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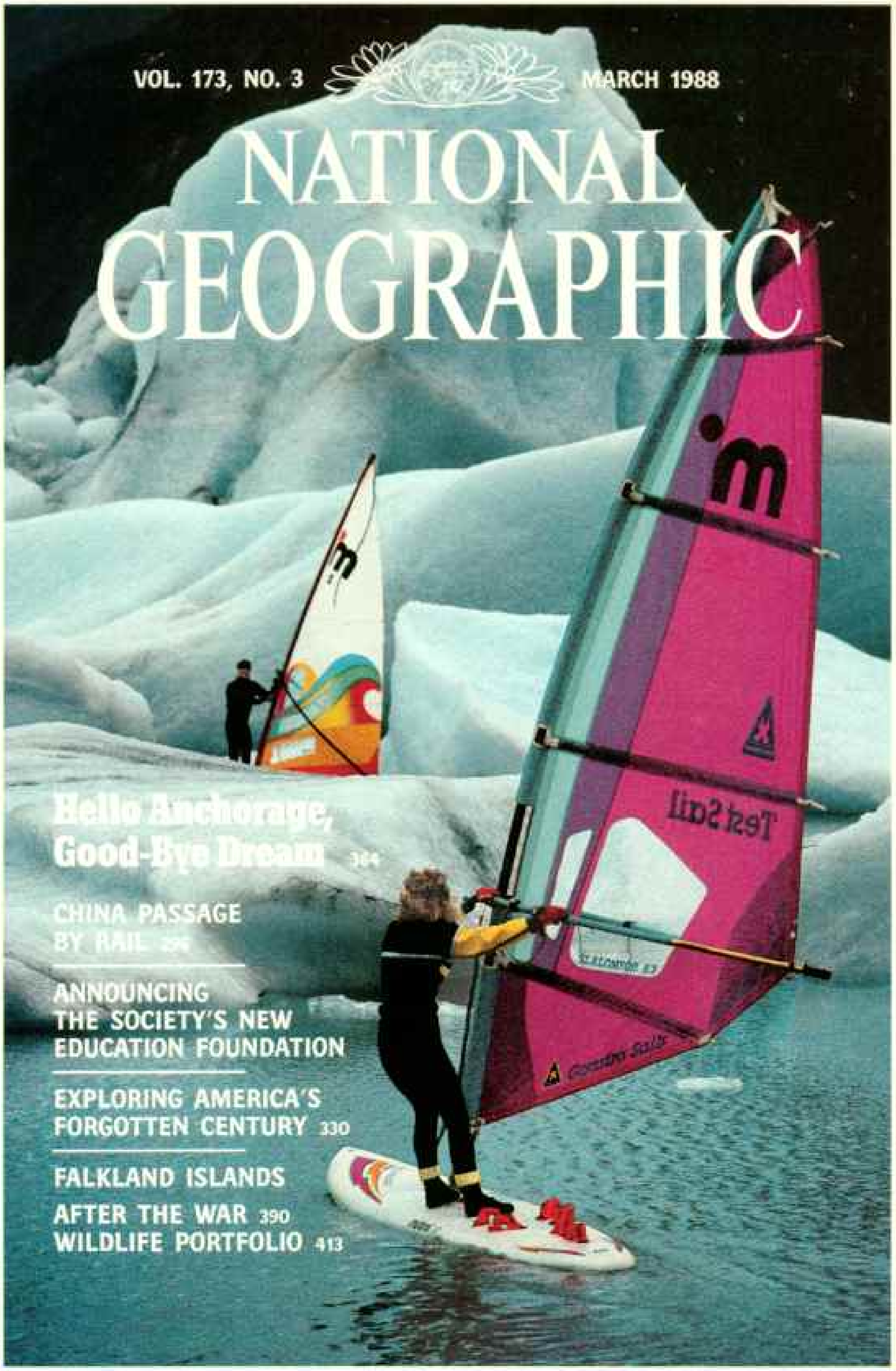

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COVER: *Windsurfing among icebergs, a dangerous and now prohibited activity on Portage Lake, typifies the try-anything-once spirit of Anchorage. Photograph by Chris Johns.*

IT'S A GIVEN that winners write the history books. In the 16th-century scramble to claim and settle what is now the southeastern United States, there were so many losers that historical records suffered. Senior Associate Editor Joseph Judge reports in this issue on the efforts to chronicle those chaotic years. In doing so, archaeologists depend heavily on human skeletal material for clues. In effect, through their remains the losers are belatedly writing the history.

But Indians resent what they feel has often been virtual robbing of their ancestors' graves. Scientists argue that skeletal material is critical for not just historical but also anthropological, ethnological, and even medical research—from studies of arthritis to osteoporosis.

Whether these bones continue to speak of the past depends partly on bills to be considered by Congress in 1988 that would bring the underfunded, ill-housed Museum of the American Indian, Heye Foundation in New York City to Washington, D. C. On the last open site on the Mall, below Capitol Hill, a multimillion-dollar facility would be built to properly house and display the Heye Foundation's one million artifacts and art objects, as well as some two million items currently in the Smithsonian's New World collection—including the remains of some 18,000 Indians, Eskimos, and Aleuts.

The National American Indian Museum and Memorial Act provides for a national memorial in which skeletal remains now in the care of the Smithsonian "not suitable for scientific inquiry" would be interred at the Mall site in Washington. New Yorkers are fighting to keep the Museum of the American Indian in their city. Indians want to reclaim the bones of their ancestors, and the Smithsonian feels obligated to retain unidentifiable prehistoric remains for scientific study.

Whatever the outcome, hearings on the bills before Congress will be heated. But at the very least the legacy of the first Americans will be spotlighted, and it is hoped a proper museum will be under construction before the quincentennial of Columbus's discovery and the resulting European conquest of the Americas.

Wilbur E. Garrett

EDITOR

Wheezing to life on a minus 40°C morning, a steam engine starts up narrow-gauge rails on its daily round of lumbering villages near Langxiang, one stop on the author's 20,000-kilometer (12,500-mile) journey through the new China. The logo of the growing Chinese Railways system (left) joins outlines of an engine and rail.

China Passage

By PAUL THEROUX Photographs by BRUCE DALE NATIONAL GEOGRAPHIC PHOTOGRAPHER

THE BEST WAY of getting to China is by train from London. I took seven eastbound expresses and some weeks later reached Beijing, 13,000 kilometers away (8,000 miles). This journey was full of surprises, but China—the new China—at the end of it, was the greatest surprise of all.

At the border town of Erenhot, the people working beside the track look up and smile as the train enters China and begin to applaud. They are well fed, and their markets are full of merchandise. In the Soviet Union I was repeatedly asked if I would be willing to sell my watch, my T-shirt, or my sweatshirt. In Siberia a man implored me for my track shoes. But the Chinese have all the T-shirts and track shoes they want.

China is enjoying a boom at the moment. And because it is no longer necessary for a Chinese person to secure official permission to travel, it is now full of travelers—salesmen, students, factory workers, people heading home or on vacation. They are crossing the country, they are visiting friends. They pay only about a third of what the same seat or berth would cost foreigners, who pay more for most things in China.

The Chinese prefer to travel by train and have a knack for turning an overnight trip into a combination pajama party and troop train, in which everyone shuffles around drinking tea and swapping stories. The Chinese are in their most relaxed and reminiscing moods on trains. No distinction is made regarding passengers. You might find yourself with anyone—a general, a peddler, a party official, a mother and baby. On my second train in China I was assigned to a compartment that I shared with a pair of honeymooners and a woman of 78.

The Chinese have become accustomed to a lack of privacy. But it has not made them rude—on the contrary, crowding has made them considerate and sensible. So on the overnight train from Erenhot to Datong, I was talking, eating, reading, and passing the time with these travelers, and after dark we all lay in our berths cozily rocking and snoring.

On that train I conceived a plan. Chinese railways go everywhere, so why not take them all? They went to the wettest regions in south China; the driest in Xinjiang (Sinkiang); the lowest, the Turpan Basin; the coldest, in Manchuria. The only place the railway didn't go was Tibet. The Chinese had abandoned this Tibet line at Golmud in Qinghai, faced by the impenetrable Kunlun Mountains. But if I persevered, I could visit 25 of China's 26 mainland provinces or regions. As soon as I crossed the border, I could see what these changes were, and who traveled and why, and what was on people's minds.

I LEARNED simple interesting things from Chinese railways: That the clever cormorants who help the fishermen in Guilin are brought in baskets by train from Shandong almost 2,000 kilometers away, that the raisins in Shanghai have made a four-day trip from Urumqi, and that it's always possible to buy apples and oranges in the desert cities of Qinghai, because of the train from the southern region. The Chinese are delighted by this speedy food distribution, and they are consequently healthier. They visit their relatives more often, they carry on their businesses more profitably (buying clothes cheaply in Guangzhou—Canton—and selling them in the free markets in the north), and they have become tourists themselves—complete with sunglasses and cameras. The train represents a whole new way of living, and traveling is one of their most important freedoms.

That was obvious in Datong, in Shanxi, just inside the Great Wall. Young people with banners and megaphones greeted the Chinese travelers at the station, urging them to stay at this or that hotel, or to try a particular restaurant—heavy competition, because these little groups of cheerleaders were each trying to outshout the others, touting for very tiny hotels and very modest restaurants. The foreign tourist is not even aware that such places

Farewell is festive at Beijing station for these Chinese boarding the weekly Wednesday morning through train to Moscow. The six-day, 7,865-kilometer journey by way of Ulaanbaatar is made mainly by officials and foreigners. From the nation's capital, rail service also reaches into every province and region except Xizang (Tibet). As economic reform brings greater prosperity, more passengers and freight take to the rails, China's main means of transport, and overload the system. The author in his travels saw many variations of this rail-crossing sign.

exist—the hotels are very basic but cost less than ten yuan ($2.70 U. S.) a night.

I stayed in one of these old-fashioned Chinese hotels in Datong. It had a chamber pot at the foot of the bed and a spittoon, and on the desk were a steel-nibbed pen, a bottle of blue ink, and a blotter. It was the sort of writing arrangement that would have been familiar to Charles Dickens. The Chinese are among the last people in the world still manufacturing the dunk-and-write pen and are definitely the last people on earth still making steam locomotives.

They turn out these big black choochoo trains in the Datong Locomotive Works (following pages), a factory with about 9,000 workers. Except for a few refinements these are the same gasping and indestructible vehicles that have been pulling trains in China since 1876. The factory is like a vast blacksmith's shop, most of the workers wearing cloth caps and slippers as they scamper among hunks of smoking iron to the tune of "The Anvil Chorus."

These workers earn a hundred yuan a month, basic pay—about $27 U. S.—but there are bonus and incentive schemes for high productivity.

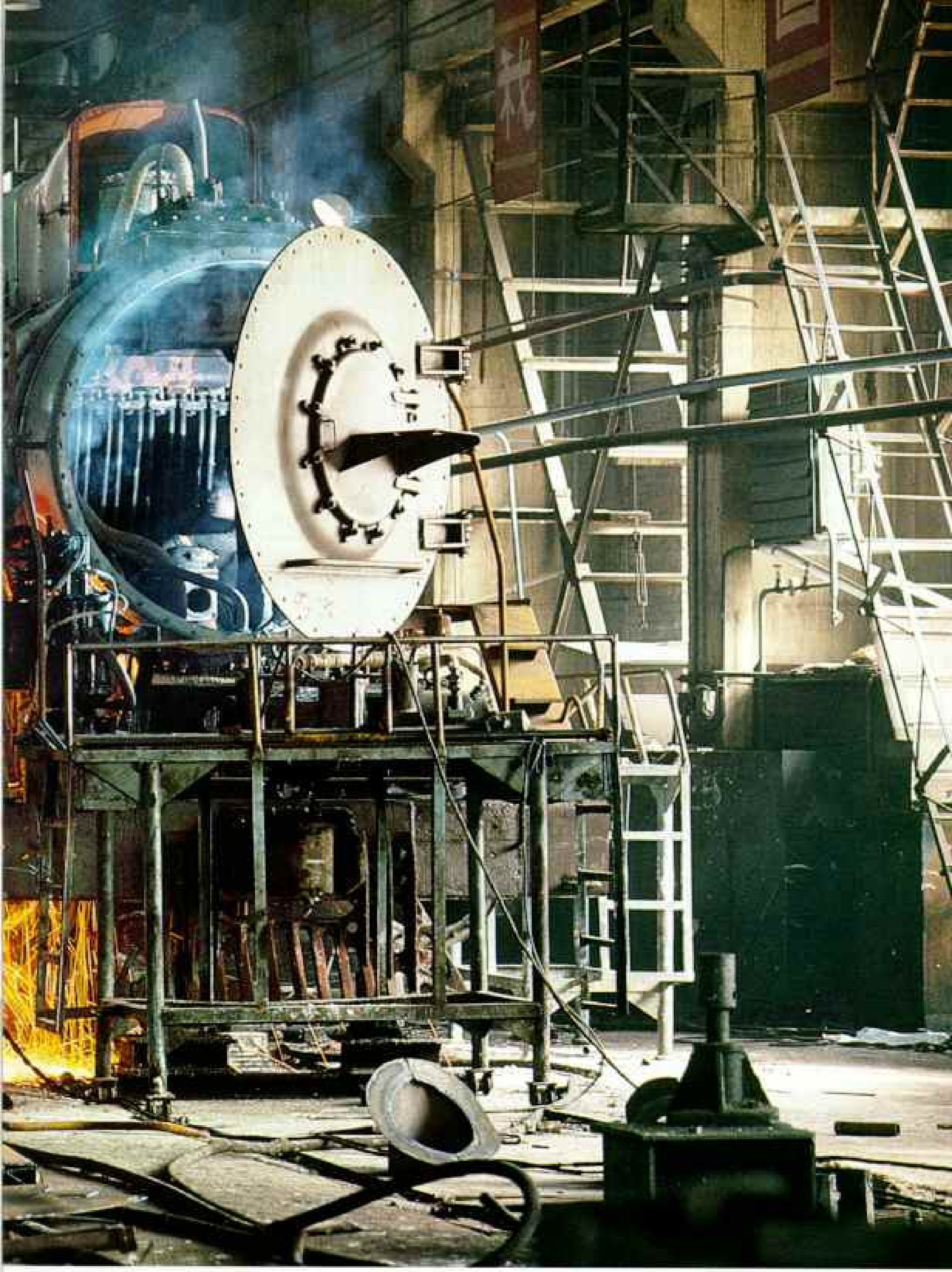
Mr. Pan, who was showing me around, said, "Workers in higher positions earn more."

"I thought everyone in China earned the same."

"Not any more. The basic pay might be the same, but one of the reforms in China is the bonus system. This varies according to your position and the kind of work you do, and also to where you live and what prices are like."

The locomotive works is unusual in China

Orderly inferno reminiscent of the 19th century, the steam locomotive works at Datong labors to pull China into the 21st century. Welders join the boiler



to the frame of a 2,270 horsepower JS 2-8-2 Mikado. To utilize its vast coal resources, China still builds steam engines, the last nation to do so.

for having a very large portrait of Chairman Mao in the visitors room. There are now very few portraits of Mao on view in China, though there were tens of millions of them hanging at the time of his death in 1976.

IN BEIJING, Bette Bao Lord, the American novelist who is married to U. S. Ambassador Winston Lord, introduced me to Sang Ye, an ingenious young man who with the writer Zhang Xinxin had the idea of traveling around China with a tape recorder, asking people to talk about their lives. This became a highly successful series in a Beijing newspaper, later translated as a book under the title *Chinese Profiles*. What is striking about the collection is its candor: People complain and boast and praise, but most of all they level with the interviewer, speaking about their pleasures and their pains.

Sang Ye said, "You say you are interested in railways. There is a certain line you should see. It is just outside Beijing. Its nickname is 'Death Road.' During the Cultural Revolution people used to kill themselves on that section of track. One person a day, and sometimes more, jumped in front of the train. They chose the train because they were too poor to buy poison."

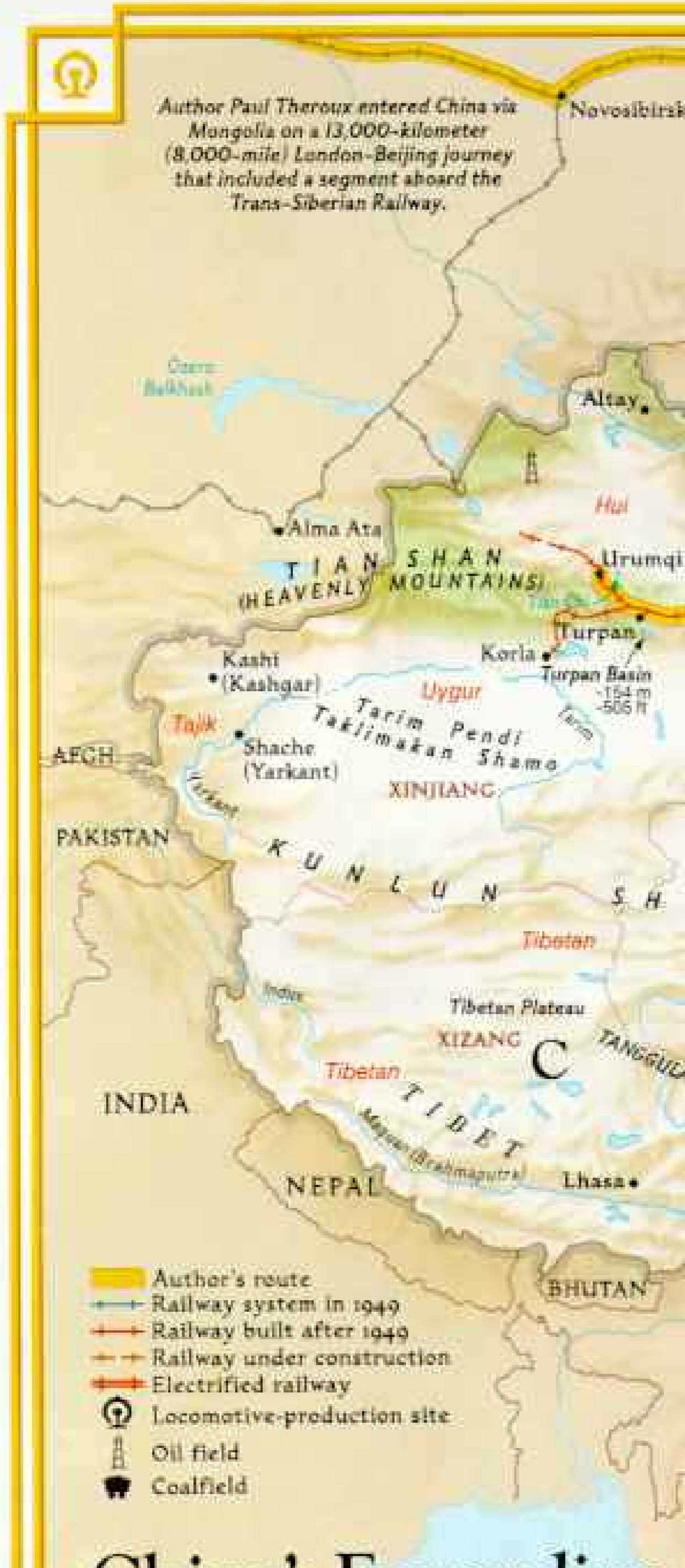
One day in a Beijing bookstore I met an elderly musician, Zhang Mei, and, discovering he liked the songs of Stephen Foster and had written many songs himself, invited him out for a meal. He was a delightful man who had lived through it all: the skirmishing in the twenties; the Long March; the forties, which had been one long war; and the turbulent early years of the People's Republic.

"But I wonder what Chairman Mao would say if he saw what was taking place in China right now," I said. "He might not like it." I was thinking of the billboards, bright dresses, traffic, pop music, the free markets where everyone was allowed to trade, the new Chinese movies in which people fell in love, and kissed, and took honeymoons in Shanghai.

"He would have to like it," Mr. Zhang said. "The facts would teach him. He could not deny it."

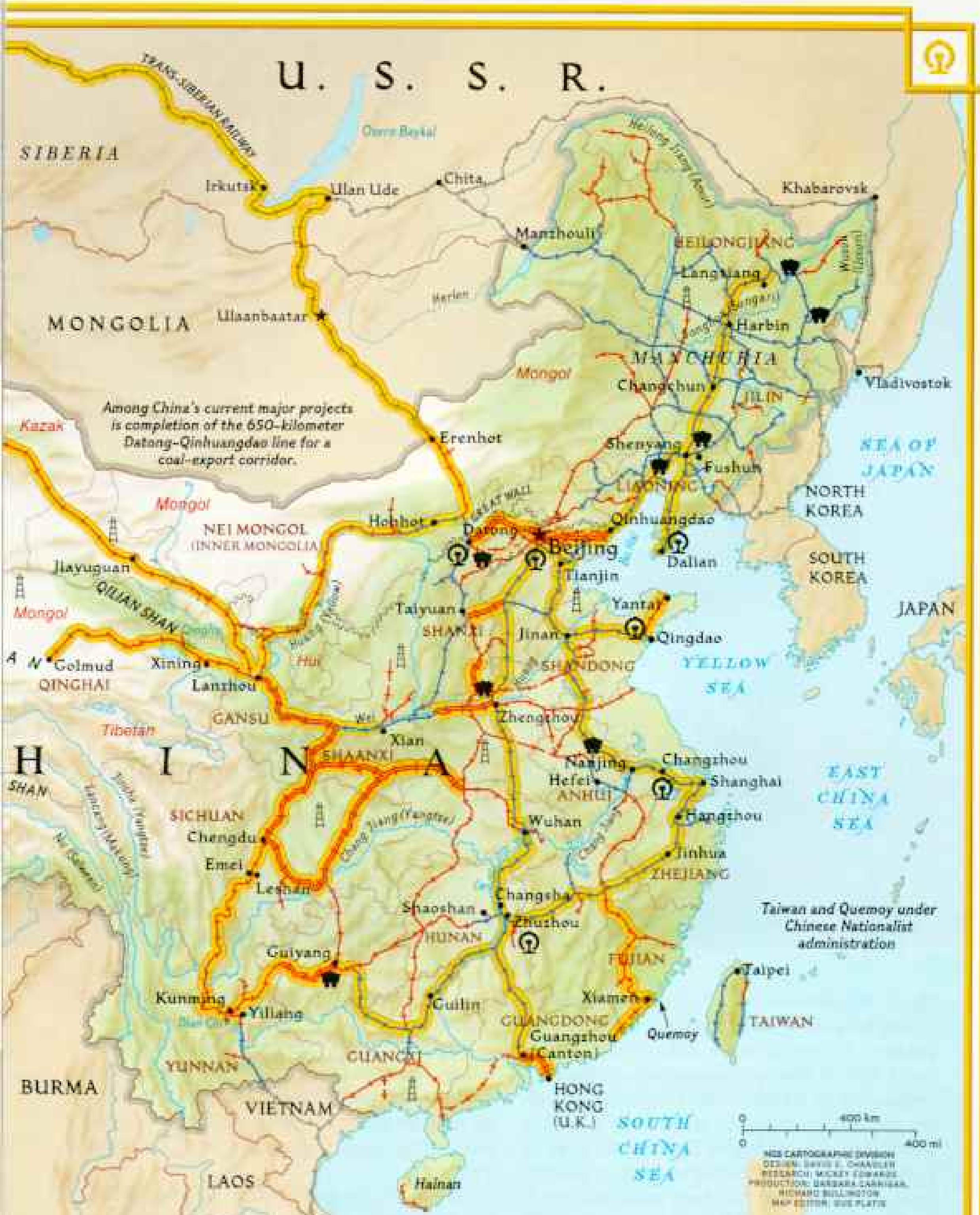
Mr. Zhang, 76, said he liked what was happening to China, but Chinese history was long, and it had distinct phases; and it might be years before we could assess this one.

That reminded me of a remark attributed to Mao when asked what he thought about



China's Expanding Railways

FEARFUL of foreign domination and suspicious of foreign technology, China came late to railroading. The first line, laid by the British near Shanghai in 1876, was soon ripped up. Gradually Britain, Russia, the United States, France, and Germany gained concessions to push railroads inland to reach rich resources. The imperial Chinese government had built



only half of the 9,700 kilometers of line existing in 1912 when Sun Yat-sen declared China a republic. He envisioned a 160,000-kilometer rail system to settle undeveloped regions, as in the United States. Civil and foreign conflicts hindered construction. When the People's Republic of China was born in 1949, a national rail network became a top priority. Today China is the world's major railroad constructor, with more than 6,000 kilometers now being added to its 53,000-kilometer system. Slightly larger than the U. S., China has only 250 kilometers (155 miles) of first-class highways. Diverse terrain challenges rail builders. The mountainous, earthquake-prone Chengdu-Kunming route passes through 427 tunnels and over 653 bridges.

the French Revolution: "It is too early to say."

Not long after that I took the Shanghai express—17 hours, no stops. I shared a compartment with a young Singaporean mechanical engineer who claimed that China was spending too much money on technology it hadn't learned to use. "They're backward. They're peasants," he said. But this was not an uncommon reaction from someone who was obviously intimidated by China's immensity. The overseas Chinese, all of whom are encouraged to see China as the motherland, often feel lost and anonymous among her one billion people.

Shanghai is a big brown riverside city with the look of Brooklyn, and the Chinese like it for its crowds and its street life. It has a reputation for city slickers and faddishness. When changes come to China they come first to Shanghai.

There I visited Comrade Ning, a retired official who was a Maoist—indeed, he still wore his blue suit and slippers and had a habit of quoting the old man on certain subjects, using terms like armed struggle and collective leadership.

We talked about corruption. Comrade Ning admitted there were many cases. Recently in Shanghai a Chinese businessman convicted of taking bribes had been executed—the Chinese way, with a bullet in the back of the neck.

I said, "Do you think the death penalty might be regarded as a little severe in a case of stealing?"

"The death penalty is a Chinese custom,"

Puffing workhorse, the largest Chinese-built steam locomotive, the QJ 2-10-2, heads north out of Langxiang as workers return to their homes at sunset. Women cooperate to move hefty logs at the town's sawmill (left). Workers from the south were resettled here in the late 1940s when China began to harvest the vast timber resources of the far northeast—formerly Manchuria.

Stoking the firebox, a fireman shovels coal on a small steam engine that pulls a new locomotive off the assembly line at Datong, which produces 240 of them a year, two-thirds of national output. China makes more than 275 diesels and 100 electric locomotives annually.

Comrade Ning said. "If you kill someone, you pay with your life. That is simple. And his was the same sort of serious crime."

The list of capital crimes is lengthy and includes not only murder, rape, arson, swindling, and robbery, but also pimping, spying, embezzling, and organizing secret societies. Between 1983 and 1986 an estimated 10,000 people were executed in China.

The train from Shanghai to Canton takes a day and a half, and it travels through eternal China—the paddy fields and streaky hills and tile-roofed houses and groves of groaning bamboo. On that entire trip you are always within sight of food growing, and there are always people in the fields, wearing lampshade hats and working.

Some minutes before we reached Canton, the train stopped and a large blue dragonfly hovered near my window. That was perfect—the Chinese dragonfly shimmering in the lushness of Guangdong. China does not have many wild animals, and if you see a rare bird, inevitably someone is stuffing it into his mouth; but China has gorgeous insects.

Canton is probably the most radically changed of any city in China, but it is not changing beyond recognition—in fact it is becoming more familiar, more commercial, brighter, noisier. People worry that Hong Kong will be changed when it is repossessed by the Chinese in 1997. It was my feeling that it might not change at all, because by then Chinese cities like Canton will have grown to resemble it. Already, Canton is a city of smart hotels and flashy bowling alleys, of restaurants and dense traffic.

There is undeniably a breathless get-it-while-you-can attitude in China, but that is understandable in a country beset by sudden and seismic changes. And the other thing—which Canton epitomizes—is that China exists so distinctly in the visitor's mind as a fixed and familiar place that it is hard to shake that fantasy loose and see the real thing, which is dynamic and changing. The Chinese also toil quietly, and beside the existing railway to Canton a new railway line is being built. It is the most modern in China, and it will obviously become the main line to Hong Kong.

MY LONGEST railway journey in China was the one from Beijing to Urumqi in the far western region of Xinjiang. The train's nickname, the "Iron Rooster," derives from the frugality of the Xinjiang railway ministry and a Chinese proverb that says you can't get a feather from an iron rooster. And these big, noisy boilers from the Datong factory also sound like iron roosters, crowing and flapping the almost 3,800 kilometers of this trip.

A few days before I set off, a sandstorm buried 530 kilometers of track—hurricane-force winds that stranded 47 trains. But the region is accustomed to disasters. Railway workers disinterred the tracks, and within two days of the storm the trains were running again. The line is remarkable for the many ways in which the Chinese have tried to deflect sandstorms: with cactus, with patterns of grass, with trees, with walls and fences. In the middle of nowhere, patterns of diligent saplings hold

the dunes at bay with their skinny limbs.

In Hohhot, the capital of China's Inner Mongolia, I admired the dusty geometry of the city street and declined to visit a plaster, yurt-shaped monument to Genghis Khan. The large Muslim community—officially a "minority" called the Hui—had been allowed to rebuild their mosque, but no one could tell me why there was a painted clockface on the mosque, with painted hands showing the time to be forever 12:45.

I reboarded the Iron Rooster and pushed on, through Inner Mongolia, across the grasslands and past big bulky mountains. The Chinese landscape here looked orderly and deliberate—every tree and bush had been planted, and there was nothing random except the eroded ravines.

From the upraised track I could see a sort of town—all bungalows and yards—like a Chinese parody of an American suburb, and somewhat like my hometown, Medford, Massachusetts, but made out of mud.

Lanzhou was a city of tall factory chimneys, and it lay smoking on the south bank of the slow and opaque Huang He (Yellow River). I was bemused by the large amount of merchandise available in Lanzhou's stores and happened upon a copy of *Chinese Literature* (Autumn 1986), which included a story that depicted a family in this increasingly consumer society. The story was called "The Wind on the Plateau" and was written by a distinguished Chinese short-story writer and present Minister of Culture, Wang Meng. One paragraph went:

"Yet his son was far from satisfied with things as they were. He wanted video equipment, a musical door-chime, a motorcycle, and a rubber dinghy. Why not go out and get an air-conditioner made in Australia?"

The story was not written ironically and was perhaps an accurate picture of the current mood of acquisitiveness.

As the train went west through Gansu, the landscape became emptier until it was utterly barren. The mountains were shaped like a certain kind of Chinese dumpling, and erosion

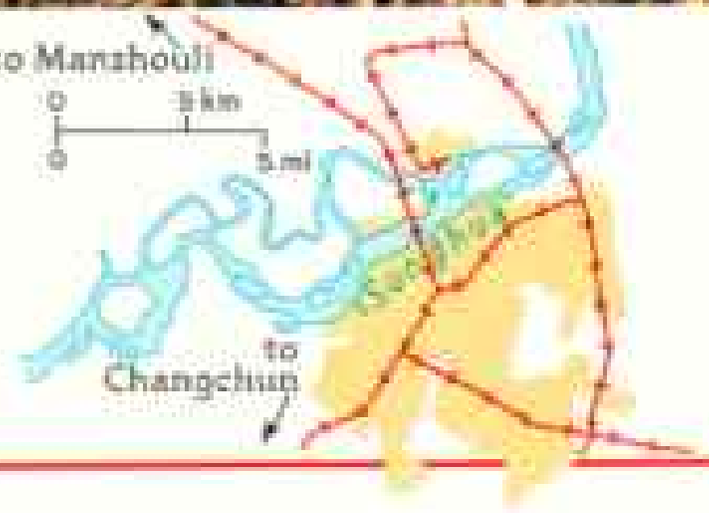
One of the 9,000 workers at Datong relaxes beside steel driving rods fabricated at a foundry in the plant. The pace of labor is sometimes leisurely, since all workers receive the same basic wage and find that earning a bonus can bring envy and even wrath from co-workers.

had given them crimp marks on their edges. The foreground was a flat plain, and the distant background was all snowy blue-and-white peaks. The landscape was majestic and strange: On some stretches I saw green fields and grapevines, and sand dunes, and rocky hills and snow out the same window.

Later that day, at dusk, we passed Jiayuguan, at the western end of the Great Wall, with its huge solemn gate, and saw how the Great Wall at that point turned into a barrier of mud bricks and went traipsing still farther west.

The rest of the trip was mountains and desert, snow and sand, as the train moved slowly under a cloudless sky. In the 20-coach train, the Uygurs played rock and roll on their portable stereos, and they ate and washed and spat and played cards without leaving their seats. The Uygurs are one of China's largest minorities and, related to the Mongols and mostly Muslim, they number some six million people. They gave their name to this vast area, the largest in China, the Xinjiang Uygur Autonomous Region.

Turpan with its grape arbors and its



HARBIN *Winter wears icy ornaments in Harbin, an industrial city and rail hub in the northeast. The Ice Lantern Festival overlaps a national holiday that begins on the first day of the lunar year, usually in January. Dozens of structures are carved from blocks of river ice, with colored lights inside. The sculptures last till*

snowmelt in March or April. Harbin was a fishing village until 1896, when the Russians won a concession to build a rail shortcut to Vladivostok and made Harbin a construction base. The Russians built an Orthodox church, destroyed by the Red Guards in the Cultural Revolution, that is commemorated in the sculpture at right.

Waiting room often means the street at the jam-packed Beijing station. Some 100,000 riders pass through here every day. Those headed north to the Great Wall (facing page) and Mongolia travel the first railway designed and built entirely by Chinese, in 1909.

donkeys seemed like a place out of the Bible. It is China's hottest town, and also its lowest—150 meters below sea level. The skull-capped Uygurs also have a Levantine look, and their bazaar has the atmosphere of a casbah: The fruit sellers had the features of fortune-tellers, of Gypsies and Slavs. By their clothes it was apparent that this town at the edge of China was populated by people who had ridden out of Russia on their horses—the Uzbeks, the Tajiks, and the Kazaks.

ANOTHER DAY'S RIDE through the 12 tunnels of the Heavenly Mountains (Tian Shan) and I was at Urumqi. The Chinese are proud of the fact that in 1960, when their break with the Soviet Union meant they had no one to help them any more on this great railway west, they went on alone. The Soviets had taken all their tools and even the plans of the railway. The Chinese finished it themselves in 1963.

Mr. Jie, of the China Railway Foreign Service Branch in Urumqi, said that in 1958 there was a slogan, "This year Urumqi, next year the Russian border!" and there is still a plan for the railway to extend to the frontier and beyond, to the Soviet city of Alma Ata.

Jiao Xiku, who was general manager of the same organization, said he had been in Urumqi for 28 years. I asked him his favorite railway journey.

"The line of Xian," he said. "The Silk Road."

Having just taken it, I agreed but added, "You're talking ancient history."

"Yes. Recent history is not so interesting."

The most beautiful place in the region is Tian Chi, a mountain lake surrounded by snowy escarpments and glaciers. I went there and was walking around the lake when I met a man from the remote town of Altay, near the Soviet border. He worked at the town's bank, and his favorite author was Mark Twain. In fact, after reading *The Adventures of Tom Sawyer*, this Mr. Ching gave himself the name "Tom." And when he announced it in the bank, all the other clerks decided to change their names too.

"We have Mike, Julian, Jan, Wayne, and Bob."

I asked him a political question, and he brushed it aside and laughed and said, "Everything is different now. That trouble is in the past. We are different."

"What's the main difference?"

"We are happy," he said.

The trip from Lanzhou to Xian was a lovely one because the line winds along the banks of the Wei River, and the gorges are steep and dramatic. This is the southeast corner of Gansu Province, but farther on, when the train entered Shaanxi Province, the land became flatter and, like all flatland in China, intensively farmed. The people harvesting stood chest high in their wheat, and when they bent over to cut it with their sickles they disappeared.

These wheat fields continued to the very edge of Xian—to the enormous city wall, which gives this ancient place the look of a medieval fort. Near the North Gate was a slogan in characters half a meter high: "Be disciplined and obey the law." The train chugs

Electric trains are the future, the Chinese believe. This one hauling coal east of Lanzhou is more efficient and safer in tunnels than steam or diesel. One reason for building more rail lines is to move stockpiles of coal awaiting transport both within the country and abroad.

beside the wall and then penetrates it, and looking at Xian's new railway station—one of the prettiest in China—you know that you are in an extraordinary place.

The majority of tourists in Xian are Chinese. They are not rich, presumptuous wanderers, but rather threadbare families and factory workers who travel hard class, sometimes great distances, to see the sights.

WE ENTERED Sichuan Province, passing through a mist that gave the landscape the look of a Chinese watercolor. People were going to market with baskets of vegetables and big hairy pigs. A man on a canal bank fished with two poles—one in each hand.

