SUPPLEMENT: TEN-COLOR ATLAS MAP OF ASIA

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THE NATIONAL GEOGRAPHIC MAGAZINE

Russia as I Saw It

By RICHARD M. NIXON

Vice President of the United States

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Since the early years of the century, when William Howard Taft wrote of the Philippines and Theodore Roosevelt of Africa, the NATIONAL GEOGRAPHIC has had the honor of publishing contributions by six Presidents or Vice Presidents of the United States. None dealt with a subject of greater interest and importance than the following article by one of the National Geographic Society's most distinguished members, Vice President Nixon.—*The Editor*

IT WAS LESS than 24 hours after my arrival in Moscow that I got my first striking lesson in Soviet determination—in their driving purpose to achieve for themselves a better and more abundant life—and a lesson in Soviet logic as well.

I had already been impressed, while driving from the airport to the center of the city, by the astonishing amount of new building, most of it huge apartments aimed at relieving the chronic Soviet housing shortage that is still far from beaten. Then, right at the start of the "great debate" with Premier Khrushchev in the television studios of the American National Exhibition at Sokolniki Park, he turned to me and said:

"We wish you success in showing what America is capable of. How long has America existed—three hundred years?"

"More than a hundred and fifty," I told him.

"Well then," he went on, "we will say America has been in existence for a hundred and fifty years, and this is the level she has reached. We have existed not quite 42 years, and in another seven we will be on the same level as America. And after that we will pass her by and go further still!"

Now, nothing I saw during my 11 days in the Soviet Union—and let me say at once that I don't believe this makes me, overnight, a "Russian expert"—none of the sharp impressions I carried away leads me to believe that they will equal our standard of living in seven years—or in 70, if only we remain true to the traditions that have made possible our fabulous growth up to now.

Both a Challenge and a Hope

But I *was* impressed by Premier Khrushchev's determination, by his evident deep belief in the future development of the Soviet Union's vast potential, by the intense purposefulness of Soviet leaders and Soviet people alike to make this potential real. And I couldn't help noticing, too, his curious offhand assumption that all of Russian history worth mentioning dates back only to the Revolution of 1917!

The most important point, though, is this:

U. S. and Soviet Flags Fly Above Muscovites

Curiosity about a land few Russians have seen draws thousands toward the central pavilion's gleaming aluminum dome at the American exhibition in Moscow.

Grinning, the author forestalls interruption during his speech opening the exhibition by telling Premier Nikita Khrushchev: "I know you object, but I have the floor." Mrs. Nixon and Frol R. Kozlov, First Deputy Premier, join in the laughter. Earlier, in the kitchen of the fair's model home, Mr. Nixon and Mr. Khrushchev engaged in a spirited debate reported around the world.

No matter how great the potential Soviet challenge, this very Soviet determination to achieve a better and richer life opens the possibility at the same time for a great hope. Such a life can flourish only in an atmosphere of peace, of mutual cooperation among nations and peoples—and this is a hope that I tried, over and over again, to exploit in all my contacts with the Soviet leaders and people. But more of that later.

I was not in Moscow, of course, to debate with Premier Khrushchev. I was there, as President Eisenhower's official representative, to open the American National Exhibition, and, at the same time, to talk candidly with the Soviet leaders, to learn as much as I could about their land and people, to help relieve in some small way the appalling misinformation—among leaders and people alike—about America and its purposes and goals.

With what success? Obviously, I cannot say. But I think I can say this much at least: That America will leave unexplored no avenue that might conceivably lead the way, eventually, to an honorable and enduring peace. And that was the heart of my own message to the Soviet people.

Millions Visited U. S. Exhibition

The exhibition itself was a tremendous success. It was designed to show some of the things we produce under our free-enterprise system and something, too, of the quality of American life. As I put it in my radio-TV address to the Soviet people, how nearly we in America have achieved freedom and abundance for all in a classless society—the very goal that the Communists claim as their own special property!

I think the Soviet people were impressed. Millions of them visited the exhibition—the unofficial attendance figures were three mil-

lion—and when I was in Moscow, tickets to the fair were about the most highly prized possessions in town.

That scarcity of tickets, in fact, gave Soviet officials a chance to try some malicious anti-American propaganda at my expense. It happened the day after I arrived in Moscow.

I woke up early and, with one of my staff and an interpreter, drove down to the Danilovskiy farmer's market. This is a fascinating place, mostly open-air, with hundreds of small stands selling fruits and vegetables, flowers and herbs, everything, in fact, from plastic toys to fresh milk. Such places have always held a special fascination for me—dating all the way back to my school days when I was in charge of the produce department of our family grocery and used to drive early every morning to the Los Angeles wholesale market to buy the day's supplies.

Trud Letter Charges Trickery

Everyone at the market—vendors and customers—was very friendly, and, when they learned who I was, at every stand where I stopped they insisted I sample their products and flatly refused any money. When I left, one of the women selling flowers gave me a bouquet as a gift from all the vendors.

But just before we left, several people asked me for tickets to the exhibition, scheduled to open later that day. I told them I had none with me, but I called over the man who said he was director of the market and said I should be glad to give him money to buy tickets for everyone. But he assured me it was not the one-ruble price that stood in their way; tickets simply were unobtainable. We promised to do what we could to help.

The next morning Moscow's *Trud* carried an indignant letter, charging in effect that I

American Models Parade U. S. Styles; "Too Skinny," Said the Russians

"Our models' slender figures puzzled Russian women," reported Helena Rubinstein, whose cosmetic firm gave beauty demonstrations at the fair (following pages).

"The women seemed baffled by the fashion show's emphasis on beach and play clothes. We showed golfing costumes, but Russians play no golf. I left with the impression that they viewed our styles as unrealistic and somewhat absurd."

These American models display evening gowns before girls in neat frocks, women in flat heels and traditional babushkas, and a shirtless man in boots and overalls.

EXTACHROMES BY NATIONAL GEOGRAPHIC PHOTOGRAPHER

was up to the usual "capitalist tricks," that I had sought out ill-dressed Russian workers and tried to get one to accept money so photographers could take pictures of the incident and send them around the world!

I'm happy to report, however, that this completely false story did not appear to do much harm to the cause of Soviet-American friendship. One of the journalists in our party went to the market next morning with a photographer (who took the pictures, by the way, printed on pages 724-5). He chatted informally with vendors and customers. And later he told me this amusing and revealing story.

"They couldn't have been nicer," he said. "Everyone was talking about your visit and seemed very pleased with it. When I told them I was an American, one of the flower vendors insisted on giving me a bouquet of

carnations. Three more followed suit. I tried to refuse, but they insisted.

"I've spent a good deal of time in markets like that one, and I've found that people like it if you eat something that's on sale there. Well, the only thing available at the moment was a big barrel of dill pickles. I picked out a nice pickle and tried to buy it, but they wouldn't take my money. The stallkeeper insisted I take it as a gift. So I thanked her and ate it. It was delicious.

"I went on through the market, and everywhere I stopped, people would gather to assure me of their desire for peace and friendship. The only trouble was that word had gotten around that I liked dill pickles. Every time I passed a stand where they were available—and this is the season—someone insisted on making me a present!"

Moscow Mother and Daughter Indulge in American Hairdos

Communism's praise of strong backs and calloused hands lost a round when fairgoers saw Western beauty operators in action.

Women pressed in so eagerly for free demonstrations that ropes were put up to protect the pavilion. Crowds grew so enthusiastic that Russian authorities banned further treatments except for American women associated with the fair.

A girl in the crowd (opposite, lower) gazes reflectively at a display of beauty aids. Some wistful viewers asked, "Can the wives of American workers afford such things?"

Soviet standards allow a severe sort of primping, but stores offer few cosmetics. Primitive beauty shops limit glamour.

© ANTHONY STEWART; HOSACHROME (LOWER LEFT) BY JAMES BLAIR © N.G.S.

The official count, before the photographer finished his work: four large pickles consumed in the cause of Soviet-American friendship.

"We left in a great surge of good feeling," the journalist concluded. "I had my tape recorder over one shoulder, two cameras around my neck, a gadget bag over the other shoulder, four bunches of carnations in one hand—and a dill pickle in the other! If these people don't like Americans, they have funny ways of showing it!"

Now, of course, this is a small-enough incident—not especially important in itself. But it does serve to point up the great truth that the Russian people *do* like Americans. Everywhere we went in the Soviet Union, the impression was the same—an atmosphere of friendship, respect, admiration, and curiosity about everyone and everything American.*

The Russian people may be skeptical about the living standard of the average American worker; after all, this is out of the range of their wildest dreams. But if the Soviet Government has failed in anything, it has most spectacularly failed in 40 years of unremitting propaganda to convince the Russian people that Americans are warmongers and oppressors. Their friendship seemed to be as real as it was spontaneous and heart warming.

Fair Showed Richness of American Life

That is why the exhibition was so important. President Eisenhower called the $3,600,000 we spent on the fair "about the best investment the Government has made in a long time." Those of us who saw it, and saw the popular response to it, could not agree more.

Someone called the 400,000-square-foot exhibit in Sokolniki Park "a corner of America in the heart of Moscow." And that was indeed the purpose. It was not a trade fair, not just a display of products, but a demonstration of the incredible richness and the wonderful variety of American life (pages 716-721).

President Eisenhower, in his preface to the official guidebook, summed up our hopes this way:

"It is my fervent wish that by this means, and through the corresponding Exhibition which your country is holding in New York City, the people of our two great nations may gain a better understanding of one another. Thus can the foundations be strengthened for our cooperation in the achievement of mankind's greatest goal—a fruitful and flourishing world at peace."

U. S. Guides Deluged With Questions

One of the most striking facts about the fair was that the visitors were almost more interested in the American guides than they were in the American goods. Day after day these 75 carefully chosen bilingual young people—27 girls among them—were surrounded by hundreds of visitors, all eager to know about life in America.

"How much does the average American earn?" "What is your monthly rent?" "How does an American live when he is unemployed?" "Do you own a car?" These are only samples of the questions with which our guides were deluged. They gave honest and unrehearsed answers, too, answers that made no attempt to cover up our shortcomings, but rather told all the truth of American life. And they were themselves excellent representatives of the whole American people.

There were literally thousands of Government officials, exhibitors, and workmen who also contributed greatly to the success of the exhibition. But one man in particular deserves to be singled out; he deserves, too, the eternal gratitude of the American people for his superb job in overcoming near-insurmountable obstacles and seeing to it that the fair opened right on schedule. That man is Harold "Chad" McClellan, a mild-mannered but tough-minded Los Angeles businessman who was general manager of the exhibition.

The visitors to the fair probably saw and felt more of America than I did of Moscow. Courtesy calls, official and formal meetings and engagements, the preparation of speeches

* See "A Firsthand Look at the Soviet Union," by Thomas T. Hammond, NATIONAL GEOGRAPHIC, September, 1959.

Greenhouse Glass Soars Above the Arcade of GUM, Moscow's Largest Store

Some 130,000 shoppers a day throng the emporium, whose full name is Gosudarstvennyi Universalnii Magazin (State Department Store). Cash registers are few; most clerks add sales on the abacus. A coin machine perfumes the hair of visiting farm wives. Prices run high even at the tourist rate of 10 rubles to the dollar instead of the official four: Ordinary leather shoes range from $25 to $40, and a man's tie may sell for $12. Mrs. Nixon bought dolls for her daughters here.

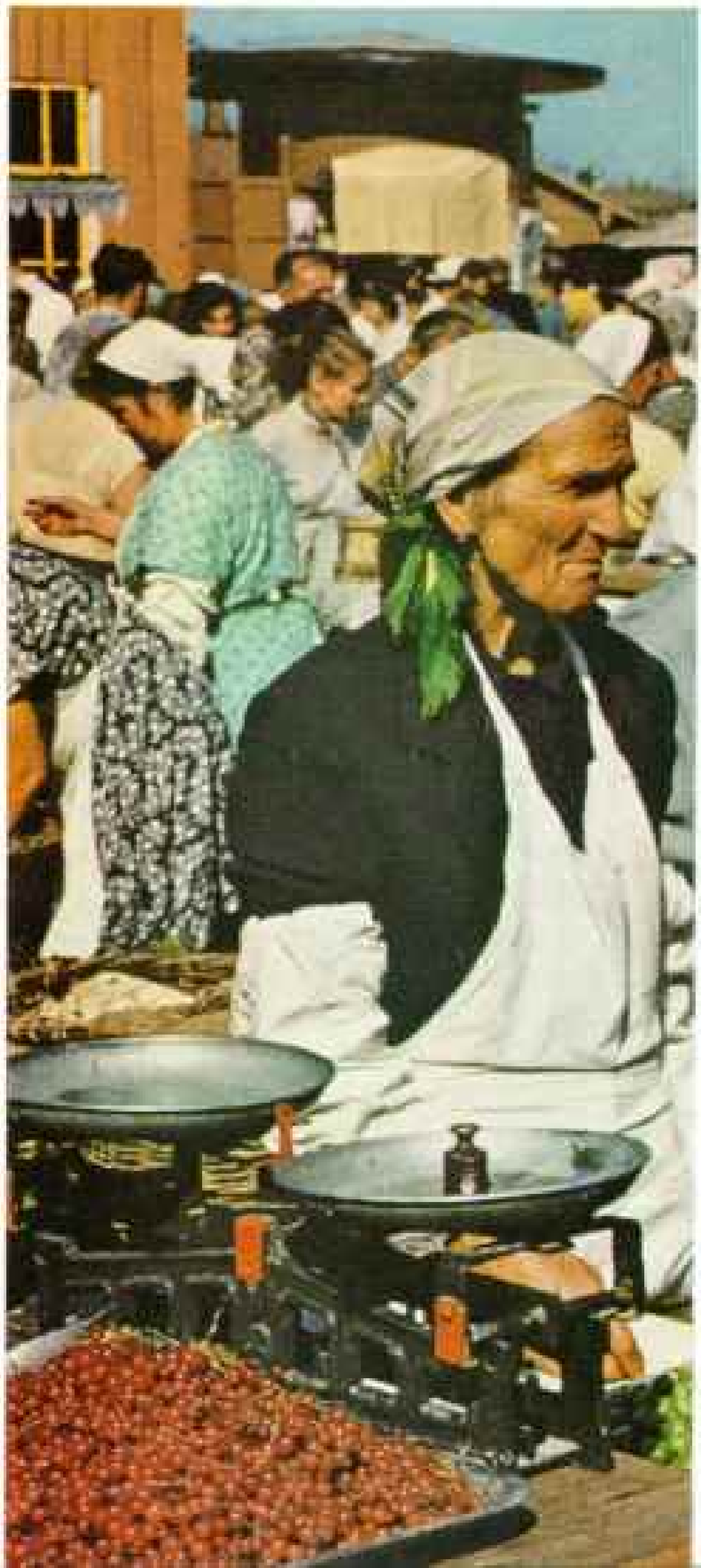
Moscow Market Keeps Free Enterprise Alive

All major cities have such outlets, where collective farmers, who may till up to 1¼ acres for their own use, turn surpluses into rubles. Collective farms, after meeting government quotas, also sell their excess here.

Flower vendor keeps shop before an anti-smoking poster.

Meditative girl (lower left) sells wild mushrooms.

Aproned women at market counters offer currants and gooseberries. "We found Moscow's friendliest faces here," says photographer B. Anthony Stewart.



—all this took too much of my time. I did manage to get away for a brief walk through the streets shortly after my arrival, and, passing a Gastronom, a government grocery store, I dropped in for a little comparison shopping.

Even at the favorable tourist rate of 10 rubles to the dollar, food is expensive. Butter, for example, was $1.20 a pound, and ordinary yellow cheese $1.40. A can of plums was priced at $1.10, one of peaches higher still. The few imported items were fantastically high: a two-ounce tin of instant coffee cost $4. Fresh caviar was $8.50 a pound. And the average Soviet worker earns but $80 a month!

My wife Pat had a better chance than I to see the city. She visited the First Children's Hospital and a nursery school, leaving behind her a trail of candy and chewing gum. She also toured the Botanical Gardens, where she presented the director with two dogwoods that we had brought as gifts from the United States. In return, the Russians filled her arms with orchids and roses—all of which contributed to making our rooms at Spaso House, where we were guests of Ambassador Llewellyn Thompson, Jr., and his charming wife, into a fair substitute for a florist shop.

Leningrad Still Shows Scars of War

Our effort to see the Soviet Union really only got started when, in our jet cavalcade of three new Soviet Tu-104B's, we flew to Leningrad. The 500-mile-an-hour planes made the trip in less than an hour, but when we got off at Leningrad airport, I thought for a minute that by some mistake we had flown home instead. There were dozens of American tourists in the crowd, several of them waving homemade "welcome" signs.

Leningrad itself, the second-largest Soviet

REDACHROME (BELOW) AND KODACHROME BY NATIONAL GEOGRAPHIC PHOTOGRAPHER B. ANTHONY STEWART © N.G.S.

city and its chief seaport, is a place of great beauty and charm (page 730). The scars of its long wartime siege are still visible, but there is evidence everywhere of rebuilding and new construction. Like so much of this throughout the Soviet Union, though, the new buildings—at least to an American—tend to a monotonous similarity.

Peter's Fountains Splash the Unwary

Peter the Great built the city in the early 18th century as a "window on Europe," and the architecture, nearly all of it in stone, was deliberately Western in style.

It was Peter's own castle, Petrodvorets, that impressed me most. Frol R. Kozlov, the Soviet First Deputy Premier, was my host, and together we toured this fantastic estate which was once the home of the tsars.

Peter was evidently an accomplished practical joker. The grounds of the castle are filled with fountains, and the unwary or uninitiated are in constant danger of a thorough soaking.

There is, for example, a bench conveniently placed for enjoying the superb view. When you sit on it, though, a well-directed spray drenches both bench and occupant. There is also a tree where the visitor gets an unexpected shower.

Mr. Kozlov and I escaped dry, but an overenthusiastic caretaker, eager to show off the mechanism, turned on the jet before everyone was in the clear. Georgi K. Zhukov, Chairman of the State Committee for Cultural Relations Abroad, was completely drenched.

"This is a pretty good way to cool off hotheads," I told him. "We might do well to use it a little more often in diplomacy."

Again, let me say that I tell you this story not for its own sake and not because it proves a great deal. But it does indicate the many, many ways in which Russians and Americans are, as people, basically alike. We can, at least, laugh at the same things. The problem is to find more, and more important, similarities—and then exploit them as avenues to the peaceful cooperation of our two great peoples.

It was at Petrodvorets that I met an attractive pig-tailed schoolgirl who joined our inspection party. I asked her what she wanted to be when she grew up.

"I'm going to be a schoolteacher," she said.

I told her I thought that was a pretty good idea; my wife had been a schoolteacher herself when we were married.

"What does she do now?" asked an older woman in the crowd.

"Being the wife of the Vice President is a full-time job," I told her.

It's the rule rather than the exception, of course, for Soviet women to work; even in the steel mills and heavy-machinery plants, many women work side by side with men. And this is the case, basically, because of the manpower shortage resulting from the Soviet Union's staggering losses in World War II and because right now the Soviet economy is being driven at maximum wartime capacity rather than at a more leisurely peacetime pace.

Rug Stays Bright for 2,500 Years

Pat visited Petrodvorets with me, but I think she was far more impressed with the hours she spent in the Hermitage, one of the world's great museums. Leningrad has more than 50 museums, including one of Europe's finest natural history collections, but the Hermitage is in a class by itself.

Its six buildings, I was told, have more than 1,500 rooms with more than two million items on display. It houses one of the world's leading collections of Western paintings and sculptures, including a matchless group of French Impressionists that has only recently been taken out of storage and put on public display. And its classical, Scythian, and Egyptian exhibits rank with the world's finest. Rembrandts, Rubenses, and Titians also hang in great profusion.

Pat was particularly interested in a woven rug, red and green in color, decorated with figures of horses and reindeer. It was found only recently in a Siberian burial mound, but it still preserves the brilliant color it had when woven 2,500 years ago.

"I wish Tricia and Julie could have been

Brilliant Chandeliers Light an Underground Palace in Moscow's Subway

Each of the city's 46 subway stations differs in architectural motif; the decor stresses Soviet achievements. Construction in the 1930's enlisted the country's best planners and artists, and thousands of laborers. Corridors and landings house statues, murals, and gem-studded mosaics glorifying Russian leaders, soldiers, and workers. Some street-level entrances resemble classic temples. Three million persons a day walk past marble columns on polished granite floors to board the trains.

Two Rare Sights in Russia: an Orthodox Priest and Massed Automobiles

Russia has one car for every 300 persons, compared with one for every three in the United States. In this scene, one of Moscow's few clergymen leaves a taxicab.

Surrounded by American and Russian newsmen, Mr. Nixon greets Siberians in Sverdlovsk. Map traces his journey, which covered 14,500 miles by plane, car, and boat.

with me." Pat told me later. "One of the most fascinating things in the museum is a wonderful little set of toy furniture. It was made in France in the 17th century, of silver filigree set with precious stones. The guide said it was used by the children of the tsars. The girls would have loved it."

Opera Musicians Play in Shirt Sleeves

Pat and I, together with Dr. Milton Eisenhower, the President's brother, were guests that night at the Kirov opera house for a performance of *Spartacus*. During the intermission the mayor of Leningrad, or the Soviet equivalent of one, introduced us to the audience, and to our surprise everyone stood and applauded. It was a heart-warming reception, not so much for us as individuals, but for all the American people whom we represented. And again, I am convinced that this typical demonstration was sincere and spontaneous on the part of the Russian people.

The theater itself is a lavish baroque structure, decorated with gilt frescoes, crystal chandeliers, and countless cupids. I was intrigued by the fact that although the conductor was formally dressed in white tie and tails, most of the orchestra were in shirt sleeves and without neckties—another curious example of the Soviet mixture of the rough and the polished, the old culture and the new. And let me add, too, that the orchestra was excellent. The Soviet emphasis, in every aspect of life, seems to be on practical results, not on refinements.

This was just as true, we found, in a rather more important field. Next day at one of the city's numerous shipyards we inspected the new atomic-powered icebreaker, the *Lenin*. Vice Adm. Hyman G. Rickover, the father of our atomic submarines, was in the party.

Mr. Kozlov, on his tour of the United


Washington
CANADA
Alaska
Arctic
North Pole
Ocean
Greenland
Atlantic
Keflavik
ICELAND
London
Paris
Berlin
Warsaw
Leningrad
Moscow
Kiev
Ukraine
Odessa
Volga
Ural Mts.
U. S. S. R.
Siberia
Ob'
Yenisei
Lena
Manchuria
Sverdlovsk
Novosibirsk
Rome
Black Sea
Mediterranean
TURKEY
Caspian Sea
Aral Sea
Tashkent
Beirut
Cairo
AFRICA
IRAN
CHINA

States, had closely examined one of our atomic-powered ships. We insisted on the same privilege, and Admiral Rickover went over the *Lenin*, especially its power plant, carefully. He felt generally that the basic engineering of this ship, which sailed on her maiden voyage in September, is sound, but does not break any significant new ground.

When we emerged from below decks, we found a crowd of shipyard workers, eager to shake hands and ready with questions. I told them how delighted I was to see atomic energy being put to peaceful use, and they applauded when I added that I would prefer to see all atomic power—and all our skills and resources—directed to the benefit of man, not to his destruction.

"We must remember," I told them, "that in Alaska, Russia and America are only 53 miles apart. That isn't much for an icebreaker like this to handle. But we must all work together to break the diplomatic ice between our governments."

Welcoming Crowds Grow Larger

As our trip went on, we could sense from day to day a warming in the climate that surrounded our party. The Soviet press, while never exactly enthusiastic, became less and less critical. And the crowds everywhere grew larger and friendlier. We might, at that, have been doing some "ice breaking" of our own.

I was especially curious about our reception in the so-called "closed cities" of Siberia, next on the schedule, where few Americans have ever been seen. Certainly, as we headed into

Novosibirsk airport, there was nothing in the air view to remind us of our traditional notion of Siberia as arid and barren and forbidding. The countryside was lush and flat, a typical checkerboard of green and yellow and the black of freshly turned fields.

The crowd at the airport was easily the largest we had yet seen. And the city officials who greeted us pointed out with considerable pride that theirs was a new and young and vigorous city, comparable to the cities of our own American West. It certainly could boast of the same tradition of warm hospitality.

It was interesting to note that these officials themselves repeatedly referred to Novosibirsk as the "Chicago of the Soviet Union"—interesting in two ways. First of all, as a further indication of the widespread respect for American growth and progress that we found everywhere in the Soviet Union, and second, as another sign that America is the conscious target of their own efforts. I was told proudly by several officials that they fully expect to surpass Chicago within 20 years—quite a goal when we realize that Novosibirsk is today a city of about 900,000 compared to Chicago's nearly four million, and therefore has a long way to go (page 744).

Siberian Factory Uses U. S. Machines

The Novosibirsk airport is about 15 miles from town, and all along the road there were groups of people waving and calling out their welcomes—many in the doorways of their log houses, and others working in potato patches and fields of sunflowers. The Russians, I was told, extract cooking oil from sunflower seeds.

Once in the city, we found the streets literally lined with crowds. One bus carrying a load of reporters and photographers took a wrong turn and got back on the route ahead of the official party. It was immediately surrounded by a milling, cheering crowd which very nearly overturned it in its enthusiasm.

When our cavalcade reached Stalin Square, in the heart of the city, the friendly throng broke through the police lines—no mean feat in the Soviet Union—to shake our hands and ask questions.

Novosibirsk is especially proud of its growing industry, and our hosts took us directly to their largest machine-tool plant, the Yefremov factory. We were told that its products are exported principally to China and the European satellites.

I was surprised to note that roughly half the machines in the factory were American-made. Many of the rest bore German markings. One of the correspondents with us, who had spent the postwar years in China, noticed that one of the Cincinnati-made machines carried an instruction plate in Japanese.

Knowing that the Soviets had sacked the

Rush Hour Swamps the Bus Service on Leningrad's Nevskiy Prospekt

Imperial palaces, revolutionary shrines, and World War II battle scars flavor the former tsarist capital, which withstood Hitler's armies in a 900-day siege. Old-fashioned façades in this view face streetside flower beds. Some of these people walk home from work on a long summer evening while others wait for a bus.

JAMES BLAIR (BELOW)

Moscow Women Shovel Hot Asphalt for Sidewalks in Lenin Hills

Two inescapable aspects of the Soviet scene—women laborers and furious building activity—struck members of the Nixon party in every city they visited. Women perform heavy tasks because the state needs their labor and their own families require the added income.

Urban housing fails to meet the people's needs by 44 percent. To overcome the shortage, the Government encourages citizens to construct their own homes, and more than a third of all dwellings being built are privately financed. Owners may bequeath, sell, or rent their properties, including a part of a room, but the state keeps title to the land.

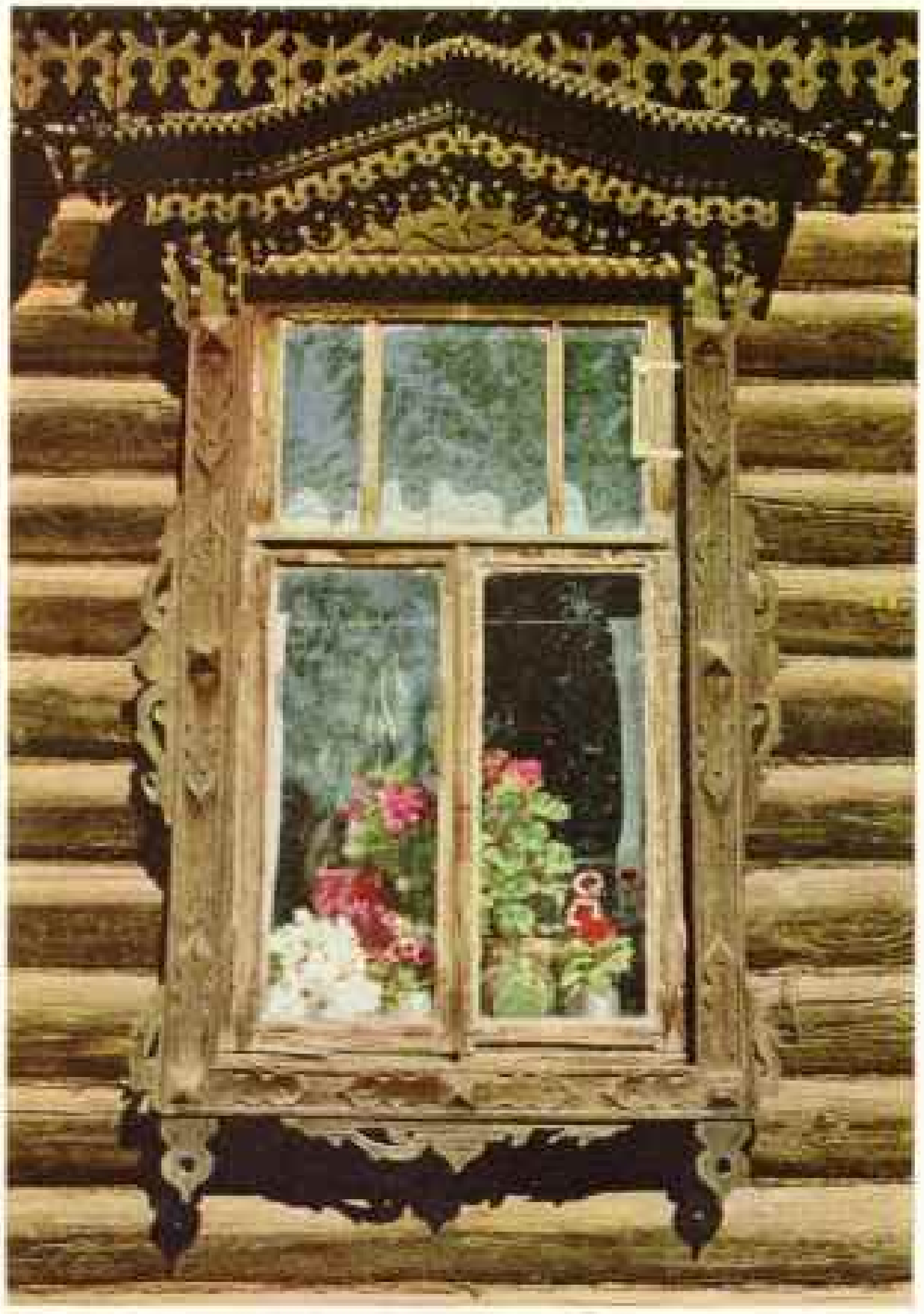
Clean streets in Moscow reflect the zeal of thousands of broom-wielding women. Siberian cities visited by the Nixon party showed the same scrupulous neatness. Noting the faithful use of sidewalk trash cans, photographer Stewart remarked, "There are no litterbugs in Russia."

Motor pool in Sverdlovsk, Siberia. A government truck takes women workers home at day's end. The theater marquee bills a Russian classic, Tolstoy's *War and Peace*, in a Western film version.

Sverdlovsk Trolley Riders Show Wary Interest and Shy Grins

Siberian warmth and openness surpassed the expectations of United States newsmen. Any initial reserve usually melted in an exchange of greetings that sometimes turned into bear hugs.

A few rehearsed hecklers confronted Mr. Nixon with planted questions designed to embarrass him. The Vice President answered forthrightly. One interrupter found the crowd siding with the American and slunk away in defeat.



Flowers in an ornate window brighten a log cabin in Sverdlovsk.

Long, dark winters of Siberia and much of the U.S.S.R. help explain the Russian people's universal love of colorful potted plants.

Vendors selling bouquets dot streets in summer; paper flowers find a ready market in winter.

Manchurian factories during their "caretaker" occupation of that Chinese province, he asked the foreman if the machine had in fact come from Manchuria.

"No," he was told. "It was one of the machines we bought from you during the war."

"How does it happen to have this Japanese plate?" the reporter persisted.

The foreman shrugged and laughed, "Who knows why Americans do anything?"

The correspondent gave up on that one, but the remark about the "machines we bought from you during the war" started him off on a further line of questioning. He asked, in all, seven subforemen and twelve workers if they knew the approximate value of American lend-lease aid to Russia during the war.* Not only did none of them know the amount —in round figures, eleven billion dollars— none of them had even heard of lend-lease! These machines had all been "bought" from the United States during the war!

Ballet Thrives on Siberian Frontier

That night we went to a superb performance of *Swan Lake* in the Novosibirsk opera house, another reminder of the similarities between this Siberian frontier and our own West. If classical ballet in a Siberian city—where many of the houses are still rude log cabins and where modern plumbing is by no means common—seems unusual to you, recall that in mid-19th-century San Francisco, for example, there was this same combination of raw but dynamic vitality and a hunger for culture.

The opera house in Novosibirsk is, in fact, larger even than Moscow's Bolshoi Theater. It is an elaborate amphitheater, built during the darkest days of World War II at a time when housing was in critically short supply.

I was not the first American Vice President to visit there, I later discovered. During his trans-Asian tour in 1944, Henry A. Wallace, then Vice President, spoke in this same opera house, which was then unfinished but was opened especially for him.

Here again, after a magnificent performance, we were treated to typical Soviet and Siberian hospitality. Hundreds of members of the audience crowded around our party to shake hands. When we were escorted backstage to meet the company, we were, as always, deluged with questions about life in America and repeatedly assured that the Soviet people want only "*mir i druzhba*"—peace and friendship—with America.

I couldn't help being struck that evening by the sense in which culture and all the arts are, in themselves, an international language. Van Cliburn is practically a household name in the Soviet Union. And when I mentioned in passing that back home I had recordings of several Tchaikovsky ballets by the London Symphony and by Eugene Ormandy's Philadelphia Orchestra, the crowd was way ahead of the translators. They nodded and smiled in instant recognition of these names, as familiar to them as to any American. Especially after this summer, the mention of Leonard Bernstein and the New York Philharmonic would doubtless get the same response.

I came away all the more convinced by this incident, added to the great success of the Moscow Exhibition, that we need to increase dramatically our cultural and person-to-person exchange programs with the Iron Curtain countries. The people of these countries will inevitably increase their pressures for more consumer goods and for greater freedom from oppressive controls as they become acquainted with the aspects of a richer and freer life through direct contacts with the West.

We drove 18 miles south the next morning to visit the new Novosibirsk Hydroelectric Power Plant, a gigantic installation on the Ob' River with a projected capacity of 400,000 kilowatts. The three-mile-long dam will form a lake 134 miles long and 12 miles wide. A labor force of more than 70,000, we were told, is at work on the project.

Soviets Plan City of Scientists

At this dam site I ran into what our traveling press party described as my first Siberian "hecklers." I couldn't prove, of course, that they were planted, or that they were primed with loaded questions, but the uniformity of the questions and of the very words used was too much for coincidence.

One of the most ambitious projects in Novosibirsk is the so-called Scientific Center, still under construction a few miles south of the city. Here, by 1962, the Soviets hope to have a city—estimates range all the way from 15,000 to 60,000—chiefly of scientists, built around a new university and a series of research institutions in such fields as nuclear physics, thermophysics, hydrodynamics, kinetics, and electrometry. Building is going on

*See "Lend-Lease and the Russian Victory," by Harvey Klemmer, NATIONAL GEOGRAPHIC, October, 1945.

full steam by a labor force of about 7,000.

As we neared the city on our return trip, I noticed hundreds of little one-room wooden structures set in the middle of small garden plots. One of my hosts explained that they were for "weekend farmers"—city workers who were allowed to till an acre or so of land for their own use and who slept in these rough shelters.

I found tremendous pride among the people of Novosibirsk in their city's rapid growth from its start among birch forests only 66 years ago to become the metropolis of Siberia. It has more than doubled in size in the last 20 years.

Geography has played a big part in this success story. Novosibirsk lies on the Ob', at the narrowest part of the river valley, thus at the logical crossing for the Trans-Siberian Railway. The completion of the Altai rail-

"Safety!" "Temperance!" Shout Propaganda Posters on a Sverdlovsk Wall

Wherever Russians gather, slogans exhort the people to toe the Communist line. Painting above this group at a streetcar stop stresses the perils of pedestrians. The cartoon, based on an old story, shows a drinker's downfall. The caricatured tippler brags like a peacock, plays like a monkey, roars like a lion, and passes out like a pig.

Sverdlovsk appears on pre-Soviet maps of Siberia as Yekaterinburg, named for Catherine, wife of Peter the Great. The town became a gateway to Siberian exile, and some deportees remained to mine gems for the tsars. In 1918 Nicholas II, the last tsar, his wife, son, and daughters met death in a Yekaterinburg cellar at the hands of their Communist jailers. Today industry and mining have spawned a city of 777,000.

way from the south in 1915 gave a fresh impetus to the city's growth, and foundries and metal-working plants were established to draw on the vast natural resources of the region.

Then, in the 1930's, industrial plants were added, a growth further stimulated during World War II when many factories were moved inland ahead of Hitler's armies. Located at the junction of Siberian water and rail transportation, it was the logical site for the Soviet Union's Siberian arsenal.

Since the war there has been an important change in this industrial complex. Novosibirsk has become one of the country's chief machine-building cities, the center for iron and steel and chemicals, and the unchallenged center of Siberian education and culture as well.

