where are the currants?" I had asked when we first toured the island in spring. Winter's rains were past, when the skies open and the soil greedily drinks its store for the long, hot, waterless summer to come. Zante's parklike plain, flanked by ridges and broken by clumps of oak, silver poplar, and eucalyptus, was a tapestry of green.

How fertile it seemed after Ithaca and Cephalonia; how merciful its level, tarred, cypress-shaded roads.

"Currants? On those grapevines," our driver had said. I was surprised, because the currants I knew were berries that grew wild on bushes.

Now, under cloudless August skies, we found those same vineyards patched with purple: expanses of tiny grapes drying into currants—seedless raisins. Farm women spread them on plastic sheets and turned them with wooden rakes, letting them dry for several weeks. Most are shipped to England.

Siren song of the sea calls to island boys; in response, this lad of Kalamos built a toy caique out of a tin can. Through the ages Ionians have found livelihood and adventure as fishermen and sailors. As Penelope awaited Ulysses, their women still await the return of these "scudding ships that sailors use like chariots, to drive across the sea's immensities."



Massive walls rule a curving ridgetop above Assos; Venetians fortified this



Cephalonian headland in the 1590's against an Ottoman invasion that never came.

We saw milk goats everywhere, and baby olive trees, their stems wrapped in straw. The olive, requiring less care, is fast replacing the grape on Zante, Dr. Barbianis told us.

Many of Zante's young people work on the mainland. A gentler depopulation, certainly, than that the island suffered in earlier centuries. In the fifth century, Vandals, invading from North Africa, slew some five thousand islanders and cast them into the sea. In the 15th an Ottoman fleet burned Zante's city and so devastated Ithaca that the island was virtually uninhabited for a generation. Dalmatian corsairs and Barbary pirates, operating from Turkish bases in Albania and the Peloponnese, continued to make raids on Zante and other islands.

Zante had one more surprise for us: the pitch springs near Keri.

Descending from the southern ridge overlooking magnificent Lagana Bay, we walked through an old olive grove and came to a small pond at the edge of a marsh.

Wading birds paused in their feeding as we poked with a stick in a shallow pool and brought up black gobs. The pitch oozed up as fast as it was removed. When the gooey stuff dripped back into the water, it eerily wriggled off like a fish or an eel.

"Fishermen still caulk the bottoms of their boats with this pitch," said the shepherd who had guided us there. "But it is not so much used today as in olden times."

Herodotus, in the fifth century B.C., relates that "I myself have seen pitch drawn up out of water from a lake in Zacynthus."

Zante probably provided the pitch to coat the hulls of Ulysses' galleys. Now I realized why Homer spoke of "black" ships.

Wooded Isle Holds Onassis Retreat

Sailing north from Zante, we put in for the night at Port Atheni, a haven carved out of soft-hued rock on Meganisi. Next morning we motored across a sea of glass to Levkas.

On the way we passed Aristotle and Jacqueline Onassis' islet of Skorpis. The yacht *Christina* gleamed at the dock in her snug harbor. We could see a few cottages scattered about the wooded isle, set like a jewel in a beautiful blue inland sea surrounded by towering mountains. An idyllic spot.

Levkas. Island or peninsula? Actually it has been both. In the seventh century B.C. the Corinthians severed it from the mainland with a canal. The waterway silted up, but the

THE CASE OF THE DISAPPEARING WATER

ON THE TIP of Argostolion Peninsula in Cephalonia, the sea flows inland and gurgles down into cracks, like bath water down a drain. For more than a century the phenomenon puzzled scientists. Finally, in 1963, Austrian geologists Viktor Maurin and Josef Zötl of the Graz School of Technology solved the mystery of where the water went. They dumped 350 pounds of dye into one of the holes. Two weeks later springs on the other side of the island revealed traces of color. The water had traveled ten miles under the island, as shown in the diagram (below), which illustrates the geologists' theory on how the process works.

At one outlet—a natural grotto at Melissani—visitors row around the stalactite-hung cavern (right), where a shaft of sunlight at noon bathes them in cerulean blue.

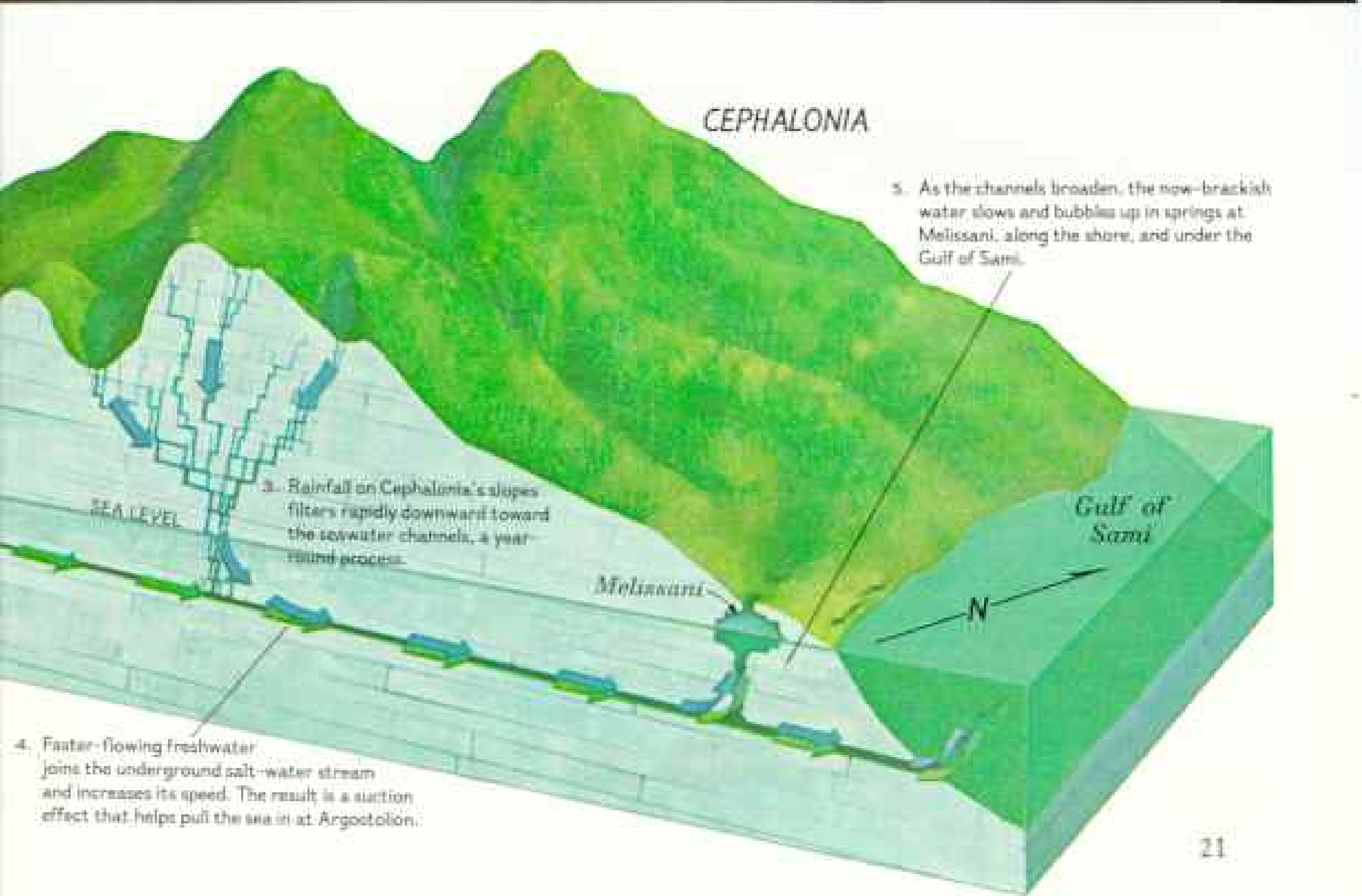


1. Steady flow of seawater pours into sinkholes at Argostolion. An enterprising 19th-century Englishman harnessed the current with a waterwheel to grind grain. A 1953 earthquake destroyed the sea mill, but a new waterwheel has been built.



2. Salt water runs eastward down sloping limestone beds in channels that pass beneath the harbor of Argostolion and through the very heart of the mountainous island. These conduits were carved by freshwater in the Ice Age when sea level was lower.

ILLUSTRATION BY STAFF ARTIST WILLIAM H. BOAC





Romans redredged it. Franks, Turks, and Venetians fortified it, the British deepened it, and modern Greeks finished it.

Cautiously we threaded the canal, which knifes through a land-girt sea of shoals and reeds. Fishermen rowed flat-bottomed boats; sea salt whitened in vast, sun-drenched pans; windmill towers stood on a sandspit; sea gulls perched on pillars of a ruined Turkish aqueduct beside a modern causeway.

Tying up at the crowded pier in the silted harbor, we saw the town of Levkas reflected in the water.

"A floating town it seems at first, where caiques ride high above the quayside on the waveless lagoon and the gutters of the narrow streets run with water like the scuppers

of a laden ship," Martin Young aptly describes it in a guidebook we used much on our journey.*

Corrugated iron or hardboard, sheathing the upper stories, gives the houses a patched-up look. Actually, use of lightweight materials is traditional. So is the timber frame for the masonry bottom story—like the ribs inside a ship's planking. In earthquake country this resilient construction keeps masonry from falling on residents.

There was nothing ramshackle about the eight-foot-thick walls of Santa Maura Castle, which has commanded the northern entrance to the Levkas Canal since 1300. Deep in

**The Traveller's Guide to Corfu and the Other Ionian Islands*. London, Jonathan Cape, 1971.



Seeking miraculous cures, ailing women lie in the path of Cephalonia's St. Gerasimos. They believe they will regain their health when his mummy, in its ornate casket, passes over their bodies.

Handling harmless cat snakes, a mother introduces her son to another Cephalonian custom at the chapel of Markopoulo. The reptiles with crosslike markings appear for a few days around August 15, the feast of the Virgin, then vanish for another year.



its dungeons we looked up at small barred openings through which food was dropped to prisoners—perhaps galley slaves in Turkish and Venetian days—chained to rusty rings on the walls.

Lake Turns Into a Fruitful Plain

Stepchild of the mainland, severed from sister isles by two centuries of Turkish rule, Levkas seems the most remote, primitive, and least Ionian of the islands. And in ways the most interesting.

Take its sunken gardens of Livadhi. In April when I first came upon this strange sink cupped in the mountains, it was a rain-filled lake. Returning in June, I found it green with crops. Descending to the valley floor, I met a

farmer and his wife tending their vineyards.

"Is it true your vines were covered with water last winter?" I asked Nikolas Aravanis.

"Yes; ten feet of water," he said. "But you see they are flourishing."

"Grapes are now too cheap," he continued. "Only one and a half drachmas a kilo [about 2 cents a pound]—hardly worth the effort. My children don't want to work in the fields. When my wife and I are gone, who will tend our vineyards?"

His wife finished hoeing, packed bundles of pruned branches on her donkey, and set off for home. Inviting us up for a taste of his wine, Nikolas got in the car with us.

"I suppose Mrs. Aravanis will take a shortcut and get there before us," I said.

"Oh, no," he said. "It's a long climb for her; we will be there ahead."

On the trellised patio of his stone house, Nikolas's daughter Maria greeted us in English; she had learned it in school in Levkas, she told us proudly. She served us wine and crystal dishes of reddish sickle pear and quince preserves—delicious and refreshing in the heat.

"We crush the wine grapes with our feet," Nikolas said, showing me the great vat in which the family stamps. After 40 days, the wine is ready to drink. Ten barrels get the family through the year—one liter for lunch, one for dinner.

Just as we were taking leave of Nikolas and his daughter in her bright print dress and modish hairdo, Mrs. Aravanis, clad in somber brown and the ubiquitous head scarf, arrived hot and tired with her load of fuel.

One Lobster Provides a Feast

Back at Levkas harbor the wind was blowing a near gale from the south. But we doubled up our lines and were snug, and all turned in for a Greek siesta—the afternoon hours when vivacious voices are stilled and the sunbaked streets deserted.

An hour later the wind had abated and we headed south for Sivota Bay, linked by some scholars to the story of Ulysses.

It was getting dark and steep seas were still running as we picked up the unmarked entrance to the bay. We headed in through an opening in the surf and found ourselves in a calm lagoon. I spotted a flickering blue-tinged light far ahead; through glasses I made out men in a taverna. I pointed *White Mist* for it, and we came in, guided by a generator-operated TV set!

We soon found Spyros, a fisherman who had been recommended to us, but he was all apologies for having but one lobster for our hungry crew. Then he picked up a cord on the dock and pulled in, tied by one leg like a billy goat, the biggest spiny lobster I ever saw. It weighed 15½ pounds, and gave us not only dinner but a fine chowder the next day.

In the early 1900's the eminent German archeologist Wilhelm Dörpfeld excavated Bronze Age graves to support his claim that Levkas, not Ithaca, was the true home of Ulysses—the Ithaca of Homer. He declared that Sivota's landlocked bay was where the hero landed. Most scholars disagree, but Dörpfeld's theory keeps the conversational

pot boiling whenever Levkas and Ithaca men meet over coffee in a *kaffeneion*.

In any case, the beauty of Sivota Bay is breathtaking. So, too, are views along the mountainous road that girdles the island. I looked northward over a green and fruitful plain to Levkas town, clustered about its long main street, to the tiny blue line of the canal with its castles at either end, and far beyond to the faint gleam of the Ambracian Gulf.

At the entrance to that gulf I imagined great lines of galleys clashing in a battle that would decide the fate of the Roman world—Actium. There the squadron of Queen

Flags proclaim the dual allegiance of Harry



Cleopatra suddenly hoists sail, breaks through Octavian's line, and takes flight around Levkas for distant Egypt, where she and the defeated Antony will die by their own hands.

If Actium recalled a tragedy, Gaios, on Paxos, where we sailed next, was musical comedy. We came in around an islet that in the old days hid the port from pirates. Curving through a narrow channel steeply tiered with pine and olive trees, we suddenly emerged in this tiny theater of a town and tied up to a stage set for an operetta.

From box seats in our cockpit we looked upstage to a chapel flanked by white and

pastel-tinted townhouses around the little paved square. A chorus dressed as fishermen and tourists babbled and sipped at tables front and center; from the wings offstage came the music of guitars.

We spent a delightful evening savoring the tempting aromas of spitted lamb, pork, and kid, and the night scents of jasmine and oleander—surely the most picturesque stop on our cruise.

Next morning we toured the six-and-a-half-mile-long island in one of its five taxis; huge olive trees formed a thick canopy over the stone-walled lanes. Centuries ago the

Koulouris, a naturalized American who retired to his native Katarakho, Cephalonia.

25

HELVILLE BELL BRIDGEMAN





Venetians paid a bounty for olive trees the islanders planted. They have grown prodigiously and today cloak the island.

Each trunk bore a number, sometimes letters. All are registered in the town records, our driver said. He pointed out a grove marked in red: 10,AK. "My father's trees."

"If a man wants to give a present to a new grandson," he added, "he'll plant, say, fifty olive trees in the baby's name." And I remembered Ulysses telling his father that "when I was a child... you gave me thirteen pear trees, and ten apple trees, and forty fig trees."

What was Paxos' surprise? A secret cave

where, islanders told us, a Greek submarine operated right under the noses of the Nazis in World War II, hiding out during the daytime and raiding enemy shipping at night.

Like Ulysses sallying forth with his ships on a daring raid, I thought. I took *White Mist* around the island to see that cave. The shore was notched with sandy nooks where tourists bathed and fishermen mended nets. Cliffs jutted sharply out of the sea.

"There's a submarine surfacing!" came a shout from forward. Truly that's what it looked like, a great gray rock with waves foaming at one end like a sub blowing its



tanks. Behind this strange formation opened Ipapandi cave at the bottom of a 300-foot cliff.

We took *White Mist* in until her mast almost touched, then piled into our Boston Whaler to explore the "submarine's lair."

We sounded the water—18 to 24 feet of gorgeous deep aquamarine. And it went back 300 feet or so under the arching rock—a weird and beautiful hideout.

Alas, a check with naval authorities revealed that the Greek submarine *Papanikolis* did operate in the Ionian Sea, but from Patras, then from Beirut, Lebanon. Once she had put into Paxos for repairs.

Making a sport of washday, a country woman of Levkas, in traditional brown cotton, vigorously beats dirt from a rug in a bubbling spring near Sivota. Gossip with friends lightens the work on this least developed of Ionian Islands. The whitewashed column is a wayside shrine; a niche on the far side shelters an icon and oil lamp.

Seeing Paxiote bards shape these prosaic facts into a 20th-century epic that grew with each telling, I understood how whirlpools became monsters, and volcanoes "storms of ravaging fire" in the *Odyssey*.

Contrary winds baffled us as we made northward for Corfu. Why was Poseidon trying to keep us from this most extolled of the Ionian Islands?

Of course! This was ancient Scheria, land of the Phaeacians, who befriended storm-wracked Ulysses and sped him homeward laden with gifts. But Poseidon did not count on our modern version of the brawny oarsman: a husky diesel engine. We started it and set a direct course for Corfu Channel.

Along the Sea-lanes of History

Storied waters, these, pressed between Corfu and the coast of Epirus and Albania. The first sea battle in Greek history frothed the channel in 664 B.C. when Corcyra, Corinth's colony on Corfu, defeated her mother city. A second clash here in 433 B.C. triggered the Peloponnesian War, in which iron Sparta ended Athens' Golden Age. Here sailed Don John to victory at Lepanto (page 9). Ships of the Venetian Empire coursed here, great merchant galleys emblazoned with the lion of St. Mark.

Romans and Russians; Byzantines and British; Goths, Genoese, and Germans; Angevins, French, Italians, Normans; Saracens, Slavs, Turks, Vandals—all ravaged, conquered, or ruled Corfu; some did all three. But none influenced it more than Venice, "throned on her hundred isles" at the head of the Adriatic.

So much history, so much beauty, I reflected, as Corfu unrolled its long green carpet rising to the gaunt mountain that bestrides the north, Pandokrator—the Almighty.

I remembered Corfu in spring when it was ablaze with wild flowers, and even the dark, gnarled olive trunks, twisted like wrestlers, were veiled in delicate creamy blossoms. On May Day we watched families collect flowers.



Crowned king and queen of their hearth, newlyweds Spyros and Ioanna Argyros receive a shower of rice at the chapel on Erikoussa; they hope to fulfill the poignant declaration of a homesick Ulysses: "There is nothing nobler . . . than when two people who see eye to eye keep house as man and wife, confounding their enemies and delighting their friends."

Mr. Argyros moved to the United States in

1966 to seek his fortune. Last summer he returned to marry his sweetheart and take her home to New York City.

When *White Mist* anchored in the harbor, the groom's cousin ran to the shore to invite the crew to the wedding—a total surprise, since they had been told the island was deserted. At the wedding feast the groom's father (below) leads a circle dance.

MICHELLE BELL SHOOTING



in meadows golden with marguerites and marigolds, blue with bellflowers, and pink with violets. They wove them into wreaths to decorate doors, donkeys, trucks—anything and everything.

Returning to our car after one stop, we found a bouquet tied to the radiator. We wore it proudly along the road around the buttresses of Pandokrator. Masses of yellow broom framed caiques and ships furrowing the cobalt sea far below. Across the narrow strait stood forbidding Albania, its 8,000-foot peaks still frozen in snow.

Much of northwest Corfu shelters fertile valleys, checkerboarded with farms and dotted with pleasant villages. In one grove we saw a family on their knees combing the lush grass with their fingers for fallen olives, the last of the harvest. I joined them. They gave me sacking to kneel on. It was back-breaking, boring work, but they made it fun with their joking and laughter, and we soon had heaped baskets.

Haven From Pirates Now a Ghost Town

How different that friendly village from another we saw high on Pandokrator. We labored up hairpin turns almost too tight even for our tiny Fiat, and from the top of the escarpment discovered a cream-colored town cradled in a lofty valley—tile roofs, archways, doors, windows of houses, churches, and taverna intact. Vine-trellised patios seemed ready for afternoon coffee—but no people.

This was Perithia. Corfiotes told us it once gave refuge from pirates, and that when the piracy ceased, most of the villagers abandoned their isolated valley. Now many return in summer to farm and find refuge from the heat. But we found it a ghost town.

Riding southward that spring through verdant rolling fields, it was easy to see why Corfu, with its high rainfall, has the densest rural population in Greece. Nature everywhere showed her bounty. Framed in dark cypress, silvery olive, and arching blue sky, peasants hoed and watered gardens, vineyards, stands of corn. Melon patches abounded—green, round watermelons and honeydew-like yellow melons, juicy and sweet.

As we passed, waving villagers called out, "Be happy!" and "St. Spyridon be with you!" Boys ran alongside turning cartwheels. Little girls offered us flowers.

Streams, reedy lagoons, deserted beaches, grazing cows that produce the milk for much

of Corfu's butter marked the miles to Potami. Its watery "street," a long narrow inlet, was lined with large fishing caiques, once safe here from corsairs, today safe from storm.

Now summer was nearing its end as *White Mist* motored up Corfu's east coast. In August the cicadas chorused, and the dusty olive trees drowsed in the sun.

Ahead we picked up two great castles on a promontory, trademark of Corfu and one of the most dramatic of landfalls. The double-humped rock on which they rest, which Byzantines called Korfous, the Peaks, named both city and island.

Venice and Britain Flavor an Island

Rounding this promontory, passing the old galley port at its base, we saw a mellow, Venetian-style city facing the sea with buff and ocher houses that rise five or six stories above a curving boulevard (pages 34-5).

A snow-white ferry came barging by, and we followed her in. Down came her ramp, and cars, trucks, and passengers streamed off to join the din in George II Square.

After weeks aboard ship, we luxuriated in the comforts of the Corfu Palace Hotel. Set in a garden, it nestles against Venetian ramparts, its wine cellar in a dungeonlike passage. Our windows looked out on Garitsa Bay, framed by the twin forts on our left and Paleopolis Peninsula, site of the ancient colony, on our right. Here Mon Repos, the royal villa where Prince Philip, Duke of Edinburgh, was born, lifts its cupola above a beautiful park.

Late that afternoon we strolled up to the tree-shaded Esplanade, where at dusk Corfiotes throng to take the air.

What's that? Cricket? A match was being played on the old parade ground! And by Corfiotes. The game, the ginger beer spectators sipped, the Georgian architecture of the Royal Palace facing the quadrangle, all were legacies of the British.

Those arcades behind us—the Liston—are French, calling to mind the brief Napoleonic occupation of Corfu. Mathieu de Lesseps, father of the Suez Canal builder, was civil administrator at the time they were erected. Our crew gathered at tables there, for whoever visits the island always reads the news and has a drink, or tea, or coffee at the Liston. It took its name from the walkway where only noble families were privileged to promenade when Venice reigned. Today the Liston belongs to everyone.





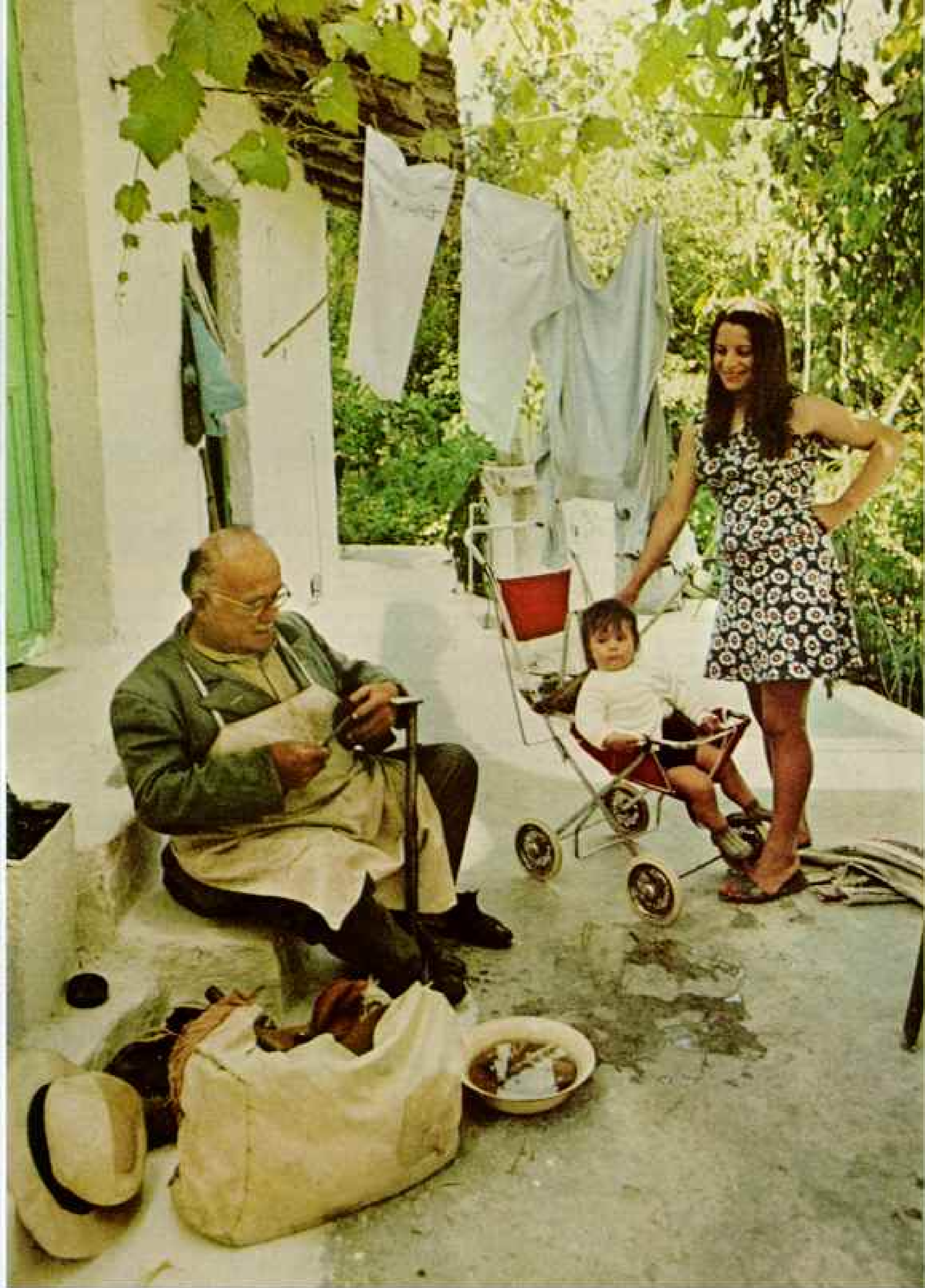
LEFT AND ABOVE FROM THE COLLECTION OF DR. NICOLAS A. BARBIERIS, JOHN SCHNEIDERMAN

Recurring tragedy of the Ionians: Earthquake! On August 12, 1953, a cataclysmic shock struck the island of Zante and turned its port, Zakinthos (left), into a desert of broken masonry with more than 100 dead. Overturned charcoal braziers started fires, and a stiff north wind whipped the flames across the city, destroying all that would burn. These numbed survivors watch Greek, British, and American ships arrive with medical supplies and food. When the rubble was cleared away (above), merchants' palaces—built when the port lay on the sea-lanes of Venice's empire—and a magnificent opera house, cathedral, and library were no more,

but a modern concrete bank building still stood, left. Leaders decided to rebuild slowly and restore the Venetian flavor.

Today arcades and balconies again surround Solomos Square at the foot of the long jetty (below); the plaza bears the name of the island poet who wrote "Hymn to Liberty," the Greek national anthem. Small freighters load currants, Zante's major crop, as well as gypsum, olive oil, and lemons. A speedy ferry, blurred in this time exposure at sunset, carries passengers and cars toward the mainland.





Traveling cobbler brings his skills—and the latest island news—to Corfu's backyards. A young mother welcomes him to the shade of her grape arbor.

We loved to walk down arcaded Nikiforos Theotokis Street and its offshoot alleys, prowling a kaleidoscope of shops, eyeing fruit carts and sugared kumquats packed in little wicker baskets. We lifted the lids off pots bubbling on restaurant ranges to sniff, and even sample—as you are invited to do—before selecting our suppers.

Storm Miraculously Saves a City

Ever since boyhood, castles have fascinated me. When opportunity beckons, no hill is too high, no day too hot, to explore another fort. And Corfu has its share.

Crossing a bridge where the sea forms a moat, I entered the citadel under the stony eye of a winged lion of St. Mark. The honeycomb of dark passages, steep stairs, lookout vaults, gun galleries commanding sea and city made the twin forts seem impregnable.

They had to be, to withstand Suleiman the Magnificent in 1537. The sultan sent a fleet, 30 siege guns, and 5,000 men against them in vain. But with scimitar and torch his horsemen scourged the island and swept half its people into slavery.

In 1716 the Ottomans came back—with 30,000 men. The Venetians stood ready with a second complex of fortifications on the city's landward side. From its highest battlements I surveyed the scene as Comdr. Constantine Moraitinis of the Greek Navy replayed the battle before my eyes. "A great Turkish fleet landed the army at Gouvia Bay, up the coast there. Fighting south, they besieged these walls for 42 days. A furious assault breached the northwest bastion right below us. The Turks poured through it, but a desperate counterattack drove them out. That night a great thunderstorm demoralized the Turks, and next day they sailed away."

A grateful Venetian Senate raised a statue on Corfu to their heroic commander. Tactfully, they also presented a splendid silver lamp to St. Spyridon.

Four times each year, in magnificent procession, Corfiotes—many of them named Spyros—thank their patron saint for miraculous interventions to save their city: from two plagues, a famine, and Ottoman invasion.

One invasion of Corfu I saw with my own eyes. But it was a joyous one; the U. S. Sixth Fleet was in, and prices soared in George II Square (openhanded hospitality and tight-fisted business coexist untroubled in the Greek soul). Sailors shook sea legs by piloting

snorting scooters over cliff-hung roads. Some of them buzzed across the island to see the famous Paleokastritsa coast, perhaps the most beautiful scenery in all Greece.

We climbed that craggy coast to Lakones, whose house terraces look 800 feet down to picture-puzzle bays where midget boats scurry like water bugs across shallow green and unfathomable blue. While the sun set in the empty Ionian, we savored Corfu's delectable wild strawberries at an eagle's-aerie café.

A chill wind made Ed shiver in short sleeves. "Perhaps you will enjoy the sunset better in this," our waiter said as, unbidden, he brought one of his white coats.

This was Ulysses country; sailing here in *White Mist* in the languorous last days of summer, we found the coast even more spectacular from seaward. We poked into half-moon coves that hid sandy nooks at the bases of cliffs. At Ermones Bay, scarred with new resorts under construction, we saw rocky basins through which, in the rainy season, the river Ermones cascades to the sea.

Sea-battered Ulysses Awakes to Laughter

It was here, scholars suggest, that the Phaeacian princess Nausicaa and her maidens came to wash clothes, and spread them to dry while they played a game of ball. And where Ulysses, swept by "the current and the tearing winds," had crawled ashore, crusted with brine, and slept under a sheltering olive, to be awakened by girlish squeals.

Nausicaa took Ulysses to the royal palace, where her father the king generously provided him with a ship for the last leg of his journey home to Ithaca. He got there safely—but what of the Phaeacians who took him?

From the pleasant heights of Kanoni I looked out beyond the ancient harbor to a boat-shaped island fretted with cypresses, in which imagination perceives husky oarsmen, mast, and sail. "The Phaeacians' ship turned to stone," any Corfiote will tell you, "Poseidon's revenge for taking Ulysses safely home."

Gusts began to ruffle the water, tug at my clothing, pummel me about the head. Hastening back to our mooring, I found *White Mist* jumping and rolling in a fresh northerly. We had two big anchors out. Still, they might drag, smashing us against the quay. I'd seen harbors where gales had wrecked hundreds of sailing ships right at the docks, trapped, without room to claw out.

(Continued on page 39)



SIXTH-CENTURY B.C. RELIEF, CORFU - ARCHAEOLOGICAL MUSEUM



Gleaming beacon to seafarers, Corfu welcomes them to a seaside park lined with time-mellowed dwellings.

Snake-haired Medusa (left) guarded the shrine of Artemis in ancient Corfu. The nine-foot figure dominates the temple pediment, one of the earliest and best preserved in Greek art. Ulysses feared that such monsters might come "up out of Hades."

Now a museum by day, a casino by night (right), the Achilleion was built for the restless Elizabeth, Empress of Austria, as a retreat from the restrictions of court life.

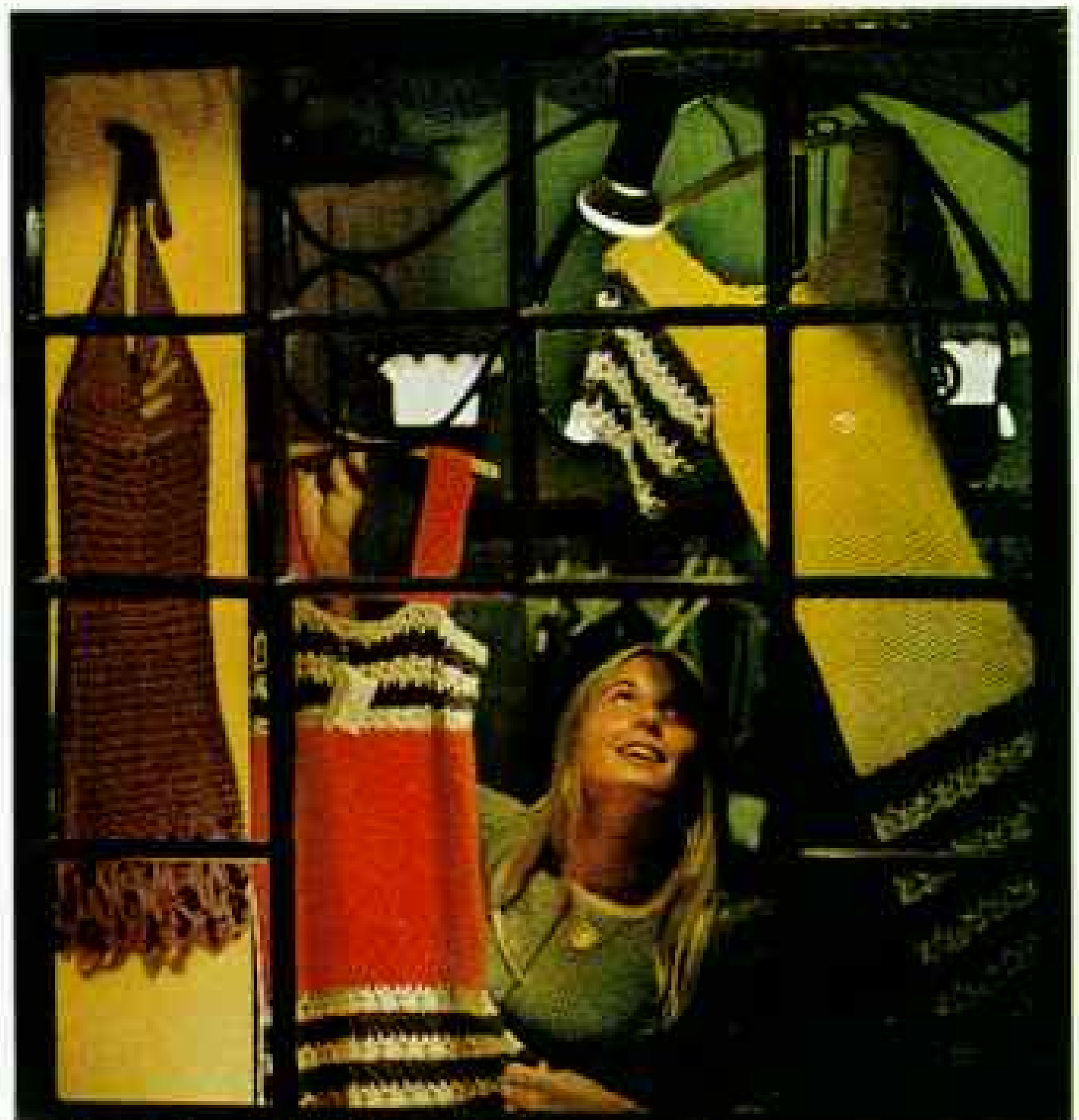






Strollers oust autos on arcaded Nikiforos Theotokis Street. Shops offer jewelry, candied fruit, and copies of ancient art. Hand-knit sweaters and dresses sell for \$10 to \$20 in a boutique (right).