Standing on the little platform at Emei station, waiting for the train to come, I was told by the stationmaster that there were 200 tunnels between here and Kunming. That meant hills and valleys and mountain gorges and narrow swinging footbridges. The line does not go straight through the mountains. It creeps around their sides, rises higher, and circles again, doubling back. You look out and see the line you left half an hour ago.

This Chengdu-Kunming railway line is one of the most dramatic in China, and it was also the hardest to build. It took 12 years, but they were crucial ones, from 1958 to 1970: years of idealism, revolutionary fervor, self-sacrifice—and forced labor. It was built by soldiers and prisoners.

We were traveling through central Sichuan, and the dining car that night served the provincial specialities, peppery chicken and bean curd. At sunset the glow over the mountain ranges afforded just enough light to see a cemetery beside the railway line.

"They are the graves of the workers who died building the line," Mr. He said. It was unusual for the Chinese not to cremate their dead, and cemeteries were regarded as a waste of space. This little graveyard on the mountainside was intended as a tribute to these workers.

Mr. He was the *lie che zhang*, Head of the Train. He had started as a luggage handler in the 1960s and had held most of the jobs on long-distance trains—conductor, sleeping car attendant, and even cook. "Not a bad cook," he laughed.

"I was promoted by being appointed," he explained. "I didn't apply for any of these posts. And one day my officers came to me and said, 'We want you to be Head of the Train,' and I agreed."

The train arrived in Kunming at 8:30 in the morning. It had been a 24-hour trip. But this was not a free day for Mr. He: The train would head back to Chengdu that night, and Mr. He was in charge of that trip too.

In the park near Cuihu (Green Lake), there are scores of storytellers and musicians, and it was touching to see an old man and woman singing a duet, or a person holding his listeners spellbound with a story.

THE VIETNAM BORDER is 465 kilometers from Kunming, and a narrow-gauge railway travels the whole distance. The line was finished in 1910 by the French, who wanted to exploit the trade of Yunnan and thus expand

their sphere of influence beyond Indochina.

There is tension now on the border, and intermittent skirmishing, which is reported in patriotic terms in the *People's Daily*. The through train to Vietnam stopped running in 1979. I asked the Railway Board whether I could take it part of the way.

"Foreigners are forbidden to stay in the towns on that line," the officer said.

"I won't stay," I said. "I'll just go to one—say, Yiliang—and come straight back to Kunming."

After a little discussion they agreed to this bending of the rules, and that was how I came to be sitting on the small, rattly narrow-gauge train through the Yunnanese jungle. I was accompanied by Mr. Wei, who helpfully pointed out the crematorium on Running Horse Hill. The other passengers—countrypeople—were playing checkers and smoking the big bamboo pipes that have long been favored by the Yunnanese.

Slow as hand labor is, it gets the job done—this hacksaw, cooled by water, cuts a steel rail in 30 to 90 minutes for a repair at Chengdu. As part of a decentralization policy, some regional rail bureaus are now free to invest profits to improve their own lines.

At a tiny station a woman got on that train and sat near us. She had two children in tow. I naturally wondered, in view of the one-child policy, how this woman had two. Mr. Wei put the question to her tactfully.

She said that her first child had been a girl, but that she and her husband had been counting on a boy. They decided to have a second child, even though it meant a fine *(fa kuan)* of a thousand yuan. The woman became pregnant, paid the fine, and gave birth to a boy.

"The countrypeople want more children to help with the farming and to look after them when they are old," said Mr. Wei.

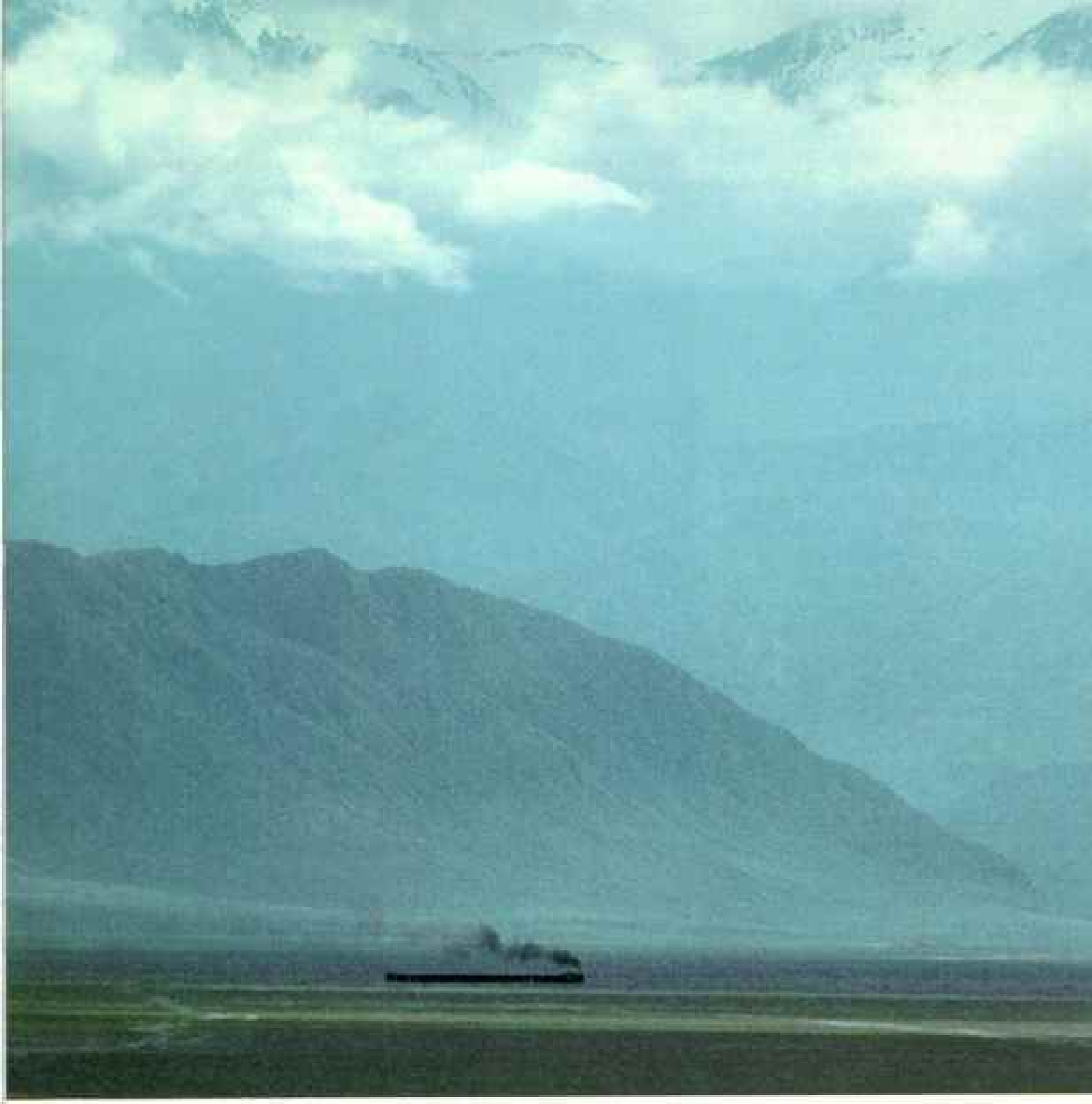
The train traveled in a groove high in these hills, and below the line was the wide lake called Dian Chi. It was a landscape of thin trees with fluttery leaves and small farms; it was tropical and fragrant, and the sky was full of steamy-looking clouds.

And suddenly beside the track there were French colonial houses—the sort that are found all over Vietnam: yellow stucco, with long windows and narrow green shutters and tiled roofs. They had been built by the French at the turn of the century for the railway supervisors. They were very pretty, set amid the low hills and fields. It was so strange to find in the houses a touch of Frenchness deep in Yunnan, but the region had been so isolated for so long it had hardly changed.

IT TOOK 36 HOURS to travel by train from Kunming east to Guilin, making a dogleg because of the mountain ranges. Guangxi Province possesses the landscape that is so often depicted in Chinese classical paintings—steep hills of gray limestone, the shape of camel humps, and water everywhere. At about the halfway mark, Guiyang, I met an old man who said that he had retired, but strictly for the pleasure of it he was working at the station. He didn't need his salary, he said, and so he spent it on his hobby. What was his hobby?

"Listening to light orchestral music," he said very carefully in English.

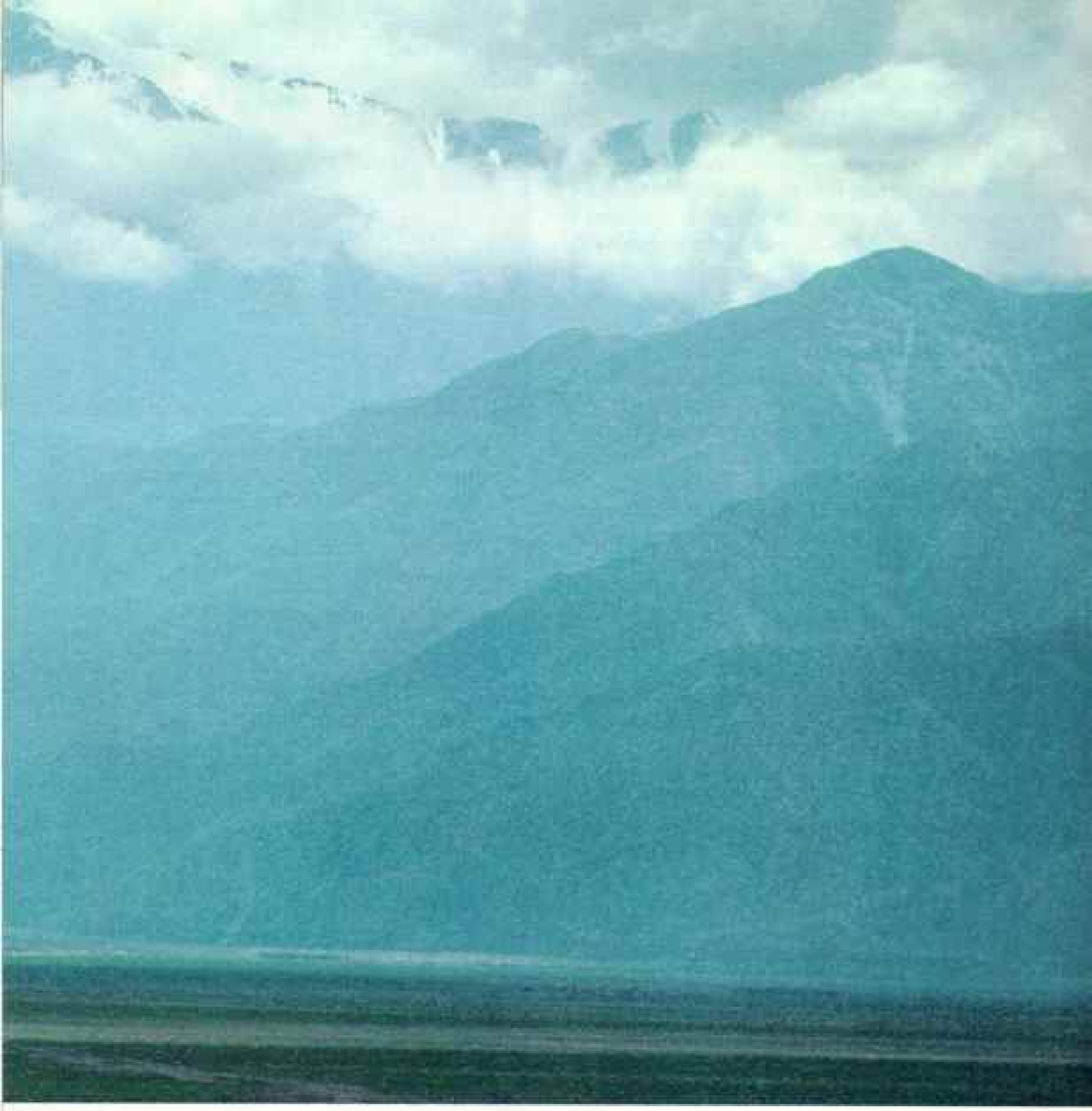
All Chinese trains have numbers, instead of names. But the numbers are not random. A very low number signifies an international express; slightly higher means the train is a national express, such as the 16 from Canton



to Beijing. The trains are slower as the numbers rise, and above 500 they stop everywhere. I knew this train from Guilin to Changsha was one of those, but in China—unless you're in a hurry—this hardly matters. Most Chinese trains have a dining car, mealtimes are punctual, service is good, and the sleeping cars are orderly.

Hot water is always supplied for tea—you supply the tea leaves, they provide the cup. Many Chinese use hot water from the China Railways thermoses to make their own instant noodles. There is seldom any luxury on a Chinese train. It is sometimes uncomfortable, even in "soft berth," but it is never intolerable, except in "hard seat," with every seat taken, and laundry and smoke and crying children and someone taking his ten parrots to market.

IN A YEAR of riding Chinese trains, I noted that trains left on time and only a few were late—by an hour or two, which is nothing. There was always bedding in the sleepers; no one asked me for a bribe or even a tip. On the other hand, in a year of travel I never found a train in which there weren't loudspeakers (they usually warn of impending stops, but they begin squawking at 6 a.m.), and while I am sure there are Chinese trains



with clean lavatories, I did not have the privilege of seeing one.

It was not more than an overnight trip from Guilin to Changsha, the capital of Hunan Province. But Changsha is better known as the place where Mao Zedong grew up and held a job as a schoolteacher. In most Chinese cities people keep silent about Mao, but in Changsha a man said to me, "Mao made very few mistakes, and the mistakes were very small." That was the highest praise I had heard of Mao's achievement.

Mao's association with Changsha had put the city on the map and had made Hunan famous. But when I expressed a desire to go to Mao's birthplace, I was urged to forget it.

I said that I had my heart set on seeing Shaoshan, Mao's village.

The railway line to Shaoshan is the strangest one in China—the quietest, with the fewest trains—and Shaoshan itself is the emptiest station in the country. Its huge platform receives

"Beyond here spring winds won't blow."
This ancient saying was quoted to photographer Dale near Jiayuguan, western terminus of the Great Wall. This train steams farther west, past the lofty Qilian Shan, carrying food and other supplies to desert dwellers.

only two small trains a day. In the past there were as many as two or three an hour, but with Mao's death there was a decline in demand, and now the national monument to which people once flocked is like the town that time forgot. Mao's portrait still hangs on the front of the station, and each room in the country villa in which Mao was born is appropriately labeled: Parents' Bedroom, Brother's Room, Pigsty, Kitchen ("In 1921 Mao Zedong educated his family in revolution near this stove"). The house was empty except for the caretaker, a young girl who told me that one day in 1966, 120,000 people visited the house.

I went to the Mao museum. It is fascinating for what it omits. There is no mention of the Cultural Revolution, nothing about the Red Guards, no intimation that Mao was ever married to Jiang Qing, the former actress who was a member of the Gang of Four. One would gather from the Mao museum that the only noteworthy event of the 1960s was the exploding of China's first atom bomb.

The message of the museum is the feeling that is current in China—don't praise him, don't blame him. I went to the museum shop, which sold candy, buttons, cigarettes, soap, razor blades, and color photos of Hong Kong movie stars. "I would like to buy a picture of Mao, or perhaps a copy of the selected writings of Mao Zedong.

"We have none," the clerk said.

And when I asked whether she would get some eventually, she said she didn't know.

I CONTINUED north on an express train to the region that used to be known as Manchuria, now the provinces of Liaoning, Jilin, and Heilongjiang. This last, the "Black Dragon River," was my destination. I traveled with a group of Hong Kong Chinese, who complained of the cold and the food. It was their first visit to the motherland. They had not learned that the cheaper meal in China is often the better one: Instead of fatty pork, chicken skin, and a big bony fish, you get vegetables, dumplings, and soup. There was frost on the window of the dining car, and by the time we got to Harbin the outside temperature was minus 34°C.

The intense cold is hardly noticed. The markets are held outdoors, there are no bus shelters for the many people who wait in the sleet for the buses, doors and windows are left open, and in Harbin people ride their bicycles

Crowded as bundled chopsticks, say the Chinese of train travel; one rider finds leg room outside. Hungry passengers buy snacks from vendors at brief stops (right) or visit a dining car where pickled vegetables from home flavor hot rice.

through the snow and ice. The favorite time for visiting is after dark, when the lights are switched on, and, although it was almost 40 below, the park was crowded. The highlight of the Harbin winter is the Ice Lantern Festival—a square mile of ice sculptures (pages 308-309). Blocks of ice with electric lights frozen into them are carved into a thousand shapes—animals, people, and even more ambitious structures such as pagodas and temples and bridges. I saw the Taj Mahal in ice, and a two-story house, and an elephant.

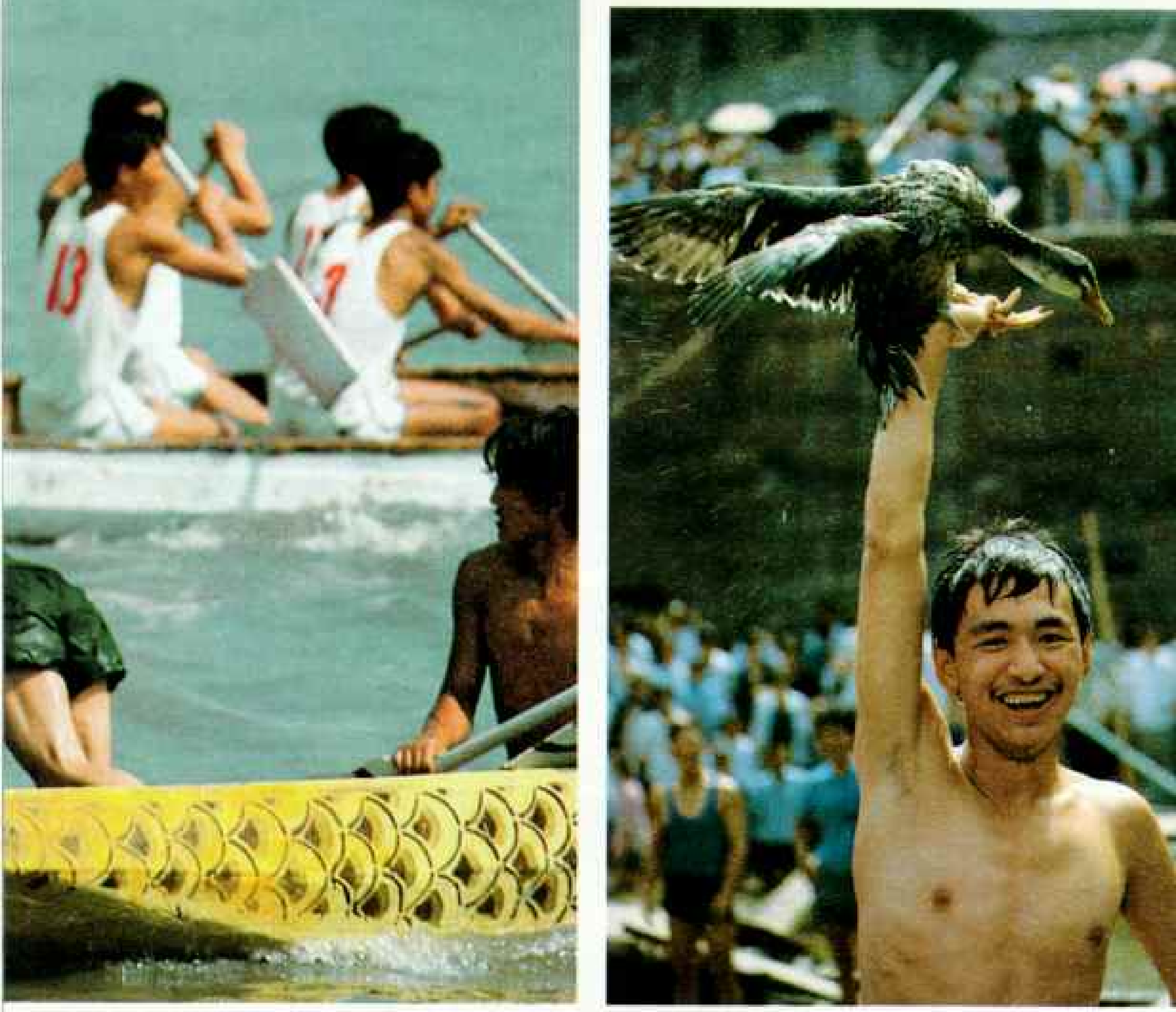
I WENT still farther north. We had breakfast on the train. A Chinese railway breakfast is usually one of two things—thin rice gruel or noodles. Mr. Tian said, "Anything but noodles," and found something new on the menu—a heap of black fungus, which is one of the specialities of Heilongjiang.

It was cold in the train, and when we reached Langxiang it was cold in the station. The hotel was also cold—too cold for me to eat dinner without my overcoat on, and I only took off my gloves because it was impossible to use chopsticks with gloves on.

"It will get warmer in a few months. I'm used to this!" said Mr. Cong, the hotel manager.

Mr. Cong had four children and had grown up on a commune. In these days of one child and no communes he was regarded as something of an antique. His commune in the north of Heilongjiang, near the Soviet border, had been dissolved, and each family had been given its own plot to farm.

"Production is much greater," he said.



"The yields are larger now. The commune system is outdated."

The next day Mr. Tian and I went on the logging railway to what he called the "primeval forest." It was about 50 kilometers outside Langxiang, which is the center of the lumber industry in this area. And there I saw the thickest trees in China and real wilderness. But the lumberjacks were cutting a wide swath through it. One of the rarest sights in China is a tall tree—they hardly exist outside Heilongjiang—and these were nearly three meters in circumference as well. The branches were alive with woodpeckers and tree creepers, even in this bitter cold.

The unspoiled part of the forest, which was immense and silent and fragrant, seemed to me idyllic.

I said, "Wouldn't you like to build a log

LESHAN *A side trip from Emei station—by car or bus—brings train riders to a June melee in Leshan. At the Dragon Boat Races, crews of factory-sponsored craft pit their agility against wily waterfowl. The team capturing the most just released ducks wins. Each boat keeps its catch. The men compete near a towering 1,200-year-old Buddha carved into a cliff. From Emei, visitors also travel to the sacred Buddhist peak, Emei Shan.*

Pool of laborers, parted by the passage of the Changsha-Shanghai train, resumes work in its wake. They restore rock ballast to the railbed in

Jinhua, Zhejiang Province, using the vast resource of muscle power that has developed the nation for thousands of years.

cabin here and live alone with your wife?"

"Yes," Mr. Tian said. "Have a family and write something."

Shenyang seemed even colder than Harbin, and cyclists tottered on the icy streets with frost on their face masks. It was mid-January, and small, padded, roly-poly figures cycled through the snow. The city is noted, as is Harbin, for its local delicacies—bear's paw and moose nose, if anyone is heartless enough to order such things—and for ginseng, sable pelts, furry antlers (said to be medicinal), and a giant epoxy-resin statue of Mao, "Comrade Mao" as he now is often known. The open-pit mine at Fushun is so wide and so hazy that it is impossible to see across it.

The cold seemed to me mystifying and unmemorable, a sort of paralyzing pain that took hold and prevented me from thinking about anything else. I kept going south, to get warm, and though the train was unheated, the absence of snow in southern Liaoning Province made me hopeful. It had taken nine hours to go from Harbin to Shenyang. And another eight hours on the slow train from Shenyang to Dalian (Dairen). But Dalian was warm—and interesting. A port city with the look of South Boston, it had been controlled by the Russians and still had Stalin Square and Stalin Road.

There were also big red-brick Christian churches in Dalian, and a suburb of Russian-style villas, and the "Hongxing [Red Star] Cut and Perma," where not only the women but also men had their hair curled.

DALIAN in the winter looked like any seaside town out of season, a bit windblown and bleak. It lies at the southern tip of Liaoning, on the Bo Hai gulf. There is an overnight ferry service both to Tianjin (Tientsin) and Yantai, but "ferry" hardly seems a suitable word for the vast thousand-passenger Chinese ships that ply between these ports. I decided to continue south and one night crossed the gulf to the Shandong fishing port of Yantai.

Xi Guan (Western Pass) People's Cooperative in Yantai had once been a typical Chinese

one-crop commune, growing wheat during the day and reading the works of Mao at night. It was neither a success nor a failure: It was a cog in the national machine, or, to use the Chinese image, a "rustless screw." The monthly per capita income was a hundred yuan, and the commune authorities envisioned that it would stay that way. There had never been discontent or disruption in the commune, though some of the 1,500 people were quietly annoyed that when they were ill they had to travel 25 kilometers into town and pay to use the county hospital.

After the commune system was abandoned in 1979, the Xi Guan commune turned itself into a cooperative of 500 households, and by late 1986 it had its own hospital, tourist hotel, and trucking company. A newspaper, praising it, called it the Pearl of Shandong, and members of the cooperative were so pleased they gave themselves the name Bright Pearl.

I asked the party secretary, Ma Weihong, how this transformation had come about.

"It was simple," he said. "We diversified. Before 1979 we were growing wheat, that was all, but we knew we were capable of doing more. The party would not permit it. But when the commune system was criticized and we were reformed, we started to diversify—new crops, a nursery for selling plants, various industries, commerce, the hotel, and so forth. That increased our income."

"That sounds like capitalism!"

"No," he said. "You and I are on different roads, but we are going to the same place."

"Which place?"

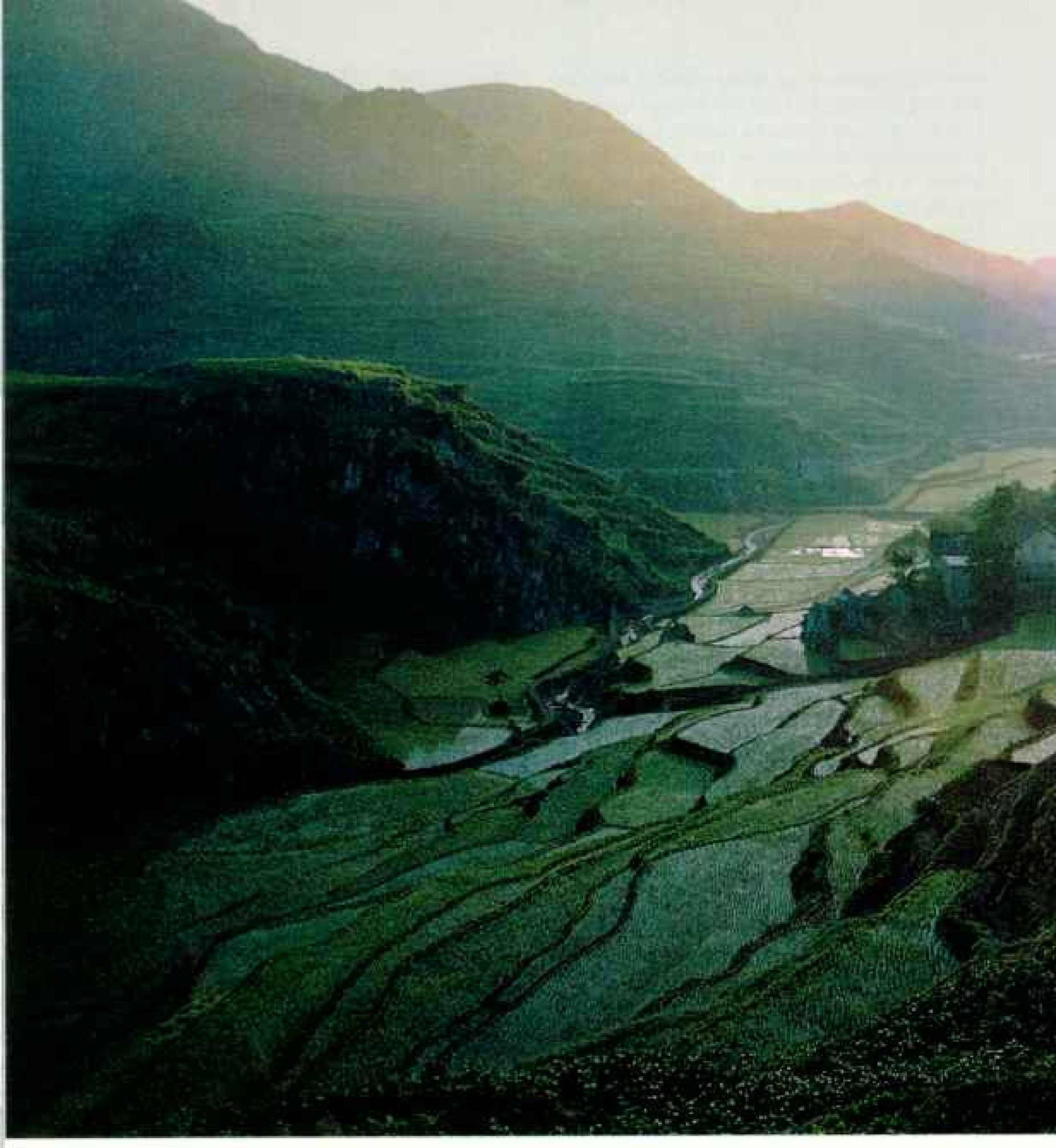
"To richness and wealth," he said quietly.

I left Yantai on the steam train to Qingdao (Tsingtao), the port city on the south side of the peninsula. It was a high-numbered train, 508, and stopped at every station. It was very crowded and littered with discarded chicken bones, apple cores, cookie wrappers, and orange rinds—but none of this was unusual for a Chinese train. And it took seven hours to go 235 kilometers. On the plus side, the dining car was one of the best I had tried in China—an eight-course meal was $2.80 U. S., and a soft-berth ticket cost $1.90. Train travel in China could often be wearying, but it always had its compensations.

And the young people were waiting outside the Qingdao station with their bullhorns and megaphones, calling out, "Come to our hotel!" and "You are welcome at our guest

CHANGSHA

Delicate stockings, considered decadent in Mao's day, are removed to wade a flooded street in Changsha. Nylons cost about a dollar U. S.—a day's wage in a factory. A dollar also buys a 145-kilometer train ride, as on the old narrow-gauge line (facing page) south of Kunming.



It is 8 a.m. and still 20 hours to Guilin on the 32-hour ride from Kunming. The electric rail burrows through dozens of tunnels here in the mountainous south and passes terraces growing rice and greens. Communes have been replaced by a "responsibility system." Now farmers contract for plots and raise what they wish, to sell at free markets. Productivity has skyrocketed.

Near tracks along the Li River outside Guilin, the duck not chosen watches another being butchered for dinner. The blood is saved in the small bowl to be congealed and cubed for vegetable dishes. On nonarable land farmers raise fowl and pigs, trying modern methods to increase yields. Railroads distribute the largess, bringing the Chinese greater choice and better nutrition.

house!" and "Good food and hot water!"

It is only 90 years since Qingdao was officially established as a city, but it was built to last by Germans, who also built the railway west to Jinan. The railway was finished in 1904, and many of the buildings in Qingdao are about that vintage—turn-of-the-century and very solid. It is the most European-looking city in China, which is appropriate, because it also has the best brewery.

I found Qingdao an attractive place, prosperous and in good repair—all the churches had been restored, not only the Catholic church, but also the Lutheran, the Baptist, and six other churches. I asked a young man how it was that in such a short time (1898 to 1914) the Germans had made such a strong impression. He was a university graduate, and so I assumed he might know.

"The party doesn't talk about it," he said. "We don't know how many Germans were here. It might seem too humiliating to us if we knew how few were occupying the town."

"Would you be humiliated if you knew?" I asked.

"No," he said. "I am interested in the truth."

FROM QINGDAO I made a long trip south through the flat brown fields of Shandong and Anhui, to Shanghai. I thought about major political changes in China that have occurred at the highest government levels. Most recently, senior leader Deng Xiaoping last November turned over the reins of the ruling Communist Party to Zhao Ziyang. Li Peng is now acting prime minister.

SHANGHAI

A shift in policy toward religion is reflected in Xujiahui Catholic Cathedral. In 1979 photographer Dale recorded its use as a grain warehouse (above); today services have resumed following repairs, including new plastic windows, of damage inflicted during the Cultural Revolution. In Shanghai 16 Roman Catholic churches have reopened.

The most obvious fact of life in China today is its Westernization, at least superficially. I say "superficially" because politically China has not changed much. It still seems as stuffy and mysterious as it has ever been, and in fact it is so hard to advance politically in China that people go to night school, start a new business, make money, and forget about politics entirely. But because of China's peculiar recent history it is impossible for anyone to become very prosperous without becoming politically suspect.

This was Ni Guoqing's problem. I met him on the train to Xiamen. He told me to call him George and said he was disenchanted. He said he wanted to succeed in business, but that in China it was impossible to advance beyond a certain point.

"What's the solution?"

"I want to go to the United States," he said.

"To study?"

"No, to stay for the rest of my life."

He was being very frank. But there were other ways. I had read in a magazine called *China Reconstructs* (December 1986) that of the 35,000 Chinese who had gone overseas to study since 1979, only 15,000 had returned. And the Chinese government was so dubious about students wishing to go overseas that it had just passed a law requiring all students to post a bond of 5,000 yuan before leaving the country.

We passed through several ranges of hills and then descended to the city of Xiamen. With its shop-houses and verandas and monsoon drains, Xiamen looks like a Malaysian city or the quaint old Singapore that disappeared in the 1960s. Chinmen Tao (Quemoy

Luxurious link between Canton and Kowloon (facing page) in Hong Kong, diesel trains make four round-trips a day. The British colony is due to revert to China in 1997. Passengers enjoy air-conditioning, closed-circuit television, and duty-free goods.

Island) is visible from the eastern beaches of Xiamen, but the Chinese ignore it and direct your attention to Gulangu, in Xiamen Harbor, the prettiest island in China, with a tile-roofed town that is all the more idyllic for there being no motor vehicles at all on the island.

One of the ships involved in the Boston Tea Party sailed from Xiamen—then known as Amoy. A causeway now crosses the harbor. The irony is that the causeway was built by Red Guards, as a revolutionary effort, and it now joins the town of Xiamen with its booming suburb of light industry and joint venture—banking, toys, and bicycles, plus a multimillion-dollar project to develop China's first factory for making photographic color film.

It was Spring Festival and the whole country was on the move, because it is customary for the Chinese to go home at this time and be dutiful and respectful. But it's not an easy time to get tickets, so I let the festival pass before I set out again. And this time I was planning to go to the province the Chinese regard as their wildest and emptiest—Qinghai. It is a place of mountains and desert and grassland, with a tiny population.

I traveled back to Xian and Lanzhou and caught a train to Qinghai's capital, Xining, which is a breathtaking 2,250 meters high, surrounded by hills of mud and sand. It is a town of minorities—Mongol, Kazak, Tibetan, and Hui peoples. Tibetans are especially proud of the fact that the present Dalai Lama was born near Xining, and the Taer Lamasery, southeast of Xining, is among Buddhism's holiest shrines.

THE LAST STATION in China is in Golmud, 21 hours from Xining. This was the only train I traveled on that ran out of hot water for tea. I asked why this was so, and the Head of the Train said, "Because we are passing through the desert."

"Are people complaining about the lack of water?"

"No," he said. "Only you."