There are nine institutions of higher learning scattered among the factories which now line both banks of the Ob', and Siberia's largest publishing house turns out a stream of books and magazines and newspapers. Here, too, are Siberia's telecasting center, two museums, and a State Conservatory of Music.

New Lands Mean More Meat

Not only is Siberia the center of great industrial growth; members of our embassy staff told me that the "new lands" program, started in 1954, has been concentrated in Siberia and adjoining Kazakhstan. In these five years more than 90 million acres have been brought under cultivation for the first time—a great part of it in wheat.

This new acreage means that some of the rich lands of the Ukraine can be turned from small grain production to corn, which in turn means more meat in a Soviet diet that has run heavily to bread, potatoes, and vegetables. The area of the new lands has a climate very like that of western Canada. The growing season is short, and rainfall seldom exceeds 12 to 14 inches a year. Fortunately, it usually comes at the right time.

Still, farming in the new lands is risky, and results have not been entirely favorable. Last year, for example, a freak August snowfall ruined a good crop in some areas.

People were encouraged to settle the new lands, I was told, by offers of free transportation and interest-free loans for livestock and homes. Many were "volunteered" from Communist youth organizations, and large numbers of students spent summer vacations helping break out the new lands.

Successful or not, there is little chance that this program can be duplicated. Although the Soviet Union is an enormous country—nearly three times the area of the United States—only about 10 percent of it is arable; the rest is simply too cold or too dry for farming. Thus the 1954-59 increase in cultivation used up just about all the land there is.

Then, too, some of the crops produced have been wasted because of administrative blunders. There is a lack of storage elevators, and the road system is inadequate for transport. This means that much of the crop in good years has to be stored on open ground and is lost in bad weather. In 1958, a good crop year, there was a standard joke among the farmers. They said, "We would gladly trade a ton of wheat for just one bottle of vodka. At least we could put the vodka to some use."

Two out of Five Work at Farming

We must remember that fully 40 percent of the Soviet Union's labor force works at agriculture, that it takes one person to produce food for himself and about four other Soviet citizens. Contrast this with the American average of 1 to 22, and you have some idea of how far the Soviet Union still has to go in turning itself into an industrial nation.

And while both the Soviet Union and the United States have farm problems, ours fortunately is mostly one of surpluses. With but seven and a half million farmers and farm workers as against roughly forty million in the Soviet Union, our over-all output of farm products is much greater. Not only that, of course, but because of our unparalleled technology and capital equipment we exceed Soviet production on much less acreage.

We were all sorry to leave Novosibirsk. It may be raw and rough in many respects, but it is a dynamic and exciting place to be, and tremendously warm at heart. It also happens to produce two table specialties which many of the members of our party found delectable. One is a spicy soup called *ukha*, made from a white fish which is native to the Ob'. The other is a ball of highly seasoned meat encased in a thin coat of pastry and then simmered. Sturdy Siberians think nothing of putting away a couple of dozen of these *pel'meni* at a meal, even at breakfast!

Sverdlovsk was our last stop in Siberia. It lies almost exactly halfway between Moscow and Novosibirsk and is called the industrial capital of the Urals. But it is no mountain

Can this be Siberia? Though the beach on the Iset' River at Sverdlovsk lies as far north as Labrador, midsummer temperatures reach the mid-70's. Warm sun attracts bathers and boaters to a spot they call the Water Station.

"Carbonated Water," say the signs on beverage dispensers in Sverdlovsk. Patrons wash glasses over a spray nozzle and get a fizzy treat of fruit-flavored water for 30 kopecks—about three cents.

city. The Urals resemble our own Catskills much more than the Rockies, and Sverdlovsk is located in gently rolling country, none of it more than 1,000 feet above sea level.

It is the mineral wealth of these mountains, though, that gave Sverdlovsk its start back in 1723 and that has made it into a teeming, smoky city of nearly 800,000 today. It is a center for the processing of iron, copper, tungsten, platinum, gold, and asbestos, and one of the leading Soviet armament centers.

Log Houses Line Sverdlovsk Streets

We were again greeted by enthusiastic crowds at the airport, and cheering groups were scattered all along our nine-mile route into town.

Much of the countryside is covered with well-tended pine forest, and most of the cleared land is planted in potatoes. Almost all the houses are log built, but nearly every window displayed its pots of geraniums and nasturtiums (page 734). Even in the city itself most of the houses are built of logs.

Our first full day in Sverdlovsk was a typically busy one. We drove over rolling countryside to Pervoural'sk, where we toured a tube-rolling mill, one of the largest in the Soviet Union. There I was once again struck by the number of women at work and by the inevitable posters which covered nearly every square inch of wall space, urging workers to produce more, reminding them that only Communism can lead them to a better life, admonishing them to avoid accidents.

This last warning was certainly necessary. Safety standards in that plant, as in all I visited, were far below those of American factories. Workers drawing hot metal wore no goggles, machine belts were unprotected, and men stacking heavy pigs of metal had no safety shoes.

The young manager seemed to be typical of middle-level Soviet executives; he had started as a worker, studied at night, and finally worked up through the ranks. He had spent a year in America, 10 years ago, inspecting material and heavy equipment later purchased by the Soviet Union.

Much of the equipment was old-fashioned by American standards, and there was little evidence of automation. But one of our Intourist girls, an interpreter assigned to the press corps, had never seen a steel mill and was convinced that this must be the last word.

"I'm sure you don't have anything like that in America," she said proudly to one of the American newsmen.

"Not any more," he answered, and left her looking very puzzled indeed.

But let us make no mistake about it. We may today be well ahead of the Soviet Union in automation, plant capacity, and capital equipment, but they are making an almost superhuman effort to catch up, and even surpass us. They are dead serious about their goals.

"It's He—the American Visitor!" Country Folk Meet Nixon at a Frontier

From Sverdlovsk the Vice President took an 80-mile motor trip through the Ural Mountains. Children along the road cried, "Nixon! Nixon!" At a boundary stone marked "Europe, Asia," he greeted welcomers and sipped champagne with them at tables set in a grove.

And so there is only one way for us to stay ahead—we must constantly move forward.

Before we reached the tube mill, however, we had passed quite a landmark: the frontier between Europe and Asia. A concrete obelisk marks the spot (below). Picnic tables had been set up, complete with a supply of well-chilled champagne, so that we could toast the occasion. I remarked that I was exactly halfway around the world from my own home in California, and that the shortest way there would be straight through the earth.

Miners Ask About Atomic Tests

My hosts evidently took me at my word. For when we reached the Degtyarsk copper mine after lunch, I found myself fitted out in heavy working clothes and miner's cap and lamp, 800 feet below ground in the mine, talking with two miners about the problems of controlling atomic tests and of enforcing any ban on such testing.

One of the miners very seriously put this question to me:

"You say you do not want war, but why then do you keep on with your atomic tests? Why don't you stop them?"

"This is the best place in the world for you to ask me that question," I answered. "What we in America are interested in is not simply an agreement to stop these tests but an agreement that can be enforced, that both sides will adhere to. Did you know that tests can now be conducted underground, as far below the surface as we are right now, which cannot be detected unless you have inspectors right on the spot? That is why we insist on an inspection system that will give both of us the assurance that any agreement we sign is being lived up to."

I think this argument—which he clearly had never heard before—really hit home. At any rate, I was most impressed by the miners' serious approach to these problems, and as I left I made the suggestion:

"You men are in the wrong profession. You should be statesmen."

"But then, who would do the mining?" one of them replied.

Pat was meanwhile doing some visiting of her own. Mrs. Valya Kalyagina, the wife of one of the miners, asked her to come to her home, where they spent a pleasant hour together and were entertained with a few accordion solos by Mrs. Kalyagina's husband.

Pat also had a busy time in Sverdlovsk, and I think the high point came for her when she visited a summer camp for young Pioneers, and was lured into joining in a fast polka.

"It was *too* fast," she told me later. "I couldn't keep up with the children." But at least they had had the good fortune to pick on the graceful member of the Nixon family, and the one who knows something about dancing!

We ended our Siberian journey with a stop at the Beloyarsk Atomic Power Station. Here, on the shores of an artificial lake, construction is well under way on an installation which is slated to reach its capacity of 200,000 kilowatts of electricity by 1961.

Admiral Rickover told Mr. Nicolai Kuybyshev, the director, that American scientists would far rather work on peaceful uses of atomic energy than on military projects.

"Your words give me assurance that we may arrive at the stage of doing everything in cooperation," the director replied.

On behalf of President Eisenhower I invited Mr. Kuybyshev and his staff to visit the United States to see our own nuclear installations and our own peaceful applications of atomic power. I hope he can, indeed, come and see for himself.

TV Speech Ended Author's Visit

Back in Moscow I ended my 11-day visit with an hour-long talk to the Soviet people over the state television network and a radio hookup. The *New York Times* called it "one of the bluntest speeches ever heard by Soviet listeners from a Western visitor."

Actually, I intended not so much to make it blunt as simply to make it as straightforward as I knew how. I felt I should waste no time on diplomatic niceties but get right down to specific cases.

I took it to be my major task to make some contribution, at least, to opening a frank exchange—an exchange of information and ideas—between our two peoples. I did not hope to change overnight the appalling situation of misinformation and lack of understanding—certainly no one speech can do that—or, indeed, to suggest for one moment that there are not deep and significant differences between America and the Soviet Union. Problems—the clash of basic principles—are never solved by glossing them over, by pretending that they do not exist.

We should be under no illusion that mutual

Mrs. Nixon Dances a Russian Polka at a Girls' Camp

Young Pioneers, 9 to 14 years old, spend summer days learning games, woods lore, and Communist ideology at this retreat near Sverdlovsk. President Voroshilov and Premier Khrushchev stare soberly down upon the play yard.

While in Russia Mrs. Nixon toured camps and hospitals, chatted with housewives, and visited a miner's home. To youngsters she gave treats that included lollipops and chewing gum.

Anxious flower vendor dashes for her street-corner stand in fear of missing sales to home-going crowds in Sverdlovsk. Streetcars often run coupled in trains.

New Office Buildings Jostle Wooden Cabins

Log houses survive from the not so distant day when Novosibirsk was a mere village. Today the city has 887,000 residents, the Soviet Union's largest light-bulb factory, 16 mineral research institutions, and an opera house bigger than Moscow's Bolshoi.

Apartments rise while the city still struggles to pave its streets.

Laundry on lines shows that home-hungry families have moved in before the builders could complete their work.

PHOTOGRAPHS © NATIONAL GEOGRAPHIC SOCIETY

understanding—expressions of friendship and good will, the avowed desire of the leaders of world Communism for peace, even the exchange of visits between the President and Premier Khrushchev—will suddenly resolve all the differences that divide the Communists and the Free World.

But at the same time we must remember this: While understanding alone will not produce peace, misunderstanding can provoke war, war by miscalculation, or by drifting into such rigid positions that the use of force might become inevitable. To avoid this situation, we must keep open every possible channel of communication, we must enter into serious and patient negotiations, but always negotiations which are firm on basic principles.

So I used the occasion of my hour on Soviet radio and TV to establish just such communication—to tell the Soviet people, probably for the first time, that each of them works one day out of four for armaments because of world tensions brought on by 15 years of Soviet aggression and subversion.

Nations Must Choose for Themselves

I told them that, of course, the United States is armed and maintains bases abroad, but not for purposes of aggression against the Soviet Union or any other nation. We mean only to defend ourselves and our allies. We started to build our defenses, indeed, only after the Soviet Union had clearly embarked on a world-wide campaign of subversion and aggression; the Berlin blockade and the war in Korea are the two most dramatic examples.

And I told them this, too: That we do not object if Premier Khrushchev expresses his belief that our grandchildren will live under Communism—we only object if he attempts to bring this result about by interfering in our internal affairs.

As for us, we do not say that his grandchildren will or ought to live under a system of free enterprise. The very essence of our belief is that every nation should have the right to choose for itself, free of all coercion, free of outside force, and with full awareness of all the alternatives, the political, economic, and social system under which it wishes to live. We want for other peoples only what we want for ourselves—the freedom to achieve, in their own way, a life of material abundance and, even more basic, of cultural and spiritual richness.

Finally, I told them that the American people wanted a better living standard for the people of the Soviet Union; that if Premier

Steadfast Women Attend a Sverdlovsk Christening

"I am 85 years old," the white-kerchiefed woman above told photographer Stewart, "but I feel 65 because my faith keeps me young."

A small group had gathered near a weather-worn Russian Orthodox church standing among log cabins on the city's outskirts. The woman at left proudly held her grandchild for the christening.

Religious congregations in the Soviet Union tend to be elderly, mostly women, but church marriages and baptisms persist.

Stalin's active persecution of churches has given way to a scornful tolerance, tacit admission that the atheist government has failed in four decades to stamp out religion. Soviet Orthodox sources say churches have increased fourfold since 1935, totaling 20,000 today.

FRANK HOUK, NATIONAL GEOGRAPHIC STAFF

Ob' River Power Workers Besiege the Author With Political Questions

"Why have you attempted to surround us with bases?" a Russian asked. Countered Mr. Nixon: "Why does the U.S.S.R. have bases in foreign countries? Is Hungary the U.S.S.R.? Is Poland the U.S.S.R.? Is East Germany the U.S.S.R.? The workers of every country should look very carefully at the policies of their own governments."

Khrushchev would concentrate his efforts on building a better life for the Soviet people within the Soviet Union, this was an objective we would welcome and support.

But if on the other hand he diverted Soviet energies and resources toward communizing the world, this we would have to resist.

I emphasized that the inevitable result of such a policy would be increased tensions and ultimate misery for the Russians and other peoples as well in the years ahead.

I rejected the negative concept of co-existence, Soviet-style, which means two worlds with two hostile camps, each struggling to impose its system on the other. I submitted in its place the concept of one world where different peoples live under the different systems they choose, but where there is freedom of communication and exchange, and cooperation in achieving mutual goals.

Polish Welcome: Smiles, Tears, and Flowers

My wife and I have had many exciting experiences during our travels, not only in the Soviet Union but in the 53 countries where, since 1953, we have represented President Eisenhower and the American people. There has been much drama on these travels, many

Wonder fills the eyes of a Siberian as she beholds American visitors.

Novosibirsk Smiles Say, "Happy to Meet You!"

Mr. Nixon's tour began on a note of formal politeness in Moscow. Leningrad, the next stop, extended a cordial but reserved greeting.

But Siberians, in an area closed for years to most Westerners, opened their hearts to the Vice President and his party.

Jostling, waving onlookers in Novosibirsk beamed genuine pleasure and sought to talk with their guests, the first Americans many of them had ever seen.

gratifying incidents. But there has never been anything to match the experience of our reception in Warsaw.*

We arrived on a Sunday afternoon, the exact time unannounced, our route unspecified, with no organized reception of any sort planned by the Polish Government. Yet the 10 miles from the airport to the center of Warsaw was lined—literally lined—with a quarter of a million people.

People along every inch of the road, people crowding the city streets, people standing on tiptoe to peer over the heads of those in front of them. People leaning out of apartment windows, waving from trolleys and buses, pressing close to the car when our motorcade slowed to a crawl.

There were the faces, pressed close together, smiling. Every one of them smiling, hands waving, hands clasped above the head and shaken vigorously. Shouts in a language I didn't understand, but carrying a meaning that would have been clear to anyone.

They cheered and shouted their tributes to America, to Eisenhower—even to Nixon.

* See "Poland Opens Her Doors," by Delia and Ferdinand Kuhn, NATIONAL GEOGRAPHIC, September, 1958.

Handshakes and Flowers Greet Mr. Nixon in Warsaw

Poland's Communist rulers were discomfited by the tremendous throngs that turned out despite scant advance notice. Crowds tossed so many bouquets that the Vice President's open car had to be cleared eight times. Two gladioli remain on the roof of this limousine. ELLIOTT ERWITT, MAGNUM

They literally flooded us with flowers. And I could see tears in many eyes—tears, I think, of gratitude that they were thus able to show their devotion to the principles of freedom and independence. I think they were displaying, too, their deep friendship for America as a symbol of freedom and independence in the richest sense of our long tradition and our present dedication.

This was no personal tribute. It was much more than that, and much more important. It was the demonstration by a whole people that, even though they shared a common border with the menacing dictatorship of the U.S.S.R. and although Soviet troops were stationed in their country, they dared to show their feelings, their dedication to the immortal principle of freedom.

Next day one of our party told me that he had had a conversation with a Polish acquaintance shortly after our arrival. He had remarked that Premier Khrushchev, too, on his recent Warsaw visit, had doubtless been greeted with a flood of flowers. "Sure," his Polish friend replied. "But for the American we bought our own flowers."

This story, and our whole Polish experience, simply points up the fact that no amount of censorship or distorted propaganda can weaken the traditional bonds of friendship and affection that join the Polish and the American people together. This is a bond that goes all the way back, of course, to the time of our own Revolution. Clearly, the Polish people have not forgotten it.

And every mile of the way along our route that memorable Sunday in Warsaw served to remind me that we must not forget it either—as we work with all our energy and dedication at the task of securing a world in which men can be free, nations independent, and peoples can live together in peace, harmony, and friendship.

Portrait of Earth's Largest Continent

Many changes—and international trouble spots—dot the new ***Map of Asia,*** *fourteenth in The Society's growing Atlas Series*

ASIA, biggest of the continents, holds nearly a third of the earth's land surface, more than half its people, and a giant's share of its problems.

You scan these problems in the day's headlines as Communists create an international incident in Laos, as Red China tightens its grip on Tibet or makes threatening gestures toward Formosa. Cease-fire lines mark dams against Communism in Korea and Viet Nam, both split between two worlds.

On the more constructive side, a gigantic dam at Bhakra, in northern India, nears completion. New highways in Cambodia and Thailand, built with American aid, push through the jungle. An oil field is discovered in Sinkiang. New cities sprout in Siberia.

Asia Has 58 Percent of Earth's People

To show such changes, and to help National Geographic Society members follow the unfolding headlines, a new Atlas Map, **Asia and Adjacent Areas,** is distributed with this issue of their magazine as Plate 44 in the Atlas Folio.* Thus Asia becomes the first continent to be charted in the Atlas Series.

Eighty percent of the world's 2,900,000,000 people live in the lands shown on the new map, which includes all of Europe and Indonesia. The population of only the Asian part of this land mass totals 1,675,579,000 and is increasing by 30 million a year—a major complication in the problems Asian nations face.

Transferring any part of the curved earth to a flat map results inevitably in geographical "stretching." In the case of so vast an area as the Eurasian continent, the problem becomes enormous. Many Asia maps have scale variations that err as much as 25 percent.

But The Society's plate accomplishes the reproduction with a minimum of distortion of land shapes and political units. You can, for example, plot the Russian travels of Vice President Richard M. Nixon—described on the preceding pages—with a distance accuracy of almost 100 percent. The map will also help readers follow other stories in this issue—*Yankee*'s island-hopping cruise (page 767), and the round-the-world trip of Editor Melville Bell Grosvenor (page 832).

The exactness of the Asia chart is made possible by a "two-point equidistant" method of map projection pioneered by The Society. It reproduces the area by laying out all spots in their true relation to two key centers, or focal points—one near Tokyo, the other near Abū Kamāl in eastern Syria. The usual equidistant map has only one such center. More than 500 complicated computations in spherical trigonometry were required to plot the projection on paper.

The map demonstrates strikingly—and in almost exact scale—that Europe is only a small appendage on one corner of giant Asia. It shows in full panorama how three of the world's largest and most populous nations—Russia, China, and India—dominate the continent. And it depicts the political boundaries of half a dozen nations that have come into being within the past decade—Indonesia, Cambodia, Malaya, North and South Viet Nam, and the United Arab Republic.

Skate Charts Underwater Polar Ridge

The map also charts new data on ocean depths in the Arctic, including the location of the underwater Lomonosov Ridge—depicted as a narrow strip of light blue meandering beside the North Pole. Charting of this massive range, which divides the Arctic Ocean into two huge basins, owes much of its accuracy to soundings by the U. S. Navy's nuclear submarine *Skate*. The depth shown for the ocean at the North Pole—*2,235* fathoms—also came from the *Skate*'s own records.†

Peaks of the Lomonosov Ridge reach up to within a few thousand feet of the surface; some may even have been above water in historic times. First outlined by Russian explorations in 1948, the ridge was named for M. V. Lomonosov, 18th-century Russian scientist who devoted much of his lifetime to Arctic research.

* Fourteen Atlas Maps have now been issued and are available, folded flat, in a packet for $5.50. To bind their maps, 225,000 members have ordered the convenient Atlas Folio at $4.85. A combination of Atlas Folio and 14 maps may be ordered for $9.95 from the National Geographic Society, Department 36, Washington 6, D. C.

† See "Up Through the Ice of the North Pole," by Comdr. James F. Calvert, USN, NATIONAL GEOGRAPHIC, July, 1959.

Growing from fifes and drums to 100 of the world's most expertly played instruments, the colorful Marine Band marches melodiously through the Nation's history

The President's Music Men

By STUART E. JONES
National Geographic Editorial Staff

Illustrations by WILLIAM W. CAMPBELL III
National Geographic Photographer

THE TELEPHONE RANG in an office in Washington, D. C., and a brisk, fiftyish man named Oliver W. Trapp answered it. The caller spoke from a town in Oregon.

"When can you send the Marines out here?" he asked.

"Just a minute," said Mr. Trapp, as he consulted a schedule. Then, "In two or three years, perhaps. We're booked solid for 1959. I'll put you on the waiting list."

The conversation was part of a process that annually causes drugstores and other public places across the land to bloom with placards announcing:

CONCERT
UNITED STATES MARINE BAND

Each year, through Mr. Trapp's efforts as civilian tour manager, such notices draw thousands to see and hear the famous band that has played a musical accompaniment to the Nation's triumphs and tragedies for 161 years. Even before there was a Marine Band, its remote ancestors, fifes and drums of the Continental Marines, were heard aboard John Paul Jones's fighting ships in the War of the Revolution.

Over the years the band has grown from an unskilled nucleus to a superbly trained organization capable of dealing with the most difficult symphonic works as well as blaring marches.

While sharing many official engagements with the

"Hail to the Chief" greets the President as his scarlet-clad bandsmen add dash to an official appearance. Mr. Eisenhower dedicates the National 4-H Club Foundation headquarters in Chevy Chase, Maryland.

excellent bands of the Army, Navy, and Air Force, the Marine Band holds a unique distinction: It is the only musical group that plays regularly at White House social functions. Guests arriving for a luncheon, tea, reception, or state dinner find from 10 to 22 of the scarlet-jacketed "President's Own" playing in the Executive Mansion.

The band's nationwide tours began in 1891, under the leadership of John Philip Sousa. This autumn, for nine weeks, it covered the Midwest and Northwest, and in 1960 it will visit the Southeastern and Southwestern States. Proceeds of the concerts go to charity or civic projects, with the sponsors underwriting all expenses.

Whether playing at the White House or rolling from city to city in comfortable buses, the musicians overlook their grueling schedule to admit that servicemen seldom had it so good. Some of them may be thinking back upon the days when a Marine bandsman's lot was quite different.

Fifes and Drums Encouraged Volunteers

The earliest Marine musicians spent much of their time tootling and thumping through the muddy streets and alleys of Philadelphia, then the Capital. Mostly they played to encourage recruiting, at the behest of Robert Mullan, an enthusiastic Marine captain who also operated a King Street—now Water Street—pub called Tun Tavern. "Yankee Doodle" was the tune played most often; other favorites were "Rural Felicity," "My Dog and Gun," and "On the Road to Boston."

Like the children of Hamelin following the Pied Piper, Philadelphia youths trooped after the fifers and drummers to Tun Tavern. There, after listening to a patriotic speech by Mullan, they signed papers, collected enlistment bounties, and perhaps enjoyed a tankard or two of the captain's ale. When they woke up in the morning, they were Marines.

An act of Congress in 1798 gave official status to a band for the Corps: "One drum major, one fife major and thirty-two drums and fifes. . . ." When the Capital was moved to the new Federal City in 1800, Marine Corps headquarters and the band moved too, and Leathernecks set about building a new home, the Marine Barracks, which still stands in southeast Washington. The "musicks" quickly became the favorites of President John Adams, and made their White House debut at a reception given by Adams on New Year's Day, 1801.

The band really came into its own when Thomas Jefferson moved into the White House. The third President, an erstwhile violinist who loved all forms of music, became known as the godfather of the Marine Band.

Jefferson's special fondness for band music launched the Marine Corps upon a venture as bizarre as any in Leatherneck annals. In 1803, though busy fighting the Barbary pirates and buying 827,000 square miles of Louisiana Territory from France, Jefferson found time to consider the state of music in the Capital. In his view, it was not good.

Jefferson Offended by Sour Notes

By then the Marine Band had grown beyond mere fifes and drums to include French horns, clarinets, oboes, and a bassoon. It played loudly and frequently, but perhaps not well enough to suit Jefferson's sensitive ear.

The President confided his views to Lt. Col. William Ward Burrows, Commandant of the Marine Corps. He reminded Burrows that the best musicians were Italians. Why not get some from Italy? Then there could be two bands, one American and one Italian.

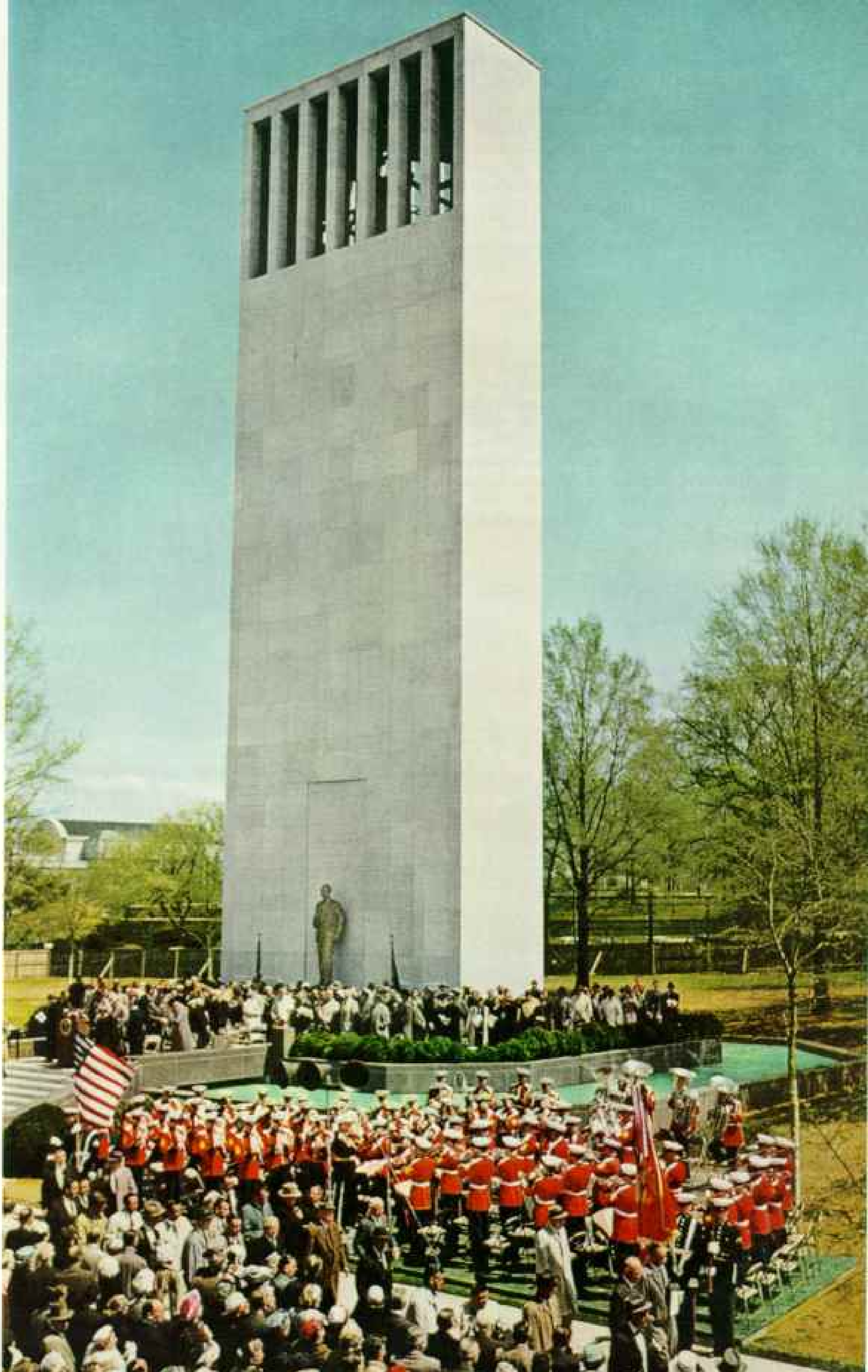
To Burrows the President's suggestion was a command. Soon young Capt. John Hall, Mediterranean-bound in U.S.S. *Chesapeake* to help quell the pirates, found himself under orders to recruit Italian musicians.

Jefferson proved quite correct in his belief that Italy teemed with talented beaters of drums and blowers of brasses and woodwinds. In fact, Hall did not have to go as far as the Italian mainland. At Syracuse, Sicily, he found an excellent military band. But leader Gaetano Verano and his men, satisfied with their jobs, said "No" to Hall.

Verano then referred the captain to Gaetano Carusi, leader of a band at Catania. Here Hall met similar resistance, but after nine months of haggling and wheedling he signed up 14 musicians. The oldest was Carusi, 42; the youngest was his son, Ignazio, 9. Another musical Carusi was Samuel, 10. A third son, an infant in arms, also was in-

The National Anthem Rings Solemnly at the Robert A. Taft Memorial

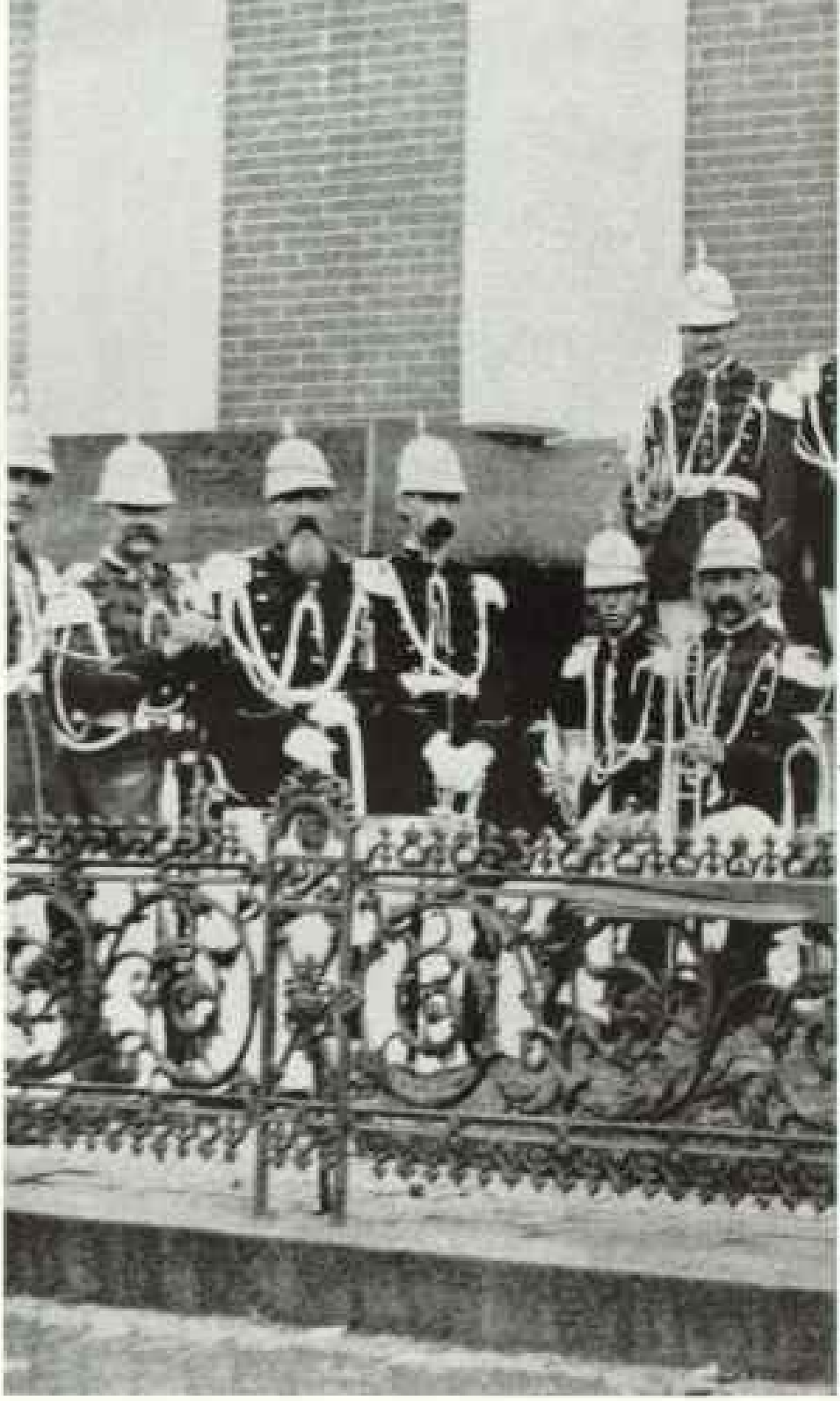
Last April's dedication of the 100-foot bell tower near the Capitol included a performance by the Marine musicians. White-gloved riflemen of the color guard present arms.



Mustached Musicians in Spiked Helmets Visited Albany, New York, in 1888

Germany's victory over Napoleon III in 1871 influenced uniforms, giving the Marine Corps spiked helmets in place of French cockades. The style vanished in the 1900's amid sentiment that Prussian headgear did not suit American troops.

Marine fifers and drummers of the Revolution wore long-skirted green coats and knee breeches, first musicians' uniforms in the Nation's history.



The march king, John Philip Sousa, grew a beard to dignify his 26 years when he became leader of the band in 1880. He imbued the organization with new verve and precision and vastly increased its repertoire. Later he toured the world with his own band and received medals from mayors and kings. He wrote songs, operas, and even novels with middling success, but his marches proved immortal.

cluded in the group, but as a nonperformer.

At Messina two more men were enlisted, making a total of 16 musicians. All these, plus eight wives and many children of the older men, were quartered aboard *Chesapeake* to await passage to the United States. As they were moved about from frigate to frigate of the Mediterranean squadron, they participated at least passively in the final phase of the war with Tripoli.

Marine Mystery: Who Ordered a Band?

Meanwhile, back at the barracks, matters assumed a shape that boded ill for talent scout Hall and his tuneful flock. In a later era, the word "snafu" might have been used. Commandant Burrows, who had given Hall his original orders, retired because of illness. His successor, Lt. Col. Franklin Wharton, knew nothing of the import scheme.

The new Commandant was astonished to receive a series of letters from Hall reporting his success in signing the musicians for three-year enlistments, and adding that he had been "obliged to give the Leader 50 Dollars and

the rest Ten Dollars Bounty, with a ration to 8 of their wives. . . ." Hall said he hoped the Commandant would be pleased.

Wharton managed to conceal his joy, if any. He wrote to Hall on June 29, 1805, that he, Wharton, had "never given any order for the collection of a band in the Mediterranean," that it could "not be mentioned as belonging to the Corps," and that "the Secretary of the Navy can never consent to allow two Military Bands for one Corps."

Apparently Hall did not receive his superior's letter. Arriving at Hampton Roads, Virginia, in U.S.S. *President*, he advised Wharton by mail that he was accompanied by his musicians, now unaccountably increased to 18. Again he hoped the Commandant would be pleased.

Baby Born on U. S. Warship

President sailed up the Potomac to Washington. There, on September 20, 1805, the pilgrims disembarked at the Navy Yard. Among them was Maria Fortunetta Sardo, a few days old, daughter of musician Michael Sardo and his wife, and one of the few babies born aboard a United States warship.

It was a cheerless scene that greeted the Sicilians. The Washington of that day was little more than a collection of rude shacks strewn among cow paths and a few cobbled streets. Cattle grazed and pigs rooted wherever they pleased. By looking hard to the northwest, the newcomers could see a rectangular white building rising atop Jenkins Hill. This was the Capitol, its dome and legislative annexes still far in the future.* Just north of the Navy Yard lay the Marine Barracks, and there the forlorn little group was marched.

Soon after reporting to headquarters, Hall found himself, with Wharton, on the carpet before Secretary of the Navy Robert Smith. Smith heard their stories and pondered the case. Then he wrote to Commodore John Rodgers, Hall's commanding officer in the Mediterranean, dressing down all concerned

* For the story of the Capitol, see "U. S. Capitol, Citadel of Democracy," by Lonnelle Aikman, NATIONAL GEOGRAPHIC, August, 1952.

for acting "without competent authority" and suggesting acidly that it had better not happen again.

History fails to record why the case apparently never gained the attention of President Jefferson, the man who inspired the orders that caused all the trouble.

The Sicilians, meanwhile, were housed in makeshift quarters that caused them to yearn powerfully for their homes beside the blue Mediterranean. Colonel Wharton's stern attitude added to their unhappiness. As he saw it, a Marine was a Marine, and as such available for manual labor. If a man happened to be a virtuoso on piccolo or snare drum, the Commandant could not care less.