Tile-roofed maze of downtown Corfu leads to the hulking crests that are the island's trademark. On the heights a Venetian fortress withstood repeated Ottoman assaults. Corhotes credit their deliverance to their patron saint, Spyridon, whose remains lie in the church at far left.





Tranquil as a sailor's dream of home, Corfu's Vlacherna Convent



slumbers under a rising moon.

But *White Mist* had her diesel. As the wind freshened, we decided it was time to get out of there.

Winds now 50 knots flung combers over the breakwaters. The chop was terrible, waves bouncing between seawall and moles, the ship plunging her bows and smothered in spray. If our engine quit, we'd be in trouble. It took half an hour to inch out of the harbor in the teeth of that blow, the engine going full speed. We headed for Gouvia's protected harbor four miles to the northwest.

Poseidon Poses a Final Threat

Then I noticed the engine overheating under the prolonged strain; a gasket had blown. I slowed her so as not to burn out the diesel. As steep waves pounded us and spume foamed into the cockpit, I remembered how Poseidon "stirred up an unspeakable sea" against Ulysses, wrecking him with a "stormblast of battering winds."

No lights mark Gouvia's shoal-flanked entrance. Luckily, we made it just before dark. We ran upchannel, made our turn, and came into the sudden tranquillity of a haven shielded by hills and ringed about with goodly trees. Here in calm waters we slept while the storm blew itself out.

Day broke clear, suffusing this lovely harbor with light—that magical Greek light that makes the landscape radiant and illumines the mind. I rejoiced in the homecoming of Ulysses. And perceived that in a sense I, too, had come home. Though I did not reach the Ionians until I had explored the world's far lands and endured many of life's tempests, I had always carried the isles of Ulysses in my mind. And the long journey had been rich in newfound friends and experiences.

But Ulysses had one more hurdle. A blind seer had foretold that he must go inland, oar on shoulder, until he came to a place where men, knowing nothing of ships and the sea, mistook it for a winnowing fan. There he must plant it and render sacrifices to Poseidon. Only then could he return home to serenity.

I'll make my peace with Poseidon, never fear. But should you chance to meet me with an oar over my shoulder, I'll not be planting it inland. I'll be returning to the gull cry, the salt tang, the surge of the wine-dark sea. □



Spewing smoke and fire,

In Iceland's fourteenth volcanic eruption
of this century, a mountain is born, and

A Village Fights for Its Life

By NOEL GROVE NATIONAL GEOGRAPHIC STAFF



CHRISTIAN MANNINGSON

the new volcano forced 5,000 Icelanders to flee Vestmannaeyjar, on the island of Heimaey.

WE FELT ITS HAIL of cinders long before we saw the volcano's fire, glowing like a midnight sunrise through the mizzling rain. Coarse black ash pinged off our helmets as it bombarded the transport ship *Esja*, crowded with volunteer salvage workers headed for a stricken island six miles off Iceland's southern coast.

From the glow ahead came a rumbling thunder, punctuated with deep, rasping

coughs like those of a gigantic lion. Suddenly, *POOM!* A louder, cannonlike blast split the night and brightened the torch that lit the sky. A murmur rippled through the crowd on deck, and a young Icelandic, cued to speaking English by my own exclamations, turned and said, "It is like a war."

It *is* a war, I would discover in the days ahead, a battle between the earth-shaping processes of our planet and a town that

refuses to die. On January 23, 1973, the ground had split apart on Heimaey, an oceanic knob two miles wide and four miles long, largest bump of land in the Westmann Islands (map, below). The eruption opened a mile-long gash at the edge of the quiet fishing town of Vestmannaeyjar (VEST-mun-ayer). Although not a single human life was lost until much later, the rain of fire forced evacuation of the some 5,000 inhabitants of Iceland's most important fishing port and threatened a severe blow to the economy of the nation.

If the eruption did not soon subside, the entire harbor might be closed by lava, cutting the economic lifeline of the town. Iceland depends on fish exports for 80 percent of its foreign exchange, and a tenth of those exports are processed in Vestmannaeyjar.

Now, ten days after the eruption began, the *Esja* rounded a rock cliff to enter the harbor, and before us stood a mountain afire (pages

48-49). Groaning, bellowing, it spat flaming salvos of molten rock that splashed in glowing dribblets down the cone's black sides. Dwarfed by this furnace towering 700 feet above the sea, Vestmannaeyjar nestled at its foot, with outlying houses already buried beneath lava and ash. Ironically, the islanders at first called their blazing hell Kirkjufell, or "Church Mountain," because it opened near the site of Heimaey's earliest Christian shrine. Official designation would come much later.

Islanders Sing Against the Thunder

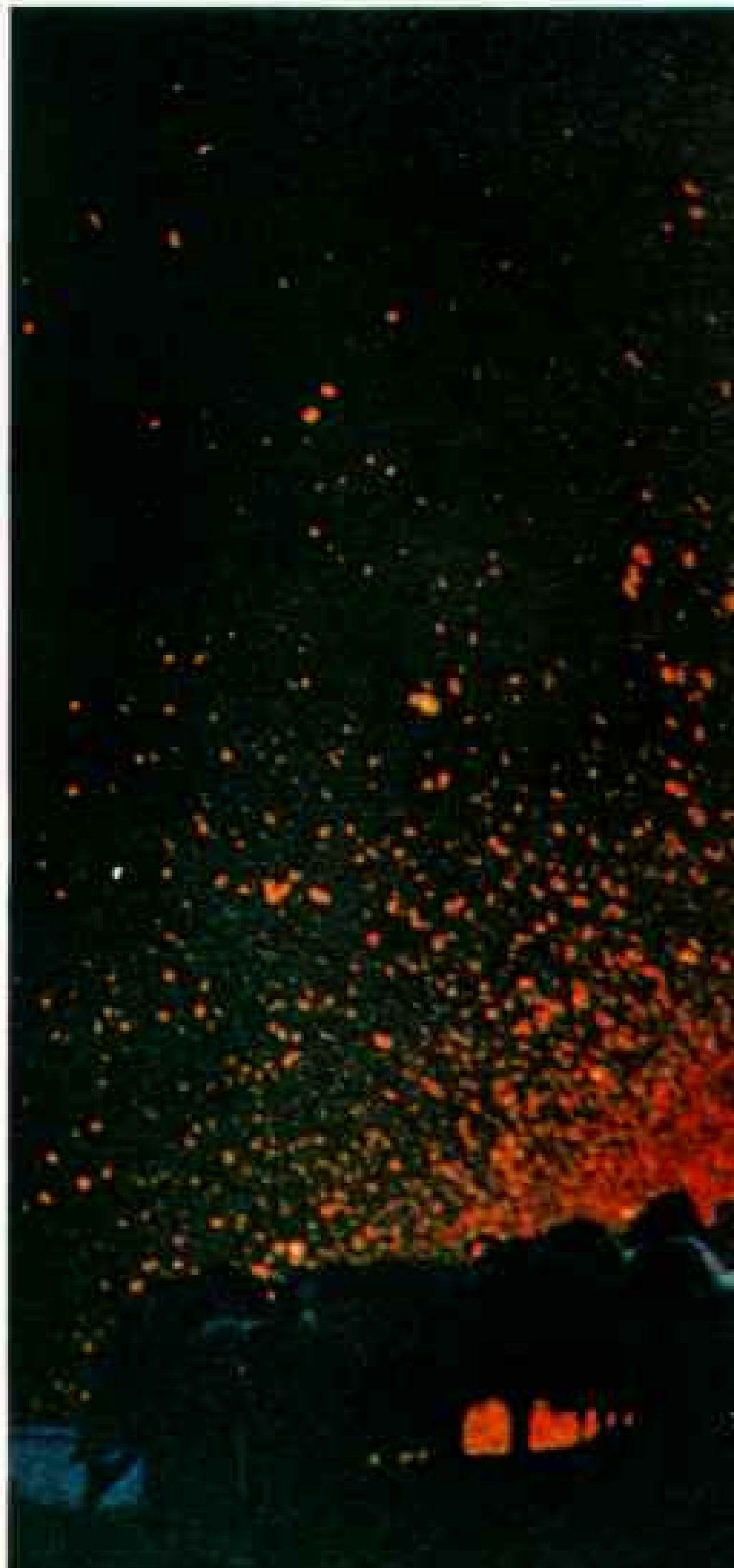
Barely a word was spoken on the afterdeck, where I stood as the ship slipped between two breakwaters half a mile from the inferno and eased next to a pier. So compelling was the spectacle that, once ashore, I found sleep impossible, despite its being past midnight.

With a longtime Westmann Islander, Páll Steingrímsson, I began a night walk through

Seemingly at hell's gates, sheep stand placidly as fountains of magma thunder at the edge of their pasture. Foreshortening effect of a telephoto lens makes it appear that the animals are at the very brink of the new volcano, dubbed Kirkjufell.



Blister on a boiler plate, Iceland sits on an underground inferno. Lava bursting through a great crack in the sea floor created the mainland and its offshore Westmann Islands, of which Heimaey is the largest. Most recent addition is the island of Surtsey, raised by eruptions that began a decade ago.



streets blanketed with black ash, blown high and wide by the booming exhaust. I stumbled often, my eyes riveted to the fiery spectacle looming just beyond the rooftops.

Scuffing through the deep volcanic ejecta, my foot suddenly kicked against a hard clump of leaden stone. "Lava bomb," explained Páll. "In the first days the volcano threw them as far as a mile. Some broke through windows and burned dozens of houses.

"A fireman named Halldór Ingi picked up one that was still hot, broke it in half, and lit his cigar," he added, grinning. "Here is the fire station. Perhaps he is here now."

My companion's genial mood puzzled me. I knew that Páll, a high-school art teacher in Vestmannaeyjar for many years and now a free-lance photographer, had a house almost buried by ash nearby. His postcard-pretty town sat enveloped in inky grit. On the island's northeastern shore, once a pleasant flat

greensward, the new volcano still coughed destruction. Yet his eyes twinkled with mirth, and his mood seemed almost buoyant.

My puzzlement was only beginning. In the firehouse, where I expected to find haggard faces and weary bodies, a guitar throbbed and the station rang with song. Páll joined in the boisterous tunes about well-meaning drunks and brave fishermen. During a pause, he exchanged pleasantries. Then we left to plunge again into the night and the volcano's roar.

We moved closer to the volcano, up a hill covered with cinders that gradually deepened around houses until they disappeared altogether. There, in the lee of the last visible man-made structure before the solid desert of ash, I sat through the waning hours of the night to watch mighty Kirkjufell's dazzling fireworks, listen to its stentorian voice, and marvel at the uncontrollable power it was

(Continued on page 50)





FLAME-CURTAINED HORIZON augurs doom for houses closest to the volcano, as explosions wrack the day-old fissure along most of its length. Braving the fallout, two residents crunch over a thin layer of ash to salvage household goods. Most of the people had been evacuated to the mainland before daybreak. Two days later creeping lava and deluges of ash would cover the scene.

BY SAM WOODWARD, JOURNALIST PHOTO





WAFS WIDE LENS, '88

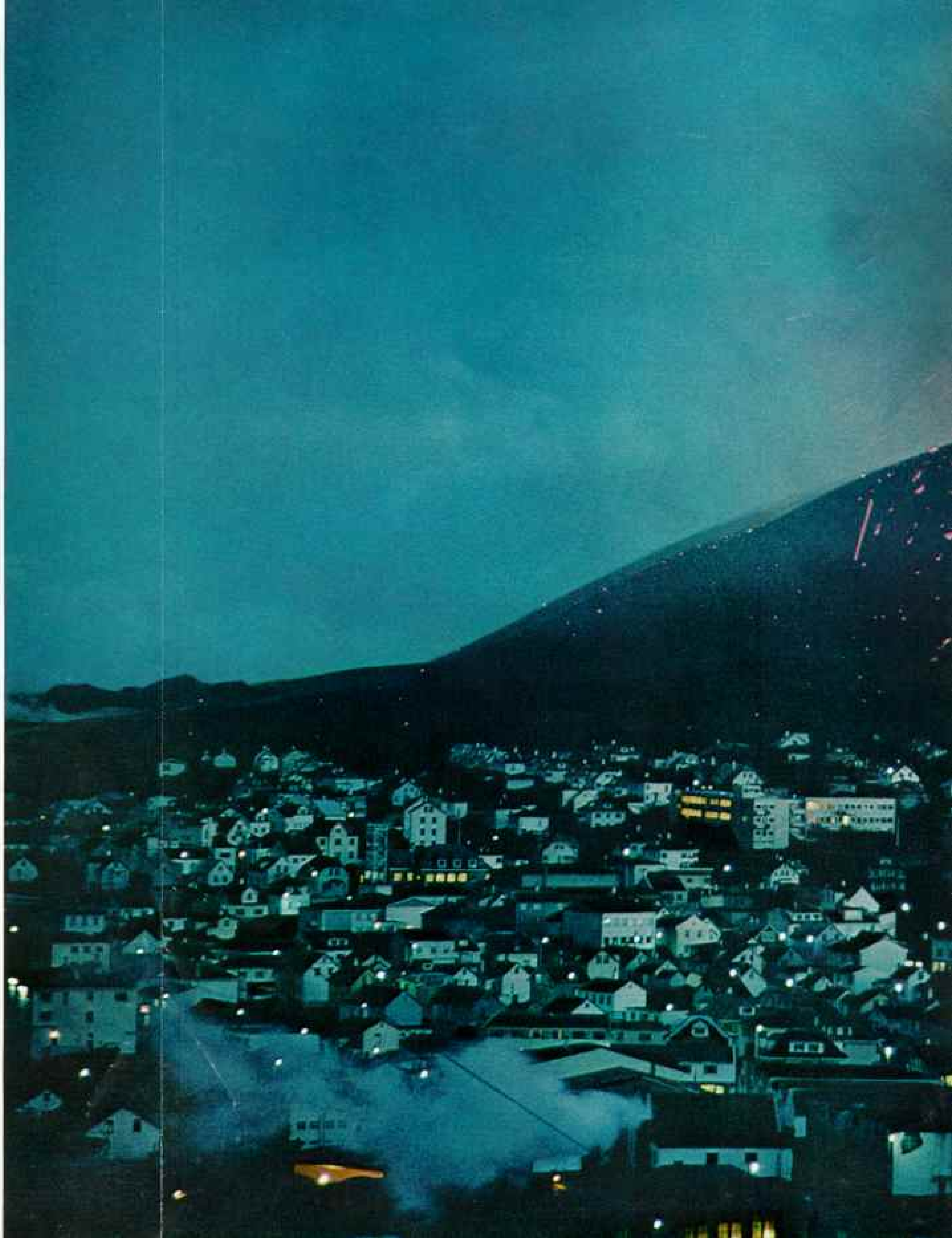


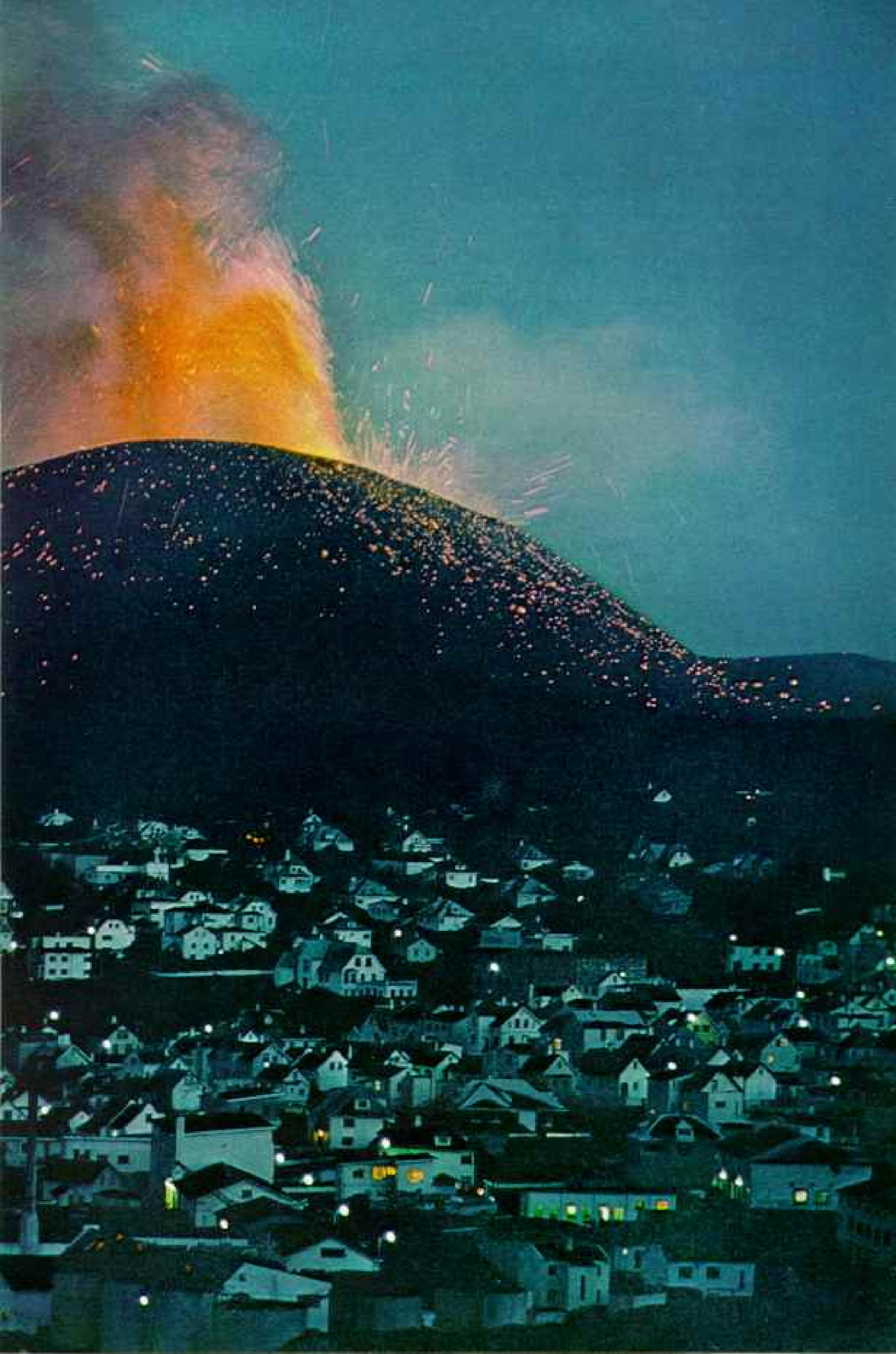
KRISTJAN JONSSON, ISLANDIC PHOTO (ABOVE); ROBERT S. PATTON, NATIONAL GEOGRAPHIC STAFF

Awing a town with its might, Kirkjufell rockets gas and magma into the sky (right) from underground pockets. Glowing chunks of lava arc and fall to roll down the sides of the two-week-old cone that has grown to 700 feet in height.

Iceland's chief fishing port before the upheaval (top), Vestmannaeyjar prospered as the home port of four-score fishing boats, and as the largest single processor of the nation's harvest of cod, haddock, and capelin. Proud islanders cherished their peaceful, almost self-contained realm, with its own schools, hospital, and three-day summer festival. A monument to the island's volcanic origin, the cone of Helgafell, extinct for about 5,000 years, looms in the background. Unwelcome birth of its twin now sullies the once-gleaming town with black ash (bottom).

THIS PAGE FOLDS OUT





unleashing from some subterranean caldron.

Such outbursts are well-known in Iceland, for here, near the top of the globe, they have occurred 14 times since 1900. The island nation sits astride a notoriously weak zone in the earth's crust known as the Mid-Atlantic Rift. On January 23 pressure from tens of miles deep in the earth had once again pushed through the rift to pile tons of molten rock on the surface and forever alter the planet's face.*

No one saw the soil open, as skin parts before the surgeon's knife. Hjalmar Gudnason, who relays radio communications from the fishing fleet to processing plants on the island, may have been the first to spy the fire and red-hot magma. Strolling with a friend after a night shift, he saw flames leap from the ground about a quarter of a mile ahead.

"At first I thought a house was burning," he told me. "But then I saw that it was beyond the edge of town, and it was throwing sparks. I knew then it was an eruption."

Islanders Face Threat With Calm

Frozen with astonishment, the two men watched the single burst grow to a solid wall of flame that disappeared behind the ancient cone of the volcano Helgafell, silent for some 5,000 years. Turning, they raced home to awaken their families and others and send them to the safety of the mainland.

Some islanders were reluctant to leave. No strangers to volcanism, they had held a ring-side seat at the birth of the island of Surtsey, 12 miles to the southwest. There the sea first boiled on November 14, 1963, as the ocean floor split.† The clouds of steam could be seen from Heimaey, and southwest winds laid a quarter of an inch of ash on the rooftops at Vestmannaeyjar. Many townspeople felt they could now weather their own eruption.

Most of them, however, crowded willingly aboard boats, airplanes, and helicopters as the fissure roared along its full length. Later it would narrow to a crater with three fountains that raised the mountain of lava and ash where once there had been a plain.

Not a single human injury was reported during the evacuation; not a trace of panic was seen. The only known casualty on the island was one of the tough little Icelandic ponies that ran, confused by terror, into a

stream of lava. Found wheeling in crazed circles, half blind and badly scorched, it was mercifully shot by a local fireman. Evacuation was completed within six hours after the eruption began, leaving only a handful of town officials and technicians maintaining life in the deserted streets and vacant houses.

"I've been involved with disaster work for 25 years, and these are some of the calmest, most collected people I've ever seen in a crisis," I was told by Californian Will H. Perry, Jr., a disaster consultant to the United Nations. "There was never any doubt in the minds of the evacuees that they would have a place to stay; Icelanders take care of their own."

I heard many explanations for the calm
(Continued on page 56)



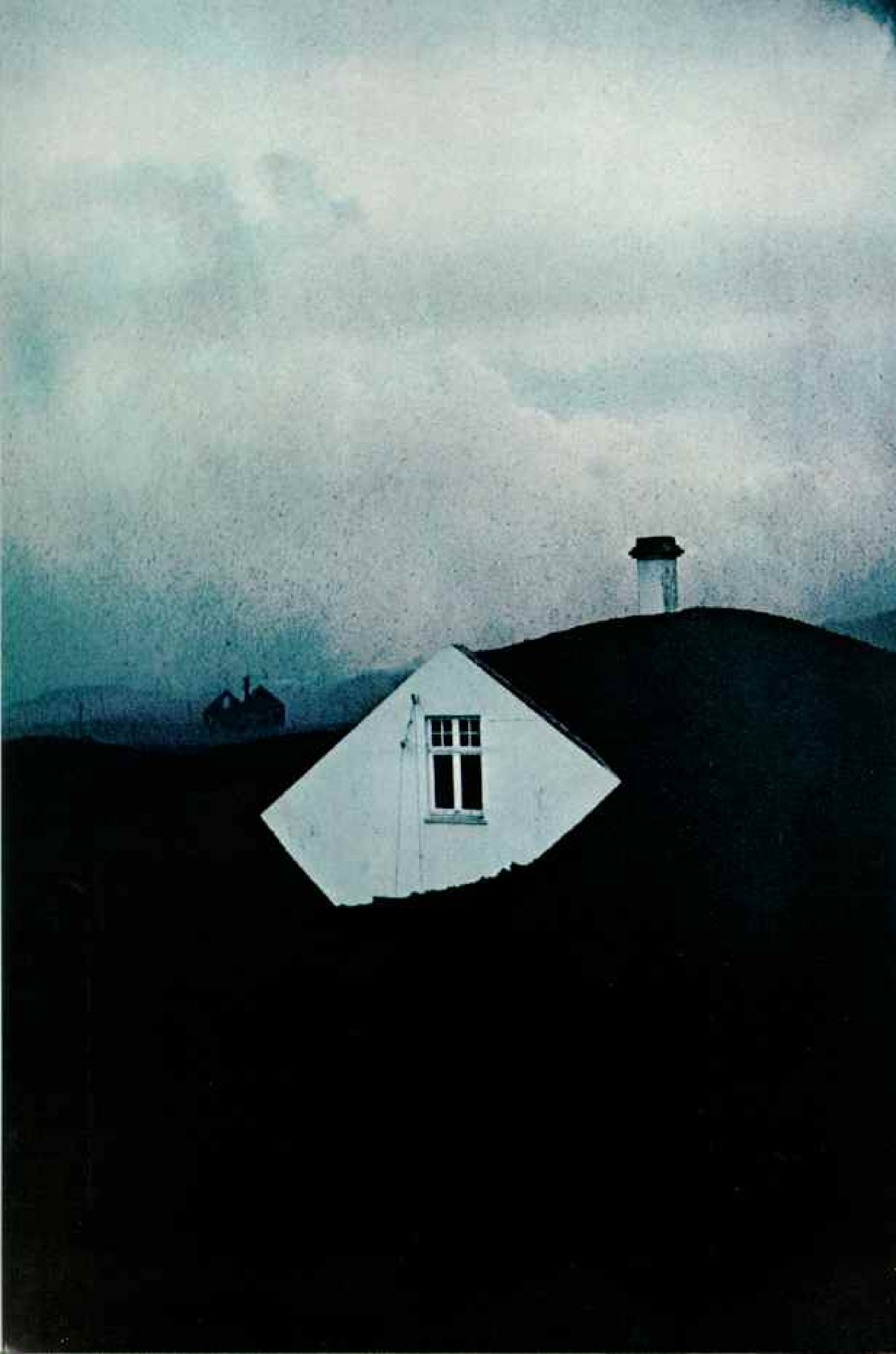
SCAPIN WAGNER/STON (RIGHT)

Clouded sky, cloudy future: Billowing pillar towers over the island, sometimes reaching 30,000 feet. Black smoke and ash from the volcano mix with steam as boiling lava meets the sea. Formed by Kirkjufell's magma, still-growing extensions of land on the little island's eastern shore (map, above) could eventually cut off or completely fill the harbor that Vestmannaeyjar must have to survive.

*See "This Changing Earth," by Samuel W. Matthews, NATIONAL GEOGRAPHIC, January 1973.

†Surtsey: Island Born of Fire," was described by Icelandic geologist Sigurdur Thorarinsson in the May 1965 NATIONAL GEOGRAPHIC.







BLANK JOURNALISM, (GLOBIC PHOTO (LEFT), ROBERT S. PACTON

Inches from entombment, a house slowly disappears beneath the volcano's hail of black ash. Some fifty homes were buried and many others burned within the first two weeks when thunderous explosions hurled red-hot lava bombs through windows and set houses ablaze. As if mourning the catastrophe, a Madonna with one hand missing gestures poignantly at the blanket that covers her three-foot pedestal (above) and all but two other monuments in the town cemetery.

Luck rode with the islanders even as calamity roared at the doorstep. The season's usual easterly winds were light in the first two days of the eruption, though later the cinders were borne directly over the town as the ashfall increased. Also, on the first day of the eruption, the normally violent winter weather abated, allowing evacuations by boat, plane, and helicopter.





SHEDDING JOHANSSON ABOVE AND LEFT; WILSON S. PATTON

Up to their eaves in ash, houses get a helping hand from shovelers who clear rooftops to prevent collapse under the weight of rain-soaked tephra. A wind shift sometimes meant that crews had to return to the same roof. Corrugated sheet metal protects windows from fire-dealing lava bombs.

At the island's airstrip, firemen hose off the wings of a plane that brings food for volunteers and leaves with household goods. Hundreds of volunteers from the mainland, joined by U.S. servicemen from a nearby North Atlantic Treaty Organization base, aided the rescue efforts.

An automobile overlooked in the removal of some 800 vehicles by sea finds a permanent parking place (right).



that prevailed on Heimaey, and for the stoicism with which townspeople regarded the devastation. "There would have been some panic had they not been familiar with Surtsey," a mainlander told me. "There was no time to be afraid," said an islander who had joined the flight.

Yet I found the explanations too simple to account for the consummate cool of those who live over one of earth's hottest spots.

In novelist Thor Vilhjálmsson, one of Iceland's leading men of letters, I found the words that clarified the qualities of these northmen. Like the hundreds of carpenters, factory workers, and mainland laborers of all description, Thor had come to Vestmannaeyjar to help salvage household goods and scoop house-crushing ash from rooftops.

"I think the Vikings who settled Iceland were lucky to capture Irish princesses and bring them to their new country," he said. "The Irish gave the Icelanders a poetic quality they might not have had otherwise."

It was that poetic quality, I decided, that gave the Westmann Islander his fierce love for his tiny homeland and his faith in it. The warrior blood of Vikings may have bred that icy calm with which he faced fire and left his home to board a rescue craft, but it was the poet inside that made him vow to return.

Ash and Lava Missiles Decimate Homes

By the time I arrived on Heimaey, 112 homes had been destroyed or badly damaged. About a fifth were ignited by the lava bombs. Others collapsed after ash piled up on the roofs, then grew sodden in the frequent rains. The black-robed houses, bulldozed street paths, and ebony dunes seemed a film-negative view of a snow-covered Alpine village, with black and white reversed.

Awash in that deadly expanse were tidy cottages and modern ramblers, for the Westmann Islanders enjoy a standard of living higher than the average mainlander's. For decades, harvests of herring and cod have sent fleets of more than 75 fishing boats out of the harbor, to return with almost a sixth of Iceland's total catch. Related industries such as netmaking and boat repair and the cleaning, salting, and filleting of the catch rounded out a thriving economic community.

That financial solvency, the isolation by sea, and a colorful history have inspired a strong local allegiance. "We are Westmann Islanders first and Icelanders second," I heard

from more than one Vestmannaeyjar resident.

Now hundreds waited in restive safety on the mainland, eyes glued for hours to a fixed, round-the-clock televised view of their village and its new, seething mountain. Several days after leaving the island, I visited a two-story house shared by 17 refugees on the outskirts of Reykjavik. As children scampered underfoot and a knot of adults bent in silence over a chess game, a netmaker stared at the strange new profile of his island on a television set.

"Why do you watch? What do you look for, since the picture is always the same?" I asked through an interpreter. Although English is compulsory in the schools, many Icelanders speak it haltingly. Their Old Norse fell softly melodic on my ear, less guttural than German, but somewhat like German spoken with an Irish brogue. I failed embarrassingly at pronouncing all but a few elementary words, such as the simple and beautiful farewell, *bless*.

"We watch to see whether the ash is falling on the town or out to sea," said the netmaker. Both of us looked back at the screen, where the volcano's ominous plume stretched directly above Vestmannaeyjar, deepening its shroud of scoria. Once-cheerful cottages, some ornamented with gingerbread trim, peered mournfully from the morass. The place seemed barely habitable.

"Will you return to live on the island?"

"We will go back, as soon as possible."

The thought of losing their homeland was far more wrenching to islanders I encountered than the fact of having personal property burned or buried.

"It's not so bad losing houses," I had been told back on Vestmannaeyjar by Hjálmar Gudnason, first to see the eruption. "But having to leave the island," he added, as he reached out, closed his fist, and yanked upward, "is like being pulled out by the roots."

Through those roots seemed to flow a visible strength. It rang in the voices of residents whose irrepressible songs resounded through the Heimaey house where photographer Emory Kristof and I stayed. Singing was an inevitable part of nighttime camaraderie on the island, as we chewed on dried haddock and sipped *brennivín*, a breathtaking Icelandic liquor known as "black death."

Jarred awake by a flood of melody one morning at 3:15, I climbed off my mattress on the living-room floor and staggered upstream into a torrent of song. In the kitchen sat a dozen mainlanders and Westmann Islanders.

Laughing at my sleep-pinch face, they backslapped me into a three-hour musicale, while Kirkjufell roared in tympanic accompaniment outside the door.

Among the singers was telegraph operator Hjalmar Gudnason, who had grieved the day before about being pulled out by the roots. Now his face was alive with the lusty Icelandic ballads, and his body swayed like a tree that is rocked by storm but remains anchored deep in the soil of its birthplace.

Island Born of a Boiling Sea

Violence, originating beneath and above the surface of the earth, has ever played a lead in the saga of Heimaey. Infant soil by geological standards, the island rose Surtsey-like from the sea only 5,000 to 6,000 years ago. The now-quiet Helgafell erupted about the time Menes founded the first of Egypt's 31 ancient dynasties, around 3000 B.C.

By Icelandic records, the first inhabitants were Irish slaves—*vestmenn*, the Vikings called them—who fled from the mainland in a stolen boat after killing their Norse master. The victim's brother found them there and, with the gory drama typical of Icelandic sagas, took their lives while giving the string of islands their name forever.

The cataclysm that had created Heimaey now seemed determined to render it uninhabitable. As the volcano gave no sign of subsiding, concern for the all-important harbor accelerated. Diminishing fish populations had already reduced the harvest so drastically that Iceland had banned foreign fishing within 50 miles of the coast in 1972, opening a cold war with European fleets. Loss of the harbor would further cripple the industry.

"This season, the boats from Vestmannaeyjar can operate out of other ports, and we may still get 50 to 60 percent of our usual catch," said Tómas Arnason, a manager of Iceland's Economic Development Institute in Reykjavik. "But there remains the problem of processing, and last night the lava cut one of the two pipes that pump in water from the mainland to clean the catch. Also, the electrical line was cut, and the island is now on emergency diesel power."

Flying back to Heimaey, I found the mood changed from buoyant confidence to grim speculation. While I had been on the mainland, submarine flows of lava had so raised the sea floor that ships the size of the 700-ton *Esja* could no longer enter the harbor.

The town's mayor, Magnús Magnússon, shook his head sadly as he told me, "If the harbor fills, there remains little chance of people moving back." Machinery would be moved to the mainland, and Vestmannaeyjar would lose its reason for existing.

Still the island fought back. Electrical and plumbing crews went from house to house, restoring heat and drainage so homes would not swell and crack.

An Icelandic Village Fights for Its Life



ROBERT D. PATTON (ARNDT) SIGURDUR THORARINSSON

"Fifty-fifty chance" is the prediction for the town's survival by Iceland's top volcano expert, Dr. Sigurdur Thorarinnsson (above). Checking the temperature of lava, an assistant drags a heat probe across a field that measured 1,930 degrees Fahrenheit below the surface.