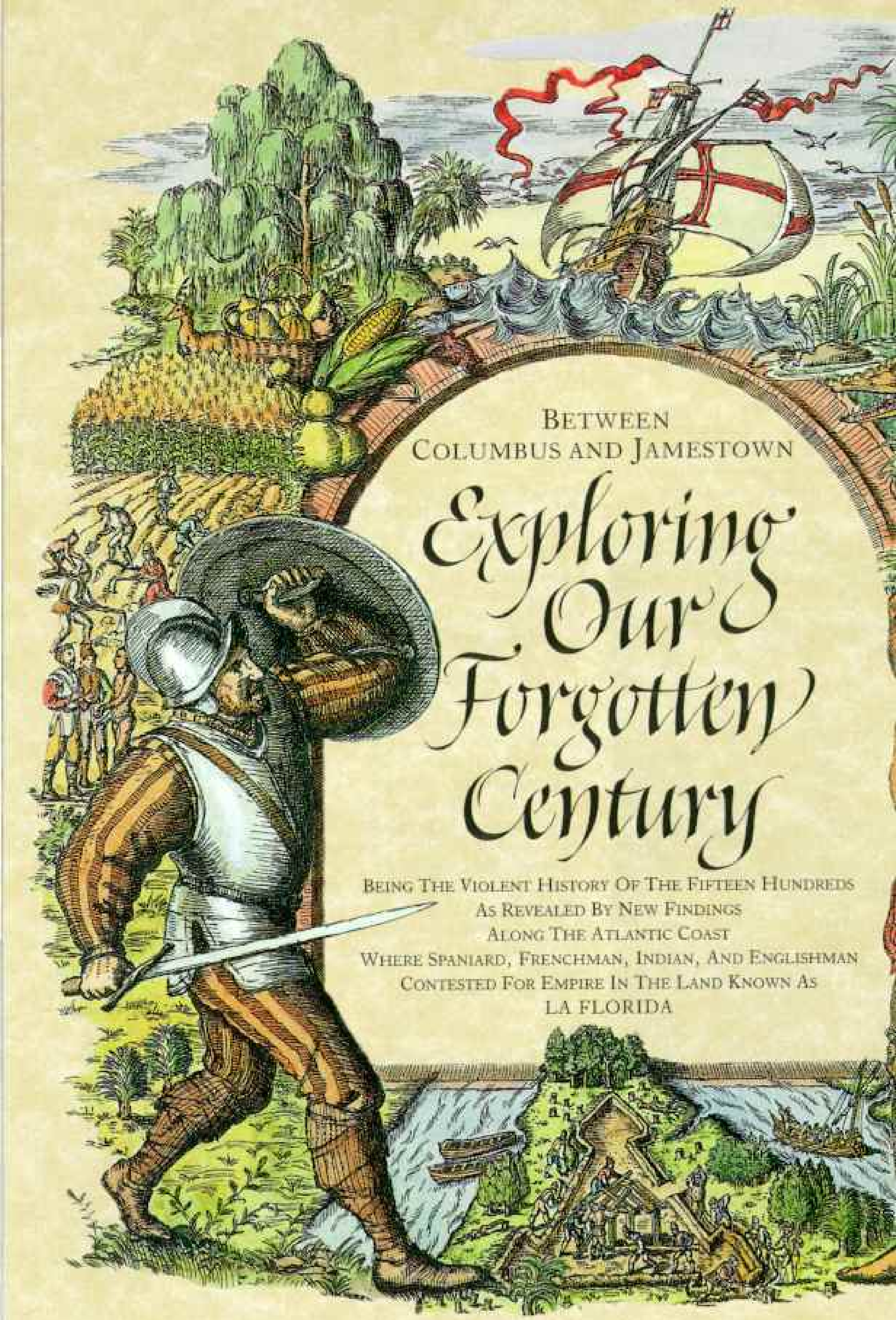
And he reminded me that water is so scarce in Qinghai that in the grasslands the people never take baths and sometimes have to wash their faces in yak's milk.

The landscape was more devastated looking than Xinjiang. It was stony and very windy, without vegetation or people. In the distance there were hills, and as we drew nearer to Golmud, mountains appeared, the Kunlun Shan, at the edge of the Tibetan Plateau. They were covered with snow, from top to bottom, and the snowfields extended all the way to the small, low town of Golmud.

Until recently the Chinese were extending the railway beyond Golmud. But they were stumped by the mountains—there were too many of them, and they were too high. So Tibet is China's remotest province, but it will not remain that way—tourists ultimately will flock there, flying from Chengdu in Sichuan.

My last glimpse of Chinese Railways was glorious—a train traveling to the railhead outside Golmud. It was the most beautiful train I have ever seen—a steam train racing through the snowfields on a sunny day, a black engine in a cloud of steam, and the dazzling white mountains behind it. □


KENT



BETWEEN
COLUMBUS AND JAMESTOWN

Exploring Our Forgotten Century

BEING THE VIOLENT HISTORY OF THE FIFTEEN HUNDREDS
AS REVEALED BY NEW FINDINGS
ALONG THE ATLANTIC COAST
WHERE SPANIARD, FRENCHMAN, INDIAN, AND ENGLISHMAN
CONTESTED FOR EMPIRE IN THE LAND KNOWN AS
LA FLORIDA

By JOSEPH JUDGE SENIOR ASSOCIATE EDITOR

Photographs by BILL BALLENBERG

Paintings by JOHN BERKEY

Was ever a tale more writ in blood than this I am about to tell? Or more put away from memory . . . for little remains but bone and parchment. The ships have all melted into the seas, the villages are charcoal dust under field and forest, the men and women who fought and suffered and died have no tombstones.

Yet something may be learned from the telling. For this is not only the story of how a king and his people tried and failed to settle a wild new world. Nor only the story of nations at war—Spanish, French, English, Guale, Chisca, Orista. It is the story also of how knowledge is so hard won, how men and women of our own time, archaeologists and historians, piece together the past, tiny bit by fragment by sherd, until what is revealed to our wondering eyes is a portrait of ourselves.

When this turbulent era in North America ended, the French flag flew over the north, the Spanish over the south, and the English over the lands between. Thus the wheel of history had made a great turn and paused. This is the story of that turning in what is now the eastern United States.

WAR CLUB AND SWORD clash in this cartouche by Kinuko Y. Craft, based in part on the art of Jacques Le Moyne de Morgues, the first important painter of North America.

Spain Reaches Inland For Empire

Far from his base at the town of Santa Elena on the Atlantic coast of La Florida, Spanish captain Juan Pardo reaches the Tennessee Valley in 1567 and meets with the ancestors of the Creek and Cherokee.

From its first attempt at settlement in the future U. S. in 1526, Spain tried repeatedly to control the vast continent to the north of Mexico. Repulsing Indian attacks, French incursions, and English raids, explorers extended the Spanish sphere within the Southeast until English colonies drove them back to Florida.

The Fatal Lure of La Florida

ITS PENINSULA discovered by Juan Ponce de León in 1513, the land known as La Florida once covered the entire Southeast of the present-day United States. Voyages by Pedro de Quexo, Giovanni da Verrazano (for France), and Esteban Gómez in 1524 and 1525 completed the picture of the eastern North American

coast. From Santo Domingo (inset map), a wealthy lawyer, Lucas Vásquez de Ayllón, led the first settlement attempt to the Carolina coast in 1526. With his failure Spanish attention turned toward the Gulf of Mexico entrance to the great hinterland.

In 1528 Pánfilo de Narváez landed at Tampa Bay with 400 men. Eight years later four survivors appeared in Mexico, having walked thousands of miles.

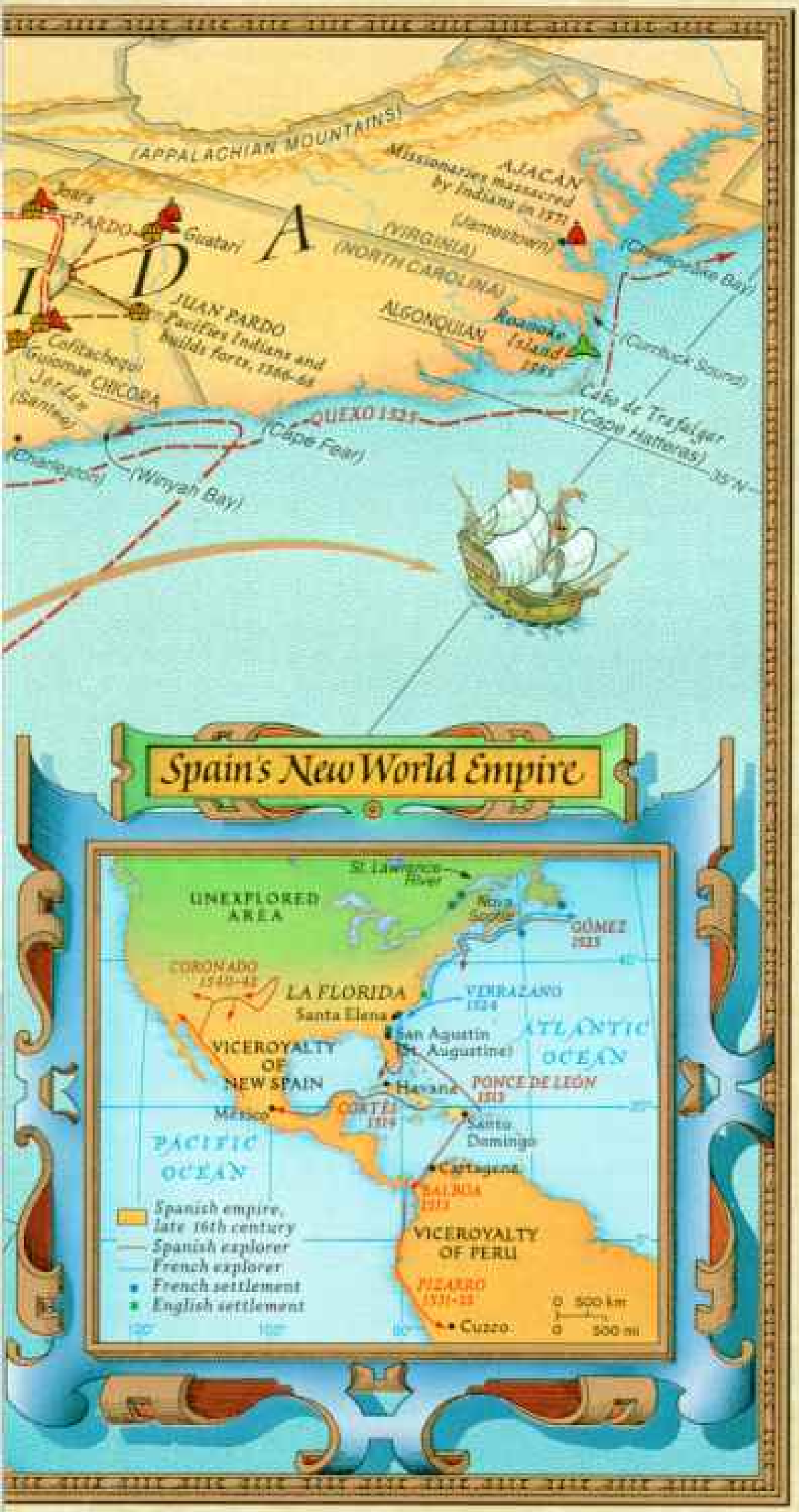
Tampa Bay was also the site of Hernando de Soto's landing in 1539 with 600 men in ten ships. He wandered for three years through the Southeast, discovering the Mississippi River, in which he was buried. Again, survivors made it to Mexico.

In 1559 Tristán de Luna y Arellano led 1,500 soldiers and settlers to Pensacola Bay, where a storm wrecked his fleet. Angel de Villafañe rescued survivors two years later.

As Spain grappled with the problems of La Florida, French Protestants established a foothold at Fort Caroline in 1564, intensifying a conflict that brought Pedro Menéndez de Avilés to La Florida. He obliterated the French and founded St. Augustine along with a town on modern Parris Island—Santa Elena—from which expeditions reached the Tennessee Valley and Chesapeake Bay.

Spanish Florida survived Indian risings, epidemics, and English attack until it was granted to Britain in 1763. It was returned to Spain 20 years later and became part of the U. S. in 1821.

Excavations at Santa Elena, St. Augustine, and St. Catherines Island, along with recent scholarly work on 16th-century documents in Spain, have shed light on this long-neglected epoch.



"COLUMBIA PLAIN. . . ."

That certain light of excitement brightened the face of archaeologist Stanley South as he extended a hand on which rested a small, gray piece of pottery.

". . . we are standing on Santa Elena."

Actually we were standing in the rough of the golf course at the Parris Island Marine Corps base in South Carolina. Beyond a tawny marsh, the waters of Port Royal Sound mirrored the morning sun—and the past, for that fragment of early Spanish ware confirmed what historians Eugene Lyon and Paul Hoffman had predicted: Santa Elena, the long-lost capital of the vast Spanish domain called La Florida, which had covered the whole of the eastern United States, lay beneath our feet. The site had once been excavated, in 1923 by a Marine officer who found a wooden palisade and took it to be from Charlesfort, a small bastion built by the first French to visit the Carolina coast in 1562. A handsome marble monument perpetuates the error.

"Stanley, just remember to replace your divot," I said, and we laughed. Soon after, on July 4, 1979, South did make divots in the course, 42 small test pits and trenches that turned up early Spanish pottery and mud plaster from houses and bit into the moat of a fort. It was the beginning of six seasons of digging under the course, which laid bare the bastions of two of the forts that had guarded the settlement at different times, a small plaza bordered by simple houses of thatch and daub, the remains of a vineyard—enough to evoke the hard life of the 400 colonists who once lived there, hoping for the best against Indian hostility, disease, and the forsaken feeling of living at the very margin of the European world.

The revelation of Santa Elena is but one of a number of recent discoveries that have greatly enlarged our knowledge of Spain's astonishing reach for conquest and settlement in eastern North America. It is a seldom told early chapter of American history.

It begins 467 summers ago, in 1521, just 29 years after the discovery of the New World by Columbus. From the colonial capital of Santo Domingo, in the modern Dominican Republic, two caravels were on the prowl for slaves.

Francisco Gordillo had been sent out by a wealthy lawyer named Lucas Vásquez de Ayllón. At Great Abaco in the northern Bahamas, Gordillo fell in with the caravel of a friend and fellow pilot, Pedro de Quexo, who worked for an official named Juan Ortiz de Matienzo. They joined forces and followed the Gulf Stream northward toward a mysterious "island of giants" that had been discovered five years earlier.

In mid-June they raised a coast that they named Land of John the Baptist, for it was near his feast day, and entered a river they called the Jordan. Nearby was an Indian village where they spent three weeks trading, took possession of the country in the names of their patrons, and took possession of 60 unwilling inhabitants. On the way home Gordillo's seaworn ship foundered; captives and crew crowded aboard Quexo's, and she limped home, the first European ship known to have visited the Carolina coast.

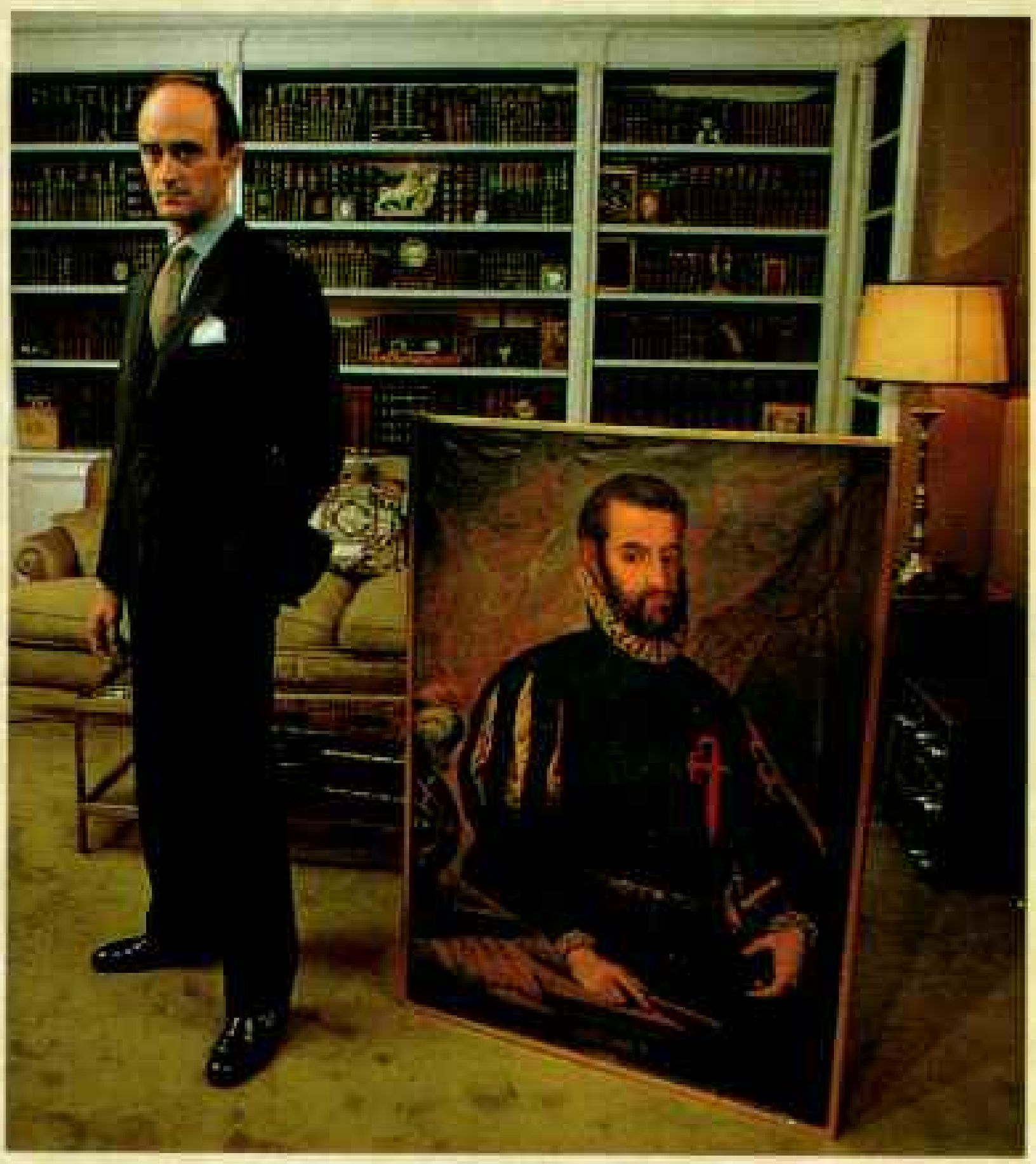
In Santo Domingo the Indians, who were especially large in stature, looked like good bargains but weren't; most died quickly. One who did not said the name of his land was Chicora. Ayllón dubbed him Francisco de Chicora and took him along when he sailed back

THE BLOOD of the adelantado, or royal representative, of La Florida runs in Alvaro Armada, Count of Güemes (facing page), direct descendant of Pedro Menéndez, whose portrait—a copy of one by Titian—adorns the count's apartment in Madrid. While serving King Philip of Spain, Menéndez hoped to turn La Florida into a personal empire as Cortés had done in Mexico, but his dream was still unfulfilled when he died in 1574. Although Menéndez's capital of Santa Elena was abandoned and long forgotten, his St. Augustine has survived from its founding in 1565. The oldest continuously inhabited city in the United States remains proud of its Spanish heritage.

to Spain to secure a claim to the newfound land. At the court they met the first historian of the New World, Peter Martyr, and what tales Francisco spun for the elderly scholar—of men with tails so thick that they had to dig a hole to sit down, and of a magic balm used by priests to stretch the bones of royal children. But the largest myth he left behind, which Martyr passed to gullible generations, was that of Chicora itself, a land like Andalucía, fertile and fruitful beyond measure.

After Ayllón returned to Santo Domingo with royal permit in hand, Matienzo served him with an angry lawsuit: Had not his caravel also discovered this land? Should he not also profit?

Even before lawyers began proceedings, Ayllón sent Quexo out in 1525 with two caravels to survey the vast and unknown land he intended to settle, where lay perhaps another golden Mexico, another silver Peru. Quexo sailed for months, seeing the surf break along 500 miles of beach, as far north as the great bay that he called Bay of the Mother of God—and we call Chesapeake. His voyage survives on the wonderful world map (following pages) painted by Juan Vespucci, Amerigo's nephew.



The court was still taking testimony against Ayllón in July 1526 when his fleet departed—six ships carrying some 500 souls—men, women, children, soldiers, priests, and the first black slaves to reach American shores.

At the shoal-guarded mouth of the River Jordan the flagship grounded and went down, along with most of the supplies. The smaller ships took off survivors and landed them on an inhospitable shore, where Francisco de Chicora breathed the air of home, dropped his civilized trappings like leaves, and vanished.

Ayllón decided to move down the coast for 150 miles, until he came to a likely place to build the first European settlement within the present United States; he called it San Miguel de Gualdape.

Autumn storms brought shivering and fever and Indian attack. Two hundred Spaniards were soon shoveled into graves. On October 18, 1526, Ayllón himself died. A mutiny followed. In a wild melee between factions, houses were fired, men murdered. In the dawn light, there was nothing for the survivors to do but abandon the colony.

THE HISPANIC SOCIETY OF AMERICA, NEW YORK CITY

ACTS OF DISCOVERY live again in 16th-century documents. Juan Vespucci's 1526 map shows the "new land of ayllon" ending at Chesapeake Bay. To the north lies the "land of the codfish," Nova Scotia and Labrador. The lands between are unknown.

In Seville's Archive of the Indies, a treasury of 82 million manuscript pages, Juan Pardo's account seems written yesterday. A Spanish sword was uncovered near Rome, Georgia, where Soto explored in 1540.

Only 150 made it back home. Nothing remains except words on a map, repeated on maps of North America for the next 50 years, "land of ayllon."

Where was it, exactly? Where lie the bones of these first settlers on our shores? Historians reading historians have guessed at many places, as far north as Cape Fear, North Carolina, and as far south as the Savannah River—yet testimony taken in the Matienzo lawsuit against Ayllón gives us the answer.

Pilot Pedro de Quexo recalled that in 1521 he and Gordillo had drifted for eight or nine days north of Great Abaco before they were becalmed in 65 fathoms—below Cape Fear, North Carolina. They changed course to the southwest, and Quexo recalled a series of fathom readings—34, 19, 8—that still trace the grain of the continental shelf to within sight of the Santee River and Winyah Bay. The Jordan River is the Santee. There Ayllón's flagship went down in 1526.

The movement down the coast took them past the Savannah River mouth to Sapelo Sound, near St. Catherines Island. Paul Hoffman believes that the site of Gualdape lies somewhere there. Indian names apparently from the same root—Guale and Gualapini—have long identified that coast.

Nothing has ever been found of the settlement—not a bone, a potsherd, a nail. But they are there somewhere, among the fish camps and condominiums and palmetto woods, the Spanish dead of long ago who still sleep in the once cruel land of Ayllón—and historians and archaeologists are still searching.

LA FLORIDA was now on the world map, stretching from Key West to the mouth of the St. Lawrence, from the Atlantic surf to the distant Pacific with, many believed, a passage somewhere between them. For the next generation La Florida would devour a succession of expeditions—Narváez, Hernando de Soto, Tristán de Luna, Villafañe—lured by mirages of wealth and a new life.

As a result King Philip II of Spain discouraged further attempts at conquering La Florida; he wanted no more of sand and swamps, fever and flames, wild animals and wilder men. But history had another plan. On May 1, 1562, a ship emerged from the ocean mist off the Florida coast near the St. Johns River. She flew not the red and gold colors of Spain but the royal blue of France. She was commanded by a famous Protestant sea dog, Jean Ribault, devoted not to Rome but to Luther and Calvin. La Florida

A KING-SIZE DIVOT taken from the Parris Island Marine base golf course revealed the town of Santa Elena, capital of Spanish Florida in the mid-16th century. The site is being excavated by archaeologist Stanley South (right), who passes a hose to assistant Michael Hartley in a Spanish well made of barrels.

A silver coin and a bullet mold are among the objects found that evoke the life of the town, once home to more than 300 people living in 40 houses protected by a wooden fort. Life was hard. Disease and Indian attack were constant threats. Burned during an Indian rising and rebuilt, Santa Elena was finally abandoned in 1587 following an English attack on Spanish America, and the families were ordered to move to St. Augustine.

ALL BY DAVID L. BRILL

was about to become a bloody battleground in a European war waged in different names of God.

The St. Johns rises in central Florida and flows north to Jacksonville and the sea. On its right bank, ten miles east of the port city, stands Fort Caroline, one of the rare monuments in the United States to the horrific events of 400 years ago when Spain and France warred over North America.

Deep forces were moving in the world. Protestantism was spreading through northern Europe. Spain regarded the defense of Catholicism as a sacred mission. Both of these Christian beliefs were faced with a massive military challenge from Süleyman the Magnificent,* whose Islamic banners flew across the whole Mediterranean.

Men born into such a world knew no quarter. They died for uttering a word of treason or simply for believing what they believed. Kingdoms were divided. As Jean Ribault's ship left France, sent out to find a foothold in Spain's La Florida, his nation erupted in religious warfare.

BUT NOW the voyagers drank in the beauty of the land as they coasted northward, passing and naming nine rivers before entering Port Royal Sound, just beyond the point the Spanish called, since Ayllón's time, Santa Elena. There Ribault built a wooden fortification named Charlesfort, left a garrison of 30 men, and with his second in command, René de Laudonnière, sailed for home. They found their home port, Dieppe, under siege by a Catholic army; when it fell, Ribault fled to England.

Queen Elizabeth listened with interest to this fellow Protestant and enemy of Spain and offered to return him to La Florida in English ships. It became clear to him, however, that she intended to take La Florida for her own. Soon after, he was arrested trying to flee the country and was thrown into the Tower of London.

There he languished while his small command in the American wilderness, without another European for hundreds of miles, watched and waited. Isolation gave way to despair. The commander became homicidal. He hanged one man with his own hands and sentenced another, named Lachère, to slow starvation on a small island. His exasperated men mutinied, killed him, freed Lachère, and named Nicolas Barré to command. They made a pitiful boat out of pine, vines, and moss, and everyone climbed aboard except 17-year-old Guillaume Rouffi, who said he would take his chances with the Indians.

The overloaded bark sailed somehow into the open Atlantic, where it was becalmed for 21 days. The men ate their clothing, drank their own urine, then "made this motion that it was better that one man should die than that so many . . . should perish."

The man who drew the fatal lot was the twice-doomed Lachère, whose "flesh was divided equally among his fellows."

By the time the ship of horrors reached the coast of Europe, the men were too weak to land her, and she was picked up by an English patrol vessel. In August a recovered Nicolas Barré was interviewed by Elizabeth and clapped into the Tower. History is silent

*See "The World of Süleyman the Magnificent," by Merle Severy, in the November 1987 NATIONAL GEOGRAPHIC.

An Old Faith In A New World

Though often poor and struggling in its 20-year history, Santa Elena knew moments of rustic splendor, as on feasts like Corpus Christi when the ruling class—friends and

DAVID L. ARIAS

relations of founder Pedro Menéndez de Avilés—led townsfolk in procession to church. This crucifix (above) was uncovered at the site of Santa Elena.

Two years before the town's founding, French Protestants in 1564 had quietly established a fort and colony on the St. Johns River in Spain's La Florida, provoking a bitter war between faiths and empires. No quarter was asked or given as Spanish forces under Menéndez drove out the French. He established Santa Elena to protect Spanish claims and serve as a base for exploration and settlement of the interior.

on whether he met Ribault there; if so, it must have been a classic moment of mutual astonishment.

WHERE WAS CHARLESFORT? Stanley South proved that it was not under the golf course on Parris Island. But if not there, where?

Cartographic historian W. P. Cumming discovered a small hand-drawn map long stored in the Naval Museum in Madrid. He argues persuasively that it is a tracing by a Spanish spy of a map made by Barré, perhaps in England, and that it fixes the location of Charlesfort—somewhere under the concrete and railroad tracks of a shrimp dock not far from the bridge that carries State Highway 281 across Battery Creek near Port Royal, South Carolina.

When an interlude of peace came to France in 1563, René de Laudonnière, Ribault's old shipmate, led another French attempt on La Florida. Among the 300 men and four women aboard the three ships was the artist Jacques Le Moyne de Morgues, who made the first important paintings of North America.

ARTIFACTS TELL A TALE OF FRONTIER LIFE

LITTLE THINGS mean a lot to archaeology, for portraits of daily life are built on them. Tailor Alonso de Olmos and his young family enjoy a moment of domestic tranquillity in Santa Elena, reconstructed by artist John Berkey from Stanley South's collection of artifacts that includes a buckle and (clockwise from top left, facing page) straight pins; ball

Coincidentally, Philip of Spain decided to move against Charlesfort, not knowing it had been abandoned. Thus, 20 days after Laudonnière sailed from Le Havre, Capt. Hernando Manrique de Rojas departed Havana in a lean fighting caravel with 25 men, bound for La Florida, blood in his eye.

On June 12, Carolina Indians brought to Rojas's ship that young Frenchman, Guillaume Rouffi, who guided him to Charlesfort, which was then burned. Rojas headed back to Havana, convinced he had removed all traces of the French. A few days later Laudonnière's little fleet slipped over the bar of the St. Johns River and went upstream to a bend where they built Fort Caroline.

At once they became embroiled in warfare between two Indian tribes, supporting first one side and then the other. The men began to lust after the gold and silver said to be found in the "Apalatcy Mountains." Winter brought scarcity and near starvation. The discontent turned against Laudonnière. When a plot to blow him up with a keg of powder was discovered, 13 of the rebels took a small boat and made for Cuba, where they seized a Spanish prize—and announced that the French had returned to La Florida.

buttons for pants and jackets; copper and silver stars that adorned clothing, harnesses, and saddles; decorative ornaments for clothing, including a figa, *or clenched hand of God holding the souls of the saved, believed to repel bullets; thimbles and hooks and eyes; and jack plates that armored jackets (Olmos is making one in the painting).*

Olmos's eldest son, Alonso, accompanied a Spanish mission to Chesapeake Bay, where he survived an Indian massacre only to be killed later near Santa Elena. The elder Alonso eventually moved to St. Augustine and became a merchant.

Historian Eugene Lyon has uncovered hundreds of documents in Spain that recount the life of Santa Elena, its citizens and their lawsuits, dress, food, shelter —and their once bright hopes and aspirations.

After a few weeks a second band of mutineers, 66 in all, took a larger ship and sailed toward the Antilles, where they intended to land on Christmas Eve and "enter into the Church while Mass was sayd after midnight, and to murder all those they found there."

As weeks dragged by at starving Fort Caroline, the sentries each day looked for the sails of a relief fleet from France, and finally sails did appear—a Spanish brigantine, sailed by the mutineers who had seized her. Only 26 were aboard; the others had been cornered and killed by a Spanish fleet.

If they expected mercy from Laudonnière, they misjudged their man. He shot the leaders and hung the bodies from gibbets.

At long last, in the sweltering heat of August, four ships were seen at the bar, but flying the English flag. It was John Hawkins, prowling for Spanish prizes and being led upriver by another rebel from Fort Caroline he had picked up in the Caribbean.

Hawkins and Laudonnière struck a deal—a ship for cannon and powder. Before he returned to sea, Hawkins threw 50 pairs of shoes into the bargain.

The French now had only to wait for a fair wind to take them home, but the wind was contrary for days, and it brought in yet another fleet of seven ships. On the flagship stood none other than Jean Ribault, escaped at last from England and its Tower and sent out by the French to succor their foothold in La Florida.

Philip of Spain was furious at word of this second French encroachment on his lands. He had already granted license to one of his most capable captains, Pedro Menéndez de Avilés, for a large settlement attempt in La Florida; now he ordered Menéndez to drive the French out "by what means you see fit."

MENÉNDEZ was a man of the sea who had escorted the treasure fleet home from the Indies. He had just built a big ship, the *San Pelayo*, named for the knight who had first turned the tide against the Moors 850 years before. *San Pelayo* at the head, 18 ships with 1,504 soldiers and settlers started across the Atlantic. They were scattered by a hurricane. Menéndez pushed on with five ships and 600 people—including 26 women.

Thus it fell out that on the day Jean Ribault dropped anchor off the St. Johns, Menéndez made landfall at Cape Canaveral and turned north. The French ships were still riding at anchor offshore on the afternoon of September 4 when Menéndez's sails split the horizon to the south, bearing down.

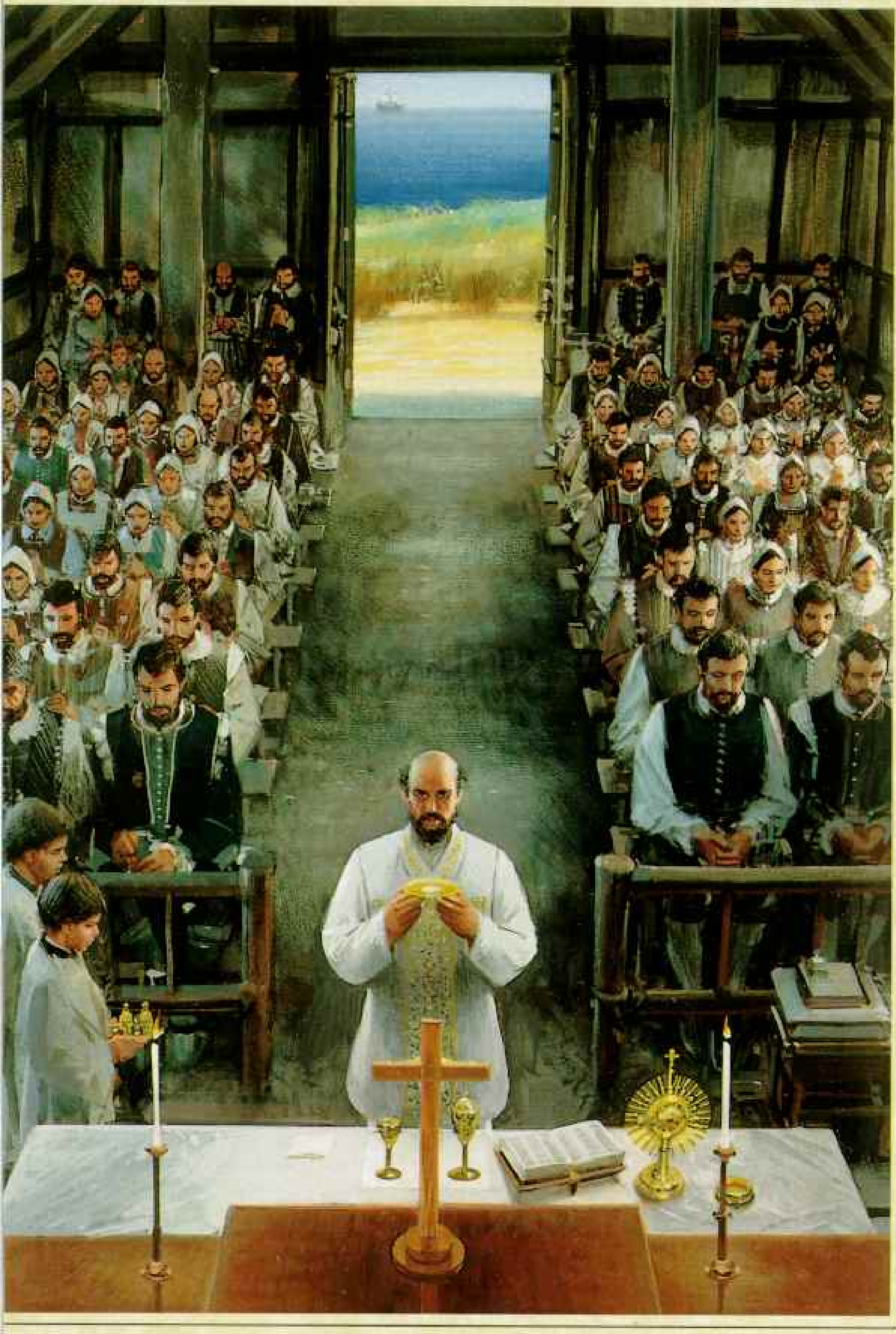
The wind died, night fell, the Spanish glided in among the French. Men cursed and taunted in the dark. When the Spanish attempted to board, the French cut their cables and ran to sea.

Next day Menéndez dropped down the coast to a small inlet that gave access to a harbor. He landed a party that threw up a fortification around the council house of a local Indian chief. On September 8, 1565, Menéndez came ashore "with many banners spread, to the sounds of trumpets and salutes of artillery" and called the place St. Augustine. Thus it has remained the oldest permanently inhabited city in the United States.

Archaeologist Kathleen Deagan has been patiently digging in the backyards of St. Augustine for 15 years. In 1985, not long after the publication of her study of the ancient Creole community of our

"I THINK I SEE AID FROM HEAVEN. . . ."

SO SAID the Jesuit father Gonzalo del Alamo as he preached at Christmastide to the starving community of Santa Elena gathered in the church in 1569. The small and infertile fields were inadequate to feed the 327 souls who had descended on the hamlet; families survived by gathering oysters and eating roots. During the church service Father Gonzalo said that God would soon come to the rescue, and that in his vision he saw a ship crossing the bar. Soon after, the first bell rang out with news of a relief ship. In time the colonists, like their Indian neighbors, relied on corn, melons, and squash rather than barley and wheat to sustain them.



THE WORD of a Christian God came to a people already familiar with divinity. Throughout the area of Spanish interest, between the Tennessee River and the Gulf, a unified mythology held sway. Its symbols are shown on conch-shell carvings (facing page) sharing motifs with Mexico and Central America. The rites of southern tribes involved ritual sacrifice and sacramental meals.

Mundane objects were not without their adornment. This pot, which was probably used for cooking, is shaped like a moccasin.

oldest city, she found Menéndez's fort, or what was left of it. Surprisingly it was in a still open field overlooking the harbor behind a tourist attraction called Fountain of Youth Park.

When I visited, Dr. Deagan was knee-deep in mud, supervising the installation of pumps to keep water out of the excavation. She had a bit of a well and a piece of a palisade and a few bits of pottery, enough to evoke the events—*San Pelayo* being frantically unloaded and sent off to summon the rest of the scattered forces, the troops landing and sizing up this shore of sand and palmettos.

Ribault's ships had regrouped at Fort Caroline. A council of war was held in Laudonnière's quarters as he lay ill in bed. Ribault determined to attack Menéndez before he could further strengthen St. Augustine; he started south with 12 ships and 600 men. They noted at once that the big warship was missing from the Spanish flotilla and started in pursuit, a fatal mistake as the wind veered sharply north and a huge storm bore down on Florida.