Ordered to perform nonmusical tasks, such as digging ditches, the Sicilians found a simple but effective way to resist. They "feigned not to hear."

Musicians Yearned for Native Sicily

Despite these difficulties the newcomers functioned for a while as a separate band. Contemporary accounts tell of the President and other dignitaries listening to concerts by both the Marine Band and the "Italian Band." At many such affairs at the White House, the widowed Jefferson's official hostess was Dolley Madison, vivacious wife of Secretary of State James Madison and soon to become a First Lady in her own right.

For about half the Sicilian artists life in the New World proved unendurable. They were discharged and sent home. The rest remained and were absorbed into the Marine Band. One, Venerando Pulizzi, stayed with the band for 21 years and worked his way up to leader.

None of the musicians struggled harder to get back to Sicily than Gaetano Carusi, leader of the group. In 1807 he and his family were granted passage in a ship already familiar to them—the 38-gun frigate *Chesapeake*. Aboard the vessel they also found a familiar face, that of their old friend and good

Pride of the Corps, the Band Parades at Marine Barracks, Washington, D. C.

Drum major Edmund DeMar, a World War II combat veteran, leads with a five-foot mace of Malacca wood and silver that bears the Marine insignia. Baldric across his chest carries his personal ribbons plus the Battle Honors of the Corps: silver scrolls listing major campaigns from the American Revolution through the Korean war. Bandsmen countermarch while playing "Semper Fidelis," John Philip Sousa's tribute to the Marines.

Violin takes shape under the skilled hands of Paul Sieben, who plays in the string orchestra and repairs its instruments. As a hobby, he makes new violins. Others mend the woodwinds and brasses in the band's own instrument shop.

shepherd Capt. John Hall, bound once more for the Mediterranean.

Off Hampton Roads *Chesapeake* was intercepted by H.M.S. *Leopard*, whose skipper suspected the Yankee man-of-war of sheltering British deserters. Although outgunned and unprepared for action, *Chesapeake* resisted and a sharp fight ensued.

After Commodore James Barron fell wounded and three crewmen were killed, *Chesapeake* struck her colors and crawled back to port. The Carusis, most of whose belongings had been heaved overboard in the heat of battle, returned to Washington, this time to stay.

Sicily's loss was America's gain. The musical Carusis became solid citizens, just as their descendants are today. Eugene C. Carusi, Gaetano's great-great-grandson and a Naval Academy graduate, ranks as a leading Washington lawyer. Fifteen years ago, as Commander Carusi, he earned the Purple Heart, Silver Star, and Croix de guerre on the Normandy beachhead. Other descendants of the Sicilian musicians are widely scattered through the United States.

And the dashing Captain Hall? He testified at Commodore Barron's trial by a naval court on charges growing out of his conduct in the *Chesapeake-Leopard* engagement. A brother officer, incensed by Hall's testimony, challenged him to a duel. Hall shot him in the hip. He wound up his career in a series of obscure barracks commands, was promoted to major, and left the Corps in 1817.

Despite the early misadventures, both the Marine Corps and its parent service, the Navy, continued to import European musicians. Francis Maria Scala, one of the Marine Band's best known leaders, got his job that way.

"I was about 20 years old when the cruiser *Brandywine* entered the harbor of Naples," Scala reminisced to an interviewer in 1903, when he was in his eighties. "I was told they were seeking musicians. . . . This was in 1841. I enlisted and was rated as a third-class musician. . . . I was soon playing the clarinet on the quarterdeck."

Making shipboard music was not easy for Scala, for he was almost constantly seasick. Finally saying goodbye to the Navy and hurrying ashore at Norfolk, he vowed never to set foot again on anything that floated. The Army offered him a bandmastership at Fort Monroe, on Hampton Roads. Scala took

one look at the restless waters surrounding Monroe on three sides, felt slightly queasy, and said "*No, grazie*" to the Army. Then he headed inland.

In Washington Scala noted that the Marine Band had a pleasingly landlocked base. The nearest water was the Anacostia River, about half a mile from the Marine Barracks, and it seldom achieved more than a ripple. He enlisted, and soon became leader.

"The nations represented in the band at that time," Scala related, "were America, Germany, England, Spain, Italy, and Austria. We had one flute, one clarinet, one French horn, two trombones, one bugle, one bass drum, and one pair of cymbals. Not more than five men could read music."

Band Survived Shipboard Disaster

Even here Scala found it impossible to keep his feet on firm ground. Duty compelled him to put aside his loathing for open water and brave the Potomac River aboard the steam sloop *Princeton*, first naval vessel to boast the newfangled screw propeller. Also aboard on that gala February 28, 1844, were President John Tyler, most of his Cabinet, and many other prominent officials and their ladies.

Scala, gamely waving his baton while trying to ignore the ship's gentle motion, led the band through a lively program. Near Mount Vernon he and his men went below for lunch. Topside, gunners prepared for the day's big feature—the firing of a demonstration round by the "Peacemaker," a monstrous experimental cannon made of wrought iron.

Something went very wrong. The Peacemaker's barrel burst with a roar that shook the Maryland and Virginia countryside. Those standing near by were cut down by a hot hurricane of jagged metal.

Clearing smoke revealed *Princeton*'s gun deck a shambles. The dead included Secretary of State Abel P. Upshur, Secretary of the Navy Thomas W. Gilmer, and Col. David Gardiner, a New York State political leader. The bandsmen were unhurt. So was President Tyler, who had also been below decks toasting a new friend, the doomed Gardiner's daughter Julia.

From this occasion of death and suffering bloomed a romance that pleasurably agitated

Assistant Directors Play Back Rehearsal Tapes to Improve Performances

To get the best sound blend, 1st Lt. (now Capt.) James B. King, Jr., left, and Capt. Dale L. Harpham change score and interpretation on the basis of the recording.

the drawing rooms of Washington and of Tyler's native Tidewater Virginia. Four months after the *Princeton* disaster, the President, a widower, made a secret dash by yacht to New York, where he and Miss Gardiner were married.

Water continued to affect the career of bandleader Scala. A few years later the cornerstone of the Washington Monument was being hauled to its site south of the White House. A wagon bearing the 24,500-pound cube of Maryland marble broke through a bridge over the Washington City Canal, a noisome ditch that ran the course of what is now Constitution Avenue.

Civilian workers at the Navy Yard volunteered to spend their lunch hour rescuing the stone. Not to be outdone, Marine Commandant Archibald Henderson ordered Scala and his men to the scene. As the workmen hauled wagon and stone out of the muck, the band urged them on with spirited tunes.

The cornerstone was cleaned up and duly laid on July 4, 1848, with a loud all-day hurrah of speeches, fireworks, and—naturally—music by the Marine Band.

March King Joined Marines at 13

The band has come a long way since shrilling fifes and rolling drumbeats of the early Republic. Not for many years has it had to recruit foreign artists; the Nation's music schools provide an abundant supply. But as a reminder of the past, many of the names on today's roster are Italian.

John Philip Sousa, the band's most famous personality, was born within trumpet sound of the Marine Barracks, son of a Spanish-Portuguese musician and a Bavarian mother. When he was big enough to hold a violin, he began taking lessons on one, and soon branched out to other instruments.

John Philip's father enlisted him at 13 with the Marine Band as an apprentice. Sousa's later career included 12 years as leader, during which he composed many of the stirring pieces that made him the "March King" (page 756). He left the Marines to head a civilian band that enlivened many an affair during the Gay Nineties and later.

Sousa's name lives on in, among other compositions, his "Semper Fidelis," official march of the Marine Corps. The band plays this just before it reaches the President's reviewing stand in inaugural parades. Then, after saluting the President with ruffles and flourishes, it breaks into the "Marines' Hymn" ("From the Halls of Montezuma to the shores of Tripoli . . ."), whose melody is also found in the Offenbach opera *Geneviève de Brabant*.

Veteran parade watchers agree that these moments, with the President's Own swinging past the White House, are the most spine-tingling of the quadrennial shows on Pennsylvania Avenue.*

Bandsmen Heard Lincoln's Finest Speech

On days of national bereavement the band has slow-marched to dirges in the funeral corteges of Presidents William Henry Harrison, Zachary Taylor, Abraham Lincoln, James A. Garfield, William McKinley, Warren G. Harding, and Franklin D. Roosevelt. It has played at White House weddings, including those of Nellie Grant and Alice Roosevelt.

During the Civil War the band bolstered the morale of a frightened Capital by playing spirited concerts in Lafayette Square while Abraham Lincoln wrestled with staggering problems in the White House across Pennsylvania Avenue.

On a November day in 1863 at Gettysburg, Pennsylvania, the bandsmen played at the dedication of a national cemetery for Civil War dead. After listening for two hours to noted orator and statesman Edward Everett, of Massachusetts, they heard President Lincoln's "additional remarks"—a two-minute speech now revered as a classic of succinct, moving eloquence.

To see and hear the band of today, I sat in on a rehearsal at the Marine Barracks, no longer headquarters but still the Corps' No. 1 post. My companion was Lt. Col. Albert Schoepper, a violinist and saxophonist who rose from the ranks to become director.

* For an account of the Nation's historic "Main Street," see in the NATIONAL GEOGRAPHIC: "Pennsylvania Avenue, Route of Presidents," by Dorothea and Stuart E. Jones, January, 1957.

Twilight and Music Enchant a Water Gate Audience Beside the Potomac

Light blazes gold from the floating concert stage while the Marine Band plays melodies ranging from Wagner to Broadway's latest. Crowds of up to 8,000 attend summer's free Sunday concerts; some of them listen from canoes or outboard runabouts. Arlington Memorial Bridge, beyond the stage, crosses to the Virginia shore.

Pelted by rain that spots their uniforms, bandsmen play a "surprise" serenade on New Year's morning for the Marine Corps Commandant and his wife, Gen. and Mrs. Randolph Pate. They listen from a doorway trimmed for the Christmas holidays.

Bandsmen Greet the Pates in a Historic House

Since Civil War times the band has serenaded the Commandant, whose 154-year-old home at the Marine Barracks is one of the oldest official residences in Washington. Lt. Col. Albert Schoepper, the band's director, joins the general in the receiving line for the musicians following the concert. Staff in the corner carries the Marines' Battle Color, whose streamers represent every decoration and campaign ribbon earned by the Corps in its 184-year history.

In an auditorium at the south end of the quadrangle we found the band finishing up the overture to *Iolanthe*, under the baton of 1st Lt.—now Captain—James B. King, Jr., assistant director. King then called for Weber's "Fantasia and Rondo," featuring a clarinet solo.

After a few introductory bars the soloist, Sgt. Louis Coccagnia, stood up and soared off into a flight of trills and roulades.

"This kid is really in orbit," said a Marine sitting near us. "Really semper fi."

Colonel Schoepper grinned. "Coccagnia's a new man," he told me. "He just came to the band from the Peabody Conservatory of Music."

When Coccagnia had finished, his fellow bandsmen applauded warmly. King held up a circled thumb and forefinger to signify "on the ball."

About 85 percent of the band's members, Colonel Schoepper explained, are products of the Nation's leading music conservatories—Peabody in Baltimore, Eastman in Rochester, Curtis in Philadelphia, and Juilliard in New York City.

For years the band had a rule that each member must be able to perform on at least two instruments. Although no longer required to do so, every bandsman meets that standard today, and one remarkable musician, Master Sgt. Louis Saverino, plays everything from piccolo to sousaphone, and string bass as well. A tireless seeker of unusual effects, Saverino recently persuaded the band to acquire a contrabass clarinet. He believes he was the first musician to play a concert solo on this little-known instrument, which has 23 keys, yards of brass tubing, and a mellow voice that can growl like jazz patriarch Louis Armstrong's.

During his years with the band, Saverino has acquired seven antique bass viols, one of the world's finest collections. One was made in 1570 by Andrea Amati, first of the great fiddle-making family of Cremona, Italy. The bulky instruments, all playable, merit a specially insulated room of their own in the Saverino home—a 35-foot house trailer.

BOTH PHOTOS BY NATIONAL GEOGRAPHIC PHOTOGRAPHER WILLIAM W. CAMPBELL (© N.G.S.)

Beneath the Capitol dome, Sgt. Joseph Hanchrow plays the sousaphone at a performance for the National Maritime Day poster awards ceremony—one of more than 850 appearances the full band or its units make annually. The sousaphonist wears as well as plays his 28-pound instrument, its tubing looped over a shoulder. Sousa devised the bass horn to replace the cumbersome tuba in marching bands.

Small car, big horn. The shiny bell of a sousaphone rears above the Volkswagen's open top, hiding the Marine bandsman, who drives to an engagement in Washington.

As vacancies occur, the band grants auditions to applicants from all over the United States. Once a candidate has met the Marine musical and physical standards, he becomes a noncommissioned officer and can look forward to earning additional stripes and eventually, perhaps, a commission.

Like Colonel Schoepper, Captain King and another assistant director, Capt. Dale L. Harpham, played in the band and rose from noncommissioned grades.

Bandsmen are spared the rigors of boot camp, and they perform only enough drill to enable them to march smartly in parades. Although not required to bear arms, many of them volunteered for combat duty in both world wars and in Korea.

One-man Unit Plays at White House

At full strength, the Marine Band numbers 100 men. As occasion demands, it divides itself like an overactive amoeba and sends forth smaller musical units—a string orchestra, a dance band, and any number of jazz combos to play hot or cool on order at Marine parties. The smallest unit of all consists solely of Staff Sgt. Gene Akers (Peabody '56), who sometimes plays piano at intimate White House affairs.

On Fridays in spring and summer the band takes part in a military display of color and precision that ranks among the Capital's best free shows. Along with the Drum and Bugle Corps and two companies of Marines stationed at the barracks, it marches in evening retreat parades, with staging and lighting effects that would do credit to one of Broadway's brightest productions.

Of the hundreds of engagements played in the course of a year, the Marine musicians' favorite is one that keeps them on their home grounds. Each New Year's morning the band lines up around the back door of the Commandant's House, a 154-year-old dwelling at the north end of the barracks quadrangle. There it plays a "surprise" serenade to the Commandant—an annual custom since the Civil War (page 764).

Last year I watched the band form in the Commandant's garden. A cold rain quickly soaked creases out of bright uniforms. After an opening number, the Commandant, Gen. Randolph McCall Pate, appeared with Mrs. Pate. Master Sgt. William Jones, the band's baritone soloist, sang "Bless This House." The general made a genial speech, professing astonishment at the whole thing.

Then he invited everybody inside, where he just happened to have some hot buttered rum and a buffet breakfast.

The crew of the world's most-traveled yacht finds new adventures on romantic islands of the west Pacific

New Guinea to Bali in *Yankee*

By IRVING and ELECTA JOHNSON

OVER A PACIFIC OCEAN aflame with soft moonlight, *Yankee* romped for New Guinea.

Only he who goes in sail over tropic seas knows such nights—the rush of a trade wind laden with fragrance of mysterious islands to windward, the burble of the hurrying forefoot, a block creaking somewhere aloft, the hiss of a long swell passing beneath the counter.

And then a shower of jeweled spray at the weather rail, a silver streak in the air—and a feminine squeal.

"Flying fish for breakfast," remarks Exy—that's Electa, the skipper's wife. "I think Judy Huggins took a direct hit."

This was a night of nights on *Yankee*'s fourth world cruise, one of the best sails of the 18-month voyage, a night of splendor. All our crew of 22 young men and women were on deck, whether on watch or not. Singing the lilting songs they had learned in Tahiti, below the horizon, they sat in the warm wind as happy as the porpoises frolicking beneath the bowsprit.

Sad Voyage for *Yankee*'s Owners

But for us Johnsons there was sadness in the beauty about us: *Yankee*, too large to cruise the narrow waterways of Europe we had hoped for many years to explore, would have to be sold when we returned to her home port of Gloucester, Massachusetts.

The new sailing ship we planned for these trips would be small and not fitted to range the mighty oceans. And so it was not likely we would ever again hear, from the deck of our own ship, the men and women of Pitcairn singing "In the Sweet Bye and Bye" or watch the dhows in the Indian Ocean running their westing down.

Many of you already know the ship that made us sad that night. World-ranging *Yankee* was built in Germany for the North Sea pilot service, in which a ship had to keep the sea when even the herring ran for shelter. We took her over in 1946 and rerigged her from schooner to brigantine.

Then, with only ourselves and our youthful expense-sharing crews to handle her 15 sails of snowy canvas, nylon, and Dacron, we took her around the world more times than any other yacht has ever gone.*

Always we have sought out islands, the islands of the trade winds where the steamers cannot go, where only a sailing ship can thread through coral reefs into still lagoons; we have even discovered and named a few ourselves.

With some islands we fell in love, and to them we have always returned. Already on this trip, nine months out of Gloucester, we had revisited Bermuda and then, across the Panama Canal, stopped off at the Galapagos Islands.† We had gone back to Pitcairn, where live the descendants of the *Bounty* mutineers,‡ and to Tahiti, of course. And now New Guinea, where one still may be brained by a stone ax in the hands of a savage who never before saw a white man (map, page 777).

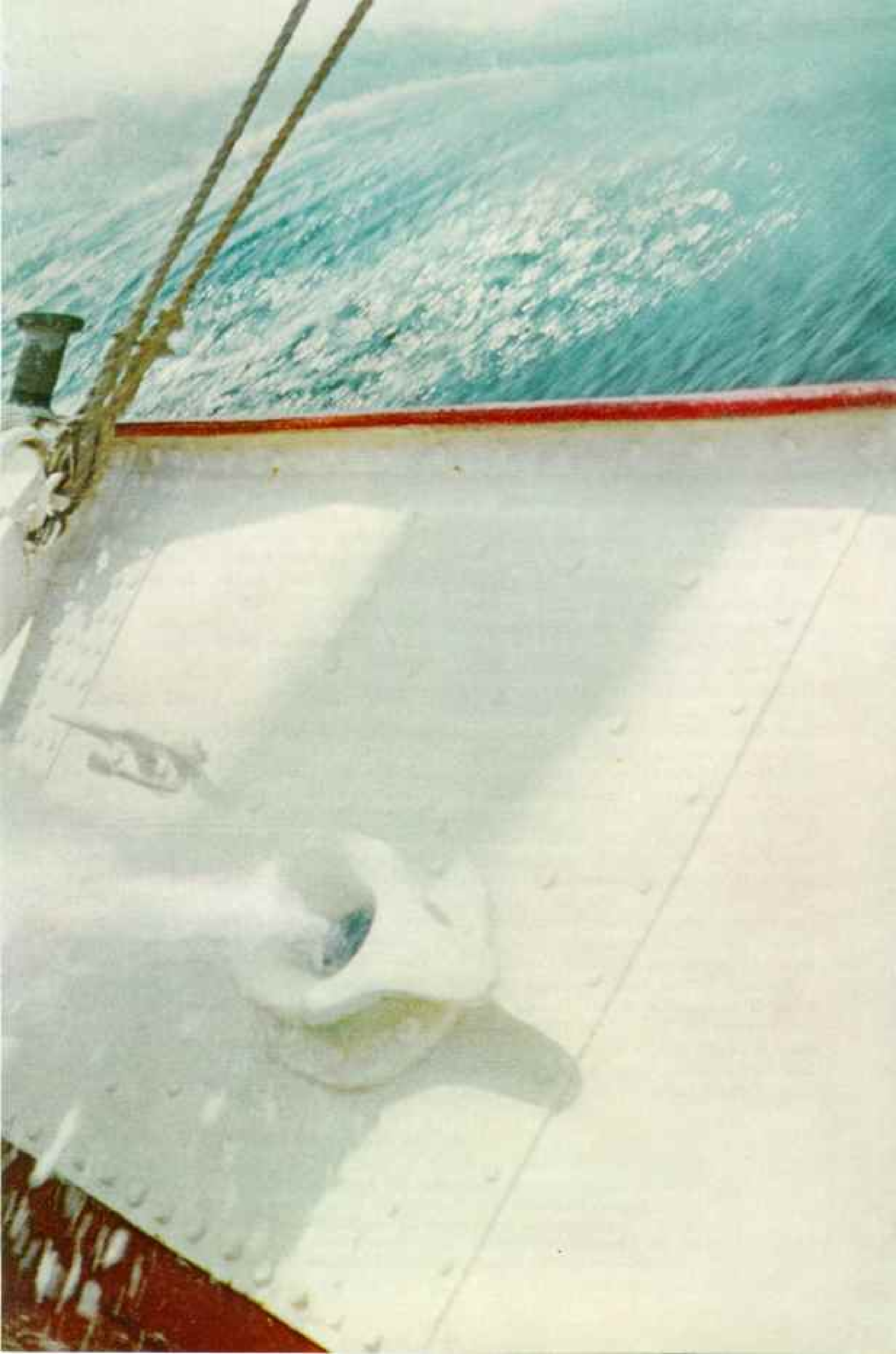
New Guinea, second largest island on earth —only Greenland is bigger—forms a rugged

* Colorful accounts of previous voyages by the authors have appeared in the NATIONAL GEOGRAPHIC: "*Yankee* Roams the Orient," March, 1951; and "The *Yankee*'s Wander-world," January, 1949.

† For the Johnsons' description of these strange volcanic isles, see in the NATIONAL GEOGRAPHIC: "Lost World of the Galapagos," May, 1959.

‡ Luis Marden of the NATIONAL GEOGRAPHIC staff related his experiences in recovering relics of this historic ship in "I Found the Bones of the *Bounty*," December, 1957.

Oblivious to Spouting Scuppers, a *Yankee* Sailorman Scrubs Potatoes



mountain barrier between Southeast Asia and the islands of the South Seas. Japan invaded New Guinea early in World War II, and it took a great deal of fighting to wrest it back.

Mementos of those bitter days still remain. In the Huon Gulf we fouled our anchor on a sunken Japanese ship, one of many hundreds on the bottom herealbout. From shattered fortifications big guns still point seaward; in one we found a shell ready to fire.

Goroka Booms on Highland Frontier

Today the Netherlands governs the western half of New Guinea. The rest is under Australian control; here, in the port of Madang, we dropped our hook and gave the sails a harbor furl. Then we went to the airport, for the New Guinea we love best is not beside the sea but in the newly opened mountain valleys around Goroka, where men wear bird-of-paradise feathers in their hair.*

We could hardly believe the changes we found up there in the cool highlands.

"Six years ago," Exy told our band of adventurers as we stepped out of our chartered plane, "Goroka had just four frame houses. Now look!"

The crew was already looking—at a booming frontier town built up with houses, stores, garages, and public buildings. Here a hundred white settlers pilot Land-Rovers and trucks over new dirt roads. Yet aborigines in bark-net loincloths still crowd the town.

The altitude—more than 5,000 feet—is invigorating after the sea-level tropics. No doubt New Guinea's cool, fertile highlands would attract great numbers of Australian settlers if the country were open to unrestricted immigration. But the Australian Government wants orderly development, to protect the original inhabitants—300,000 of them in this Eastern Highlands District.

We settled down briefly to enjoy the luxuries of civilization at the Goroka Hotel. But eight of the boys turned their backs on these comforts to take a rugged cross-mountain hike with a young government patrol officer and 35 native carriers. For five days they followed 65 miles of foot trails between villages of Stone Age people.

Now this is the sort of thing we did ourselves on our first voyages, but willingly left to younger sailors as the years went by. Instead, we heard all about it from Mike Sumner, one of our three mates.

"We hiked 23 miles the first day over tough mountain trails, crossing an 11,500-foot pass in cold mist and rain," he said. "Coming down, we got caught in the dark. All around us were these wild men, shouting, rustling the underbrush, all excited at this invasion of their countryside.

"At first we were nervous. Then we hit some dangerous switchbacks in the trail where an exhausted man, if he stumbled in the dark, might go over a cliff to certain death.

"But at every one was a line of naked children, hands linked, forming a human wall at the drop-off. '*Ai, ai, ai,*' they shouted, and pushed us bodily back to safety.

"Next day Peter Barney thought he'd repay them with a little magic. He had a stunt he'd picked up: He'd fill his mouth with lighter fluid and spit it out onto a lighted match. The flames really billowed from his mouth" (page 775).

Ship's Barber Writes Letters on Tape

Some of us flew one day in a bush plane to a lonely airstrip near Mt. Hagen, and then hiked to a 6,700-foot-high village where we heard there was to be a celebration. Climbing with us were men and women coming in from miles around to take part. Nowhere else have we seen such splendid primitive people.

Many wore crescents of shell around their necks, so that they stood up like Elizabethan ruffs. The ceremony we saw, called *moga*, involved the trading of this mother-of-pearl shell. We'll let Judy Huggins describe it. You remember Judy: the kamikaze flying fish of the moonlight sail picked her for its target.

* New Guinea's mountain tribesmen were described for the NATIONAL GEOGRAPHIC by E. Thomas Gilliard in "To the Land of the Headhunters," October, 1955, and "New Guinea's Rare Birds and Stone Age Men," April, 1953.

All Sail Set, *Yankee* Tops a Long Pacific Swell

Germans built the 96-foot steel craft for North Sea pilot service in 1912 but lost her to the British as a prize of World War II. *Yankee* acquired her American name when Irving Johnson bought her in 1946 and rigged her as a brigantine, with 7,773 square feet of sail. Youthful crews shared labor and expense as Captain and Mrs. Johnson took her four times around the world. Here, beneath their private emblem on the topgallant, a lad works on the fore-topsail yard. Nylon stunsails billow behind him.

Yankee **sometimes paused** to give her crew a cooling dip. Gripping a halyard, this sailor swings from a foreyard for a plunge into the Celebes Sea.

Judy is a tall, lovely bundle of energy and enthusiasm who shook up Rarotonga with the Charleston and devastated Singapore with rock-'n'-roll steps. She cut everybody's hair on the 18-month voyage—365 haircuts by her count (page 801). She is still cutting Mike Sumner's hair, because she later married him, and he still thinks she is the best barber he ever knew.

We have had a wedding of *Yankee* crew members after every voyage. Two resulted from this trip—but of them and the courting on "porpoise watch," more later.

Judy has a gift for words. We

THOMAS KEITH (ABOVE) AND EDWARD HOLLAND

Lifeguard stands shark watch from his bowsprit station as swimmers stir a glassy tropical calm. Near land one afternoon, Judy Huggins and several of the boys dived to the bottom with air hoses and lead weights. Other crew members paddling beside the ship 25 feet above reminded her of "Peter Pan and the actors flying around."

learned this early in the voyage, when we heard vivid descriptions of places and people come floating down from the foreyard. That's where Judy liked to sit while she dictated letters to her parents on a tape recorder.

Mountain Millinery Dazzles Yankees

Here is how she saw the moga trading:

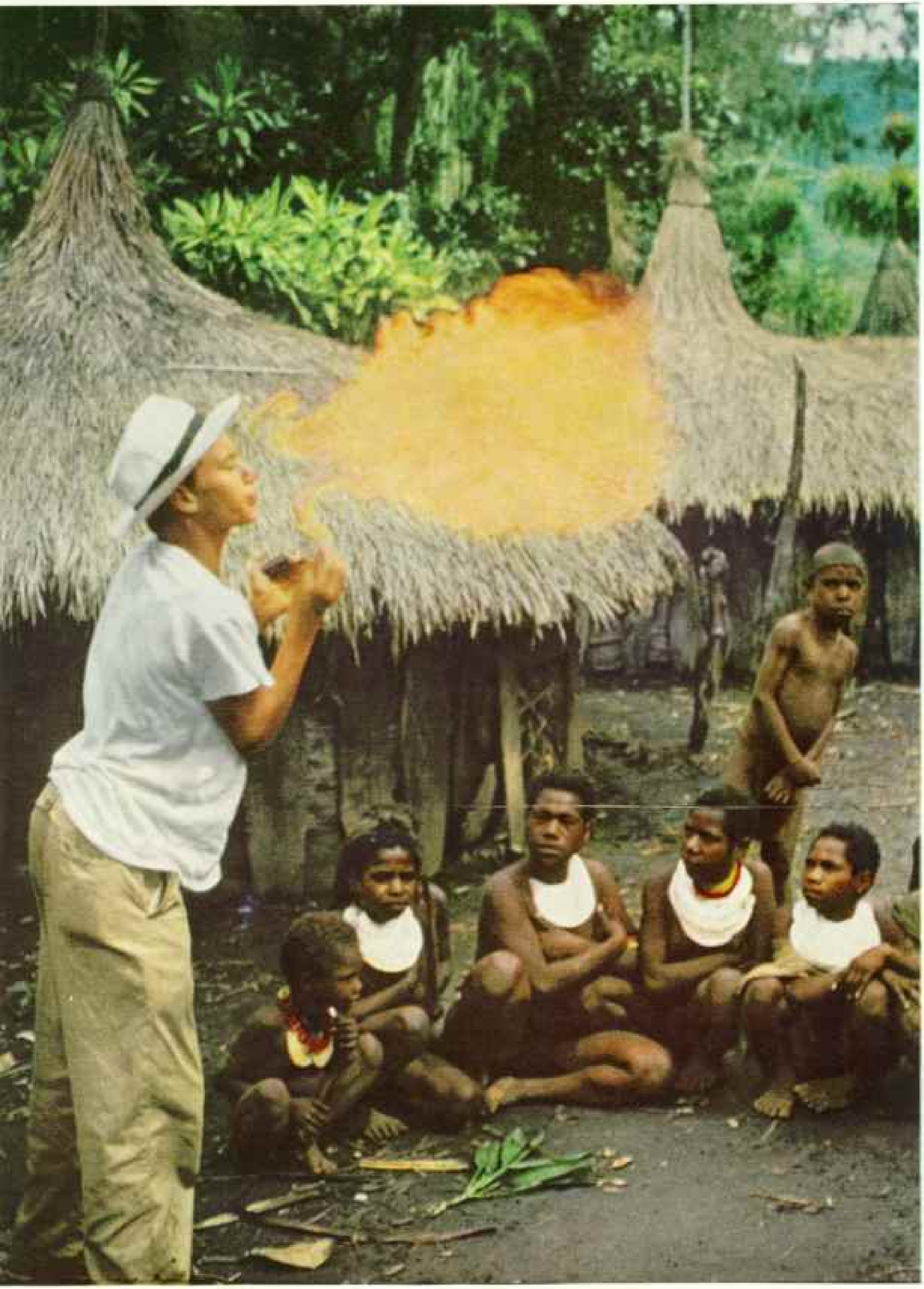
"It was like an American county fair. People in fantastic costumes just milled around in a field, and we mingled right among them.

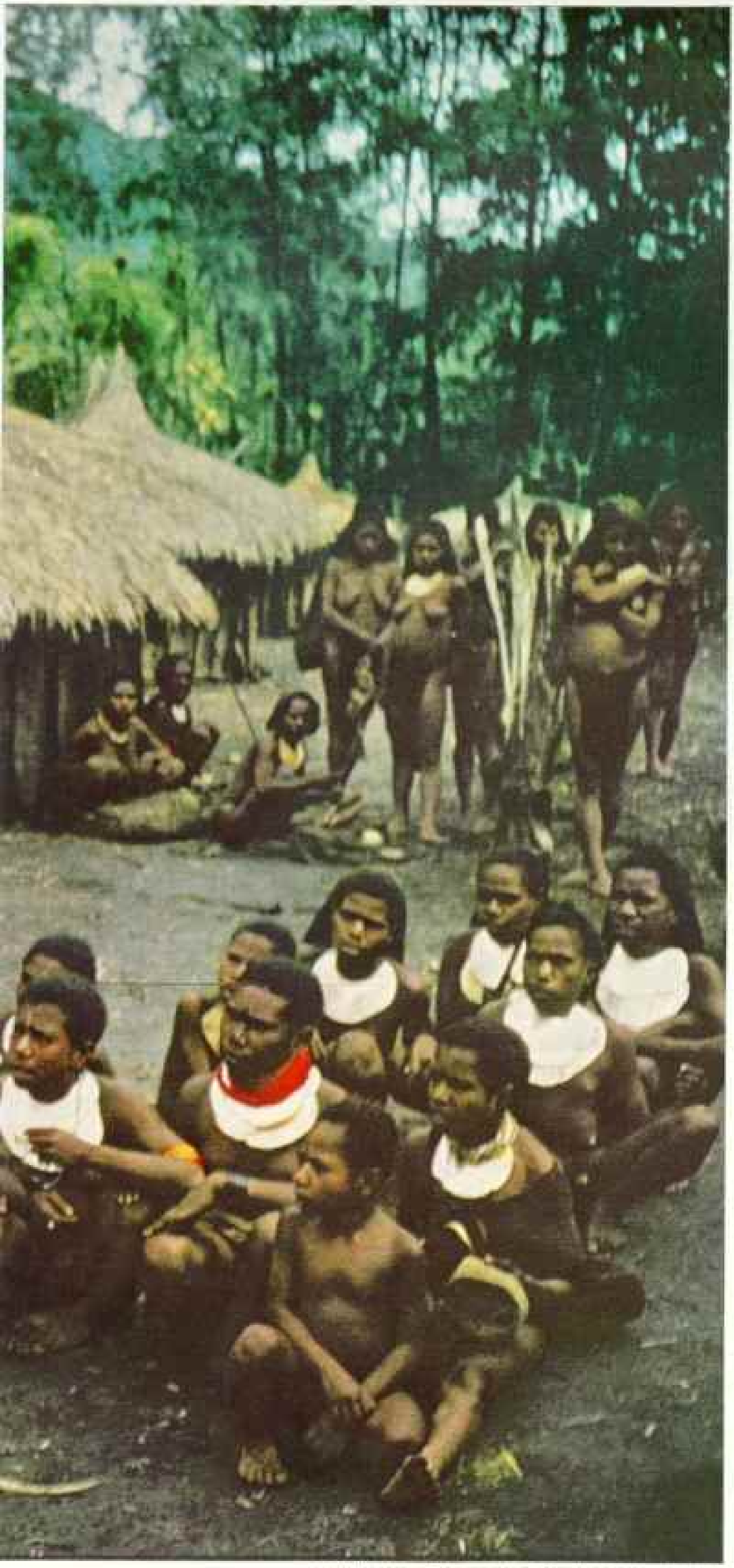
"At the far end of the field a line of them stood hopping up and down chanting, and the headdresses flopped and bobbed. Those headdresses! Bird-of-paradise feathers—green, yellow, red—tall, black, gorgeous plumes and whole bird wings blazing in the sun, and all set off with accessories of beads and scarab beetles and golden cuscus fur.

"Down the middle of the field was a line of shell, and some of the old men stood in little groups beside it, apparently dickering. Dr. Alice Strahan, the ship's doctor, and I were standing by one of the piles when all of a sudden we heard a whooping, and five men ran down the field. They carried spears, and they wore headdresses and lots of paint, but as far as clothes went, that was about it.

"These five came roaring along waving their spears, and if we hadn't yanked Alice back, she might have been run over. They did this several times, and everybody stood along the sides and shouted.

"Rain broke up the party. The men took





Fire-eating Visitor Awes a Stone Age Audience

Leaving *Yankee* at Madang, New Guinea, members of the crew flew across the island's Eastern Highlands to Goroka.

Irving and Electa Johnson, who slept in one of Goroka's four houses six years earlier, scarcely recognized the village, so large had it grown. They found a hundred European and Australian residents, and even a potato-chip factory and a coffee-roasting plant.

Led by an Australian guide, eight American youths took a five-day hike across 65 miles of rugged trail. Visiting smoky thatched houses, the boys made friends with their hosts, bargained in pidgin English for stone axes, and sampled *kau kau*, a kind of sweet potato.

In one highland village 18-year-old Peter Barney remembered a parlor stunt he had perfected at home in Connecticut.

"It's for fireproof parlors," says Barney. "I fill my mouth with lighter fluid, spray it out, and light the spray. It's dangerous and I don't recommend it, but I've killed flies this way."

Barney's first performance sent residents fleeing into the bush. A braver crowd sat through the encores.

Younger members of the tribe wear mother-of-pearl bibs and paint their faces with pigments and grease. Prudent elders, in brief skirts made of bark, watch from a distance.

Feathers and Lizard-skin Drums Solemnize a Pig Killing in New Guinea

Bird-of-paradise headdresses, woven bark aprons, nose ornaments, and mother-of-pearl necklaces complete the costumes of tribesmen near Mt. Hagen. "The crowd," said Electa Johnson, "was as wild looking a gathering as one could find."

their headdresses apart and wrapped each feather carefully in brown paper. Everybody left, and I don't really see how they knew which moga shells belonged to which people.

"I have never seen anything so wild and beautiful."