One step ahead of destruction, volunteer workers rescue household goods from

with moisture. I chatted with American seamen and Marines from the NATO base at Keflavik, who helped clear ash from doorways and rooftops.

Work crews sprayed seawater on the headwall of creeping lava in a desperate attempt to cool it and stop the advance (pages 60-61). "It seems to be working," one man told me as clouds of steam swirled around us. "Last night this portion stopped while elsewhere the lava moved ahead."

A call went out for heavy pipes and pumping gear to spray the entire front constantly, but suddenly a new problem besieged the star-crossed town. Snow whipped by winds

gusting to 90 mph raked the island, closing the airstrip to further shipment of supplies. Black ash and snow fell together, giving Vestmannaeyjar a salt-and-pepper coating.

At the command post for the town's battle against the elements, I met the man who lent such military daring and precision to the fight that he was nicknamed "Patton." Sveinn Eiriksson, fire chief at the Keflavik airport, had intended to visit Heimaey for only a few hours after the eruption to offer additional equipment and fire-fighting advice. Instead, he found himself chief of salvage operations, organizing cadres of carpenters to shore up homes against ash weight and to board up



BOB WILSON/JOHANNSON

imminent burial by lava. Soccer star's picture still decorates a liberated door (left).

windows against the hail of lava bombs.

I last saw him after his brief visit had extended to two weeks, a phone in each hand as he relayed instructions to his volunteer troops in a voice grown whispery hoarse, a man red-eyed with fatigue, living on coffee, cigarettes, sandwiches, and a grim determination to help the town survive.

How long would the siege of Vestmannaeyjar continue? Seeking the answer, I crunched across a desert of ash to a fresh river of lava, where Dr. Sigurdur Thórarinsson and three scientific colleagues were measuring the flow. The river moved at a turtle's pace, its black fringe of cinder tinkling with

the subtle but ominous sound of a snake rustling through dry grass.

"By measuring the daily volume of lava, we can forecast somewhat the danger to the harbor," said Dr. Thórarinsson, a renowned geologist. "But we cannot predict how long the volcano will continue to erupt. It might stop next month, or, like Surtsey, it might continue for three years or more, but we don't consider that likely."

Science still wrestles with basic questions about the way magma comes to the surface of the earth, and the depth of its source. "A borehole we have here suggests molten rock at less than ten miles down," he pointed out,



Battling against the bulge, firemen spray a cindery wall of lava in an attempt to stop its advance (left). Pressure from the cone's continuing discharge pushes the steaming slag heap toward the town and harbor. By cooling the front—molten beneath its cindery surface crust—strategists created a hardened dam that slowed and sometimes stopped its progress. But as fire fighters concentrated on the leading edge of the wall, another portion broke loose near the cone and lava poured directly into the town. To combat the new invasion, multiple hoses (below) fed by dredging boats and extra pumps spewed some 29,000 tons of water an hour on the menace.

GEORGE J. JONASSEN (BELOW), EMORY HARRIS



"but the ultimate source could be thirty to forty miles down."

Whatever triggers Iceland's frequent eruptions, the effect remains awesome. Like a moth drawn to flame, I yearned to look directly into the exhaust of this pyrotechnic spectacular. The cone had formed into a horseshoe—steep sloped on three sides but open on the fourth, where the lava extruded. Surely, I concluded, one could climb to the low side and look over the lip.

Lured one night by the eruption's brilliant coloration against the black sky, I ascended the cone's lowest corner, buoyed by 90 mph gusts that pushed the volcano's fallout away from me. Suddenly Kirkjufell shook with a phlegmatic cough, and a barrel-size chunk disengaged from the fountain and vaulted directly into the wind.

Fascinated, I followed its arc, like a football player fielding an unwanted punt. When the trajectory was dangerously well-established, I began a frantic retreat, scrambling across loose scoria in the slow-motion flight of bad dreams. The bright orb, overcome at last by the wind, landed with a sickening thud 50 feet short of me.

Wary Intruders Take New Approach

Obviously the slope put one in dangerous proximity to the blasts. The only other clear view of the discharge would be from the lava valley itself, where I could look inside the horseshoe at eye level with the vent.

Descending into the valley, Páll Steingrímsson, Austrian film cameraman Ernst Kettler, photographer Kristof, and I worked our way closer to the cone. Lava flow had all but ceased for the moment, and a cooled crust of basaltic blocks ranging in size from as small as golf balls to as large as houses littered the valley floor. Between the smaller rocks beneath our feet, the underlayer of still-hot lava glowed orange. We were walking on some of the newest land on earth, freshly delivered and barely cooled.

Stumbling across the surface, we finally gained an unobstructed view into the raw throat of the volcano, racked with deafening explosions less than a hundred and fifty yards away. Each blast shattered the caldron of lava into hundreds of nuggets that were hurled upward a thousand feet. Some would clear the back rim of the cone and roll down its side or plunk near its base, but most fell back into the crater to clog the vent. Pressure

would then build up below the mass until it pushed its way through again with another spasmodic outburst.

Although the wind blew the volcano's heat and discharge away from us, the oven beneath kept me constantly shifting my feet to cool my shoes. A flicker of light attracted my eye, and I glanced down to see flame licking up one of the legs of Emory's camera tripod; the rubber tip had ignited.

The thunderous explosions, the incessant launching of fiery projectiles, and now the molten threat beneath combined to give us an overpowering sense of unease. Drawn by curiosity to this valley of tumult, we were now repelled by fear that drove us back across the lava field and up the valley's talus wall.

A subdued and contemplative quartet trudged back across the plain of ash toward the village. In the thunder and flame of Kirkjufell, we had witnessed, as closely as we dared, the power of nature as it was arrayed against a town's courageous will to live.

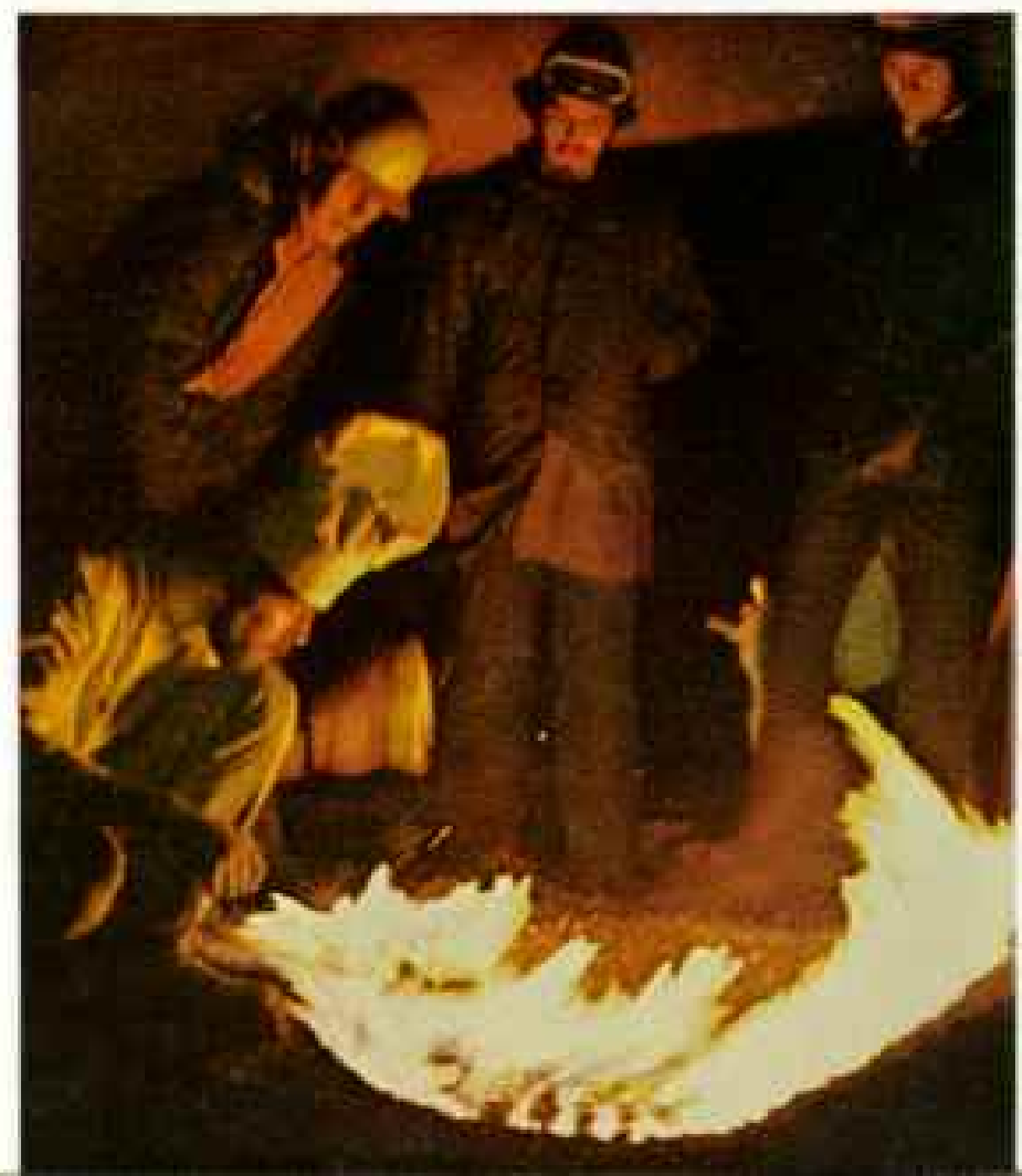
The battle would seesaw for months. Days after our trek onto the valley floor, fallout and cooled basalt plugged the volcano's open end, forming a chalice of bubbling, dancing magma. Both ashfall and lava flow diminished, and the worst of the eruption seemed to be over.

Collapsing Cone Spills Lava Into Town

But the chalice did not hold. On February 19, ancient Helgafell's month-old twin mountain collapsed on the north side, and the next day a creeping 100-foot hill of slag with a molten interior began spilling into the town and toward the harbor.

During the next month, as quickly as barrages of seawater would stop one section of the front, a new portion would break out a few hundred yards away. Within one five-day period, 120 homes and commercial buildings were lost, nudged into flames before they were ground into rubble.

Toxic gases, deadly by-products of the subterranean inferno, began percolating through the soil to settle in low spots throughout town. Sleeping quarters in the lower sections were ordered abandoned, and the volunteer command post was moved to higher ground. I understood why when, at the request of an island artist stuck on the mainland, I entered a basement to rescue some paintings. Without warning, a terrifying, suffocating heaviness struck my chest and sent me gasping and





SHUNKEI TENAZUMI

Moving mountain of lava grinds through Vestmannaeyjar, setting houses on fire before rolling over their remains. In the lava breakout two months after the eruption began, some 120 homes disappeared.

Undismayed rescue workers, including one in a chef's hat, gather at the foot of the cone one night for a "lavacue" (left)—singing and broiling steaks in a pit of glowing ash urged into flame by the dripping fat. In a more somber moment, some seek solace in the island's only church (right).



Smoldering tide hits the northeast corner of town (below). Directly ahead lie large waterfront fish factories. Steam billows up from the leading edge as hoses continue to spray the front.

Narrowing the vital channel, tongues of lava reach for the cliffs on the other side of the harbor entrance (right). One islander eyed the land extension and

observed, "If it stops now, we will have a better port." Eternally optimistic, villagers made plans for ash removal even as parts of their town continued to disappear. Aware that the house-burying lava field cannot be moved, Mayor Magnús Magnússon shrugged and said, "We will wait until it cools and then build more houses on top of it."





Вид на город





Man's handiwork bows to terrestrial change as lava slowly engulfs a cluster of houses. In the

gagging back up the stairs and out the door to fresh air.

A few weeks later the deadly gases claimed for Kirkjufell its first human fatality—a fisherman who had wandered into a cellar.

Incredibly, throughout my stay the indomitable spirit of the northmen never waned. "Come with us tonight, we are going to have a lava party by the volcano," said Icelandic folk singer and journalist Árni Johnsen. On a knoll at the foot of the cone we scooped away a foot of ash to bare a ready-made bed

of red-hot coals for barbecuing steaks (page 62). As Árni whanged his guitar with a vengeance, some 15 Icelanders faced the shower of magma and defiantly bellowed tunes—including the American protest song "We Shall Overcome."

With a cod fisherman named Hjálmar Jónasson I stood at the harbor entrance one evening and stared at the steaming hill that now touched the breakwater. A ship normally used for dredging lime deposits from the ocean floor poured water on the projection,



REUTERS/JOHANNES

face of nature's devastating power, villagers calmly awaited the final fate of their island home.

and another ship pumped more water to nozzles several hundred yards inland.

"If the volcano does not stop soon, I will have to go into another business, because my boat is too small to operate from the mainland ports," said Hjálmar. "But no one can say when it will stop for sure. I have only my dreams that it will before too long." Bidding me a courteous *bless*, he set off along the breakwater toward town, a solitary, determined figure disappearing slowly into a heavy-hanging sulphurous cloud.

I had seen enough of these modern Vikings to know that they would be disheartened but never defeated by the volcano, regardless of what happened to their once-beautiful town. Weeks after I had left Iceland, reports of their gallant struggle would drift after me.

"We have not yet given up hope," came the cheerful message from my friend Páll Steingrímsson, even as the news was all of burning houses and crushed fish factories.

"And we are still singing," he added, "harder than ever." □



Cuba's Exiles Bring New Life to Miami

By EDWARD J. LINEHAN
ASSISTANT EDITOR

Photographs by
NATHAN BENN

Ready for a new life, a Cuban refugee steps jubilantly from a chartered "freedom-flight" plane in Miami. Hands of welcome reach out to greet the newcomer, one of some 600,000 Cubans to find haven on United States soil since Fidel Castro assumed power in 1959. About half of them have settled in and around Miami—hardly more than a sigh away from their beloved island across the 90-mile-wide Straits of Florida.

IT IS NOT YET THE TIME FOR TEARS. The end of the old life lies only 45 minutes behind them, at Varadero airport in Cuba. The emotion of this moment is delayed, dammed up against a wall of bewilderment and apprehension.

This lot is old, in their sixties and seventies, and some will need the wheelchairs waiting at the foot of the ramp. Dressed in dark, threadbare Sunday best, they blink in the strong Florida sun and file out of the chartered airliner slowly, carefully, very quietly. One gaunt gray-haired woman breaks, and sinks to her knees on the concrete apron at Miami International Airport. She crosses herself and cries, "*¡Gracias a Dios!*" Others lead her gently to a waiting bus. It is not yet the time for the tears.

Half an hour later they sit patiently on metal chairs inside a dowdy old building in a distant corner of the vast airport. An official of the Cuban Refugee Program of the U. S. Department of Health, Education, and Welfare steps forward to tell them of the customs, immigration, public health, and refugee registration formalities awaiting them.

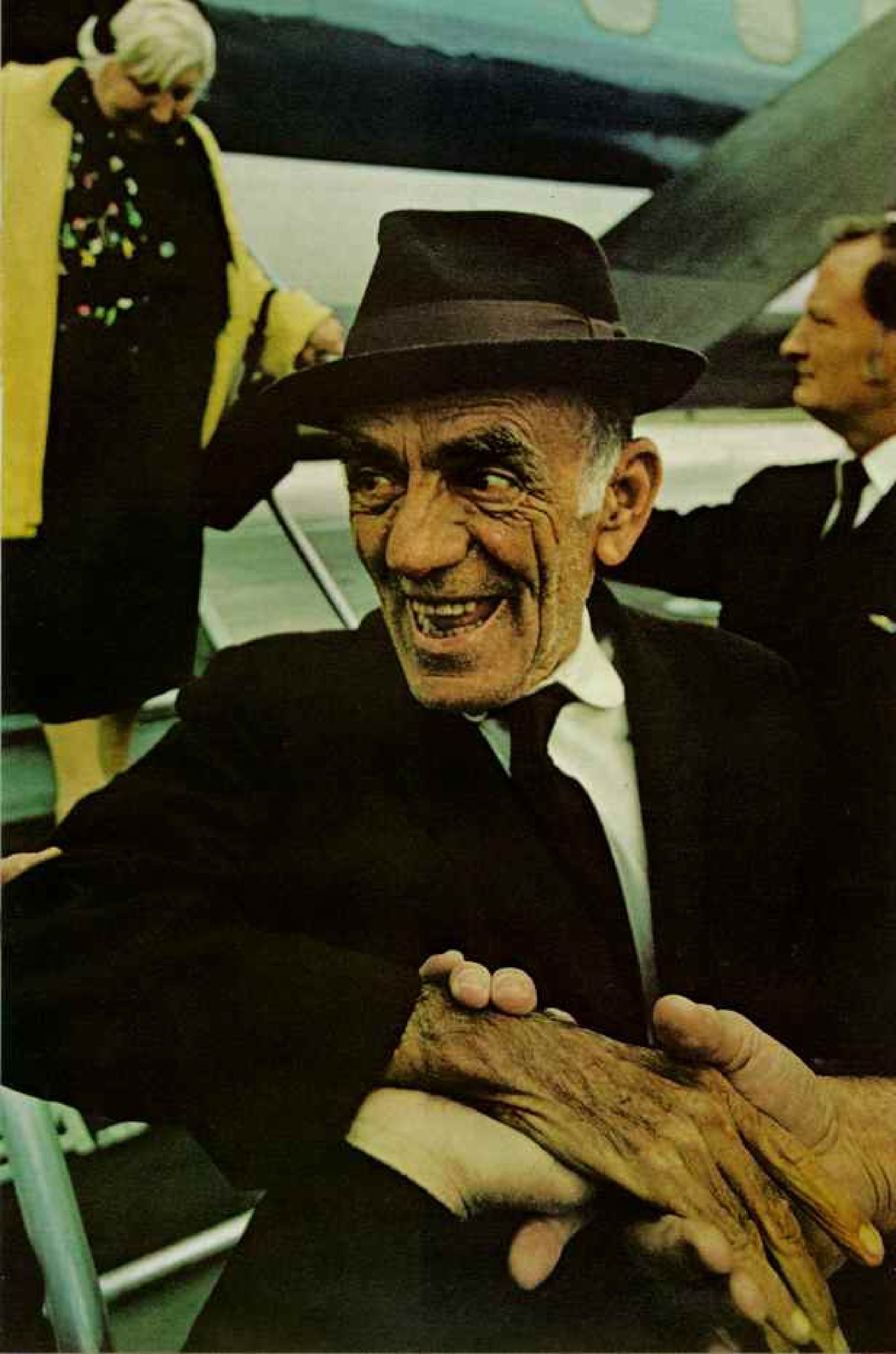
"*Su atención, por favor,*" he says, and proceeds in Spanish: "I want first to wish you the most cordial welcome in the name of the people and the President of the United States." He pauses. He always has to pause here.

Shouts of "*¡Gracias!*" drown him out; applause spatters and laughter swells through the little room. A woman in the first row rushes forward and embraces him impulsively. The dam has broken, and 88 Cuban refugees realize at last that they have touched freedom.

Now it is time for the tears.

Except for a throng of relatives and friends waiting to greet them at nearby Freedom House—a dormitory-like way station maintained by the Cuban Refugee Program for incoming exiles—Miami paid little notice to the arrival of 88 more Cubans. They have been streaming into Florida since 1959, when Fidel Castro led a band of guerrillas into Havana and set up a kind of government Cuba had never seen in all its turbulent history.

Cuba's exiles, in turn, have left their indelible mark on Miami. Over the past dozen years they have boosted its economy, spiced its culture, and established an enclave of several hundred blocks so thoroughly Cuban that no one would think of calling it anything but "Little Havana."



No one is sure how many Cubans now live in the greater Miami area; they can be found almost everywhere in the 27 municipalities—including glittering Miami Beach—that comprise metropolitan Dade County. The latest census, in 1970, counted nearly 218,000.

Stephen P. Clark, who was mayor of Dade County when I met him last year, thought the figure was closer to 300,000—more than a fifth of the county's population.

"For a time we had as many as a thousand refugees a week pouring in here," Mayor Clark told me in his office in the towering Metropolitan Dade County Courthouse. "About 20 percent settled here immediately. But some of those who went elsewhere soon drifted back to Miami; Cubans were born in a tropical climate, and they like it here."

If Cubans find Miami's climate to their

liking, Miami has found the Cuban influx equally salubrious.

Mr. Clark chose his words carefully. "Now I'm not saying that Dade wouldn't be the best county in the world even if we didn't have the Cubans," he said. "But look at the economics alone. Cubans contribute about 800 million dollars to the gross product of this community annually—a sizable contribution, let me tell you."

By any indicator, their impact has been, to say the least, profound. Cubans now own and operate more than 7,000 business establishments in Dade County. They range from the Suave Shoe Corporation—a computerized plant worth 55 million dollars, employing 3,000 people—to a one-man art gallery on Southwest 8th Street. It measures 19 feet long by 46 inches wide.



Four Cuban-run radio stations and one TV channel now broadcast full time in Spanish. Four theaters show only Latin films; others present films with Spanish subtitles. One daily newspaper, *Diario Las Americas*, has reached a circulation of 63,000. More than a score of other Spanish newspapers and magazines circulate through the community.

Cubans run 17 private schools and about a dozen clinics. A Cuban-published phone book devotes the bulk of its 376 pages to Latin-American names and businesses in the Miami area. Cuban Rotary and Lions Clubs have been established, and a Latin Chamber of Commerce serves the Cuban business community.

Cuban builders are involved in more than 40 percent of all new construction in Miami—including the brand-new, 40-story One

Biscayne Tower, Miami's tallest skyscraper (following pages). Hotels—the area's life-blood—are staffed more than 50 percent by Cubans. Skilled Cuban seamstresses have made the city's garment industry one of the top ten in the United States. Latins operate three of every five service stations in Miami.

The exiles have brought new vigor and color to this sun-washed city of pale earth and chalky concrete. They have filled many streets with loud, staccato Spanish speech and insistent Latin rhythm. They have launched Miamians on new gastronomic adventures in scores of Cuban restaurants.

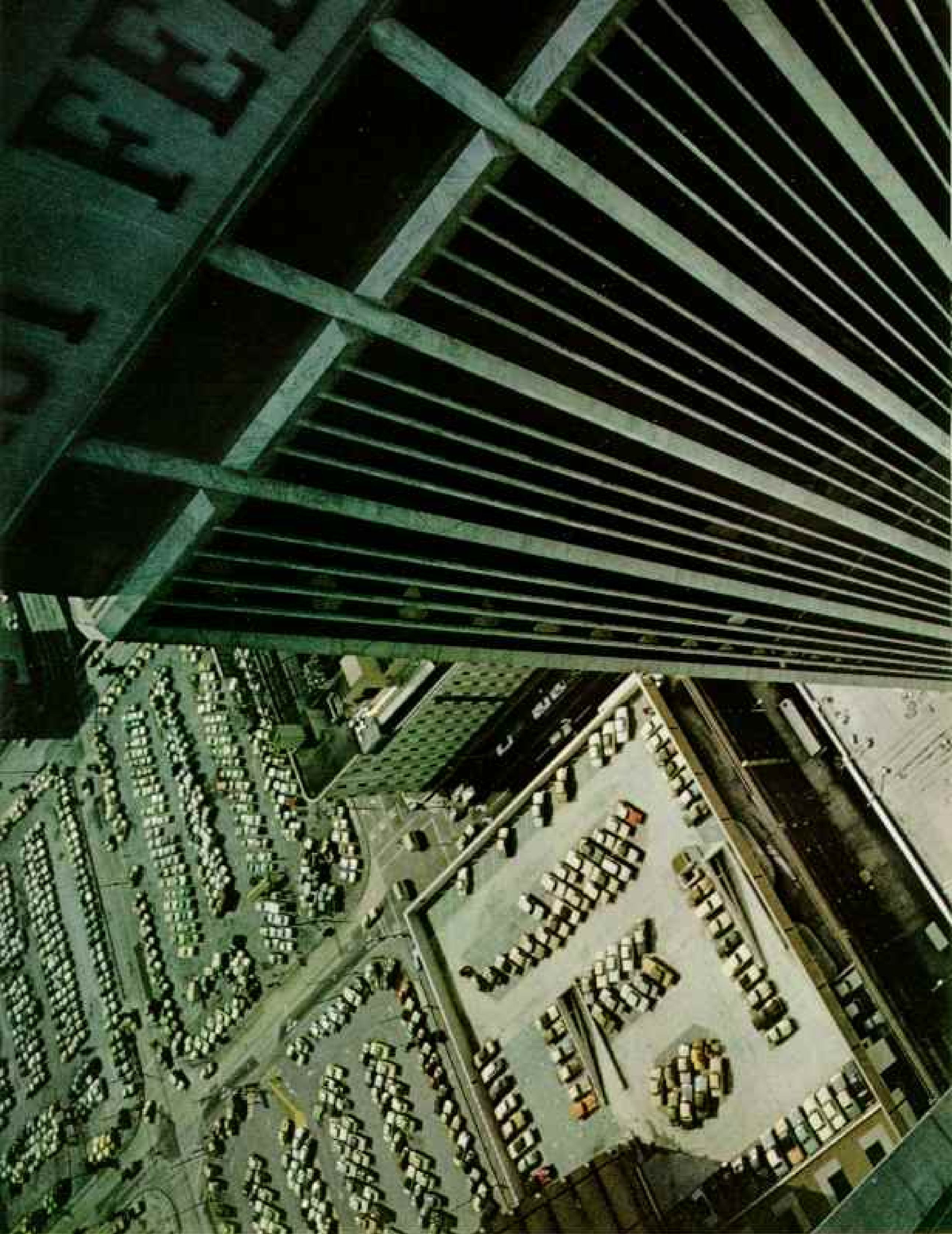
But more important than any of these things, I suspect, they have prompted many to reexamine a few old values and principles.

For several weeks recently I wandered about Miami talking to Cuban exiles—



"Little Havana," Miami's Cuban enclave, sprawls across hundreds of blocks where scarcely a word of English can be heard amid lilting Spanish accents and Latin rhythms. Signs in some shop windows read "English spoken here."

Makeshift marquee on West Flagler Street (left) lists a rainbow variety of ice-cream flavors, most derived from popular Cuban fruits. Passersby (above) pause for a pick-me-up *cafecito*—a minicup of jet-black coffee downed in two searing gulps.



At the pinnacle of success, real-estate developer Henry Gutierrez—a penniless refugee 13 years ago—looks out with architect Pelayo Fraga, left, from an upper floor of a recent project,



One Biscayne Tower. Sharing the skyline with an adjacent skyscraper, the 40-story building—tallest in south Florida—stands as a monument to the enterprise of hardworking Cuban exiles.



wealthy ones, poor ones, but mostly average, middle-class people who found life intolerable under Communism. They were friendly, courteous, and voluble, and in their Spanish-English speech I was struck most by repeated phrases that seemed to echo another era of American life—still uttered with almost ferocious sincerity:

“Hard work, enthusiasm . . . and giving \$1.25 for every dollar you earn.”

In his paneled office, the president of the Fidelity National Bank of South Miami, Carlos J. Arboleya, expounded on the theme.

“I was chief auditor of Cuba’s largest bank when Castro nationalized the banks in October 1960. I resigned the same day. I believed too strongly in freedom and democracy and the free-enterprise system; I definitely could not work for a Communist regime.” A stocky, vigorous man in his mid-forties, he chopped the air with his hand as he spoke.



Square knots and square deals. Bank president Carlos Arboleya teaches knot tying and a philosophy of hard work and fair dealing to a local Boy Scout troop. A Havana banker in pre-Castro days, Arboleya fled Cuba in 1960. Starting anew in Miami as a \$45-a-week factory clerk, he has reclaimed the ladder of success.

Latin chic of old Havana meshes with Las Vegas-style showmanship at the Flamenco Supper Club. Former Havana nightclub operators run this posh Miami night spot. Waiters and waitresses become performers (left) during a spectacular floor show.

“I specialize in long hair,” says tonsorial artist Louis Hernandez, who learned the trade in Cuba and now wields scissors and comb at his supermod Circle Men’s Hair Styling in Coral Gables.

NATHAN BROWN (ABOVE); FLIP SCHULZE, BLACK STAR

He arrived in Miami with his wife and 2-year-old son and \$40 in his pocket in the middle of a bus strike. For weeks he walked the streets looking for work in any of the area's 69 banks, but all found him "over-qualified." Finally a shoe factory hired him as an inventory clerk at \$45 a week.

"I didn't know a thing about shoes when I started," he reminisced, "but when the bell rang at quitting time and everybody dashed for home, I'd sneak into the factory and tear a pair of shoes apart to learn how they were made." In a year and a half he was vice-president and comptroller of the company.

In 1962 he took a cut in salary to return to his first love, banking. In 1968 he became president of Fidelity National Bank, a U. S. citizen, and one of the most inspiring success stories in Miami's Cuban community.

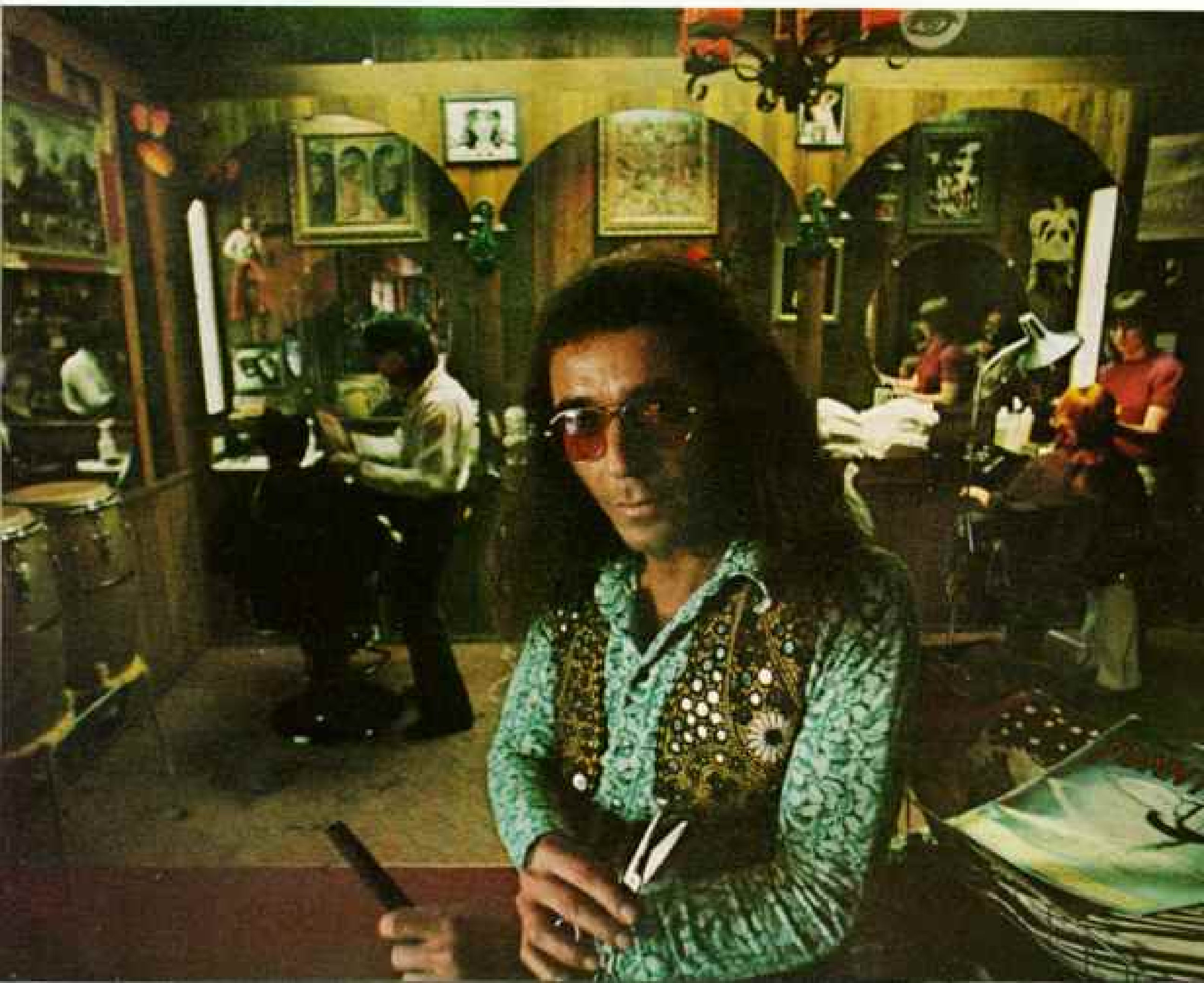
"There is no question that the Cuban colony here is a very successful one," Mr. Arboleya told me, with evident satisfaction. "Why? Hard work, enthusiasm, involvement, and giving \$1.25 for every dollar you earn—that's

what pays off. You know, people come in on these airlifts and they send them up to New York or Chicago, all over the country. They work two or three jobs. The wife works, everybody works. In a couple of years they come back to Miami. Almost every day one of them walks into this office and sits where you're sitting and says: 'Look—I've saved up \$10,000 or \$15,000. I want to deposit it in your bank and you to help me find a business to buy or start.'"

"Take pride in the job you're doing."

Behind a plain storefront on West Flagler Street, I heard those words spoken by José Orlando Padrón, who, with his father-in-law, Vicente Matilla, owns the firm of Padrón Cigars. Both had been tobacco growers in western Cuba.

They arrived in Miami a decade ago, separately and penniless. Now their firm is one of only a handful that make acceptable substitutes for genuine Havana cigars, unavailable



Salute to the past: A member of the Cuban military in pre-Castro days snaps to attention as he reminisces about his army career. He works in West Miami on a Cuban-owned farm whose crops—*boniato* and *malanga*—are potato-like staples of Cuban cooking.

Art of the hand-rolled cigar has not been lost among Miami's Cubans. Craftsman's fingers (below) add the wrapper to a cigar at the shop of José Oriando Padrón. Tobacco for the fine products was grown in Nicaragua from seeds smuggled out of Cuba.



FLIP SCHOLKE, BLACK STAR (1981)



in this country since the 1964 embargo on Cuban products. Their secret is twofold: tobacco grown in Nicaragua from Cuban seed, and the enormous pride in craftsmanship of refugee Cuban cigar makers.

Mr. Padrón, a serious, square-jawed man of 46, arrived in Miami via Spain and New York, a common route of exodus from Cuba. He washed dishes and worked as a carpenter and gardener along the way.

"But when you work with tobacco for

many years," said Mr. Matilla (with, I am sure, unintentional, mordant humor), "it gets into your heart, into your blood." Mr. Padrón scrimped, leased the shop, built worktables, and in 1965 opened his cigar factory.

"Then I joined him with my wife and daughter," said Mr. Matilla. "It was very difficult for us at the beginning, but all of us were working hard, pushing that cart to make it go, looking only for the future—do you understand?"



"We found the people here in Miami were anxious to have a good cigar. Cubans know cigars, how they are made, how tobacco is processed, how to smoke them—they are good smokers, Cubans. As they prospered, so did we. Last year our sales were \$443,000."

In a workroom as aromatic as a humidior, I watched some 20 Padrón cigar makers hunched over their wooden tables, selecting and trimming strips of rich brown leaf to achieve the proper blend.

"Look at his hands," Mr. Matilla said. "Fingers like a pianist!" Indeed, the gray-haired virtuoso before me deftly trimmed and rolled the silky leaf with a touch that seemed almost pianissimo (facing page). Swiftly the cigar grew into a nine-inch-long Gigante, swaddled in a dark *maduro* wrapper. Finally it nestled with two dozen others in a fragrant cedar box. They would retail for \$40.