Menéndez realized that the French ships could not return to Fort Caroline; he ordered 500 harquebusiers to march and led them into the storm. It took three days to cover 45 miles. It was still raining furiously at dawn on September 20 when Menéndez pointed them toward the unguarded fort with the cry: *"Santiago!"*

"They vied with one another to see who could best cut the throats of our people," said a survivor. In an hour 132 French corpses littered the ground. In all, 45 people escaped, including Laudonnière and the artist Le Moyne. They made their way through the dark, steaming woods to two small ships that Ribault had left behind and set sail for France; for them the war was over.

Ribault's fleet was smashed by the storm and driven ashore near Cape Canaveral. Even as Menéndez renamed Fort Caroline, calling it Fort San Mateo, and marched back to St. Augustine, the dazed French survivors were struggling northward along the Florida beaches in search of the St. Johns.

Eighteen miles south of St. Augustine the brackish waters of the river that flows past the city bend eastward and meet the Atlantic surf at a lovely inlet with an ominous name—Matanzas, the "slaughters." Here, at dawn on September 29, 1565, Menéndez and his soldiers met 200 French survivors walking north.

The French had no way to cross the river. They agreed to surrender without terms. Menéndez ferried them over in groups of ten, tied their hands, marched them behind a dune, and put them to the knife. Only a dozen who professed to be Catholic were spared.

Ribault's turn came on October 11, at the same place and in the same way as he led a larger group up the beach. He was brought

A shell gorget engraved in the "spaghetti" style with two dancers was found during excavation for Tennessee's Chickamauga Reservoir. The rattlesnake gorget, in the Citico style, was probably an emblem of status.

A "weeping eye" gorget (above) shows the eye markings of a peregrine falcon. Images of falcon men, or falcon spirits, appear frequently in Southeast Indian art.

over the river to speak to Menéndez, and the great antagonists faced each other directly. It was said that Ribault offered a large ransom for his life, but he died like the rest, on a dagger and a spike.

When Philip of Spain read Menéndez's report of such complete victory in La Florida, he wrote a cramped little note in the margin: "As to those he killed, he has done well." The furious French ambassador reported to Paris: "This court were more gladdened than if it had been a victory over the Turks."

EARLY IN 1566 Menéndez led a small fleet northward from St. Augustine along the Florida, Georgia, and Carolina coasts, meeting and entreating the tribes in the towns of Guale and Orista. He entered Port Royal Sound, the same magnificent harbor that had earlier attracted the French as the site for Charlesfort. On Parris Island he built a fort, the first of four that would stand there, and the first structure of Santa Elena, the little capital of his vast domain.

In July a troop of 250 men under Capt. Juan Pardo arrived from Spain and built a more substantial fort and a number of houses—small thatch-roofed domiciles with walls of daub, a kind of mud plaster. Having planted his second La Florida community, Menéndez looked to the interior. He thought it possible to trek from Santa Elena to New Spain (Mexico) and find rich mines along the way. On St. Andrew's Day, November 30, he ordered Juan Pardo and 120 soldiers westward to find out. With Pardo as guide and interpreter was the young man once named Guillaume Rouffi but now called in Spanish Guillermo Rufin.

Pardo's own account of his exploration reads like a duty roster, a laconic account of Indian place-names. He stopped at a large settlement named Cofitachequi and went on to the foothills of the Appalachians where, at a riverine town named Joara, he built a fort and left behind a company under Sgt. Hernando Moyano de Morales. He then turned east again, to Guatari, where 30 chiefs met him, and a note from Santa Elena with "news of the French" reached him. Before heading for home, Pardo stationed four soldiers and his chaplain, Sebastian Montero, at Guatari—the first successful Christian mission in the present United States.

REQUIEM PRAYERS 300 years after death were said on St. Catherines Island by Bishop Raymond Lessard of Savannah (above left) for the 430 individuals found in the mission church. A face sculpted of daub (left) adorned a wall—perhaps the image of a Guale Indian.

In the 1600s the settlement, overlooking Georgia's Sapelo Sound (above), was Spain's northernmost outpost until destroyed by English-led Yamassee Indians in 1680.

THE CROSSING of cultures at St. Catherines was ruled by religion. Glass cruets (above) held altar wine and water. Hawkbells and glass ornaments (below) and a cotton sash woven with copper thread added touches

of color to the mundane rural mission life.

A fragment of mission bell, one of the objects conserved at the American Museum of Natural History by Nancy Demyttenaere (above right), recalls an Indian rising in 1597 that killed five priests.

DURING THAT SPRING of 1567 a letter from Sergeant Moyano in the faraway foothills reached Santa Elena. He was up to his neck in Indian trouble. No sooner had Pardo left Joara than Moyano became embroiled in an exchange of insults with a chief of the Chisca, a tribe on the other side of the mountains. The chief threatened to eat not only Moyano but his dog as well.

Moyano took the offensive. Crossing the mountains, he found the Chisca in a fortified village. The Spanish rushed the entrance. Moyano was wounded but with his men forced the palisade, the defenders spilling away to the protection of their houses. Moyano fired the buildings; flames and smoke rose into the valley sky, a death pall for more than a thousand Indians.

After the fight Moyano took his company down a valley, that of the Nollichucky River, to Chiaha, where 3,000 warriors greeted him in peace, and onward to the village of the "main chief," where he built a fort and settled down to wait—for whatever a man waits for deep in an unknown land.

While Moyano was thus engaged on the frontier, Menéndez at Santa Elena listened to Pardo's report of where he had been the previous winter. It was not the easy road to Mexico, but it was a broad and fertile land worthy of conquest. On September 1, 1567, Pardo was again on the march, and this time we have a clearer idea where he went.

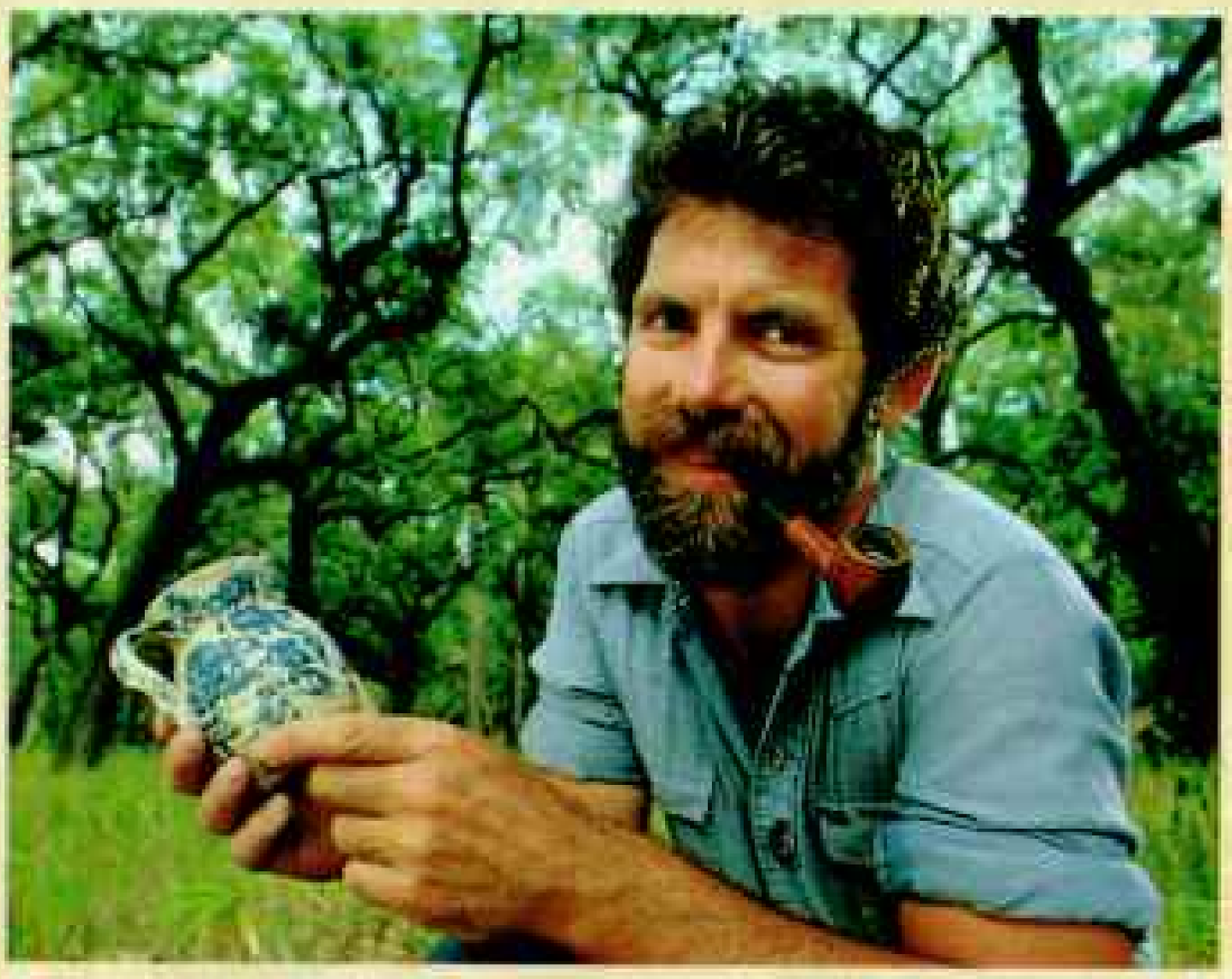
For years historians have noted that many of the places visited by Pardo have the same or similar names as places visited by Hernando de Soto during his long trek through the Southeast. Soto's route, despite the best efforts of scholarship and a presidential commission, has never been known with certainty. Thus, fixing the Pardo route might unlock one of the oldest mysteries of our early history.

About 1945 historian Herbert Ketcham, during "a fortunate bit of browsing" in the North Carolina State Archives, came upon copies of a 900-page narrative of Pardo's second expedition, written at Santa Elena in April 1569 by the notary Juan de la Bandera. In 1963 Michael Gannon came across Ketcham's translation while searching for the site of Father Montero's mission at Guatari, and in 1979 Gannon's study directed others to the Bandera document—Charles Hudson and his students Chester DePratter and Marvin Smith at the University of Georgia. Paul Hoffman rendered a new translation, and Hudson began to unlock, through the now clarified Pardo route, the old mystery of the Soto track.

From Santa Elena and Port Royal Sound, Pardo traveled west and north to the village named Guiomae, at the juncture of the Congaree and Wateree Rivers. Here he picked up Soto's route, a well-trod trail leading up the Wateree to the town of Cofitachequi.

What remains of the town today is an assemblage of mounds on

"THE BEGINNING of the end for the Spanish in the Southeast," is how archaeologist David Hurst Thomas (below, with a jug of Spanish majolica ware) characterizes the mission's fall. He located the long-sought St. Catherines site using ground-penetrating radar and other electronic tools. Six digging seasons have yielded a full picture of the settlement, founded by 1587, filling a gap in the history of the Southeast, where more than 50 Franciscan missions once gathered souls.



the riverbank outside Camden, South Carolina, an aristocratic little city with deep memories of the Confederacy and the Revolution. From here the trail follows the river to Charlotte, North Carolina, where the Wateree, now drowned by dams, assumes a new name, Catawba, and bends west toward the mountains. Somewhere along its banks was Joara (a town Soto had called Xuala). Charles Hudson places it near Marion, North Carolina, probably in the fertile floodplain called locally the McDowell Bottom.

PARDO REACHED JOARA on September 24, then pushed on to Tocae, near present Asheville, and crossed the Great Smoky Mountains by walking the margin of the French Broad River. By October 6 he had reached Tanasqui, on a fertile black bottom near Newport, Tennessee. And the following day he met at length the patient Sergeant Moyano, waiting for him at Chiaha.

"Chiaha was on Zimmerman's Island," archaeologist Richard Polhemus told me. "It's 70 feet under Lake Douglas because of a TVA dam." In the spring of 1985 Polhemus surveyed a site where the Pigeon River joins the French Broad and found traces of a town plaza and palisade that he believes was Tanasqui.

"From there," Polhemus continued, "Pardo mentions going through rugged country near a place called Chalahume and on to a town named Satapo. A friendly Indian slipped him the word that a huge army was waiting to ambush him, so he chose the better part of valor and turned around, returning to Chiaha by what he called 'a better way.'"

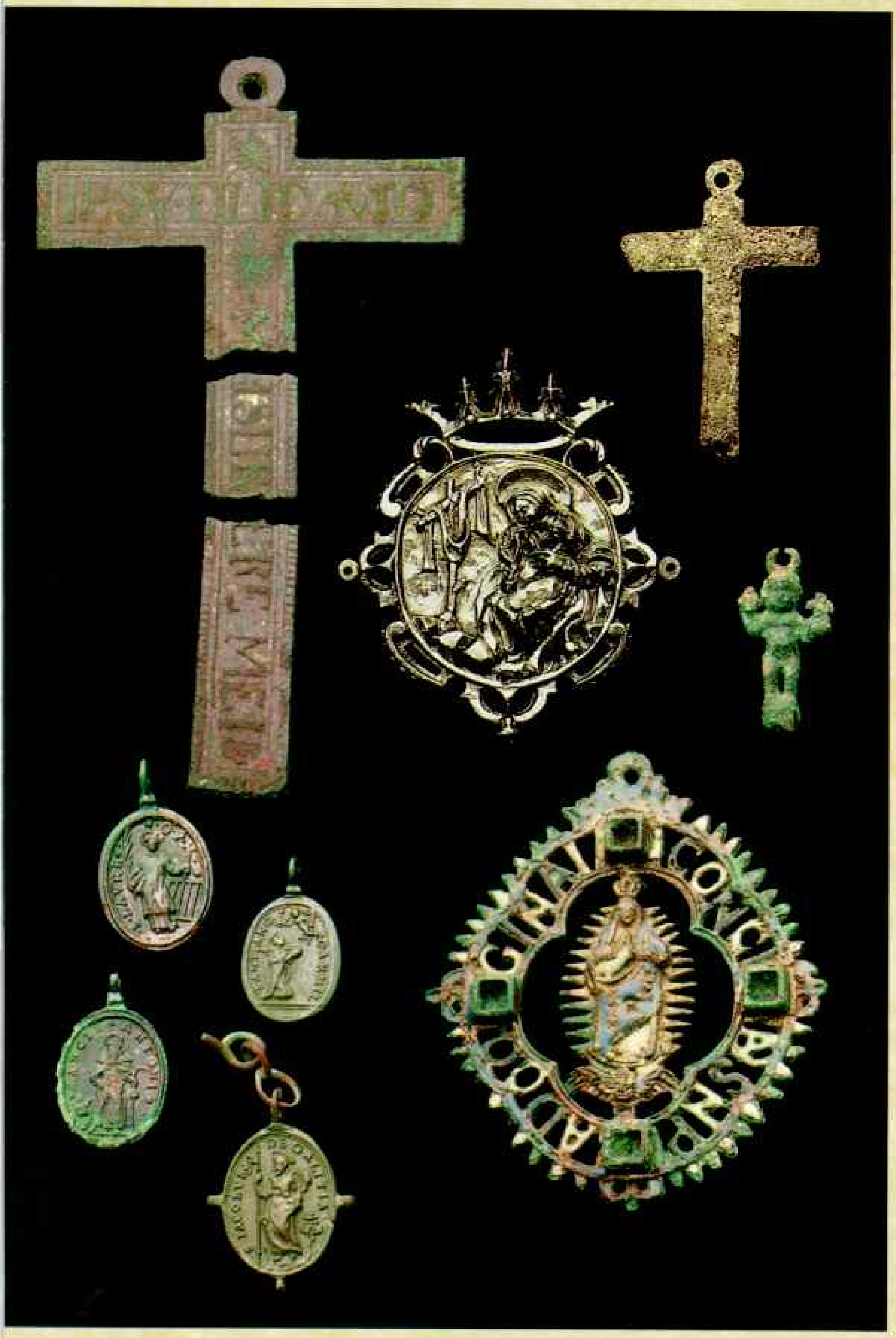
Those place-names, Chalahume and Satapo, proved keys to unlocking the Pardo path, for they are Muskogean words, the language of the historic Creek and other southern tribes. The Cherokee pronunciation of these foreign words survives in the modern names of Chilhowee Mountain and Citico Creek, both near Knoxville.

"It all fell into place," says Charles Hudson. "Pardo came down the east side of Chilhowee Mountain and at Citico Creek turned back along the Great Indian Warpath. The peoples living in the region were decimated by European disease, and in the 17th century they moved south to become Creek and the Overhill Cherokee moved in."

On his way home Pardo drove in a series of manned forts like fence posts across the Southeast from Tennessee to South Carolina, and on March 2, 1568, he reached Santa Elena, bringing sacks filled with sorely needed corn and tales of the wild west.

Pardo described the interior as "good for bread and wine and all kinds of livestock." That hope soon brought settlers to Santa Elena. Two caravels unloaded 193 immigrants, farmers and their families, who formed a town government and elected a *cabildo*, or town council. By October 1569 the little capital numbered 327 souls. Around the fort clustered 40 houses, some very crowded, like that of merchant, tailor, and tavern keeper Alonso de Olmos, who

EMBLEMS of their adopted faith—crosses and medals bearing images of saints and the Virgin—were buried with Indian converts at St. Catherines mission. Even personal jewelry like silver finger rings (below) displayed religious symbols such as a Sacred Heart of Jesus. The Roman Catholic Church has begun an inquiry into the lives of the five priests slain in the rebellion of 1597, anticipating that they might someday qualify for sainthood.



lived with his wife, mother-in-law, and six children. Juan de la Rosa, a social cut above Alonso, lived with his wife, three children, a nephew, and three servants.

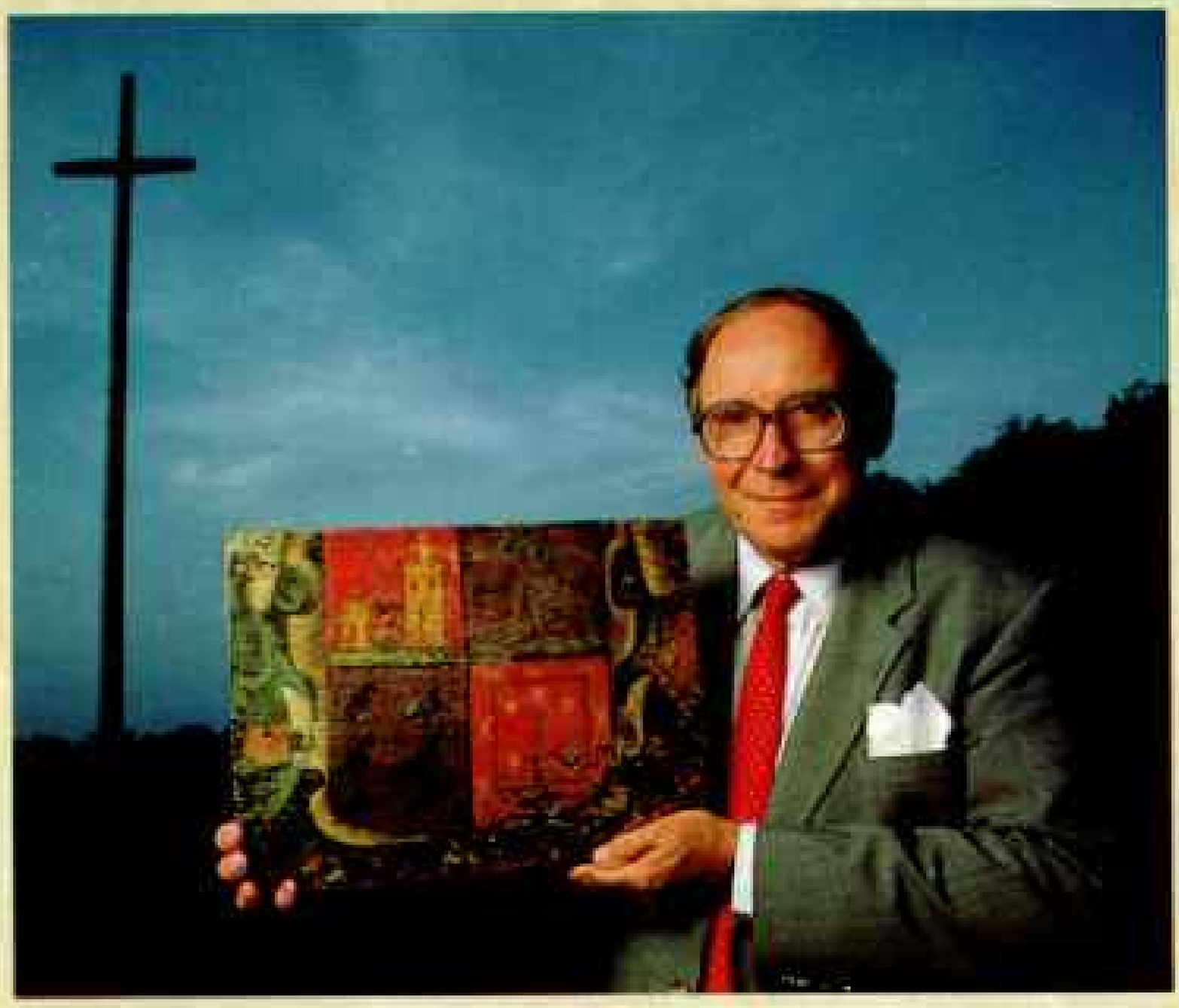
Jesuit missionaries arrived and spread out into the country to teach the faith to the Indians, but it did not go well. The Indians "made sport of what I said," reported one priest. They kept asking questions "of a low order" such as "Does God have a wife?"

Bad times came when food ran short. Only the dramatic arrival of a relief ship saved the colony from starvation (painting, page 347). When hungry soldiers were quartered on the Orista, a policy that could end only in hostility, the Jesuits withdrew.

In 1571 Menéndez again shored up Santa Elena, arriving with his wife and a new governor. They brought symbols of permanence—canopied beds, a pewter table service for 36, carpets, saddles—and probably typhus, which struck the settlement.

Again Santa Elena survived and even flourished. The upper class, friends and relatives of Menéndez, dressed finely for Mass in a church humble of design but boasting an embossed leather altar canopy. In the processions on feast days, they were followed by a mix of craftsmen—a mason, a tailor, a barber, a carpenter who built both kitchen tables and gun carriages, a notary, and a smith.

The farmers had learned that corn, melons, and squash grew well. Sarsaparilla root, cedar, and oak were shipped out to Spain, and town officials hoped to prosper in a business that would come to shape North American history—trading in furs.



SYMBOL of vanished empire, the headboard from the coffin of Pedro Menéndez—adorned with his coat of arms—was a gift from Spain, where Menéndez is buried, to the city of St. Augustine. Historian Michael Gannon raised funds to erect the cross, a feature of the city's skyline since 1965; it marks the place where Menéndez landed 400 years earlier.

THE COLONY had long dreamed of more distant and more fertile lands. One of the most tempting surrounded the Bay of the Mother of God at the top edge of the maps, where might be found a passage to the Pacific. The Spanish had an entrée into that land—the son of an Indian chief picked up in 1561. Taken to Spain and later to Mexico, he became known as Don Luis de Velasco after the Viceroy of New Spain.

The king had ordered Don Luis returned home, where he could act as an interpreter and set a good example for a mission. So it was that a small band of Jesuits gathered in Santa Elena in 1570, bound with Don Luis for the land far to the north he called Ajacán.

The story of their journey has been assembled from Jesuit archives in Rome by historians Clifford Lewis and Albert Loomie.

The Jesuit leader, Juan Bautista de Segura, was a saintly man, set in his resolve to "live with his little community where there

would be no white men to give bad example. . . ." The younger brothers tried to talk him out of going. One noted: "I did not like the looks of that Indian, Don Luis."

Nonetheless they embarked, taking with them Alonso de Olmos, the young son and namesake of the town's tailor, to assist at Mass. After a wave-tossed voyage around Capes Fear and Hatteras, they came on September 10 to "the best and largest port in the world."

Chesapeake Bay is loveliest in September, with bright days under a cobalt sky, and the voyagers' hearts must have been gladdened as their ship made its way across the bay and up a river to a stream now called College Creek. Five miles farther upriver lay the island the English would, 37 years later, call Jamestown.

Don Luis was greeted by demonstrations of joy by his people. The Jesuits sailed to the head of the creek—then navigable for five miles—and portaged their goods over the watershed where Williamsburg now stands to King's Creek, which they canoed down to the York River. On a bluff not far from the village of Chiskiac, the priests built a small church of timber and thatch.

In Ajacán, Don Luis's fervor as a convert quickly dissipated; within a week he had left for the village of an uncle, where he said he was gathering chestnuts and souls—Segura's opinion was that he was gathering "many wives."

By February the missionaries had been abandoned. Segura was very ill. He sent three of his company on a last embassy to Don Luis. The Indian greeted them cordially and promised to follow them back to the mission—and follow he did, killing all three.

On February 9 Don Luis and his warriors did come to the mission and asked for trading axes to cut wood for the priests; instead, he cut down the fathers, all but the boy Alonso, who was saved by a brother of Don Luis.

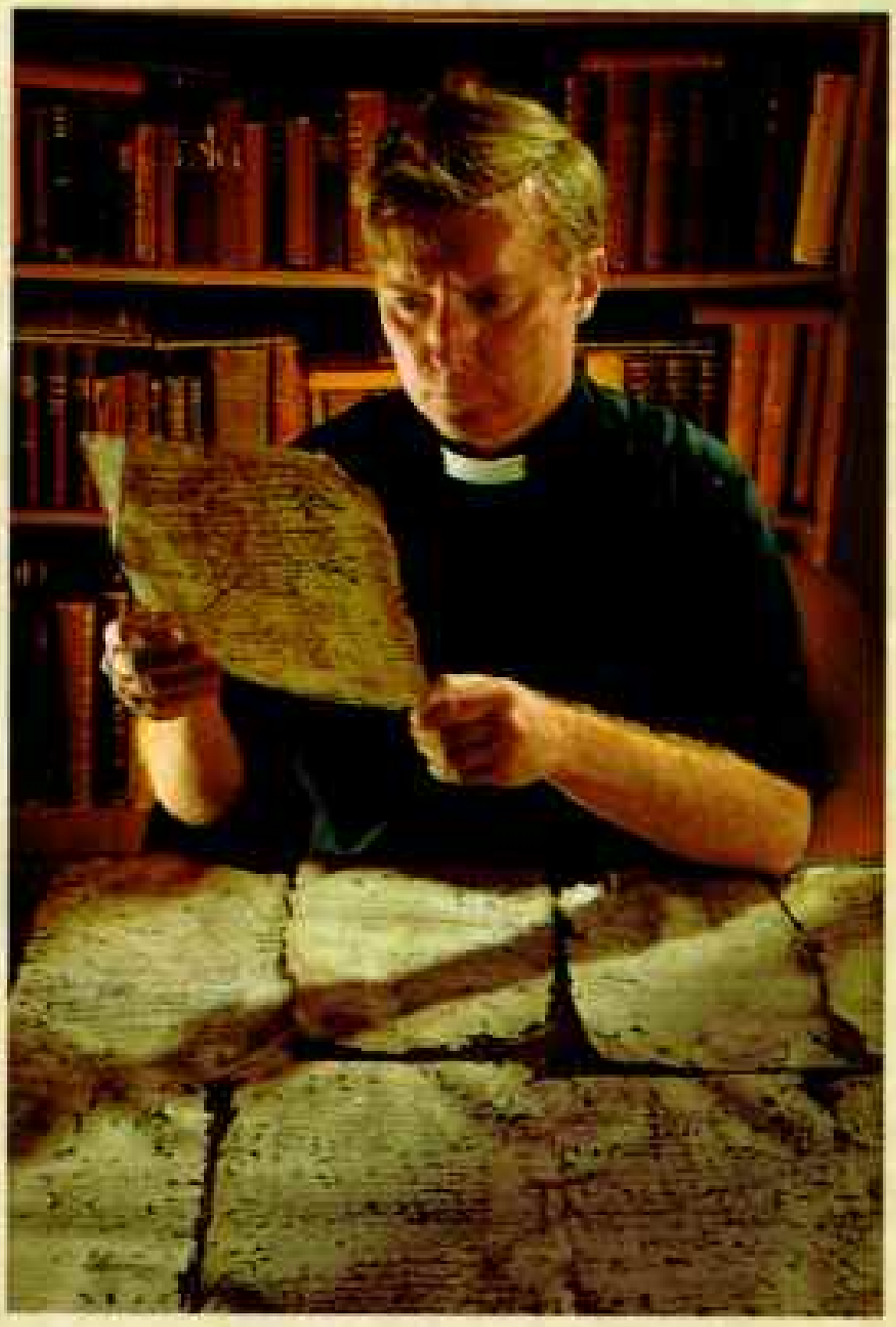
When a relief ship arrived that summer, the pilot did not see the signals that Segura had promised. Then the "Jesuits" appeared, walking along the shore—a ruse by costumed Indians. A fight followed. The Spanish captured two Indians and sailed for Havana, where one revealed that young Alonso was still alive.

Menéndez was unable to launch a punitive expedition until August of 1572, when he led three ships into the Chesapeake and sent 30 soldiers to attack the Indians at College Creek. In short order young Alonso was produced "naked as an Indian." He "knelt at the feet of his father" and tried to remember his Spanish.

As captives were brought to the ships, Menéndez hanged eight or nine for the murder of the missionaries and let others go, but the object of his vengeance, Don Luis, did not appear. Menéndez sailed for Spain vowing to return, but in two years he was dead, stricken while building a new fleet.

Thus it ended in Ajacán, the land that would one day be called Virginia. Or did it?

OLDEST DOCUMENTS penned in the United States, parish registers that date from 1594 are examined by Father Philip R. Gagan, archivist of the diocese of St. Augustine, where Catholic services have been held regularly since 1565.

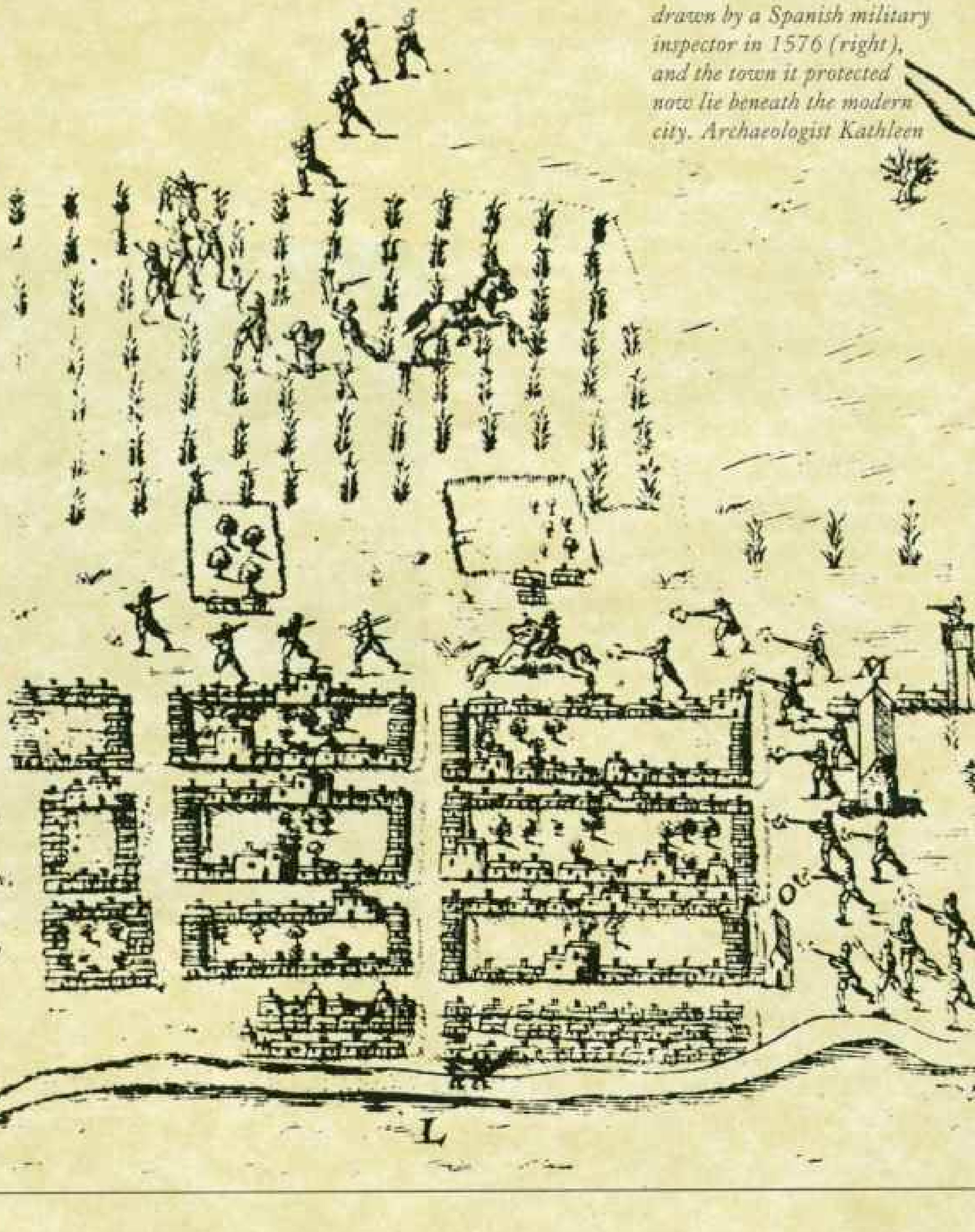


"The Sack The Corsair Did In This City . . ."

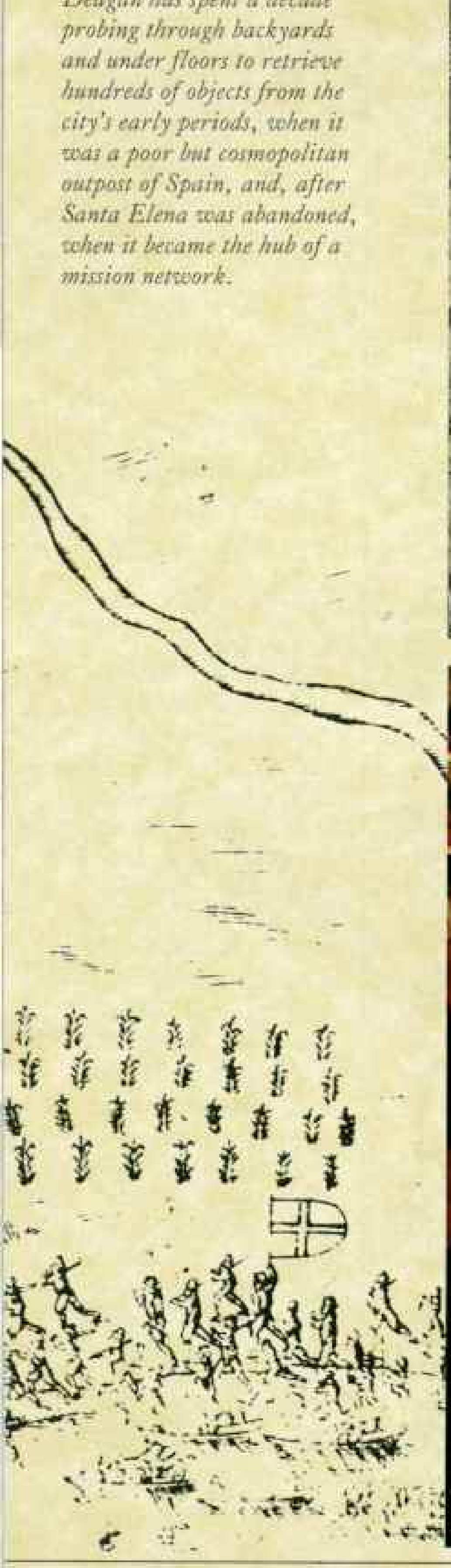
THE GREATEST BLOW to Spanish America was struck by English freebooter Sir Francis Drake, who raided through the Caribbean in 1586, sacking Santo Domingo and Cartagena before falling on St. Augustine with 42 vessels and 2,000 men.