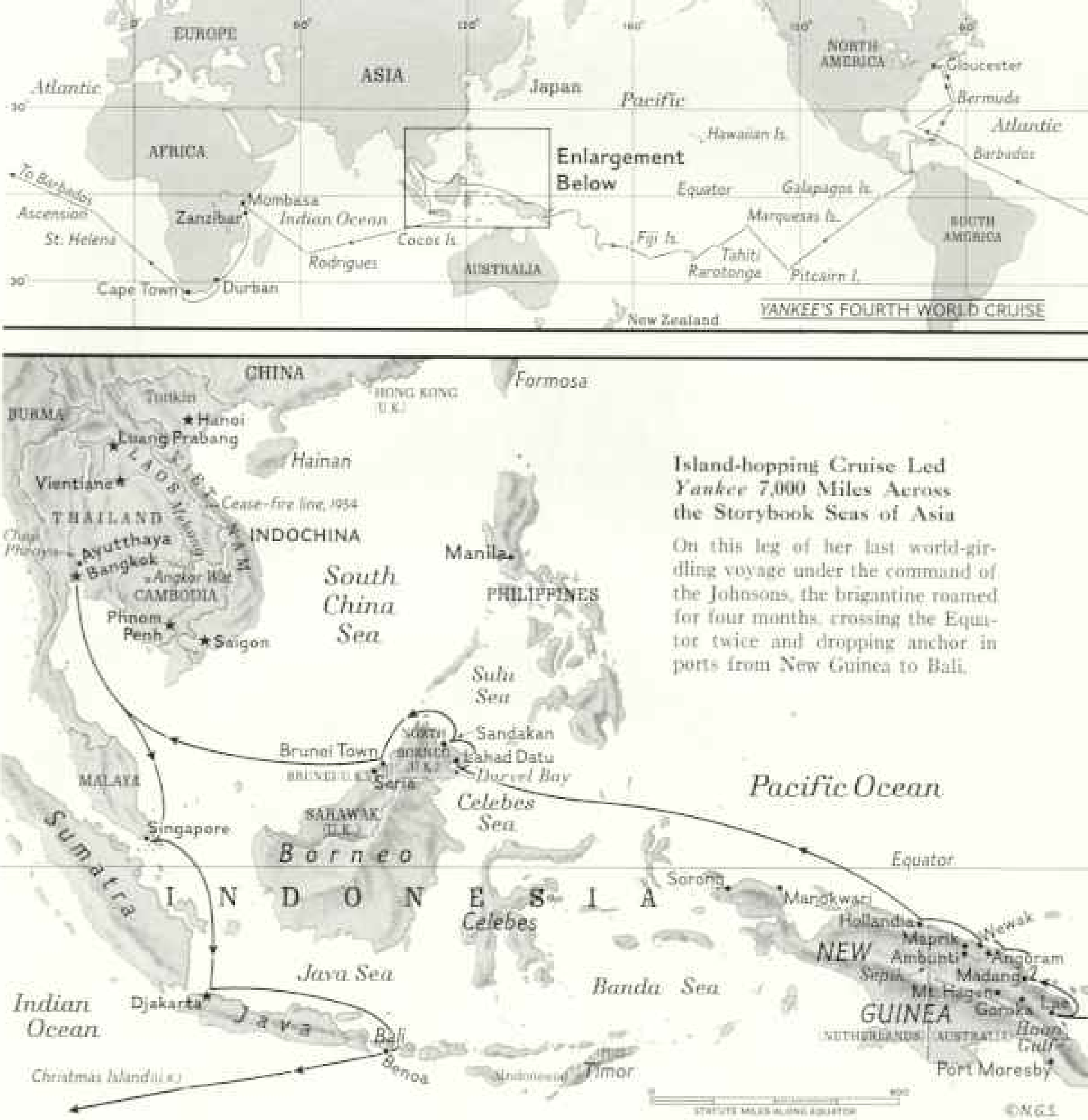
Sepik Mosquitoes Welcome *Yankee*

"Sailors can't stay inland too long," Irving announced, and after a final dinner ashore we rejoined our ship. Our next New Guinea foray was to take the *Yankee* up the great Sepik River, whose muddy waters stain the sea for miles beyond the river's mouth.

The evening the *Yankee*'s bow turned shoreward, the moon was bright and the water quiet. Irving could not resist a bit of chancy night piloting up the river. This was July, the season of low water and little current—about 3½ knots—so the *Yankee*'s two diesels made about three knots upstream.

At sunset the mosquitoes had arrived in clouds, so that we had to cover all hatches and skylights with screens and netting. Better to take refuge in the stifling heat below than to endure the bites and itches above. About 10 p.m. we anchored.

We met a number of Sepik settlers—missionaries, government men, crocodile hunters, a couple of traders. Our second night on the river we reached the one river metropolis, the settlement of Angoram—with a white popu-



Island-hopping Cruise Led *Yankee* 7,000 Miles Across the Storybook Seas of Asia

On this leg of her last world-girdling voyage under the command of the Johnsons, the brigantine roamed for four months, crossing the Equator twice and dropping anchor in ports from New Guinea to Bali.

lation of 19. The *Yankee* crew more than doubled the number. After Angoram we had the river mostly to ourselves, only rarely meeting a crocodile hunter. We found these river neighbors friendly and always glad to come aboard and pass on their local knowledge of shoals.

"Your draft is 11½ feet?" a boatman asked. "You'll never make the next part."

Children Paddle Own Canoes

We could not be sure, of course. There are no charts of this river, only air maps showing an outline, and the river bottom keeps changing. But, weighing the different advice and making big sweeps around the outside of each bend, Irving kept going cautiously upriver.

We hired a strange vessel, a thatch-roofed platform on two huge dugout logs. With an outboard motor we could now explore the countryside up some of the Sepik's tributaries.

Kambaramba was typical of the villages we visited. Just a few miles up a side stream we came upon this community built entirely on stilts. The watery main street ran for at least half a mile.

People were everywhere—on the porches of the large houses, on rafts, logs, and in canoes. All the animals and people seemed to be amphibious. Even the tiniest children had their little canoes; like the ducks and pigs, they waded and swam. It was easy to

see how the Sepik people attain their skills as canoe handlers.

One came alongside so its occupants could look us over. They paddled standing up, and since the canoe was a long, narrow dugout drawing only a few inches of water, it took superb balance to keep it from turning over. Spears lay in the bottom.

Margaret Putnam Riley, better known aboard as Put, leaned over the rail.

"Going to spear a few neighbors, fellows?" she inquired pleasantly.

The canoemen grinned.

"*Kissim puk-puk*," one of them said. Rather hastily, skipper translated:

"'Kissim' means catch, and a 'puk-puk' is a crocodile. That's pidgin, the trade language in all this country. These men are crocodile hunters."

Watch Out for the Grass!

They speared the dangerous beasts from the canoe, the hunters explained, then leaped into the water after them and wrestled them to a finish. Yes, they admitted, the canoe then always tipped over.

Each house in Kambaramba had a private garden—a floating earth-covered raft either tethered to a post or skewered by a long stake. But always the garden floated, so that it rose and fell with water levels, keeping small plots of taro and other vegetables close at hand.

Wait long enough on the river, and the makings of a garden come to you.

"Grass, he come," cried a citizen of the bush one day.

And down the stream came a great floating island, cut from a bend in the river by the current. It hung up on *Yankee*'s anchor chain, and Peter Bloomer climbed down to it.

He came back instantly and speedily, yelling like a witch doctor. Behind him a column of red ants as large as thumbnails filed solemnly up the chain.

Frantically we cut the island loose and repelled the boarders. And we remembered our last Sepik trip: A five-foot snake had nearly boarded us from a floating island!

Our crew had a wonderful time trading for curios. The Sepik River people are the best carvers of the western Pacific. We marveled at the decorations above the doors of houses, on footstools, masks, bowls, and spears. The crocodile is a favorite motif in river designs; indeed, it is something of a fetish.

After exchanging tobacco and cloth and gesturing pointedly, the *Yankee* traders began to load immense carved and colored shields. They nearly swamped our dinghy.

Later they swamped their bunks in *Yankee*. Boys sleep in tiers of bunks along each side of the ship's big main cabin. Two girls sleep forward in each of two small cabins. A *Yankee* rule says that everyone must keep his own things in his own small space, and anything the girl cabin cleaners find lying around is impounded.

So the spears, the shields, the *kundu* drums; the stone axes, the carved masks accumulate in the bunks until the occupant, when he gets in, is completely invisible and often twisted into pretzel shape. Ah, youth!

Ship Grounds on Jungle Bar

Yankee pushed 150 miles upriver to the Catholic mission station at Timbunke, where children in neat blue shorts and white shirts lined up to greet us. Only 100 miles beyond lay the government station of Ambunti—white population, four—from which a traveler must secure a pass to venture into uncontrolled territory.

The river—now about 200 feet above sea level—was becoming more dangerous. And so, we had been told, were the local folks, who liked to collect human heads. Reluctantly we turned the bow downstream. The current pushed us along at 9 and 10 knots.

"Is there any chance of stopping for some good jungle pictures?" asked Alice. It seemed strange, but most of us had exposed our film on villages, wild people, and canoes—and had neglected shots of the surrounding Sepik River forest. So we nosed into a tree-covered inlet —and *Yankee* ran hard aground (page 780).

For a few minutes we just took pictures

Popeyed Gods Guard a Thatched Wedge Splitting the New Guinea Sky

Maprik is famed for its houses *tamberan*. Although these spirit houses are taboo to women, islanders opened their 80-foot skyscraper to Judy Huggins. "The entrance [left] couldn't have been more than 3½ feet high," she wrote to her parents. "You had to bend really low to crawl in." Inside, she found "carved figures, three to six feet high, with moon-shaped faces." A ridgepole slopes steeply to the ground behind the elaborate façade; the thatched cap helps shield paintings from weather.

Yankee Runs Aground in the Murky Sepik

The brigantine cruised 150 miles up this New Guinea river, where crewmen met villagers, missionaries, and crocodile hunters. Enormous ants tried in vain to stow away, but thousands of hungry mosquitoes accomplished the boarding. Here, returning downstream, the ship lies hard aground on a shoal. Crew members managed to rock *Yankee* free by running from one side of the deck to the other.

Highland dandies wear parrot wings, green beetle shells bound with orchid fiber, and beads.

Knitting a sweater, Electa Johnson compares skills with a Chimbu district girl, whose long needle makes knots in a net cap.

of the jungle and of trees that almost arched over the stream. But there are better places to be aground than in the Sepik. We could wait a long time for help to come; we might even stay here until the rainy season raised the water level and floated us off the gluelike clay. That would be in about three months.

We tried the engines full astern. *Yankee* did not budge. It was time for an old remedy.

"Sally ship!" came the skipper's order. And the crew turned out. While the engines tugged astern, the crew ran back and forth across the deck, shifting weight from one side to the other, rocking the ship to loosen the suction grip of jungle mud on the hull. At last Irving shouted, "She's coming loose!"

Yankee rocked once more, and then began to slide backwards. We were free, and soon we sailed out into clear, clean salt water. Ocean swells felt good again.

Sunken Hulks Recall Grim Battles

A night of light wind and we reached Wewak, another of the Japanese strongholds in World War II. Some of the crew spent an eerie day diving among ships that Allied bombs had sent to the harbor bottom.

Irving had had his fill of this during the war. One of his jobs in the Navy survey ship *Sumner* had been hunting precious code books in these wrecks.

"They were usually newly sunk," he said with a shudder. "Sometimes you'd open a door and find people floating about."

Other western Pacific ports held bad memories for him too. More than once he showed us where the *Sumner* had lain at anchor amid a fleet of invasion barges; her men, under fire, had blasted underwater obstructions and made quick charts to guide the big ships in.

A group of us flew up to Maprik to see some of the best houses *tamberan*, or spirit houses, in New Guinea. The bush plane, leaving Wewak, took off from a field still lined with gigantic bomb craters. Here in August, 1943, Allied air attacks had wiped out a Japanese armada of several hundred planes.

One house tamberan at Maprik had a spectacular pyramidal thatched roof 80 feet high (page 778). Outside, under the bark eaves, were paintings in striking yellows, red ochers, jet black, and white; the colors came from earths and vegetable dyes near at hand.

The entrance was only three and a half feet high. The *Yankee* crew squeezed in to find wood carvings of people with smooth, moon-shaped faces and thin, tubular arms and legs.

"Some people drifted in from the bush wearing absolutely no clothes at all," Mike Sumner reported. "Up to now they'd always worn a little something or other, and we thought this new development was going to shock the girls.

"But no, they hardly even noticed. 'Styles have been building up to this gradually for the last 1,000 miles,' they said."

General's Return Planned in Hollandia

A great many Americans know Hollandia, our next port of call. American forces took it and the surrounding countryside in savage fighting in the spring of 1944, and here General MacArthur made his headquarters while planning the retaking of the Philippines.

Hollandia is the capital of Netherlands New Guinea. We found it an attractive small city of red tile roofs. Some 8,000 Dutch live here, building roads, dock facilities, and permanent public buildings.

Indonesians call Netherlands New Guinea Irian and want it turned over to them by the Dutch. The latter, however, seem determined to stay. They have built an expensive dockyard at Manokwari and started oil production near Sorong, at the western tip of the island.

(Continued on page 791)

Skipper, in the Chartroom, Plots His 546-day Orbit Around the World

Irving Johnson's durability has withstood many a test. He passed through a hurricane's eye on Sir Thomas Lipton's *Shamrock V*, and rounded Cape Horn in a four-masted bark. He was at Pearl Harbor on December 7, 1941, and took part in the United States Navy's campaigns against Guadalcanal, Tarawa, Kwajalein, and Iwo Jima. Diving, he blasted obstructive coral reefs and jimmied safes in sunken Japanese vessels for code secrets. He sustained only one broken bone—on lecture tour. After seven world-circling cruises, three of them in a previous *Yankee*, he left an accident-free record.

Supported only by his arms, Captain Johnson challenges the crew to a gymnastic feat but finds no takers. Clothes conceal Herculean muscles and barrel chest.

REDACTIONED BY THOMAS J. ABERCROMBIE, NATIONAL GEOGRAPHIC STAFF

Yankee (Far Left) Calls at Brunei Town, a Community Half Ashore, Half Afloat.

Catwalks Above the Brunei River Take the Place of Streets in a Venice-on-stilts

Armloads of silver on a Dyak girl in North Borneo interest Captain Johnson. Hand-tooled belt and bracelets are local favorites.

The Dyaks, former warriors and head-hunters turned farmers, invited *Yankee*'s crew to their barnlike community homes, called long houses.

Floral headdresses adorn Malayan bride and groom at Lahad Datu, North Borneo. The couple came from the Cocos, Indian Ocean islands whose population outgrew the food supply. Painted headband, mustache, and beauty spots adorn their faces.

KODACHROMES BY THOMAS KEITH (ABOVE), ALICE STERNER GREGOR (OPPOSITE) AND B. CARMICHAEL SUMNER © N.G.S.

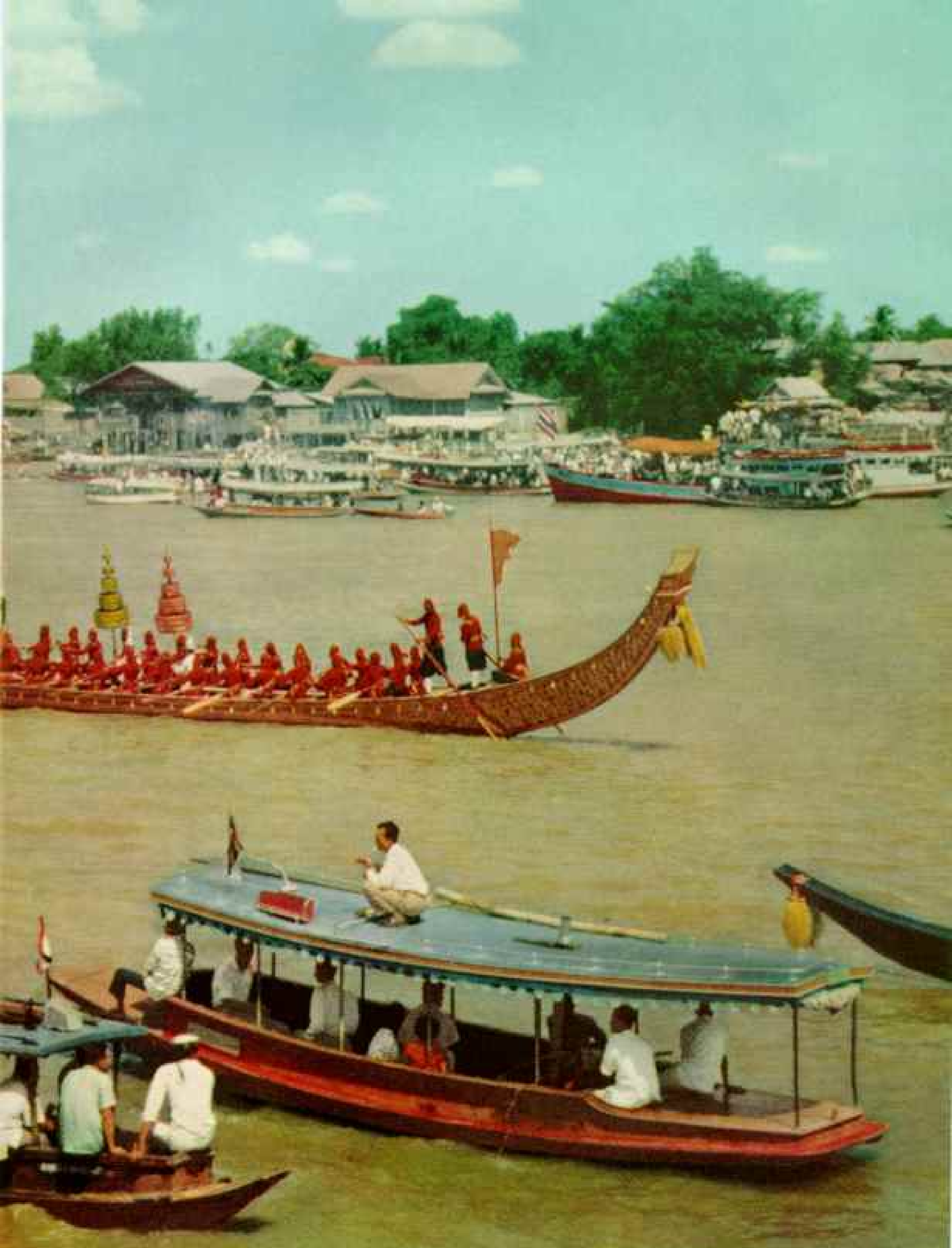
Glistening Buddha of solid gold sets temple walls aflame with reflected light in Wat Trimit, Bangkok, Thailand. Buddhist priests, who long ago coated the 15-foot, five-ton image with plaster to conceal its value from invaders, died without betraying the secret. An accident cracked the plaster and revealed the treasure in 1956. After seeing the statue, a *Yankee* crew member wrote, "I feel like I've been to Fort Knox."

A Huge Upturned Goblet, the Temple at Nakhon Pathom Soars 377 Feet

Legend says that a fifth-century ruler made the spire's height "equal to the flight of the turtledove." He extended the temple grounds as far as an elephant's trumpeting could be heard. Thousands of Thai pilgrims annually visit the sanctuary, which rests on the remains of two earlier shrines. It lies 30 miles west of Bangkok.

Fifty Oars Flashing, a Palace Barge in Bangkok Gleams Gold and Crimson

Lavishly gilded and canopied, the 80-foot-long vessel glides majestically up the Chao Phraya River, Bangkok's link with the sea, on the 2,500th



PAINTING BY PIERRE CLAUDET © NATIONAL GEOGRAPHIC SOCIETY

anniversary of the birth of Gautama Buddha. Five pagodalike ceremonial umbrellas specify the rank of the passenger, a high official. Nine umbrellas would signify a king, six a living Buddha. Crowds jam excursion boats, sampans, outboards, and the ocean-going ships moored on the left.

Line Squall Lowers a Menacing Curtain

Yankee met this storm in the tropical South China Sea en route to Malaya. Under shortened sail, the ship followed Captain Johnson's formula for a squall: "Run with it a while to test its strength and, if it doesn't blow your hat off, come around to it." This storm, he said, seemed "a solid thing . . . cruising up like a battleship against the wind." *Yankee* accepted the challenge and plunged through after a two-hour struggle.

Cavorting porpoises swim under *Yankee*'s bow. Playing tag with them, young crew members cling to bowsprit rigging and occasionally score a point with a tap of the foot.

As we left New Guinea, light winds plagued us; we had expected them on the two-week sail to Borneo. But everyone enjoyed a quiet passage at sea after so many short trips between islands. It was during this time that the log began to acquire notes like this:

"Wind light. Lovely tropical evening. The porpoise watchers are not reporting porpoises."

Two people stood porpoise watch at a time. One was a boy, the other a girl. Duty station was as far out on the bowsprit as they could get without falling overboard. Preferred hours were at night, when there was a moon or a sky full of blazing stars.

We noted a bit earlier that Judy and Mike Sumner, after a while, stood quite a few porpoise watches. So, too, did Dr. Alice Strahan and Chris Sheldon. Result: two marriages.

Often people ask us whether we worried about shipboard romances. How could we? We did our own courting many years ago aboard the cruise schooner *Wander Bird*, and we have never once regretted the outcome of our own porpoise watches out on the bowsprit. Here, as Chris Sheldon put it, was "the only place where two people could speak of things not meant for 22 other pairs of ears."

And now, as we crossed the shimmering Celebes Sea, we worked hard to spruce *Yankee* for the months of sailing still ahead. Our young people chipped rust, painted, mended sails, fixed plumbing—and all the while, divided into three sea watches, they steered and helped with the navigation and handled all the sails, bad weather or good.

Stars and Storms Weld Firm Friendships

Every morning at sunup they scrubbed the decks until they could have eaten from the clean pine planking instead of the long gimbaled table in the main cabin. Then they turned to on the countless tasks of running a sailing ship, and after that, letters home. Fifteen typewriters clattering at once on the table made *Yankee*'s cabin sound like a newspaper office.

On some evenings everybody drifted aft as if by common impulse, and around the boy or girl at the helm the talk and song and laughter would swirl. Sometimes the subject was photography, or sports cars, or philosophy; we have even discussed the life of Marcus Aurelius.

Living in *Yankee* at sea is like living on a tiny island a thousand miles from nowhere. The people on the island come together in warm, permanent friendships born of evenings on the afterdeck and perils shared in the rigging on a stormy, pitch-black night. No wonder Exy grew sad on a few lovely nights of this, our last voyage.

Borneo, on this trip, was for us only North Borneo and Brunei. Today Great Britain controls them both, but once Brunei was a powerful sultanate holding sway over the entire island, third largest in the world, and even parts of the Philippines.

Piracy Lives On in the Sulu Sea

In North Borneo's Darvel Bay we heard about pirates—in fact, almost ran afoul of them. They have always infested these waters. Swooping out of the Sulu Sea, they preyed on explorers, square-rigged merchantmen, and even tough Yankee whalers.

The books say that Sir James Brooke, the first White Raja of Sarawak, suppressed piracy in northern Borneo waters in the 1840's. The books need updating.

A detachment of Sandakan policemen came aboard as we lay at anchor.

"Which way did they go?" they asked.

"Who?" we wanted to know.

"Why, the pirates, of course. They came right by you, raided a village, shot a man, took everything they could carry, and went back to sea. We don't catch them very often—their boats are too fast."

And now we did remember hearing them. The modern pirates, clad in loud sport shirts, still come down from the Sulu Sea, making their raids in *kumpits*, long unlovely craft with powerful outboard motors. They had roared past us a little earlier.

The police, and a customs man who had come with them, stayed long enough to give Exy some presents: a box of chocolates and a pair of small scales.

"My, but those will be fine for measuring out recipes in the galley," said Exy. "Whenever did you get them?"

"We confiscated them from a smuggler," the customs man replied. "He used them for weighing opium."

We put back to sea and, moving up the Brunei River, entered the once-great Sultanate of Brunei. During the first voyage around the world, Magellan's ships came up this same river in 1521. Magellan was dead, killed on Cebu in the Philippines; his companion, Antonio Pigafetta, however, left this description of Brunei Town:

Saffron-robed Priests at Angkor Wat Stroll the Ruins of a Vanished Kingdom

Mysterious Khmers, ancestors of modern Cambodians, created this fabulous temple complex while Europe was raising its Gothic cathedrals.

BRACKMANN BY GILBERT M. GROSVENOR, NATIONAL GEOGRAPHIC STAFF © N.G.S.

The pillared galleries around the temple could enclose two Canterbury Cathedrals. These Buddhist monks, who dwell near by, traverse a boulevard-sized causeway. Massive towers, the highest soaring 200 feet, crown the empty structure like lotus blossoms.

"This city is entirely built on foundations in the salt water. . . . The houses are all of wood, placed on great piles to raise them high up. When the tide rises the women go in boats through the city selling provisions and necessaries."

More than four centuries later, Judy Huggins sat on the *Yankee*'s foreyard and dictated this about Brunei Town:

"As you come around the bend, you see the kampong, a whole thatched village on stilts. There are some, women especially, living in these houses who have never been ashore in all their lives."

But some changes have been made. Galvanized roofs stand out today amid the thatch, and nearly every house has a radio aerial. The watery streets now swarm not with women in dugouts, but with men in outboard motorboats zipping along at 30 miles an hour, miraculously avoiding collision.

His Highness The Sultan Sir Omar Ali Saifuddin, K.C.M.G., is building a modern town on one shore of the river—houses, public buildings, wharves, and all (page 784). Nearing completion is one of the finest mosques in all Islam. Its onion domes and tall minarets already dominate the town.

Borneo Town Boasts Milk Bar

The money comes from oil revenues of $30,000,000 a year—for a country with only 75,000 people. Near-by fields in Seria are among the largest in the British Commonwealth; they produce 105,000 barrels of oil a day from 305 wells. Only 30 of those wells have to be pumped; the others flow strongly from natural pressure.

"None of us expected to find anything like this out here," dictated Judy of the new town that oil built. "There's a hotel which just opened two days ago. And a milk bar.

"And can you hear the Chinese music? It's coming from a little store near the waterfront."

One day we chartered a bus to visit the oilfields of Seria. We traveled over good jungle roads, then on a river ferry, and finally ran for 20 miles on a hard sand beach.

Seria, we found, is a world of its own. We inspected the derricks and processing plant of the Brunei Shell Petroleum Company Limited, and marveled at a commissary stocked with frozen foods and even fresh Australian lettuce. Inspecting the company's luxurious hotel and club, one of our wags dubbed it the "Seria-Hilton."

Squalls Fill Dinghy With Bath Water

Crossing the South China Sea toward Bangkok, we kept well to the south. Typhoons grow likelier the farther north you cross. While *Yankee* does not fear these savage storms, she never willingly heads into their paths.

We hit so many sharp squalls we lost count. A dark cloud rises suddenly to leeward; it rushes upon the ship, it swirls and writhes, and as it nears, it roars like a demon (page 790). The first great breath from its belly strikes the ship. *Yankee* staggers and reels off before the blast. "Down t'gallant!" Feet patter on the deck, the young men swarm aloft; the girls take over at the wheel—they do not have to go into the rigging.

Rain, unbelievable rain, sweeps across the decks in a wall of water. Oilskins flap, a sou'wester goes swirling into the scud, the t'gallant thunders as the men fist it to the yard. If this is a bad one, other sails follow the topmost one into temporary exile, and *Yankee* swings up along the edge of the wind under lower fore-and-afters—the main, and main and forestaysails, and maybe a jib.

But most of these squalls are braggarts, full of sound and fury and nothing much else but sweet water, which fills the dinghy on deck and makes the finest kind of bath. So we carry on after we have tested the weight of the squall. The taffrail log reads 12 knots for a time, and then the sun is out and the decks are steaming, and we are back on course under full sail once more.

Sometimes we meet other things in the South China Sea. We were below, in the captain's cabin aft.

"Skipper," called a voice from the deck, "there's a waterspout making up off to starboard."

Black Thai Mother and Son: a Portrait of Serenity in Laos

Members of a tribe once scattered over Tonkin, many Black Thai people fled the Communist advance in Viet Nam and took refuge among their neighbors, the Lao. Proud and industrious, they built new homes on land donated by the Lao Government. This woman wears the dark blouse and skirt that earned her tribe its name. Hair coiled atop her head proclaims a married woman. Tattooed charms decorate her hands.

KODACHROME BY CHRISTOPHER ENGLISH © NATIONAL GEOGRAPHIC SOCIETY

We hurried topside. Out of a heavy cloud perhaps 1,000 feet above the sea, a long thin dagger of whirling mist pointed straight downward. It grew as we watched it.

Skipper gave orders: "Kick over both engines! Hard astarboard! All hands—and bring your cameras!"

As we approached, we doused some sail and closed the hatches. Such precautions were in order, for waterspouts are unpredictable things. Some have been known to sink seagoing vessels; others have dissolved completely when meeting even a frail craft, as though they themselves were smashed.

A spout develops in an air current, often over a patch of warm sea. Warm air expands and rises, cooler air below rushes in to replace it. A whirling motion begins.

Vapors in the twisting column condense and unite with turbulent water from the sea. The result is a pillar writhing and whirling as high as 2,000 feet into the dark sky.

Waterspouts can make the surface beneath them convex or concave; they can measure a city block in diameter—or a few feet. They can contain a great deal of water—or be as insubstantial as wind and cloud.

We charged toward the waterspout for half an hour, while at least half the crew took pictures. Both curiosity and tension mounted as we drew closer.

We were perhaps 200 yards away from this dark phenomenon when we heard it hissing. Its column writhed, and we could see its pale, hollow core. That was enough for us. There is no use fooling with a husky and mysterious customer. *Yankee* turned away, and presently the spout disappeared.

Bangkok Turns Tars to Tourists

As we approached the shallow bar off Bangkok's river, Menam Chao Phraya, we found ourselves part of a variegated traffic moving 40 miles upriver toward the capital of Thai-

WALTER MEAYERS EDWARDS, NATIONAL GEOGRAPHIC STAFF

Teak Carrier Drops Floating Cargo in Singapore Roadstead

Agile crewmen and stevedores keep a slippery footing while lashing the logs into rafts. Ladderlike framework at the ship's bow braces the bowsprit and gives crewmen a platform from which to set the jib. Black "bird cage" device next to the foremast announces the ship is at anchor.

land (page 788). Here were ocean-going steamers from the great ports of the world, and lighters laden deep with teak and rice. Sampans carrying local cargoes and passengers plodded past little wood-burning steamers from upcountry.

Like the shipping, our young people kept on the move, and while we Johnsons stayed in Bangkok to see to some repairs on the brigantine, they scattered all over the countryside.

Somewhere Chris and Alice found an opium den. From a narrow alleyway, they entered a murky central chamber. This room was divided into cubicles, each equipped with a few low benches and porcelain pillows.

"The place was hushed, hardly a sound," Alice related. "We could smell the opium—a scent like burning wood. One man offered Chris a smoke."

"Did you accept?" we asked in some alarm.

"I wanted to," Chris laughed, "but my doctor wouldn't let me!"

Judy flew to Hong Kong and bought, for $30, a gold brocade dress worth far more in the States. Put went to Japan. Peter Barney took a plane to Cambodia and almost didn't get back for sailing time.

Peter went especially to see the tremendous temple ruins of Angkor, built in the 12th century by the Khmer people and lost to the world for hundreds of years after the Khmer civilization declined (page 792).

In the early 1860's a French naturalist glowingly described the amazing ruins of gray sandstone all but buried in rank jungle. The French, who held Cambodia until 1953, brought Angkor Wat back into the light, and thousands of people have since viewed it.

We have been there many times. Angkor's five central stone towers rise in splendid proportions within a rectangle of surrounding galleries and buildings, the whole enclosed by a huge moat. There are bas-reliefs of dancers, kings, slaves, armies, and characters from Hindu mythology.

Writhing roots of jungle trees have split walls, weather has taken a toll, commercialism discolors the mood. Yet Angkor rises above all, and here travelers from every land see beauty and absorb the sense of centuries past.

Peter Pedals While Driver Lolls

Peter Barney drove from the airport to the ruins in a pedicab, a three-wheeled taxi pedaled languidly by its operator. Trying to photograph a group of monkeys, he somehow lost sense of the passage of time, and realized he would never make it back to the plane in time unless he did something drastic.

He did something drastic: He replaced the slow-moving driver and pedaled the vehicle back himself at a furious clip. The driver lolled in the passenger compartment puffing a cigar. Peter was a sensation, we heard, tearing down the road in a cloud of dust, scattering Cambodians like chickens, arriving so ex-

Savory Odors Attract Hungry *Yankee* Sailors

Chef Victor Nelson (left), a dental student, went to cooking school to qualify for his *Yankee* job. He installed so many hooks and blocks that a crew member predicted, "He'll make a great orthodontist." Margaret Riley, his helper, tempts two *Yankee* hands with stew in an open pot.

"All hands!" As the wind pipes up, the crew douses the mainsail. Peter Bloomer steps lively at left; Dr. Alice Strahan, the ship's physician, grapples for a fistful of canvas, and Electa Johnson ducks under the boom.

A balanced meal stands steady on the mess table. Mounted on gimbals with counterweights, the table stays level in rolling seas and never spills soup. Diners blur in this tabletop time exposure while crockery and water glasses register as sharp images.

KODACHROME (BELOW) AND SUPER ANSCOCHROMES BY THOMAS J. ABERCROMBIE, NATIONAL GEOGRAPHIC STAFF

hausted he fell off the pedicab. But he made the plane.

In Phnom Penh, capital of Cambodia, Chris and Alice visited the "Street of the Dentists."

"Each dentist had a mat spread out on the sidewalk and a display case where you could choose the sort of tooth you wanted—plain gold, gold with a heart-shaped inlay, or a tooth of red, green, or black," Chris reported.

"While we watched, a young man came and sat down before an idle dentist. The dentist took a gold cap, tried it, worked it with pliers, heated the gold on his burner and pounded it on a tiny anvil.

"In about 30 minutes, it fitted. The customer looked at himself in a mirror—and smiled at us. He was really proud."

Laos Lady Bathes Under Parasol

A few Yankees flew to Laos—to Vientiane, the administrative capital, where water buffaloes draw carts over rutted streets, and to the royal capital of Luang Prabang in the foothills of 7,000-foot-high mountains. Little Laos was then at peace.

"It was a land of parasols," they told us. "Not only did women walk under them; they washed clothes in the shade of orange paper parasols stuck into the mud of the river bank.

"One very lovely lady was taking a bath in the river. Sure enough, she held a parasol in one hand!"

While our crew enjoyed these adventures, we stuck with *Yankee* in Bangkok to watch the East Asiatic Company's artisans finish the work we had ordered. We did take time off one day to see the incredible gold Buddha in the temple called Wat Trimit (page 787).

For years beyond recall, guardians of this image believed they had a fine 15-foot plaster statue. Then they tried to move it, and it proved so heavy it broke the hoisting machinery and toppled over.

Through a crack in the plaster a priest noticed a dull gleam. The Buddha was made of gold! At some unrecorded date, plaster had been used to disguise it, probably when an invasion threatened. All who knew the secret must have died.

Across the Sea to Singapore

Gradually the crew came homing to *Yankee*. We had a final dinner ashore. It had 11 courses, and some of the items were interesting. We recall, for example, a course billed as "100-year-old eggs," although a waiter confided that they had been buried only 21 days

THOMAS J. ABERCROMBIE, NATIONAL GEOGRAPHIC SOCIETY

Barber for the voyage, Judy Huggins trims Captain Johnson's locks. Demand for her tonsorial skill, she found, "somehow always reached a peak just before we hit port."

Lay Aloft! Yankees Scramble Up a Spider's Web of Ratlines

Rising winds and racing clouds send crewmen scurrying to shorten sail. This view from the foot of the mainmast shows the fore-topsail (left), fishermen staysail, main staysail, and mainsail, only a part of *Yankee*'s enormous suit of canvas and synthetic fiber sails. Baggywrinkle, sausagelike bundles of hemp on steel shrouds and stays, protects the sails from chafe.

A Coaster With a Junk's Foresail Alerts All *Yankee* Hands, With Cameras

"She was beating to windward off the east coast of Malaya," says Captain Johnson. "With her Western hull and Eastern sail, she seemed to symbolize the changing Orient. Her foresail appeared to have been mended a hundred times, but the mainsail was brand new."

Spotted moray comes aboard as an unwilling visitor. Peter Barney, whose favorite pastime was spearfishing, examines the large, depressible fangs of the dangerous, five-foot eel he took in the Indian Ocean.

"He tied an overhand knot in his tail," said Barney, "and moved the knot up his body to dislodge the spear, but his trick didn't work."

Gymnothorax funagiensis is often found near submerged wrecks.

to give them their gray-black antique color.

And there were ginger, shark's-fin soup, fried crab claws, Chinese omelet, crisp roasted duck-skin, bird's-nest soup with pigeon eggs, litchi nuts, and baked Alaska. Next morning, as we sailed for Singapore, the crew still had a glassy look.

Winging across the Gulf of Siam, we were rarely alone. Ponderous junks and small sailing craft of all kinds swarm in these waters. They are careless about showing lights at night. Sometimes we would sense a dark shape ahead and turn on our searchlight. Startled Oriental faces would stare for a moment, then disappear as their owners hid from the glare.

On the eighth evening we raised the lights of Singapore, and had the temerity to pick our way through the teeming inner harbor in darkness. We waited out the night for customs clearance. From our anchorage we looked out next morning at a modern Western city.

Singapore, less populous and more leisurely these days than Hong Kong, is really two cities. One is the city of the British, and that is greatly changed since before the war.