"In Cuba," said Mr. Padrón, "a cigar maker used to serve an apprenticeship of four years,



sweeping floors, learning everything about tobacco. You watch these people—when they finish making a cigar they look at it, turn it, see if it is right or not. You have to take pride in the job you're doing."

Mr. Matilla nodded gravely and added: "When you come here and you are looking only at the clock, believe me, you don't go far. But I have great faith in the United States. There are millions here who are working hard. No matter if some are in the streets crying, or throwing stones."

I walked out onto West Flagler Street, puffing a fine Padrón Presidente. Reflectively.

West Flagler Street is one of two main business arteries of Little Havana (pages 70-71). The other is Southwest 8th Street—Calle Ocho to Cubans, the Tamiami Trail to American tourists. Around them spread block upon block of bungalows—many old but tidy—and modest apartments. Occasionally one sees a toylike religious shrine piously emplaced on a postage-stamp lawn, but little else distinguishes this overwhelmingly Cuban residential district from any other low- to middle-income area of Miami.

A dozen years ago, Southwest 8th Street was a hardened artery. Many stores stood vacant, boarded up. Attracted by low rentals, Cuban refugees moved into the surrounding neighborhood and revitalized the business district. Today Little Havana still serves as a sort of staging area for refugees until they can afford to move on to Hialeah, Coral Gables, Westchester, or other suburbs, to blend into the greater Miami community.

I often strolled Calle Ocho, absorbing its sounds and sights and aromas. Here Spanish is all-pervasive; amid hundreds of snatches of conversation you will not hear a word of English.

"*Oigame...*" says a businessman briskly, gripping his companion's arm. "Listen..." And "*Digame...*" his friend replies, "Tell me..." The rest is drowned by the whoosh of traffic and a horn blowing with Latin abandon. Radios blare Cuban tempos from WFAB—*¡La Fabulosa!*—or today's anguished installment of a Spanish soap opera from competing WQBA—*¡Su Cubanísima!*

Sunday afternoon warriors turn an empty lot on Southwest 8th Street into a verbal battleground, where friendly domino games can lead to heated political squabbles. A frequent subject: the latest doings of Alpha 66, a Miami-based exile group whose claimed acts of sabotage in Cuba embarrass Washington as much as they infuriate Havana.

Block after block, the street is lined with Cuban shops—*farmacias*, *panaderías*, *mueblerías*, *ferreterías*—selling patent medicines, baked goods, furniture, hardware. In open-fronted *bodegas*, grocery shoppers browse among heaps of *plátanos* (plantains), papaya, and root vegetables like *boniato*, *malanga*, and *yuca*.

Dozens of *cafeterías* invite the stroller to pause for a cup of coffee and a "sandwich Cubano"—ham, cheese, and pork tucked into a slender crusty loaf. Calle Ocho's restaurants serve such standard Cuban fare as *arroz con pollo* (chicken and rice), *ropa vieja* (shredded beef, literally, "old clothes"), and the ubiquitous *moros y cristianos*, the Cuban's whimsical name for black beans and white rice.

At Vizcaya, founded by a refugee and now one of Miami's most popular restaurants, I dined on a fine saffron-tinged paella, and asked for the owner, so I could compliment him.

"There is no longer one owner, señor," the waiter told me with a touch of pride. "This is now a corporation!"

I admired the murals on Vizcaya's walls: Basque village scenes, and white-clad jai-alai players. The artist, I learned, lived nearby. And from him, in turn, I learned something more of the Cuban's nature.

"One must have faith in God, above all."

At 56, Teok Carrasco has hair the hue of Toledo steel and the patrician features one sees in old Spanish portraits (next page). He should be wearing a starched ruff about his throat, I thought, and a slender sword at his side, instead of a simple sport shirt. Yet he was born in Cuba. As a boy he taught himself to draw with crayons on wrapping paper. Today many people regard Teok as one of the world's leading muralists.

"*Mi casa es suya*—my house is yours," he said in the time-honored phrase of welcome, and shoved a canvas off the couch. His paintings covered the apartment walls, and dozens lay stacked on the floor.

"I have just become an American citizen,"

he said, and showed me a letter of thanks from President Nixon for a painting of Abraham Lincoln he had sent to the White House. And he spoke of times in Havana when he re-fought the Spanish Civil War with Ernest Hemingway, mapping old skirmishes on scraps of paper at the Floridita café. He had fought for principle in Spain—he showed me his legs, terribly scarred—so how could he abide life under Castro?

Teok's paintings have hung in half a dozen of the world's capitals. They adorn the Pan American Bank of Miami and the Pan American Hospital. But we went to the site of what will be his crowning achievement.

"Are you a religious man? I am," he said. "I think one must have faith in God, above all." Beside green Biscayne Bay, we pulled up to the foundation of the Shrine of La Virgen de la Caridad del Cobre, the patroness of Cuba, a \$420,000 edifice being built by contributions of exiles in Miami.

The artist described how the shrine's hexagonal walls—symbolic of his homeland's six provinces—would soar to a pinnacle. Its altar, naturally, will face over the sea toward Cuba. And inside he will cover the walls with a panoply of man—his good and evil, peace and war, man's conquest of the moon, and his surrender to the earth. "This is what I was born to do," he said.

Later he showed me half-finished murals he was painting in a restaurant on Calle Ocho, depicting the life of Don Quixote. As I surveyed the sepia sketches of that gaunt, indomitable crusader on a bony horse, it struck me that Teok Carrasco, too, carries a lance.

"I think you like Don Quixote," I observed.

"I *am* Don Quixote," he replied, with only the faintest of smiles.

"You got to have respect for the law."

About a third of the people of the City of Miami are Cuban. "In theory they should produce about a third of our crime," Miami Police Chief Bernard L. Garmire told me. "Yet they account for only 10 to 12 percent of criminal arrests. Much of the crime in Little Havana is committed by outsiders who come in and victimize the Cubans."

Some Miamians take a dim view of Cubans' driving habits. I, too, noted a few who seemed to accept a stop sign more as a challenge than a directive. But the exiles have committed only one notable breach of the peace.

When the Soviet oceanographic research ship *Akademik Kurchatov* put into Miami for a four-day visit in March 1972, it was more than the ardently anti-Communist Cubans could bear. In impromptu alliance with members of the Jewish Defense League, they picketed the vessel, and minor scuffling broke out between demonstrators and police.

Later, attacks were launched by sea and air. A floating explosive device, apparently intended to drift toward the vessel with the tide, blew up harmlessly half a mile away. And someone in a low-flying plane dropped a cluster of Cuban flags, along with a can of green paint. They missed by 40 feet.

One afternoon, inside a white air-conditioned patrol car, I rode down Calle Ocho with Officer Robert Rogers Yee. Between



CLIP MULLER, BLACK 1968

His idol: the man of La Mancha. Cuban artist Teok Carrasco (left) poses in his Miami studio beside a recent painting of Don Quixote. Accustomed like most exiles to jousting with the windmills of destiny, Carrasco finds a special relevance in the adventures of Cervantes' hero.

Foot tends the tiller, hands manage the line as Antonio Llorens fishes for snapper off Key Biscayne. Inured to a dawn-to-dusk workday, he rarely takes time for lunch. "My cigar is my food," he grins. In the past decade thousands of small craft like his carried their owners to a new life in the United States.



calls that spat brassily from the police radio, he spoke to me of Cubans and the law.

"They say, 'You got to have respect for the law.' Many don't really understand our system of justice—how a man can kill somebody, and later it turns out he'd been out on parole or on bail from another crime. You'll hear them talk about it all the time."

Of Cuban-Chinese extraction, Bob Yee speaks of Cubans as "they," for he was born in New York City. "Oh, the kids are learning American customs pretty fast," he went on. "Some of them are discovering drugs and car theft, for example. But the ones in their twenties and thirties or older, they're very law abiding, very respectful of this uniform.

No Cuban has ever called me 'pig,' or 'fuzz.' I've had them come up and say, 'Anything I can do to help, you can depend on me.' And they really mean it—I think many of them would risk their lives to help a policeman."

We stopped at the sidewalk counter of La Caridad cafeteria to toss down a tiny cup of Cuban coffee—strong, black, and sweet.

While Bob and the owner exchanged pleasantries, a customer argued with the owner's wife in rapid-fire Spanish. He owed her two dollars, I gathered, but had only a twenty-dollar bill. She could not change it.

"Take the twenty and I'll come back later for the change," he insisted.

"No," she said resolutely. "Keep the twenty.



When you come back later, *then* you pay me the two dollars."

"No," he replied. "You keep it and . . ."

We left before the dispute was settled.

"Look there," Bob said. At an intersection ahead a stalled car with Pennsylvania tags was blocking traffic. As we watched, another driver pulled alongside it. "Bet you anything the guy who's helping is a Cuban."

He was right. The Samaritan took no more than a minute to link the batteries with a pair of jumper cables and send the stalled motorist on his way. His own car bore the bumper sticker one sees everywhere in Little Havana: "*Volveremos—We shall return.*"

"Like I said, they'll go out of their way to help you," Bob continued. "But on the other hand they won't tolerate abuse, from police or anyone else. Cubans are too conscious of their rights as human beings. After all, that's why they're here."

He dropped me off at the parking lot where I had left my car. "A couple of weeks ago I picked up a Cuban kid joyriding in a stolen car," he said. "I brought him in and called his father to come and get him. Believe it or not, the old man cried. Said he'd rather be dead than see his kid standing there, arrested, bringing such shame on the family."

"To us, the family means everything."

The only time I could meet Señor Idefonso Alsina, his wife, and all their children together was late at night in their rented ranch-type home near the old Tropical Park Racetrack. Five of the six children attend school, and three of them hold jobs as well. Mr. Alsina is usually out during the day looking for work, but he is hampered by poor health and—every refugee's biggest problem—the language barrier. In Havana, he told me, he had owned a small meat-packing plant, expropriated by the government.

"When we left Cuba three years ago," he said in a voice chronically hoarse, "according to Castro we were *sin patria*—we had lost our country. But you cannot lose the country in your heart. You gave us a welcome and a chance to rebuild our lives. *Ahora, siento amor por dos países,*" he added with a smile. "Now I feel love for two countries. *¿Es un problema?*"

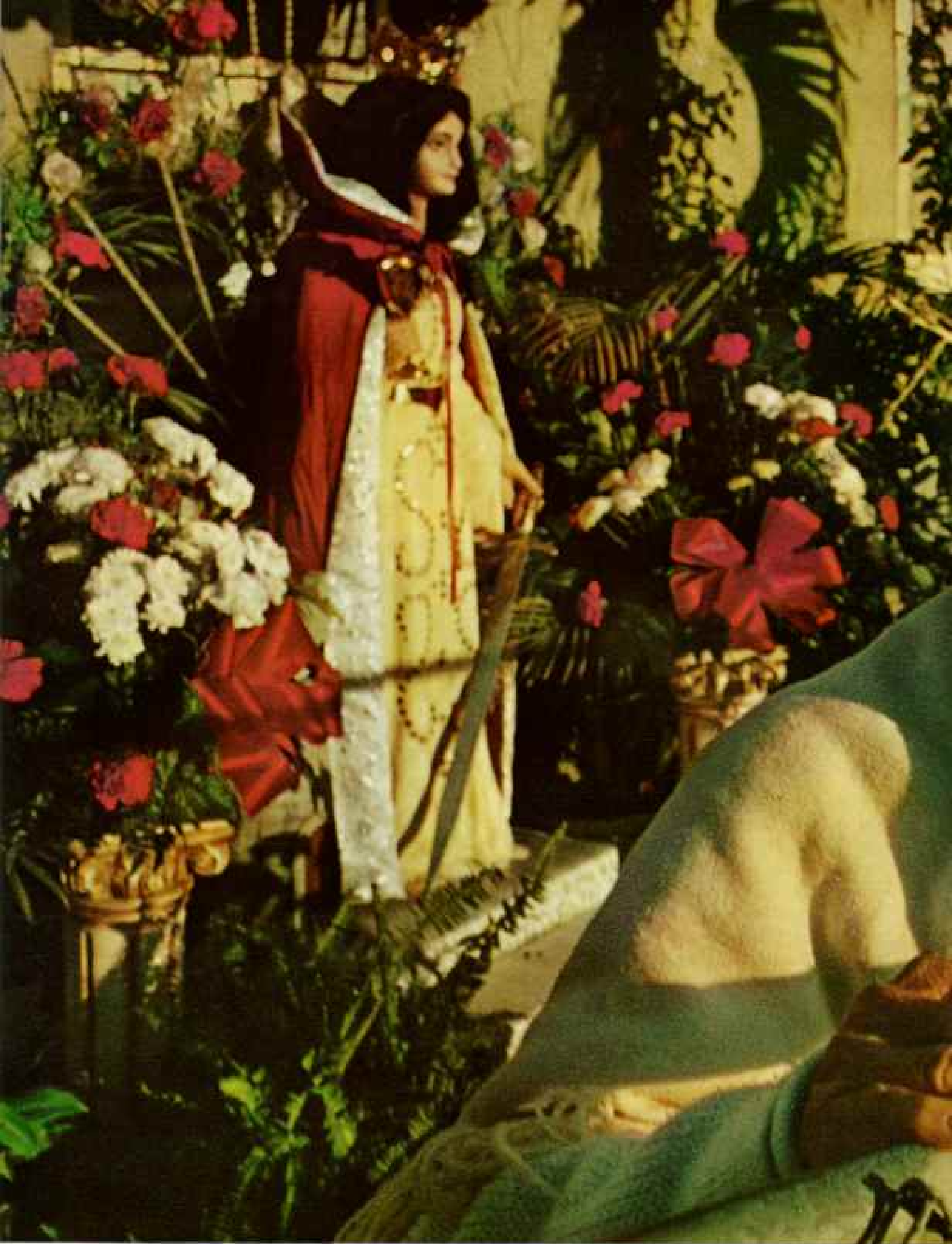
At 11 p.m. his eldest daughter, 22-year-old Aida, came home from her chemistry classes at Florida International University. Days, she

Barefoot balladeer, high-school student María López serenades herself at Crandon Park (facing page). The beach on Key Biscayne is a popular weekend haunt for the younger generation of Cuban exiles. María's songs dwell mostly on love and the dreamed-of-day when her people will be able to go back over the water to Cuba.

Daughter of the Cuban work ethic, Aida Alsina (below) holds down a part-time job as a laboratory technician. Evenings, she studies chemistry at a local college, then rushes home to pitch in with chores. Such hard work and self-sacrifice characterize the Cuban exile family.



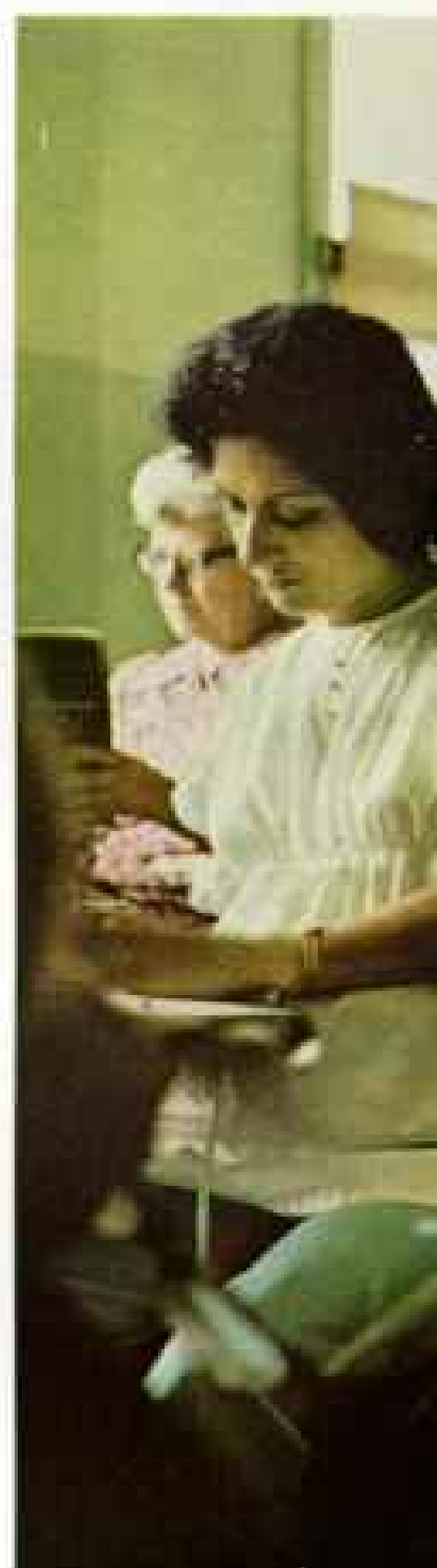
GET IMAGES



Keeping the faith in a flower-bright garden shrine, octogenarian Regina Espinosa



bedecks an image of St. Barbara with red carnations and white chrysanthemums.



Absorbing the old culture, children of exiles attend an after-school course in Cuban history at Miami's St. John Bosco Catholic Church (above). Says a parish priest: "Once we worried that the kids wouldn't learn English. Now we worry that in a couple of generations they won't know Spanish!"

Battling a new language, students at Miami's free English Center struggle with the intricacies of grammar. Refining his knowledge, former Havana attorney Arturo Zaldivar hopes to pass the Florida bar examination.

studies and works as a laboratory technician. Her sister, Josefa, is also a lab assistant, and a brother, Ildefonso, Jr., works at a gas station. Both also attend high school.

"Every minute, somebody in this house is either going or coming," Aida told me. "We're building a new life, and it will take time. But believe me, this family is going to *make* it."

The family's pet white rabbit (a refugee from Aida's laboratory) nibbled amiably at my shoelace as she spoke.

"It has not been easy for us here. But in Cuba it was much worse. It was not the lack of food, or the lack of things. It was the lack of a chance to make our own lives, even to have our own thoughts. Not everybody can get used to feeling like an animal, or like a slave. In Cuba now when they tell you something, you cannot ask, 'Why? Why is that so?'"

"In school there they tell you, 'Aida, you don't have to love your family any more. All Cubans are now one big family. Just because you were born from your mother doesn't



mean you are supposed to love her. If she is against the government you have to report her.' How can I believe that? To us, the family means everything!"

The younger Alsinas had already gone to bed. In the morning, Aida, Josefa, and Ildefonso faced a school- and workday of 12 to 17 hours. I said good-night.

"We always try at least to be together on Sunday," Aida said. "Sometimes when I am asked to go to a dance or to the beach on a weekend I say no, I want to be with my family."

The beach, of course, is the area's primary focal point. Each year it attracts 11.5 million visitors, who spend 1.5 billion dollars in fervid search of sunshine and pleasure, principally among sumptuous hotels lining the famous sands of Miami Beach.

To most Cubans, though, the "beach" means Crandon Park on Key Biscayne (page 82), or what they call "Eden Roc beach"—a pocket-size public park adjacent to the luxurious resort hotel of that name. On one

Sunday stroll along the sand I paused between that palace and that park and absorbed the balmy essence of Miami Beach.

Offshore, fishing cruisers patrolled the glinting cobalt stripe of the Gulf Stream. Overhead, a sight-seeing blimp crabbed across the breeze and a plane towed a streamer urging vacationing nurses not to go home. "WORK HERE," it said. "ST. FRANCIS HOSPITAL NEEDS YOU."

To my left, pallid Northerners arrayed on padded hotel chaises dutifully basted themselves with suntan oil, awaiting the correct hour for bingo or cocktails.

To my right, next door, hordes of Cubans were having a ball.

I turned right and picked my way through beach towels, picnic jugs, and transistor radios blaring Latin rhythms.

"¡Ay, la cabeza!"

The warning to duck came too late, and a beach ball thumped lightly against my head. A young dark-haired beauty in a blazing



Revel with a cause: Castanet-clicking flamenco dancers and crusty Cuban sandwiches are among the attractions at



a *romería*. The picnic was staged, in part, as a devotion to the Virgin of Charity of El Cobre, Cuba's patroness,



in whose honor Miami Cubans are building a \$420,000 shrine.

The graceful structure of stone and

glass will rise imposingly from Miami's shoreline, its altar facing southeastward toward Cuba in symbolic gesture.





Scoring a slashing goal, the predominantly Cuban soccer team of Miami Senior High battles a rival school's varsity. While keeping up an avid interest in soccer—or *fútbol*—Cuban youths of Little Havana join with equal enthusiasm in sandlot games of *béisbol* and *fútbol americano*.

Sack races add to the fun at a *romería* staged by Miami Cubans from Oriente Province. Exiles from each of Cuba's six provinces stage such an outing once a year, giving an emphatically Latin flavor to Miami's calendar of events.

bikini apologized profusely. "*No importa,*" I assured her, and tossed it back.

The irresistible beat of bongo drums drew me to a corner of the beach where two teenagers sat on a low seawall, palms and fingers flying across the taut skins. Others clustered around, swaying and singing "*¡Ay, Mamá Inés!*" punctuated with laughter and shouts of "*¡Arriba... Arriba!*"

One youth in frayed cut-off blue jeans and dark moustache launched lightly into a *décima*—the improvised verse of the *guajiro* of rural Cuba.

"*Aquí estoy en Miami,*" he sang, "*a causa de Fidel—Here I am in Miami... all on account of Fidel...*"

"We will die, if we must, for the freedom of our country."

They are all in Miami on account of Fidel. And every day Fidel Castro's overthrow is plotted in a dingy storefront office on the outskirts of Little Havana. Here I met officers of Alpha 66, one of the most active of the few remaining militant Cuban exile groups.

With the Bay of Pigs fiasco painfully in mind, the United States Government keeps a watchful eye open for illegal activities by such groups. Still, Alpha claims credit, in past years, for 16 hit-and-run attacks on the coast of Cuba, three larger landings, and frequent acts of sabotage on the island.

"Not long ago at Regla, near Havana, our people blew up the oil refinery—the explosion was heard for miles," said Andrés Nazario, the general secretary of Alpha 66. A small gray-haired man with black-rimmed glasses, he looks more like the *comerciante*—the merchant—he was in Cuba than like a dedicated counterrevolutionary.

As we spoke in the cluttered office, another Alpha member, Emilio Hierrezuelo, paused from sticking address labels onto envelopes and discreetly jammed a chair under the door-knob. We would not be disturbed. Like Nazario himself, Emilio was on probation. The United States Coast Guard had picked him up some months earlier trying to run a boatload of guns to Cuba.

"All over Cuba our people are setting fire to cane fields and tobacco warehouses," said a member of Alpha's Executive Board, a handsome dark-eyed woman named Emma Montenegro. "We have thousands of *células*



"We're in a free country now," Manuel Alvarez, 72, says to Eleuteria, his wife of 50 years, as they step off a chartered plane from Cuba at Miami International Airport (above). Seven years earlier they applied to the Castro government for two tickets on a freedom flight.

Amid a welcoming crowd of family and friends (above right), son Alberto Alvarez hugs his mother for the first time in more than a decade. Making an emphatic point, the newly arrived Señor Alvarez (right) discusses his long-range plans with an official of the refugee program.

In the emotion-charged atmosphere, he digresses to speak of unbearable





conditions in Cuba. "Shhh!" breaks in his wife, instinctively fearful, "be careful what you say!"

"Don't worry," Manuel reassures her, "we're in the United States now. You can say anything you want."

On his first full day of freedom, the elder Alvarez goes on a short sight-seeing tour, stopping off (right) at a gas station run by his former business partner in Cuba. Another son, Manuel, Jr., enjoys the happy reunion.



—underground groups, each with three to eight people—all over the island. Ours is a fight that cannot be stopped. We will die, if we must, for the freedom of our country.”

“We are working very closely with Castro’s army,” Nazario asserted. “Our people include some highly placed officers. Now we are preparing a big action to *move* the country!”

Emilio removed the chair from the door with a cheery, optimistic smile, and I left.

All Cubans in Miami share the hopes of Alpha 66, but few are as optimistic. About 15 percent have become U. S. citizens, and as the months and years of exile slip by, many more will do so. Still there are some—particularly among the elderly—who find it difficult to adjust to life here.

When I stopped for gas at Johnny Fumero’s service station, his 75-year-old father filled the tank and polished the windshield. “Are you happy here in Miami?” I asked.

He would not go that far. “*Tranquilo*,” he conceded. For 41 years he had prospered as a dentist in Cuba. Now it was probably too late to undergo retraining and qualify to practice his profession in the United States.

And I suspect that some people, like Erasmo

Castro, have succumbed to creeping despair and will never adjust at all. A balding man with skin the color of polished walnut, he spent most of his life as a fisherman on the south coast of Cuba. When told he could no longer sell his fish to whomever he pleased—that the state would buy it, or no one—he balked, and set sail one night with seven others. A tanker picked them up 11 days later off the coast of Texas.

Today Erasmo shares a tiny apartment near the Miami River and catches snapper, grouper, and lobster off the Keys. He can choose his buyer now, but it is not the same.

After a decade in Miami he still speaks no English, though he can study it free at the English Center, sponsored by the Cuban Refugee Program, as thousands of others have done. He shrugs a hopeless shrug.

“*Al pescao no le importa la lengua*,” he said. “To the fish, the language doesn’t matter.” And melancholy flooded his voice: “Oh, I know this is a good country. But it is yours, not mine. When someone takes your country away from you, you have lost everything.”

Many suffer the same yearning for their homeland, but none I spoke to would return



WITH BY FLIP SCHILKE, BLACK STAR

Symbols of courage, boats that carried Cuban refugees to freedom lie abandoned at the U. S. Coast Guard Base in Key West. More than one such craft has been found bobbing empty after storms in the Straits of Florida. Of the refugees who made it safely, many see little chance of ever returning to Cuba. Eligible for U. S. citizenship after five years, Cuban exiles (right) take the oath of allegiance at a naturalization ceremony.



until Cuba somehow shakes off Communism, a dim prospect at best.

Meanwhile, the main pipeline to freedom—the refugee airlift—has closed again, probably for good, after flying more than a quarter of a million Cubans to Miami. Thus subsides one of the most remarkable waves of immigration ever to touch U. S. shores. With the negotiation of a recent anti-hijacking pact, there are even signs of a thaw in relations between the two countries.

No doubt determined anti-Communists will continue to seek freedom outside Cuba, as more than 700,000 have so far—some in bizarre and dramatic fashion. One youth survived a sub-zero transatlantic flight to Spain hidden in the wheel well of a jet airliner.

Thousands have crossed the Gulf Stream in an incredible variety of small boats, and on rafts fashioned from planks, bamboo, oil drums, inner tubes, even inflated plastic bags. They have risked merciless sun, sharks, and storms, and over the years the Coast Guard has found dozens of drifting dead.

Still they will come, I am sure. During one hiatus in the airlift, I spoke to several new arrivals at Freedom Tower—the Cuban

Refugee Emergency Center on palm-lined Biscayne Boulevard.

Bruno Dannenberg, a 44-year-old navigator for Cubana Airlines, was no less Cuban for his German name and wavy brown hair. He had been picked up the day before, with five companions, a few miles off Key West.

Bruno rubbed his chafed backside, but made little of the two-and-a-half-day voyage aboard an oil-drum raft, which he navigated with a toy compass bought years before. "We never felt desperate, or close to panic," he said. "We had eight gallons of water, some tins of condensed milk, and enough candy to keep us alive for a week.

"But when you prepare for a trip like this," he added with a wry smile, "the most important thing to put in your bag is your equanimity."

He might have added, I thought, a few other intangible treasures his fellow Cuban exiles have brought with them—simple, shining traits to replenish those that built a great nation: a vast capacity for hard work; unshakable faith in God; respect for the laws of the land; a family united. And above all else, an unquenchable thirst for liberty. □



Bangkok, City of Angels

By WILLIAM GRAVES

SENIOR EDITORIAL STAFF

Photographs by

JOHN LAUNOIS

BLACK STAR

Destined for a temple, a gleaming image of the Lord Buddha endures a delivery truck's ropes in the traffic-choked streets of Thailand's capital. Bangkok and its nearly four million inhabitants constitute a bustling, cosmopolitan amalgam of the Orient and the West. Modern concrete-and-glass office buildings contrast with the timeless grace of Buddhist temples. Monks' saffron robes, military uniforms, and business suits share the sidewalks, where a passerby can nibble hamburgers as well as spicy native fare, then amble through peaceful sculptured gardens or shake to the beat of rock-and-roll. Of such is the ever-changing montage that is Bangkok.

ALL MY LIFE, it seems, I have traveled about totally unaware of my five protective gods. I have made important decisions on inauspicious days, ignored the movement of the stars, disregarded omens and portents by the dozen, and generally given my guardian spirits nothing but grief.

It was time, said Chamnian, to be more considerate.

Chamnian could offer me only a few pointers, for market days in Bangkok are her busiest time. Every weekend from miles around people descend on the capital of Thailand—some to sell, others to buy, and still others to consult a fortune-teller. With more than half a century of counseling to her credit, Chamnian is in great demand; nonetheless she paused long enough to read my fortune.

I would live a long time, she began, studying my palm with thoughtful gray eyes. Despite my neglect of the guardian spirits, I would never have a serious accident. I was new to Bangkok (which was certainly true, for I had arrived only that week), and during my stay I would experience a very strong wish. She looked up from my hand.

"Your wish will not be granted right away," she warned, "but the answer will come in time, for your hand is lucky. And of course you have five spirits to help you—that is enough for anyone."

I asked her then how many guardian spirits Bangkok has, and she smiled at the question.

"More than a man could count," she replied. "Besides, Bangkok is a city of angels."

Gilded Temples Reach for Heaven

In the literal sense Chamnian is right: Bangkok's real name—Krung Thep—means "City of Angels." The name Bangkok refers to a small fishing village that once occupied this riverbank site. In appearance, too, the city suggests an abode of angels, with the gilded roofs and spires of more than 300 Buddhist temples soaring above the great Chao Phraya River like immense columns braced against the vault of the sky.

This is the Bangkok that tourists see—820,000 of them in 1972—and the city that I too found enchanting during a recent visit of almost two months.

But beneath the heavenly aura I gradually discovered another Bangkok, a city first and last of mortals, 3,800,000 by latest estimate, rivaling Jakarta, the capital of Indonesia,



as the largest metropolis in Southeast Asia.

Moreover, the City of Angels faces problems far from celestial, including pollution, overcrowding, poverty, disease, hunger, and rising crime—familiar trademarks of growing cities everywhere.

Thailand's capital lies in a sweeping bend of the Chao Phraya River, the main stem of the great water system that drains the western part of the country from its northern border to the Gulf of Thailand, 25 miles southeast of Bangkok (map, page 100). In area as well as population the city is one of Southeast Asia's largest, extending across 600 square miles.

Citadel of Freedom in Southeast Asia

During an era when violence and discord have ravaged most of their neighbors, Bangkok and Thailand have escaped almost unharmed as outposts of freedom among nations either threatened or already engulfed by Communism.

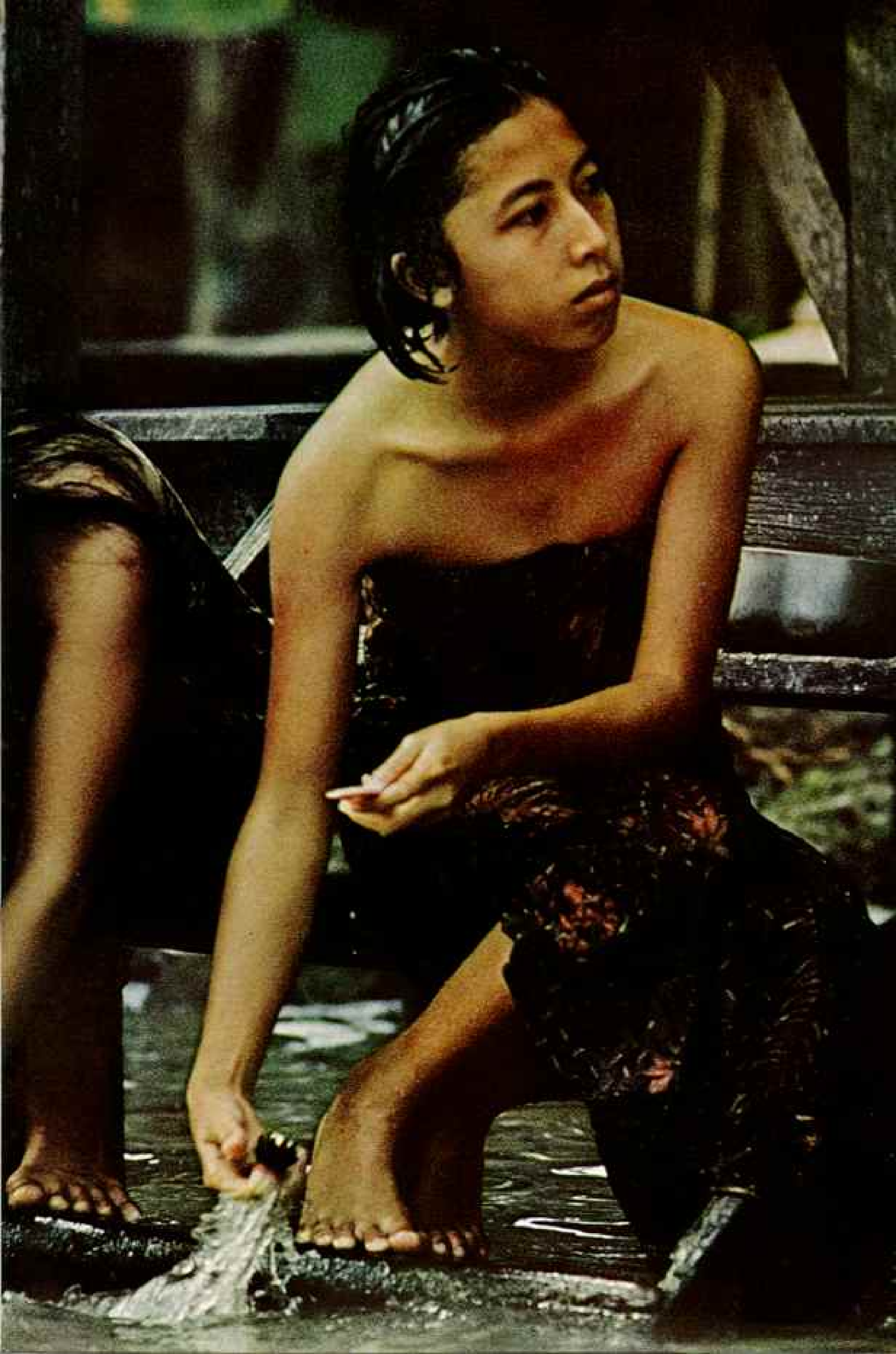
At considerable risk to itself, though recognizing its own stake in Asian security, the Thai nation has granted the United States the use of advance air bases within its borders. During the Viet Nam war U.S. air power hammered enemy troops and supply lines from several sites in Thailand, whose names have become familiar to Americans—Udon, U-Tapao, and Ta Khli.

In return, the United States has advised and assisted Thailand's 160,000-man army in its constant battle against Communist infiltration across its borders.