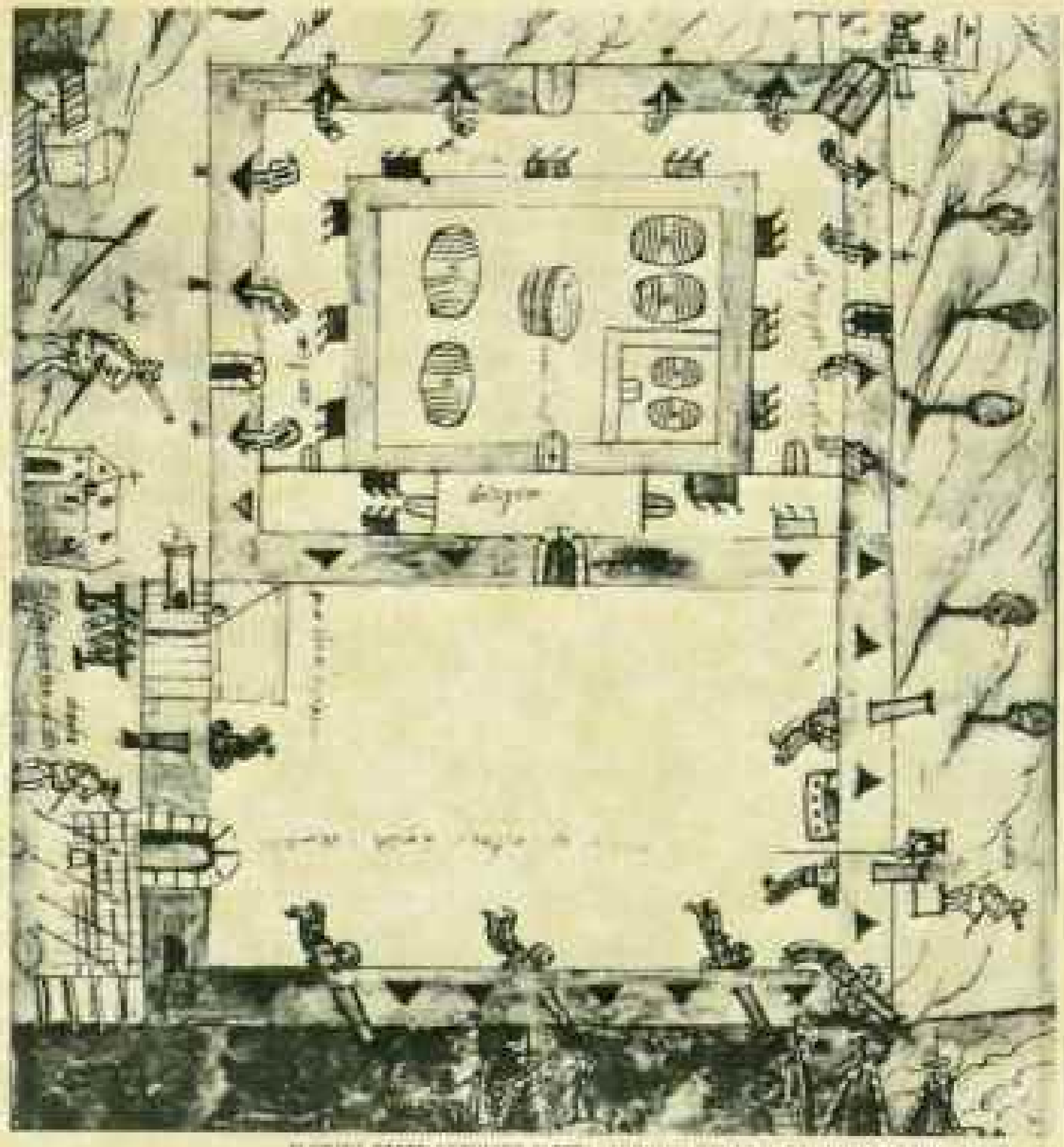
Drake's cartographer made the first map of the Spanish colony (detail below), showing the ordered blocks of streets and Drake's assault force coming ashore.

The fort attacked by Drake, as shown in a plan drawn by a Spanish military inspector in 1576 (right), and the town it protected now lie beneath the modern city. Archaeologist Kathleen



Deagan has spent a decade probing through backyards and under floors to retrieve hundreds of objects from the city's early periods, when it was a poor but cosmopolitan outpost of Spain, and, after Santa Elena was abandoned, when it became the hub of a mission network.





FLORIDA STATE ARCHIVES (LEFT); ARCHIVO GENERAL DE INDIAS, SEVILLE (ABOVE)

HISTORIAN CARL BRIDENBAUGH, refining the work of Lewis and Loomie, makes a convincing case that Don Luis was none other than Opechancanough ("he whose soul is white"), brother of the famous Powhatan and leader of the two risings, in 1622 and 1644, that almost obliterated the infant English colony at Jamestown. "[It] cannot be proved," writes Bridenbaugh; "it is, however, a reasonable, workable, and plausible hypothesis into which the known facts fit . . . [it] explains nearly all of the matters that have hitherto been obscure, preventing our understanding of many events in the early history of Virginia."

It is cause to wonder at history that the old Indian chief, about 100 when he was shot in the back while being held prisoner in Jamestown, had been feted at a Spanish court and baptized in a great cathedral.

After Menéndez's death, Spain sent out new leaders to Santa Elena and St. Augustine. In 1576 the long-feared Indian rising erupted along the whole Spanish coast. It began when the Guale tribe killed a chief who had been baptized. Capt. Alonso de Solis led troops from Santa Elena to the Guale village, killed two chiefs, and cut the ears off a third. The Guale then waylaid a Spanish ship near Sapelo Island and killed all aboard.

The Orista tribe, living closer to Santa Elena, joined the war. A party of 21 men marched on the Orista and seized their corn. Before dawn the Indians struck back—and dead in the new day were two whom the frontier had finally killed, Sergeant Moyano, who had once trooped to Tennessee and killed a thousand Chisca warriors, and a new recruit to the army, young Alonso de Olmos, who had once been an altar boy in bloody Virginia. A lone survivor hastened back to Santa Elena to spread the alarm.

A month later the war reached Santa Elena itself. As smoke began to billow from the houses, the people rushed to the creek, where they crowded into small boats and made for St. Augustine. Through eyes blurred by anger and loss, they watched ten years of labor go up in smoke behind them as the town and fort became a firebrand.

The king sent out another Menéndez—Pedro's nephew, Pedro Menéndez Marqués—to take command and restore La Florida. As part of the campaign he loaded sawed timber and planking aboard a fleet in St. Augustine and sailed back to Santa Elena, where a fort was quickly assembled—San Marcos, one of two that Stanley South excavated under the Parris Island golf course. Menéndez took the war to the Indians, burning 19 Guale towns and fighting a pitched battle at Orista against 300 bowmen. By 1580 the rising was quelled, and Santa Elena entered its second life, with 60 houses and a new governor and a complement of 80 men in San Marcos. It must have seemed at that moment that this tale would be written in Spanish.

In England, the young queen who had listened so attentively to Ribault and Laudonnière 20 years before was now a mature queen with powerful fleets of privateers, and her eye was on North America. In 1584 Sir Walter Raleigh's scouting ships reached Cape Hatteras, athwart the course of Spanish treasure fleets. The following year Sir Richard Grenville sent settlers to erect a fort on Roanoke Island. The thorns in King Philip's side were being driven deeper.

A Bloody Beginning To Virginia History

A mission to the Chesapeake Bay in 1570 ended when an Indian convert dubbed Don Luis, who had been taken to Spain by a previous expedition, led an attack from which only young Alonso de Olmos survived. In 1572 Menéndez rescued Alonso and hanged several Indians for murder—but failed to find Don Luis. He reappears in history, scholars suggest, as the famous Opechancanough, leader of two risings against the later English colony at Jamestown. The mission was on the York River, near where Cornwallis would surrender and the United States win its Revolution almost 200 years later.

IN A RACE with nature, archaeologist David Sutton Phelps and his crew preserved the bones of 30 individuals from an Algonquian ossuary eroding into North Carolina's Currituck Sound. The Carolina Algonquian faced the end of their history with the arrival of the English. John White, member of a failed 1585 colony, painted an Algonquian mortuary house (above), where bodies were stored prior to ossuary burial. Although a second settlement, in 1587, disappeared as the Lost Colony, the English established Jamestown in 1607. By 1750 the Algonquian culture, which had survived here for a thousand years, had vanished.

BRITISH MUSEUM, LONDON

In 1586 came Sir Francis Drake, sweeping through Spanish America with a fleet of 42 vessels and an army of 2,000. He sacked the major cities of Santo Domingo and Cartagena. When his huge force arrived off St. Augustine, the garrison put up a token fight and fled to the woods. Drake's cartographer made the first map of the settlement (pages 358-9) before it was burned. Moving north, Drake missed Santa Elena when the wind blew him offshore. He kept north to Roanoke Island, where he picked up the miserable survivors of the first colony and took them home to England.

A year after Drake's attack, orders were issued to the 33 families at Santa Elena to tear down their fort and move to St. Augustine, where defenses would be concentrated. Despite their vigorous protests, it was done, and Santa Elena was no more.

THERE REMAINED along the barrier islands of the Spanish coast a number of missions established by the Franciscans, who began to replace the Jesuits in 1573. In the following century they founded more than 50 thriving missions in La Florida. Those on the Atlantic coast centered on Santa Catalina de Guale, the site of which was undetermined until 1981, when archaeologist David Hurst Thomas found it after a systematic survey of St. Catherines Island.

Once the home of Button Gwinnett, signer of the Declaration of Independence, St. Catherines is used today by the New York Zoological Society as a breeding farm for endangered species, many from Africa, which give an exotic look and sound to the old Guale Indian island. On its southwestern side, Thomas and his colleagues have unearthed the old mission church and the skeletons of 430 Indian converts buried inside its walls.

St. Catherines died in flames and arrows when 300 English-led Yamassee Indians descended on it in 1680, during the century when English settlement, anchored in Charleston, drove the Spanish back into St. Augustine. There the red and gold, first brought to the coast by Ayllón in 1526, flew with one brief English intermission until it was finally hauled down and replaced by the Stars and Stripes of a new constitutional republic in 1821.

That energetic young republic had its own memories and no reason to remember Chicora, the land of Ayllón, or Pardo's forts and first mission, or Santa Elena, or Segura and his dead companions beside the York in old Ajacán. But the muse of history delights in small ironies and keeps them for others to discover in time.

Thus it was when a Spanish caravel came into the Chesapeake in 1611, under pretext of searching for a lost ship, and captured a young English pilot named John Clark. Three from the caravel were stranded ashore and were jailed. One died of starvation; another, found to be English, was later hanged for treason. The third, Don Diego de Molina, survived five years' imprisonment in Virginia, railing in letters smuggled home against English designs in a land to which Spain had such an ancient and honorable claim, and calling Jamestown "a new Algiers in America."

Clark had been taken to Spain and interrogated, and in due course of time each man was returned to his native land. Clark returned to the sea and found work to his liking as first mate on a ship bound for America.

Her name was *Mayflower*. □

Hello Anchorage, Good-Bye Dream

By LARRY L. KING Photographs by CHRIS JOHNS

Soaring above a sylvan vista of Alaska toward Anchorage's urban sprawl, a jumper takes off from Hilltop Ski Area. One of the nation's fastest growing cities during the early 1980s, Anchorage came down hard when its oil-rich economy nose-dived, but now it hopes for progress to get off the ground again.

BANISHING THE LONG WINTER BLAHS, contestants high-step down Fourth Avenue in a snowshoe race during the annual Anchorage Fur Rendezvous in February. The ten-day "Rondy," begun in 1936 to give trappers a place to sell their pelts, still features a fur auction, as well as the World Championship Sled Dog Race (if snowfall is sufficient) and a sled dog weight-pulling contest (left); a recent winner managed to budge 2,660 pounds.

In June about 3,000 entrants competed in the ten-kilometer Alaska Women's Run, including several who pushed strollers for a stretch to demonstrate that motherhood does not preclude life in the fast lane.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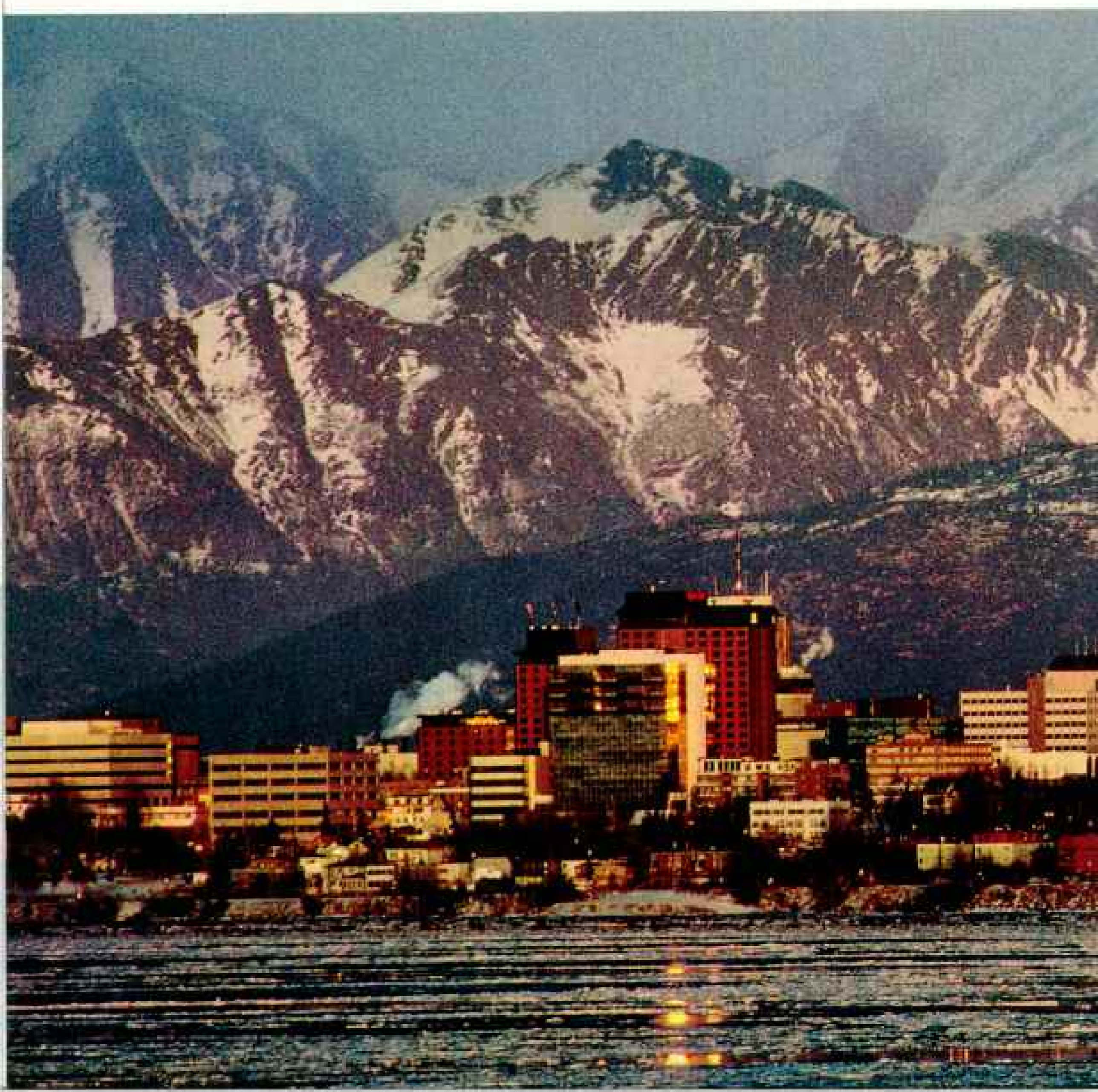
THE OLDEST JOKE about Anchorage—that it is "only half an hour from Alaska"—survives because it is the gospel truth.

Within that famed half-hour perimeter are snowcapped mountain ranges, icebergs, glaciers, ski slopes, lakes, rivers, woodlands, old gold mines, colorful native villages and burial grounds, fertile valleys, a wildlife refuge, a national forest, state parks, bays, inlets, islands, moose runs, trading posts, quaint cabins, and—well, shucks folks, *Alaska!*

Girdwood, a ski resort 35 miles away, receives 127 inches of snow annually compared with only 71 for downtown Anchorage. Surrounded on three sides by mountains, and protruding into two branching arms of huge Cook Inlet, Anchorage has natural barriers against extreme temperatures and harsh storms. This means that the city often gets uncomfortable without getting beautified or taking on the winter wonderland qualities of myth and outlander expectations.

Waking in a downtown hotel and peering out the window through morning's dim winter light, one may lift one's eyes above the city (which, alas, in the absence of covering snow or summer greenery has, to the foolishly romantic visitor half-expecting igloos, polar bears, and cadres of swaggering sourdoughs, all the modernist charms of downtown Amarillo) and see, beyond, the "real" Alaska beckoning. Mount McKinley, at 20,320 feet the highest peak in North America, looks no more than a brisk stroll away. In fact, to fly there, one

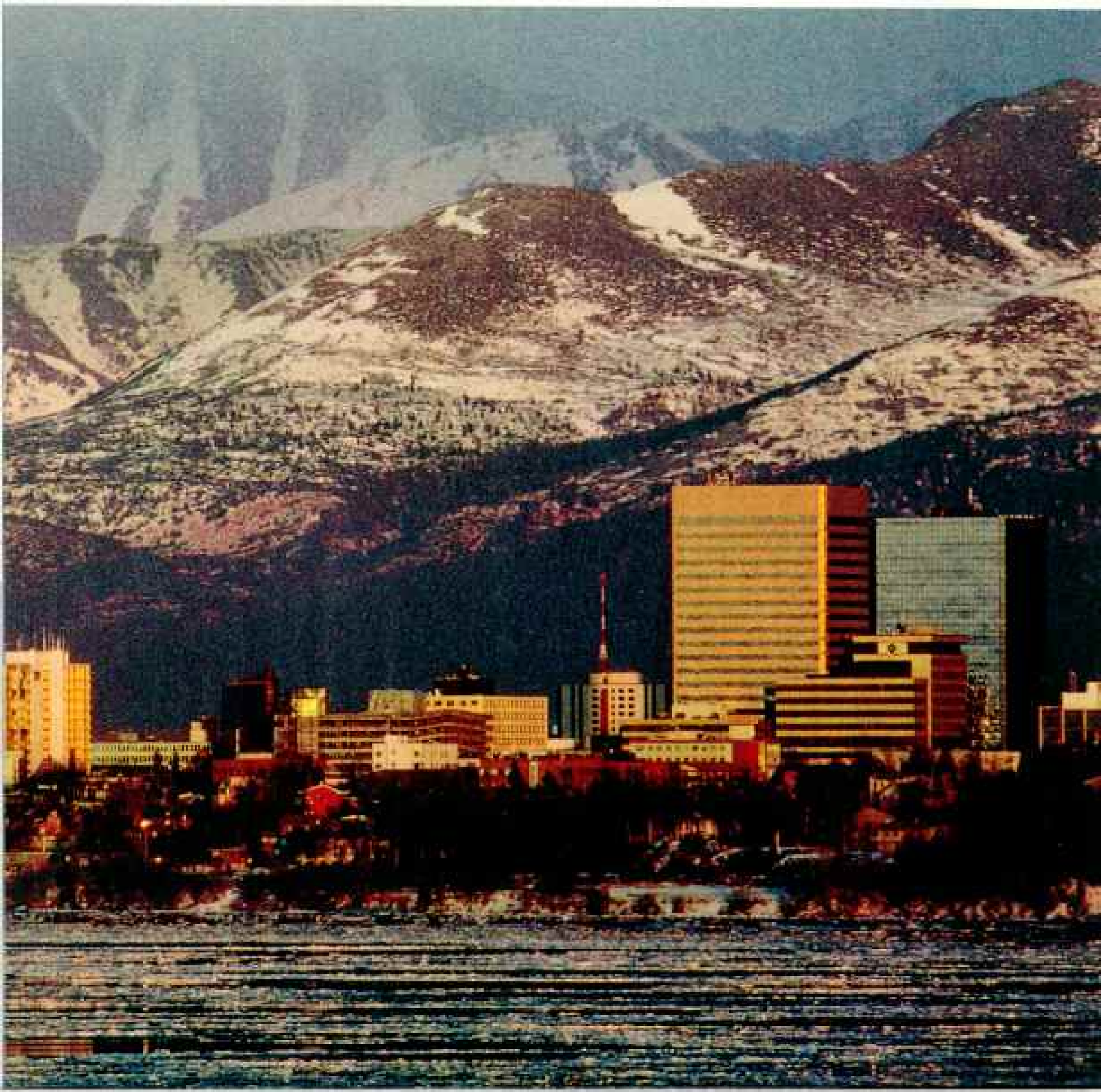


must travel over 150 miles of rugged terrain.

Modern Anchorage surely would appear as an Emerald City, a miracle of glass and steel, to those who witnessed its beginning in 1915 as a tent and log-cabin settlement—literally carved out of the wild—to serve construction of the Alaska Railroad; its name derived from the site's use as an anchorage for sloops and steamships traversing Cook Inlet. At its early peak the raw boomtown contained perhaps 6,000 workers and adventuresome entrepreneurs. When incorporated in 1920, the shacktown was given a slight case of skyline fever by two- and three-story buildings housing a school, a movie theater, and a hotel; in 1923 it got a small, bumpy landing field to serve light aircraft and begin bush pilot legends treasured to this day.

Until the mid-1930s, when the road to Palmer was built to accommodate new agricultural development in the Matanuska Valley (colonized by some 200 midwestern rural families resettled with federal money), the only "highway" in Anchorage didn't go anywhere. Bob Atwood, publisher of the *Anchorage Times*, recalls: "A dirt road ran around Anchorage. If you wanted to take a Sunday afternoon drive,

OIL HAS LEFT ITS SIGNATURE on the skyline, including the 21-story, 65-million-dollar headquarters of ARCO Alaska, Inc., glowing gold at far right. Anchorage's 1970 population of 126,000 soared in 1986 to 250,000—nearly half the state's total—but then oil prices plummeted, and nearly 20,000 residents moved away last year.



FRIENDS WHOOP IT UP on Friday night, some from an altitude recorded by the license plate of Steve Pickett's customized truck. At Chilkoot Charlie's, site of the Rondy beer-drinking contest (with non-alcoholic beer), "bottoms up" is a boast, not a toast. It's hard to dampen the spirits of a populace whose median age is just 28.

you literally had to go around in circles."

Says former Governor and Nixon Administration Secretary of the Interior Walter (Wally) Hickel, one of Alaska's largest commercial builders, "Some have the notion Anchorage was a better place when I got here in 1940 with 37 cents in my pocket. No. It was rough, raw. It was primitive. It had no amenities."

World War II brought an accelerated road and defense-base building spree luring new thousands. Tongue firmly in cheek, publisher Atwood says that "Hitler, Tojo, Stalin, Mao Zedong, and Ho Chi Minh have been the greatest developers of Anchorage and Alaska to date." With a few exceptions, such as the discovery of the Prudhoe Bay oil field in the late 1960s, growth spurts have been occasioned by war. Old memories of hardscrabble times in a rude, isolated village may account for the repeated boasts of prosperous old-timers that Anchorage has become "a great international city." Perhaps they see not so much what is there as what once wasn't there. The visitor who has seen Paris, London, and New York may not so quickly think to bracket Anchorage with them.

FEW CITIES the size of Anchorage (230,000) or larger remain squeaky clean; where people congregate in large numbers, they invariably scar, pollute, and sprawl—the tax paid for what we call "progress" or "civilization." Says former Anchorage Mayor Tony Knowles, a slick-haired Oklahoman by way of Yale, "People come here expecting a kind of Disneyland, a theme village. But we're 20th-century Americans with all the strengths and faults of our time."

Under cover of darkness or snow Anchorage's urban blemishes are not readily apparent. From the high-perched fine homes atop Skyline Drive, Hiland Road, or Upper Huffman Road, city lights wink and twinkle invitingly. But in the light of a dry, bleak winter day, urban realities intrude. One February midafternoon, returning on Seward Highway from the ski slopes and woodlands of Girdwood—the snow-covered Chugach Mountains posted as roadside sentinels and a restful blue-ice glacier only ten minutes behind—I was startled to see hanging over Anchorage, 30 miles distant, a noxious yellow cloud that looked like a giant spillage of split pea soup.

Locals, perhaps, would not have been so astonished. "We're in a natural bowl here," says Howard Weaver, editor of the *Anchorage Daily News*. "When we get sunlight, exhaust fumes, and a trapped layer of warm air, we manufacture smog almost like Los Angeles." Everyone in Anchorage appears to own at least one car, truck, camper, van, airplane, boat, motorcycle, and snowmobile; nobody walks save a few backpackers and winos.

LARRY L. KING is the author of 11 books, five stage plays, several television documentaries, and many magazine articles. CHRIS JOHNS has photographed five assignments for the GEOGRAPHIC, including "Tornado!" in the June 1987 issue.

Mount McKinley
(Denali)
6,194 m
20,320 ft

ALASKA

Talkeetna

ALASKA
RAILROAD

Susitna

Mount Torbert
3,479 m
11,413 ft

Yentna

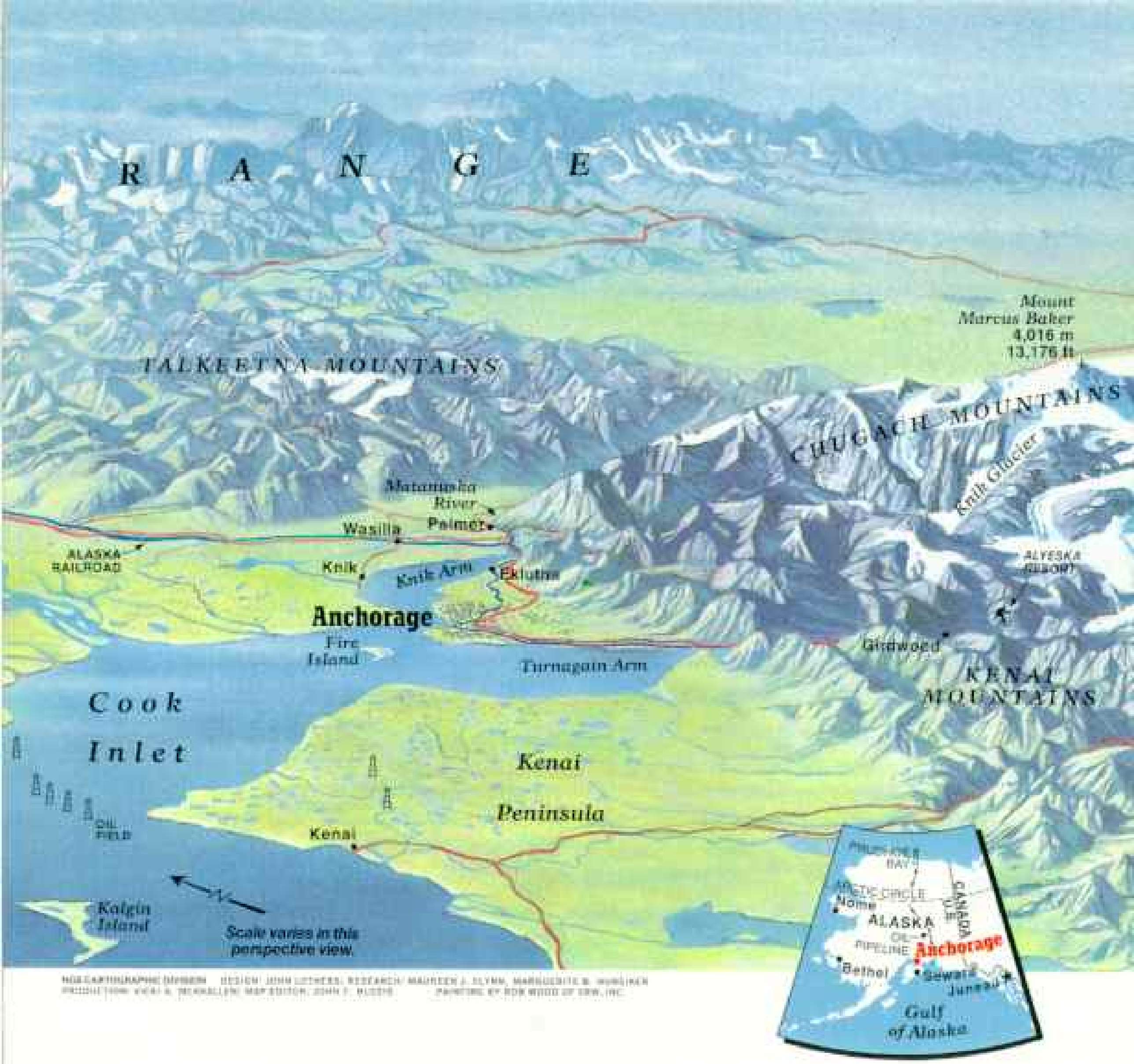
TORDRILLO
MOUNTAINS

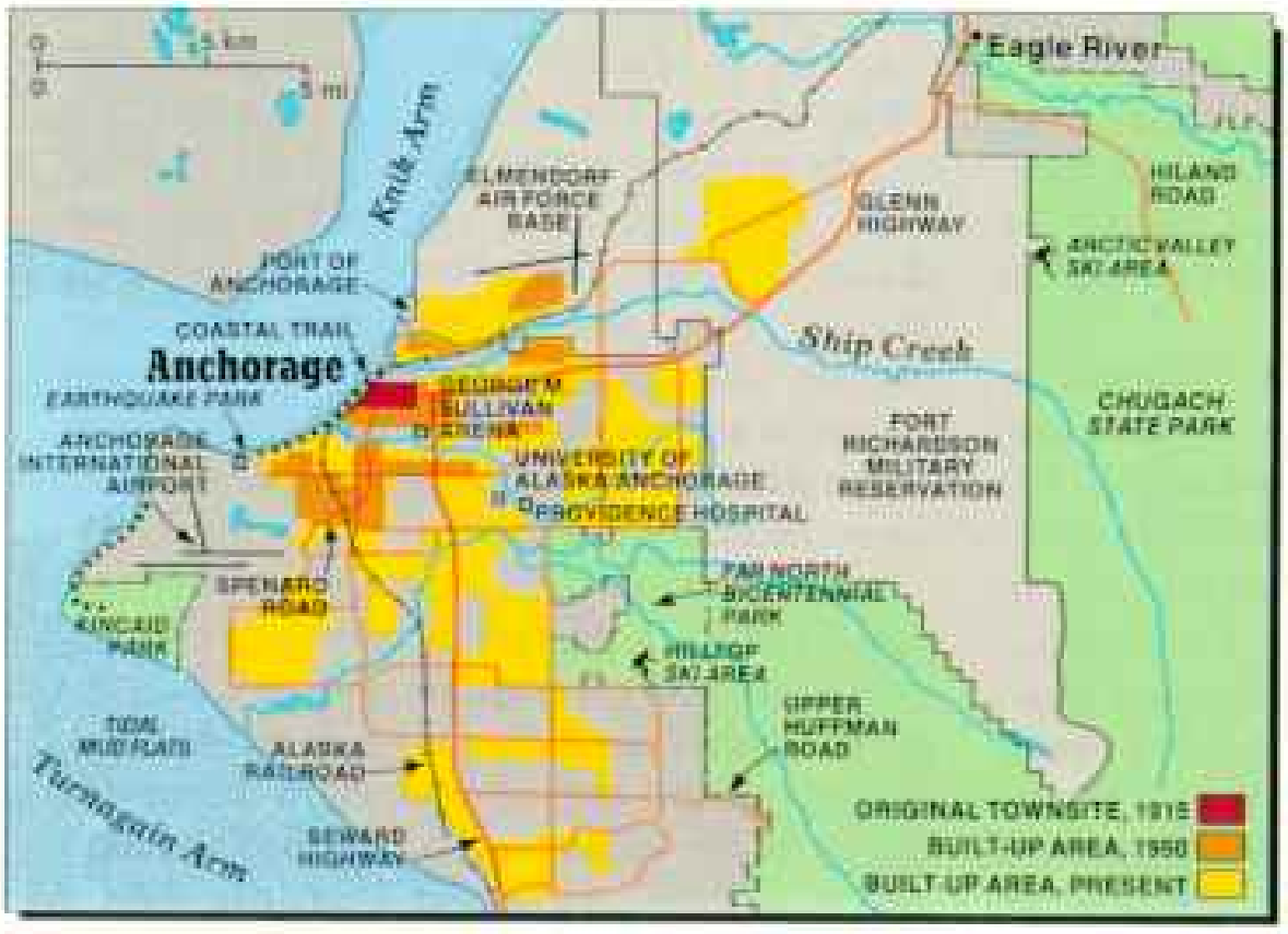
Anchorage: a sheltered place to grow

"AS FAVORABLE *for a settlement as any . . . under the same . . . latitude,*" commented Capt. James Cook after his 1778 visit to the future site of Anchorage. It lies on an alluvial plain at the head of Cook Inlet and is flanked by two branches, Knik Arm and Turnagain Arm. To the east the Chugach and Kenai mountains merge to form a wall that catches most precipitation from the Gulf of Alaska. To the north the Talkeetna Mountains and the Alaska Range seal off frigid northern air.

Anchorage began in 1915 as a central construction camp for the railroad linking interior coalfields

ANCHORAGE MUSEUM OF HISTORY AND ART





with the port of Seward on the Gulf of Alaska. More than 2,000 settlers, hoping for jobs, crowded the tent city (far left). Many moved to a permanent site nearby, decreed "Anchorage" by the U. S. Post Office. A restricted district allowed entrepreneurs such as "Montana Bessie" to add spice to the frontier.

In 1964 the Good Friday earthquake of March 27 rocked the city, causing parts of downtown to subside 30 feet. After repairs, growth continued (map, left). Greater Anchorage, known as the Municipality of Anchorage, encompasses 1,732 square miles—the largest U. S. city in area.

ANCHORAGE IS BULLISH on tourism, illustrated by a New York State couple taking in the exhibits at the Anchorage Museum of History and Art. About 850,000 out-of-state visitors spend some 215 million dollars annually, but the city hopes for more.

THE CITY'S rapid growth—140 percent between 1975 and 1985—made Anchorage one of the fastest growing cities in the nation. "We're constantly scrambling just to keep up in providing police and fire services, utilities, roads, schools. We haven't had time to settle down and satisfy management experts or professional aesthetics," says Mayor Knowles. Most of the mayor's comments about his city are a combination of brags, optimism, and a tempering defensiveness—as if paradise has a little trouble in it, yes, but perfection is just around the corner. An outside observer found that typical of many Anchoragites.

Wally Hickel believes that "Anchorage needs more people who care. Twenty-five percent of our population has turned over in the past two years. It's difficult to get transients to think of Anchorage as home or to take pride in city cleanliness, orderly zoning, the environment, architecture. They don't think of planning ahead twenty or ten or even five years, because they don't expect to be here." Mayor Knowles sees his city's number one problem as "how our people treat each other. We have our share of domestic violence and child abuse. Alcoholism plays a big part, as do our long, dark winters. One tough month is April. Expectations rise as spring approaches, but if it stays cold or snows in April, people find that spring hasn't provided a cure-all. They go crazy."

If one survives winter's gloom and a false spring, he'll witness nature's glory in bloom, bursts of happy optimism, and outdoor activities. "We're beautiful when it snows, beautiful in summer," says editor Howard Weaver. "Some people can't handle the cold and the dark. They come alive again when they can shake off their cabin fever." Anchorage's annual Fur Rendezvous—the February "Rondy"—is the largest of its community celebrations and was begun with the hope that it might get residents out of their homes and help them shed the winter blahs.

Anchorage in winter is no place to sleep on park benches. For years, however, the homeless population—a high percentage being Indians, Aleuts, and Eskimos—had little choice. "Every winter they'd find 12 to 20 bodies frozen to the sidewalks," says Brother Bob Eaton, one of two young Roman Catholic

brothers who arrived from Spokane in January 1982 to attempt to help the homeless. They found a great deal of community indifference toward those who existed on the streets, in cheap bars, and in shabby flophouses along lower Fourth Avenue. The city was booming, cash registers jingling, deals being cut, and—well, more people come to Anchorage to better themselves than to be their brother's keeper.

In the spring of 1983 Brother Bob and his colleague, Brother Dave Sifferman, established a tent city for the homeless down by the Alaska Railroad tracks. But they had camped on federally controlled land and quickly got evicted. "The feds gave the homeless half an hour to get their stuff and go," Brother Bob says, "but they didn't say go where. Ironic that they'd bust a tent city when Anchorage *began* as a tent city."

As Brother Bob helped the evicted load their belongings into the back of his pickup truck, up drove Archbishop Francis T. Hurley. The archbishop grinned and said, "Why don't you take them over to the Park Strip?" Brother Bob decided that, by golly, he would. "That was sacred ground," said Brother Dave. "In the winter of 1981 the Pope had drawn 40,000 people there"—the largest crowd ever assembled in Alaska. Delaney Park—the Park Strip in local parlance—is a well-kept city plot between Ninth and Tenth Avenues downtown. Brothers Bob and Dave gathered up about 30 random souls from alleys and weed thickets, establishing them in five faded tents among city flowers and greenery. The cops and park rangers came; the brothers stood their ground; the authorities retreated. Some folks grumbled about bums among the roses, but others lost scales from their eyes.