At the Swimming Club every English child had an amah, or Chinese nurse, in attendance in the old days. No proper Englishman drove his own car; a syce piloted the vehicle for him through the swarming rickshas and scurrying pedestrians.

These good people have gone on to other callings these days, and so has the punkah walla, the boy who pulled the string that moved the overhead fan that cooled the family dining table. He was a lot quieter than the electric fans and air conditioning that have replaced him.

Sidewalks Crowded for Evening Meal

But the Chinese city is unchanged. It is a world of shops in tiny cross streets: charcoal shops, lantern shops, a coffin maker's, a noodle factory, and drug stores with antlers and all sorts of herbs on display.

Here men sit in groups on the sidewalk, gambling intently, oblivious to pedestrians picking their way around them. In the last hour before dark this part of town has its evening meal. So many eat from the little restaurant carts on the sidewalks, you wonder who's left to dine at home.

To get ashore, you call a sampan sculled by a wiry Chinese, usually an old man. He wears only floppy black shorts and looks underfed, but he handles his water taxi skillfully and comes alongside without putting a scratch on the new paint we put on in Bangkok.

Singapore is an important commercial crossroads, little damaged during the war. The strongest British defenses faced seaward and the Japanese crept up from behind, taking the port almost without firing a heavy gun.

Today, from gray stone office buildings and stern banking establishments, men of commerce look out at the shipping, sending the grimy little coastal steamers to all the ports of Southeast Asia and the huge freighters to the far corners of the globe.

Yankee's New Owner Joins the Ship

Longing for more tropic isles, the *Yankee* youngsters refused to be impressed. "Looks like a British Chicago," they said—and we sailed away in dead of night for Djakarta, capital of the island republic of Indonesia.

Once again *Yankee* crossed the Equator. To the delight of the crew, we had a new "polliwog" aboard—one who had never crossed the line before. It was the brigantine's future owner, veteran yachtsman Reed Whitney, of Nantucket, who joined us in Singapore to learn how we handled her.

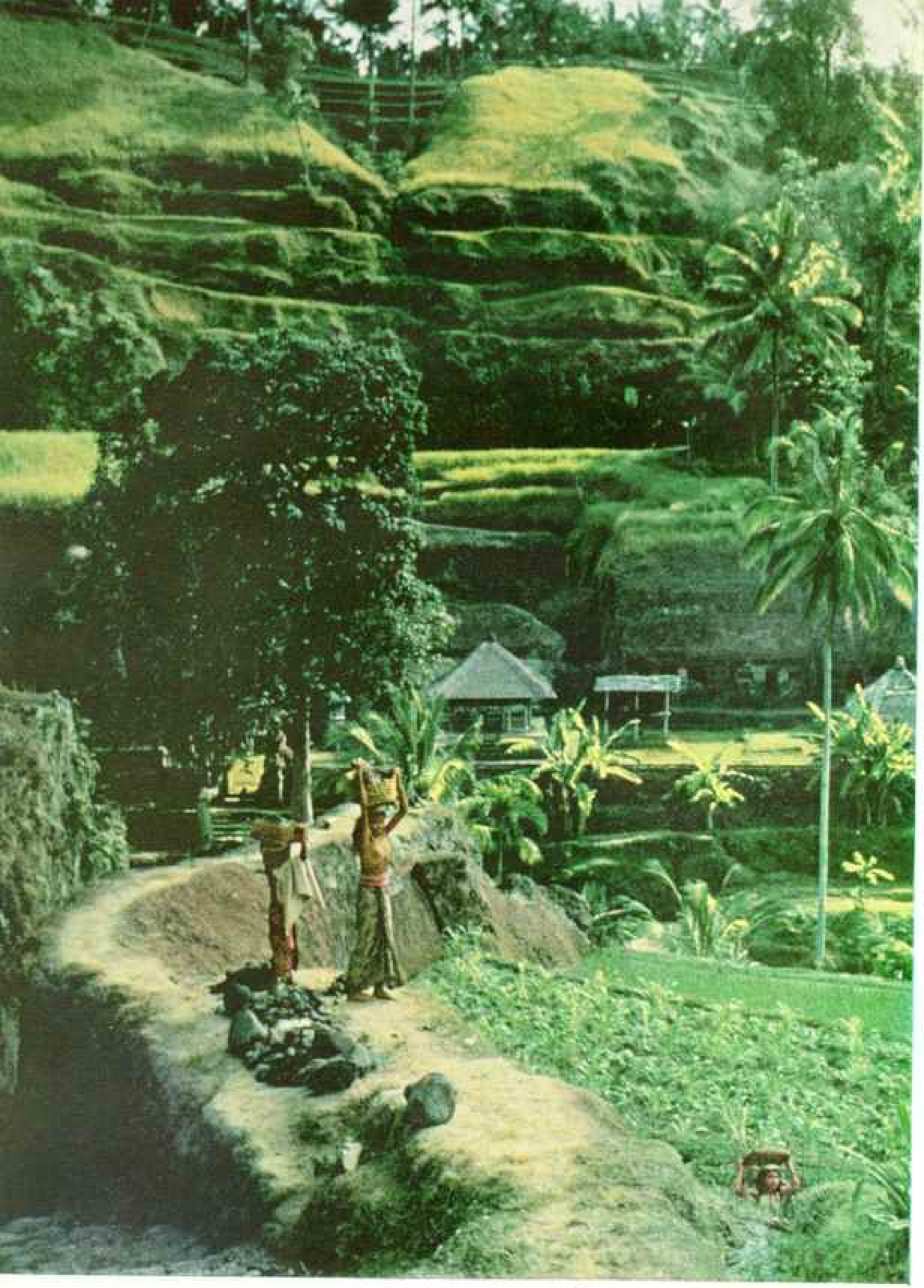
For him, poor fellow, the crew devised especially fiendish tortures. His chest was shaved and then lathered with a mixture of vinegar, flour, garlic salt, molasses, ground trade tobacco, onion and potato peel, cheese, maple syrup, engine oil and grease, mustard, and peanut butter.

With all this coating on him he had to climb into the rigging and put on his shirt while "Davy Jones" made passes at him with a bush knife. He took it like a man; aside from his sufferings, the passage to Djakarta, undertaken only to get clearance for Bali, was uneventful.

We stayed in the capital only long enough to sample a few of the changes that have come about since World War II ended and the Dutch yielded to the Indonesians the city they knew as Batavia.*

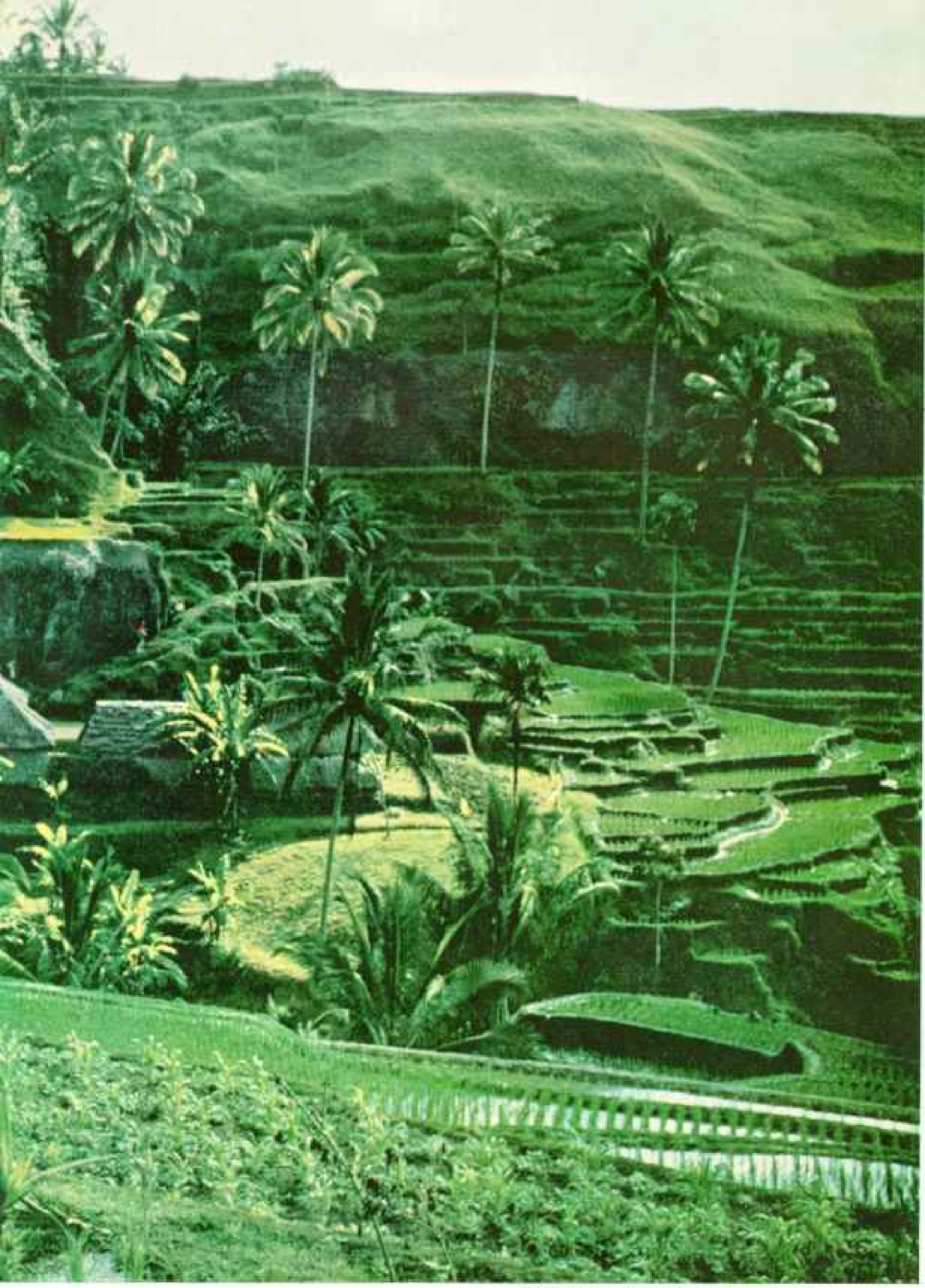
We remembered Batavia as an orderly, clean, somewhat prosaic port. We found Djakarta a city going Oriental with a vengeance—colorful, untidy, exuberant with the comings and goings of 2,000,000 new people

* Beverley M. Bowie of the National Geographic staff toured the infant republic to report its growth—and growing pains—in "This Young Giant, Indonesia," September, 1955.



804 **Rice Terraces Shingle a Balinese Hillside**

Islanders call the place Gunung Kawi—Poet's Mountain. Carved in its verdant flanks lie nine



KODACHROME BY W. L. HYDEN © NATIONAL GEOGRAPHIC SOCIETY

tombs: ancient links with the Hindu past. Farmers cultivate every square inch in an effort to feed the island's exploding population. Some plots are so small that they hold only four rice plants each.

who have swarmed in from all parts of Indonesia since the Dutch dropped the reins.

Ramshackle suburbs have sprung up along the city's edges in every direction. Traffic has become a nightmare of horns, bells, and squealing brakes. Prices have soared. The remaining Dutch live quiet lives in their own suburbs and clubs.

We finished our business, made sail, and slipped into the Java Sea. Eastward we coasted, and, rounding the northeast corner of Bali, ran south and let the anchor go in the clean little port of Benoa.

Three Bags Make a Headload

Bali! Last of our Pacific island paradises, land of temple gongs and temple dancers, a place of waving palms and paddy fields, of handsome people and smiling faces. Exy's eyes would mist again when our chain came aboard and *Yankee* sailed away for the Indian Ocean and home.

The ship's papers suited the civil authorities, but the Indonesian Army couldn't understand why we wanted to come ashore.

"They have everything they need on board," reported the inspecting lieutenant to his superiors, "so why should they wish to land?" We were just the Bali enthusiasts to tell them why! Besides, we did need provisions—fresh meat, fresh fruit, and other things.

The army turned us loose on that delightful island, and we Johnsons attended to our special chores. Exy hunted up three Balinese women to do our ship's laundry—a dinghyfull. Each woman balanced a bag of clothing on her head, and on top of it another. Then they said, "*Satu lagi*"—"one more." We piled a third laundry bag on high and watched the procession depart down the beach.

In the past generation the Bali population has exploded from 1,200,000 persons to some two million. Instead of having a food surplus, farmers now till marginal land. Yet we found the people still practicing hundreds of gay little rituals, still close to the land and to their beloved rice fields.

Provisioning the ship was a minor Balinese adventure. Exy entered the busy market in the town of Denpasar; four little girls crowded around asking for the job of carrying her purchases.

Noma was her choice—pert, quick, bright-eyed, yet remarkably sturdy. She instantly took the situation in hand, leading Exy to the kiosks, where they bought a big bowl-shaped basket, just right for carrying on the head.

Next Noma led Exy to the best stands on different levels of the stone-floored market. The basket soon filled up. It takes at least 200 smooth-skinned purple mangosteens for the *Yankee*'s hungry complement. Chickens and pigs are bought alive in Bali. With Noma's help Exy managed to describe in Malay the way the meat was to be dressed. Eventually, Exy and Noma had to get a pony cart.

Buz Fawcett, one of our Yankees, called Balinese cooking a "culinary hotfoot." He should know: He spent several days sharing the life of an island family.

In Balinese fashion, the home had several separate structures instead of rooms. Buz watched while his hosts built him a thatched palm-leaf hut. He breakfasted on duck eggs and coconut and went eel-trapping in rice fields (opposite).

To catch small edible freshwater eels, a Balinese farmer baits basketwork traps with an evil-smelling mixture of squashed worms and crushed leaves, and sets the traps in the water. Next morning he takes three or four eels from each of two dozen traps.

After he has given them a minimum cleaning, his wife cooks them on glowing embers. "Then you eat them whole," said Buz. "They take a little chewing, but they're really good."

Fire Frees Balinese Soul

Now the crew assembled from all parts of the island for one of the famed sights of Bali, a cremation, the largest in years. It would take place at Pliatan, a village famed for its dancers.

The Balinese custom is to bury the dead of lesser families until such time as a nobleman dies; then all the dead are exhumed and cremated in one large ceremony. To the Balinese, the body is only a shell which houses the soul. Cremation is thought to release the soul; thus it is a happy event.

For weeks the people of Pliatan had been working to build the great towers in which the bodies would be carried, the 40-foot-high bamboo ramps that led up to the towers, the splendid hollow wooden bulls in which the bodies would be burned, the fancy pavilions to shelter the bulls. Everything was bright with color, gilt, and mirrors.

The bodies were wrapped and ceremoniously carried to a special pavilion inside Pliatan's great temple enclosure. Presiding was a high

(*Continued on page 815*)

Balinese Eel Hunters Work Their Trap Line

Farmer and daughter gather the night's catch from bottle-shaped traps submerged in rice fields.

Slippery harvest, destined for the dining table, spills onto a leafy creel.

A forest of hands writhes and ripples in a torchlit *kerjuk*, or Balinese monkey dance. The 150-man chorus plays the part of an army of monkeys enlisted to rescue the wife of the god-king Rama from a demon. Flickering shadows, eerie chants, and the performers' antic movements almost convinced *Yankee* spectators that they had seen animals masquerading as men.

Drum, Flute, and Strings Signal a Balinese Dance

The orchestra, called a gamelan, draws villagers to a performance requested for the Johnsons by an old friend, Tjokorde Agung, outside his ornate home, shown on the page opposite. To Judy Huggins the music sounded "tinkly and sad . . . like the playing of a waterfall." The young girl dances the traditional *legong*.

Graceful gestures of a legong beauty take the place of words.

Next Two Pages:

Swaying towers bearing the dead ride a sea of shoulders during a cremation ceremony. Balinese often delay the rites for years and celebrate the release of souls in one joyous festival. To elude evil spirits, the bearers speed these wood-and-paper skyscrapers around a corner. Riders hold precarious perches.

ELDER BRECCOMBRIDGE BY THOMAS J. ABERCROMBIE, NATIONAL GEOGRAPHIC STAFF © N.G.S.

Like a glowing Chinese character, the moon traces its path in a time exposure made from the *Yankee*'s heaving deck. A crew member, standing the midwatch, strikes a light in the lee of the forecastle. Another writes in the log.

priest; he looked just as a high priest should.

In Bali a high priest is always old, thin, leathery, gentle looking. His garments are always white, and he sits on the highest pavilion of the temple and rings a high-pitched bell for hours at a time in a monotonous unchanging rhythm.

For several days small processions occasionally came down the road. We caught glimpses of ceremonies through temple gates. Pliatan's visitors crowded around little stands to buy fruits, peanuts, bright-colored drinks, and spicy mixtures—small servings wrapped in a green leaf in exchange for a copper coin. At night the little stands sprouted brightly flickering lights and the crowds gathered to watch the finest dancing.

Cremation Tower Nearly Topples

On the day of the cremation, excitement reached a high pitch. Most of us were up before breakfast.

The main procession started. A tower 80 feet tall was borne on the shoulders of 150 men closely spaced under a latticework of strong bamboo. Halfway to the top rode the high priest. Important nobles rode on the platform at the base.

Bulls, in gaudy pavilions, preceded the tower. Gorgeous snakeheads, creatures from mythology, moved under a fancy canopy, their long cloth bodies stretching back over the shoulders of marching men.

Periodically they gave the great tower a quick turn to throw off pursuing demons. Once, by mistake, 40 bearers on one side staggered into a deep ditch. The structure swayed precariously. The whole crowd gasped. But a hundred other bearers steadied the burden, and the tower moved down the hill. A tide of people followed the towers to the cremation grounds (page 812).

We Yankees found places in the crowd. Some of us climbed carved gates and sat on crumbling walls to look squarely at the two largest black and gold bulls below on the highest tower. Irving and Bill Newton climbed a tall banyan tree to a tiny roofed treehouse; their perch was also the shelter for wooden gongs.

"The first time the gongs were struck," Irving reported, "Bill almost fell out of the tree."

We watched as the bodies were carried down, placed inside the bulls, blessed by the priest. Then fire was touched to the decorative tinder. In an astonishingly short time, flames swept up, consuming the bulls and pavilions.

We spent two and a half weeks in Bali and mourned the passing of each day. We saw ducks walking in single file, following a child with a pole. We heard the unforgettable music of a gamelan, the Balinese orchestra. And we saw the exciting *ketjak*, the monkey dance (page 808).

The ketjak comes straight out of the Ramayana and tells the story of the monkey army that came at the king's command and rescued his beloved from the forces of evil. The men dancers sit in concentric circles in the firelight, their hands and arms writhing.

"Aaaaaaaaaaaaaaaah UH!" they chant, rising and jumping.

"Chuk!" sputters one side of the ring, and "Chuk!" comes the answer from the other. "Chuk! Chuk!" The cadence quickens, the antiphony never breaks. "Chuk-chuk-chuk-chukchukchukchukchukchuk!"

The ketjak ends, the dancers disperse. You are irrationally surprised to find them men; you had actually almost come to believe them monkeys, so perfect is the illusion.

The famed Belgian artist Adrien-Jean Le Mayeur and his beautiful Balinese wife Pollok invited our entire crew to their home at Sanur for a swim. Theo Meier, Swiss artist, another old friend of the *Yankee*, spent days showing us his favorite parts of the island.

Yankee Heads for Home

Then one day, with hearts of stone, we realized our time was up. Tjokorde Agung, whom we had known many years, invited us to a farewell feast. Nothing could have been more beautiful than the long banquet in the glow of the coconut lamps, and nothing more wonderful than the food and the final honor paid us: a *legong* performed by the beautiful young girls of Bali with the gamelan music singing under the stars.

But we could not be happy, and one by one we quietly thanked Tjokorde and drifted away toward the quiet water, where *Yankee* lay tugging at her chain.

"I understand," said Tjokorde, waving the dancers to cease.

"For a Balinese to leave Bali forever is death itself, and so even for a visitor the parting must make a wound. But I am happy that Bali was your last island of the trade winds. Even a wound from Bali is better than a caress from any other place on earth."

"Miniature people" can be much more than playthings for little girls, as many a collector has discovered

The World in Dolls

By SAMUEL F. PRYOR

Vice President and Assistant to the President, Pan American World Airways

With photographs by KATHLEEN REVIS, National Geographic Staff

ONE OF THE GREATEST JOYS of Christmas morning is finding a much-wanted doll under the tinsel-decked tree. I ought to know. There are four or five under my tree every Christmas; it gives me a thrill to get them, even though I am a grown man and a former Marine.

You see, I collect dolls.

Of course, I expect—and I get—a certain amount of gentle derision from friends when they first hear of my hobby. And I will admit that the humor in remarks about "guys and dolls" has worn a little thin over the years. But many a friend who comes to jest stays to admire, and ends up captivated by the 2,500 small people in my collection.

Many men, in fact, collect dolls. There are a number of organizations of collectors in the United States, and their membership lists are sprinkled with male names. Guy Mollet, former Premier of France, has a collection of dolls. Eugene Field, the poet, collected them. Music critic Deems Taylor keeps a doll family.

I know of a British admiral who always has a few dolls in his ship's quarters, picked up for his collection during a cruise. A former Greek Ambassador to the United States, a United States Senator, a Government scientist—all find pleasure in this absorbing hobby.

Let me hasten to say that I'm not as wrapped up in dolls as some people have been. Princess Augusta of Saxe-Gotha, for example, exposed herself to ridicule because she paid more attention to a doll than she did to her royal dignity. And the Duchess of Marlborough thought so highly of her friend William Congreve, the dramatist, that she had a life-sized doll made in his image after his death in 1729.

It was exact—the story goes—even to a leg sore that had afflicted him during his lifetime. What's more, the duchess paid a doctor to come in periodically to dress the doll's wound.

With Twinkling Eye and Infectious Grin, Tom the Clown Captivates a Young Friend

"Dolls speak a universal language," says the author, collector of some 2,500 dolls from 84 nations. Here Mr. Pryor's granddaughter, Robin Haws, and her jovial playmate return smile for smile as she prepares to comb his hair.

Out of vanished imperial Russia come gem-studded diadem, gossamer veil, and golden braids. The 15-inch doll models a court costume worn at dances in the tsar's Winter Palace.

As another point in arguing a man's right to own dolls: I believe it was probably a man in prehistoric times who created the world's first doll. Most likely he used it as a magical idol or talisman in obeisance to whatever gods he worshiped. He designed it to please the gods as modern man designs his to please little girls. And doll manufacture in the United States—today a $130,000,000-a-year industry—is run mostly by men.

Author Inherits Friend's Collection

Having accounted for man's place in the doll world, I will now admit that my own interest in it was sparked by a woman. She was Mrs. Ann M. Archibald, an Assistant Vice President of Pan American World Airways in Washington, D. C. Her apartment was lined with made-to-order glass cases in which she displayed 300 dolls from foreign lands.

For years, I seldom returned from a trip without bringing a doll for Mrs. Archibald. She often laughingly said I would get them back in her will. In 1953 Mrs. Archibald died. She left me her entire collection.

Mrs. Pryor and I were overwhelmed when crate after crate arrived at our home in Greenwich, Connecticut. We suddenly found ourselves playing host to a glittering international set—Siamese ballet dancers, Japanese geisha girls, Indian maharajas, Chinese coolies, Hungarian gypsies, Peruvian Indians, Russian nobility, and so on—all in miniature.

We turned our recreation room over to them, and they've lived there ever since.

As I studied them, I realized how accurately they represented man's customs and cultures on a Lilliputian scale. I began to dream of building a collection to represent every country in the world. On our rapidly shrinking planet, the interchange of travelers and ideas is wiping out many of the differences between nations. Whole regions in the East, for example, are beginning to adopt Western dress. One day, perhaps, costumes now typical of some countries will be found only on

Dolls Sit Down to Tea With Mrs. Pryor

Visitors to the author's home in Greenwich, Connecticut, often take tea among unblinking delegates from every corner of the earth.

Traveling abroad as an executive of an international airline, Mr. Pryor frequently observes the animosities that divide the family of nations. At home he finds relaxation in arranging his dolls in friendly situations.

"In my house," he says, "Arab and Israeli rub elbows; mainland Chinese and American all but speak."

Here a Polish tea-cozy doll (right) and a mannequin with German head and American body join Mrs. Pryor at the tea table.

Wooden Actors From Thailand Peer at the Author From a Trunk

Inheriting a friend's doll collection in 1953, Mr. Pryor began a search that has carried him from auction rooms in London to crowded bazaars in Thailand and India.

These puppets turned up in Bangkok's "Thieves Market." Entering a shop, Mr. Pryor explained his mission in sign language. Beckoning with an air of mystery, the proprietor led the way up three flights of rickety stairs to a storeroom. There the troupe lay packed in a teakwood trunk.

A Japanese Child Once Looked to This Doll for Protection

Some 350 years ago the 10-inch figure appeared in the home of a boy born in Kamakura. Immediately the spirits of sickness and evil that might threaten the infant's life transferred to the doll's flat paper body—or so the parents believed. When his charge reached the age of 15, the doll won an honored place in the family shrine.

dolls and in museums. The collection I envisioned would, I felt, attract American children and help them to understand the folkways of foreign peoples.

Dolls Assume Human Traits

Some collectors are specialists. They limit their interest to antique or modern dolls, or those representing a particular country. Others collect dolls that are made of unusual materials—you can find them made of beeswax, bread crumbs, bark, or even ducks' bills, as well as china and plastic and gingerbread. Still others collect storybook characters, or historic or religious figures.

My collection, I guess you'd say, is broad-scale international. Mrs. Archibald's legacy now has grown to more than 2,500 dolls, tracing their ancestry back through the centuries and depicting every part of the globe.

I like to think of dolls as little people of the world. Since mine come from all walks of life, no occupation or face is strange to me. When I meet someone new, I am almost invariably reminded of a doll resembling him in my collection. Each doll has a personality of its own, and seems, at times, to take on a human quality.

I mentioned this once to a woman who owns a doll store, and she replied: "It's when they bow and say good night to you that you should see a psychiatrist." She seemed serious

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about it, too. And it is a fact that sometimes I feel sure that a doll I left in one part of the room is in a different spot when I next see it. I often wonder what really goes on in there when I'm away.

"Thieves Market" Yields Ivory Prize

My globe-hopping job with an international airline is ideal for my hobby. Whether it's an antique shop on Third Avenue in New York or a West Indies market place, I'm always on the lookout for unusual dolls. I've startled a good many foreign officials and airline representatives abroad with the remark:

"Well, now that our business is done, let's go dig up some dolls." I'm sometimes not

Challenging Death With Sword and Armor, a Japanese Samurai Awaits a Call to War

For nearly seven centuries an elite class of warriors called samurai held sway in Japan. Pledged to an unwritten code of honor, a samurai fought for his lord with fanatical loyalty. Forgetful of self, he defied death, even welcomed it. Often, in defeat, he took his own life.

This doll, one of the finest in the Pryor collection, exemplifies the pride and dignity of the Oriental knight. Expecting to play the hero, he dresses as one. In rich brocade, he fingers his *saihai*, a baton of command. His equipment includes the traditional two swords and a suit of armor fashioned of leather, metal plates, and silken tassels. Scattered at his feet lie field boots, camp slippers, horned helmet, and fan, all normally carried in the war chest.

Embossed helmet hides a head of real hair. Clean-shaven chin reflects the samurai's fastidious custom; he considered it a disgrace to go into battle unkempt in person or improperly dressed.

sure whether they are nonplused or relieved when I explain what kind of dolls I mean.

I bought one of my prize specimens in Bangkok. I was a guest at a dinner in the home of the U. S. Ambassador there when my hostess said to me: "I understand you collect dolls, Mr. Pryor. I saw an interesting ivory one in the 'Thieves Market' the other day."

Now, the Thieves Market in Bangkok is a typical oriental bazaar, with colorful, open-fronted shops jam-packed together in a section of town off Yawaraj Road.

"Which shop?" I asked.

"It was in a shop on a corner, I think," she said. "One run by a Chinese storekeeper."

The next day I hailed a cab. "Take me to every corner store in the Thieves Market," I told the driver. He looked at me incredulously, shrugged, and off we went.

Hours later I found the doll. It was exquisitely carved, a little more than a foot tall, with the topknot hairdo and long fingernails of a Siamese youth of noble blood. The shopkeeper told me it was a representation of King Rama I, founder of the Chakkri dynasty and grandfather of the ruler made famous in the book *Anna and the King of Siam*.

Leopard-man Wears Yellow Spots

Friends from around the world have contributed to the collection. Two of my prize exhibits are Korean dolls which President Syngman Rhee presented to Dr. Milton Eisenhower, the President's brother. Dr. Eisenhower donated them to my collection, where more people could see and appreciate them.

We have also groomed a few assistant collectors in our family of five grown children.

My daughter Tay—Mrs. Lowell Thomas, Jr.—had a doll made for us in Afghanistan,

Wardrobe of Wigs Spans the Life of a Kimonoed Japanese

Among Japanese who cling to old-time custom, a woman's hair style reveals her age and station.

By a change of wig, this doll can act the child in flowing tresses (top shelf), the bride with hair arranged in butterfly design (third shelf from top), the matron (second shelf), and the maiden (bottom).

Here, as a young girl, she wears her locks piled high. Red petticoat is reserved for the unmarried.

ALL ROBACHROMES BY NATIONAL GEOGRAPHIC PHOTOGRAPHER KATHLEEN REVIS © N. G. S.

Rollicking Turkish Bandsmen Amuse a Passing Patriarch

A hundred years ago wandering musicians might have been found on any street corner in Constantinople, the modern Istanbul. There with oboe (left), cymbals (center), and drums, they charmed piasters from Arabs in burnooses, veiled harem beauties, Greek merchants, Persian rug dealers, porters, and gypsies. Their world was ruled by the "Sultan of Sultans, King of Kings, Bestower of Crowns upon the Princes of the World, Shadow of God upon Earth. . . ." Their life was ordered by the sweep of boats up the Golden Horn, the swirl of peoples into mosque and bazaar.

Clad in velvet robe and turban, these foot-high modern dolls were made to strengthen the remembrance of costume and custom from the past.

Rabbi and scribe keep the age-old traditions of the Jews. Handmade in Israel, they stand but half a foot high.

My son Lawrence sent back from a trip to Africa a primitively carved image of a man, daubed with yellow spots. The figure is apparently a fetish—a juju symbol of the so-called leopard-men of West Africa, a secret terrorist society. Lawrence got the doll from an innkeeper in the Belgian Congo, swapping a multibladed Swiss penknife for it.

Pryor Dolls Outgrow Their Home

I've had dolls given to me, and paid as much as $400 to buy one. It would be almost impossible for me to set a value on the entire collection, now overcrowding the recreation room. I have a Santa Claus doll—soot covered—stuck in the fireplace, and a parachute jumper hanging from the ceiling. The glass cases lining the room are jammed with exotic little people, and an overflow is mounted on the walls, mirrors, and fixtures of an adjoining powder room.

The collection's size—and the almost weekly visits of school groups to see it—have prompted us to plan a real museum for the dolls. This will be a remodeled barn, with chestnut planking and hand-hewn oak beams nearly a century old, part of an early American homestead in Greenwich.

Written history, of course, does not go back to a time when there were no dolls. The oldest one in my collection is a little four-inch figure of glazed clay, looking exactly like a shrouded Egyptian mummy on a pedestal. It was given to me by Wendell Phillips, the archeologist, who found it in an Egyptian tomb. It dates from about 2000 B.C.

The doll is an Egyptian *ushabti*—a statuette placed in the tomb to perform unpleasant work for the deceased in the other world. This custom is found in many cultures. It grew out of the practice of equipping the tombs of important people with food, clothing, weapons, ornaments, and other items they might need in the afterlife—including horses, servants, and wives. At first, real people were buried along with the deceased; later, dolls were used as substitutes.

The Greeks, like the Egyptians, used dolls not only as grave images but as playthings. Corinthia, a Greek doll in my collection, dates from 146 B.C. She was found in a child's grave in the ruins of Corinth—hence her name.

Made of terra cotta, she stands about eight inches tall and has jointed arms and legs. Since she wears no clothing, I believe she was used in a little girl's age-old game of dressing her dolls.

Equally unclothed—but no child's play-

Old Friends From Africa and Asia Entertain the Author's Daughter

Mrs. Lowell Thomas, Jr., sees in these dolls a reflection of the peoples she and her husband met while exploring northern and central Africa. They described their journey, made in a small, single-engined plane, in "Flight to Adventure," National Geographic, July, 1957.

From Dakar, the black-faced woman at upper left wears four petticoats despite the tropic heat. She chews a limewood stick to keep her teeth clean.

Mrs. Thomas had the doll in her right hand specially made in a part of Afghanistan where strict interpretation of the Koran forbids the fashioning of human images. She explained to the seamstress that she wanted it for the costume only.

Molded from beeswax, Timbuktu man may have been a child's creation. Mrs. Thomas collected the doll in the Soudanese Republic. It appears in her left hand on the page opposite.

thing—is my Chinese "doctor" doll. Fashioned of ivory, the figure measures 10 inches in length and reclines modestly on a carved teakwood couch. Once every highborn Chinese lady possessed such a doll. Custom forbade disrobing for the doctor; instead, the lady or her maid would point out the region of pain on the nude figure, and the physician made his diagnosis without touching his modest patient.

Japan Has Festive Days for Dolls

Probably nowhere in the world is the art of doll making and collecting as highly esteemed as in Japan. Japanese dolls, beautiful works of art, are passed from generation to generation. National attention focuses on two festive days—the Girls' Doll Festival in March and the Boys' Festival in May.

Hawaii has a large Japanese population, and once on a trip to the islands I was invited to one of these celebrations. The dolls belonging to the daughter of the family had been set out in traditional fashion on tiered shelves covered with red cloth.

On the top shelf stood dolls representing an emperor and empress; on the lower tiers court attendants, musicians, and servants were formally arranged. There was also tiny doll furniture of exquisite craftsmanship—such things as an inch-wide bookcase containing 10 volumes of poetry, each page filled with microscopically inscribed verses.

Customarily the family has a feast in front of the doll stand, often inviting friends and relatives. The hospitality rivals that of Occidental open houses during the Christmas holidays.

I have in my collection reproductions of the emperor, empress, and other traditional dolls used in the festivals, each resplendent in court dress, exact down to the tiniest detail. Once, on a visit of foreign students to my home, a young Japanese miss was using them to describe her nation's doll festival when a girl from India exclaimed:

"Why, we have just such a celebration in my home."

On that same visit a pretty blond lass squealed with delight as she spied an equally blond doll. "She is from Finland, see! She is in the dress of our land!" And a petite Israeli girl lifted out a doll quintet and described the motions of their dance to three other students—from Egypt, Iran, and Lebanon.

Mrs. Pryor's favorite in the collection is a

Content Shines From Faces of a Norman Farm Couple

In France's province of plenty, fat cows graze lush pastures, blossoming apple trees promise rich harvests, and tables in thatch-roofed farmhouses groan with an abundance of food.

These lifelike dolls mirror Normandy's good life. Scanning lottery numbers in his newspaper, monsieur seems to have picked a winner. Madame smiles with satisfaction over her knitting.

Stuffed with straw, the dolls stand two feet high in their wooden shoes. Faces are painted on a stocking material.

Jolly Tourist From Germany Salutes a Spanish Señorita

Bundled in shaggy coat, muffler, felt hat, and woolen trousers, the burgomaster appears to have come straight from a winter in the Bavarian Alps, where snow-laden chalets cling to awesome slopes, and skiers risk their lives on the sheerest of inclines.

His willowy companion, in lace mantilla and satin gown, evokes the essence of Spain.

Cigar clamped between rubber lips, the German eyes the world through lensless spectacles. A painted stocking stretched over the molded face simulates skin. Hair is cotton.

Eskimos From Alaska Match the Pictures in a Geography Book

Ethel Washington, an elderly Eskimo woman living in Kotzebue, carved these figures in wood and dressed them in wolf and squirrel fur. The last Kotzebue artist making such sculptures, she now produces but a couple a year.

Here Mrs. Thomas uses the dolls to show her daughter, Anne, what to expect on a forthcoming trip to the Nation's 49th State.

Framed in fur, Eskimo faces register a look of stoic resignation, perhaps the result of winter-long nights beside the Chukchi Sea. The mother carries a baby strapped to her back.

delicate French fashion doll brought to the United States in 1879 by Sally Sturgis Fitch—of the family which helped to found New York's famed Abercrombie & Fitch sporting goods store. Mannequins like these, in the days before fashion magazines, were sent all over Europe and to the United States by Paris dressmakers (page 830).

Costumes designed for these models were meant to be copied in every detail, including coiffures. An advertisement from a New England newspaper in 1733 gives an idea of how these fashion dolls were regarded. It read:

"To *be seen at Mrs.* Hannah Teatts *Mantua-maker at the head of Summer-street, Boston, a Baby dress after the Newest Fashion of Mantues and Night Gowns and every thing belonging to a Dress, lately Arrived in Capt.* White, *from* London, *any Ladies that desire to see it, may either come or send & she will be ready to wait on 'em, if they come to the House it is* Five Shillings, *and if she waits on them it is* Seven Shillings."

So important were these dolls that they were permitted to move about duty free and even cross lines during time of war.