With Chamnian's blessing and with my five invisible guardians, I set out to explore the City of Angels. For an earthly companion I was fortunate to have Xuwicha Noi Hiranprueck—simply Noi to his friends—a gifted 24-year-old student of economics at Bangkok's Thammasat University. In the weeks that followed I never discovered how many guardian spirits Noi himself has, but I suspect the maximum. Anyone who has survived Bangkok's traffic for 24 years has more than mere luck on his side.

Devotion to cleanliness brings women to bathe at their doorstep in a *khlong*, or canal. Once Bangkok's major arteries of travel, *khlongs* still lace the city in a watery network that inspired Westerners to call it "Venice of the East."









Straddling an elbow of the broad Chao Phraya River, one of Southeast Asia's largest and most prosperous cities crowds the eastern horizon. In the Thon Buri area, foreground, the five-towered Wat Arun, or Temple of Dawn, looks across the water to the leafy Grand Palace complex, left center. The palace was begun by Rama I in 1782, when he moved his capital to the fishing hamlet

on the east bank. This first ruler of the present dynasty renamed the village Krung Thep—City of Angels—but to Westerners it is still Bangkok. A showcase of Thai culture, it dazzled visitors to the kingdom long known as Siam. In 1939 the people of this oldest independent nation in Southeast Asia determined to call their country after their own name—Thai, or “free.”

Happily for Bangkok it has a dual traffic system—one on land and the other via a great network of *khlongs*, or canals, that earned the city its nickname, "Venice of the East." Postponing the watery side of Bangkok until another day, Noi and I set off to see the rest of the city in his Japanese sedan.

It is said that Bangkok has a driving code, but that does the city an injustice. Actually it has 400,000 codes—a different one for every driver on the street. As a result, downtown traffic alternates between a state of near paralysis and a genteel version of a demolition derby that miraculously claims few lives. Skillfully maneuvering among his thousands of fellow contestants, Noi chose a route through the heart of the city, introducing me to Bangkok as though to a charming but slightly temperamental friend.

Tradition Survives Amid Rapid Change

"We are changing so fast," Noi said as we made our way along a crowded street parallel to the river, "there are times when I am a stranger in my own city. Of course Bangkok is growing—by nearly a quarter of a million people a year."

He waved at a street sign above an intersection, printed in both Thai and English, announcing "New Road."

"That's one of the oldest streets in Bangkok," he said with a smile. "It dates from the time when all we had were *khlongs* and elephant paths for a transport system. Now the elephants are practically gone, and the *khlongs* are disappearing, too, as you'll see. A lot of the old city is passing, and what's taking its place," he paused "well, it's fascinating, but it's hardly Bangkok."

Not the Bangkok Noi knew as a child, perhaps, but still a city far from abandoning its cherished past. In the shadow of modern office buildings and tourist hotels that border the streets like giant rows of whitewashed pilings, much of Bangkok lives as it did more than a century ago, in a distinctive style born of its own deep traditions, yet richly seasoned with elements of many other Asian cultures—Chinese, Indian, Malaysian, Cambodian, Burmese, Laotian, and Indonesian.

More and more the blend includes American and Japanese influence, at least in economic fields. Despite its efforts to restrict luxury imports, Thailand still suffers an annual trade deficit of some \$400,000,000.

Here the lure of Bangkok proves a definite

Meditating in mid-journey, a young driver pulls over to *wai*, a gesture of respect for a temple she particularly reveres among the more than 300 shrines in Bangkok. Less cautious motorists *wai* without stopping, adding to the hazards of the city's bumper-to-bumper traffic.



One-manpower sedan strolls off the assembly line on its way to a Chinese funeral. Once delivered, this fragile symbol of opulence will be burned to accompany the deceased to his next life.



Traffic without end fades into exhaust-laden haze cloaking Sukhum Wit Road in this telephoto view of rush hour. The city's street system, only 6 percent larger than it was ten years ago, now struggles with four times as many motor vehicles, despite a 160 percent duty on imported cars.

asset, as I noticed several times that morning. At one point, Noi indicated a group of sight-seeing buses drawn up before one of the city's innumerable bargain emporiums specializing in curios, silk, and jewelry.

"Thanks to tourists," he said, "Thailand gets back about 135 million dollars a year in foreign currency—and the amount is growing all the time. Also, the United States has been providing some 80 million dollars a year in military and economic aid to Thailand."

I remarked that for all their apparent knowledge of Bangkok's culture and art, few foreigners seemed aware of the city's Thai name, Krung Thep. Noi readily agreed with me, smiling.

"Not all that many Thais know it, either," he said. "'Krung Thep' is just the beginning. When we set out to name a capital we do a thorough job. If you want the city's full title"—he took a breath—"it's 'Great City of Angels, the Supreme Warehouse of Divine Jewels, the Great Land Unconquerable, the Grand and Prominent World, the Royal and Delightful Capital City Full of Ninefold Gems, the Highest Royal Dwelling and Grand Palace, the Divine Shelter and Living Place of the Reincarnated One. . . .'" He let out the breath and I stopped him.

"That's enough for one city," I said. "Where do we go next?"

"Let's visit a temple," suggested Noi.

Faith and Art Glorify Shrines

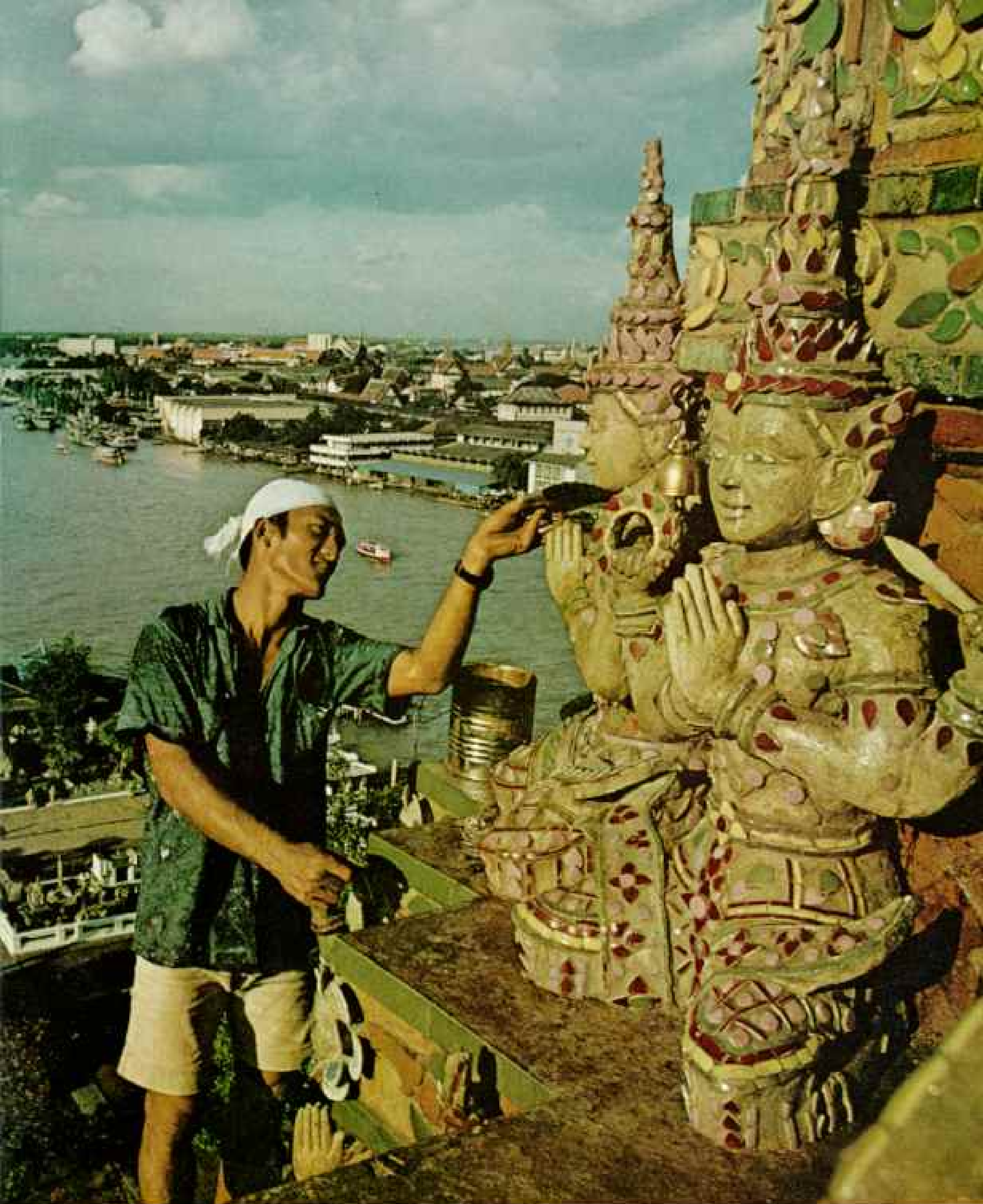
In fact we visited half a dozen temples, or wats, as they are known, including several of Bangkok's most beautiful and renowned: The great Temple of Dawn, with its massive *phra prang*, or Cambodian-type tower, thrusting some 200 feet above the city; the Wat Trimit, housing a 5½-ton image of Buddha, more than 40 percent gold; and the superb Temple of the Emerald Buddha, whose two-foot-high masterpiece—the most revered image of Buddha in all Thailand—is carved not from emerald but from green jasper, a semiprecious form of quartz.

In almost all of Thailand's temples, Buddhist monks conduct secular and religious schools, once the only source of education for Thailand's young men. Despite Bangkok's modern public school system and several outstanding universities for both men and women, the city's temples still serve as centers of scholarship and as retreats for meditation.

"Most of our young men spend at least a



Angels in need of earthly help, statues atop Wat Arun receive a coat of epoxy resin to protect them from weather and disintegration. Traffic fumes, lightning, and the monsoon's wrath perennially besiege the famous Bangkok landmark, looming high on



the west bank of the Chao Phraya River. Colorful bits of broken pottery and porcelain, donated by the devout, decorate the early-19th-century shrine, an architectural composite of Buddhist and Hindu motifs. More than half a million ceramic chips will

be replaced and covered with epoxy before the restoration is complete, probably within two years. Restorers from the National Museum also inject resin into the statues' hollow interiors for added strength, and will install new lightning rods.

few weeks of their lives in a temple," an elderly monk told me at Wat Trimit. "Any man is free to enter or leave as he chooses," he continued, "to become a monk, or to return to the outside world.

"Whether a monk or a layman, a man usually belongs to the same temple for life. We have a saying in Thai for people who are not to be trusted: 'A man with three temples, a woman with three husbands.'"

Man or woman, Thai Buddhists devoutly adhere to the custom of providing food, money, and other essentials for the monks. Their number in Thailand, estimated as high as 300,000 in a population of 38,000,000, ranks among the highest per capita in all Southeast Asia. By long-standing tradition the King of Thailand himself travels once a year by a magnificent royal barge to present a gift of new saffron-hued robes to the monks at the Temple of Dawn.

Nuggets Yield Gossamer Sheets of Gold

With some 590 square miles still before us, Noi wasted little time. We visited Bangkok's port, whose 20-mile river channel to the sea and whose meager berthing facilities barely manage to accommodate its 8,000,000 tons of cargo a year. Then we moved on to a new electronics firm producing transceivers and powerful ship-to-shore radios, the first of Thailand's sophisticated answers to Japanese and U. S. imports.

That same afternoon we visited a small gold-leaf factory, where tireless workers pound lima-bean-size nuggets 30,000 times each with brass-headed mauls to produce tissue-thin sheets of gold measuring more than a square yard in area.

For each hour of steady, exhausting work a pounder receives ten baht, the equivalent of about fifty cents U. S. At ten hours a day, six days a week, an expert pounder may earn as much as \$120 a month—roughly four times the pay of one of Bangkok's unskilled laborers and three times the salary of a primary schoolteacher. The problem, of course, is one of stamina.

"After the age of 40," the shop foreman told me, "a man can no longer stand the strain on his back. Then he is finished as far

as heavy labor is concerned, and must find himself another trade."

Although able-bodied enough, many in Bangkok can find no trade at all. The difficulty lies in the city's accelerating growth and the addition of far more workers than the economy can absorb. With one out of every ten Thais now a resident of the capital, Bangkok is hard put to shelter the overflow. When it does, the results are sometimes unexpected—and heartbreaking.

A morning or two later I visited the Din Daeng quarter of Bangkok, a section combining residential and commercial property. During the visit I came across an attractive low-cost housing project in the final stages of completion. In the bright sunlight the three-story apartment buildings stood newly white-washed and sparkling, their big windows needing only curtains and the grounds a little landscaping to complete an atmosphere of comfort bordering on luxury. It was then that I saw the huts.

They stood in a low cluster at the edge of the project, extending perhaps a quarter of a city block in area. My first thought was that they were piles of abandoned construction material. But then I saw an elderly woman emerge from what appeared to be a doorway.

Misery Rules the City's Slums

Entering the compound, I met with a scene so appalling it was difficult to imagine the human misery that had produced it. My first impression had been right: The huts consisted almost entirely of discarded materials—splintered boards of random sizes, sections of rusted tin sheet, and lengths of badly warped and buckled plywood joined here and there with strips of canvas or heavy tar paper.

The entire compound stood on partial swamp, so that narrow raised catwalks took the place of footpaths, their rotting planks green with slime from the outpouring of innumerable kitchens and latrines. Along the shadowed catwalks groups of naked children played happily, now and then retrieving toys from the ooze below.

The majority of men were obviously either off at work or looking for jobs. I paused to chat with an attractive young mother tending

Spraying salvation, a Bangkok faith healer douses his patient with sacred water in the hope of exorcising evil spirits. Mystics, mediums, and astrologers abound, and are consulted by members of virtually every social and economic class.







her baby in the shade of an open doorway. In the manner of all Thais she was immaculate in both her person and her dress, despite the grim surroundings.

She and her husband, she said, had lived in the compound for three years, although the community had existed for ten. Her husband was a construction worker, earning 20 baht (about \$1) a day when he could find a job. The money went mainly toward the family's food, for clothes are a relatively minor item in Bangkok's year-round heat.

Hut Dwellers Share Power and Water

Noting a single light bulb in the ceiling, I asked about electricity and water.

"We buy them from our neighbors," she answered simply. "The water and power departments would never trouble with a single house such as this, but there is demand enough from the whole compound. One house installs an electric line, and then we all connect with that. We pay the family that owns the line one baht a day for each of our light bulbs, and in turn they pay the bill."

The same system works equally well for water, and I noticed a length of green plastic hose half-buried in the slime beneath the catwalks. To fill a 50-gallon jar, the mother explained, the "water family" charges one and a half baht.

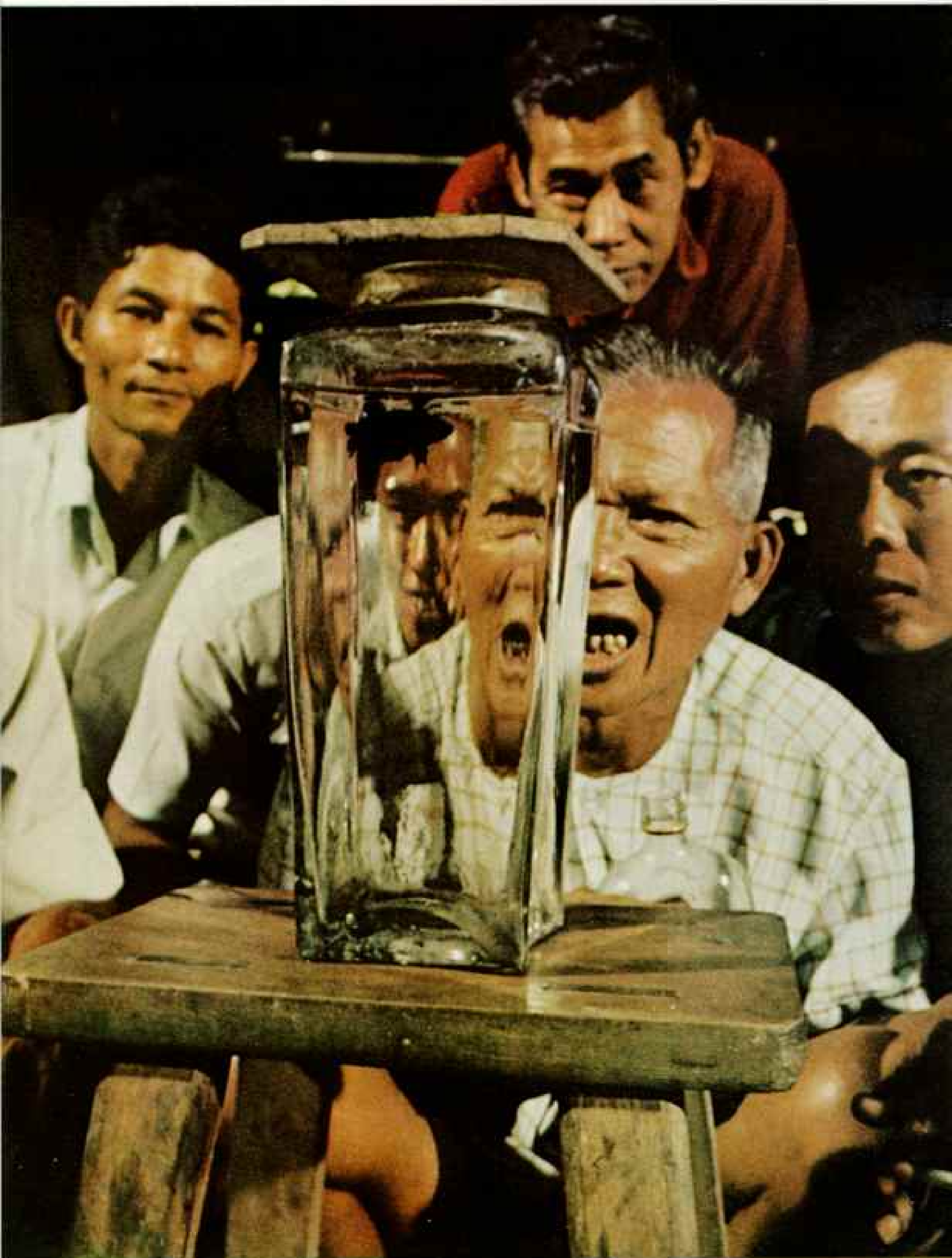
Despite the extreme poverty, I remarked on the atmosphere of community among families. The mother nodded, adding, "It is not easy to think of leaving."

It developed that the housing project next door was to be expanded, and the huts would have to move. I asked if any families in the compound qualified for the housing project, and the mother shook her head.

"For such a home one must wait years on the list. Besides, we are not registered with the city. To do so one must live at a permanent address, a house with a number, and that we cannot afford. Yet without registration, our children cannot go to public school."

I asked where the compound would move, and she shook her head again.

Striving for unison, students drill in the shadow of a Wat Arun spire, rehearsing for a mass performance at an athletic event. Augmenting the nation's public school system, Buddhist temples provide instruction throughout Thailand.





Tabletop duel rages silently between Siamese fighting fish in a glass jar (left). Bred for bravery and underfed to ensure ferocity, the colorful warriors may lock jaws for minutes at a time (below), writhing until one breaks free and refuses further combat.

Win or lose, such finned opponents seldom fight more than once, for even victors bear scars that could prove a handicap in future battles. Though betting is illegal, side wagers can total as much as \$150—half an unskilled laborer's yearly salary.



"For the others I cannot say. Perhaps my husband and I will move beyond the city, where there is more room and one may have a chance to register." She glanced down at the child. "When her time comes, I would like her to go to school."

Finally I asked what would become of the hut, and the mother looked surprised.

"We will take it with us, of course. It is not the first time we have moved."

I saw then what I had failed at first to notice. Among the planks and sections of plywood there were additional nail holes and joints, which in the past had obviously helped to fasten the pieces together somewhat differently. In a pathetic way it was a prefabricated house.

Violent Art of a Gentle People

In the days that followed I saw many sides of Bangkok, some of them familiar to every tourist and others less easily come by. One evening I explored the popular Phatphong and Phet Buri Road areas, centers of the city's gaudy but overrated night life, with its endless bars, dance halls, rock-and-roll cafés, and

the famous massage parlors, one or two of which continually surprise foreign customers by providing exactly what the term says, and nothing more.

On another occasion I witnessed an exhibition of Thai boxing, a seeming free-for-all involving fists, elbows, knees, and feet, but whose rigid rules transform a mere sport into a highly respected art.

Time was when Thai boxers fought to the point of exhaustion, and even death, but modern matches consist of five three-minute rounds. Still the sport can be bloody, and I asked a champion boxer how he explained its popularity among a people as gentle and kindly as the Thais.

"Perhaps," he answered, "it is a form of release. As a *farang* [foreigner], you will rarely see Thais argue or disagree in public—to lose one's temper, and to show it, is unthinkable. Even in the ring, anger is considered weakness rather than strength, and a good boxer never hates his opponent. He merely releases his physical energy in a test of skill and discipline."

Throughout their history the Thais have



exhibited much the same attitude toward violence, accepting it only in sport or as a last desperate measure. Then the opponent would do well to be on his guard, for once threatened, the Thais are the fiercest of warriors.

Elaborate Park Depicts Thai History

Early one morning I took a brief trip into Thailand's past with a distinguished television commentator, Pichai Varnasong. In Pichai's car we traveled south from Bangkok to visit the Ancient City.

The Ancient City is a 300-acre, privately financed park devoted to the broad sweep of Thai history. Although no actual record exists of the Thai people's origin, the Ancient City dramatizes the great eras of Thailand's past, from before its emergence as an independent nation in the 13th century, through the Sukhothai and Ayutthaya periods, named after the country's succession of royal capitals.

To present the subject in proper detail, the Ancient City's designers spent some ten years and \$20,000,000 in building authentic temples, palaces, typical households of various periods, and elaborate re-creations of some

of Thailand's most treasured works of art.

As we toured the grounds, Pichai offered a few additional details about his people. Originally, he explained, Thailand was known as Siam—a variation of the term *Syam*, found inscribed both in Viet Nam and at Angkor Wat in neighboring Cambodia. Dating respectively from the 11th and 12th centuries, the inscriptions refer to a people obviously different from the Khmers, who were the architects of Angkor Wat and the forerunners of present-day Cambodians.

"It was a confused period," Pichai continued, "with constant warfare among the Khmers, the Burmese, and the Siamese. For a period prior to our independence the Siamese seem to have been vassals of the Khmers, and thus were required to pay tribute. As it happened, certain areas of Siam were famous for their pure, sweet water, and the Khmers included that in the tribute. It was to cost them dearly in the end."

Pichai paused to indicate a large water jug standing beside a temple wall. "Right there you're looking at the birth of the Thai nation—at least so the legend goes.

Hard-rock emporium throbs to the explosive rhythms of Western music (left). Afro hair styles adorn two members of this Malaysian band, known as the "Alley Cats."

Designed to attract U. S. soldiers and an army of tourists, Bangkok's nightclubs draw increasing numbers of Thais, as do American movies and hamburger stands.

Slugfest on a spar: Striving for balance, "sea boxers" lunge to unseat each other before the watchful eyes of a referee. The sport originated some eighty years ago, when Thai sailors challenged one another on horizontal booms rigged outboard to moor small boats. Now bouts take place ashore, where thick mattresses, not water, cushion contestants' falls.

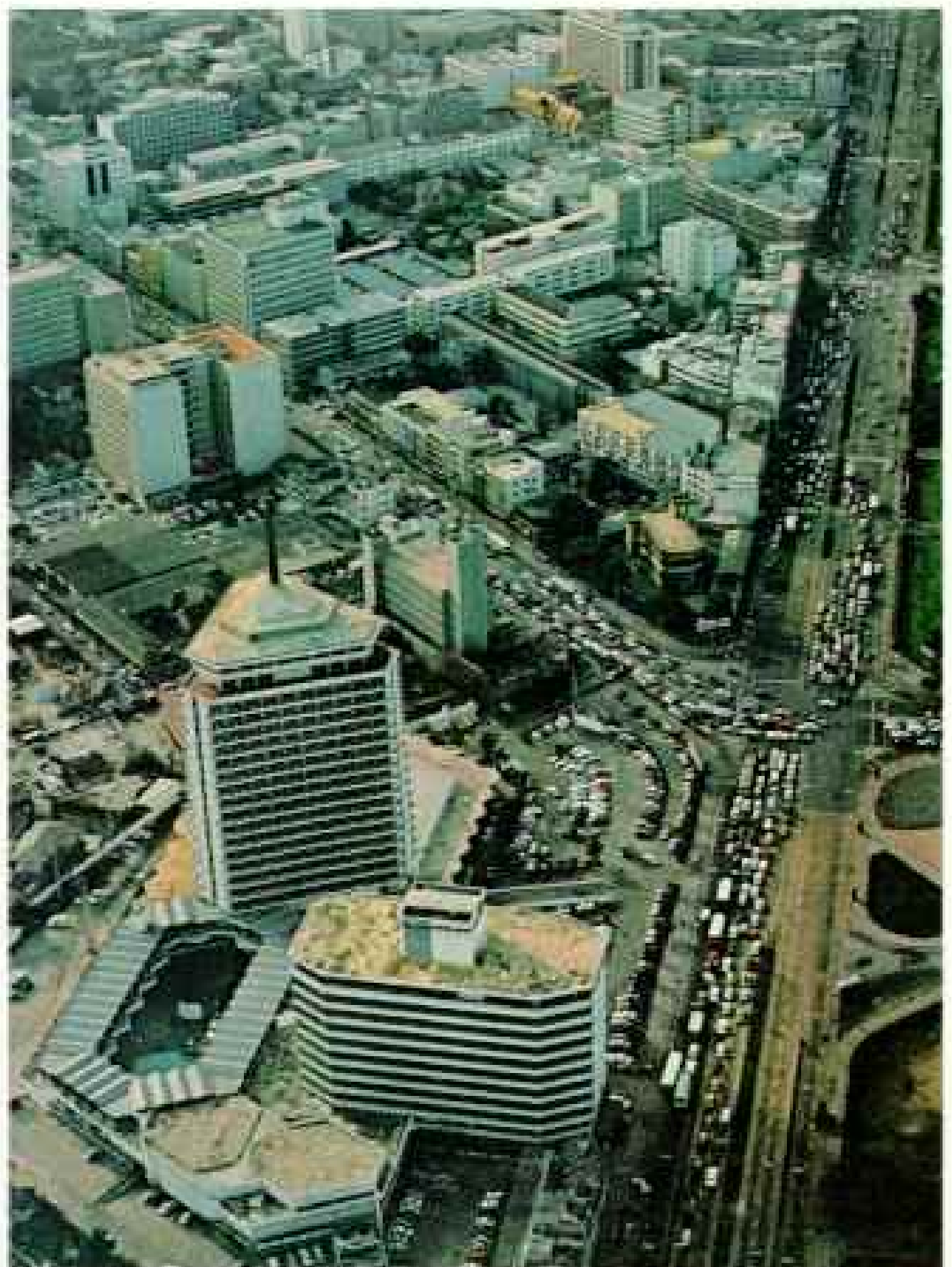


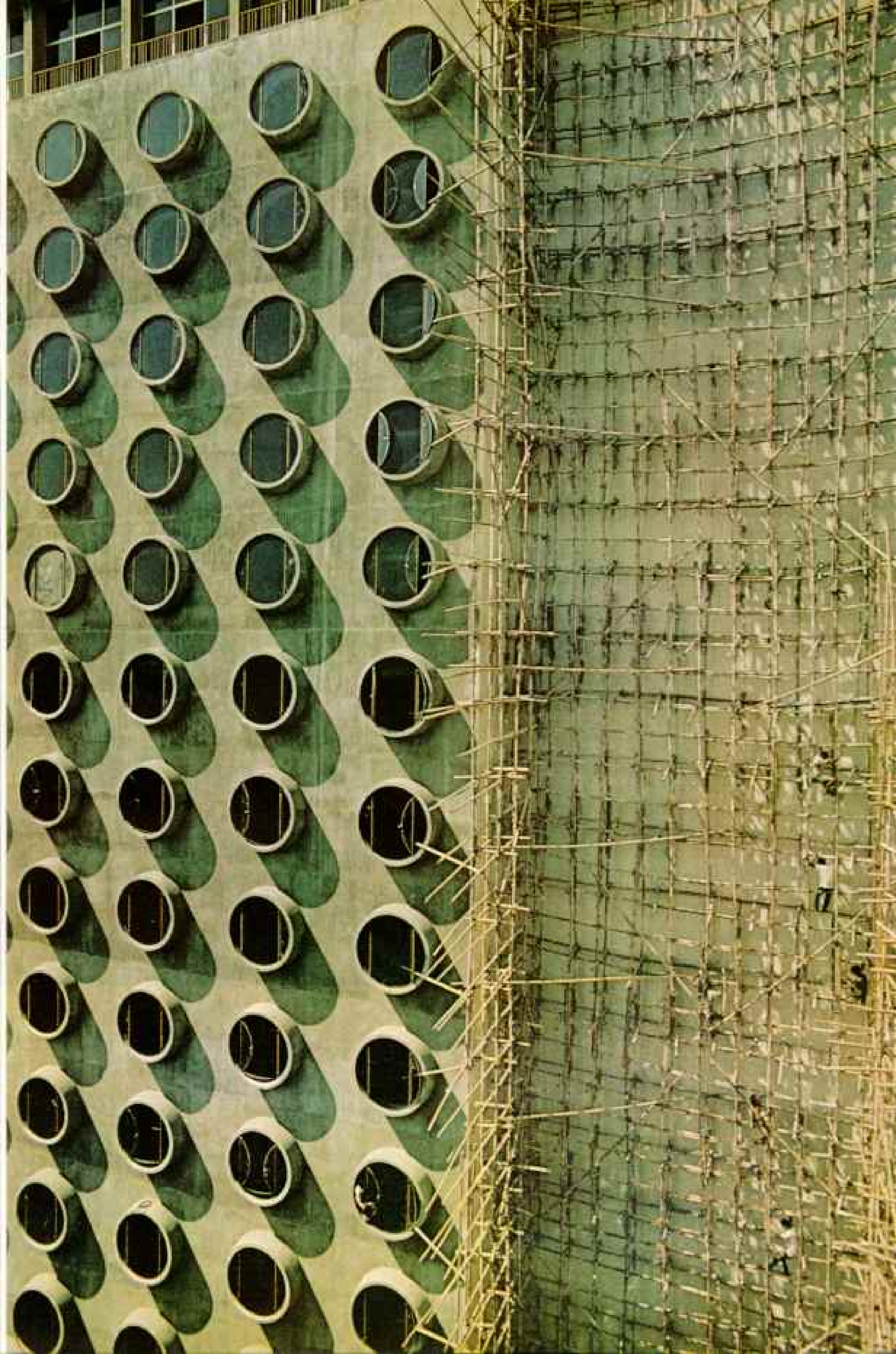


Laborers in time of need, the monks at Wat Singha (above) trundle stones from their temple ground to buttress temporary dikes along a nearby klong that threatens to overflow.

Increasingly honeycombed by deep wells, some downtown areas of the city are subsiding to river level, resulting in floods. Meanwhile, the city continues to build, erecting high rises such as the spire-topped Dusit Thani Hotel (right).

Concrete and steel create much of the newer architecture, but bamboo, the Orient's age-old building material, is still used for scaffolding, as on the Rama Hotel (facing page). Jute strands and string secure lengths of bamboo into a strong, flexible web for painters.





"The Siamese, it appears, broke so many pottery water jugs on the way to the Khmer capital that they had to carry two or three times the required number to meet the quota. Then along came a very shrewd leader among the Siamese, a man named Phra Ruang.

"Phra Ruang reasoned that a jug fashioned of woven bamboo and covered with gum would be lighter and stronger and save everyone a lot of grief. So he had a few samples made up and, sure enough, they all got through to the Khmer capital. That's one of them you see by the wall.

"But then the Khmer king grew suspicious," Pichai continued. "He had one of the jugs inspected, and he decided that Phra Ruang was too smart for his own good. He declared war on Phra Ruang, but this time the Siamese won. We've been independent ever since.

"Unlike every other country of Southeast Asia, Siam has never bowed to Western colonial rule. In 1939, we changed our name to Thailand, meaning 'land of the free.'"

Streetcars Arouse Elephantine Passion

In wars of the past Siamese armies often owed victory to an awesome weapon—the elephant. Heavily padded and decorated, the huge beasts struck terror into the hearts of enemy troops. In peacetime elephants for centuries have worked the great teak forests of northern Thailand, and they have graced Bangkok's royal palaces.

To the sorrow of tourists and Thai children alike, elephants in Bangkok are a thing of the past. The royal herd, which once numbered more than a hundred animals, has dwindled to a few residents of the municipal zoo. Only an occasional elephant is imported from the countryside, usually as an advertising stunt.

Time was when elephants not only strolled Bangkok's streets but also terrorized the city's trolley-car conductors. I heard the story from Kukrit Pramoj, the highly respected editor of *Siam Rath*, Bangkok's leading newspaper.

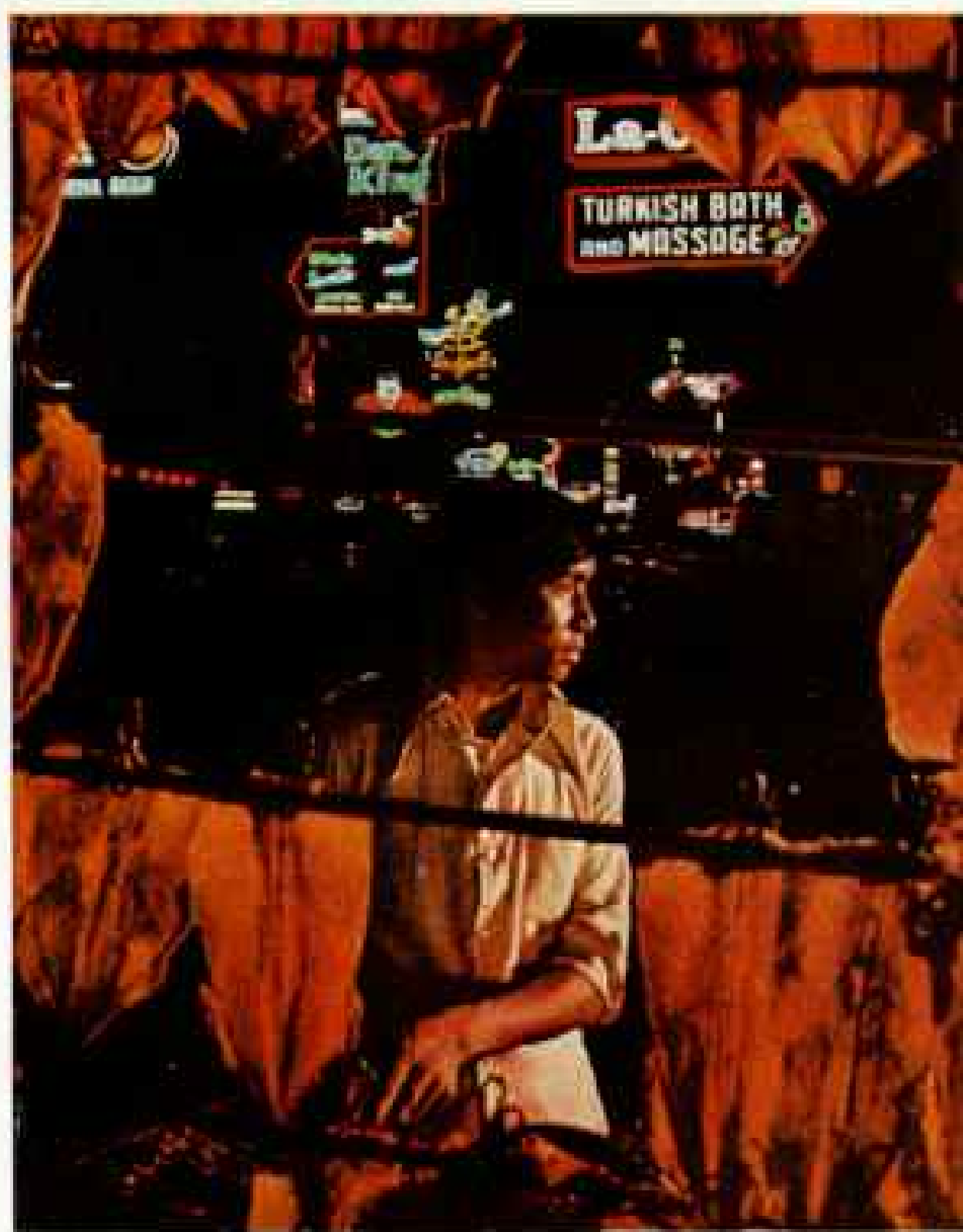
"When I was a boy," Kukrit recalled, "the royal elephants were taken every morning to be bathed at Ta Chang, a river landing near the Grand Palace. On our way to school we used to watch them ambling happily along the avenue with their keepers.