Howard Weaver began crusading in the *Daily News* for the city at long last to provide shelter for its down-and-out. Private citizens contributed food, blankets, dollars. A woman donating three sleeping bags told Brother Bob, "I didn't realize the plight of these people until you put them in my front yard and made me look at them."

The city provided a former municipal garage, used for storage of snow-removal machinery, and paid for refurbishing; costs for lights, heating, water, sewer, and garbage services were also assumed by the city. "In addition, it costs about $200,000 a year to provide the basics for 200 people each night," Brother Bob says of the Brother Francis Shelter. "All such money is from private donations, from oil companies down to the little old lady with $75 to her name."

When a derelict named Francis Trader died of hypothermia in an alley in the winter of 1986, outraged citizens wrote letters to the two Anchorage newspapers blaming police, the state legislature (for making public drunkenness legal), and passersby who may have seen the man but did nothing to help him. "Until lately," says Brother Bob, "I'm afraid that nobody noticed or much cared when 20 Francis Traders died." Attitudes *have* changed: Power brokers and tub-thumpers steer visitors to the Brother Francis Shelter as proudly as they point to Alaska's natural wonders. On the colder nights the two brothers and volunteers search for strays who might freeze unless gathered in. In February 1986, as unemployment mushroomed in Anchorage following the abrupt crash of world oil prices, there was often no room at the inn (pages 384-5). "We could probably help 400 guests each night," Brother Bob said, "if only we had the space."

IN QUITE ANOTHER WAY Anchorage is a very loving town. The most loving precinct sprawls along Spenard Road, leading to the international airport, where "ladies-in-waiting" leap into the cars of cruising sports at the toot of a friendly horn. There too one may find escort services with names like Thee Body Shop, Alaskan Trapline, and Paradise Unlimited; these are housed in bright red or yellow or blue bungalows decorated with heart-shaped signs conjuring up visions of instant honeymoons. Scroungy Spenard bars feature topless waitresses or waitresses in the altogether, and certain fast-food restaurants look as if *should* one decide to eat in them, it would be wise, indeed, to do so as fast as possible.

Spenard is the target of local jokes. People say, "Are you going home to curl up with a good book or to Spenard to curl up with a bad girl?" A "Spenard divorce" occurs when one fatally shoots one's spouse or lover; if the injured party lives, somebody's sure to say "Melvin got hisself a Spenard trial separation from Lucille." Hope, apparently, is indigenous to the human condition and sometimes harder to kill than a big mean snake: A "committee of concerned citizens" has plans to clean up Spenard by giving it parks, lighting that won't accommodate cat burglars, smart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THEY TAKE TO THE AIR with the greatest of ease. Mark Gruszczynski is among some 3,000 civilian pilots in Anchorage. He repairs his helicopter in his yard while daughter Kristina plays on his motorcycle.

Airmen sweep snow from F-15s at Elmendorf Air Force Base. Some 16,000 personnel and dependents boost adjacent Anchorage's economy.

shops, and upgraded restaurants through a combination of low-interest business loans, a redevelopment authority, and city tax dollars. Like the building of Rome, this is likely to take longer than one day.

Not all Anchorage entertainment is rowdy or raunchy, though chamber music ensembles somehow are not as well advertised as the girlie shows. Nonetheless, the city claims a dozen musical associations including a symphony orchestra, an opera company, and a civic ballet. The truly outstanding Alaska Repertory Theatre heads half a dozen theatrical companies boosted by dramatic offerings of the University of Alaska at Anchorage and the private Alaska Pacific University. There is the modern Visual Arts Center. The Anchorage Museum of History and Art runs toward Alaska artifacts and fine paintings and sculptures; Earthquake Park commemorates the killer quake of 1964; for nostalgia junkies there are old railroad relics, totem poles, a few landmark houses, and "a genuine rustic trader's cabin," which now houses a tourist information center smack downtown.

The 8,000-seat George M. Sullivan Arena hosts sporting events, trade shows, musical touring shows; country singer Willie Nelson filled it when it opened. Each November it reaches capacity when some of the nation's better basketball teams compete in the Great Alaska Shoot-Out tournament; hockey teams visit to play UA Anchorage. (Alaska is the only state with no intercollegiate football. Weather is a factor, as is the cost of transportation to the lower 48. Even high schools in Anchorage must begin play in August to finish football schedules shortened by early winter.)

Bob Atwood now nominates a variety of foreign terrorists for left-handed honors in his city's economic growth: "They've provided us with a great number of tourists who might have otherwise gone abroad." Rapid tourism growth has, indeed, excited talk of preserving or restoring (or perhaps building from scratch) "typical frontier day" structures to assist the old legends and the public image of Anchorage. Sounds like a "theme park" deal, doesn't it, Mr. Mayor?

ALASKA is a place of many frictions. The cold and the dark and geographic isolation may contribute, along with diverse cultures and the kinds of people —adventurers, independent cusses, dreamers, life's crapshooters—attracted to it. Timid, unopinionated folk willing to walk in old tracks seldom take up with distant frontiers.

Rural areas feel neglected when state or federal money is handed out. Anchorage residents


Life Guard Alaska
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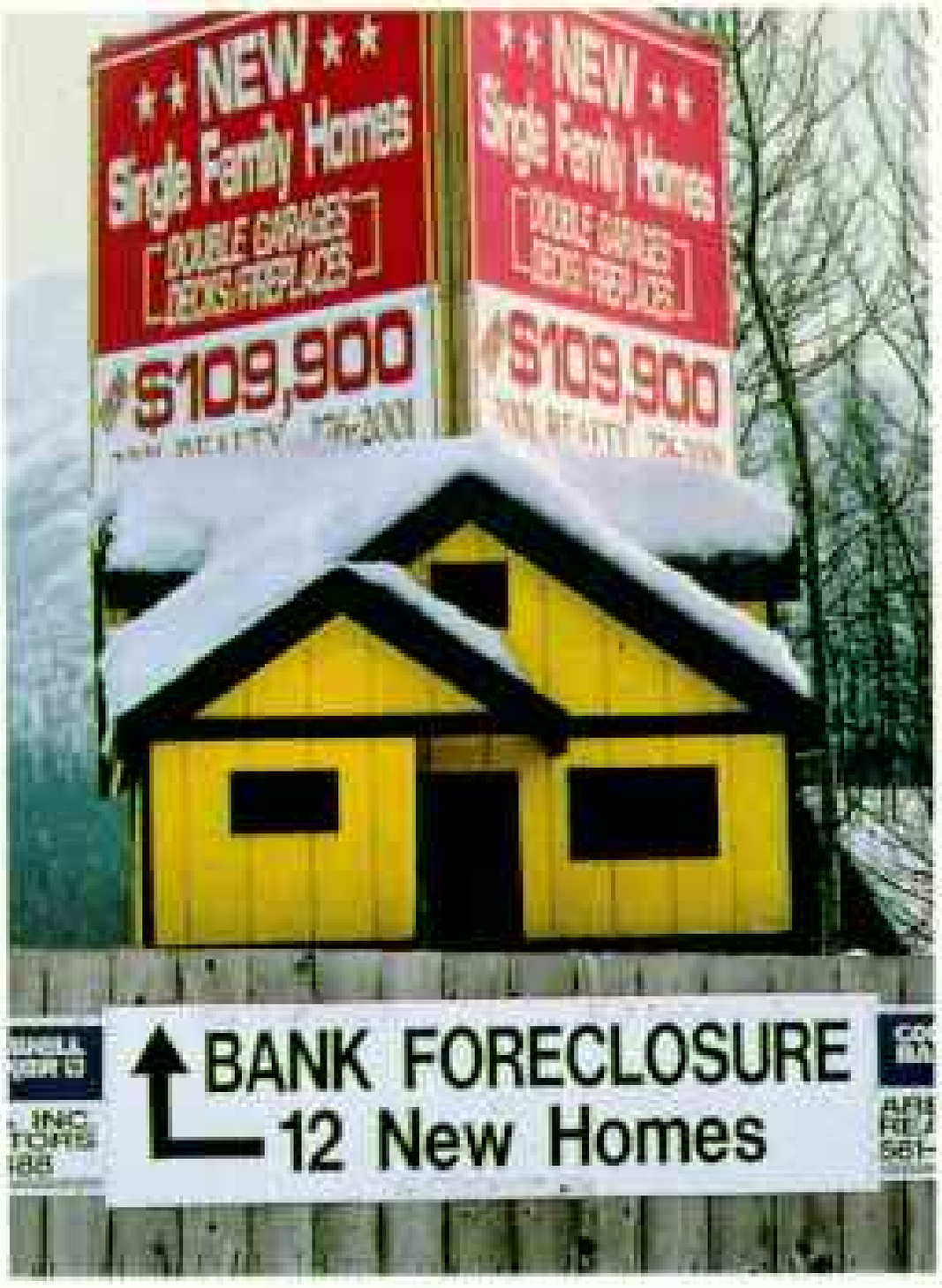
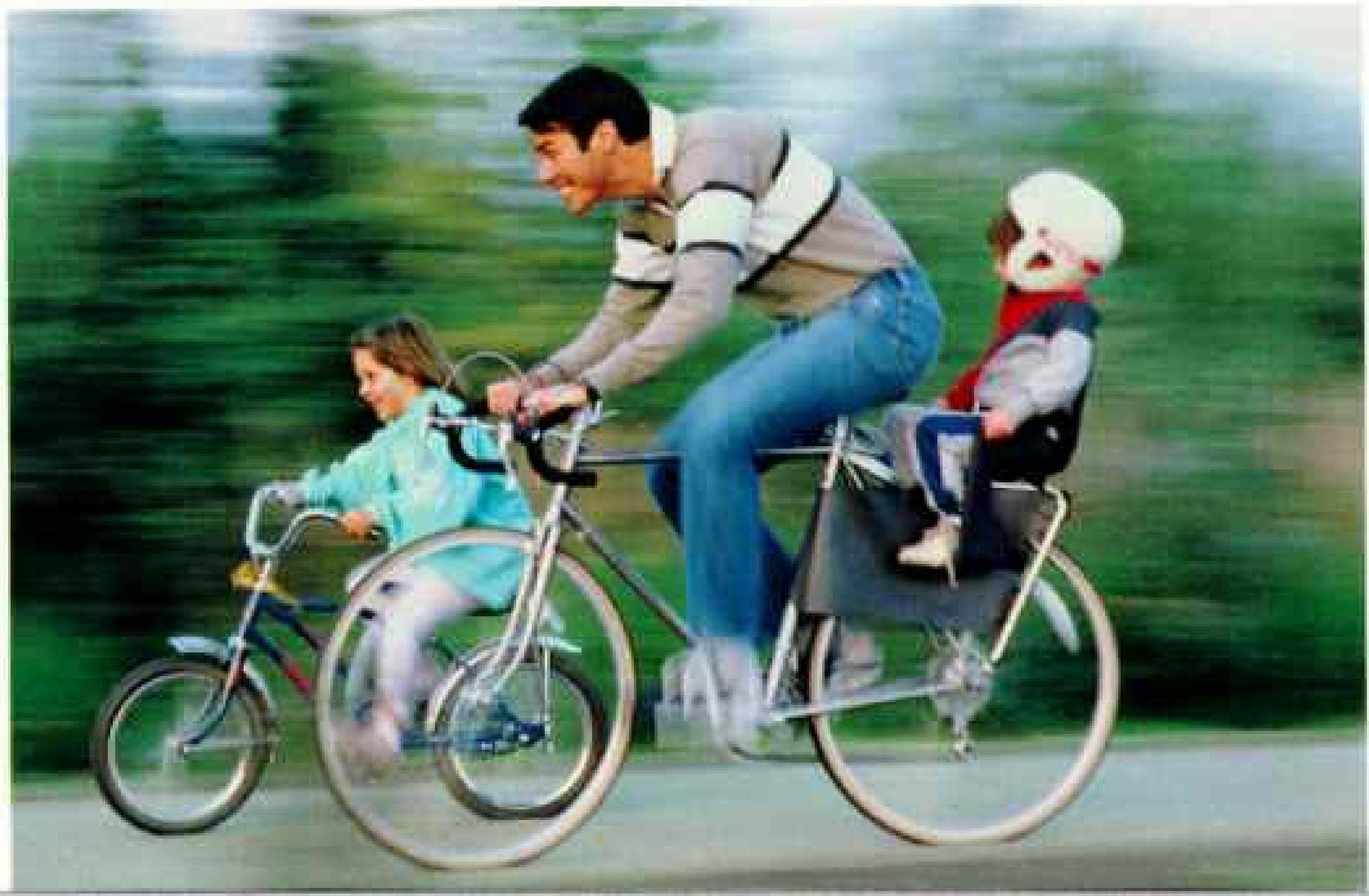
INTO THE WORLD TOO SOON, a life was saved by the coordination of helping hands. At a Public Health Service hospital in Bethel, about 400 miles west of Anchorage, Mildred Nelson's daughter, Kristin, was born four weeks premature. Mildred, from the nearby Yupik Eskimo village of Napakiak, says good-bye to her infant, nine hours old and enveloped by a maze of monitors and a respirator (below left), before the child was flown to Anchorage for care with more sophisticated technology.

Inside a blanket-covered incubator Kristin will board a Beechcraft King Air turboprop provided by LifeGuard Alaska, an emergency evacuation service that can reach victims in any part of the state and fly them to any Alaska medical facility, or to Seattle if necessary. The operation is managed by Anchorage's Providence Hospital—the child's destination. Three weeks later, after Kristin's condition stabilized, she was transferred to the Alaska Native Medical Center, where mother and daughter were reunited (below).

Such efforts helped reduce the state's native infant mortality rate from 18 per 1,000 live births in 1977 to 14 in 1985.



A STAGGERING 14,000 residential properties—15 percent of the total—are going begging, with out-of-work Anchoragites unable to pay mortgages. One of every 12 housing units is a mobile home, and 7,800 of them, with a vacancy rate of 20 percent, sprawl across the city. Former Mayor Tony Knowles fought for greener vistas, such as the Coastal Trail he bicycles with his children (below). His final term expired last year, but congressional and gubernatorial seats may offer targets in 1988 and 1990.



shrug and say, "The money belongs where the people are"; almost half of Alaska's people are in Anchorage. Residents of several years, or those intending to remain in Anchorage, often are contemptuous of transient oil boomers who ride in, take the money, and ride out like so many Wells Fargo bandits; Texan and Okie jokes proliferate. The oil transients themselves feel unappreciated. They tend to band together clannishly, like unwelcome occupying troops, and talk incessantly of home.

Weekend recreational sportsmen complain of game and fish laws, which they perceive are stacked in favor of natives: "subsistence" measures to assist Alaskans in making a living in the old ways. Natives countercharge that cityfolk kill not for food but wantonly and scar field and stream. A state task force, which for two years studied tensions between natives and nonnatives, itself wrangled and whooped, dividing like varied branches of a contentious family, before voting by a six-to-four margin even to release its "peace report." The report pleased few, recommending compromises neither side wished to accommodate.

"Alaska is made up of Vince Lombardis," says *Daily News* columnist Satch Carlson. "Winning isn't just everything, it's the only thing."

Developers ("tar babies") are accused by environmentalists ("greenies") of seeking a quick buck at the expense of nature's wonders and of not caring should they create urban eyesores. Charlie McAlpine, 55, once ran a saloon in Nome and hunted and trapped and traded with natives—earning the sobriquet Sealskin

"I JUST TOOK TO THE STREET," says welder Mike Higgins, seeking a job during the oil slump. His perseverance won him temporary work renovating a building. Hoping for a steady paycheck farther south, Wayne Johnson, far right, is delayed by his balky bus-camper. Unemployment dropped from a 9 percent high in 1986, but Anchorage continues to lose jobs, 6,100 last year.

Charlie—before becoming a builder and president of Brandywine Corporation. "Listen," he says, "the greenies won't be satisfied until everybody lives in igloos and eats whale blubber. Hell, half of 'em would die of exposure if you put 'em out in the woods."

McAlpine appeared disconcerted when his houseguest, former astronaut Wally Schirra—visiting from California—said, as the two and a companion drove by a sprawling shopping complex on the city's outskirts: "Just look at that junk! I see every fast-food outlet in the world! Charlie, this could be Anywhere, U.S.A.! I thought this was supposed to be *Alaska!*" Schirra, who had not visited in more than a decade, often returned to the theme that perhaps too much was being lost too soon. McAlpine and others who have survived a more primitive time, and who remember when goods imported from the lower 48 had a 40 to 60 percent charge added on, are more sanguine about galloping growth.

The ideal would be that which former Governor Hickel recommends: "A quality of life in this city to match the magnificent country in which it is set." But how, pray, to achieve it? When former Mayor Tony Knowles began razing rowdy bars and skid-row flophouses along Fourth Avenue, some criticized him for callously depriving street people and the poor of their hangouts and homes for the purposes of "business interests." His plan to turn 60 acres of tidal mud flats along Cook Inlet into a scenic center for parks, restaurants, a small-boat harbor, and a dock for cruise ships—to be financed by city funds and private money—was even backed by the conservative *Anchorage Times*, which was also in favor of knocking down old eyesores, toughening zoning laws, and giving tax breaks to existing businesses so they might accomplish private face-lifts.

"Why have mud flats where we could establish beauty and commerce?" asked Mayor Knowles. "We *need* waterfront development, underground utilities, fewer signs that clutter, bike trails, walking space, greenbelts, family space. Those things will make people relate to their city better, get along better."

THE ALASKA Native Claims Settlement Act of 1971 conferred on Alaska natives title to 44 million acres of land and 962.5 million dollars in cash, now managed by 13 regional corporations; regional officials are elected from 198 villages and groups formed on the basis of old tribal alliances. "Everybody thinks we're wallowing in riches," says 47-year-old Roy Huhndorf (page 386), president of Cook Inlet Region, Inc. (CIRI), which in 1986 made profits of 24.5 million dollars. Sounds pretty rich, Roy. Stereotype Eskimos and Indians tooling along in Cadillacs, smoking five-dollar cigars while on their way to champagne brunches, right?

Forget it, says Huhndorf: The 6,300 stockholders of CIRI (about half of whom live in Anchorage, with one-quarter in nearby villages) last year received an average of only $1,100 each. "Our rule of thumb is to pay 25 percent of our net income to stockholders. We


ALASKA
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must share 70 percent of oil-derived income with the other regional corporations and support organizations that attack our people's problems. We've lost our culture. Many of us are unskilled, ill educated, and lost in the predominant [read "white" or "modern"] culture. Subsistence life-styles are inadequate in a modern society. Our old ways, customs, and traditions are going, going, gone. Alaska natives exist in a time warp, and we've been victimized by it. Why do you suppose that we have such a high degree of alcoholism, drug addiction, suicide? I think cultural dislocation is the culprit. Our people have become frustrated, self-destructive. Child beatings and spouse beatings were once unknown in our culture. Now they've become commonplace."

Many worry that beginning in 1991, when natives may by law sell their corporate stock to nonnatives, control will inevitably pass to outsiders. "That won't happen," Huhndorf says, his dark eyes hardening. "Alaska natives think too much of their land and resources to peddle them off. We're not surrendering what was so difficult to win."

ALL ALASKANS came into the money in 1977, after a statewide referendum established the Permanent Fund to conserve oil riches from royalties and rents paid by producers; the fund, invested in the name of the people, now contains eight billion dollars. Only earnings—profits—may be distributed. Earnings are annually averaged for the most recent five years; half of that average is distributed, and half draws interest in the undistributed part of the fund. Like Santa Claus, the checks come once each year. In 1987 each Alaska resident received $708. Anchorage, with almost half the state's population, obviously profits most.

There have been other benefits from oil riches since discovery of the Prudhoe Bay field in 1968: Personal state income taxes were repealed as of 1979, residents enjoyed a state subsidy on home-loan interest when rates skyrocketed in the early '80s, and a generous student-loan fund makes it easy for almost anyone to seek an education.

Oil money has helped Alaskans enjoy the third highest per capita income in the nation: $17,800 in 1986, behind only Connecticut's and New Jersey's and almost twice that of Mississippi's. "That's a psychological plus," says Pat Dougherty, city editor of the *Daily*

WHITE MAN'S WORLD speeds by Andrew Yakasoff, an Eklutna Indian elder relaxing near his house by the Glenn Highway.

Some 12,000 natives from throughout the state now live in Anchorage, making up only 5 percent of the city's population but a majority of its homeless. In 1982 two Roman Catholic brothers from Spokane, Washington, began a crusade that culminated in the Brother Francis Shelter, named for St. Francis of Assisi. Supported primarily by community donations, it is the only sizable shelter open throughout the night. In winter more than 200 seek refuge here nightly; in summer the number dwindles to perhaps 70.

News. "You feel better about yourself if you're earning more. To take a 25 percent pay cut somewhere else may give you pause. I think that keeps many people in Anchorage."

Alaskans are quick to note that their dollars disappear due to the high cost of living. True. But not, proportionally, as much as in the past. The average living expenses for a family of four fell from 47 percent higher than the national level in 1961 to 26 percent higher in 1982 and have since steadily declined. The influx of hustling new entrepreneurs and competition among expanding chain stores have made for saner prices.

CONSERVATIVES view Permanent Fund distributions as less than an unqualified blessing. "It's a mistake," says Wally Hickel. "I don't know of a civilization that ever divided its wealth and lasted. You can't 'save' yourself rich or 'spend' yourself rich. You can only produce yourself rich."

Judy Brady, state commissioner of natural resources, believes that Permanent Fund goodies have made Alaskans less independent of spirit and that the flow of oil money generally has contributed attitude problems: "Our state budget jumped from 700 million dollars in 1980 to almost four billion in 1985. The bureaucracy exploded. The attitude in Juneau seemed to be 'Got a problem? OK, throw money at it.'"

Newly rich state and local governments went on spending sprees. Lavish community centers, schools, highways, airstrips, and docks proliferated; television ground stations piped wrestling matches and *Fantasy Island* into remote villages at exorbitant cost.

When oil prices began tumbling in December 1985, from $36 a barrel of spot-market crude to below $15 in a matter of months, the reaction was anger and panic. On the heels of announcements by oil companies that they would postpone projects in the planning stage and cut back production, Alaska legislators rushed to rescind a substantial pay increase they had just voted themselves; the proposed state budget was trimmed from 3.9 billion to 2.9 billion dollars, and every politician with a hand to shake cried for some immediate, if extremely vague, "economic diversification."

Politicians also became more vocal in

PROMINENT KEEPERS of native culture, Bill Tyson and his son Joe interpret stories of their Yupik Eskimo heritage with the Great Land Traditional Dancers. Bill, who has also performed in the lower 48 and in Japan, served as an interpreter during hearings for the Alaska Native Claims Settlement Act of 1971. The compensation it awarded is managed by local corporations such as Cook Inlet Region, Inc., one of the most successful groups, whose president is Roy Huhndorf (left).

echoing residents who demanded an "Alaskans first" hiring policy; former Governor Bill Sheffield was quick to brand outside workmen as "economic vampires," although he hadn't said much about bloodsuckers during the good times. Anti-outsider bumper stickers and graffiti from the 1970s resurfaced: "Happiness Is a Texan Headed South With an Okie Under Each Arm."

Said Mead Treadwell of the Yukon Pacific Corporation, "A few years ago the oil industry would have thrown its collective hat in the air at the prospect of 15-dollar oil. Now, somehow, that price is seen as a tragedy. Money can be made at that price by those who know what they are doing." Added Charlie McAlpine: "My industry can cut prices by 20 percent and still make a decent profit if everybody doesn't panic and run away." The *Anchorage Times* lambasted scare talk, pointing out that the state still had a healthy seven billion dollars in the bank and that only mindless panic could fuel a depression.

MOST WHO HAVE OPTED to remain in Anchorage seem truly to care about their chosen place. There is a sort of last-stand camaraderie, a brotherhood of the isolated reminiscent of soldiers in Vietnam who spoke of anything outside that beleaguered country as "the world": a shared pride in having overcome hardships of the country and the weather, perhaps; of having made a mark in a unique place.

Even cynical newspaper types seem to harbor a sly affection for Anchorage. One night at a dinner party in the home of columnist Satch Carlson, the newsfolk for hours told laughing tales of the foibles and eccentricities of their city and state. What came through was a tough love of the place, despite its warts.

"You can pick your life-style here," says Jack Miller, 36, a Wisconsin native and a consulting lawyer to an Anchorage firm. A couple of years ago Miller decided against that nose-to-the-grindstone life indigenous to most law practices; now he lives with his family in a cabin on a Talkeetna Mountain lake, which requires a three-hour drive from Anchorage and then a half-hour flight by floatplane. Once a year he comes to the city to work for six to eight weeks. "I couldn't do that in the lower 48," Miller says. "Law firms there simply wouldn't understand the importance I place on fishing, hunting, boating, being with my family. There you're expected to grab for the brass ring or you become a casualty."

I liked the friendly candor with which most Anchorage residents spoke, the informality of attitude and dress (neckties play second fiddle to woolly lumberjack shirts unless one is dealing with the old aristocracy, such as the publishing Atwoods and the banking Rasmusons), and the hardy humor. Consider one Bob Ernisse, a fun-loving bartender at the Whale's Tail, one of several watering holes in the Hotel Captain Cook. Ernisse once spotted actor Jack Lemmon—who visits Alaska regularly to fish—in the hotel's lobby on a busy Saturday

night. The bartender approached the actor as humble supplicant, saying, "Mr. Lemmon, my wife and other relatives and friends are in the bar tonight," and then politely asked Lemmon to come in, do his famous double take, and yell "*Bob!* Bob *Ernisse!*" This, said the wheedling bartender, would mean a lot to him. Lemmon graciously consented to go along with the gag.

A few minutes later the actor dutifully entered the bar, did his patented double take, and delivered his line at full voice. Ernisse, mixing drinks, said, "*Bleep* you, Jack! Can't you see I'm busy?" Lemmon cracked up.

Dogs are big in Anchorage: Almost every home I visited had one or more huge hair shedders. Litigation involving dogs is common. In a small town near Anchorage, one neighbor successfully sued another on the notunreasonable grounds that 26 yowling dogs made noises adequate "to rob the plaintiff of the normal enjoyment of his home."

FEW STATES OR CITIES in the lower 48 offer the prospect of unusual adventure as we approach the 21st century, or that feeling that one still has the possibility of getting in on a good thing early; the last horseman has passed by, the gold strikes and oil strikes are of the past and not the future. We

WINTER'S ERMINE COAT drapes ski slopes near Girdwood, 35 miles southeast of the city center. With both a passion for winter sports and the facilities to stage them, the city is going for the gold of worldwide recognition by making a strong bid to host the 1994 Winter Olympics.

are learning that our resources are finite and that our children may not automatically expect to rise on the economic scale as we did, no matter how stubbornly they apply themselves. But Alaska retains vestiges of that old promise, even amid its uncertainties about the immediate future of oil. It may be one of earth's few remaining places not tired and used up.

Not many cities in the lower 48 give promise of soon becoming more than they are, or have been. Anchorage is unique in that it has not yet become but is still becoming. Perhaps it isn't as easy to get rich there—or at least quickly prosperous—as it was during the past decade. If our economists can be believed, however, the present lull is no more than just a lull.

Some years ago Norman Mailer took a trip to Alaska and then soon wrote a manic and controversial allegorical novel—*Why Are We in Vietnam?*—in which a hunting party of hard-drinking, easy-killing Texans represented the U. S. in that very unpopular Asian war. Later Mailer said of Alaska that it had acted on him like strong whiskey, bringing out some euphoric craziness, as if perhaps his brain had been influenced by being too near the earth's poles.

I didn't react as strongly as Mailer—but I did react: well to the countryside, not so well to the city. I was made morose by a twilight gloom lasting until midmorning, then sneaking back much too quickly in midafternoon. Dirty, aging ice stubbornly persisted on Anchorage sidewalks and in parking lots: A stroller felt precariously off-balance, as if learning to roller-skate. The night cold seemed colder than the actual temperature readings and sapped my strength. I ate too much, brooded too much. My cure for the glooms was to visit the countryside as often as possible, though I am not—and never have been—a card-carrying outdoorsman. In the countryside I could believe Wally Hickel: "Alaska should have been a nation. It's too majestic, too massive to be a mere state."

Perhaps, in the end, my city discontent largely was a product of that romantic frontier dream I had toted to Anchorage as foolish baggage. Maybe, as Mayor Tony Knowles charged, too many of us visit his city expecting a theme park. My final day in Anchorage, the city at long last was considerably softened and brightened by a big snow. Put in terms of the heart, I had gone to Anchorage hoping to fall in love with a sophisticated lady and had, instead, become enamored of her sweet country cousin. The fickle city lady had mysteriously hidden her beauty until the tantalizing eleventh hour when, alas, the time had grown too late to kiss.

Hello Anchorage, good-bye dream. □

The serene look of faraway islands belies the dangers that remain in the Falklands. Thousands of mines were sown by Argentine soldiers during their disastrous war with Great Britain in 1982. A lucrative fishing industry now bolsters British resolve to keep the Union Jack flying.

The Falkland Islands

LIFE AFTER THE WAR

By BRYAN HODGSON

Photographs by STEVE RAYMER

BOTH NATIONAL GEOGRAPHIC STAFF

TOTEMS OF THE HOMESICK tacked up near the old Stanley Airport show the long way home for many in the Falklands, whose population of 1,900 has been effectively doubled by British troops garrisoned there since the 1982 war.

PENGUIN WALK is one of the prettiest beaches in the Falkland Islands, a crescent of crystalline sand where solemn groups of gentoo penguins stroll among grass-covered dunes, and the prevailing west winds unfurl glistening tapestries of spray from the South Atlantic surf. One visit instantly dispels the myth that the islands—called in Spanish Islas Malvinas—are merely a frigid rubble of rocks stranded on the continental shelf 300 miles northeast of Tierra del Fuego, Argentina.

But the beach carries less agreeable messages as well. Skull-and-crossbones signs warn that Penguin Walk is seeded with high-explosive antitank and antipersonnel mines. It is one of 120 active minefields left by Argentine troops who invaded the islands in 1982.

"They planted about 18,000 plastic mines, which are invisible to metal detectors," I was told by a young Royal Engineers captain named Colin King. "We found about 3,000, plus 1,400 trip-wire booby traps. But after two of my predecessors lost legs to antipersonnel mines, we fenced the minefields off. Amazingly we've had no civilian casualties—yet."

I had come to the islands not to study war, but because they had suddenly become the center of one of the world's richest fisheries. Britain had just declared a 150-nautical-mile-radius conservation zone around the islands, where hundreds of vessels from Asia and Europe were catching squid worth 500 million dollars a year. Argentina protested that the zone infringed on her territorial waters, including areas she had licensed to the Soviet Union and Bulgaria. And some scientists questioned whether fishing might damage a little-understood food supply for seals and seabirds, repeating the pattern of whaling and sealing that devastated the South Atlantic's natural wealth in the 19th century.

In many ways, I discovered, the war had been about that wealth. In April 1982, when Argentina's military rulers sent 11,000 troops to assert their claim to the archipelago, they also vaulted 800 miles east of the Falklands to capture South Georgia. Argentina has long claimed that as part of the Andes chain both South Georgia and the South Sandwich

Islands are national territory. Possession of those islands, with their fisheries and potential minerals, is a geographic justification for competing British and Argentine claims to a giant wedge of Antarctica.

What might be called the First Antarctic War was savage and brief. On May 2, two torpedoes from the nuclear-powered attack submarine H.M.S. *Conqueror* sank the Argentine cruiser *General Belgrano* 250 miles southwest of the Falklands, killing 368 of her 1,100-man crew. Two days later, in an attack that eerily prefigured the Iraqi strike against U.S.S. *Stark* in the Persian Gulf, a French-made Argentine Super Etendard jet fired an Exocet missile to devastate the ultramodern destroyer H.M.S. *Sheffield*, killing 21 sailors. Argentine pilots sank five other British vessels and damaged many others with bombs that failed to explode, but suffered 45 aircraft shot down. Draftees were no match for 5,000 highly trained British assault troops. On June 14 Argentina surrendered.

At the end 635 Argentines, 255 Britons, and three Falkland Islanders were dead.

Argentina's dictators resigned in disgrace. They were later court-martialed and jailed for losing the war. A new democratic government has yet to declare an end to hostilities, and it continues a political battle in the United Nations to force Britain's withdrawal.

As the war's fifth anniversary neared, I joined staff photographer Steve Raymer on a 17-hour, 8,000-mile flight from England via Ascension Island. Our Royal Air Force Lockheed L-1011 landed in a savage crosswind at a new, 500-million-dollar air base at Mount Pleasant, which Britain has built to allow rapid reinforcement of the islands.

"There is still a threat to the Falklands," we were told by Brig. Graham Coxon, Chief of Staff of British forces. "The Argentines are better equipped now. They have at least 114 jet fighter-bombers, including a squadron of Super Etendards equipped with Exocets. Our aim is to deter aggression."

Mount Pleasant, with its hangars, revetments, and bunkers, has earned the nickname

ISLAND ARCHIVIST Sydney Miller, 83, at home with his wife, Betty, in Stanley, edits the annual Falkland Islands Journal, essays about the islands' history and wildlife. The son of an immigrant father, Miller was educated in England and considers it home.

"Death Star" from the 2,000-man garrison.

By contrast Stanley, the capital and only town, still wears a frontier look, its harbor dotted with hulks of old sailing ships, and its weatherworn houses softened by brightly painted roofs and flower-filled conservatories. But to the north, in Berkeley Sound, a fleet of anchored refrigerator ships and squid-fishing vessels lights up the night sky like a major city.

We sailed there on a brilliant morning aboard the 1,500-ton *Falkland Desire*, flagship of the newly formed Falkland Islands Fisheries Protection Service. Aboard was Terry Plum, acting director, who explained why Britain had declared the 150-mile conservation zone late in 1986.

"Squid fishing has developed only in the past two or three years," he said. "These waters were in dispute, and between 600 and 700 vessels were fishing with no limits at all. In 1987 we licensed 220 vessels. Under the new law they must file daily reports by radio or telex. Unlike most of the world's fisheries, this one was controlled before it became highly developed."

Fishing limits are based on a two-year study for the British Overseas Development Administration by fish-population specialist Ken Patterson, 28. "There are two kinds of squid fished here, *Loligo gahi* and *Illex argentinus*," he told me. "*Loligo* is found to the south and is fished by the Spanish, Italians, and Poles. Asians favor the *Illex*, which can bring $1,800 a ton in Japan.

"We know from fishing reports that *Illex* inhabits the continental shelf as far north as Uruguay. There are several populations, but they all spawn at the same time and appear to have a one-year life span. So we can follow the decline in numbers through a season. If they are fished hard, you see an immediate effect. At least 40 percent of the stock must be left at the end of each season. If necessary, we can quickly shut down the fishery."

For Dr. Paul Rodhouse, squid biologist for the British Antarctic Survey, the new fishery has provided a bonanza of scientific data.

SCUDDING OVER CHOPPY SEAS, a Falklands government boat delivers a fishing license to a Polish trawler tied up to a larger refrigerator ship. The government collects fees from foreign fleets, which catch 500 million dollars' worth of squid a year within 150 nautical miles of the islands.


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"These are bizarre, fascinating creatures," he told me. "We know almost nothing about their breeding and growth rate, or the size and location of populations. Some Antarctic squid species are known only from their undigestible beaks found in whale stomachs—and they include the largest animals in the world still unseen by man. After 20 years of work an English researcher, Malcolm Clarke, estimates that predators eat about 34 million tons of squid a year in Antarctic waters alone.

"The average world fishery—of all fish—is only 80 million tons, and there's little opportunity to increase that. But major squid resources are known to exist in Antarctic waters. Which means that fishing pressure on the Antarctic food chain will soon become a very hot political issue."

HOWEVER MYSTERIOUS the animal, there is no mystery about its value, as I learned from Simon Armstrong, 36, general manager of the Falkland Islands Development Corporation.

FIDC was inaugurated after the war under a 45-million-dollar grant and a mandate from Parliament to develop the Falklands economy by starting new industries and by purchasing the islands' huge, absentee-owned sheep ranches so they could be broken up and sold to local farmers, thus keeping profits at home.

But it is squid fishing that has put economic independence within reach. Through a subsidiary, the government formed 12 joint ventures with fishing companies based in Britain, Taiwan, Japan, South Korea, and Spain.

"Our income in the first five months of 1987 was 11 million dollars, plus another 11 million dollars in license fees," Mr. Armstrong told me. "We give licensing preference to our joint-venture companies. If they invest 90 percent of profits in the Falklands, they pay no corporation tax. Otherwise we whack them with a 52 percent tax.

"A squid boat costs two million dollars and catches 1.5 million dollars' worth of squid in a season. Multiply that by 200 boats, and you can see that the Falklands are well on their way to becoming economically independent. You might say we'll be living on Squid Row."