In the Civil War contraband and messages went past Northern road blocks, hidden in dolls cradled in the arms of little girls. Some cotton growing even today in Mississippi traces its lineage to seed smuggled in then as dolls' stuffing.

Marvels That Walk, Talk, and Draw

The majority of dolls throughout most of the past have been figures of women. Infant dolls as playthings were practically unknown before the 1850's. Eyes that could open and close were in use in 1826, and the first speaking doll was patented in 1824. Today we have dolls that can walk, talk, wet, sing nursery rhymes, and even kiss when squeezed. But they have their equals in mechanical dolls of bygone days.

I recently acquired an 18th-century French musical doll which turns her head, flutters her eyelids, heaves her bosom, and strums on a lyre as a hidden music box plucks out a tune. Dolls such as this were the rage in the court of Louis XVI, and craftsmen who made them sometimes reaped fortunes. Some of the miniature robots they produced could draw pictures and even write whole sentences.

One of my dolls is really a department store mannequin. I was walking down New York's Fifth Avenue one day when I saw her in a shop window. She represented a little girl of about eight, her arms thrust upward and her mouth

Face Impassive, a Thai Figurine Speaks With Graceful Limbs

Stylized gestures convey emotion in between-the-scenes ballet of Thailand's epic *Ramakien*. Varying Asian versions of India's *Ramayana* relate the battles of folk-hero Rama to free his abducted wife, aided by monkey warriors (pages 808-9). Pointed ejmulets and trouserlike panung disclose this doll's masculine role. The flame-shaped headdress suggests spires of Buddhist shrines; the costume echoes temple mosaics.

partly open in surprise. I had seen that same instinctive reaction in children when they got a first glimpse of my collection.

Back at the office I told my secretary: "You've got to get me that mannequin."

She did. Some time later Mrs. Eddie Eagan, wife of the former Olympic light-heavyweight boxing champion, saw it. "Why, I know the little girl who posed as the model for that mannequin," she said. Mrs. Eagan arranged for me to meet her, and today Chris Norwood—now 14—comes over frequently on Saturdays to help me dust and care for the dolls.

Lifelike Clown Startles Guests

Dolls can be humorous as well as educational. People who visit my collection get a chuckle out of seeing a devil doll with an impish leer whose forked tail is draped around the bare waist of a dancer from Bali. I have a miss from Brittany, in tight-fitting jeans and floppy shirt worn revealingly open at the neck; beside her stands a Shaker girl—hands folded, eyes downcast, and a high blush on her cheeks in embarrassment for her brazen sister.

And, of course, there is Tom, a four-foot stuffed clown we keep standing before the washbowl in the powder room. Many a visitor has drawn back apologetically after opening the door to find this lifelike figure at his ablutions.

So my little people represent the foibles as well as the customs and cultures of the world. But the collection is not yet quite complete. There are dolls of certain climes and particular pursuits that I still want to add to this perpetual story of mankind in miniature.

I'm thinking, too, of reserving a place in the museum for the doll that most surely will be brought back from the first inhabited planet we reach in space. For if there are Martians, you can be sure there will be Martian dolls.

Chic Parisienne Checks Her Mirror Before a Stroll on the Boulevard

In 1391 several mannequins dressed in the latest French fashion crossed the English Channel as a gift from the Queen of France to the Queen of England. From that day until modern times, dolls carried the creations of French dressmaking around the world. This 16-inch figure, with kid-leather body, ceramic head, and real hair, wears a ribboned silk brocade gown and a straw bonnet fashionable in the late 1870's.

A Belgian Lady's Open-mouthed Astonishment Inspires the Mimic in Robin Haws

PHOTOGRAPHED BY NATIONAL GEOGRAPHIC PHOTOGRAPHER KATHLEEN REGA © N. G. S.

SUPER KRESCHROME (ABOVE) BY MELVILLE BELL GROSVENOR AN

Around the World and the Calendar

The President's Annual Message, illustrated with his own photographs

AS WE NEAR the end of one of the most productive years in the history of the National Geographic Society and look forward to a 1960 of even greater promise, your President welcomes the opportunity of addressing this message to you, the individual member.

Thanks to you, The Society's membership has increased during the year to a new record total of 2,400,000—surely an unprecedented number for a nonprofit organization whose aims are entirely educational and scientific. The National Geographic Society has no paid agents or solicitors; instead it enjoys the loyalty of members who are continually nominating others, thus enabling it to grow and expand its activities.

Whether you reign as a monarch, practice medicine, rear children, or build bridges, you share an interest in geography—the world and its creatures, exploration, discovery—and the wish to increase knowledge and understanding among men. During the past year you gave new gift memberships in our Society

"Welcome to Kyoto!" Say the Smiles of Japanese Children at Nijo Castle

"Herro," shouted the youngsters, unable to pronounce the "l's" in hello. "Herro—goodbye," the author called back—and caught their delight in this happy photograph, taken on his world reconnaissance for the magazine. Below, he surveys ruined Angkor Wat, Cambodia.

with the Geographic

By MELVILLE BELL GROSVENOR
President and Editor

to 187,000 friends and relatives—for Christmas, birthdays, anniversaries, graduations, and other occasions.

You nominated 160,000 others to receive the benefits of membership—the NATIONAL GEOGRAPHIC MAGAZINE and its Atlas Map Supplements, educational books at prepublication prices, the satisfaction of aiding research and exploration, of playing a part in "the increase and diffusion of geographic knowledge."

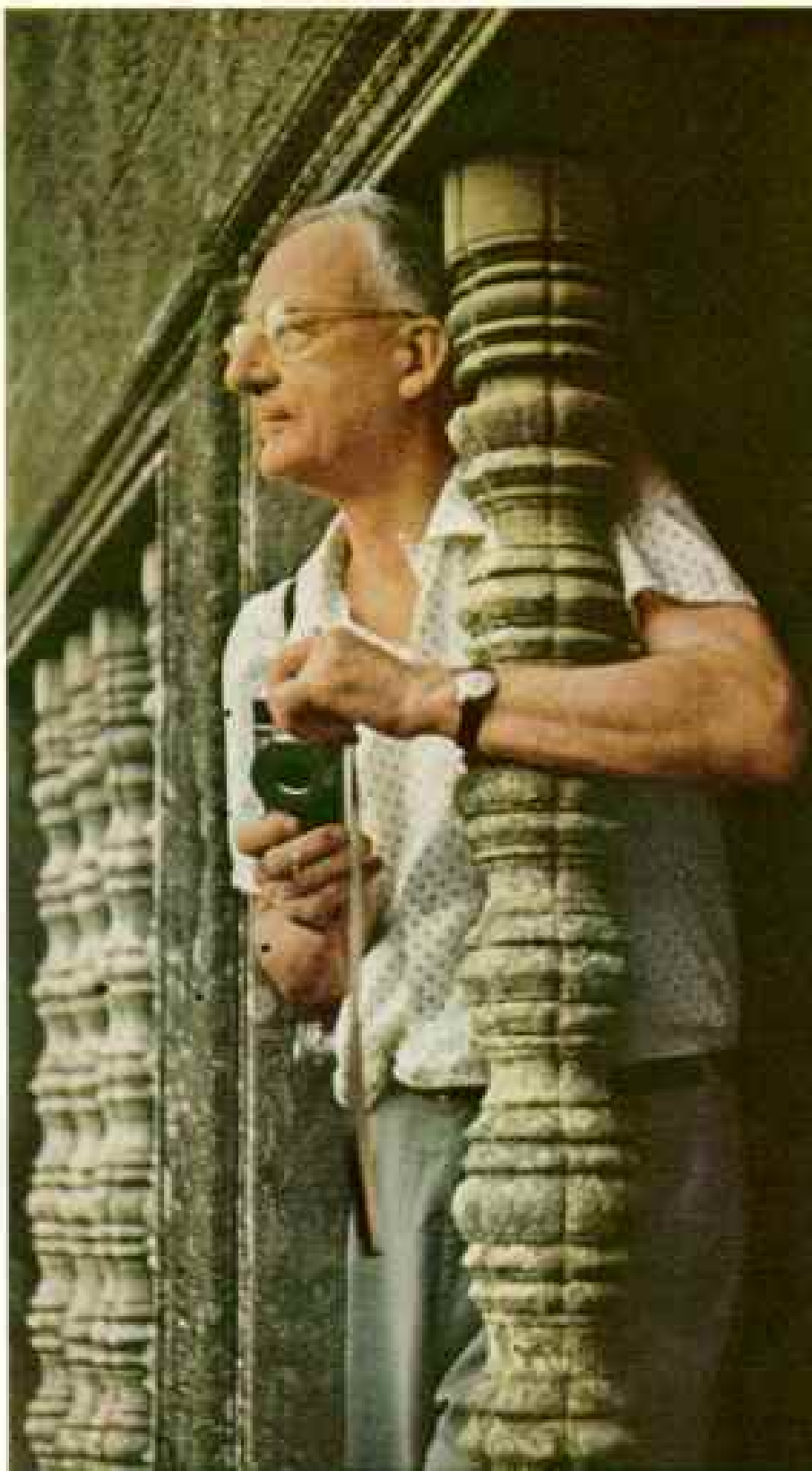
Recently my wife and I made a journey around the globe by Pan American World Airways Clipper. We met scores of fellow members, conferred with writers and photographers in the field, and arranged for future GEOGRAPHIC articles. We climbed gray Cambodian ruins, rode pedicabs in Phnom Penh, cruised by junk around Hong Kong, and talked with fun-loving Japanese children. We returned with 2,100 color photographs and a refreshed perspective.

"What brings you here?" asked a member in India. "Tell us about our Society's work."

Perhaps this message began with that remark. Certainly, at the time, I did not expect to write a report of our travels.

"Who sponsors The Society and its maga-

(*Continued on page 836*)



As a Scout for the NATIONAL GEOGRAPHIC, the Editor Circled the Globe

To keep the magazine timely, fresh, and authoritative, writers and photographers travel widely—and so must the men who assign the articles and direct Society studies.

Limited to 50 days, the Editor and his wife took to the skyways, often flying by night in order to work by day. Heading east by Pan American jet, they stopped briefly in France, then hurried on to Asia to concentrate in turn on Pakistan, India, Thailand, Cambodia, Viet Nam, Hong Kong, and Japan. The globe below outlines their journey; details may be traced on the Atlas Map of Asia, 10-color supplement to this issue.

Other officers of The Society also ranged the continents for firsthand information. Flying west around the world, Executive Vice President Thomas W. McKnew gave special attention to Africa. Associate Secretary Melvin M. Payne checked on Society activities in Europe and the Caribbean. Associate Editor Frederick G. Vosburgh made a flying trip around South America.

EXTACHROME BY NATIONAL GEOGRAPHIC PHOTOGRAPHERS ROBERT MCBRIDE AND JOHN E. FLETCHER © N.G.S.

The Society's Trustees Ensure Its Continuity as a Scientific and Educational Body

These public-spirited men from diverse fields establish The Society's policies, vote its expenditures, elect its officers, and plan its expeditions. Here, beneath a portrait of Alexander Graham Bell, a Society founder and early President, they hear President-Editor Melville Bell Grosvenor (far right) report on his round-the-world survey.

To his right sit Gilbert Grosvenor, Chairman of the Board and former President and Editor; Robert V. Fleming, Vice President and Treasurer of The Society, and Chairman of the Board, Riggs National Bank; Earl Warren, Chief Justice of the United States; Gen. Curtis E. LeMay, Vice Chief of Staff, U. S. Air Force; Hugh L. Dryden, Deputy Administrator, National Aeronautics and Space Administration; Benjamin M. McKelway, Editor, *Washington Star*, and President, Associated Press; Conrad L. Wirth, Director, National Park Service; Vice Adm. Emory S. Land (USN, ret.), former Chairman, U. S. Maritime Commission; and Robert E. Doyle, secretary of the meeting.

To the President-Editor's left sit Thomas W. McKnew, Executive Vice President and Secretary; Lyman J. Briggs, Chairman of The Society's Committee for Research and Exploration; Alexander Wetmore, Research Associate, Smithsonian Institution; Crawford H. Greenewalt, President, E. I. du Pont de Nemours & Company; Leonard Carmichael, Secretary, Smithsonian Institution; Rear Adm. L. O. Colbert, former Director, U. S. Coast and Geodetic Survey; Lloyd B. Wilson, honorary Chairman of the Board, Chesapeake & Potomac Telephone Co.; Elisha Hanson, The Society's general counsel; and Melvin M. Payne, Vice President and Associate Secretary. John Oliver La Gorce, Vice Chairman of the Board and former President and Editor, sits at the far end.

Trustees unable to attend: Laurance S. Rockefeller, President, Rockefeller Brothers, Inc., and Jackson Hole Preserve; H. Randolph Maddox, Vice President, American Telephone & Telegraph Company; General of the Army George C. Marshall, former Secretary of Defense (since deceased); Juan T. Trippe, President, Pan American World Airways; and William E. Wrather, former Director, U. S. Geological Survey.

zine with all those color pictures? Is it the Government or a big foundation?" I heard this question from New York to Saigon. Many persons were astonished to learn that, without subsidies of any kind, all of The Society's work is supported by the individual member with his modest dues.

Newest Devices Help Keep Dues Low

Your officers fight a constant battle to keep those dues at the lowest possible level. Costs for quality printing rise rapidly each year. Yet dues this year rise not at all.

Behind this pleasant fact lie careful planning and streamlining by Executive Vice President and Secretary Thomas W. McKnew and his assistants. If I could take you on a tour through the Secretary's department, you would see automatic machines post receipts in five currencies, sort and file the millions of account cards electronically, and address the magazine to members in 89 independent countries and 87 territories and dependencies.

Such devices have doubled production. This work is done today by the same number of people needed when The Society had a membership half its present size.

More improvements are coming. Already engineers have installed the first production model of Linofilm, the Mergenthaler Linotype Company's new electronic and photographic marvel that speeds composing of type for The Society's publications.

During 1960 the printing of the magazine will pass to new custom-designed web color presses. Tests have frankly surprised me: high-speed, economical printing—with better quality control than ever before.

Atlas Folios Tall as Everest

With this December issue, you have received a map of Asia—one of the 34,000,000 Atlas sheets printed in two years. Perhaps your family will mount it in the Atlas Folio.

Orders for this handsome binder—now available with 14 maps—have been almost unbelievable. Boxed for shipment and stacked in a single pile, the 225,000 Atlas Folios already mailed would make a "giant beanstalk" tall as Mount Everest! And all the while, members and Government agencies continue to request The Society's large wall maps of continental areas—kept up to date and available.

"How can The Society offer handsome books—like *America's Wonderlands: The National Parks*, with its 390 color plates—at such low cost?" members often ask. I answer that one by reminding the member of The Society's vast treasure house of costly color plates, already engraved for the magazine. We select the best of these, add new material, and order large, economical printings.

Take, for example, our 1959 best seller, the National Parks book. Members oversubscribed a first printing of 150,000, and 100,000 more have been ordered to meet the Christmas demand. The book staff is now preparing a brilliantly illustrated work on the wild animals of North America.

Another treasure house—the accumulated knowledge in Society archives—finds wide use. "Our radio listeners called to thank us for your information about the Chilean lakes," recently wrote the director of a broadcasting station in Chile. His was a letter of appreciation for geographic information sent as background for news events; such bulletins are sent by The Society to 2,500 editors of press, radio, and television, at their request and without charge.

Some 40,000 teachers and pupils receive Geographic school bulletins at nominal cost—part of The Society's educational program.

Members Support Exciting Research

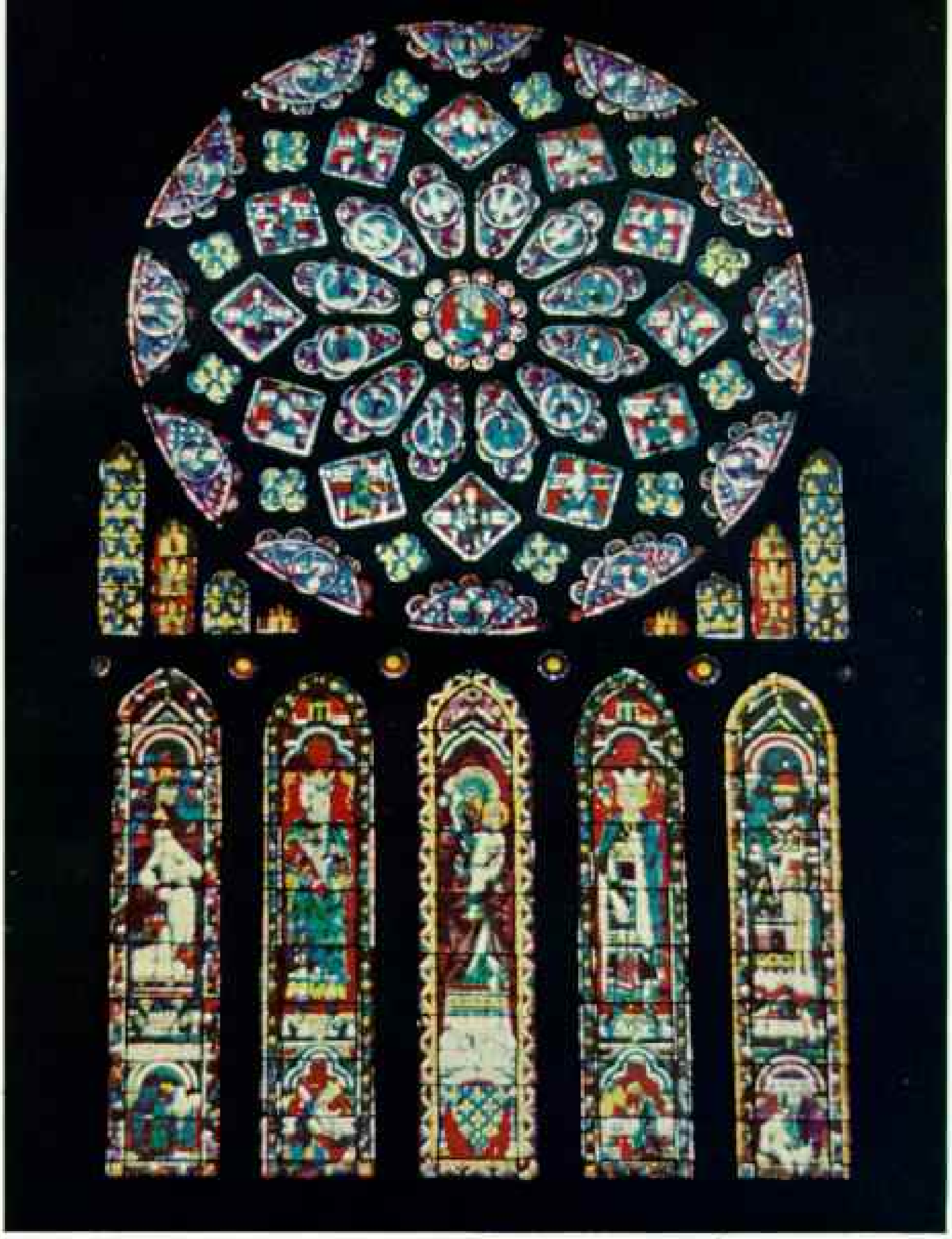
Not everyone can be a Ford, a Kettering, or a Rockefeller and endow a foundation for research. But through the National Geographic Society each member helps support geographic research and exploration.

Our expeditions this year have made important discoveries. In Yucatán, I watched Geographic- and Tulane University-sponsored archeologists at work on the great ruined Maya city of Dzibilchaltun. They tell us it was the longest inhabited and largest pre-Columbian city known in America.

At Mesa Verde I visited our expedition operating jointly with the National Park Service. Our men are uncovering an exciting past in the lofty haunts of Wetherill Mesa cliff dwellers.

Divers of The Society, the United States Navy, and the Smithsonian Institution, led by Edwin A. Link and our own Luis Marden, have made an underwater survey of the drowned city of Port Royal, Jamaica, which slid into the sea with many of its inhabitants when shaken by an earthquake in 1692.

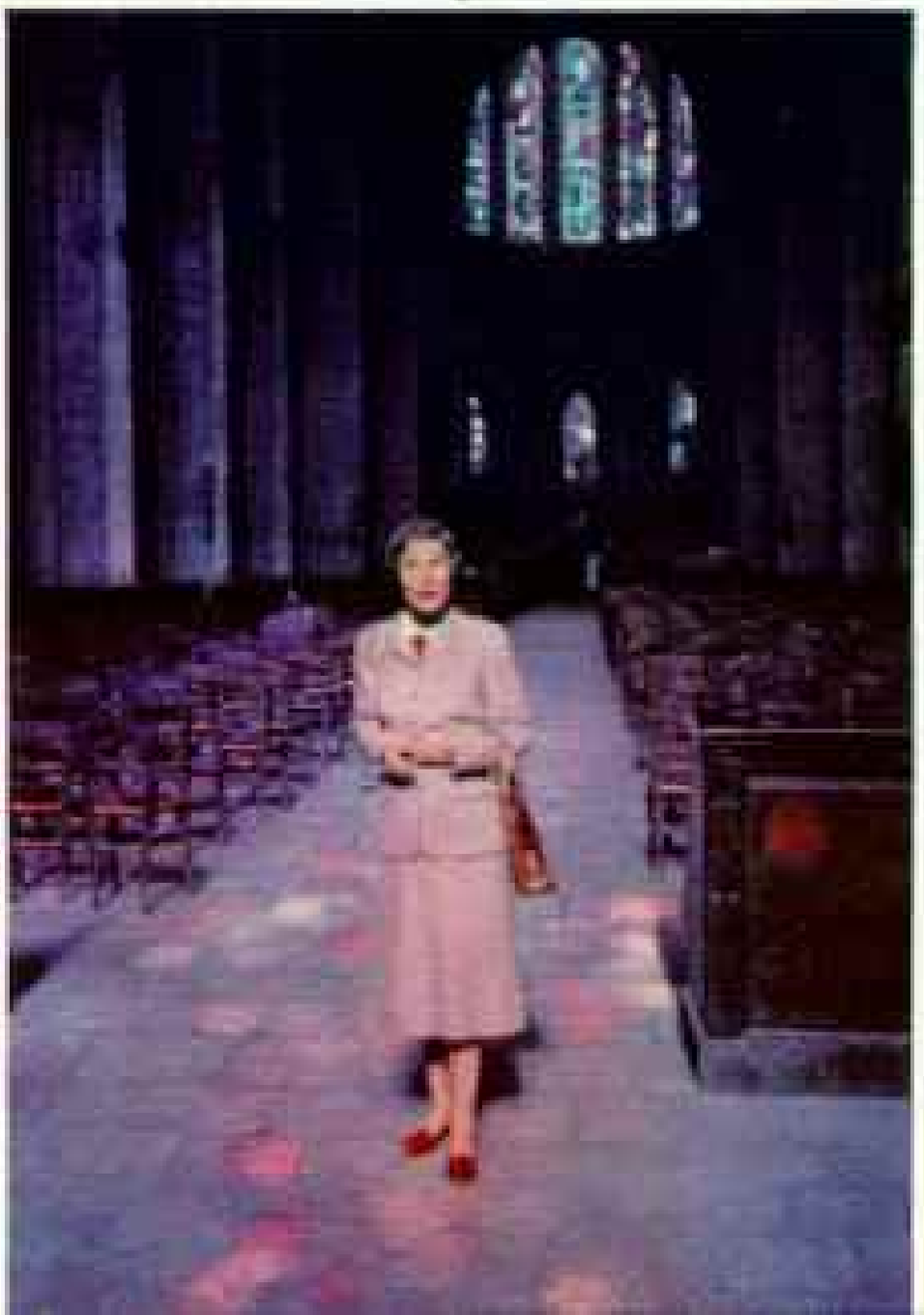
To study our West's dwindling grizzly bears, John and Frank Craighead are "shooting" them with a drug-injecting dart gun.



French Sunshine Fires the Glory of a Window in Chartres Cathedral

From their grainfields, horrified French farmers watched fire destroy Chartres Cathedral in 1194. A disguised blessing, the flames gave Gothic architects a chance to expand the size of windows and let skilled artisans frame in lead new hues of glass.

In this picture of the Rose of France, made with tungsten film, the windows' cobalt blue shines strongly, accented—but not dominated—by the fiery red.



The author's wife, Anne Revis Grosvenor, stands enthralled by the color strained through the cathedral windows.

Indian Schoolboys in New Delhi Troop Past the Ashoka Hotel

Independent for 12 years, India today grapples with the problems of 400 million citizens. One of the greatest challenges is illiteracy. Only three decades ago, 95 percent of India's people were unable to read. By building schools, setting up tent classrooms, training teachers, and recruiting classes among young and old, India's dedicated educators have reduced the illiteracy rate to less than 80 percent.

These schoolboy refugees from the Punjab carry their slates—white boards inscribed with Indo-Arabic numerals and Hindi words.

Behind the boys looms the republic's new $6,000,000 Ashoka Hotel, its eight stories largely built by hand to give jobs to many men and women. The hotel's recessed arch repeats an architectural motif used by the Emperor Shah Jahan in the Red Fort of old Delhi (opposite) and the Taj Mahal (page 845).

Hula hoop spins amid the ruins surrounding the Qutb Minar, a tower of victory begun by Qutb-ud-Din Aibak, first Moslem ruler of Delhi (page 840).

ALL WORK SHOWN BY MELVILLE BELL GROSVENOR © NATIONAL GEOGRAPHIC SOCIETY

Shah Jahan's Glittering Palace Survives as Delhi's Red Fort

Built in the mid-1600's, the palace had alabaster fountains, audience halls overhung with silver and gold, and a Peacock Throne shimmering with rubies, emeralds, and pearls. "If there is a Paradise on earth," says a wall inscription, "this is it, this is it." To some 50 Britons imprisoned and slain there during the Sepoy War, or Mutiny, of 1857, the "paradise" proved a place of horror (page 846).

The anesthetic knocks out a 600-pound bear long enough (in most cases!) to check weight, respiration, blood pressure, and to attach ear tags and plastic streamers for identification.

These findings and many more will be reported in your NATIONAL GEOGRAPHIC in coming months, together with subjects as varied as prehistoric Stonehenge and modern Israel; the State of New Jersey and remote Nepal; Brasilia, Brazil's made-to-order future capital; gorillas and pygmies; New Britain's wilds; the travels of Abraham Lincoln; nature's use of color as camouflage.

Nap-sized Night Spans Atlantic

To check on such stories and look for other ideas, my wife and I took off by jet for the other side of the earth.

"There will be an hour's delay," announced the pilot as our Pan American plane waited at its Idlewild ramp, "because of fog at Le Bourget."

"This is New York—and he's talking about Paris!" my wife Anne exclaimed. But she should not have been surprised; only eight hours separate a New York take-off from a French fog.

With the Gallic weatherman's permission, our Boeing-built jet soon began its wonderfully fast, quiet climb. As we started on our filet cooked by Maxim's of Paris, I remarked, "We should be about over our summer sailing waters on the Bras d'Or."

The pilot's voice cut in: "We have just passed Halifax, Nova Scotia."

"Imagine!" said my wife. "Cape Breton Island an hour from New York

Indian boys play cricket beneath Delhi's lofty Qutb Minar. The 238-foot sandstone and marble tower, finished early in the 13th century to commemorate Islam's conquest of Hindustan, casts "the shadow of God over the East and over the West." Muezzins once sounded calls to prayer from the tower; now sightseers flock to its fluted balconies. They look out over India's past—a narrow plain choked with the ruins of seven historic Delhis—and glimpse her future, exemplified by New Delhi's halls and malls. Britain's legacies to India range from the planned beauty of her present capital to the good sportsmanship of cricket.

—and it takes us three days by car."

I napped, but soon awoke to sunlight. My watch read 1:30 New York time. Flying eastward, we had met the dawn just 150 miles from an awakening Ireland.

Soon I looked down 38,000 feet to the Isles of Scilly; from a NATIONAL GEOGRAPHIC article I remembered that narcissus fields were being harvested there to catch early spring flower markets in London.*

Above an overcast English Channel our plane began to let down for its Paris landing. We settled through the clouds, skimmed over toylike French villages, then glided to a landing.

"What luck!" said our chauffeur driving into Paris. "You couldn't have landed 15 minutes earlier. The field was a sea of fog."

Not luck, we thought, but the timing of men in two hemispheres!

Camera Sleds Skim Ocean Floor

In Paris we had four days—and work to do in connection with a comprehensive feature on France, with an Atlas Map, planned for the coming year. In fact, the whole of our globe-girdling trip from Washington to Washington traced a course that members will follow in future issues of their magazine.

First, there is the great Atlantic itself. A few days before leaving Washington, I heard fishman Capt. Jacques-Yves Cousteau report to The Society's Committee for Research and Exploration. He described the new "dynamic system" for taking deep underwater pictures by towing a camera mounted on a bottom-skimming sled. Such undersea cameras and Cousteau's little two-man "diving saucer" have been developed with The Society's aid.

Captain Cousteau often dredges up surprises from his silent world, and you will share them with the scientific community when the next Cousteau report and pictures appear exclusively in the GEOGRAPHIC.

His was not the only ship sailing these waters on your behalf. Capt. Alan Villiers and photographer Robert Sisson were cruising the storied firth-notched coast of Scotland. Also in progress were articles on the Channel island of Jersey, Ireland, Corsica, the Italian Riviera, and many another European spot.

One full day we devoted to visiting our favorite cathedral. Driving across French

* "Garden Isles of Scilly," by W. Robert Moore, December, 1938.

© NATIONAL GEOGRAPHIC SOCIETY

Shore leave brings Frank and Helen Schreider detouring to the palace at Amber, near the pink city of Jaipur. Cruising the Ganges River in their amphibious jeep, *Tortuga II*, on National Geographic assignment, the Schreiders dodged quicksand, photographed the burning ghats of Banaras, and studied life on the sacred river that flows through the heart of India.

Landlocked *Tortuga* (lower) undergoes inspection; passers-by peer curiously at the propeller and rudder beneath the watertight stern.

Master Craftsman at Jaipur Enamels a Hunting Drama on Brass

Sweeping around the tray's rim, hunters enthroned in howdahs ride elephants; tigers attack the mounts or flee through the jungle before beaters. The red-bearded artist, who has made his Mecca pilgrimage, applies white enamel; such a tray sells for about $25 in India.

Small apprentice never lifts eyes from his hammering. The Editor wondered "how any boy of nine years could be trained to such dogged concentration."

countryside as flat and fair as a Millet landscape, we saw asymmetrical spires standing tall on the horizon. This was Chartres, a Gothic pinnacle of 13th-century architecture.

Up narrow stone steps we climbed to the cathedral roof, then picked a careful footing to share a gargoyle's view of the old town. Testing new color films, I leveled my Leica at many a Chartres detail (page 837).

From Paris we flew to Karachi via Rome and Beirut, taking off in the afternoon and waking next day in an utterly different world. Our eyes opened to a sunny view of sand and sea along the Gulf of Oman.

The sight was an apt introduction to the Pakistan capital and port of Karachi, a name meaning "the land of the sand dunes." Desert, mosques, bleaching sunshine—to me it seemed more like north Africa than Asia.

Even a hasty look shows the challenge that Pakistanis face. The city is congested by hundreds of thousands of refugees, a legacy from partition and independence in 1947.

Camel carts mingled with motorcars, and in the busy world port rakish little dhows darted on lighter duty among the steamers. Sailors nimbly shinnied up masts to furl sails for smart landings at dock or ship.

Hotel Has More Servants Than Guests

Next came India, a land as colorful as the sari, a startling mixture of timelessness and change. Our delightful hotel in New Delhi was typical. New, modern, frigidly air conditioned, the eight-story Ashoka Hotel boasts an old-fashioned number of servants: 1,100 attendants—many of them orange-turbaned—for 500 guests.

New Delhi, planned by the British, was given to independent India only 16 years after completion. Now the city is noisy with a new building boom. Concrete skeletons crawl with men and women builders.

From our balcony we looked across jasmine-scented gardens to the new United States Embassy. Like Prime Minister Nehru,

Moving at Cow's Pace, an Entire Village Takes to the Road in Rajasthan

Shuffling down the road, turbans bright, migrating tribesmen create a scene as timeless as India. Cattle carry sacks of pans, even chickens and toddlers, atop bedding used as saddle blankets. Women wear family fortunes in silver bangles. The Jaipur-bound car, its hood reflecting 97° heat, pulls off the one-track road.

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Jailed in This Fort, Shah Jahan Died With the Taj Mahal Before His Eyes

Three hundred years ago tragedy struck the world's most opulent court. Shah Jahan, mightiest of Moslem Moguls, lost his empress, the beloved Mumtaz-i-Mahal, bearing her fourteenth child. Grieving, the emperor summoned Asia's greatest artisans to raise a tomb for her. At Agra, builders massed white marble 187 feet high for gleaming domes. They cut and fitted inlays of jasper, agate, and other stones. Ingeniously, they pierced walls in lacelike patterns to curb sun glare and capture cooling drafts. After 22 years' work the Taj Mahal was complete. Then tragedy struck again. The emperor's son usurped the throne and imprisoned Shah Jahan in the Jasmine Tower of Agra's Fort for his last 7½ years. Here, on a balcony near the royal prison, visitors admire the emperor's view of moat, Yamuna River, and the Taj.

The Taj Mahal Endures: an Earth-bound Vision Amid Pool and Garden

Shah Jahan and his empress sleep side by side beneath the domed mausoleum that generations have acclaimed as the most beautiful building in the world. From the window of a speeding train, Rudyard Kipling glimpsed the monument as an opal-tinted cloud. Fearing that its magic could not survive a close inspection, he vowed never to go nearer.

Jeweled flowers, frozen in white marble, adorn the Agra tomb of I'timad-ud-Daulah, father of Emperor Jahangir's wife. Such delicate inlays glorify the Taj as well.

who was "enchanted" by it, we admired New York architect Edward D. Stone's design. Though modern, it uses the pierced-wall motif of old Mogul buildings for air and shade.

Only a short drive away we explored the domed and towering forms of the older Delhis with Mr. K. B. Singh, a black-bearded Sikh from the India Tourist Office, as guide. His costume dramatized transitional India: with his turban he wore slacks and a sport shirt.

"This," said the well-informed Mr. Singh, "is the Qutb Minar, built in the 13th century to memorialize the Mogul conquest." We looked up at the tallest stone structure in India, a fluted 238-foot victory tower.

"We have always absorbed our foreign influences," Mr. Singh remarked. Near by, youngsters proved his point, whirling a hula hoop and playing cricket (pages 838, 840).

Delhi's Red Fort and Humayun's tomb brought vividly to mind the Sepoy Mutiny of 1857. Here I reread my history of that bloody war . . . of a hot summer and 40,000 Mogul soldiers, of panic and death among women and children, of the fierce fighting along the Ridge before Delhi, and the final victory of some 7,000 cholera-ridden British soldiers.

The era seemed more than one century distant. British viceroys have followed the Moguls into India's past. But they, too, have left a powerful heritage.

On two successive days I saw the Parliament of India in action. Each lawmaker wore

(*Continued on page 851*)

Bangkok Housewives, Shopping in Sampans, Eye Fruit at a Floating Market

Dug in the delta of the Chao Phraya River, man-made *klongs*, or canals, serve Bangkok as Venice-like streets and watery shopping centers. Hungry buyers tie up to floating snack bars for charcoal-cooked meals. Vendors in lampshade hats offer sugar cane, bananas, coconuts, pomelos, mangoes, and mangosteens, all from near-by gardens. In the second covered boat Buddhist priests in orange robes approach the intersection.

Boy and cat stage a tug of war in one of Bangkok's many canalside cafes.

Thais Pay Homage to Kings in Bangkok's Pantheon

Glowering giants armed with clubs guard a gateway to the Royal Temple enclosure, which preserves the exquisite Emerald Buddha as its most sacred treasure. Serpents—not lightning rods—stab the air from the tile roof. Celebrants carrying sticks of incense and bouquets of flowers mount the steps of the Royal Pantheon on Chakkri Day, a festival in honor of Thailand's ruling house.

Thailand's Queen greets Dr. and Mrs. Grosvenor at a Red Cross benefit on Chakkri Day. "Gracious, beautiful, the queen showed deep interest in The Society and its magazine," says the author.

The Prince flies a kite for charity; his mother directs, and his sister watches. Dignitaries who approached the royal family walked on their knees. Only the president of Thailand's Red Cross (right) wears the traditional panung, or draped trousers.

BOTH PHOTOGRAPHS BY MELVILLE BELL GROSVENOR (OPPOSITE AND BELOW) AND W. ROBERT MOORE © N. G. S.

PHOTOGRAPHED BY W. ROBERT MOORE (ABOVE) AND MELVILLE BELL GROSVENOR © N.G.S.

God-king of the Khmers, Jayavarman VII lives in history as one of the world's greatest builders. Ruling in the 12th century, he expanded the Khmer kingdom to its farthest reaches, including all of present-day Cambodia, most of Thailand, and parts of Viet Nam and Laos. This statue, found at Angkor Thom, his capital, stands in the museum at Phnom Penh.