"Generally they were well behaved," Kukrit said, "except during mating season. Then bulls and cows were bathed separately, and the bulls didn't like it at all. I can still see them, a long line of love-sick elephants,

shuffling forlornly down the avenue—and then suddenly here would come a streetcar.

"It was always a case of love at first sight. The whole herd would perk up, and there would be a great deal of trumpeting and snorting and waving of trunks. As a rule the handlers managed to keep order, but now and then a determined bull would break loose, and then it was an all-out race between Cupid and the streetcar.

"If we happened to be on the streetcar," Kukrit continued, "it was a wonderful ride. The conductor would crank up all his power and ring the bell frantically for everyone to get out of the way. And here would come the elephant, squealing and trumpeting for his



Like red parchment, dried squid hang from rods in one of Bangkok's countless open-air stalls. Vendors offer an enormous variety of foods, from rich confections and exotic fruits to a spicy paste made from mashed water beetles.

Glowing candles, flowers, and incense honor a Hindu shrine. Nearly 95 percent of all Thais are Buddhist, but many also blend elements of Hinduism, animism, and other beliefs into a personalized religion.

ladylove to wait, with the handler bringing up the rear. Sometimes the race would go on for blocks, until the elephant grew discouraged. I don't recall that one ever actually caught a streetcar, but in mating season there were some very nervous trolley conductors."

Rush Hour Erupts on the River

Today no conductor would stand a chance, thanks to Bangkok's monumental traffic jams. To avoid the rush-hour paralysis, many commuters take to the river, whose broad channel sweeps in a vast arc around half of Bangkok, providing the city with a great natural beltway. Radiating to either side, the network of khlongs affords a system of access routes. All

are heavily traveled, for despite its rush to modernization, the Venice of the East still has more boats than automobiles.

Nothing prepares a visitor for his first view of the Chao Phraya River on a busy morning; the great thoroughfare simply erupts with sound and fury. To the rolling thunder of diesel engines and the shrill piping of countless whistles, a vast armada of working craft churns the surface of the river to an endless caramel-colored froth.

Flagships of the armada are the deep-bellied rice barges, built of massive teak planks along the lines of the Biblical ark and each capable of carrying 50 to 60 tons of cargo. Lumbering upstream and down on



long multiple tows, the barges share the channel with an endless variety of smaller craft, including market boats, sampans, sight-seeing launches, water buses, and outboard skiffs with extended drive shafts jutting behind, which earn the boats their Thai nickname, *hangyao*, or "longtails" (page 120).

At rush hour the river and khlongs almost match Bangkok's streets, swelling with traffic amid a rising crescendo of noise and activity that stupefies the landsman. Then along comes Boonsong Pluemyard.

Boonsong Pluemyard is an engaging young man with a ready smile and a fondness for the water. Both are decided assets in his profession, for Boonsong delivers mail by boat to the people of Bangkok. I met him one morning at a small post office on the western bank of the river and gladly accepted an invitation to join him on his route.

Khlongs Preserve Life of the Past

Making room for me amid bundles of mail in their launch, he and his partner, Liang Ninanthong, cast off and headed up a main canal known as Khlong Bangkok Yai.

"They are growing fewer all the time," Boonsong said of the canals. "For the sake of progress we are gradually filling in our khlongs to make streets, although there are still areas of the city that can be reached only by water." He waved at a floating mass of debris wedged against a piling.

"That is part of the price of progress. In former times the khlongs provided Bangkok with a natural sewer system that drained into the river. But now the new streets have interrupted the flow, and many of our khlongs are becoming cesspools."

Fortunately for Boonsong and Liang, their route is one of the exceptions. As we left the river behind and steered deeper among the khlongs, the debris gradually thinned out, and life assumed patterns little changed in more than two centuries.

Among the rows of neat houses raised on either side of us by sturdy teak pilings, men in dark cotton sarongs crouched on front doorsteps at the water's edge to bathe or shave, while the women scrubbed clothes or rinsed breakfast dishes. Others took a more carefree approach to bathing. As we made our way along the winding channel, we were subjected to a steady broadside of near-misses as groups of naked children jumped gleefully from the verandas overhead.



Cookie-cutter sameness of government-built housing sprawls over a suburb (above). Such trademarks of Western ways stamp Bangkok with increasing frequency as more Thais aspire to modern comforts. Costing \$10,000 to \$17,000 a unit, such developments draw buyers from the middle class.

Well-to-do citizens turn more and more to shopping centers and supermarkets, where housewives pause for ice cream (right). Such stores stock up heavily on imported foods, but habit and lower prices keep most Thais faithful to traditional small shops.



Waterborne market cruises a khlong, offering seafood, vegetables, and tropical fruits to canalside dwellers. Such *hongyao*, or "longtail," skiffs with long drive shafts are distinctive to the khlongs, still the only means of access to some neighborhoods.





Cooling antidote to oppressive heat, a klong inspires a water fight among gleeful youngsters (above) in their traditional neighborhood playground.

For generations Bangkok citizens have used their klongs not only as thoroughfares, but also as water source, bath, and drainage system. In years past, tides flushed the interconnected canals and carried wastes out to sea. Today, with the increasing need for new

roads, the city has filled in many of the old waterways and sealed off others—like this one—interrupting the natural flow.

To help solve Bangkok's street and sewage problem simultaneously, bucket bearers (left) remove years' accumulation of muck from a klong. Once most of the sludge is dug out and trucked away, sewer pipe will be laid before the canal is paved over.

Business, too, begins early on the khlong, and we shared the right-of-way with innumerable sampans fitted out as grocery shops, coffee bars, ice-cream parlors, noodle stands, hardware stores, and, in one case, the mobile branch of an enterprising bank.

The scene called to mind Bangkok's famous Floating Market, a required stop on every tourist itinerary. Unhappily the Floating Market no longer lives up to its name: The colorful assortment of shops and restaurants has come ashore forever, occupying the banks of the khlong where once it operated from a fleet of sampans.

Throughout the trip Boonsong and Liang stopped now and then to deliver mail at a household, alternating roles as helmsman and letter carrier. Although the route serves more than 2,500 homes, the volume of mail is light enough to allow for two deliveries a day.

Like their American counterparts, Thai families tend to show their appreciation, and on New Year or Buddhist holidays, Boonsong's launch returns home practically awash from the weight of proffered candy bars, cigarettes, towels, soap, and an occasional bottle or two of excellent Thai beer.

Other occupants react in equally direct fashion, and several times Boonsong or Liang barely made it back to the boat ahead of man's—but not the letter carrier's—best friend.

Bird Princess Escapes Earthly Captors

At the end of the route Boonsong and Liang kindly deposited me on the eastern bank of the river and invited me to join them again whenever I had time. Time, however, had begun to run out, and I turned to Bangkok's world-famous arts.

One evening I attended a demonstration of classical Thai dancing by one of the country's most gifted performers—a towering beauty who stands less than four and a half feet high, and who goes by the name of Bunnag. With infinite grace and precision, Bunnag told a story in pantomime of a bird princess who escapes death at the hands of her captors by taking wing for her homeland in the Himalayas. Like many Thai classics the story is drawn from the *Ramakien*, the country's version of the great Hindu epic, the *Ramayana*.

Then there was a day spent with the city's silk weavers and dyers, whose exquisite craft might have disappeared entirely but for the encouragement of a single American, James Thompson. An officer in the clandestine



Beauty takes the field in pregame pageantry at an annual soccer match between universities.

Office of Strategic Services during World War II, Thompson served in Thailand, where he became fascinated with the country's declining silk industry. Before his mysterious disappearance in 1967, he helped develop the American market that today absorbs a major share of Thailand's annual silk production of a million square yards.

And finally there were gems, most exotic of all Bangkok's wares and certainly the most intriguing to Thais as well as tourists. No one knows how many thousands of gems pass through Bangkok every year, for most dealers refuse to discuss their business affairs. With cheerful disregard for authority, the Thais regularly smuggle in sapphires and rubies from Burma, gold from Hong Kong and Laos, combine them into some of the world's most exquisite jewelry, and sell it at a handsome profit.

Despite a modest duty on incoming gems, the Thai Government receives only a fraction of the lawful tax. An occasional arrest reveals contraband stones tucked in such seemingly innocent containers as cameras, tape recorders, vanity cases, hearing aids, corsages, and now and then a very false brassiere.

Although Thailand has sapphire and ruby mines of its own, the best and largest stones still come from abroad, usually already cut and polished. Once in a while a Bangkok dealer takes the considerable risk of cutting a truly large and valuable stone himself by means of the diamond saw or the mallet-and-blade technique. But whenever he does, he is likely to recall the legend of the Chinese jade dealer named Lin.

Lin, so the story goes, was a man in his 60's who came from Hong Kong, and who was acknowledged as a world authority on jade. I heard the tale from David Asvatanakul, one of the owners of A. A. Gems in Bangkok.

"Some years ago," David said, "Lin supposedly bought a chunk of jade with an unusually precious streak of dark green. The streak was largely hidden by the less valuable jade around it, but Lin was an experienced man and he knew what to expect. He bought the piece for the equivalent of several thousand dollars.

"In cutting the rock," David continued, "Lin had to be sure he merely grazed the precious streak, so as to preserve as much of it as possible. After careful inspection he made the cut—and the streak simply wasn't there. Lin was not a young man, and the

shock proved too much for his heart; he died at the worktable.

"The piece lay around the shop for more than a year, until one of Lin's friends, another jade dealer, saw it. He asked the family's permission to cut into it again, and they agreed.

"Of course," David concluded, "the streak was there all the time—Lin had simply missed it by a millimeter or two. If he had made a second cut, he would surely have found it. Properly cut and finished, the piece sold for many times the original price."

War Against a Deadly Traffic

The same combination of huge profit and death surrounds a far different type of traffic through Bangkok—that of heroin. From the so-called "Golden Triangle," embracing parts of Burma, Laos, and northern Thailand, more than 600 tons of raw opium a year—the largest part of it grown in Burma—finds its way into the hands of dealers and addicts. Some of the crop makes the long and lethal journey overland or down the Chao Phraya River to Bangkok and by sea or air to markets of the world.

Despite the combined efforts of the U. S. and Thai Governments, part of the triangle's output eventually reaches the United States as pure heroin, with as much as a 2,000-fold markup in value.

An increasing amount of opium remains in Bangkok itself, for addiction in Thailand is growing. From an acknowledged 70,000 addicts in 1959, the national figure has jumped to more than 400,000 victims.

"As a result," says a U. S. narcotics expert assigned to Bangkok, "the Thai Government has clamped down heavily on pushers. A year ago two of them were executed publicly by a firing squad. But the root of the problem is the poppy grower himself—who gets almost none of the vast profits involved. Recently the government has had some success in persuading growers to shift to other crops. One farmer who made \$150 a year on poppies switched to beans and made \$250."

Only rarely have Thailand's leaders resorted to capital punishment to enforce the law, although their powers are extensive. While technically a constitutional monarchy, the country is governed by appointed rather than elected officials under a modified form of martial law.

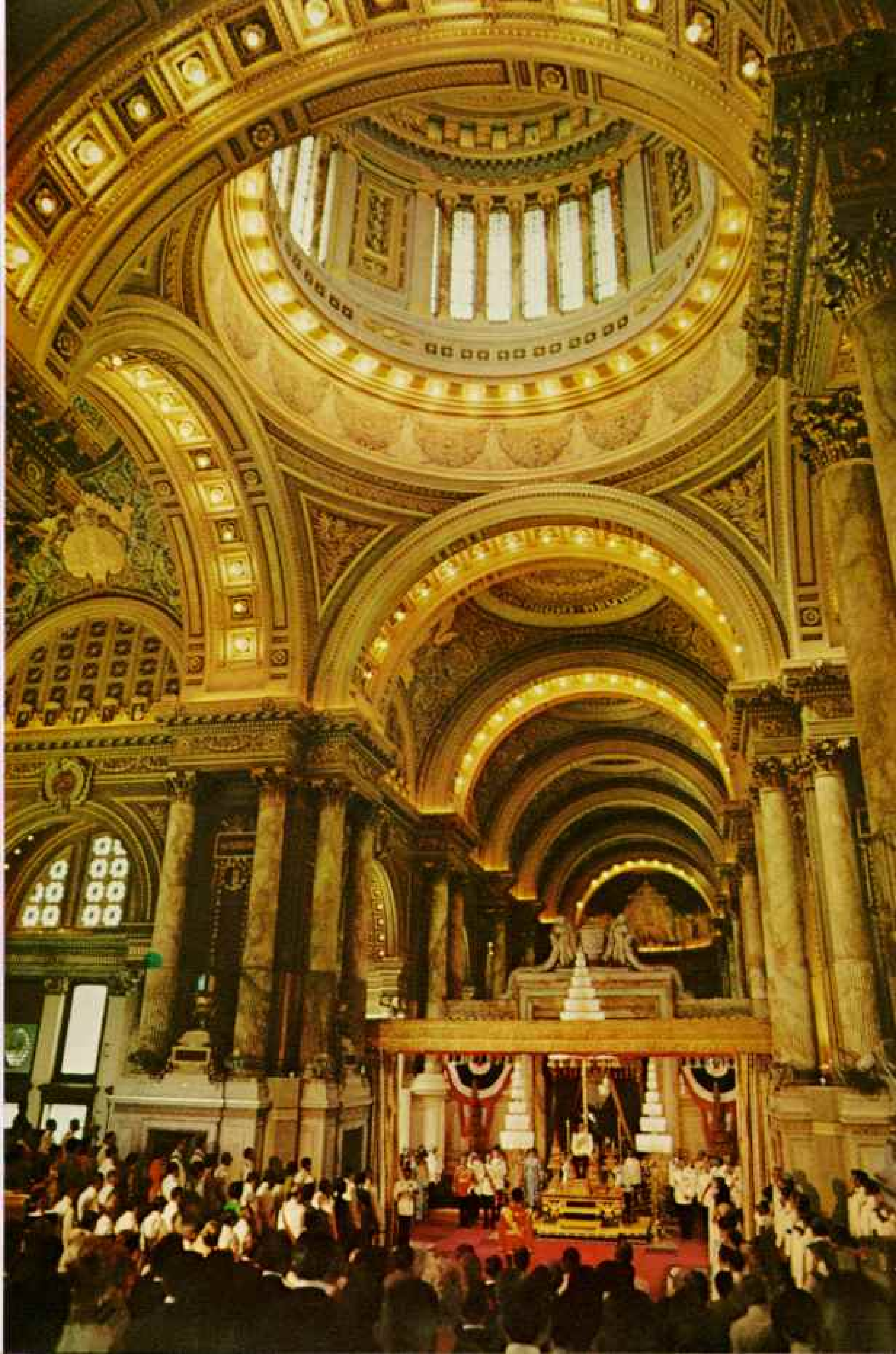
Yet the great majority of Thais accept the
(Continued on page 129)



Paper mosaic of royalty, the card section at a Bangkok soccer game portrays King Bhumibol and Queen Sirikit (above). Once ruled by absolute monarchs, Thailand instituted constitutional limits in 1932. Yet today the king remains the supreme symbol of unity to his 58,000,000 subjects.

At the recent investiture of Crown Prince Vajiralongkorn, festivity-loving Thais lined the streets to glimpse the royal entourage and give the queen floral offerings (below). The ceremony in the National Assembly (right) proceeded amidst grandeur befitting the official heir to the throne.







Daien lights a skein of smoke hanging over Bangkok as humpbacked



sand barges and teak logs from upcountry huddle at khlongside piers.



system, for their country's experiments with Western-style democracy have been discouraging. During the past forty years Thailand has adopted more than half a dozen different constitutions—and abolished all of them one after another.

"Democracy as you Westerners know it," explains my editor friend, Kukrit Pramoj, "is a luxury that Thailand simply can't afford yet. Until you know where your next meal is coming from, political theory doesn't count for very much.

"But make no mistake," Kukrit adds, "our people will never accept Communism. If you put the average Thai in a commune tonight, he'd be gone before sunrise tomorrow—and what's more, you'd never find him."

Despite difficulties with Western-style government, the West itself remains close to the hearts of the Thai people. Like his predecessors, the able Prime Minister of Thailand, Field Marshal Thanom Kittikachorn, is a staunch friend of the United States.

King Praises His Subjects

Another good friend is Thailand's King Bhumibol Adulyadej, Rama IX. Once known to Americans largely for his musical talent, the 46-year-old sovereign in reality is a keen student of U. S. and world affairs. He is also one of the most beloved monarchs in the history of the Thai people.

Even to the casual observer, Western influence in Bangkok is apparent in nearly every aspect of the city's life. Through a mutual friend, U. S. Ambassador Leonard Unger, I asked King Bhumibol what the city offered in exchange—what Americans could learn from Bangkok and the Thais. His answer reflected much of what I had seen.

"Thai people," replied the king, "are not really very conscious as to what is good in them, because they have not thought about it very much. But if an answer has to be given to this question, we may pick out the Thai sentiment of *metta*, which has no exact translation in English. It means the general feeling of being compassionate to one another, of having understanding for each other's feelings, being generous and forgiving with each

other, working together, in short, to build and maintain a society in which we may all live together in peace and happiness.

"Some Westerners," the king continued, "may consider this sentiment to be a weakness, for it seems to lack, or go against, what they call the spirit of 'push,' or of competition. They, of course, overlook the fact that the Thai spirit of *metta* is always based on a well-reasoned judgment, and is constantly reviewed and revised against the background of changing circumstances."

Symbolic Rafts Banish City's Cares

On one of my last days in Bangkok I recalled the king's words, during the festival of *Loy Krathong*. Every November the people fashion thousands of small krathongs—or rafts—out of banana leaves, decorate them with flowers, and place a candle on each. After dark they light the candles and launch the rafts down the Chao Phraya River in symbolic release of all their troubles.

Late that afternoon I joined a group of friends on the western bank of the river to celebrate *Loy Krathong* and observe the festival. By then I had long since recognized the wish that Chamnian had predicted—a wish someday to return to Bangkok. And I recalled her assurance that it would happen.

After dinner we gathered by the riverbank to launch our krathongs and watch others in the city do the same. The candles were duly lighted, and with a gentle shove each raft was sent on its symbolic way. As they caught the flow of the river, I thought briefly of other people I had known in Bangkok and wondered if they, too, were launching krathongs that night—Noi, my university friend, the young mother in the terrible slum at Din Daeng, Boonsong the mailman, and perhaps even Chamnian herself.

For a time there was only a scattering of lights out in the channel, bobbing and drifting with the river's current. Gradually, however, the number increased, until there must have been a thousand or more.

Then at last the Chao Phraya became a great torrent of flickering lights, bearing Bangkok's troubles to the sea. □

Golden victim of Bangkok's thundering traffic, the great Reclining Buddha suffers cracks near its right ear and eye. Moisture plus a daily barrage of vibration and oily exhausts have caused the gilded legs to peel. To minimize further damage to its treasures and to ease congestion, the city bans heavy trucks during daylight hours.

Nature's Living, Jumping Jewels

ARTICLE AND PHOTOGRAPHS
By PAUL A. ZAHL, Ph.D.
NATIONAL GEOGRAPHIC SENIOR SCIENTIST

ON THE TOP FLOOR of the Banco Central de Costa Rica in San José is a massive vault, whose contents the public may view only twice a week, briefly.

At the prescribed hours complicated locks are manipulated simultaneously by teams of frequently rotated bank officials. Steel tumblers and plungers clank, and the heavy door eases open on silent hinges.

Lights reveal glass cases filled with gleaming objects of gold—treasures wrought by Central America's Indians five to twelve centuries ago.

I ventured into the vault one morning to view the treasures, valued by the bank at some \$3,000,000: elaborate pendants and figurines, strange rings and wristbands, human representations, birds, snakes, turtles.

But dominant—to my eye at least—were scores of tiny frogs, every one of shining solid gold.

I moved, fascinated, from one display case to the next. Some of the frog figures were near-replicas of living



Twin rubies in an emerald setting distinguish this



REBLTCHN/D GALLIGHTER, 2 INCHES

bright-hued midget, whose last name means "beautiful tree nymph."



© WOLFGANG FLEISCHMANN

Golden frogs honor a multitude of miniature peepers

Heralding life and fertility, songs of such Costa Rican frogs as the tiny minstrel above welcome the rains that refresh man and the land. In tribute, pre-Columbian artisans fashioned stylized wax figures of the forest choristers, as well as of birds, turtles, and other creatures. They encased the figures in clay, then heated the molds to melt away the wax. Molten gold poured into the molds formed these sparkling creations.

FROM THE COLLECTION OF BANCO CENTRAL DE COSTA RICA, SAN JOSÉ



amphibians. Others stared from great exaggerated eyes, or wore strange ornamentation, straight out of a surrealist's dream. To the artists who shaped these treasures, frogs quite obviously were important symbols.

A few days later I bounced in a jeep down a forest-girt road north of San José. At the wheel was a tall, bearded herpetologist, Dr. Douglas C. Robinson, associate professor of biology at the University of Costa Rica. Again, my special interest focused on frogs—not gold frogs, but the living tropical prototypes, even more fascinating in their broad variety, which pre-Columbian goldsmiths used as models.

Variety Marks Both Terrain and Fauna

Costa Rica has a bewildering range of climate and topography: Extensive areas of warm, rainy jungle; cold, sky-piercing volcanic peaks; cool, cloud-bathed forests; temperate plateaus; and reaches that seasonally become almost desertlike. During past ages each zone gave rise to or attracted a fauna adapted to its own ecological conditions.

"The country is a kind of natural hub," Doug said as we twisted northward, "a center not only for mid-American frog evolution but also for that of many other animals and plants. You find a tremendous variety of species. That's why I decided to settle here."

The colorful frog legion of Costa Rican fauna seems almost limitless. Only a few of the groups have common names, so identifications must rely on such tongue twisters as Dendrobatidae, Leptodactylidae, Centrolenidae, Hylidae, and Microhylidae. These families embrace scores of genera and species. The exact count is still not in, but identified frog species in Costa Rica already number more than a hundred.

During the day most hide half camouflaged under leaves or in bark crevices. Only after dark do choruses of mate-wooing cheeps fill the air. But some frogs are less timid, and it was these Doug and I sought on this venture, mainly members of the Dendrobatidae, a tropical family of some sixty species.

Despite their brilliant bodies and fantastic patternings, the conspicuous dendrobatids can afford their bold indifference to the blatant light of day. Indeed, their garish colors may warn away potential predators.

Through their skin, some of these frogs secrete a poison that biochemists have found to be among the most toxic of known substances.

The poison acts on the nerves of mammals and birds, causing paralysis and quick death—a characteristic that pre-Columbian and even later aboriginals found highly valuable.

They knew precisely how to roast the delicate frog body so that the skin glands would emit a venomous mucus. Applied to a blow-gun dart, the poison would swiftly bring down a deer, monkey, or bird.

Ironically, the same deadly substances may prove to be lifesavers. Scientists at the National Institutes of Health in Bethesda, Maryland, near my home in Washington, D. C., have found that poisons from dendrobatid frogs are valuable tools in modern neurophysiological research. Since the frogs' powerful toxins affect nerves and muscles in certain specific ways, they can be used to analyze the various steps in the process by which nerve impulses are transmitted.

The scientists are also studying the effects of the poisons on the heart, where results offer the hope of finding eventual therapeutic applications—perhaps in controlling the rapid, irregular heartbeat called fibrillation, for example, or in increasing the strength of the pulse in failing hearts.

Life Depends on Airborne Moisture

Doug and I parked our jeep in the village of Puerto Viejo, in the northern lowlands 60 miles from San José (map, page 135). By dug-out we proceeded up the Sarapiquí River to Finca La Selva, where the Organization for Tropical Studies maintains a station for rain-forest research.

We found a biologist and two students at the station. When we explained our mission, they smiled. "No problem," said one. "Just walk down the trail and you'll find plenty of the little devils."

We stalked into the shadows of the festooned forest. Less than a hundred feet from camp we came upon our first dendrobatid—a midget marvel with a scarlet body and blue-spotted legs, perched on a half-rotted leaf (page 145). The tiny frog returned my stare and showed little concern when Doug reached down and snatched it from the leaf. I must have shown concern over his casual handling of the poisonous creature.

Doug laughed and explained. "To be effective, the poison has to enter the bloodstream through a wound or a mucous membrane," he said. "Just be sure you have no scratches

(Continued on page 138)

Reservoir of life, a spiny bromeliad attracts Costa Rican Roger Sáenz, who knows that these air plants capture rainwater, providing soggy refuges for tree frogs (below, right).



PHYLLOSPORA LIMON (ABOVE), 1 1/2 INCHES; HYLA PIEDROPUMA, 1 1/8 INCHES (BELOW)





Midget bushwhacker on a giant leaf, a tree frog poised on an elephant's ear plant keeps alert for insect prey. When threatened, the tiny creature leaps away, flashing underside patches of yellow and white. Some biologists believe that such sudden displays of color startle aggressors.

Croakers and screechers and potbellied peepers chorus their mating cries from Central America's coastal jungles to volcanic heights. So numerous are the species inhabiting this tropical middle ground between two continents that many remain unnamed.





HYLA EMBACATA, 1 1/2 INCH

"It might be a parrot, or it might be a canary... but it ain't—it's only just a frog," declared Smiley in Mark Twain's "Celebrated Jumping Frog of Calaveras County." These tiny tropical cousins of Smiley's pet rival the most colorful of birds. This frog "without trousers" (left) bears a garish Halloween cat on its back, but no pattern on its thighs. Bulging with life, an Ecuadorian mother-to-be (below) carries her eggs in a fold of skin on her back. Her mate helped maneuver the eggs into the pouch through an opening at the base of her spine. A snub-nosed tree dweller (right) changes its daytime coat of pale green to reddish brown at night.



SASTRICHUSA RODRIGUEZI (ABOVE), 3/4 INCHES, EDWARD S. ROSS;
PHYLLOMEDUSA SENNISI (RIGHT), 1 1/2 INCHES



DENDROBATES GRANULIFERUS, 4/5 INCH



STELOPUS VARIEUS, 1 1/4 INCHES

"Eye of newt, and toe of frog, wool of bat, and tongue of dog," cackled the witches of Shakespeare's *Macbeth* as they stirred a bubbling potion. To blend a more noxious brew, the witches could have added the toxic harlequin frog (above) or the spindly-legged creature at left, two of the many arrow-poison frogs used for centuries by the Indians. Darts dipped in the most potent frog toxins can paralyze and kill small game within minutes.



Toads or frogs? These gaily tinted harlequins lay eggs in strings, not clumps, so some biologists classify the amphibians as toads. "For patterning and brilliance of hue, they surely match the most beautiful of either classification," says the author.

Spectacular colors glamorize both sexes of many tropical frogs, but patterns are rarely identical. Some species, flashy in darkness, turn drab at sunrise; others appear bright in spring, then fade to dullness with summer. The differing garb results when the pigment cells, called chromatophores, expand and contract with changes in heat, humidity, and light. These color cells, buried beneath the skin, remain unaltered during molting, and a frog with a new coat retains its elegance.

ATHELIOPUS VARIUS, 1 1/4 INCHES



on your hands—and don't try to eat one!"

I, too, found the frogs easy to catch, and within 15 minutes we had a dozen in our plastic collecting bags.

Certain dendrobatids possess hundreds of minute poison glands beneath their variegated colors. They live on soggy humus, wet fallen leaves, mossy banks, or among roots, ferns, and shrubs. They are, above all, slaves to high humidity.

Months after I returned to Washington, a specimen I had brought home disappeared from its moist terrarium. I searched for it

feverishly, and within half an hour I found the frog under a laboratory bench, desiccated and already dead.

From my research at home and in the field I learned that the tadpoles of most dendrobatid species are somehow maneuvered onto the back of the male, who carries them about until they are developed enough to survive on their own (page 143). The youngsters, choosing their own moment, eventually slip away from the parent during one of his moisture-seeking swims in stream, puddle, or pond.

For several weeks they remain wrigglers,



scraping with their rasp-lined lips at algae and gulping protozoans. Meanwhile the mysteries of metamorphosis unfold. The tadpoles' tails diminish, then disappear; their stubby legs grow longer, and ever-intensifying pigments clothe the frogs in the garish robes of maturity. At last they crawl out of the water to take up adult life on the forest floor.

Other tropical frogs show equally strange reproductive patterns. In some species, the female carries the eggs with her, neatly packed on her back; in others, she deposits eggs in jellylike globules on leaves overhanging a

stream, so that the hatchlings will drop directly into the water (following pages).

After supper at the research station, Doug and I set out down the same trail, searching for more frogs. Doug was equipped with a miner's head lamp and I with a hand torch. About a quarter of a mile along, the trail skirted a stygian swamp. Here our spotlights, sweeping to and fro, dimly revealed tropical plants and trees that seemed like enchanted things rising eerily from the morass with outstretched arms and fingers.

(Continued on page 144)



CENTRODRELLA PROSOPLEPON, 1 INCH



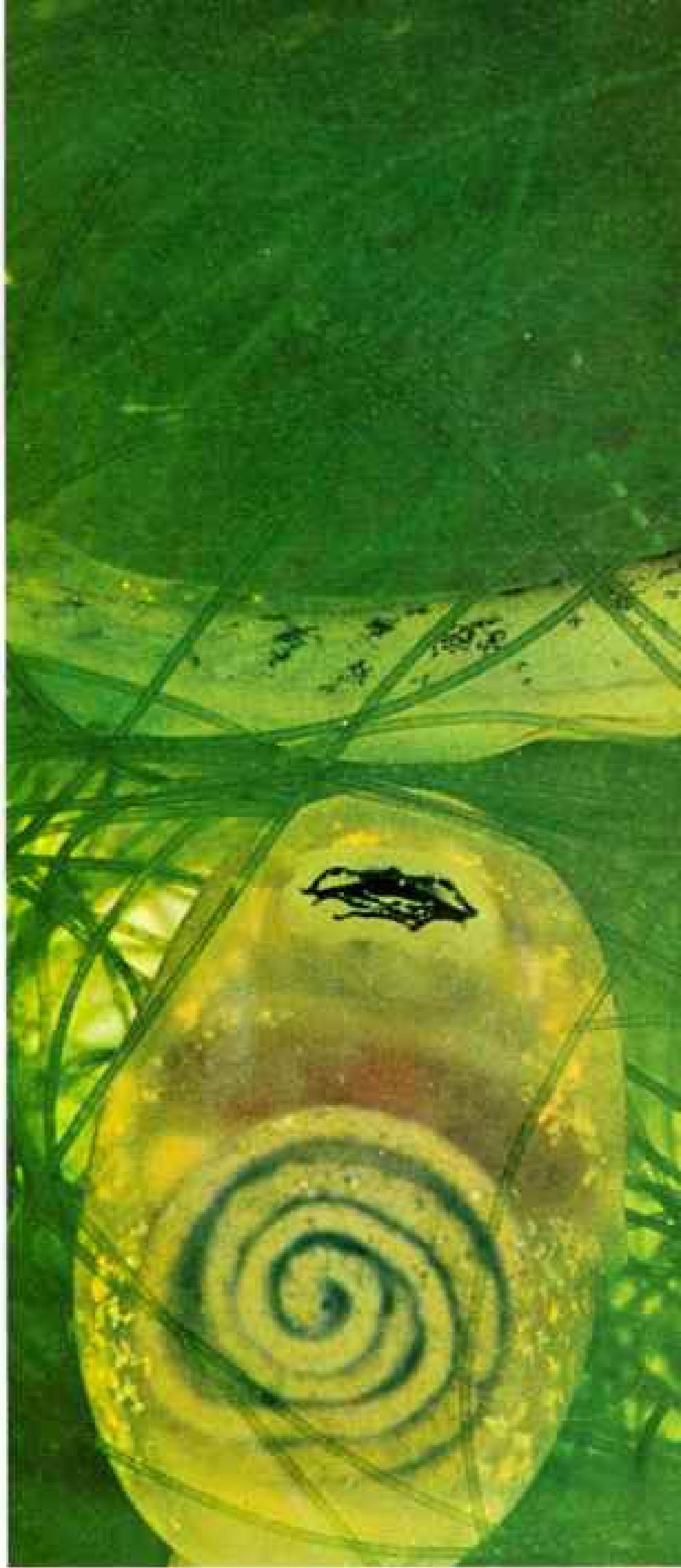
Life begins on a leaf. After mating, this goggle-eyed leaf frog deposited a clutch of about a dozen eggs on foliage overhanging a stream (above). A jellylike mass surrounding the ova soon swells with life-giving moisture (left), protecting the hours-old embryos from deadly dryness. Within days the eggs grow into recognizable tadpoles (below) with bulbous yolk sacs providing nourishment. As the wrigglers develop, the gelatinous outer membrane decomposes, perhaps triggered by a chemical change in the tadpoles. One by one, they slide off to a life of their own in the water (right).







Between frog and polliwog, a froglet gulps air from the surface of its aquatic nursery (above). It must test its developing lungs before it embarks on a land-roving life. As tadpoles grow, gills wither, legs and arms sprout and grow stronger, bold pigmentation appears over bodies, and tails are absorbed. When fully developed, most tropical species return to the water only to breed or to escape predators.



Grazing in an underwater thicket, tadpoles gobble algae and protozoans to sate enormous appetites. Rasplike lips scrape up and nibble the food. Transparent skin—flecked with color cells—reveals hearts and coiled intestinal tracts.

Taking over for mother, a poisonous Peruvian frog (right) backpacks his tadpoles for protection until they grow large enough to fend for themselves in the water.



PHYLLOBAATES BICOLORE, 1 1/2 INCHES; EDWARD S. BOSS (BELOW)



We knew that hylids—tree frogs—were everywhere around us. Noisy males, singing shrill love songs, produced a nearly overwhelming din. What some gifted composer could do, I thought, with those urgent cheeps, chirps, trills, and metallic clinks, all megaphoned by bulging vocal sacs!