FIDC's land purchases have helped create 35 to 45 new farms, but many islanders say that the program is also destroying a traditional way of life in which workers live in small, self-contained settlements.

How isolated the settlements are I learned on my first flight with Ian McPhee, a pilot for FIGAS, the islands' three-plane government

Conflict brings new attention to an often forgotten land

LONG OVERLOOKED and isolated in a far corner of the South Atlantic Ocean, the Falklands were wrenched from obscurity by the 1982 war, which brought British troops 8,000 miles from home via Ascension Island.

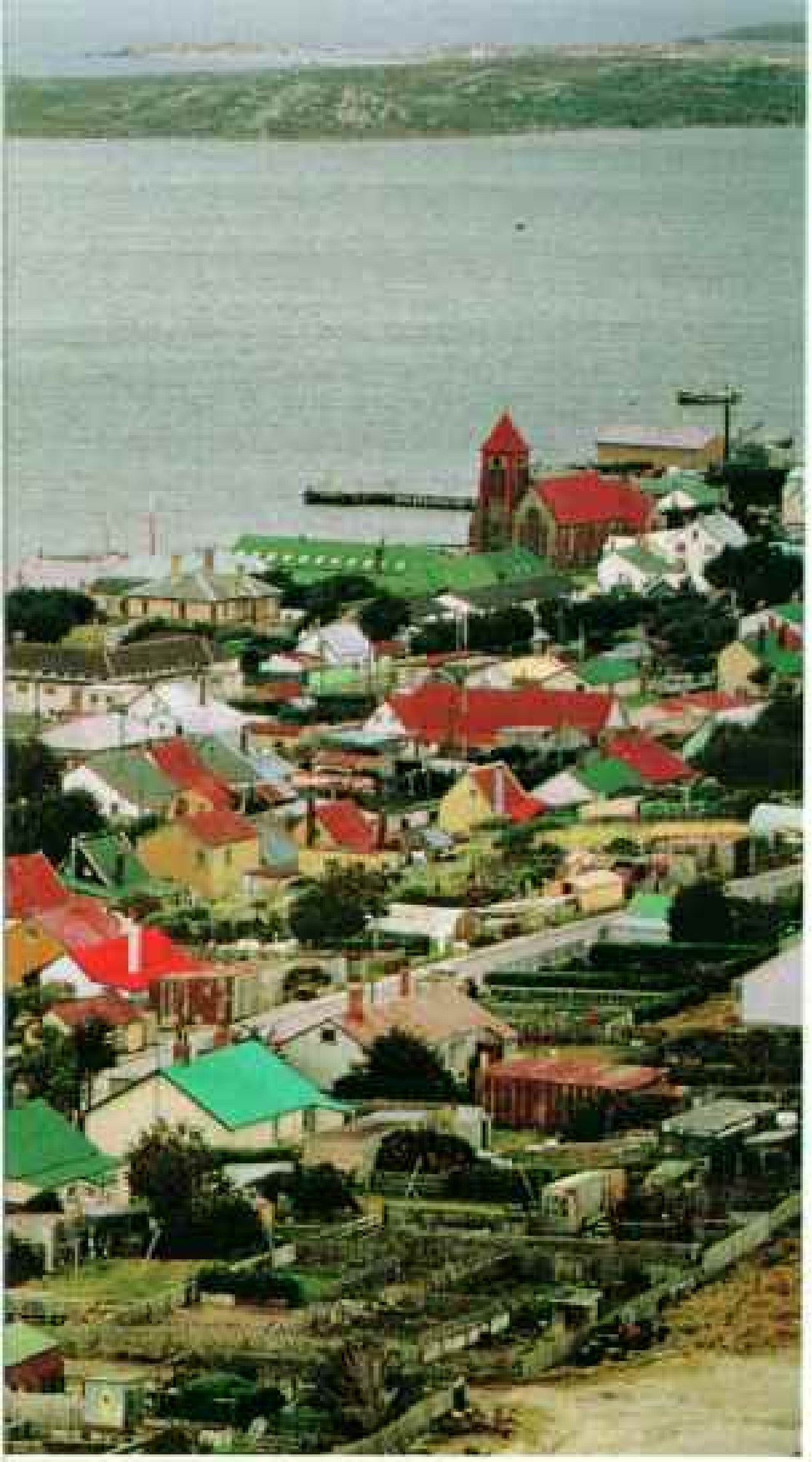
Though soundly defeated, Argentina has not abandoned her claim to the Connecticut-size archipelago. She also claims South Georgia and the South Sandwich Islands, as well as a large section of Antarctica. A 1959 treaty holds all Antarctic claims in abeyance and guarantees free access for scientific purposes.

The Falklands were named by a British captain who landed there in 1690. Argentina, which calls the islands Las Malvinas, dates her historical claim from Spanish colonial holdings. Beginning in 1764 a succession of short-lived settlements were established by the French, British, Spanish, and Argentines. Great Britain reasserted her sovereignty in 1833, and the Falklands remain a British colony.

Wool production is still the major livelihood, but income from licenses required for fishing within the 150-nautical-mile-radius conservation zone promises to transform the local economy and make the Falklands self-supporting. Intensified fishing raises environmentalists' concerns about the possible disruption of the food chain that supports the Falklands' diverse array of wildlife.

WELCOME WITH A WARNING greets passengers at Mount Pleasant Airport. Before claiming baggage, arrivals must attend a lecture that includes a firsthand look at an antitank mine and a smaller antipersonnel mine. Difficult to find and dangerous to disarm, some 15,000 mines riddle the landscape, threatening humans and livestock.

NGS CARTOGRAPHIC DIVISION DESIGN: JOHN W. LOTHERS
RESEARCH: MARGUERITE B. HUMBERT PRODUCTION: ELLEN J. LANGEMAR



ENGLISH IN EVERYTHING but location, Stanley is the Falklands' only town, housing more than half the population. Everyone else lives in the "camp," or countryside. Dominating the harbor, the research ship R.R.S. Bransfield calls on her way to Antarctica. The beer flows freely at the Globe Hotel pub (left), where locals mix with the islands' sizable military contingent.

air service. Our twin-engine Britten-Norman Islander droned over sharp peaks and ridges, where strange patterns of gray-white quartzite run down like rivers of rock. Capillary sheep trails and the wheel tracks of countless lonely journeys bite through grasslands to the underlying peat, bisected now and then by purposeful lines of fence.

The Falklands cover 4,700 square miles, roughly the size of Connecticut. It seemed a bleak, lonely land to me. To Ian it all makes sense. He reminisces about growing up at Douglas, free as a bird, until the dreadful day when, at age 12, he was sent away to school at Stanley.

"I'd ride out with farmhands to round up sheep, and we'd camp out of sight and sound of the rest of the world. It was a shock to go to town and live among so many people," he said. "Worse, in the seventies Britain decided to turn us slowly over to Argentina. Our air service and fuel were provided by the Argentines, and we were sent there for secondary education, medical treatment, supplies. That's why I left for England to get a pilot's license.

"One thing I'd never blame the Argentines for is thinking that Britain didn't care about the islands. If they had waited a couple of years, they'd have had the place. And I won't be surprised if they take over anyway if Britain ever changes governments."

IAN MCPHEE's burst of pessimism was the first of many I would hear in the Falklands, whose 1,900 citizens lived for years in a limbo of British ambivalence and inattention until the 1982 invasion aroused national pride.

But good cheer was the main order of business when we arrived at Port Stephens, a cluster of red-roofed homes and farm buildings on West Falkland. We had come to witness the annual Sports Week and found a crowd of visitors from other settlements gathered to watch four sheep-shearing finalists separating fleece from bewildered animals in a single piece, like thick and somewhat scruffy coats.

Afterward, over a lunch of fresh sea trout and spicy empanadas in the huge farmhouse, I met Peter Robertson, who has managed the 239,000-acre Port Stephens farm for the Falkland Islands Company for 17 years. His wife, Ann, is Argentine born. They met in Buenos Aires, where he attended school before spending eight years on a Patagonian sheep ranch.

"Port Stephens is a traditional settlement," he told me. "We employ 16 workers, including a full-time schoolteacher for three children, ages 6, 8, and 12. The average wage for farm workers runs from $5,000 to $7,000 a year, plus free housing, free meat and milk, and free air passages to Stanley every so often.

"We're sheep ranchers, not shepherds. Native grasses are very low in nutrients, and it takes five acres to feed one sheep. We lose

between 5,000 and 6,000 sheep a year, trapped on beaches by the tides, or fallen into ditches. For all that, we ship about 330,000 pounds of wool to England every year.

"This whole community will disappear if this farm is broken up. There will be more owners, but they will move out to separate farms. That's not the same as preserving what they call 'our way of life.'"

IF THERE is a new way of life developing in the Falklands, it will begin at the community of Fox Bay Village, where Richard and Grizelda Cockwell are struggling to make a success of a woolen mill and knitting factory, partly financed by a government loan. Mr. Cockwell was Fox Bay's farm manager for 18 years until the property was sold to FIDC and split up into eight farms.

"We borrowed $200,000 to buy and install used machines. The first equipment arrived in July 1984, but we discovered that two tons of critical parts had been sent to Pakistan. It took six months to get them back, and that put us in a cash bind we've not escaped yet.

"Falklands wool has a very soft 'handle' and is so white that bleach isn't needed," he told me as we watched machines carding and spinning gossamer fibers into thread. "A good knitter, on a hand-operated machine, can do 50 sweaters a week. These retail in the islands, mainly to British soldiers, for about $45.

"We have ten workers now, including ourselves, but we've had reasonable production only in the past 18 months. At present all our sweaters are sold in the islands. But we're working to develop an export market."

Later, walking through the village, I came upon an abandoned building containing dusty old radio transmitters and teletype equipment dating from the 1920s. I turned the knobs, half-hoping for some message from the past. Nearby, in a quiet schoolhouse, I learned how Fox Bay had sent a message of the future to Alan Jones, 44, and his wife, Jennifer, who left their native Newcastle upon Tyne with their two children, Philip, 7, and Simon, 6. Now he runs a guesthouse; she works as a teacher at the village school and also conducts classes by radio for children on isolated new farms.

"Things in the U.K. were at the bottom of the hill. I'd been 12 months out of work," Mr. Jones had told me. "Here there's no unemployment. It looks like the land of opportunity."

I met Mrs. Jones in the schoolhouse, empty now since older children had departed for boarding school in Stanley. She teaches ten children at other settlements by radio, a half hour daily for each. A traveling teacher also visits each of the remote settlements for about ten days a month.

"The education level depends a lot on parents. The brighter students compare well with those in Stanley and can't wait for the radio lessons. Those who don't want to learn have excuses, like 'My battery is going dead.'

"My family at home think we're mad for coming here. And it is rather like living on a different planet. I worry now, because so much depends on the woolen mill. Without it we won't be able to stay."

From Fox Bay we flew to Port Howard, where the 200,000-acre Waldron Farm was founded in 1867. Members of the Lee family have helped run it since 1890, when Jake Lee sailed from England with a flock of sheep, married a girl he met aboard, and settled down to live happily ever after.

Something of that happiness shows in the immaculate settlement, where two brothers, Robin and Rodney Lee, are attempting to preserve old traditions in a new way. When the farm, with 42,000 sheep, was sold to FIDC in 1986 for 1.2 million dollars, the brothers proposed buying a 60 percent interest, with farm workers becoming shareholders. Aware of growing criticism about breaking up settlements, the corporation agreed to support the plan with low-interest loans.

"There are no fortunes in this for us," Robin Lee told me. "Gross income is $500,000 a year. That means tight management. But we saw other communities being pulled to pieces, and feared its happening here. We have 58 people. Many did not want to become owners living in isolation outside the settlement. Now we've taken away the fear."

With government financial help has come technical help as well. To curtail high winter losses among lambs, the British Agricultural Service is experimenting with feeding weaned animals on closed pastures seeded with high-nutrient English grasses at a cost of about $3,000 an acre.

"We've been testing 200 animals," Robin told me. "But we're finding that if they are packed close while feeding on lush grass, they get worms and parasites far more easily and don't gain weight at any greater rate than those fed on range grass. The management question

TAKING A BREAK from his army duties, Sgt. James Grant displays a brown trout he caught to two-year-old Sam Cockwell. The Cockwell family, operators of a woolen mill, open their home on West Falkland to soldiers on rest and recreation leave.

is whether the extra costs are worth it. Falkland sheep are relatively disease free because they aren't confined."

AMONG PORT HOWARD'S AMENITIES is the comfortable old manager's house, now a guest resort. The nearby Warrah River, like other Falkland streams, offers fine trout fishing. There is a golf course and thousands of acres of grasslands and hills for horseback riding. For the contemplative there is a small war museum to commemorate Port Howard's occupation by a thousand Argentine troops.

And in the graveyard where Jake Lee rests in peace, another stone marks the burial place of Capt. John Hamilton of the Special Air Service, who was killed in action at Port Howard on June 10, 1982.

For two centuries before the Falklands war, nobody had actually died in the vehement and tangled disputes over possession of the islands. British historians say they were first seen by Capt. John Davis in 1592, blandly ignoring a 1522 Portuguese chart that clearly shows the archipelago off the Strait of Magellan. In 1690 Capt. John Strong of the British ship *Welfare* landed on one of the two main islands and named the channel between them Falkland Sound, after an Admiralty official.

But the most frequent visitors were French mariners from Saint-Malo. They called the islands the Malouines, which gradually gave rise to the Spanish name Malvinas. The first colony was established by a Frenchman, Louis Antoine de Bougainville, who built a fort at Port Louis on Berkeley Sound in 1764. A year later, unaware of the French colony, British

Commodore John Byron formed a settlement named Port Egmont on Saunders Island and claimed the Falklands for George III.

There followed a game of colonial musical chairs. Spain protested the French colony. France evacuated in 1767 after Spain volunteered to reimburse expenses. Next, Spanish ships and troops from Buenos Aires evicted the British from Port Egmont in 1770. Britain threatened war, and Spain backed down, allowing the colonists to return. But in 1774 the British withdrew, leaving a metal plate warning visitors that the islands were still an outpost of empire. Spain occupied the islands until revolutions in South America forced her to abandon them in 1811.

And in 1820 a U. S. citizen named David Jewett was appointed governor by the newly independent United Provinces of the Río de la Plata, as Argentina was then called. He observed some 50 American, British, and French sealing vessels in island waters and warned them that hunting and fishing were forbidden.

In 1828 a successful colony was founded by a Frenchman named Luis Vernet, who had studied business in Philadelphia before seeking his fortune in Argentina. The new colonists included at least 14 Englishmen, 7 Germans, 10 citizens of Buenos Aires, and some 30 indentured black laborers. In 1829 Vernet issued the first Malvinas currency, prompting Britain to utter a formal claim of sovereignty.

But it was the United States that precipitated Argentina's eviction from the Falklands.

In 1831 Vernet's government seized the U. S. sealing ships *Harriet*, *Superior*, and *Breakwater* in Berkeley Sound. In response, at the urging of U. S. Consul George W. Slacum,

HUDDLED LIKE BOXCARS, modular housing units accommodate British airmen at a radar installation on a gusty mountaintop on West Falkland. A Royal Air Force Phantom fighter armed with cannon and Sidewinder missiles takes on fuel while on patrol over North Island (above right). Cozied up with a kitten and a book, a helicopter crewman passes the time at Mount Pleasant Airport.

the corvette U.S.S. *Lexington*, under Capt. Silas Duncan, sailed to the islands on December 28, 1831, spiked the Argentine guns, and arrested seven men on charges of piracy.

The incidents prompted a savage exchange of protests. Slacum was declared persona non grata. President Andrew Jackson asked Congress for a military force to protect U. S. ships in the South Atlantic and appointed Francis Baylies as chargé d'affaires. Baylies informed Argentina that the U. S. government "utterly denied the existence of any right in the Republic [Argentina] to interrupt, molest, detain or capture any vessels belonging to citizens of the U. S. . . . engaged in taking seals or whales or any species of fish or marine animals in any of the waters, or on any of the shores or lands of any or either of the Falkland Islands, Terra del Fuego, Cape Horn or any of the adjacent Islands in the Atlantic Ocean."

Demanding reparations, Argentine foreign minister Manuel V. de Maza charged that "injustice—insult, and violence have been on the side of Señores Slacum and Duncan—but especially on that of the latter; he having carried his turpitude and ferocity to the last extremity, destroying with unspeakable inhumanity and perfidy the Islas Malvinas colony. . . ."

The two nations broke off relations.

On January 3, 1833, a British ship sent a landing party to strike the Argentine flag. The blue-and-white banner was not to fly in the islands again until April 2, 1982.

In Stanley, Detective-Constable John

LONELY OUTPOST, Waldron Farm embraces some 200,000 acres devoted to sheep raising. On many such ranchlike "settlements," all-terrain cycles and border collies team up to handle sheepherding.

Adams remembers that regaining the islands was a dangerous and costly business.

Detective Adams was a member of 42 Commando Royal Marines, one of several elite combat units that drove Argentine defenders from some 50 miles of rugged hills between Port San Carlos and the capital. He took part in a night assault on Mount Harriet, a 900-foot hill topped with a natural fortress of ridges. On a brilliant morning, in a 50-knot wind, he went with me to retrace the path of the attack.

We climbed past shell craters and remnants of cluster bombs. To the west lay Mount Challenger, where on June 11, 1982, the 240-man unit began the night march along a track that had been pronounced clear of mines simply by walking on it.

"We waited while artillery pounded Argentine positions for about three hours," Detective Adams recalled. "At midnight we moved uphill behind a creeping barrage. It was snowing. They had night-vision glasses, but they were expecting a frontal attack. We hit their flank and rear. It was over in a few minutes. We killed 30 Argentines and captured 380. We lost one, killed in the assault."

On the summit we walk amid the sad detritus of a very recent war—disposable razors, broken toothbrushes, rusty ration tins, and a scattering of charred field dressings and blankets where a first aid station was destroyed by a white phosphorus shell.

"I was glad to be part of the task force," Detective Adams said. "I was stationed in the Falklands for a one-year tour in 1974. My wife, Marjorie, is a Falklands girl. When we marched into Stanley, it felt like coming home. So I decided to come back for good."

Today, as a member of Stanley's 12-man police force, he deals with more predictable violence. "We had 360 crimes reported in 1986 and solved 65 percent. The usual lot—thefts, burglaries, assaults. A lot stems from drinking. We have a list of people legally prohibited from drinking. Anyone who serves them can be tried for the offense. With only 1,900 residents, it's not hard to keep track."

THROUGH THEIR HISTORY the islands have seldom been inhabited by more than 2,000 people, but their environment has been changed by human activities. The appetites of sheep have destroyed much of the native vegetation.

Seal populations have never recovered from

MULTIHUED HANDIWORK of Falkland Island spinners fills a display case at the Falkland Mill. Using no dyes, workers produce different shades by blending naturally colored wool that commands top prices from foreign buyers. White Falklands sheep have been carefully bred to produce a snowy wool that requires no bleaching. One of the mill's ten workers puts the finishing touches on a sweater as part of a program to make the Falklands economy self-sufficient. Islanders also depend on sheep for food, and most eat mutton daily, leading to the term "the 365 diet."

SAVAGE SEAS kicked up by 50-knot winds send 20-foot breakers cascading over the rocks. Harsh weather is the norm on the islands. Snowfall—though usually light—is frequent, cloudless days are rare, and winds average 16 knots. Such harsh conditions often thwarted sailing ships attempting to round Cape Horn. Many foundered. The British bark Lady Elizabeth *(left) struck a rock en route from Vancouver, British Columbia, to Mozambique in 1913, and limped into Port Stanley. She later drifted and grounded at her current resting place in Whalebone Cove, near Stanley Airport.*

the hunting bloodbaths of the early 19th century. Until minefields made Stanley's beaches once more safe for nesting, most penguins had sought refuge in the outer islands.

On New Island, at the archipelago's western edge, Ian Strange, an author, artist, photographer, and naturalist, is attempting to regenerate the rich and exotic sub-Antarctic wilderness that sealers and whalers found some two centuries ago.

Mr. Strange came to the Falklands 27 years ago to run an experimental mink farm. The animals didn't prosper on a diet of greasy mutton. "I shudder to think what could have happened if we'd been successful," he said. "If a pair of mink had escaped and bred, it would have been a disaster for bird life."

Ian walks with us to the Settlement Rookery, a great amphitheater where some 100,000 rockhopper penguins stand like proprietors on a majestic balcony of rock, contemplating their antipodean empire through ruby eyes beneath bright yellow eyebrows.

Amidst the crowd are nests of the black-browed albatross, a majestic black-and-white bird whose giant offspring sit enthroned on pedestal nests, plumed elegantly in down like infant maharajas. Flying around the colony are a score of caracaras, rare birds of prey noted both for omnivorous tastes and insatiable curiosity. One of them keeps station within six feet, regarding me intently with an anthropologist's eye.

Mr. Strange has published five illustrated books on the Falkland Islands, as well as scientific papers on both rockhoppers and thin-billed prions, burrowing petrels that live in nest colonies like ground squirrels. More recently he has studied the striated caracara under a research grant from the National Geographic Society.

"Banding studies indicate that rockhoppers mate for life. And we now know that the black-browed albatross returns here to mate after seven years. The female lays one egg. If it is lost, she will not lay again that year. The nests themselves are used year after year."

In 1986, when thousands of dead rockhoppers were found washed up on Falkland shores, scientists became concerned that overfishing of squid had destroyed the birds' food supply. Zoologist Kate Thompson and her partner, Dann Hale, were assigned to do a two-year study of bird feeding habits on New Island for the Falkland Islands Foundation, a

PLEDGE OF ALLEGIANCE to the crown, proclaimed from a window in Stanley, reflects the sentiments of an overwhelming majority of islanders. In the 1982 conflict the ultimate price for pressing a competing claim was paid by 635 Argentines, some of whom lie in a lonely cemetery on East Falkland (facing page), a reminder of ambitions that have yet to be laid to rest.

conservation group headquartered in London.

"It's what you might call basic science," Miss Thompson told me. "We chase the birds after they come ashore from feeding, flush their stomachs with a few pints of water, empty them out, and then spend hours counting squid beaks and krill. Chasing a very angry gentoo penguin could be classed as a new Olympic athletic event."

So far the studies indicate no lack of food for the bird population. Although the cause of the penguin die-off is still a mystery, it seems less threatening than mid-19th-century penguin hunters, who killed millions of birds for oil.

"People tend to exaggerate some problems and ignore others," Ian told me. "One of the great depredations has been the elimination of tussock grass, which was once the dominant vegetation on the islands."

Tussock is a strange plant that sprouts each year atop the matted growth of previous seasons. Undisturbed, individual plants can grow as high as 12 feet, which led early mariners to conclude that the Falklands possessed coastal woods.

On New Island, Ian has nurtured a stand that grows man high. As we walk through it, the sharp wind is cut to a whisper, and I can hear the plaintive cries of Magellanic penguins from burrows around the roots.

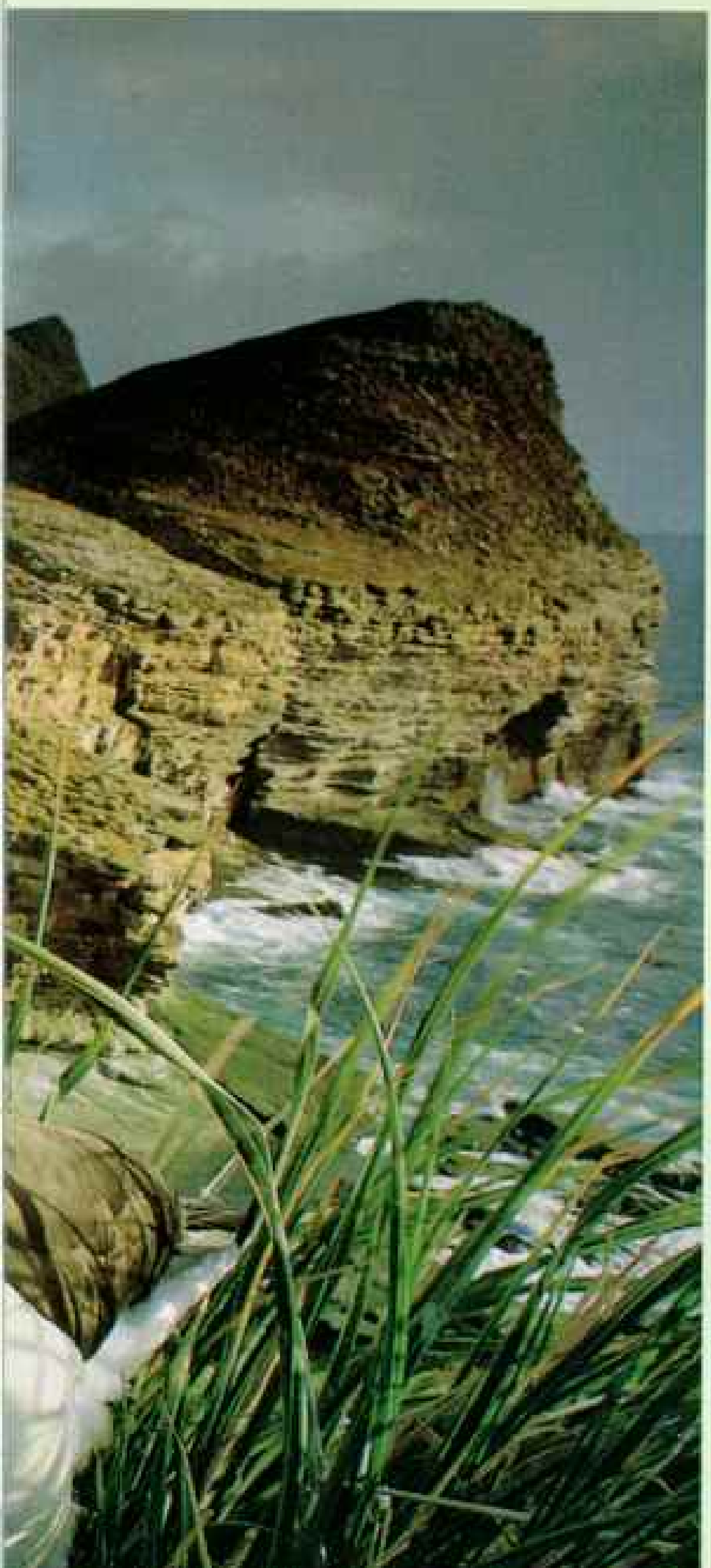
"Forty-six species of birds use tussock as a nesting or feeding area," Ian said. "When whalers set pigs to breed on the islands, the tussock became a natural habitat for them. But hunters burned the grass to drive them out. Ironically, tussock is one of the most nourishing foods there is for cattle and sheep, but it must be managed properly. Sheep farmers have simply grazed it out of existence. Now they're trying to improve grazing by importing other grasses from England."

IMPROVING the Falklands has always been a chancy business. Before I returned to Stanley from New Island, I visited the ruins of a whaling station that failed in the early 1900s. Lathes and drill presses stand where machinists manufactured and repaired the huge harpoons. Some lie scattered on the beach, their shafts bent with the force of penetrating a whale's body. In the water lies a boiler that exploded, killing several men. On the hillside above, a stone slab commemorates one of them: SWERT PEDERSEN DOD 15-2-1915. The stone is yellow now with lichen, and nesting prions burrow there among his bones.

As I flew back to Stanley, I found myself thinking not about geopolitics and war, but about surf and kelp and tussock grass, and multitudes of birds heralding the enormous energy and bounty of the sea.

Among other things, I had learned that seals do not merely bark. I had visited a colony and heard them croon and yodel to each other, and utter basso profundo territorial claims, like maritime grand opera on a sunny stage of rock.

If there is ever a South Atlantic peace conference, I thought, perhaps the participants might find instruction there. ❋ ❋ ❋



A PORTFOLIO

Falkland Islands Wildlife

Photographs by FRANS LANTING

Rugged coastal cliffs provide a roost for a pair of courting black-browed albatross, which usually mate for life. Waters rich in seafood surrounding the Falkland Islands help sustain a wildlife population diverse in nature and often astonishing in number.

Patiently perched on nests of mud and grass, black-browed albatross chicks await the return of parents offering meals of regurgitated squid, lobster krill, and other marine animals.

Showing disdain for skin and feathers, a South American sea lion flays a penguin before feeding as giant petrels stand by for leftovers. A luckier Magellanic penguin escapes a sea lion's charge (above) amid a fleeing crowd of gentoo penguins.

Living landscape of nesting black-browed albatross and rockhopper penguins blooms each January on Beauchêne Island, a nature preserve 40 miles south of the main islands.

Proximity does not always mean harmony. Rampant and scolding, a skua makes an aggressive dive (right) when the photographer ventures near its nest. Another skua swoops low to snatch a young gentoo penguin as a parent brays in protest (below). A penguin egg becomes a meal for a striated caracara (below right), also called the Johnny rook, a scavenger and predator found only in the Falklands region.

Clumps of tussock grass provide a bed for a South American sea lion and a hunting ground for a striated caracara. Although sharply depleted by sheep grazing and once burned by hunters to flush out seals and feral pigs, the rich grass still supplies crucial shelter for the islands' unique panoply of wildlife. □

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The Society launches a multimillion-dollar campaign to revitalize geography education in the United States: "We have the best chance ever to restore geography to the prominence it deserves."

President Grosvenor Announces the National Geographic Society Education Foundation

By LLOYD H. ELLIOTT

President, the George Washington University, and Vice Chairman, National Geographic Society Board of Trustees

THERE IS WORK to be done, and now is the time to do it. That was President Gilbert M. Grosvenor's message on January 13, when he announced what I consider to be one of the most significant commitments the Society has ever made: the establishment of the National Geographic Society Education Foundation.

Its purpose is to provide a permanent source of financial support for geography education. To launch the foundation, the Society's Board of Trustees has pledged a total of 40 million dollars in outright gifts and matching contributions, making it the centerpiece of National Geographic's centennial celebration.

To me there could be no better way for the Society to begin its second century. But I am hardly a disinterested party, since I have agreed to become the foundation's first president, upon my leaving the presidency of the George Washington University in June.

As a trustee of the Society for the past 20 years, I have witnessed the growth of Gil's determination to become more active in America's educational system. Since 1982 he has diligently investigated the problems facing our schools and consulted with noted educators about the best ways to solve them, and I would like to commend him for his dedication.

Having spent a lifetime in the classroom, on campus, or in other educational activities, I share his concerns. America's educational system must be significantly strengthened—from the earliest years of organized learning to the most advanced graduate years of study—and we can't walk away from this responsibility by simply passing legislation or even writing a check.

The impetus has to come from a greater appreciation of learning on the part of parents, families, neighborhoods, and communities, as well as teachers and other professional school people. And it has to come from a working partnership among these individuals.

As a member of the National Geographic Society, you are already taking part in such a partnership, since you are helping the Society throw the full weight of its 10.5 million members behind this campaign for geographic literacy. At the same time, I am hoping you will also become involved as concerned individuals and citizens.

Thirty-nine percent of high-school seniors tested in Boston could not name the six New England states.

CBS AFFILIATES SURVEY, JANUARY 1987

The Society's board is issuing a challenge to all our members—and to other individuals, corporations, foundations, and government agencies—to aid in this campaign. It has established the foundation with an initial gift of 20 million dollars, and it pledges to match every contribution dollar-for-dollar up to a second 20 million, for a possible total of 60 million dollars for geography education.

In offering this challenge, I

want to acknowledge two initial contributors. Through a special agreement with publisher Harry N. Abrams, Inc., part of the proceeds from the sale of a 1988 calendar marking the Society's centennial will be contributed to the Education Foundation. And, from the estate of longtime member Dorothy Chancellor, who spent much of her life working on behalf of better education in the Pasadena, California, school system, we have received a generous bequest that will help underwrite teacher training across the country.

I'd like to see every parent and every grandparent participate in this effort, not only through the foundation but also through geography programs at local schools. I believe you share my concerns about geographic education, and I know you can help.

We are all more aware today of how small the world has become. I happened to be in Australia last year when the stock market there dropped by more than 400 points in one day. News of financial activity around the world filled the morning papers. "Whatever happens on Wall Street today," one educator told me, "will happen here tomorrow."

In New Zealand I met dairy farmers who could describe in great detail what their competitors in Wisconsin were doing or quote to me the current price of cheese in Los Angeles.

These were telling illustrations, I thought, of how sensitive one part of the world has become to other parts. This is especially true, of course, when it concerns places such as Afghanistan, Central America,

NASA

Forty-five percent of high-school seniors tested in Baltimore could not correctly respond to the instruction, "On the attached map shade in the area where the United States is located."

CBS Affiliates Survey, January 1987

or the Persian Gulf, where events create repercussions around the globe.

To meet the challenges of this interrelated world, our children must learn more than ever about other lands and cultures. We must all understand the physical and cultural dynamics of the earth if we are to be responsible citizens of the world. I believe the people of the United States understand this better today than they did during the 1950s and '60s, when isolationism was stronger.

Back in 1937, when I was just starting out as a teacher in a coal-mining town in West Virginia, geography was taught as a separate discipline. That was true from elementary schools through liberal arts colleges.

Then in the 1940s and '50s there was a trend to "integrate" it into the social sciences, along with government, history, and political science, and a lot of other things. It largely disappeared as an individual discipline.

There was a feeling in those years that geography was a part of history, that if you were studying the era of Charlemagne, you would naturally look into the geography of that period. So geography was lost. And when it disappeared in elementary and high schools, it disappeared also in the college curricula, because there weren't professors being trained to teach geography.

Then sometime during the middle 1970s we gradually realized that we and our children didn't really know much about the world. And we have been struggling to catch up ever since. We must realize, too, that through geography learners of all ages can see the importance of other languages, literature,

Forty percent of high-school seniors tested in Kansas City could not name three countries in South America.

CBS Affiliates Survey, January 1987

the arts, mathematics, music, and religion—in fact, the world's knowledge.

I remember hearing about exotic places such as China when I was growing up, but they seemed so far away and mysterious that I never imagined I would have the opportunity to learn much about them. Today in classrooms across America there are Vietnamese, Korean, and Cambodian

children sitting next to third- or fourth-generation American children. And this has helped us recognize that a stronger educational base is a way to a better world.

For a century now, the National Geographic Society has been teaching us about the world. Its writers, cartographers, and photographers have taken very seriously through the years the charge to "increase and diffuse geographic knowledge," which goes back to the Society's charter.

How many children have spent time studying Geographic maps, globes, and atlases? How many have watched Geographic filmstrips in their classrooms, or television specials at home? This is familiar ground for the Society.

But during the past three years, the Geographic has been doing more through its Geography Education Program. In addition to stimulating public awareness of geography, the Society has put together a grassroots network of kindergarten through 12th-grade teachers and university educators in 20 states and the District of Columbia dedicated to improving classroom teaching. Working with an annual budget of about four million dollars, this has made a significant impact. But the time has come to do even more.

We want to make sure that geography doesn't become

GILBERT M. GROSVENOR AND LLOYD H. ELLIOTT FIELD QUESTIONS FROM STUDENTS IN A PILOT GEOGRAPHY PROGRAM AT ALICE DEAL JUNIOR HIGH SCHOOL IN WASHINGTON, D. C.

another passing fad. This we can do through the new foundation. Legally distinct from the Society, though closely linked through board and staff members, the foundation will guarantee continued financial support for the best geography programs.

Initially the foundation will make grants to the same kinds of programs that have already proved so successful. Last summer, for example—

PHOTOGRAPH BY CHRIS JONES

The National Geographic [sponsored] Institute in Knoxville turned out to be the best experience I've ever had in education.

MRS. JOHN V. DUNCAN
SPARTANBURG, SOUTH CAROLINA

with financial support from the Society, Chevron USA, and the William and Flora Hewlett Foundation—the Bay Area Global Education Program and the Northern California Geographic Alliance, one of 22 we support, sponsored an institute at Stanford University for 60 educators. Those teachers, armed with exciting new classroom methods and materials, are now conducting in-service workshops that should reach hundreds of other educators who, in turn, will pass along new enthusiasm for geography to thousands of students.

Despite such encouraging numbers, this work can never be finished. Our children can never be too well informed. Nor can we ever have too many good teachers.

During the next ten years, in fact, we are likely to face a critical shortage of qualified teachers. The growing demand for teachers in the United States will soon exceed the capacity of all our colleges and universities to produce them. By one estimate, we will need a million new teachers between now and 1993, not only because of an upswing in school enrollments and an increased rate of teacher retirements, but also because fewer college students are becoming teachers.

For that reason we need to make sure that our new teachers are well trained in geography. And we need to raise the prestige of the classroom teacher in our society to the point where teaching attracts its share of America's best talent.

In establishing the foundation, the Society has made a good start in this direction. It represents the best effort of a much respected institution to look at one part of the broader education picture and to make a serious long-term commitment toward correcting the problem.

I believe we now have the best chance ever to restore geography to the prominence it deserves.