Brooding over the south gateway at Angkor Thom, Jayavarman faces in four directions. After invaders looted and destroyed an earlier capital on the site, the monarch reared Angkor's stone walls, gates, and central temple; numerous palaces, shrines, and monasteries throughout the kingdom; a chain of resthouses on all-weather roads; and more than 100 hospitals. For years archeologists attributed Jayavarman's works to earlier kings, but modern research confirms the boast of his royal chronicler: "His glory went from himself to the four points of space."

Here, along the causeway, the heads of benign giants attract Mrs. Grosvenor (left) and her sister, Miss Sara Revis.

the traditional clothes of his province, but otherwise the scene was surprisingly like the United States Congress at home in Washington or the British House of Commons in London. Men debated, in English, routine matters of government. Empty seats reflected work going on elsewhere in committees.

The next day, though, the hall and galleries were jammed. In an electric atmosphere, Prime Minister Nehru announced his government's policy toward the Dalai Lama, hounded out of Tibet by the Red Chinese.

These two scenes showed how well the people of India have absorbed the traditions of parliamentary rule.

We drove to Jaipur. After Delhi's bustle we found the colorful countryside pleasant. "It hasn't changed a bit," remarked Anne, who had lived in India as a girl, the daughter of a missionary.

Elephants Sway Through a Pink City

Our road was a single ribbon, so we often had to turn off for rural traffic. Once a migrating village of Jodhpur tribesmen passed. Boys in bright red turbans drove bullocks and cows. Children and pets rode atop the cattle. Blue rollers and green parakeets flitted overhead and monkeys scampered up the trees.

Often, too, we stopped for photographs. But no matter how deserted the area appeared, we would soon be surrounded by people. They appeared to pop up out of the ground. For an understanding of Asia's population pressures, I recommend a stop in rural India.

Jaipur is a populated fantasy: a city built of pink stone. Surrounding it are crenellated walls and sculptured hillsides crowned with forts. We passed six ponderous work elephants as we entered the city. Driving to our hotel, we saw bright examples of a local craft —hundreds of yards of the finest fabrics, freshly dyed in a spectrum of color and hanging along sidewalks to dry.

The Rambagh hotel was palatial—and with reason. Until recently it had been a palace of the maharaja. Our bath resembled a Hollywood set of the 1920's, complete with a marble tub and a lion-head spigot of black onyx. But, because the remodeling was still in progress, the plumbing worked capriciously. And some windows were still unscreened against Jaipur mosquitoes. An Ali Baba-like porter, though, brought us water and sprayed the insects at 2 a.m.

Amphibious Jeep on the Sacred Ganges

We had an appointment in Jaipur. For months an adventurous young couple had been on a NATIONAL GEOGRAPHIC assignment in India. Frank and Helen Schreider, veterans of an 18-month journey from Alaska to Argentina by amphibious jeep, were traveling the great Ganges River system in a new "amphib." Now, arriving at Jaipur on schedule, they parked their odd-looking vehicle, *Tortuga II*, beside our hotel (page 841). A crowd soon gathered around it, but the

Circus performers compete for the Khmer king's applause. Such scenes, glimpsed eight centuries ago at Angkor and carved on Bayon walls, come to life in modern illustrations. Artist Maurice Fiévet used the eyewitness carvings to re-create the everyday life of the Khmers. Members will be fascinated by his unique series of 15 paintings to come in their magazine during 1960, together with recent photographs and an article by W. Robert Moore, a student of Angkor culture for 35 years. While checking details against the temple's bas relief (below), the Editor met the young Cambodian at right.

Schreiders' parking attendant, a German shepherd named Dinah, stood quiet guard.

"Welcome to the Ganges watershed," said Helen.

"We could have met you in New Delhi," said Frank. "I went there," he explained, "to see a doctor about an ear infection. The doctor took one look and said, 'You must have been swimming in the Ganges.'"

The doctor was right. A rope had fouled *Tortuga II*'s propeller, and when Frank had dived to free it, he had picked up a fungus peculiar to that sacred but polluted stream.

Surprises From the Taj Mahal

Through dinner, the Schreiders told us about their adventures on the Ganges. Once they had a narrow escape from quicksand—but I shall not spoil the exciting story which they are now writing for you.

Next day we toured the pink city and its near companion, the old capital—Amber—a city known to Ptolemy. For fun we journeyed to the palace at Amber by elephant, swaying past a small lake and ascending a slope to the rocky roots of the palace itself.

In one hall the guide showed us bits of mirror fixed into the plaster of ceiling and walls; then he shut out the daylight and struck a match. A thousand flames flickered around us like stars in a planetarium.

"Why not take Helen's picture here?" I suggested to Frank. "Get a thousand views at once." He was trying that shot of his attractive wife when we left.

As we drove toward Agra, I dreaded disappointment. For 35 years as a GEOGRAPHIC staffman, I had looked at artistic pictures of the Taj Mahal and heard its praises. No monument could match its buildup.

But I was mistaken. As we walked toward its gleaming domes and saw the reflection in the pool, I was overpowered by its size and magnificence. People standing on its balustrade were reduced to specks. It was huge but gorgeous. Though I had seen thousands of Taj pictures, still I must try my hand—70 exposures from every angle (page 845).

Back in New Delhi, I stopped in the Ashoka Hotel's bookshop and came upon a fine volume of photographs, *India: People and Places*, by Richard Lannoy. I was still thinking of that book at dinner with Delhi friends.

"You should meet a young British writer-photographer living here," said our host. "His name is Lannoy." On the spot, he sent our turbaned driver to fetch Mr. Lannoy. Before the evening was over, I had assigned him a color feature on the pink city of Jaipur.

Calcutta reinforced our earlier impressions of an India in transition. We watched stevedores load jute in the great harbor. The lone Westerners in a colorfully clad crowd, we visited the Victoria Memorial and saw Indians honor their British era as an enriching part of their past. But India's current problems made their impress. That night I counted—and stepped around—42 people sleeping on the sidewalk in front of our hotel.

Our plane landed in Bangkok late in the evening, and the Oriental features of the Thai people emphasized how far we had come from India; we were now closer to China.

Among the faces in the airport crowd we saw the big smile of W. Robert Moore, Chief of the Foreign Editorial Staff. Before he began to log his 750,000 miles of travel for your GEOGRAPHIC, Bob taught science courses for seven years in a Bangkok college. With him now were three of his former students, outstanding Thai professional men and members of the National Geographic Society.

"Tokens of appreciation for our President," explained the Thai members as they wreathed us in jasmine and escorted us to an impressive VIP room amid popping flash bulbs. We were touched by their thoughtfulness.

On our drive into town, Bob and I discussed his current assignments on Bangkok, Burma, and the Angkor ruins. Later we were joined by Anne's sister, Sara Revis, on leave from her U. S. Embassy post in Saigon.

Cruising the Canals of Bangkok

"You'll have to get up early in the morning," said Bob as we bade him a sleepy good night. "Tomorrow is your only chance to see the floating markets."

The night seemed extra short; by the Calcutta time we had become accustomed to, we arose at 4 a.m. Yet our motor-launch tour of Bangkok's *klongs*, or canals, was worth the loss of sleep (page 847). We watched the city wake up. Residents of canalside houses washed their faces from landing steps. Proprietors of vegetable boats cooked breakfast on small braziers. Housewives paddled out to argue prices. Naked children swam to hitch rides on barges.

Soon we stood in the Royal Temple enclosure, one of the world's most glamorous spots. We strolled beneath gold spires to photograph giant guardian figures and walls adorned with fragments of chinaware. We walked through pearl portals, and gasped at

(Continued on page 859)

KODACHROMES BY MELVILLE BELL GROSVENOR (OPPOSITE) AND W. E. GARRETT, NATIONAL GEOGRAPHIC STAFF © N. G. S.

Memories of Terror Shadow the Face of a Fugitive Child in Hong Kong

Voting with their feet for freedom, Chinese in flight from Communism slip into the British Crown Colony at the rate of 10,000 a month. Refugees live on rooftops, crowd shanty towns, and cram sampans and junks. Awaiting new government housing, this girl and her baby brother inhabit a scrap-wood shack in the New Territories.

To provide employment for a million immigrants, the colony fosters new industries, from textiles, rug weaving, and boatbuilding to the manufacture of flashlight batteries.

Family Life Goes On Afloat in Nested Junks and Sampans

As many as 90 refugees crowd aboard a single junk to reach the colony. Behind this hill in the New Territories lurk Red Chinese pirates, ready for plundering raids.

Five-storied Pagoda Adorns the Path at Japan's Famed Toshogu Shrine

Set amid forested mountains at Nikko, the sanctuary honors Ieyasu, founder of the Tokugawa Shogunate and the "East Illuminating Incarnation of Bodhisattva." Built in 1636 by Japan's finest artists and architects, the shrine inspired the expression, "Never say *kekko* [magnificent] until you have seen Nikko."

In this view of the pagoda, whose roofs represent earth, water, fire, wind, and sky, new High Speed Ektachrome film pierces shadows of overhanging eaves on a dark and misty day. From this spot visitors climb terraces lined with giant cryptomeria trees and pass through the ornate Yomei Gate, glittering with gold and bristling with carved dragons.

Undaunted by Rain, School Children Swarm Through Nijo Castle's Garden

At Kyoto, capital of Japan for more than 1,000 years prior to 1868, touring school children file through the famed rock-patterned Ninomaru Garden. Laid out beside the residence of the first Tokugawa Shogun, the garden originally stood bare of trees, lest falling leaves suggest the briefness of life. "Falling rain proved our problem," said the author, "but, like these Japanese youngsters, we kept on sightseeing."

The original monkeys who hear no evil, speak no evil, and see no evil enact their creed above a door to the sacred stable at Nikko. Seventeenth-century wood carvers fashioned them after monkeys from this area north of Tokyo. Copies spread to China and later to the whole world, but none captures the life and movement of Nikko's own.


消火栓

the opulence of the famous Emerald Buddha.

Earlier, near the Temple of Dawn, Bob had exclaimed, "We're in luck! This is Chakkri Day." It happened to be the lone day in the year when the Royal Pantheon was open. Crowds of pilgrims carried flowers and sticks of incense to honor the dead kings of the ruling Chakkri dynasty (page 848).

We joined them and noted with interest the statue of King Mongkut, or Rama IV. This is the Thai ruler best known to the West, thanks to the popular book by Margaret Landon, based on the accounts of Mrs. Anna Leonowens, and to the stage and screen musical versions, *The King and I*.

Later we paid our respects to living relatives of the Chakkri kings. One was Prince Dhani Nivat, who received us in his home.

"A remarkably modest man," my wife said of Prince Dhani. A former Minister of Education, he has also headed the kingdom's Privy Council and has served as regent in the absence of the king. Yet, a few years ago when he wrote an article to accompany Bob Moore's color pictures of Siamese dancers, this great scholar asked that we omit the royal title from his by-line.* Helpfully, he advised us on our Bangkok coverage.

Prince Prem Purachatra also offered counsel—and a special outing. He took us to a kite-flying contest and presented us to Her Majesty, the lovely Queen Sirikit, the 7-year-old Prince Vajiralongkorn, and 8-year-old Princess Ubol (page 849).

"We don't hear from Mr. Moore for quite a while," said Prince Prem. "And the next thing we know, he's sitting in our living room."

Bringing to Life the Builders of Angkor

To tap Bob Moore's broad experience, we took him with us to Siem Reap in Cambodia.

Our flight crossed flat rice country, stretches of thick jungle—and eight centuries. The faces we saw at the airport were those of the vanished Khmer Empire.

From our room I got my first view of the five central lotus-shaped towers of Angkor Wat. Here, a century ago, the French naturalist Henri Mouhot came upon a similar view while wandering the Indochinese forests; by his discovery he was "transported from barbarism to civilization." Archeologists, working for decades, did the rest.

From my suitcase I brought out a set of engravers' proofs. Here were paintings of an unusual sort. French artist-ethnologist Maurice Fiévet had worked with the archeologist Bernard Groslier to re-create scenes of life in the Khmer capital, Angkor Thom. These paintings, with photographs of Angkor today, will illustrate Bob Moore's article.

Wall Carvings Mirror Khmer Past

The series reflects the astonishing talents of 12th-century King Jayavarman VII, who launched an orgy of building probably unsurpassed by any other ruler in history. But how could any artist capture accurately such intimate details of everyday life among these long-dead people?

One look at the wall sculpture in the Bayon (page 852) convinced me of the artist's faithfulness. The sculptures told stories as sensational as tabloids and as personal as a family album. Here is a naval battle, galley slaves straining at their oars, and a crocodile seizing one hapless sailor. In the royal kitchen a cook pours rice into a pot. There a group of Khmer sportsmen cluster around two fighting cocks; from the men's faces we know whose bird is winning.

A steep flight of steps up Angkor Wat recalled a recent trip to Yucatán. "This reminds me of the climb up the pyramid at Dzibilchaltun," I remarked to Bob Moore.*

"Or maybe our day at Chartres Cathedral," my wife called from the highest tier.

Looking out over the mottled gray stones, I realized that Angkor had much in common with those other great structures. Maya

* "Pageantry of the Siamese Stage," by D. Sonakul, NATIONAL GEOGRAPHIC, February, 1947.

* See, in the January, 1959, NATIONAL GEOGRAPHIC: "Dzibilchaltun: Lost City of the Maya," by E. Wyllys Andrews; and "Up from the Well of Time," by Luis Marden.

Kimono, Sash, Sandals: a Japanese Bride's Trousseau

On a drive around Mount Fuji, the author passed through the town of Funatsu just as this dainty bride came out to show her wedding dress to neighbors. Like thousands of other brides all over Japan, she wanted to be married in the same month as Crown Prince Akihito and Princess Michiko. Each neighbor smiled and bowed; children were awed by the finery. Soon the bride's mother hurried her off to another family celebration.

Seen through a window, a Shinto priest (left) and his assistant, in blue gown at right, marry a young couple in the Tsurugaoka Hachiman Shrine at Kamakura.

ILLUSTRATION BY ARIE DEVO STEVENSON © NATIONAL GEOGRAPHIC SOCIETY

Crown and Glory of Japan, Mount Fuji's Snowy Peak Floats in a Sea of Sky

Its perfect cone attaining 12,388 feet, Fuji ranks among the world's most admired, most beloved, most revered mountains. For generations poets have sung its praises; artists have painted its image; pilgrims have worshiped on its slopes. A living volcano, though quiescent for the past 250 years, the mountain possesses what few humans achieve—a warm heart and a clear, cool head. Here, above Lake Ashi, honeymooners take advantage of a crystal day for family snapshots.

Flanked by stars, Fuji appears as serene as the moon that lights its features. "It was nearing midnight," the Editor remembers. "The car crawled along a rough road that challenged one's temper. Rounding a curve, we saw Fuji bathed in the light of a full moon." Bracing his Leica on a stone, he used new High Speed Ektachrome at 10-second exposure to record this haunting view of mountain and village under the spell of night.

Young Pilgrims Gape Upward at a Massive 13th-century Bell

At Todaiji, a temple in Nara, the Great Buddha, world's largest bronze statue, sits in awesome majesty. Near by hangs this huge 48-ton bell. Originally cast in 752, it was damaged during a typhoon and believed recast in 1239. From time to time the bell utters a deep-throated, melodious boom when priests or visitors strike the wooden beam against the rim.

By crawling through this hole in a column of Todaiji, a believer is assured of paradise. Encouraged by her parents, the Japanese girl took a heavenly short cut 12 times.

were worshiping at their Temple of the Seven Dolls and at Chichén Itzá; Gothic masters were raising the towers of Chartres; and the Khmers were building this masterpiece of carved stone—all at the same time.

Changing film and time zones, we had moved at a wearying pace. In Saigon, capital of Viet Nam, we took time to relax. The setting was hospitable. Sara Revis guided us to sidewalk cafes for French foods in a tropical setting. The pajamalike garb of graceful Vietnamese girls reminded us again that we were nearing China.

Our next flight, by Air France, took us closer still. Over the South China Sea we saw the low coral reefs of the Paracel Islands—sharp as sharks' teeth and, for sailors on old clipper ships, no less dangerous.

To avoid Communist territory, our plane kept far out to sea, then turned into an air corridor for Hong Kong almost as warily as planes approach Berlin. Clouds hid the hills of Hong Kong, so our plane approached low over the harbor and the masts of junks. The colony's new jet airstrip is built on a man-made peninsula. The reason, of course, is the fundamental fact of this British Crown Colony: scarcity of space.

It was Dr. S. G. Davis, an enthusiastic member of our Society, who introduced me to the human drama of nearly three million people. Dr. Davis, head of the department of geography and geology at the University of Hong Kong, invited me to "see our problem in one glance."

High on a granite hill stands the university that Dr. Sun Yat-sen called "my intellectual birthplace." Dr. Davis guided me up to the roof terrace for a breath-taking view of a two-mile strip bordering Hong Kong's harbor.

"You are looking at the most densely populated spot on earth," he said. "Down there 200,000 people live in each square mile."

Dr. Davis pointed out the shacks of roof-top squatters and the incredibly crowded warrens where many a family lives in a single room 10 feet square.

Red Pirates Fire on Fishermen

On tours around the colony we saw the human congestion firsthand. Our friend Charles de Zevallos, a U. S. Treasury official, and his wife took us all around the island itself. I was especially interested in the harbor junks of fisher families. Children are born afloat; they grow up, marry, raise families, and die—rarely setting foot on shore.

Almost daily, Hong Kong papers print stories about the hazards these people face. We read about a family that had made a good catch of fish, only to lose it to a marauding pirate boat from Red China's waters—and be machine-gunned besides.

"Happens all the time," said Mr. de Zevallos. "Over at Macau the other night a Red boat slipped into the harbor and kidnaped a whole family and its junk."

Still, many of Hong Kong's crowded people owe their lives to junks. Escaping from Communist territory, 90 folk may crowd into a single boat; whole villages have fled to the colony by sampan fleet (page 855).

Each month, by Dr. Davis's estimate, Hong Kong gives sanctuary to 10,000 new refugees; the population grows by a quarter of a million each year.

Hong Kong Refugees Brought New Skills

Refugees are an old Asian story, but meeting the challenge is not. The local government has built great H-shaped, seven-story apartment houses to shelter a quarter-million newcomers. With a bold faith, builders move hills to provide new sites; the hilltops provide fill for harbor swamps.

On a drive with Pat Richards, Pan American passenger representative, we visited the dry, hilly New Territories. Here people live in the shadow of Red China across the border; and in the hills the Hong Kong government is building new reservoirs to help meet the colony's water shortage.

The ill wind that blows refugees to Hong Kong has brought the colony new arts and skills. Rugmakers fled old Tientsin; today they ply their arts on free soil, with ivory carvers, jewelers, brassworkers, boatbuilders, and shirtmakers. These skilled refugees have changed the character of Hong Kong trade; manufacturing has surpassed brokerage as the colony's chief breadwinner.

Ironically, this very productivity is stirring new problems. Customer countries—the U.S.A. now buys more Hong Kong goods than Britain—are worried over an influx of cheap-labor products from the colony.

Next we were off to the port's tempting shops. Local products and duty-free imports from the whole world make the community one big bargain counter.

"But be sure to get a Certificate of Origin," warned Charles de Zevallos, whose job it is to keep Communist-made goods from evading the U. S. embargo. For my wife's silks, we got documents; my own prize purchase needed none—a suit of warm, obviously British-made

Harris tweed to wear in chill springtime Japan.

John Shoemaker, owner of Fenwick, a successful tailoring business, made sure I got my suit on time. A tall ex-U. S. Navy pilot of World War II, John ran his own airline here until Communists cut off his routes; like many a Hong Kong businessman, he changed his specialty. "We'll have a tailor at your hotel tonight at 11," said John. My new suit was packed aboard the Tokyo-bound Pan American Clipper next day.

We flew northeast through clear sunshine, passing the length of Okinawa. I sought out details of coves and bays that were yesterday's beachheads. I recalled a date: April 1, 1945. Released that day, a new issue of the NATIONAL GEOGRAPHIC had described this little-known island.* And at the same moment, U. S. naval landing craft were carrying troops ashore. Through this same sky, kamikaze pilots had flown their fatal missions. Now, 18,000 feet below, I could see the peaceful pattern of roads built by U. S. forces.

At dusk we flew directly over Japan's famous volcanic isle, O Shima. The caldron spat glowing red lava and breathed pink smoke. Then we landed at Tokyo.

Our journey to Japan was for editorial scouting. In a few months Senior Assistant Editor Franc Shor would be following us to write a major feature. My wife and I would make advance arrangements in half a dozen cities, and take hundreds of photographs to round out his coverage of seasons.

Royal Romance Encourages Cupid

Our season, we discovered, included the most romantic month in recent Japanese history. It was the month of cherry blossoms and the royal wedding of Crown Prince Akihito and his beautiful Princess Michiko. Sweethearts all over Japan were crowding temples and shrines so that in coming years they might say, "We were married in the same month as the crown prince and princess."

From our first day in Japan, we were struck by its contrasts with Chinese Hong Kong. Colors were not so bold; lines were more delicate. The features of the people, even their coloring, were noticeably different.

We lost no time moving into the traditions of old Japan. Our friends Rear Adm. and Mrs. F. S. Withington invited us to spend a weekend with them. As commander of U. S. Naval Forces in Japan, the admiral occupies the residence built for a founder of the modern Japanese Navy. Guest quarters are in the older Japanese wing of the house: furniture is low and spare; art objects exquisite. Panels slide back for a view of impeccable gardens and the Yokosuka Naval Base below. I soon learned to bow to tradition in a literal sense: The Japanese architect who designed the doorways did not have six-footers in mind.

The Withingtons are active scholars of things Japanese, and their interests are producing exciting results. Recently the wife of a ranking Japanese officer startled an old American friend by addressing her in perfect English. "Mrs. Withington is studying Japanese," she explained, "so my friends and I are taking English lessons."

Fast Film for Moonlit Fuji

"How can you take color pictures in this rain?" asked our guide, Yukio ("call me Jack") Watanabe. I felt uncertain about it, too. But samples of a new fast film—High Speed Ektachrome—had been flown to us in Tokyo.

"You'll be the first staffer to test this film in the field," wrote Edwin L. Wisherd, chief of our photo laboratories. "Good luck."

Our luck was perfect for trying the new film: It rained every day but one. When she saw the first photo results, Anne remarked, "No shadows—like Japanese water colors." Faster film is bringing continued variety in NATIONAL GEOGRAPHIC illustrations. No longer must our photographers depend on the sun and photoflash; now they can catch the varying moods of the weather—rain or shine.

At Nikko, a shrine of shrines, we challenged our cameras not only with gray weather but with dark, towering cryptomeria trees (page 856). The sun played tag with us when we visited the serene Daibutsu, the Great Buddha at Kamakura, south of Tokyo, but clouds reminded us that the temple which once sheltered this statue was washed away by walls of water in 1495.

Later, though, the sun came out dazzlingly clear. After arriving in the rain at Miyanoshita, we watched clouds dissolving. On the drive to Hakone the veil parted, baring a blue sky and Mount Fuji—particularly lovely with a fresh mantle of clean snow.

"A crystal day!" said Mr. K. M. Yamaguchi, proprietor of the Fujiya Hotel. "They come but three or four times a year."

* See "Peacetime Rambles in the Ryukyus," by William Leonard Schwartz, May, 1945.

Our typed itinerary promised, "All day at leisure." But Anne later penciled quotation marks around that last word. We spent 10 hours jouncing over back roads to take pictures of Fuji. Both of us did Mount Fuji's portrait framed in cherry blossoms, reflected in lakes, and finally by the light of a full moon, for we did not put our cameras away until midnight (pages 860-1).

Japanese Invent Green Tea Ice Cream

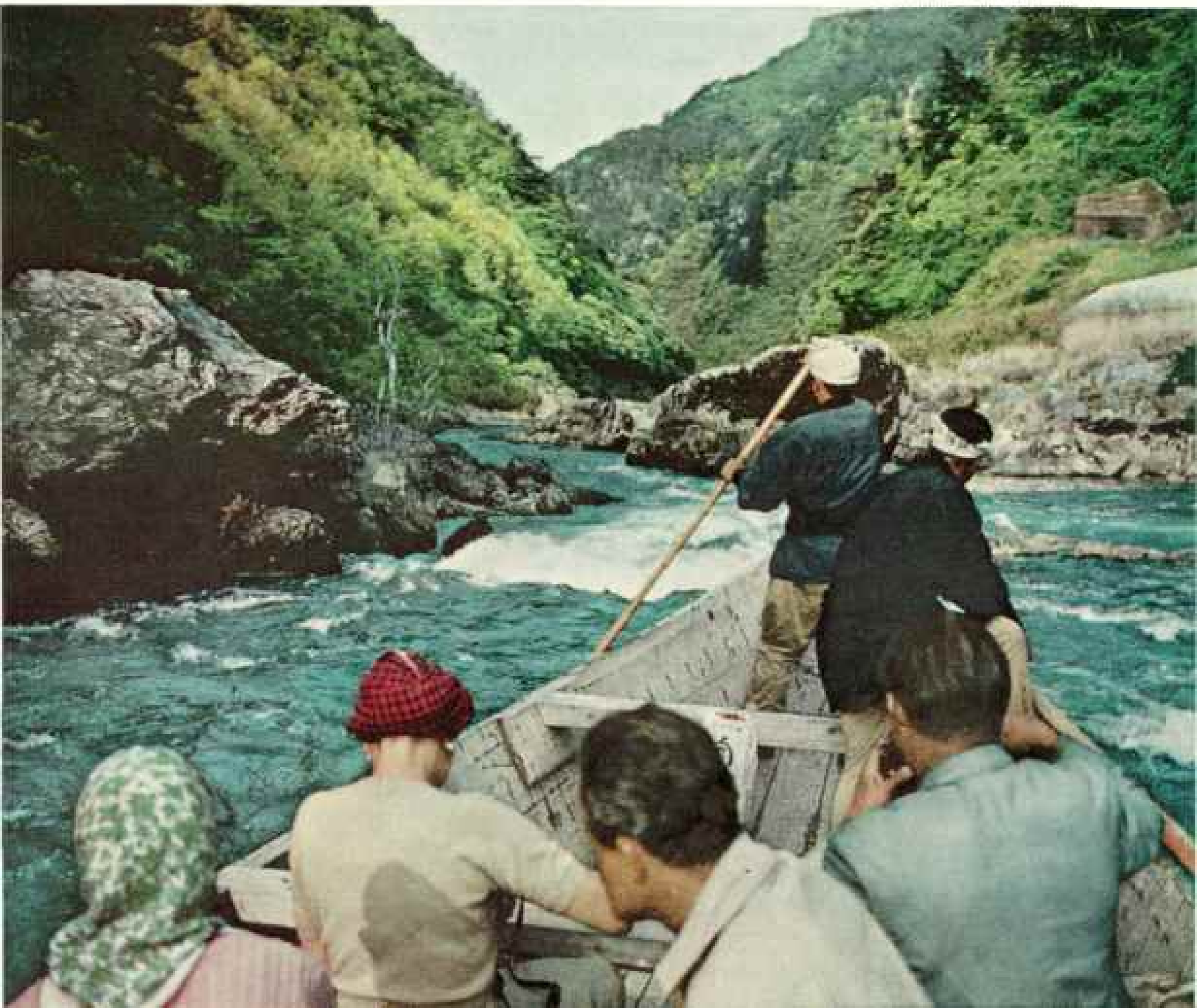
During the following days Anne's notebook filled with a wealth of detail: "Reforestation —trees being planted all over Japan." "Household hint—shirts are hung to dry on bamboo poles which slide through the full sleeves; no stretching with clothespins." "Tea raising near city of Uji—can buy tea of any age, in any form: even tea candy and green tea ice cream."

Kyoto, by reputation the most polite city—and one of the oldest—in Japan, cast a special spell. It boasts some 1,600 Buddhist temples, more than 600 Shinto shrines, and what may be the most severely simple imperial palace in all the world.

A soft spring rain was falling on the emperor's garden when we visited it, and women wore straw raincoats to pull tiny weeds. A few azaleas supplied the only color, for here gardens are not bouquets. In Japan a garden is a miniature landscape, a living still life;

Shooting Hozu Rapids, a River Boat Leaps White Water and Shaves Rock

Joining explorer Armand Denis and his wife in Kyoto, Dr. and Mrs. Grosvenor made an 8-mile, rock-dodging dash downriver. "We could feel the flexible bottom of our boat ripple underfoot. The skilled boatmen eased us through 12-knot currents, missing boulders by inches. Each knew just the spot on a rock to press his pole; generations had worn notches in the stone. We dropped perhaps 165 feet in 90 minutes—safely."



BOOKKEEPING BY THOMAS NEBBIA © NATIONAL GEOGRAPHIC SOCIETY

East Goes to School With West in Honolulu's Melting Pot

Hawaii's varied races trace a trip around the world. In a single classroom, these youngsters represent Europe, Asia, and Polynesia, all living happily together.

instead of flowers, these gardeners cultivate simplicity itself.

"Now we shall visit the Golden Pavilion," said our guide Jack. "It is Japan's newest antiquity."

The paradox springs from a violent moment in 1950 when a crazed Zen Buddhist acolyte set fire to a shrine five and a half centuries old. The building and its art treasures were utterly destroyed, all but a bronze figure of a phoenix. Aptly, a gilded three-tiered structure, duplicating the older one, has risen from the ashes.

Dining in our Kyoto hotel, we looked up from our sukiyaki and saw old friends. Mr. and Mrs. Armand Denis had come to Japan to make television films for one of their popular programs.

"We're shooting the Hozu Rapids," they told us, "—by boat and on film. You can be models." So we moved to an unfamiliar side of the camera shutter for a thrilling eight-mile trip in a flat-bottomed boat (page 865).

On one of our last evenings in Japan, we went to a Kyoto theater to watch Japanese actresses—even for male roles—perform a cherry blossom dance. One skit involved a bearded official who asked too much work of his wife. Eventually she tired of his demands, turned on her husband, and—with the help of other wives in the neighborhood—angrily cut off his beard.

I was reminded of my own wife's long work days, the pace I had set her, the pictures she had taken, the records she had kept. "The moral of that scene," I laughed, "is that it's time for you to get a rest."

We re-entered the United States by way of the 50th State, Hawaii. In customs we declared the trinkets we had bought with 10 currencies.

"What a wonderful summing up," Anne remarked. She was studying the faces of Hawaii's people: the features and colorings of all the nations we had seen.

I didn't have the heart to tell her just then that we needed some pictures for a forthcoming article on Hawaii. After all, busy 1960 should bring its own surprises—for my wife, for you, and for the host of new members joining us at this festive season.

Happy New Year!

Melville Bell Grosvenor

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COVER: *Brigantine* Yankee *roams South Asian seas in quest of adventure (page 771).*

Top to bottom: Everest Electric, $110; Bracelette "B", $89.50; Cascade, $85; Radiant "S", $175

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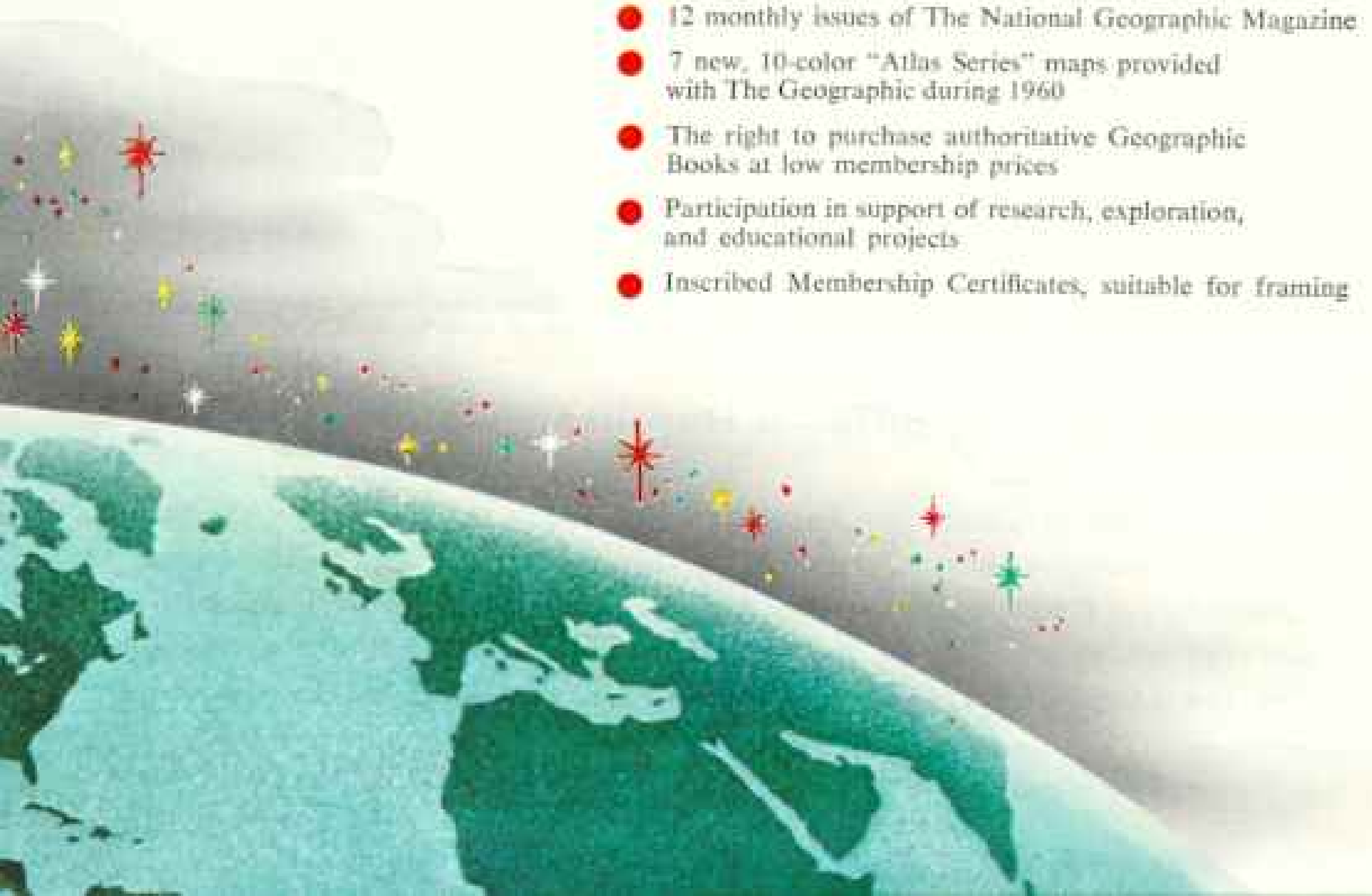

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12-59

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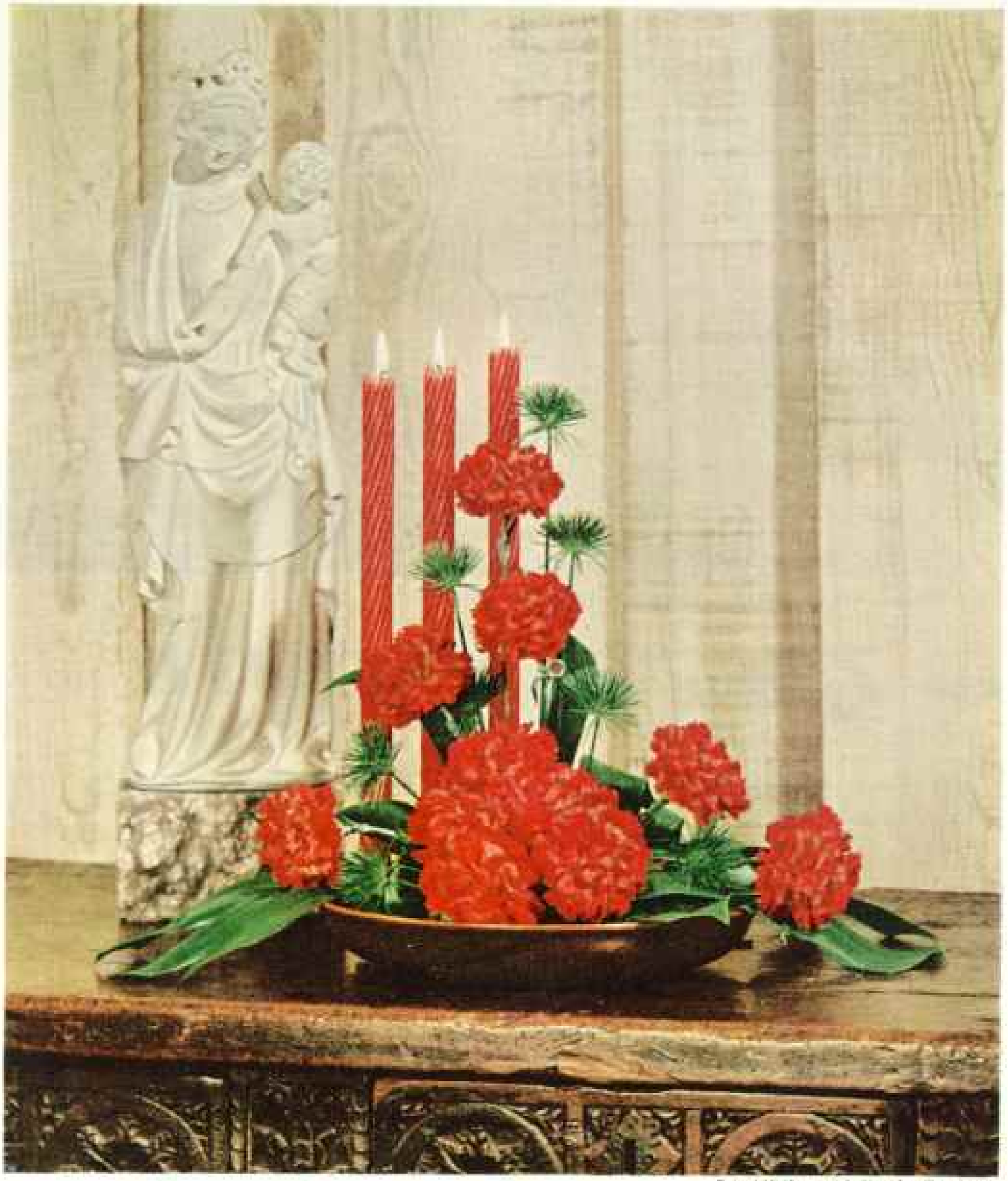