Through his long years of experience, Doug could name the genus and species of many of the singers we heard along the trail. "*Hyla loquax*," he would announce, or, "That's an *Agalychnis saltator*."

He forged ahead of me, then plunged off the trail into the quagmire. The darkness promptly swallowed him except for an occasional firefly-like glimmer of his light.

For a while I heard him talking to the frogs as he stalked them through the muck: "Don't jump, you little devil," or, "Oh, what a beauty!" But the inevitable evening rains soon obliterated his voice.

Within half an hour Doug was back, jubilantly displaying his catch, several hylids and miscellaneous other frogs blazing with multi-colored patterns—green, orange, red, blue. To identify some would require paging through the reference books. I added the few frogs I had found along the trail.

Almost any of them could have sat on a postage stamp with space to spare. Wryly I recalled the giants of the frog family I had collected earlier in Africa: They measured more than 30 inches long from nose to toes, and weighed nearly seven pounds each.*

Hidden Cisterns Hold Living Treasure

Some days after leaving Puerto Viejo, Doug and I observed an especially curious frog habitat. We stopped our jeep alongside the road where the jungle was bearded with Spanish moss. Other bromeliads grew there profusely. Although not parasites, bromeliads—also known as epiphytes, or air plants—cling for support to tree trunks and branches, even to fence posts and telephone wires.

I watched Doug scrutinize every bromeliad of the bracket variety he could reach. Each was a rosette of sharply pointed blades flaring out from a central core that was firmly rooted to the supporting host.

*NATIONAL GEOGRAPHIC, July 1967.

"Look here," he said, gently drawing back one leaf blade after another to reveal a pool of rainwater at the base of each. Mosquito and other insect larvae thrive in such natural cisterns.

But it was something four-legged moving near a pool's edge that caught my eye—a Lilliputian creature no larger than my wrist-watch dial (pages 130-31). From its flattened head of brilliant green bulged two enormous eyes, each a coal of glowing scarlet slitted vertically by a black pupil.

Flashes of Color May Save Frogs' Lives

The creature, perched on disklike toe pads, hurtled out with a wild leap to land on a shrub about six feet away. In midair its widely splayed legs revealed previously hidden flashes of brilliant orange and blue. Such sudden displays of color may serve to startle a pursuer and slow him down.

But Doug wasn't slowed. He leaped in the same direction and almost as fast. After a few more moves by both parties, Doug had the extraordinary frog firmly in hand. "It's an *Agalychnis*," he told me. And I fancied a resemblance between it and one of the bizarre gold frogs in the San José bank (page 132).

"Certain other tree frogs lay their eggs in bromeliad wells," Doug said. "The water there is ideal for the tadpoles too." We bagged the specimen, and that night in the roadside hostel where we put up I reexamined it. In the dark the pupils of those huge eyes were fully dilated. Each resembled an eclipse of the sun bordered by a corona of fire—a cat-like adaptation for heightened night vision.

Back in San José we deposited our collection in suitable terrariums at the university's biological laboratories for further study.

Night after night, often accompanied by students, we set out by jeep for other collecting sites—hiking up the sides of volcanoes, down into deeply eroded gorges, along twisting streams. We kept a sharp eye out for bushmasters, rattlers, and other venomous snakes that share such frog habitats. We encountered only one—a *terciopelo*; the pit viper slithered quickly out of sight.

We had sampled Caribbean lowlands, temperate plateaus, and chilly volcanic

Bloodred jacket cries "beware!" The Christmas-bulb colors that warn away predators act as a magnet for scientists, who are studying frog neurotoxins in the hope of discovering new medicines for the treatment of heart disease.

REPRODUCED FROM THE ORIGINAL



heights. Now we equipped our jeep for the tortuous drive to Puerto Quepos, on the Pacific coast.

Through coffee, banana, and cattle lands, over brilliantly green hills and down into deep canyons, we descended from the high Central Plateau.

Evening found us at sea level in sight of Pacific breakers. Here thousands of drenched acres of what was once wild jungle are planted in neat rows with a species of African palm, whose reddish fruit contains oil used for making margarine.

Each trunk was covered with shaggy ferns, bromeliads, orchids, mosses, lichens—a lush haven for amphibians. We drove into the palm forest, splashing over puddled roadways. Darkness fell, and we were hardly out of the jeep with flashlights when the inevitable rain began.

"What perfect weather!" Doug exclaimed, with water streaming over his hatless head. As a herpetologist, he meant it, for it is especially during heavy rain that tropical frogs come out in full force.

A lull in the downpour proved his point. An intense orchestration of cries filled the air—love-sick amphibian musicians by the thousands, reveling in this night of nights.

Gravid Frogs Work Up a Lather

Our main object was to find specimens of *Leptodactylus*. Members of this genus beat up a great blanket of foam in which to deposit eggs. Our flashlights played to and fro as we prowled through the gloom.

In less than five minutes we came upon a swampy area where the water looked like the outpourings of a hundred washing machines,

with patch after patch of the whitish froth.

I followed Doug into knee-deep swamp. He stopped and beamed his light straight down. Through rain-glazed glasses I saw a small open space in the center of one of the foam patches. Nostrils and two alert amphibian eyes protruded there from the water surface—an adult *Leptodactylus* laying or guarding its eggs. I scooped up a bit of the foam and saw hundreds of black-pepper bits suspended there—eggs, of course, just laid.

The increasing downpour put an end to the search, and we headed back to the jeep. Last to return was Doug's assistant, Roger Sáenz, who came splashing out of the darkness with an entirely different frog, a *Hyla ebraccata*, hardly larger than a 25-cent piece. This little specimen had a unique feature. The beautiful gold-and-black patterning on its back was in the precise outline of a Halloween cat on a fence (page 136).

The day I left San José, Doug drove me to the airport. As we waited for the plane, he glanced at my shirtfront. "What's that?" he asked, pointing.

I fingered the new tie clasp I had purchased in a jewelry shop. "I can't name the species," I replied, "but it's a copy of one of the gold frogs in the Banco Central."

Doug examined it more closely. "Looks like a *Dendrobates*," he pronounced. "The gold original would be worth a small fortune."

No doubt it is—but values are relative.

Costa Rica's Indians, I reflected, valued such frogs enough to make lavish images of them in gold. But the living jewels from the forest floor may yet prove more valuable to man and science than any vault filled with gleaming pre-Columbian treasure. □

NEW VOLUME OF RESEARCH REPORTS AVAILABLE

The sixth in the National Geographic Society's series of *Research Reports*, detailing the findings of 31 scientific investigations authorized by the Society in 1966, is now ready. This volume continues the publication of technical reviews on a wide range of subjects that have resulted from more than 1,200 grants made in support of various research and exploration projects by the Society since its founding in 1888. Research reported in this volume includes botanical studies in northwestern Brazil, South-West Africa, and Peru; investigations of the theater and prehistoric mounds of Aphrodisias in Turkey; an ecological study of the Florida Everglades; Alaska glacier studies; biology of Atlantic deep-sea fauna; underwater expeditions in Bermuda and the Mediterranean; fossil vertebrates in Baja California; gray whale anatomy and behavior; ornithological studies in Africa, New Guinea, and the Aegean Sea; field studies of primates in Rio Muni; and archeological excavations in various parts of the world. Copies of this latest volume and of the other five, covering the years 1955-60, 1961-62, 1963, 1964, and 1965, may be obtained for \$5 each, postage paid, from Dept. 61, National Geographic Society, Washington, D. C. 20036. Request later billing if desired.



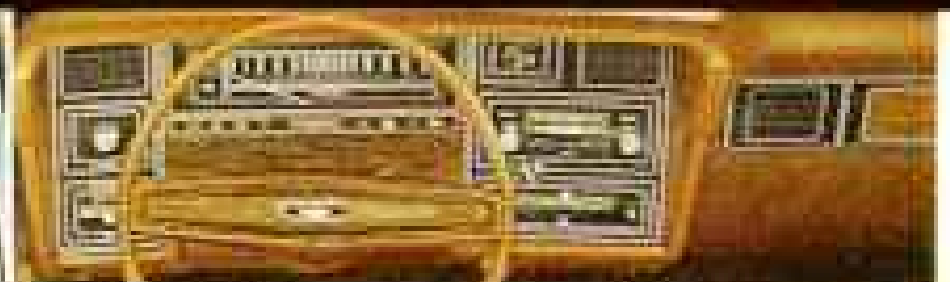
Ford Galaxie 500 4-Door Hardtop



Ford LTD Brougham
2-Door Hardtop

**The closer you look,
the better we look.**

In the 1973 Fords the extras aren't extra.



The luxurious LTD Standard Interior with Ford's famous Front Room has stretchout comfort, even for six-footers. Standard also: Ford's new wiper-mounted washer jets, and a super-size glove box. Redesigned instrument panel maximizes driver and passenger convenience.



The '73 Fords won Road Tests's "Car of the Year" award. And Motor Trend named Ford LTD "Full-size Sedan of the Year."

Every new Ford comes equipped with automatic transmission, power steering, power front disc brakes, power ventilation, and a 351 V-8. See them now at your Ford Dealer's. Where the "extras" aren't extra.

FORD

FORD DIVISION



Ford's new energy absorbing bumper system & side door steel guard-rails for added protection.



If you don't show your kids California, who will?

Universal Studios Stunt Show. See it on an American Airlines Fly/Drive Vacation.

Imagine what fun your kids could have this summer seeing how their favorite TV show is made.

Or taking a ride down the Matterhorn at Disneyland. Or watching the sea lions show off at Marineland.

California is a perfect place for families on vacation. There are so many things to see and experiences to share.

And this summer, we're giving you a chance to go there.

We've put together some of the best Fly/Drive Vacations any airline has ever offered.

Our \$187 vacation, for example, includes an Avis car for a week (unlimited mileage, you pay for gas). Plus 6 nights' accommodations

for up to a family of four at selected Holiday Inns throughout California.

Other vacations include a Hertz car and accommodations at Sheraton Hotels and Hyatt Houses.

Air fare, of course, is extra (e.g. New York to L.A. is \$234* for adults and we have special fares for children).

Why not talk to your Travel Agent. And get all the details about our Fly/Drive Vacations to California. (If you like you can fly into one city and fly home from another.)

There's nothing we'd like better than to make this summer's family vacation one you'll always remember. And one your children will never forget.

American Airlines

To The Good Life.®

Ringside seats for an island disaster

IN THE SILENT CHILL of a January morning, Iceland's island of Heimaey ripped open near the fishing village of Vestmannaeyjar. When the infant volcano coughed to fiery maturity, the GEOGRAPHIC sent staff writer Noel Grove (right) to capture the spirit of a people struggling to save their homes from nature's rampage.



NATIONAL GEOGRAPHIC PHOTOGRAPHER ROBERT S. PATTON

Photographer Emory Kristof (center) and illustrations editor Robert S. Patton were on the scene, too, making photographs and tracking down others taken during the eruption's first hectic days. To ensure the accuracy of every statement, researcher Carolyn H. Anderson, a graduate geographer, conferred with scientists and government

officials on the spot, and with islanders who witnessed the volcano's awesome birth. The article your GEOGRAPHIC team brought back from Heimaey begins on page 40.

Thoroughness and devotion to accuracy are two of the reasons NATIONAL GEOGRAPHIC finds a warm welcome each month in 8 million homes.

NATIONAL GEOGRAPHIC SOCIETY MEMBERSHIP

CHECK ONE

MEMBERSHIP—which includes a subscription to NATIONAL GEOGRAPHIC magazine—is usually on a calendar-year basis. However, because the supply of early 1973 magazines has been depleted, membership at this time is being offered only for the 18-month period starting with the July 1973 magazine and continuing through December 1974. Upon expiration, such memberships will be renewable annually on a calendar-year basis.

For 18-month membership in the U. S. and its outlying areas please remit \$11.25, which is 1½ times the annual fee. To compensate for additional postage and handling for mailing the magazine abroad, the 18-month rate for Canada is \$12.95 Canadian or U. S. funds; elsewhere, \$14.25 by U. S. bank draft or international money order. 80% of dues is designated for subscription to the magazine.

Life membership is available to persons 10 years of age or older. The fee for U. S. and its outlying areas is \$200 U. S. funds or equivalent; for Canada, \$216 Canadian or U. S. funds; for all other countries, \$250 (U. S. bank draft or international money order).

Mail to: The Secretary
National Geographic Society
Washington, D. C. 20036

I WISH TO JOIN the NATIONAL GEOGRAPHIC SOCIETY and enclose my dues \$_____

(Fill in name at left.)

(GIFT MEMBERSHIP) I nominate and enclose \$_____ for dues of the person named at left. Send gift card signed.

I NOMINATE for Society membership the person named at left. (Use separate sheet for additional nominations.)

NEW MEMBER

PRINT NAME OF AN INDIVIDUAL ONLY (MR., MRS., MISS)

STREET

CITY, STATE, ZIP CODE

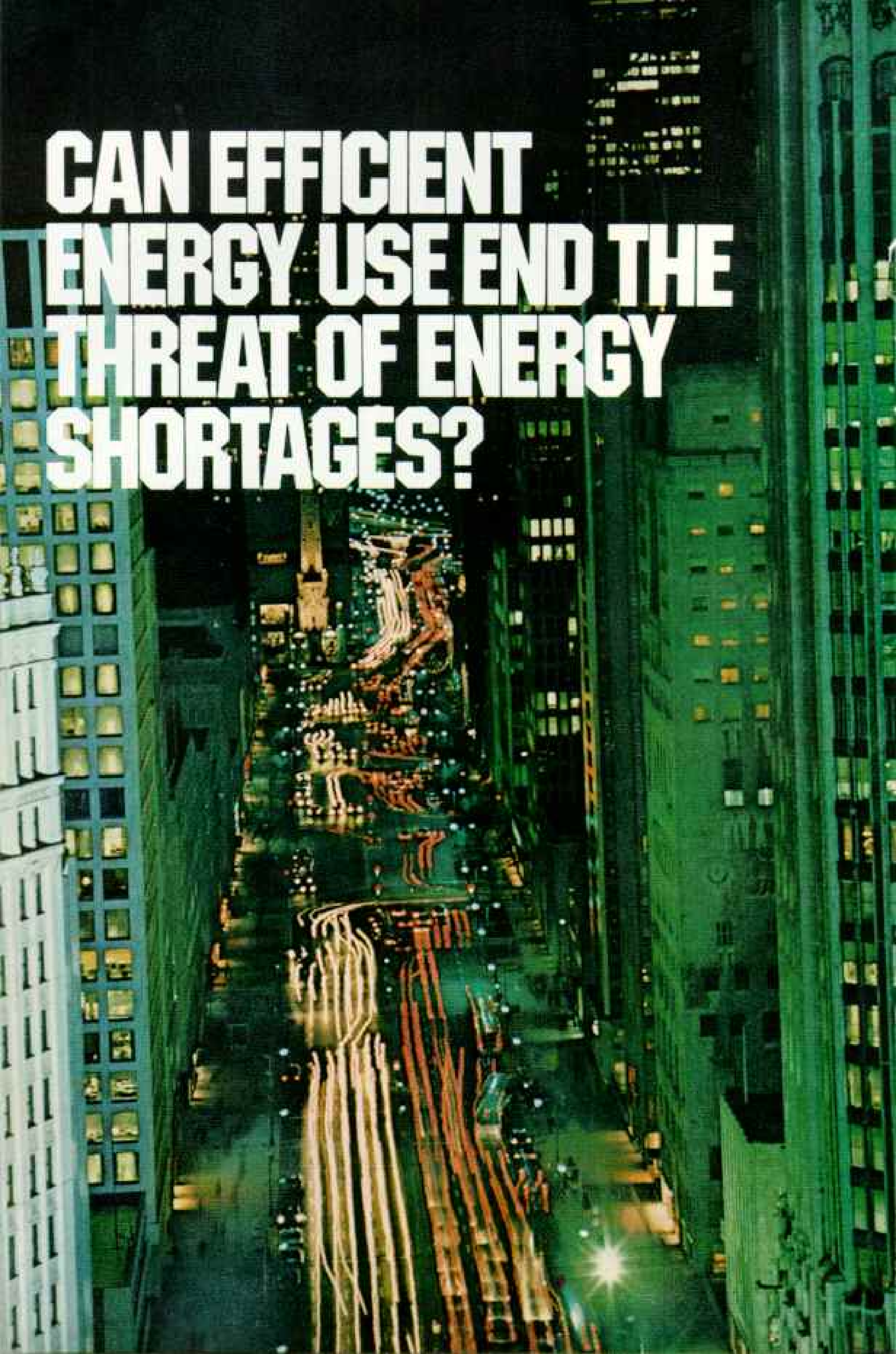
MY NAME

PLEASE PRINT (MR., MRS., MISS)

STREET

CITY, STATE, ZIP CODE

CAN EFFICIENT ENERGY USE END THE THREAT OF ENERGY SHORTAGES?



**EFFICIENT USE OF ENERGY
CAN'T END THE THREAT
OF ENERGY SHORTAGES.**

BUT IT CAN HELP.

**THE ERA OF ABUNDANT
LOW-COST ENERGY ONCE
TAKEN FOR GRANTED
IN AMERICA—IS OVER.**

**ALL OF US SHOULD BE
THOUGHTFUL IN OUR USE
OF ENERGY.**

**EVEN MORE IMPORTANT,
WE NEED TO DEVELOP
NEW ENERGY SOURCES
HERE AT HOME.**

In most American cities and towns, the lights went on every evening last winter.

Most homes, most schools, most offices and factories, had enough heat. Most planes and trains had enough fuel.

But not all.

During the winter of 1972-73, many Americans actually experienced shortages of natural gas, certain heating oils, jet fuel, diesel fuel.

What can this country and its citizens do to avoid more widespread shortages, more serious shortages?

What you can do.

All Americans can help stretch our energy supplies by a few simple, thrifty practices:

- Use mass transit if it's available, or travel in car pools.

- Save on gasoline by keeping car engines tuned.
- Turn off lights, radio and television when they're not in use.
- Improve insulation and weather stripping for more efficient heating and cooling at home.
- Try to keep your thermostat setting at 72 degrees. Above that (for heating) or below that (for air conditioning), costs and energy consumption rise significantly.

What we're doing.

The petroleum industry is extending supplies by using energy more efficiently in our own operations.

We are large energy consumers. With new equipment, what once escaped as useless heat will be harnessed to turn turbines and generate steam.

With heat exchangers, we're making our energy do more work than ever before.

We're increasing domestic supplies by recovering more oil and natural gas from existing fields and from wells once considered depleted.

This is done by augmenting natural pressures inside the earth: using injected water, gas, chemicals, liquefied gas or heat.

These techniques have the potential to produce as much oil, the second time around, as the field originally produced; in some cases, even more.

Better recovery methods can get a significant portion of the 300 billion barrels of oil in the United States that cannot be extracted with present technology.

New energy sources needed.

But conservation is only part of the answer.

The most important part of the solution is to develop energy sources of all kinds in our own country, where they can be depended upon.

Today, 77% of all our energy, including nearly 40% of our electricity, comes from oil and natural gas.

They will be our primary sources of energy for the next critical decade or longer.

Top priority: more oil and gas.

There is a pressing need to increase domestic supplies of oil and natural gas, and to build new refineries, terminals, and other facilities to get products to consumers.

The United States will not "run out" of energy in the near future. Nonetheless, all Americans can help conserve our precious supplies.

Moreover, because of the long lead time required to develop new energy sources, we cannot safely delay action that could increase those supplies.

The need is real, and so is the urgency.

To help you save energy, we've prepared a basic booklet, "A Guide to Efficient Energy Use In the Home." Write to Dept. CT, American Petroleum Institute, 1801 K Street, N.W., Washington, D.C. 20006 for your free copy.

A COUNTRY THAT RUNS ON OIL CAN'T AFFORD TO RUN SHORT.

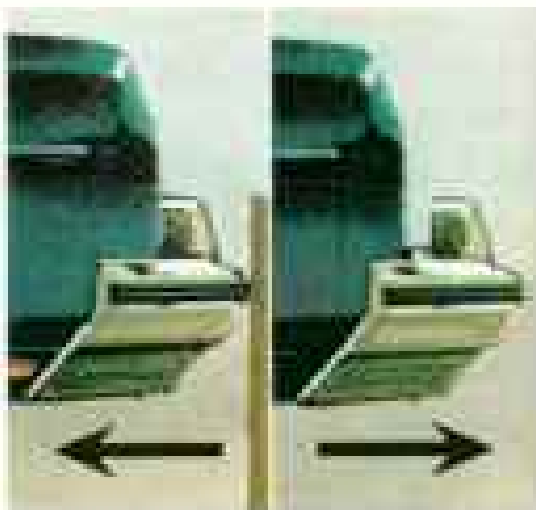
THE OIL COMPANIES OF AMERICA



Impala at Crater Mountains, Arizona.

There's so much to see, make sure you're around to see it. Buckle up.

Every time we try to give you one reason why Impala is a great value, we end up with a dozen.



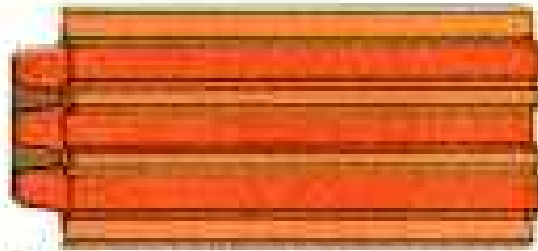
Improved front bumper system retracts and returns on minor impact to help cushion shock.



Double-panel steel roof serves two purposes: adds strength and helps reduce noise.



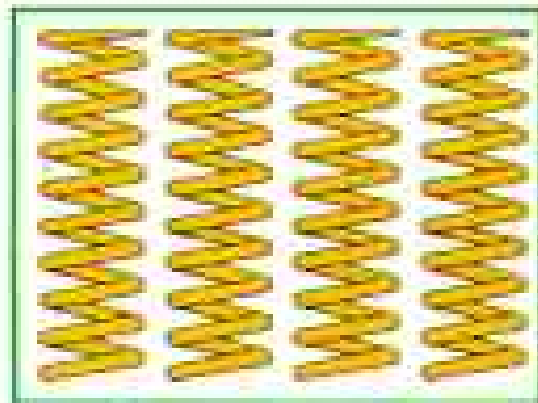
Variable-ratio power steering that gives good road feel, turns easily and quickly for parking.



Sturdy, protective side-guard beams in every door.



Impala's traditionally high resale value is something you'll appreciate at trade-in.



Full Coil suspension, springs computer selected to suit weight of car and equipment selected.



Three-range Turbo Hydramatic. One of the world's finest automatic transmissions.



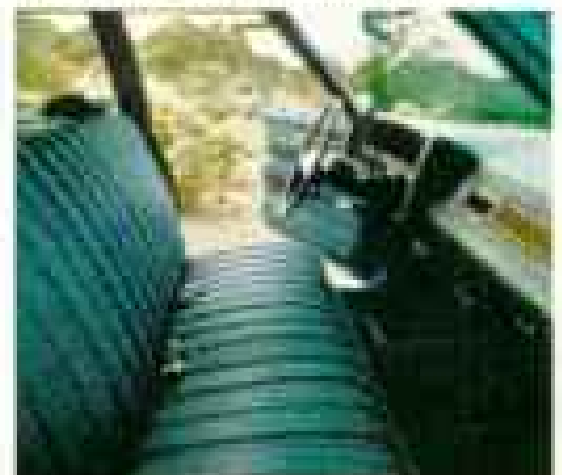
Power brake system. Up front, fade-resistant discs. On rear wheels, finned drums.



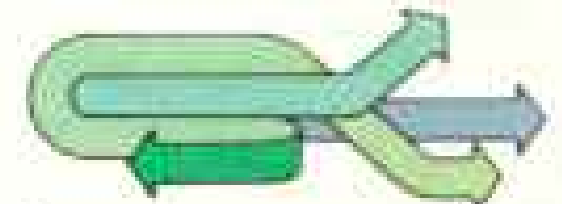
3-point seat and shoulder belt system features single buckle, reminder light and buzzer.



Standard V8 engine that provides big-car performance with advanced emission controls.



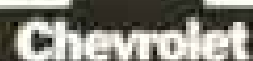
Full foam seats give you the kind of comfort usually associated with cars priced higher than Impala.



Improved power ventilation keeps outside air coming in even when you're stopped.

Impala. Truly, the great American value. When you buy it. And when you sell it.

Chevrolet. Building a better way to see the U.S.A.



Movies without movie lights. Four things Kodak did to make them possible.

Kodak XL movie cameras have four special features that let up to six times more light reach the film than cameras without them. 1. An extra-fast *f/1.2* Ektar lens. 2. An enlarged shutter opening. 3. An exposure control that doesn't block the light. 4. A viewfinder that doesn't steal the light. Just drop in a cartridge of Kodak Ektachrome 160 movie film and you're ready to take *good* movies without movie lights.

Kodak XL cameras start at less than \$120. The XL55 (shown) with power zoom is less than \$215.

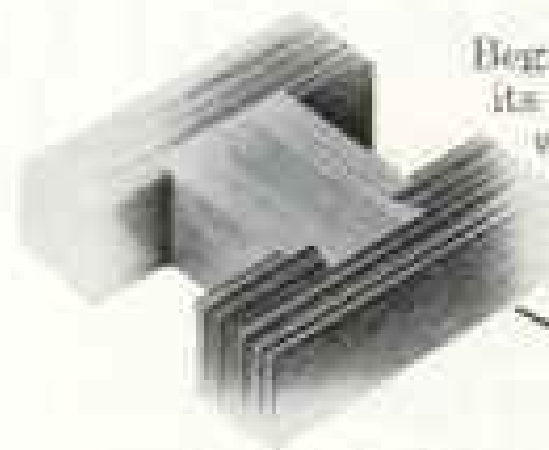
Prices subject to change without notice.



Kodak XL movie cameras. Kodak Ektachrome 160 movie film.



THE WHOLE BODY SHOULD TAKE PART IN THE SELECTION OF A PIANO.



Begin body-testing a prospective piano by examining its craftsmanship with eyes and fingers. Is the workmanship consistent? At Yamaha we make each part of our pianos, and carefully season our own woods, for high standards of quality control.

Test the piano's action (or keyboard mechanism) by playing with a variety of touch and pressure (fingers, wrists and elbows come into play as you try "load" attacks, smooth passages, short crisp notes, etc.).

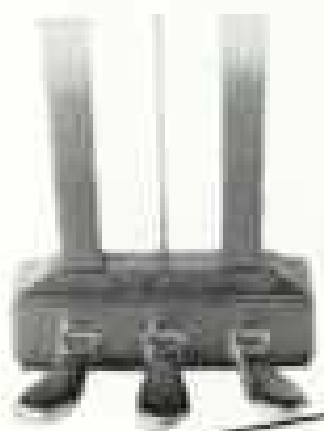
Be sure one key doesn't feel noticeably lighter or heavier to the touch than another. Also try



the action for its speed of response, and for sensitive transfer of power from your body to the strings.

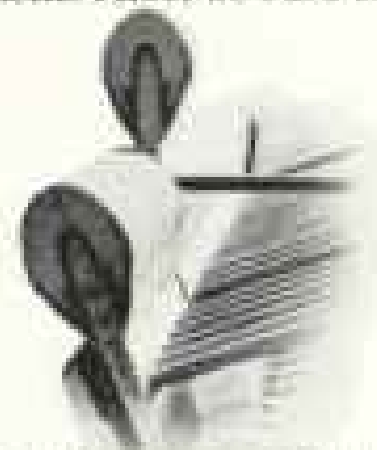
Yamaha keyboards are precise from one end to another, and respond to the slightest interpretive nuances.

Each Yamaha keyboard is balanced by an experienced specialist. Choice materials and ultra-precise fitting tolerances are utilized.



Check the piano's sound when soft-pedaled or sustained. (Yamaha pedals are smooth and responsive.)

Do you like the tone quality? Each note should sound clear and true, over the full range of the instrument. Also, be sure to ask



how well the instrument is built to stay in tune. (Yamaha pianos have features like a unique tuning pin block of the finest quarter sawed maple, and a sealing system we call "Humidiseal" for enduring tuning stability.)



Your whole body (and soul) has to respond to the whole piano. Fingers, wrists, elbows, eyes, ears, feet. The piano has to feel right, right down to your bones. If it does, buy it. (We know the chances are good it'll be a Yamaha.)

For more information on the art of piano buying, write to Yamaha for a free booklet, P.O. Box 6500, Buena Park, California 90620. Or see your nearest Yamaha dealer.

 **YAMAHA**

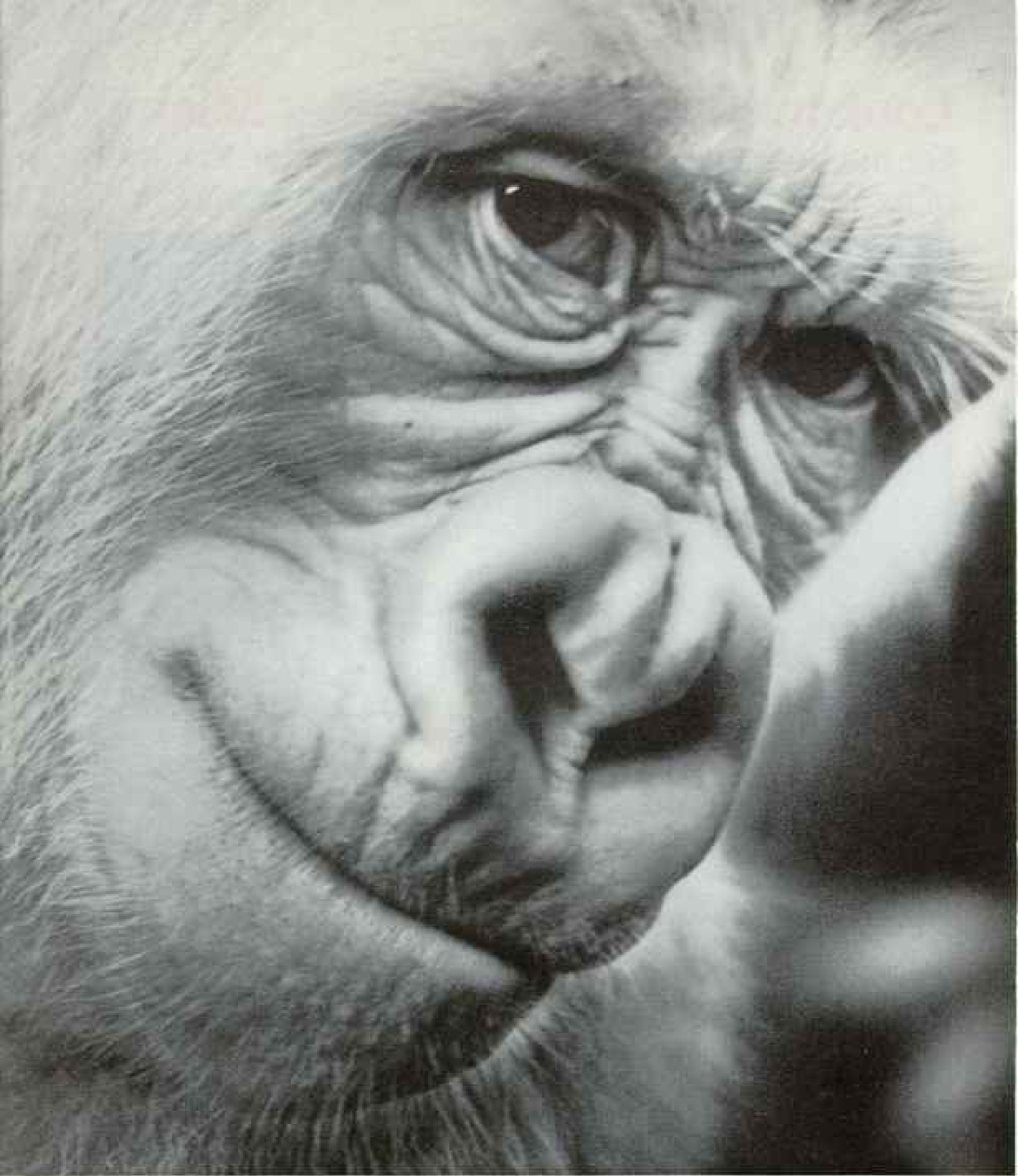
Look to the sights of Greater Miami.
For in the sights you will find brilliant color, the thrill
of exploration and the anticipation of adventure.



Greater Miami
there's no place like it
CITY OF MIAMI/METROPOLITAN DADE COUNTY



For further information write: Department NG73
City of Miami Department of Publicity and Tourism, 499 Biscayne Blvd., Miami, Florida 33132



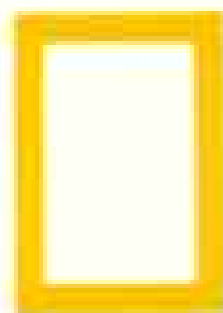
To meet the whole world face to face—as you are now meeting this white gorilla—might require more time and money than you could afford. But it doesn't necessarily have to! Through National Geographic magazines, special publications, books, maps, and school bulletins, you can now go where you choose—when you want to. You spend no time in getting to

FACE TO FACE

and from your destination, and no money on lodging, food, and transportation. Yet, you experience all the joy and excitement that come with meeting the world face to face. Use the form on the third page of this issue to become a member of the National Geographic Society.

Dept. 60, Washington, D.C. 20036

NATIONAL GEOGRAPHIC SOCIETY



National's 8 day week. Because a week's vacation is longer than 7 days.



Our 8-day week puts Father Time on your side.

Most week vacations come with two weekends. And the beauty of National Car Rental's 8-day week* is that you can take advantage of both of them.

Let's say you fly somewhere Saturday morning. The car you rent from us when you land is

yours until Sunday of the following weekend.

The 8-day net package rate is just \$118 for a Pontiac Le Mans, a Monte Carlo or similar-sized fine car.

We throw in 1,000 free miles (12¢ a mile after that). And we give you the first tank of gas free. All we ask is that you return the car to the city where you rented it.

If you're taking a shorter trip ask us about our 26-hour day and our 4-day weekend.

At National we've got the world's largest fleet of new GM cars. A sophisticated computerized reservation system† (you can even reserve a car in Europe by just picking up the phone). Plus S&H Green Stamps on every U.S. rental. And now we give one more thing to make the customer number one.

More time for your money.



*Available at participating locations in U.S. cities. †For reservations worldwide see your travel consultant or call 800-328-4567 toll free. In Minnesota call 612-830-2345 collect.

©1973 National Car Rental System, Inc. (In Canada it's Times-Rent-A-Car)



HARTZ

90 DAY

**COLLAR
FOR DOGS
FOR CATS**

**KILLS FLEAS FOR
THREE MONTHS**

that's blessed relief—that's
real protection for that pet
you love. Don't wait—get the
collar that conquers the flea

TODAY!

© Hartz Corporation. All rights reserved. HARTZ.COM, U.S. 877.242

It's a relief!
I'm your service
representative,
may I help you?

It's a relief!
I'll be glad
to explain that to you.



**"I'm your service
representative,
may I help you?"**



**"I'll be glad
to explain that to you."**

When you want to talk to the telephone company, here's who's on the other end of the line.

First of all, what you're not going to get is a shuffle from one person to another.