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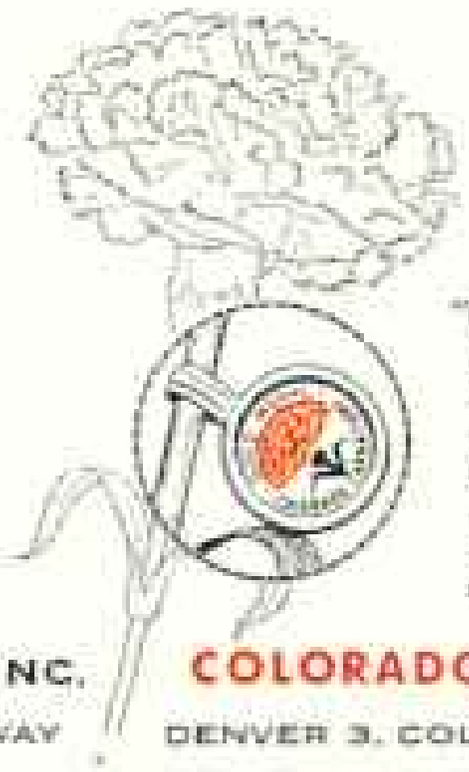

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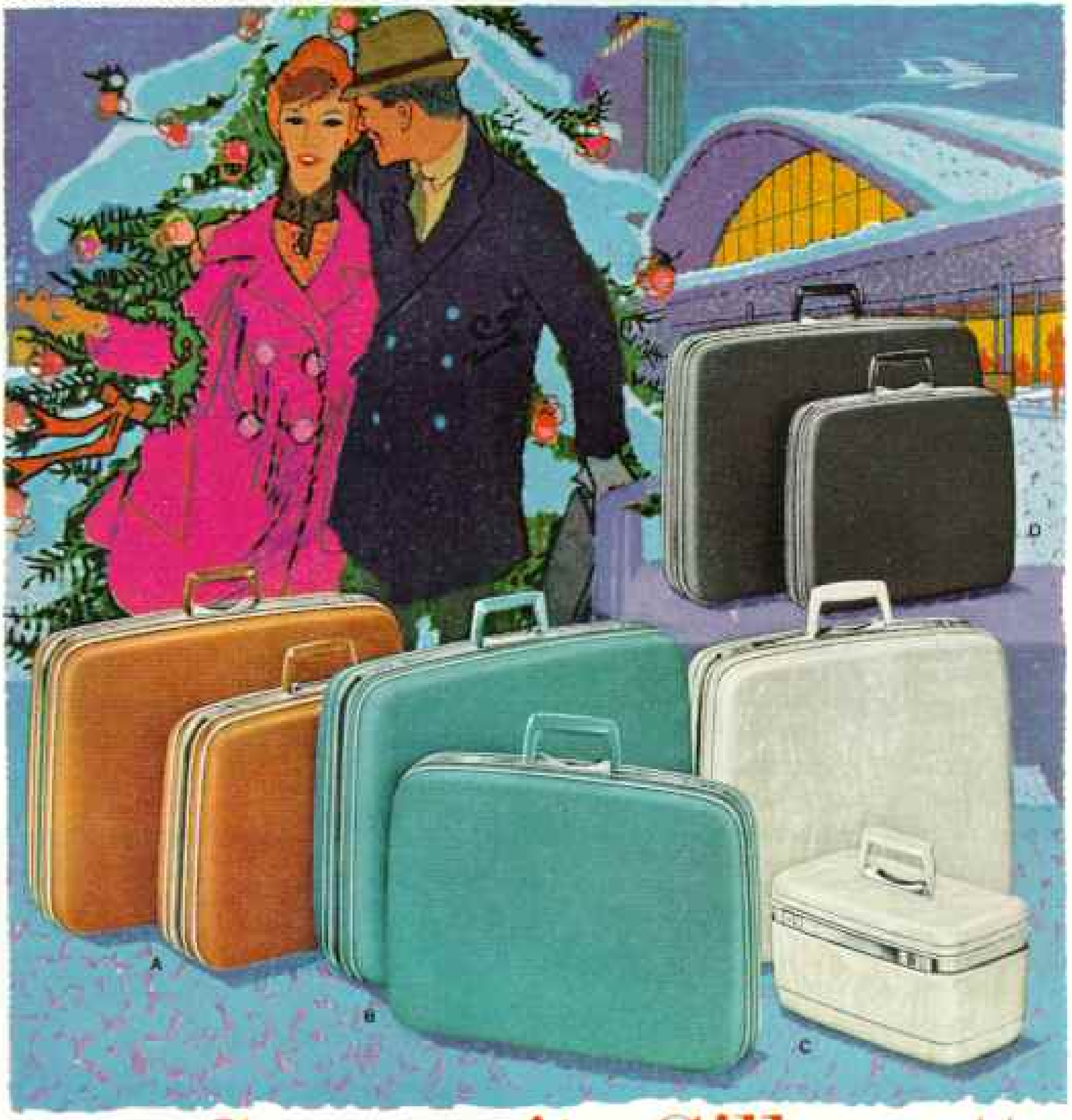

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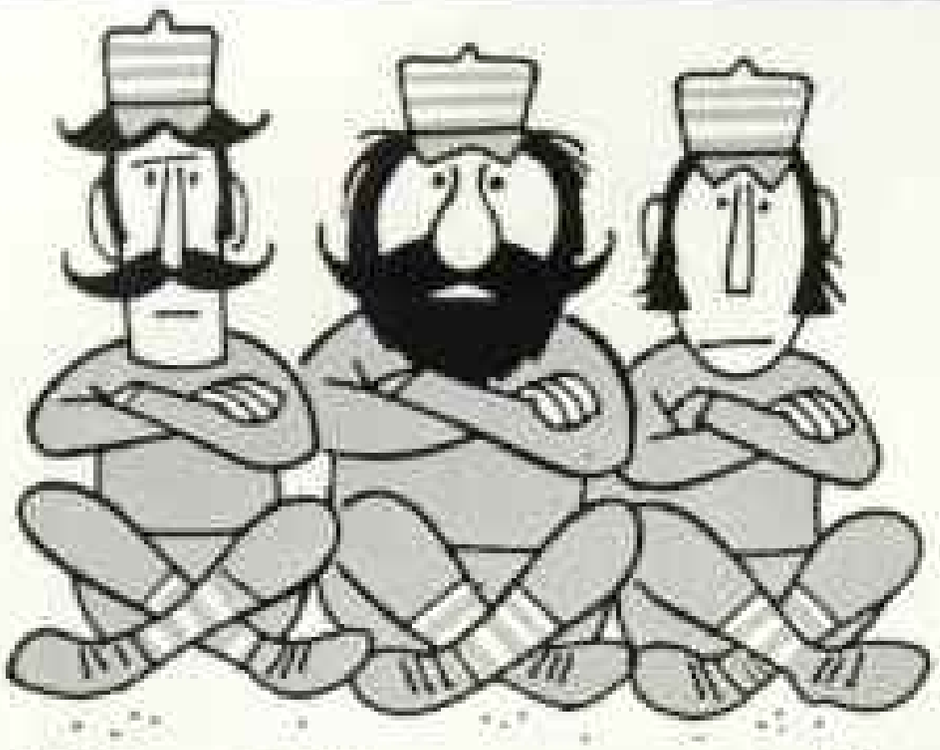
(FOR DECEMBER)



First baseball team was organized in:

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Time was when Gods walked and sported among men and men had not lost the power to see them. It was then that the Secret of the Dance was revealed by the Lord of the Universe to a mortal, Bharata. Later, the dance in its divine form was developed by the *devadasis* of the temples of old. The sculptures of India even today pay tribute to the grace and dazzle of these devoted nymphs. And even today this living dance is performed in all its purity in the dance theatres of India.

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How many home accident hazards can you find here?

Look closely at the picture above and you'll find a number of potentially dangerous situations that could cause accidents—perhaps without your realizing it—in your own home.

Notice the turned-up corner of the rug, the skates on the floor and the books on the staircase. Each of these is an invitation to a fall—and falls cause over 13,000 home fatalities a year.

Always keep stairways free of obstructions, provide a storage place for toys—and teach children to keep them there. Rugs, of course, should be made trip and slide proof to prevent tripping or skidding.

See the open fire without a screen? It's estimated that over 1500 homes are attacked by fire each day—some of them because open fireplaces are not properly screened. Every fireplace should be screened—especially if there are toddlers in the family.

Did you spot the frayed electric cord leading to the table lamp? It could cause severe shock, or a painful burn. Be sure that all the cords and electrical outlets throughout your home are always in good repair.

Notice the heavy vase on the table? A youngster could reach it easily and pull it over on himself. Keep heavy objects in the center of tables.

What about other potential "danger spots" in your home? The bathroom can be especially dangerous—if medicines are left where young children can get at them. All medicines should be kept in a secure storage place. And so should household preparations including bleach, lye, insecticides and cleaning fluids.

Poisoning from such substances is now a common medical emergency among young children.

Two of the important precautions to take in the kitchen are: keep sharp knives in a special rack on the wall; be sure that curtains do not hang where they can blow over an open flame.

Last year home accidents killed 28,000 Americans and caused over four million disabling injuries.

Why not inspect your home now for potential sources of accidents—and make the necessary repairs or arrange for their removal? If you do so, your home can be much safer for everyone in your family.

Metropolitan's booklet, *Your Family's Safety*, gives much more information to help you make your home the safe, secure haven it should be. For your free copy, use the coupon below.

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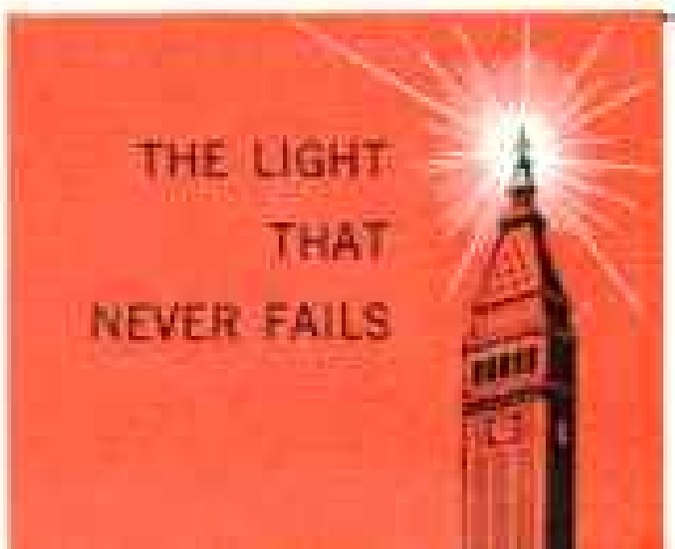

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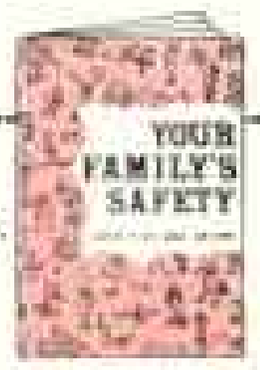

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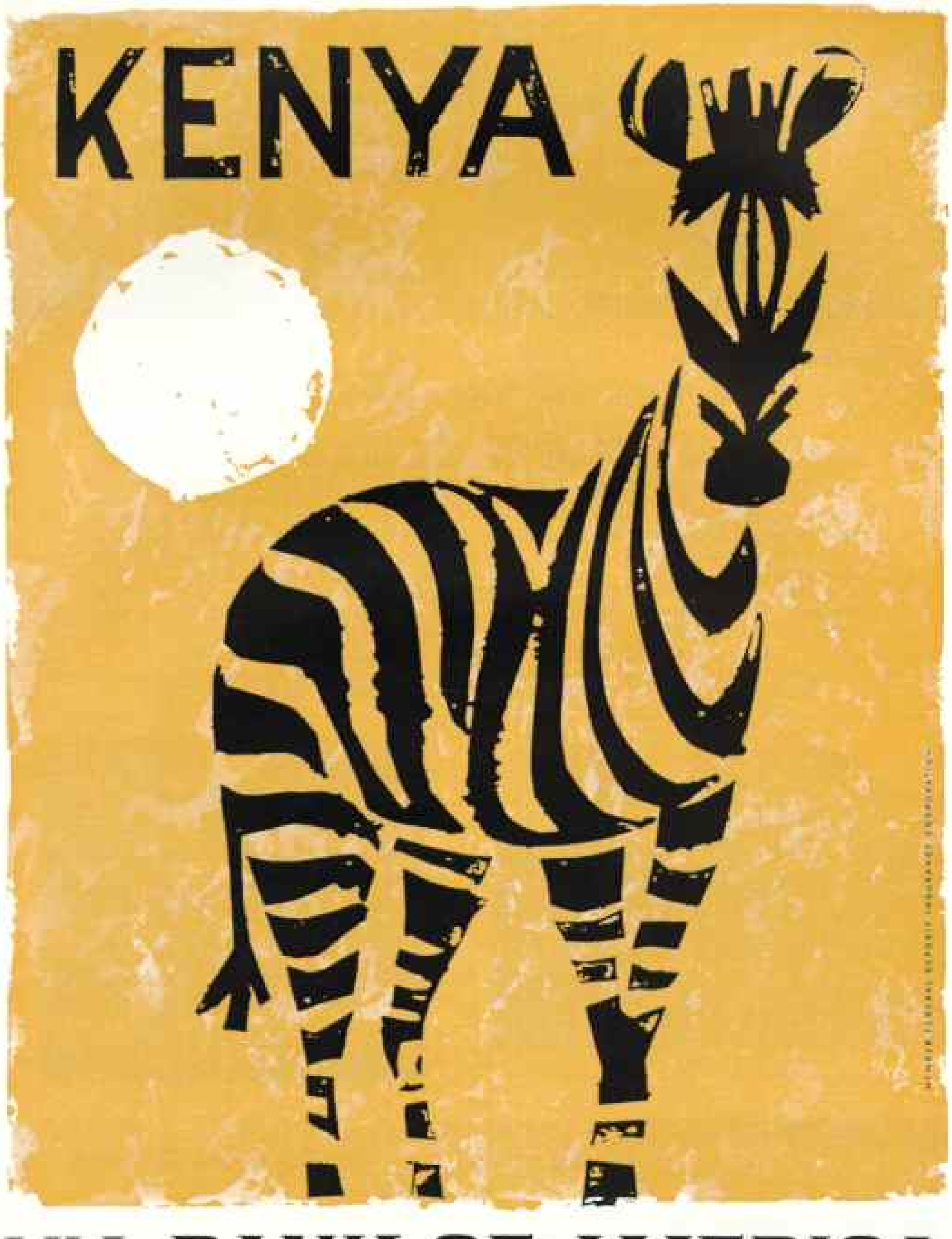

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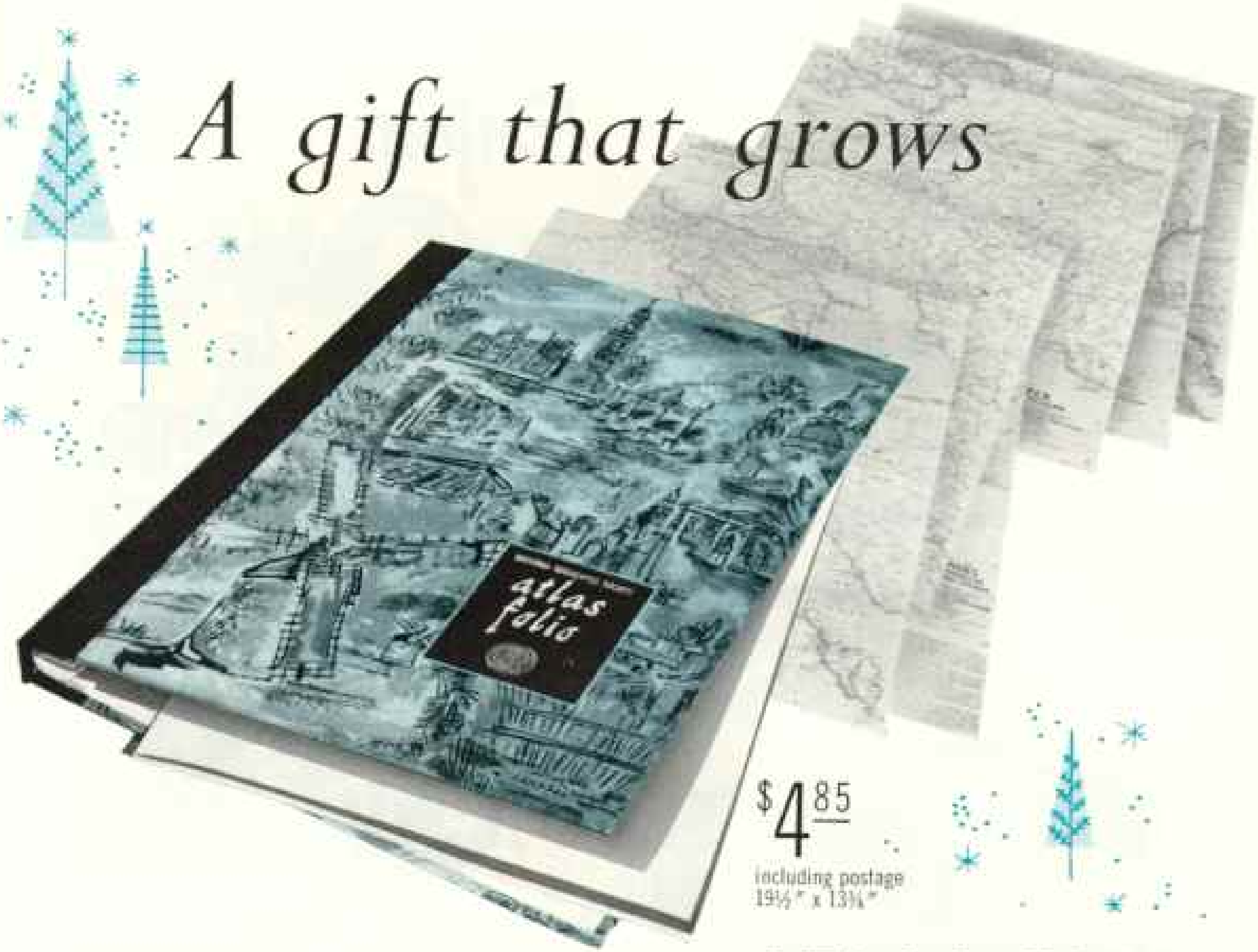

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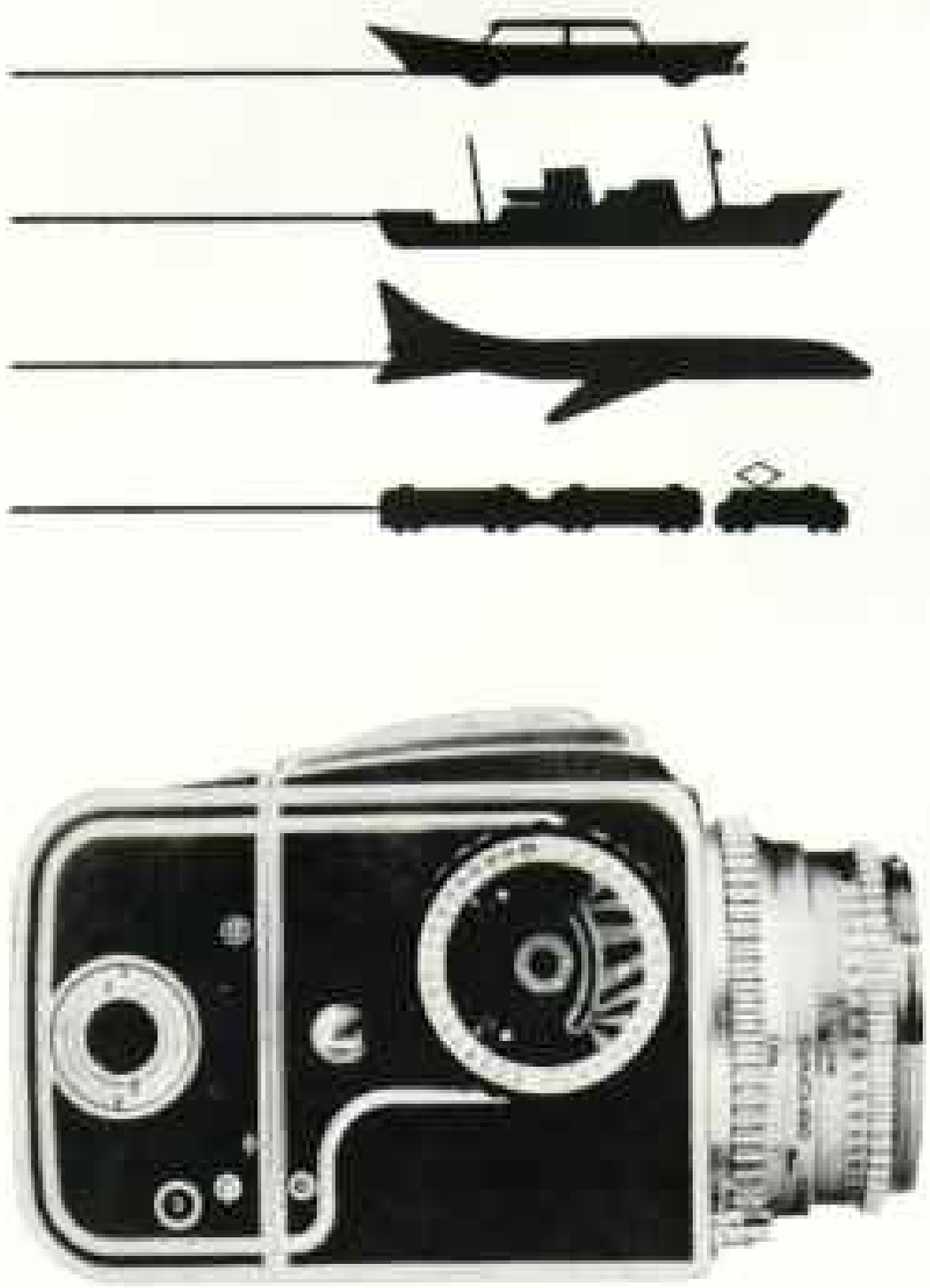

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Machu Picchu where sun-worshipping priests once ceremonially tied the sun to an altar.

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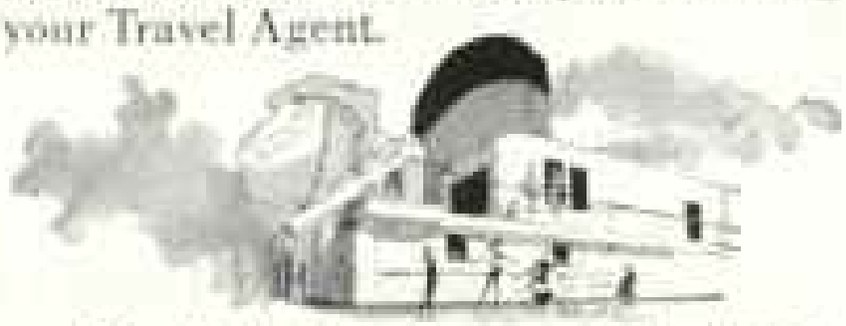

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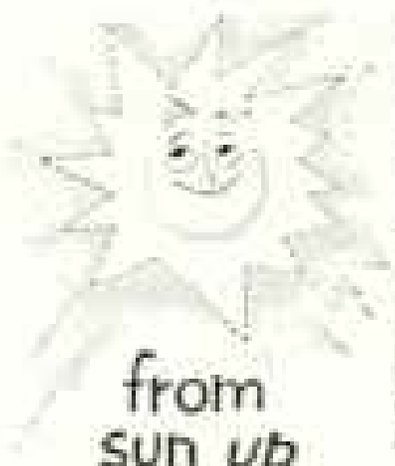

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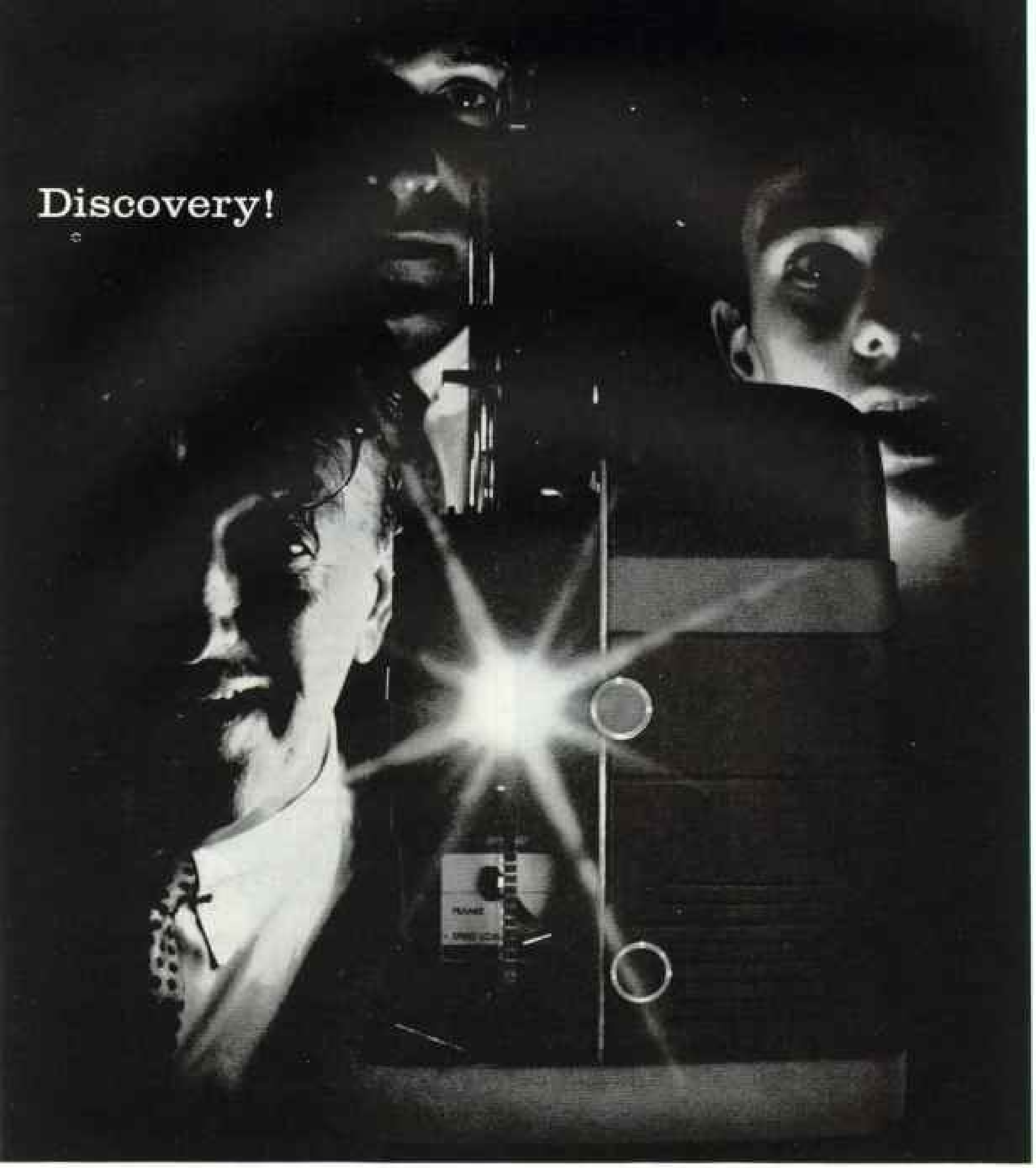

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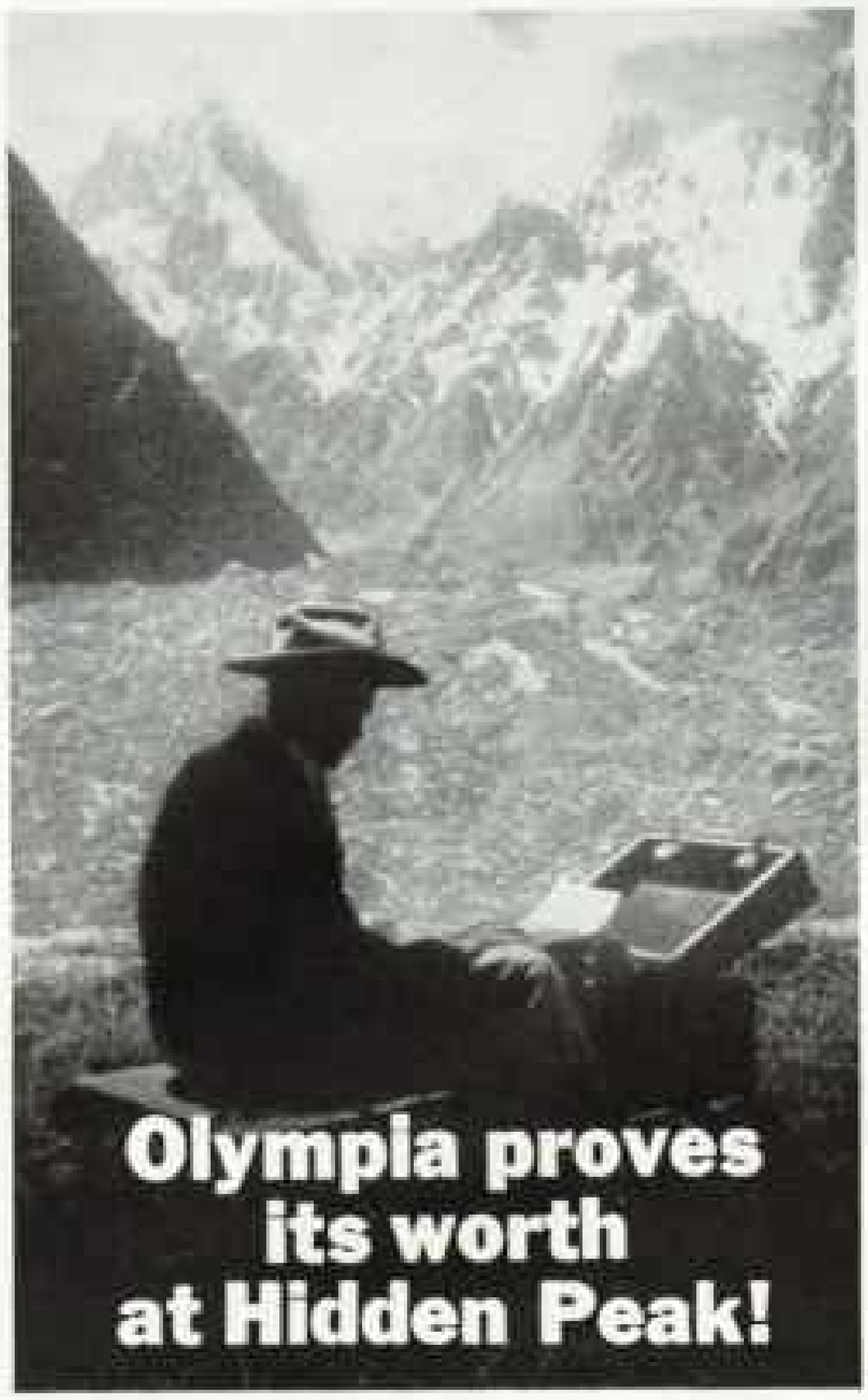

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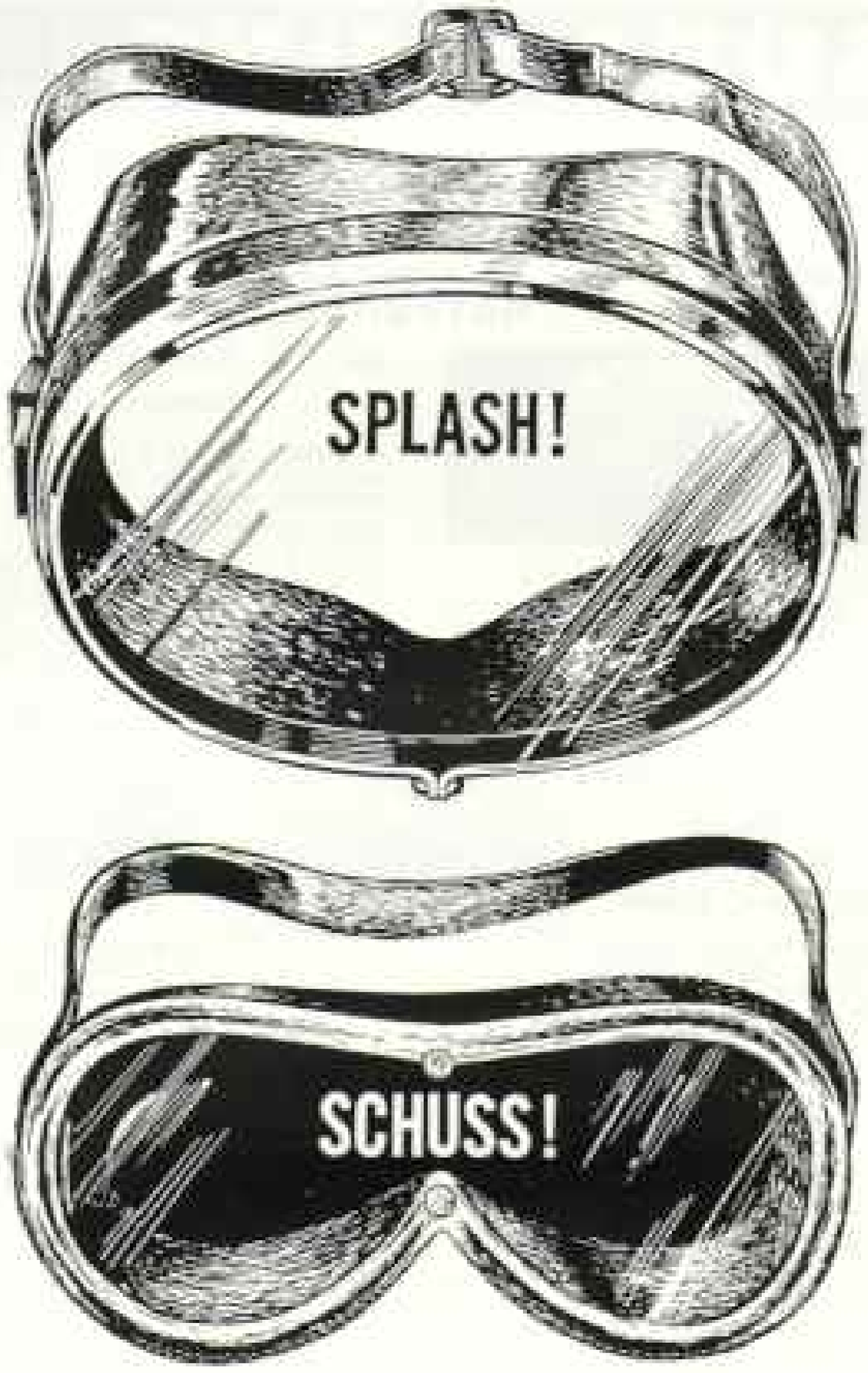

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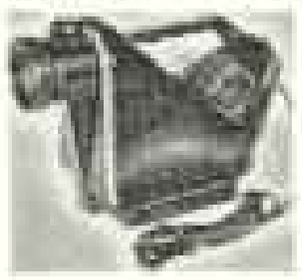

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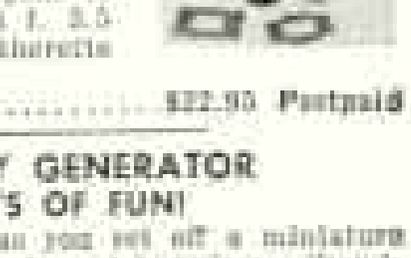

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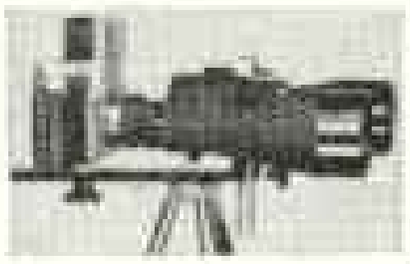

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