What you'll get every time you call your local telephone company's business office is a service representative.

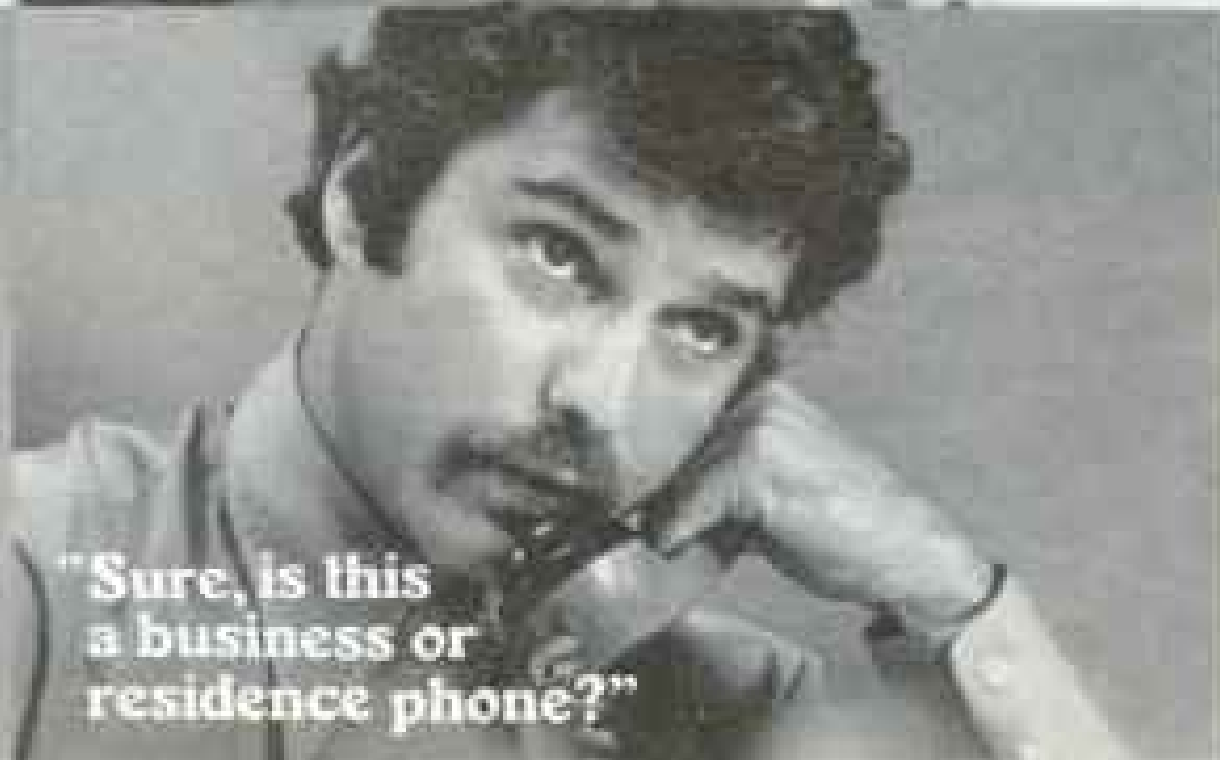
And every service representative has one job, and one job only. To help you get your problem solved. Quickly. Politely. And to your best possible satisfaction.

Naturally, you aren't the only person with something to talk over with us.

Each month, over 12 million of you call us. So AT&T and your local Bell Company have more than 37,000 service representatives to listen and to act.

(The time and money to train them runs into the millions. But when you consider the job they're doing, every dollar is well spent.)

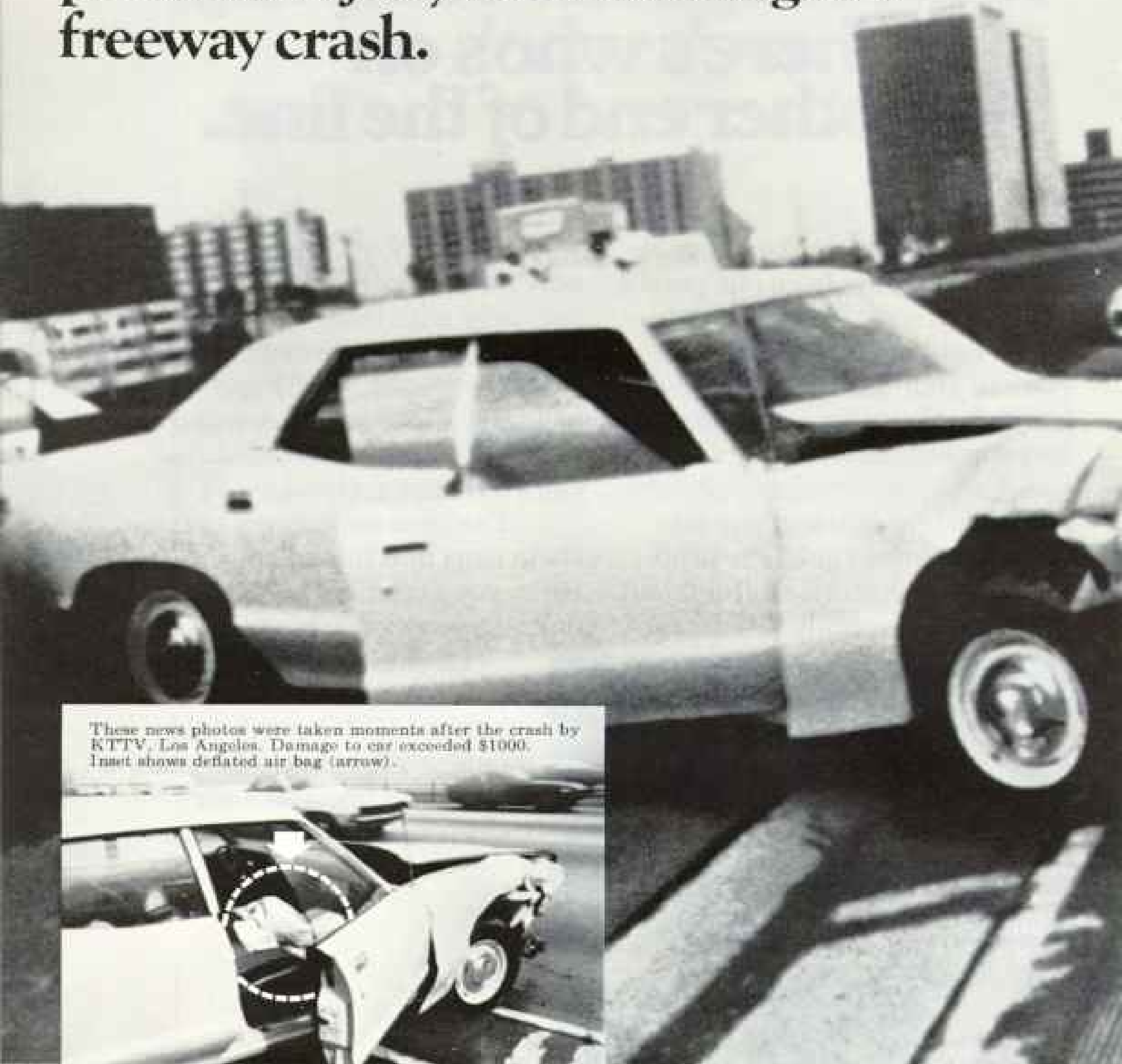
Even with all these 37,000 people, we can't promise to solve every telephone problem immediately. But we can promise a service representative will try.



We hear you.



February 7, 1973: The air bag—in its first non-test situation—works perfectly and prevents injury in a Los Angeles freeway crash.



These news photos were taken moments after the crash by KTTV, Los Angeles. Damage to car exceeded \$1000. Inset shows deflated air bag (arrow).

How the air bag works



Automatically inflates
... cushions ...

... and deflates, all in
less than half a second.

Photos from Phoenix air bag tests by
Dynamic Science Laboratories, 1972.



**"I noticed a smudge
on my glasses, but
my glasses
didn't even
come off."**

*Howard K. Shapar,
of Chevy Chase, Maryland,
was a front-seat passenger
in a U.S. Government
air bag-equipped car—
one of hundreds being
used in on-road testing
of air bags.*



Mr. Shapar was interviewed later
by Ed Reimers for Allstate.
Following is a condensation of that interview.

- Q.** *Any injuries, Howard?*
A. No, I seem to be all right, Ed.
- Q.** *Did you see the accident coming and get a chance to brace yourself?*
A. Well, I wasn't the driver, and I wasn't looking at the road . . . and I really wasn't braced for the accident at all.
- Q.** *Were you aware of the fact that the car you were riding in was equipped with an air bag passive restraint system?*
A. No, I wasn't.
- Q.** *Did you hear the air bag go off?*
A. No, I didn't.
- Q.** *What did you hear during the crash?*
A. Just the sounds that one would ordinarily associate with a severe crash between two automobiles.
- Q.** *Were you wearing a lap belt?*
A. I was wearing a lap belt, yes.
- Q.** *Was there any smothering effect when the air bag deployed?*
A. No, there was no smothering effect. Fact, I couldn't detect any effects directly associated with the air bag.
- Q.** *Do you have any idea of what would have happened to you if you hadn't had the air bag?*
A. I think I would have gone into the windshield—
- Q.** *Was there any after effect you noticed from the air bag deployment?*
A. The only after effect I noticed was a smudge on the outside of my glasses, but my glasses didn't even come off.

The air bag is designed to inflate automatically, but only in a frontal crash serious enough to cause injury. A special sensing device, using space-age technology, keeps air bag from inflating accidentally. Little bumps, rough roads, panic stops don't inflate the air bag.

Allstate is convinced that a passive restraint system like the air bag can save lives, help prevent disfiguring injuries, and can help hold down the cost of your auto insurance.

For a film and brochure about air bags for your club or organization, write:

Safety Director
Allstate Insurance Company
Northbrook, Illinois 60062

Allstate®

The Dodge Colt Wagon.

Built across the ocean.
Serviced across the street.



Until now, many little imports were apt to come equipped with one king-sized problem: where to get them serviced. Because until now, these imports have pretty much had to rely on dealerships they themselves set up in the U.S.

But now there's the Dodge Colt station wagon.

When your Colt wagon gets to America, it's sold and

serviced by a network of Dodge Colt Dealers that stretches from coast to coast.

So if you're looking at import wagons, look at it this way:

The Colt Wagon comes from Japan to America.

c/o Dodge.

Here are some of the 30 things that come standard on the Colt Wagon: Four doors, instead of two • Reclining bucket seats • Front disc brakes • Overhead cam hemi engine • Four-speed transmission • Adjustable steering column • Flow-through ventilation • Easy-to-care-for vinyl upholstery.



Dodge

Dodge Trucks

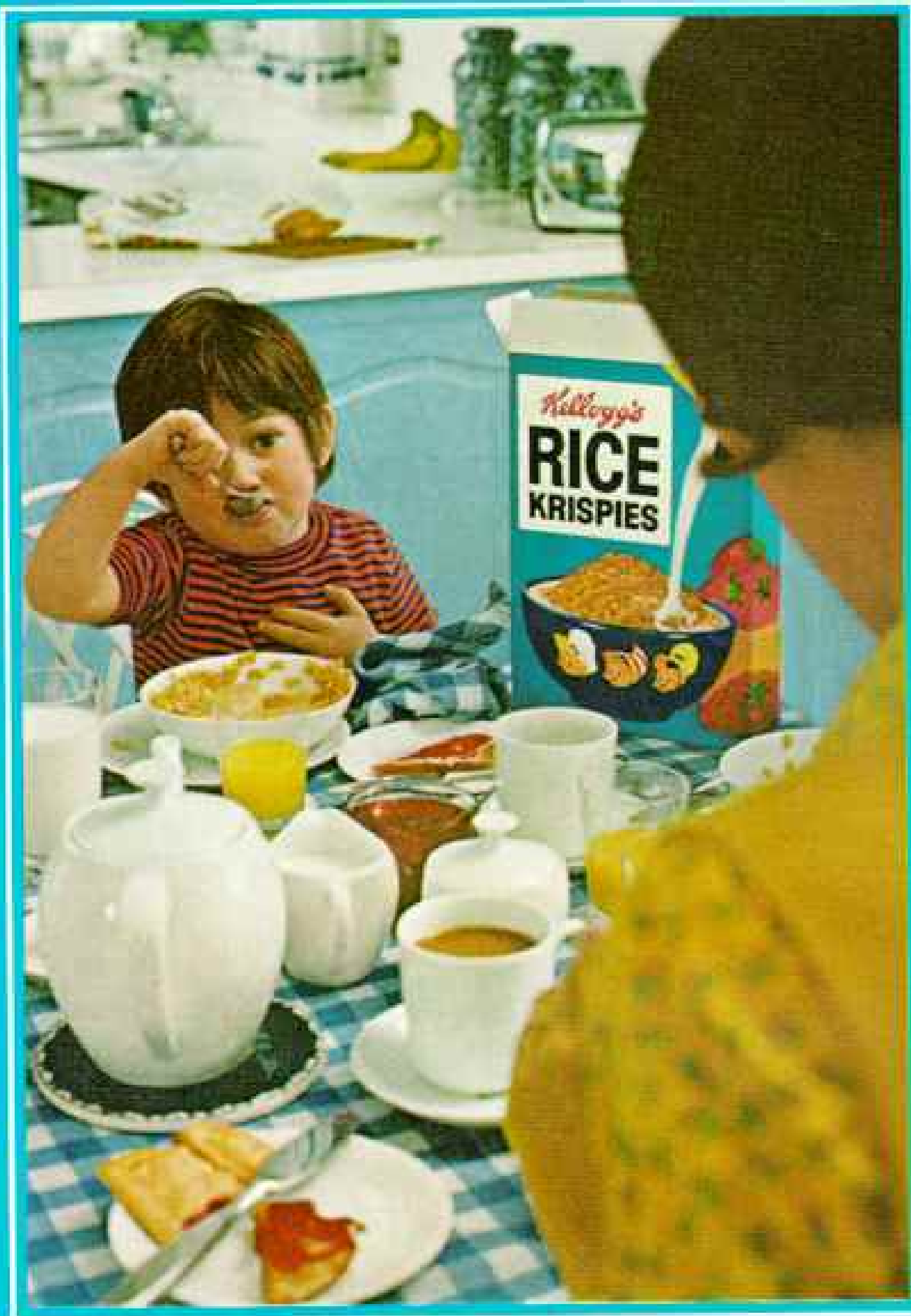


CHRYSLER
MOTORS CORPORATION

Great-tasting nutrition.

When you don't feel much like talking at breakfast time, isn't it nice to have a cereal that does? Kellogg's Rice Krispies with milk, toast, fruit or juice. Flavor, nutrition and a great sound. "Snap! Crackle! Pop!"™

The best to you each morning.



A great taste in the morning is such a fine beginning.

Kellogg's
RICE KRISPIES®

THE NUTRITIONAL FACTS OF KELLOGG'S RICE KRISPIES

See boxes of Kellogg's Rice Krispies cereal products for percentages of an adult's officially established minimum daily requirements (MDR).

NUTRIENT	Percent MDR	
	1/2 cup	1 1/2 cups with milk
VITAMIN A	33%	37%
VITAMIN D	33%	45% **
VITAMIN C	33%	37%
NIACIN	33%	34%
THIAMINE (B ₁)	33%	37%
RIBOFLAVIN (B ₂)	33%	33%
IRON	7%	7%
PHOSPHORUS	3%	10%
CALCIUM	—	19%
***VITAMIN B ₆	0.0 mg	0.05 mg
***VITAMIN B ₁₂	1.0 mcg	2.1 mcg
***MAGNESIUM	55.2 mg	31.1 mg

TYPICAL NUTRITIONAL COMPOSITION

	60g (2.1oz)		60g (2.1oz) with milk
	% Daily Value*	Amount in 1/2 cup	
Protein	6.5%	1.8 gm	6.1 gm
Fat	1.3%	0.4 gm	4.7 gm
Carbohydrate	86.5%	24.5 gm	30.5 gm
Calories		105	189

*Values are percentages derived from USDA Handbook No. 8 and USDA Report No. 36.

**Vitamin D fortified with 400 USP units/gal.

***Minimum daily requirements have not been established.

A gift of diamonds need not be expensive. Your jeweler can show you many exciting pieces starting as low as \$100.
De Beers Consolidated Mines, Ltd. A diamond is forever.



She knows
I'm not clever with words.
I've always relied
on her easy warm
understanding smile.

But just once,
after ten years, just once,
I wanted to tell her I loved her
like I've never told her before.

Diamonds make a gift of love.

**With a Land-Rover,
you can rub elbows
with the natives of
New England.
Or New Guinea.**



A 4-wheel-drive Land-Rover is the ideal vehicle for exploring the backroads of New England or any other out-of-the-way terrain, for that matter.

So if your taste in travel runs to the exotic, you can always book passage for your family and Land-Rover, and even explore the wilderness of New Guinea.

Because, with a Land-Rover, your call of the wild will never go unanswered.

For the name of your nearest dealer, call 800-447-4700. In Illinois, call 800-322-4400.

Land-Rover

British Leyland Motors Inc.
Leonia, New Jersey 07605



STANDARD EQUIPMENT: On the new Series III Land-Rover we offer an all synchromesh gearbox (4 forward speeds and reverse, plus a 2-speed transfer box, equals 8 forward, 2 reverse); alternator; larger capacity heater; improved power brakes plus new fascia and other styling advances.

As always: Four wheel drive. Full length metal top. Body of corrosion-resistant aluminum alloy with sliding side windows. Side-hinged rear door. Seats for seven. Windshield ventilators with built-in fly screens. Dual braking system. Windshield washers. Back-up lights. Fresh air heater and defrosters.

CHANGE OF ADDRESS?

Please print your new address below:

NAME _____

ADDRESS _____

CITY, STATE, ZIP CODE _____

And attach the address label from your National Geographic Magazine wrapper here, so your records can be updated.



Paste Label Here

Clip this entire form and mail to:

**NATIONAL GEOGRAPHIC SOCIETY
WASHINGTON, D.C. 20036**

**Stereo
recording of
famous "Organ
Favorites"...
plus exciting
Leslie Speaker
demonstration.
Just 50¢.**



Listen to your most beloved organ favorites...and then discover the color, texture and variety of affects which a world-famous Leslie Speaker can add to your playing. A "must" for the record collection of every organ owner! Seven inch "mini-album" just 50¢ including postage and handling.

Leslie
SPEAKERS

Electro Music, CBS Musical Instruments, A Division of CBS, Inc.

Leslie Speakers/Electro Music
56 West Del Mar Blvd., Pasadena, Calif. 91105

Please send the Leslie-Speaker "Mini-album." 50¢ full payment is enclosed.

NAME _____

ADDRESS _____

CITY _____

STATE _____

ZIP _____

BRAND/TYPE OF ORGAN OWNED _____

CONSERVATION IS A 300-YEAR-OLD WORD IN THE RSA

From the journal of Jan van Riebeeck, founder of the South African Nation: October 26, 1657 . . . "The commander today went to inspect a forest . . . the free carpenter, Leendert Cornelissen of Zevenhulsen, wished to have the sole right to obtain timber from it, in such a way that the forest would suffer no damage, but would be improved . . ."

Thus Kirstenbosch – now Cape Town's famed botanical gardens – was almost certainly the first South African soil to which an avowed programme of plant conservation was applied.

What Van Riebeeck started, the people of South Africa continued. Today the RSA is one of the most extravagantly life-filled places in the world . . . 850 species of birds. 350 at one lake alone . . . 800 species of butterflies . . . 1 500 species of fish . . . 18 000 different kinds of plants . . . the greatest variety of African animals. All preserved much as it was in Van Riebeeck's day in national parks and game reserves – one of them Kruger National Park the size of Massachusetts. A 3 000 mile coastline spanning two oceans, mountains, bushveld deserts . . . and sophisticated cities with international hotels.

One of the "Crown Jewels" of South African ornithology, an Orange-breasted Sunbird sipping nectar from an erica.

Write now for our free 52-page full-colour magazine "Discover the RSA". It will show you that a visit to South Africa is an experience no serious conservationist can afford to miss.

South African Tourist Corporation, Rockefeller Center, 610 Fifth Ave., New York, N.Y. 10020, or Suite 721, 9465 Wilshire Boulevard, Beverley Hills, California 90212.

Satour offices also in London, Frankfurt, Paris, Rome, Amsterdam, Toronto, Sydney, Salisbury, Rhodesia. Head office Pretoria, RSA.

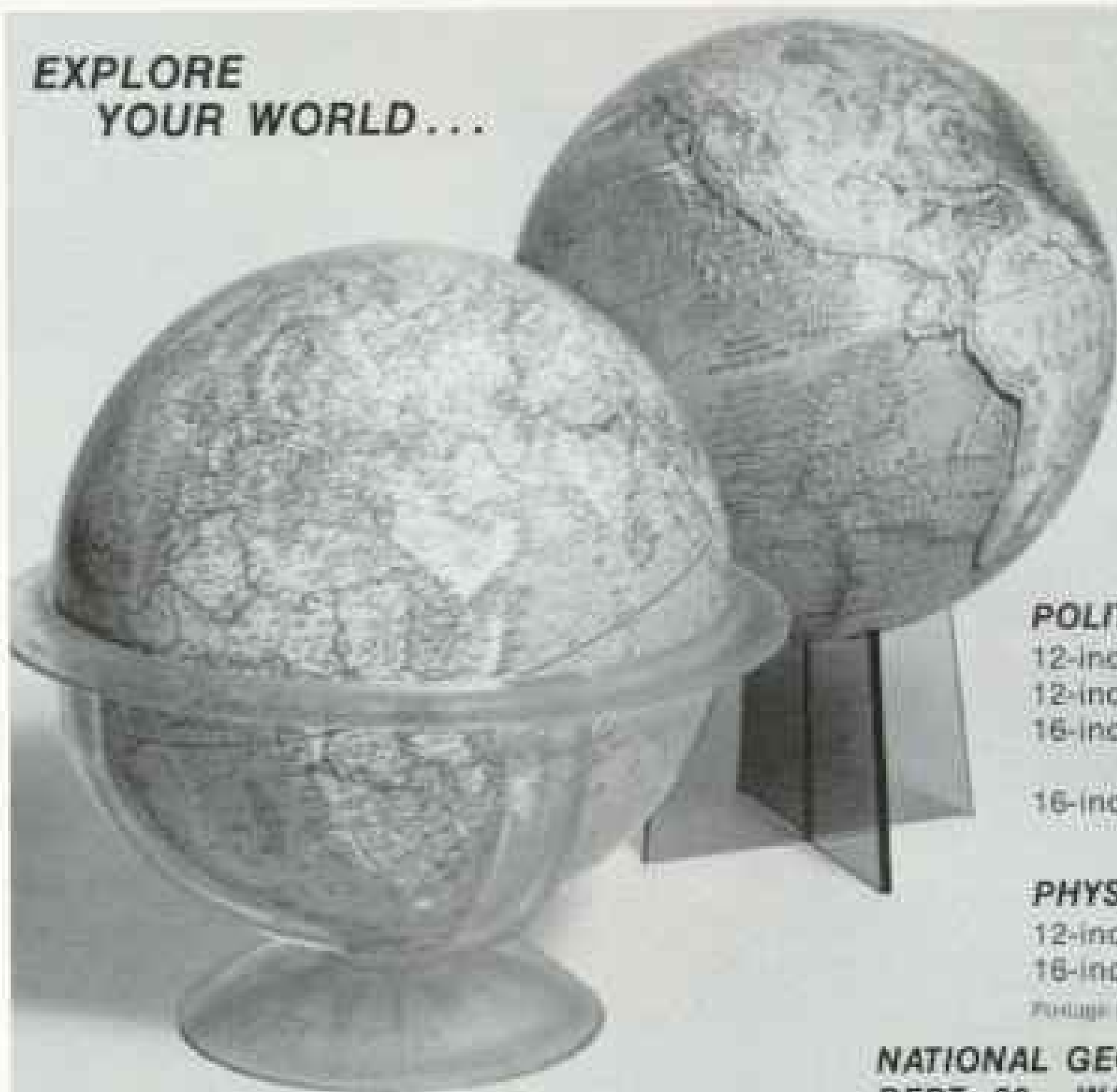


Can't have salt?



Food without salt can get pretty dull. But now there's a way out for people who can't have salt. Adolph's Salt Substitute looks, sprinkles and tastes like salt. That's why many doctors recommend it. Available regular or seasoned at your grocer.

**EXPLORE
YOUR WORLD...**



POLITICAL GLOBES

12-inch Globe	\$18.50
12-inch Illuminated Globe	\$26.50
16-inch Globe	\$42.00
(with walnut stand)	\$52.00
16-inch Illuminated Globe	\$57.00
(with walnut stand)	\$67.00

PHYSICAL GLOBES

12-inch Globe with stand	\$17.50
16-inch Globe with stand	\$36.00

Package valid in U.S. and its outlying areas only.

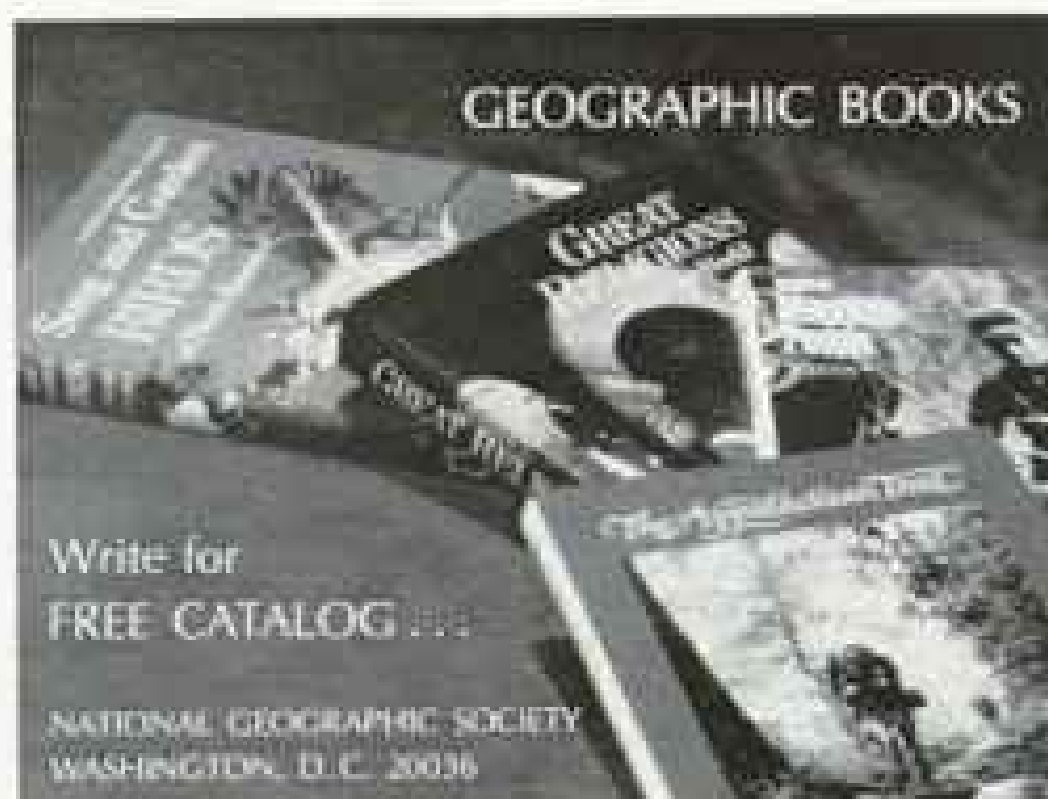
**NATIONAL GEOGRAPHIC SOCIETY
DEPT. 60 - WASHINGTON, D. C. 20036**

ROYAL WORLD ADVENTURE IV

Private 707 Jet for our exclusive group
JANUARY 19, 1974 * * * 23 DAYS
 CANARY ISLANDS, ZAIRE (Congo),
 SOUTH AFRICA, SWAZILAND, MOZAMBIQUE,
 KRUGER PARK, KENYA, IRAN,
 AFGHANISTAN, PAKISTAN, INDIA, NEPAL,
 BURMA, HONG KONG, JAPAN, HAWAII
 Under the personal direction of Cliff Gotaas
 on his 28th trip Around The World.

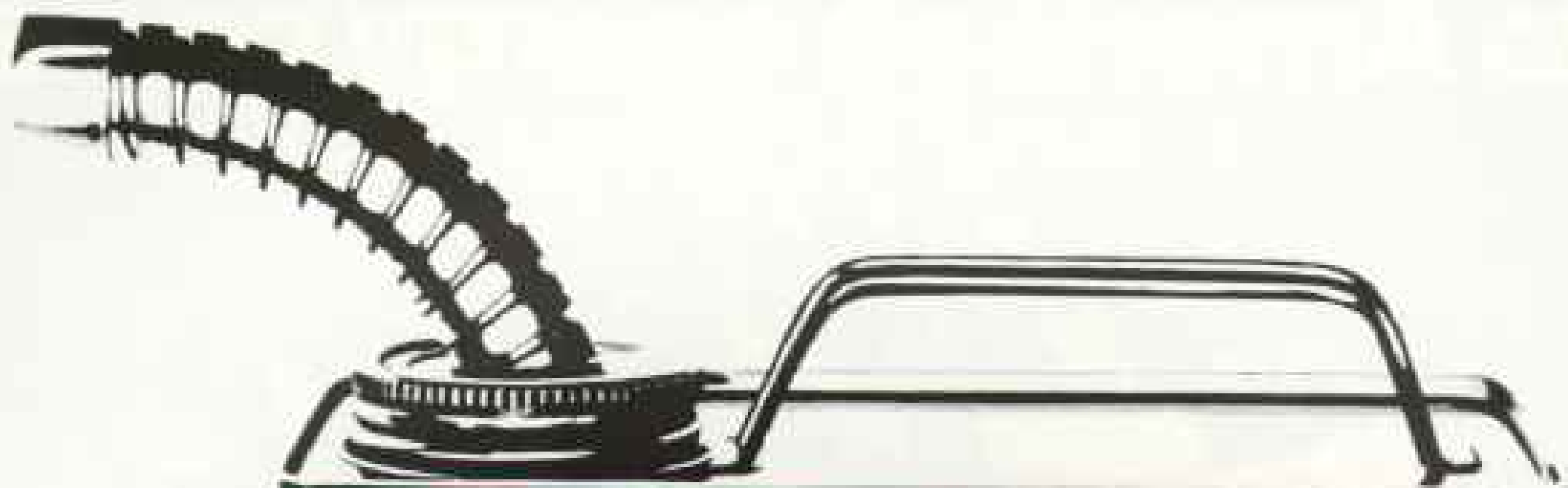
GOTAAS WORLD TRAVEL Dept. A
 7 W. Madison Street, Chicago, Illinois 60602
 Telephone: (312) 236-2385

GEOGRAPHIC BOOKS



Write for
FREE CATALOG...

**NATIONAL GEOGRAPHIC SOCIETY
WASHINGTON, D.C. 20036**



DATSUN SAVES

About a gallon of gasoline a day.

With the demand for fuel rising faster than the supply, here's one way to help ease our energy crisis. According to the latest U.S. Bureau of Highways figures, the national average for gas mileage is about 13.5 miles per gallon. The new Datsun 1200 gets around 30 miles per gallon or over twice the national average. The average car in the U.S. is driven just over 10,000 miles a year, so you can save about a gallon of gas every day by driving a 1200. With gasoline prices going up, it's a considerable savings of another important resource: your money. Drive a Datsun... then decide.



DATSUN

From Nissan with pride.

This may be one answer to America's energy crisis.



It's called resource recovery, or saving what is worth saving from your trash and garbage.

There are hundreds of reclamation centers throughout the United States, in areas where there are enough all-aluminum cans in circulation to make them feasible. Also, where solid-waste recovery plants are either operating or being planned, the recovery of aluminum is expected to pay much of the cost. Used all-aluminum cans are worth as much as \$200 a ton.

So resource recovery is possible. And the high scrap value of alumi-

num makes it practical. And the tremendous savings in energy make it even more practical. Alcoa has the technology to recycle used all-aluminum cans with just 5% of the energy it takes to make them the first time.

There's not another beverage packaging material quite like aluminum. Only aluminum has all these things going for it: it's lightweight, chills quickly, keeps things fresh, opens with a snap, has high scrap value and can be recycled repeatedly. Alcoa will pay as much as \$200 a ton to any community reclamation

center for all the used aluminum cans they can collect. We'll pay it because aluminum is a very practical packaging material to recycle.

Alcoa is doing something to help stop the energy drain. We would like to tell you more about it.

Write for our free brochure on energy and aluminum. We'll also send you a list of America's aluminum can reclamation centers and information as to how one community established its center. Aluminum Company of America, 815-G Alcoa Building, Pittsburgh, Pa. 15219.

Aluminum:
Pass it on

 **ALCOA**

What are you doing this weekend?

The usual? Again?

One of these days, you're going to get fed up with TV, crab grass, barbeque smoke, and that whole dull story.

You'll look hard at your life style and ask yourself, "is that all there is?"

Because when you're restless, there's always the usual. Like why not drive up to

You're surrounded by personally selected colors, fabrics, carpeting and appointments, marvelling at the quiet comfort and unbelievable scenery. And you're moving into a weekend of fun and adventure at 200 miles an hour.

Hours before the rest of the world is off the freeway, you're in your trout stream or on the beach. And you're thinking there'll be weekends when you'll want to stick around home base. And just fly. For the fun and beauty and solitude of it.

Next time you're staring at a dull weekend, start out on the biggest adventure of your life. Head for your Beechcraft Dealer. Or maybe you prefer to go the route of the un-coupon below. It really doesn't matter which way you go. As long as you go up, in your own Beechcraft Bonanza.



the lake? Join the chain gang on the highway for five hours both ways. Some fun, huh? Or how about a 16-hour pilgrimage to see the big game. Worth it? You decide not. Game's on TV, anyway. Yawn.

Then one day you happen to look up from your hedge clipping and see the answer far above your buttoned down boredom.

The answer is a Beechcraft Bonanza. Flying off to all kinds of freedom. All kinds of intriguing places. All kinds of adventure.

"I'll check into that," you think. You do. "But what is all this weird stuff? Can I drive one of these?" You can fly one of these. And you're entering an exclusive fraternity in the very finest airplane made anywhere. By anybody. Your own personal Beechcraft Bonanza. A legend in our times. The most respected and sought-after single-engine airplane in the world.

THIS IS NOT A COUPON!

It's sort of an un-coupon. If it isn't a crime to cut up a page in National Geographic, it ought to be! However, we have a dandy gift for you, and we'd like you to send for it. Now!

SEND FOR YOUR FREE ADVENTURE KIT. You'll get one of the most fascinating maps of the U.S.A. you've ever seen. Anywhere. Really a fun and adventure chart to set you free from the dull routine. A special calculator in the kit shows you how close each adventure is in pleasant hours of Beechcraft flight. Everything you want to know (almost) about flying is answered in this interesting gift kit for readers of National Geographic. **WRITE ON YOUR LETTERHEAD TO:** Beech Aircraft Corporation, Department A, Wichita, Kansas 67201. Ask for the Beechcraft Adventure Kit. Give us your name, address, occupation. Pilot? Aircraft owner? Thank you!