If you share my conviction about the value of geographic knowledge and would like more information about the foundation, I hope you will write to me directly. The address is National Geographic Society Education Foundation, 17th and M Streets N.W., Washington, D. C. 20036. Your interest and support will mean a more knowledgeable and responsible citizenry in our next hundred years. □

Every day I am in the classroom I am reminded of something gleaned from the institute held at Texas A & M.

SHARON STEETER
BRENHAM, TEXAS

LIVING IN AN IM
MAY BE NECESSA
IN ONE

Imagine a vacation where you travel thousands of miles and never worry about reserving rooms, hunting for restaurants, or repacking a suitcase more than once.

Imagine a hotel where, as you sip daiquiris by the pool or work on your golf swing, an ocean floats gently by. A hotel that's so dedicated to serving you, there's actually one staff member for every two guests.

Imagine, if you will, a world so cosmopolitan, you can spend the day visiting a Dutch fort, a Fren village, or a British colony. And then spend the night seeing a Broadway play or a Las Vegas revue.

Imagine a resort that doesn't simply schedule activities, but plans adventures. So instead of ju

PERFECT WORLD
RY. VACATIONING
IS NOT.

some things to do, you can do some things that perhaps you've never done. Like climbing a tropical waterfall. Exploring the ruins of an ancient civilization. Or simply playing the day away on a private island reserved exclusively for you.

Imagine a tropical getaway that's so romantic, almost every day has a classic Hollywood ending as you, literally, sail off into the sunset together.

Finally, imagine a vacation so easy to plan, you can arrange it all by making one call, to your travel agent, and asking for an NCL cruise. And soon, instead of just imagining the perfect vacation, you can start living it.

NORWEGIAN CRUISE LINE®

A century of covering a changing Russia

ONE of the Society's oldest neighbors in Washington, just across 16th Street, is a handsome mansion that has served as the embassy of the Russians—first tsarist and later Soviet—since November of 1913.

With the triumph of Lenin in 1917, the house was tended by caretakers until the U. S. recognized the Soviet regime in 1933. Aleksandr Troyanovsky moved into 1125 16th Street N.W., the first of a line of famous and sometimes infamous Soviet ambassadors.

Over the years Presidents of the Society have walked across 16th Street at one time or another to take up matters of mutual interest with our neighbor. For most of that time the great shutters and blinds were closed and drawn against the outside world. Our business invariably was to arrange the most open access we could to the most closed and important society we faced as reporters of the world.

At times we had real success. When the Western press was a small group confined to Moscow, we were able to publish on Siberia, Leningrad, the Volga, the Arctic, the Viking Trail, and the Soviet space program. We produced TV documentaries and books.

At other times we had dismal failures when our journalists got no farther than the Moscow airport. I once spent eight days in a Helsinki phone booth, so to speak, waiting for official permission to travel to Leningrad. It never came. More than once our teams returned after months with no coverage because of the restrictions they faced. But we never stopped trying, for we have always felt we could not ignore a superpower so involved with Western destiny.

Our coverage of tsarist Russia had begun, in fact, in the 1890s. In 1913 Editor and Mrs. Gilbert H. Grosvenor made a memorable trip there (below). In 1973 I traveled to a very different U.S.S.R., journeying from Moscow to Siberia, an experience still vivid to me.

Last December, 16th Street was closed to regular traffic and filled with limousines and flashing red lights as Mikhail Gorbachev came to town. Now light seems to be coming in all the windows, and we are moving toward what may be a new epoch of more open communication. As I welcome it, and fondly hope that *glasnost* is not an interglacial event, I remember with something of a bittersweet taste those many years past and the people who kept bucking the odds and the system in the belief that a little light was better than all dark.

Their work is on our library shelves; it is now part of history, and a part too of the long relationship between two old neighbors four blocks from the White House.

Gilbert M. Grosvenor

PRESIDENT, NATIONAL GEOGRAPHIC SOCIETY

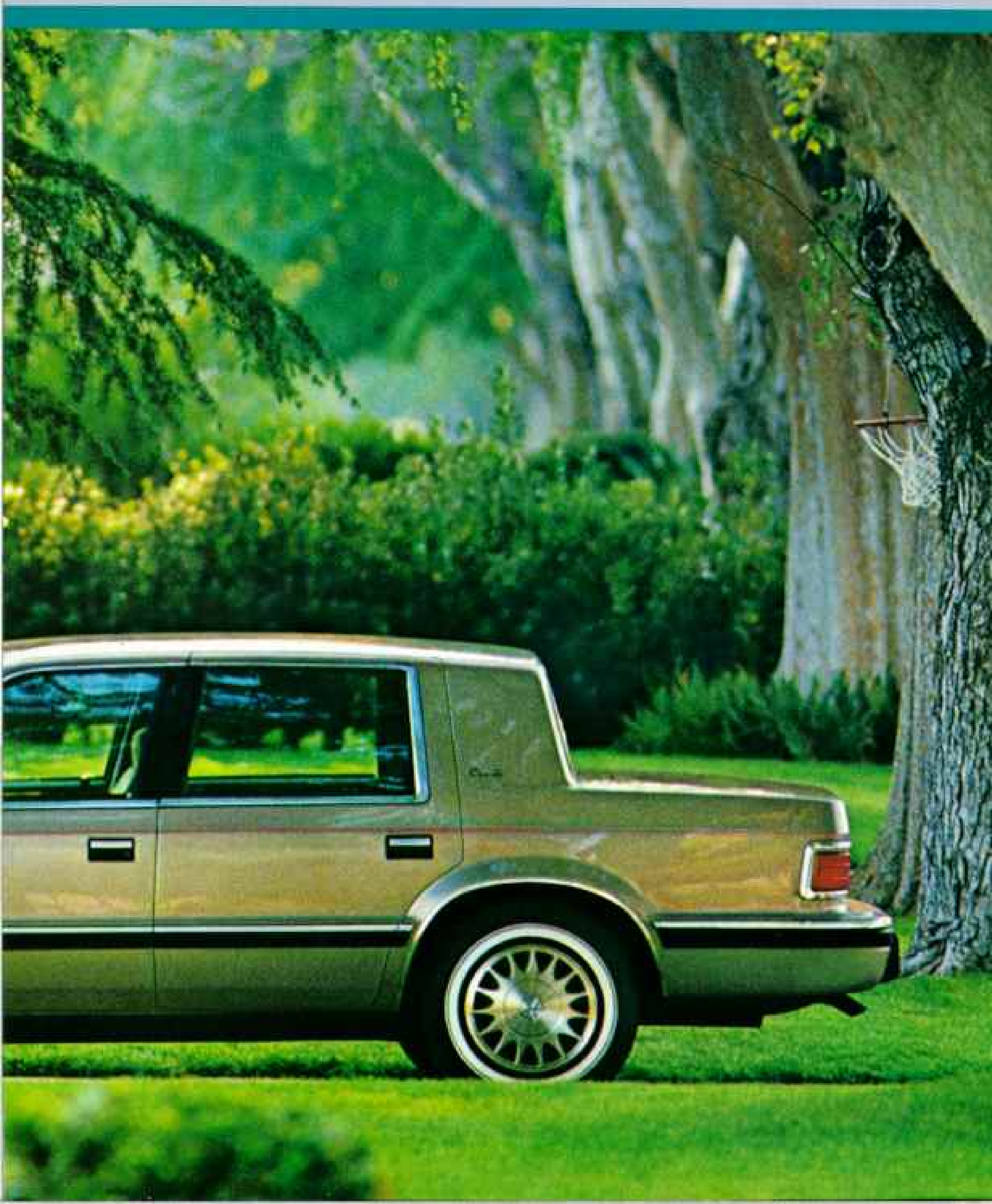
IN 1913 EDITOR GILBERT H. GROSVENOR (WAVING HAT) STANDS BENEATH THE 40-TON TSAR CANNON IN THE KREMLIN. © NGS

ANNOUNCING THE DAWN OF A NEW DYNASTY.

THE NEW DODGE DYNASTY.

IF YOU'RE IN THE MOOD TO EXCHANGE YOUR OLD DRIVING HABIT FOR A NEW BRAND OF SOPHISTICATION AND STYLE, LOOK AT THE 1988 DODGE DYNASTY. IT'S AN ALL-NEW FAMILY SEDAN THAT PUTS YOU IN

COMMAND WITH ROAD-STEADY FRONT-WHEEL DRIVE, MOVES YOU WITH AN AVAILABLE OVERHEAD CAM V-6 AND GIVES YOU THE OPTION OF ANTI-LOCK BRAKES. AND THERE'S MORE INSIDE...



DYNASTY. A NEW ERA OF FAMILY SEDAN BEGINS.

IT'S THE ONLY ALL-NEW FAMILY SEDAN THAT COMBINES COMFORTABLE SIX-PASSENGER SEATING, A LONG LIST OF PREMIUM STANDARDS INCLUDING DUAL REMOTE MIRRORS, A LEATHER-WRAPPED STEERING WHEEL, AN AM/FM STEREO, INTERMITTENT WIPERS, PLUS OUR UNBEATABLE 7/70 PROTECTION PLAN.* THE CLINCHER? AN ENTIRELY AFFORDABLE PRICE. SO IF YOU'RE LOOKING FOR THE LEADER IN A NEW ERA OF FAMILY SEDAN, IT'S GOTTA BE THE 1988 DODGE DYNASTY LE.

7/70

Dodge

IT'S GOTTA BE A DODGE.

DIVISION OF CHRYSLER MOTORS

*Based on warranty comparison with competitively priced models at time of printing. See 7/70 powertrain & 7/100 outer body rust-through limited warranty at dealer. Restrictions apply.

BUCKLE UP FOR SAFETY.

Did you almost forget to take your blood pressure medicine today?

When your doctor tells you that you have high blood pressure, he may also tell you that control of it starts with *never* forgetting to take your medicine.

Yet, of the 18 million people in the United States who are under treatment for hypertension, approximately 6 million *do* forget. And many more can't even remember if they did take their medicine.

If you are one of them, you undoubtedly have your reason. Perhaps it's because you travel a lot. Or you work different shifts, so you're either getting up when others are going to bed . . . or vice versa. Or

you're raising teen-agers who occupy all your time and mind. Then again, you may have to take several medications, so you sometimes forget one.

Understandable! But not one of these excuses will ever help your health.

Today, however, science has found a way to help you remember. It's high blood pressure medicine you wear, for a week at a time. It comes in an adhesive patch that's easy to apply to your skin.

Like any medication, however, patch therapy is not for everyone. Ask your doctor about it. If he says yes and your body agrees, the patch can help you remember.

Ask your doctor about this form of medicine: you wear it...a week at a time.

Boehringer Ingelheim Pharmaceuticals, Inc., Ridgefield, CT 06877

Members Forum

Haiti

Having worked in Haiti since 1981, I found your article of November 1987 accurate. However, it is ironic that it gave a rosy picture of voodoo at this crucial time in history and appeared in the month in which thousands of hungry, malnourished families are obligated by their voodoo overlords to present food at crossroads and in cemeteries to appease the spirits of their deceased ancestors.

Many people must borrow money to buy animals or food to sacrifice. If they don't, the voodoo priests cudgel them with threats of disaster. After the February 1986 revolution, people went on a rampage to kill voodoo priests because they felt that voodoo—in which the Duvaliers were involved—was responsible for the problems and lack of development in the country.

WARREN LAND
Port-au-Prince, Haiti

I'm glad that the magazine found space to mention the Citadelle Henri and its restorer, Albert Mangonès. If the rest of Haiti would restore itself in the same spirit, we'd have a happier story.

MARVIN T. JONES
Washington, D. C.

Let me congratulate NATIONAL GEOGRAPHIC for a superb piece: factual, well written, great photographs, and refreshingly frank. In the summer of 1987, my visit to Dr. Boulos's clinic made it possible to "resist despair."

FRANK MEISSNER
Bethesda, Maryland

On several trips to Haiti I have formed close relationships with several young Haitians who are devout evangelical Christians. The article seemed biased towards Roman Catholicism. The large evangelical community has so little place for voodoo that Protestantism has even been accused of "destroying" Haitian culture.

PAUL LINDAHL
Washington, D. C.

New Mexico

You did it! Thanks for the engaging article and photographs on New Mexico (November 1987). Alas, you also did it again: You have helped perpetuate the myth that the only thing (save Carlsbad) east of the Rio Grande corridor is Texas.

Sincerely, from the land where every town (almost) is a county seat,

SCOTT CAULLEY
Portales, New Mexico

The article ended with only a portion of the story printed. The main cash crop for New Mexico is oil and gas. Nary a whisker of information on the Permian Basin oil fields and the huge amount of dollars rolling throughout the Southwest from the oil fields. Under the cap rock (200 miles long and 150 miles wide) is an ocean of water that feeds the entire basin and is associated with all that oil and gas. Early pioneers said the Llano Escatado is so flat it may be the only spot on the globe where blue sky can be seen between the buffalo's legs.

PAUL E. CARTER
Hobbs, New Mexico

The mention of "50 miles to the Indian school" brought back memories. The Bureau of Indian Affairs schools, where I have taught, and mission schools provided the only formal education available to the Navajo, Apache, and most Pueblo children from the beginning of time to the late 1960s. State schools had not integrated the Native American students because of lack of tax money from the reservations. We teachers were often not well prepared; we had poor training, inadequate equipment, and little understanding of the cultures. The fact that even one Navajo boy made it from poverty to a Ph.D. in science is awareness enough that we often did something right.

BILL D. RHINE
Albuquerque, New Mexico

You showed a photograph of magnificent petroglyphs on Albuquerque's west side threatened by suburban sprawl (page 621), but you missed the really big news. The National Park Service estimates there are up to 17,000 examples of prehistoric Indian and colonial Hispanic rock art on the 17-mile volcanic escarpment. Legislation is being prepared to create a Petroglyphs National Monument managed by federal and municipal agencies. Last September Albuquerque approved $13,860,000 toward acquisition, as part of a quarter-cent tax for "quality of life" projects. If Congress approves, this will be the only NPS unit to focus on our heritage of prehistoric rock art. For information and tours contact: Friends of the Albuquerque Petroglyphs, Box 75277, Albuquerque, New Mexico 87194.

ISAAC C. EASTVOLD
Albuquerque, New Mexico

From my experience at an environmental law firm, I differ with the statement that semiconductor manufacturers are "clean industries" (page 611). More than 80 percent of the chemicals used by these manufacturers are listed by EPA as

BE SURE YOU PICK THE RIGHT ONE. IT'LL BE AROUND AN AWFULLY LONG TIME.

One man writes, "We bought a John Deere in the mid-60s. We still have the same machine." Another writes, "I own a '72 Deere. It performs like new." Still another writes, "Your reputation for long-lasting equipment is well deserved." Choose carefully. For details, call 1-800-447-9126. In Illinois, 1-800-322-6796.

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hazardous or toxic, such as resins used in assembly, acids used in the etching processes, and solvents. It would be a sad future for the beautiful state that prides itself on pure abundant groundwater to end up another Silicon Valley.

TINA ROMERO
Albany, California

Süleyman

"The World of Süleyman the Magnificent" has to be the pinnacle of your efforts (November 1987). What a visual treat. Beautiful from the golden borders of the pages and the sultan's *tughra* to the photographs, the prose, and the scope of this era of history.

MRS. ROBERT L. MANNY
Yellow Springs, Ohio

I am a senior citizen and read nonfiction at least five hours a day, but this is the first time I have been so enthusiastic about the past. If history books back in my day had been written in the style of Merle Severy, I would be considerably more knowledgeable.

MRS. L. I. WEINRICH
Whiting, New Jersey

Why gold borders on each page for someone that was so cruel and caused such suffering? "Magnificent" for whom?

HAIG ADISHIAN
Fort Lee, New Jersey

Again you have done an excellent job in presenting an unfamiliar seemingly exotic subject in such a way that even the present-oriented and TV-enslaved public could become inspired and informed. Congratulations from an occasional instructor of Ottoman history.

ANDREW LUDANYI
Ohio Northern University
Ada, Ohio

You are wrong on the origins of his second wife Roxelana as Russian (page 575). Her real name was Nastya Lisowska (1505-1561). The daughter of a Ukrainian Orthodox priest, she was born near Rohatyn, then under the Poles. In Ukrainian folk songs and legends she is credited with freeing the Zaporozhian Cossacks, who were Ukrainian by nationality, as stated in your article on Ukraine (May 1987).

V. KURYLIW
Toronto, Ontario

The author did not fully report Süleyman's final battle at Szigetvár (page 600). The troops [Hungarian and Croatian] defending the fort were under the command of the legendary Croatian, Count Nikola Šubić-Zrinski. Another interesting fact is that the grand vezir [Turkish spelling] Mehmed Pasha Sokollu was also Croatian. His family name was Sokolović (Falconer). The irony is that two Croatians fought on opposing sides for different masters, and at the end the Hungarians claimed the fame.

BERISLAV A. BOŠNJAK
Los Alamitos, California

The count, Croatian by birth, was Hungarian by virtue of his marriage to a Hungarian heiress.

My enjoyment of the article was increased by the magnificent child Süleyman on the cover. Great photographs draw readers to the solid scholarship of articles that they might otherwise ignore. Attention to human dimensions raises your material far above maps or even history alone.

JOHN K. GARLAND
Pullman, Washington

It would have been a fitting tribute to one of the most famous men of history, and to the Turks who revere him, to have had his portrait on the cover.

YUKSEL OKTAY
North Brunswick, New Jersey

The yard work that didn't get done this Saturday morning was a fair trade-off for the knowledge gained from your well-done presentation. It is interesting to see how those events of long ago, in some ways, can be applied today in the Persian Gulf and in the Islamic resurgence in the Middle East. In the 16th century, the scimitar; in the 20th, the Silkworm missile.

CHARLES R. HAZARD
Owings Mills, Maryland

Members Forum

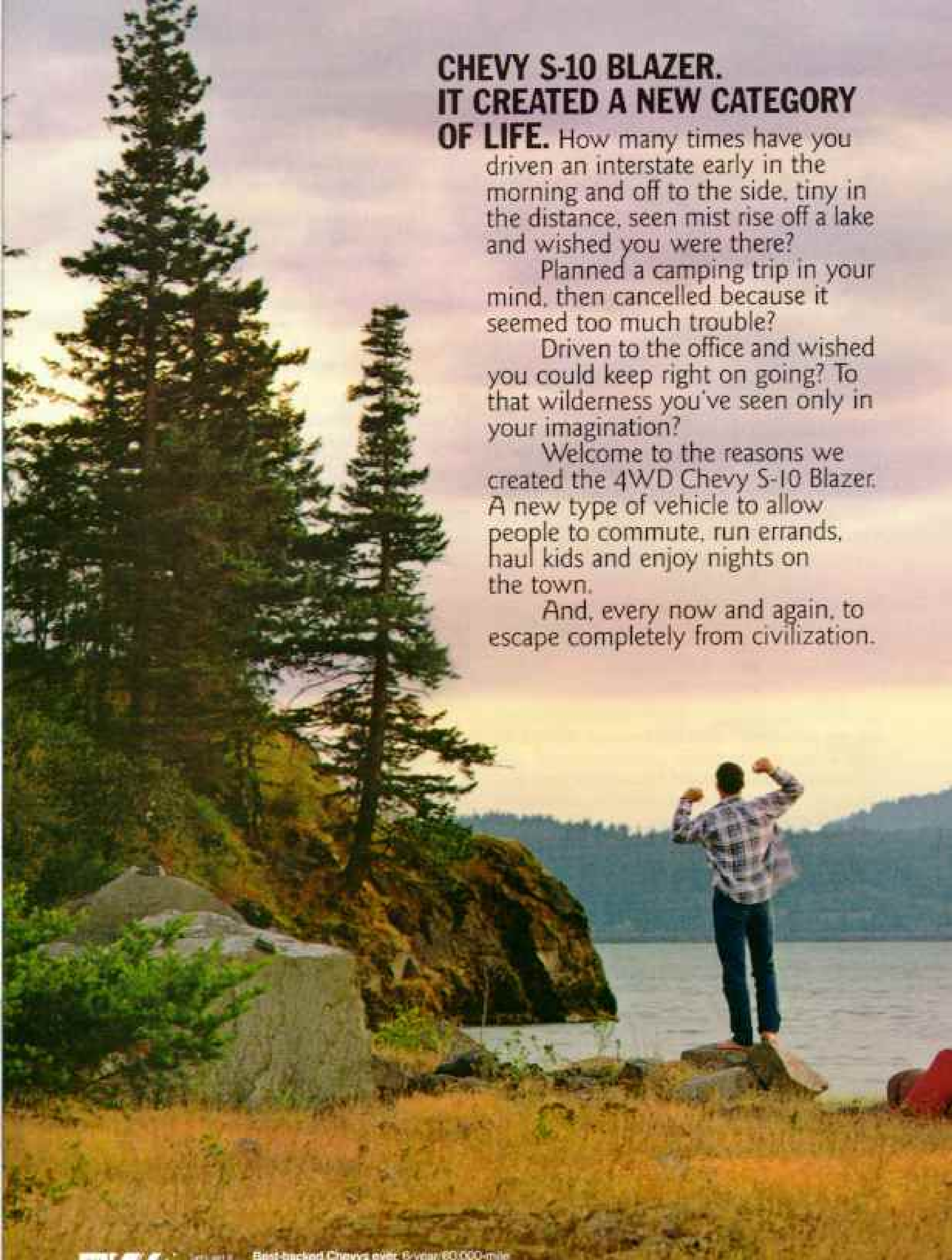
In reply to C. Stammers's letter (November 1987) on the tolerance of Kathmandu, as a Jew who has been proselytized repeatedly, I appreciate the policy against proselytizing in Nepal. Israel has one too. The majority of the world has no interest in becoming Christian. More power to Nepal, Israel, and other countries that tolerate all religions, but allow none to run roughshod over the beliefs of others.

DEBORAH S. PROESEL
Mount Zion, Illinois

We enjoy the magazine tremendously but doubt whether the space allotted to Members Forum is necessary. The writers are a nit-picking lot. But then, my old father used to say that writing to newspapers is the first real sign of mental decay.

F. K. MITCHELL
Ventnor, Isle of Wight

Letters should be addressed to ***Members Forum****, National Geographic Magazine, Box 37448, Washington, D. C. 20013, and should include sender's address and telephone number. Not all letters can be used. Those that are will often be edited and excerpted.*



CHEVY S-10 BLAZER. IT CREATED A NEW CATEGORY OF LIFE.

How many times have you driven an interstate early in the morning and off to the side, tiny in the distance, seen mist rise off a lake and wished you were there?

Planned a camping trip in your mind, then cancelled because it seemed too much trouble?

Driven to the office and wished you could keep right on going? To that wilderness you've seen only in your imagination?

Welcome to the reasons we created the 4WD Chevy S-10 Blazer. A new type of vehicle to allow people to commute, run errands, haul kids and enjoy nights on the town.

And, every now and again, to escape completely from civilization.

FLY TO FREEDOM. You've driven to that lake miles from nowhere and the Chevy S-10 Blazer 4x4 that took you there has sat patiently, silent and unused, for three of the most breathtaking days of your life.

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And when you decide to pack up and get away, Blazer lets you toss in loads of luggage behind the optional rear seat. And quiet the kids with the sheer pleasure of riding high and handsome in a truck so strongly built it comes with 6-year or 60,000-mile power-train warranty protection.

DO IT NOW. Take an afternoon off and test drive a new Blazer. Get the feel of it. Then picture yourself enjoying things no simple sedan or wagon could ever hope to let you do.

Chevy S-10 Blazer. Because life's too limiting with anything less.

THE *Heartbeat*

OF AMERICA TODAY'S CHEVY TRUCK

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Now there's nowhere for food to hide. You'll find just what you're looking for in this new Whirlpool refrigerator. Want something way in back? No problem. Now every shelf slides out so you can see and reach everything easily. Plus big gallon containers and three-liter bottles fit right in our adjustable door shelves.

Even the freezer makes finding food easy. Four big baskets in two different depths provide plenty of room for different shapes and sizes of food. And they all slide out to help you organize everything–and keep it in plain sight.

See how easy it is to keep clean. Whirlpool refrigerators have easy-to-clean interiors. Many have smooth glass shelves that wipe up easily, and special Spillguard™ shelves have raised edges to help contain spills. Vegetable crispers, meat keepers and bins remove for easy cleaning. And, of course, our textured steel doors help hide fingerprints.

We'll make it right, or we'll replace it free. You'll be satisfied with the quality and performance of your new Whirlpool appliance. Repairs, if needed, will be to your satisfaction…if not, we'll replace it free for up to a year.* That's part of our 100% Customer Commitment. And it's one more way we make your world a little easier.

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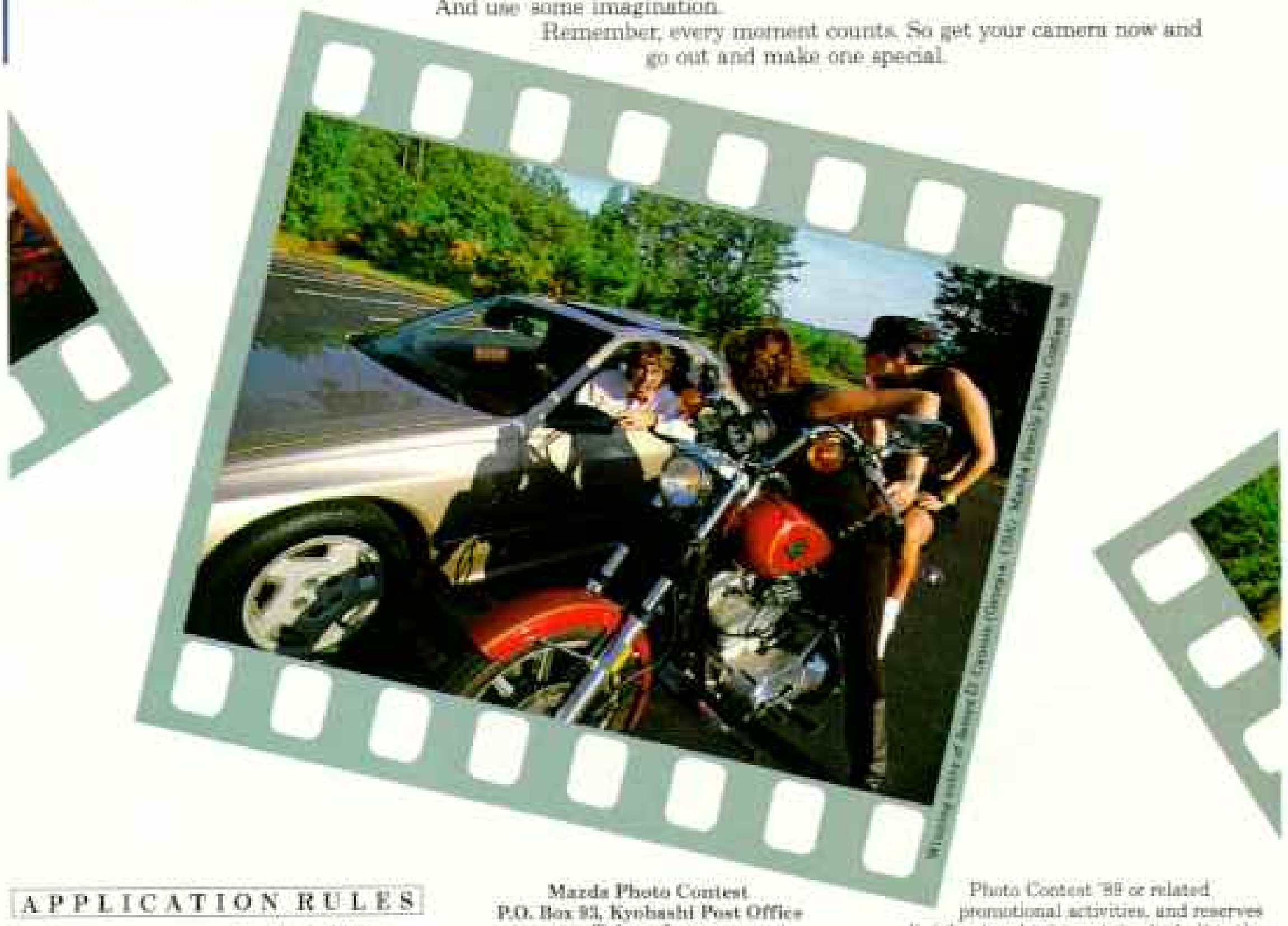
NATIONAL GEOGRAPHIC MAGAZINE

JUST GIVE US A MOMENT.

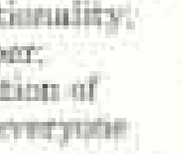
Make it a special moment and you'll win US$3,000 and photo publication in the Mazda Photo Contest '89.

We're not asking for much. One photo is all, featuring your friends or family with a Mazda.
What's more, we're offering a lot in return. The top fifteen photographers each earns US$3,000. Plus publication of their photo in Mazda's 1989 Calendar and photo contest album. While 45 second prize winners receive US$500.
Best of all, everyone has a good time.
So what's the catch? There is none. Simply follow the contest theme "Having Fun With Mazda Cars And Trucks." Read the rules at bottom. And use some imagination.
Remember, every moment counts. So get your camera now and go out and make one special.



APPLICATION RULES

1. This contest, sponsored by Mazda Motor Corporation at 3-1, Shinchi, Fuchu-cho, Aki-gun, Hiroshima, Japan, is open to any photographer, whether amateur or professional. The contest theme is "Having Fun With Mazda Cars And Trucks." Purchase of or ownership of a Mazda vehicle is not necessary to enter the contest.
2. **Entries must be 35 mm COLOR SLIDES horizontally mounted,** and the entrant's name and country must appear on the slide mount. Each entrant may submit as many entries as desired. Each entry must be accompanied by a signed Application Form (available at your nearest Mazda dealer) or a signed sheet of paper giving the following details. Please type or print clearly: (1) Name; (2) Address; (3) Age; (4) Sex; (5) Nationality; (6) Occupation; (7) Telephone number; (8) Date of photo shooting; (9) Location of photo shooting; (10) The names of everyone shown in the photo.
3. Entries should be mounted horizontally as in the diagram:



4. **Entries must be received between February 1, 1988 and June 30, 1988 inclusive, at the following address:**

Mazda Photo Contest
P.O. Box 93, Kyobashi Post Office
Tokyo, Japan

Mazda will not be responsible for the loss of or damage to entries, or for entries which are delayed or misdirected.

5. The prizes are as shown above. Prize money will be remitted either in the currency of the winner's country based on currency exchange rates then prevailing or in U.S. dollars. Only one prize will be awarded per household. Prizes are not assignable, nor exchangeable.
6. Entries will be judged by the Photo Contest '89 Committee, an independent panel of experts, based on originality, composition and photographic technique. The panel's decision will be final.
7. Winners will be notified by mail and their names will be announced in the December 1988 issue of "National Geographic" magazine.
8. Entries are accepted and prizes are awarded on the condition that the entries are original photographs, are the sole property of the entrant, and have not been submitted or accepted for publication elsewhere.
9. All entries will be retained by Mazda and will not be returned.
10. Mazda reserves the right to reproduce, publish, or exhibit any entries in connection with the Photo Contest '89 or related promotional activities, and reserves all rights to winning entries, including the right to reproduce, publish, or exhibit the photograph in Mazda's consumer advertising or elsewhere. It is the obligation of each entrant to obtain any necessary consents for these purposes from persons appearing in the photograph and for other objects appearing in the photographs. The entrant shall hold Mazda harmless and indemnify them against any claim or liability arising as a result of the publication or exhibition of his or her entry. For the foregoing purpose, all winners will be required to execute a consent form to be supplied by Mazda and to be returned to Mazda within 20 days as a condition to receiving their prizes.
11. This offer is void where prohibited by law.
12. The prizewinner will be responsible for paying tax in connection with receiving a prize.
13. Any breach of the above rules will entitle Mazda to disqualify any entry.

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So if you're a little skeptical when you see words like these in a bank ad, well, we understand.

All we ask is a chance to prove to you that, at any member of the 1st Nationwide Network, they're more than words.

They're the philosophy we built the Network on. And before any bank gets to display our sign outside their building, they have to demonstrate the right attitude inside their building.

If you'd like to check us out for yourself, we invite you to stop by any of the independent financial institutions that make up the 1st Nationwide Network. A network which, at present, covers 38 states and has combined assets of over $31 billion. Or call us toll free at (800) 826-1092 for the member branch nearest you.

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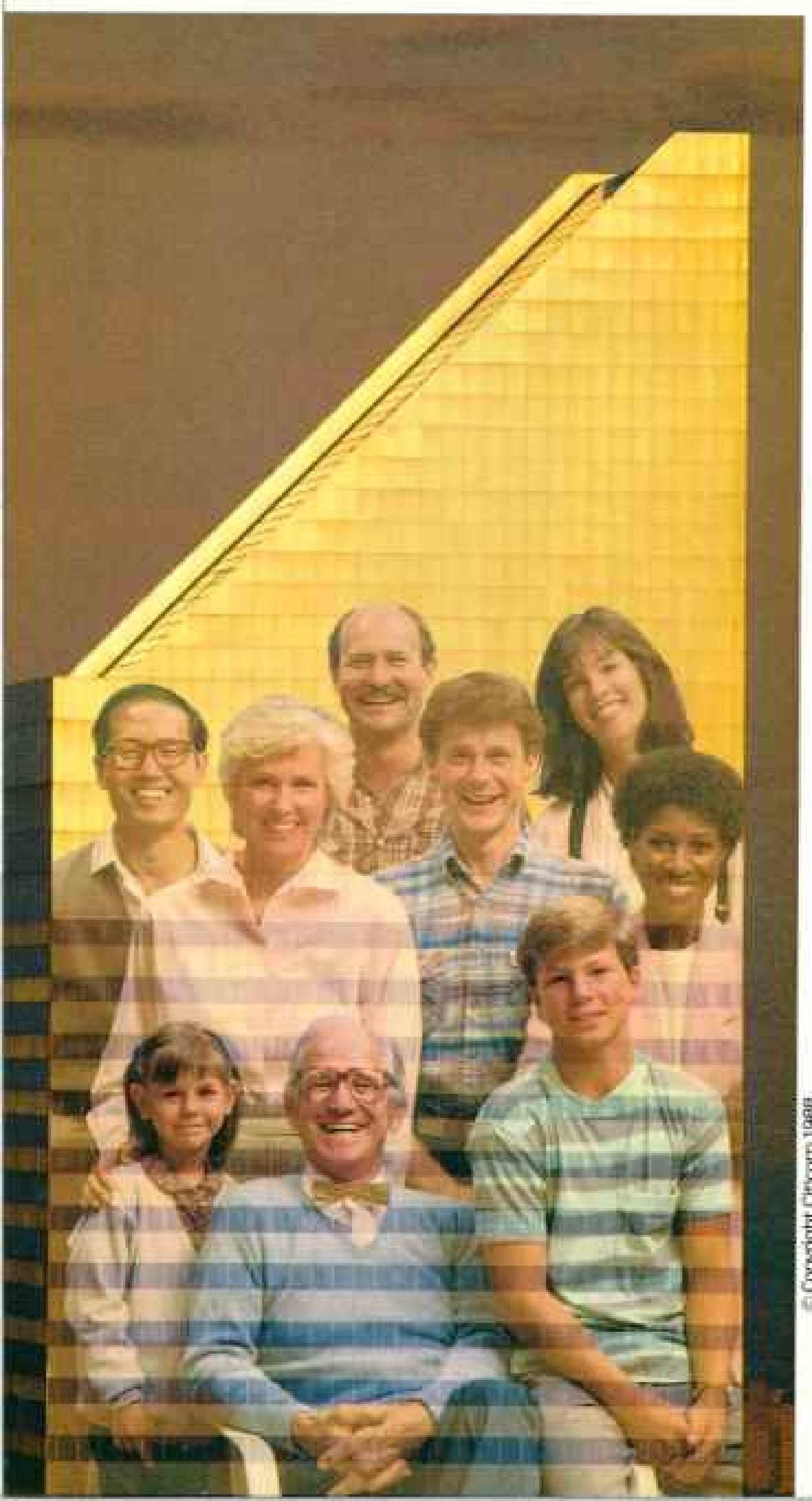
BECAUSE AMERICANS WANT TO SUCCEED, NOT JUST SURVIVE.℠



The drive to succeed is deeply ingrained in the American character.

It means more than just wanting to get by. It means wanting to get ahead.

As Citicorp and Citibank, we understand this determination to succeed. For over 175 years we've helped people across the U.S. and around the world see their ideas of success become reality.

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We also do business with more businesses than any other financial services company. (At home and in over 90 countries around the world.)

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That's typical of the innovation we consistently try to bring to our customers.

Next time you or your company have a financial need—any size, any place, any time—let us put our energy, our resources, and above all our people to work on it.

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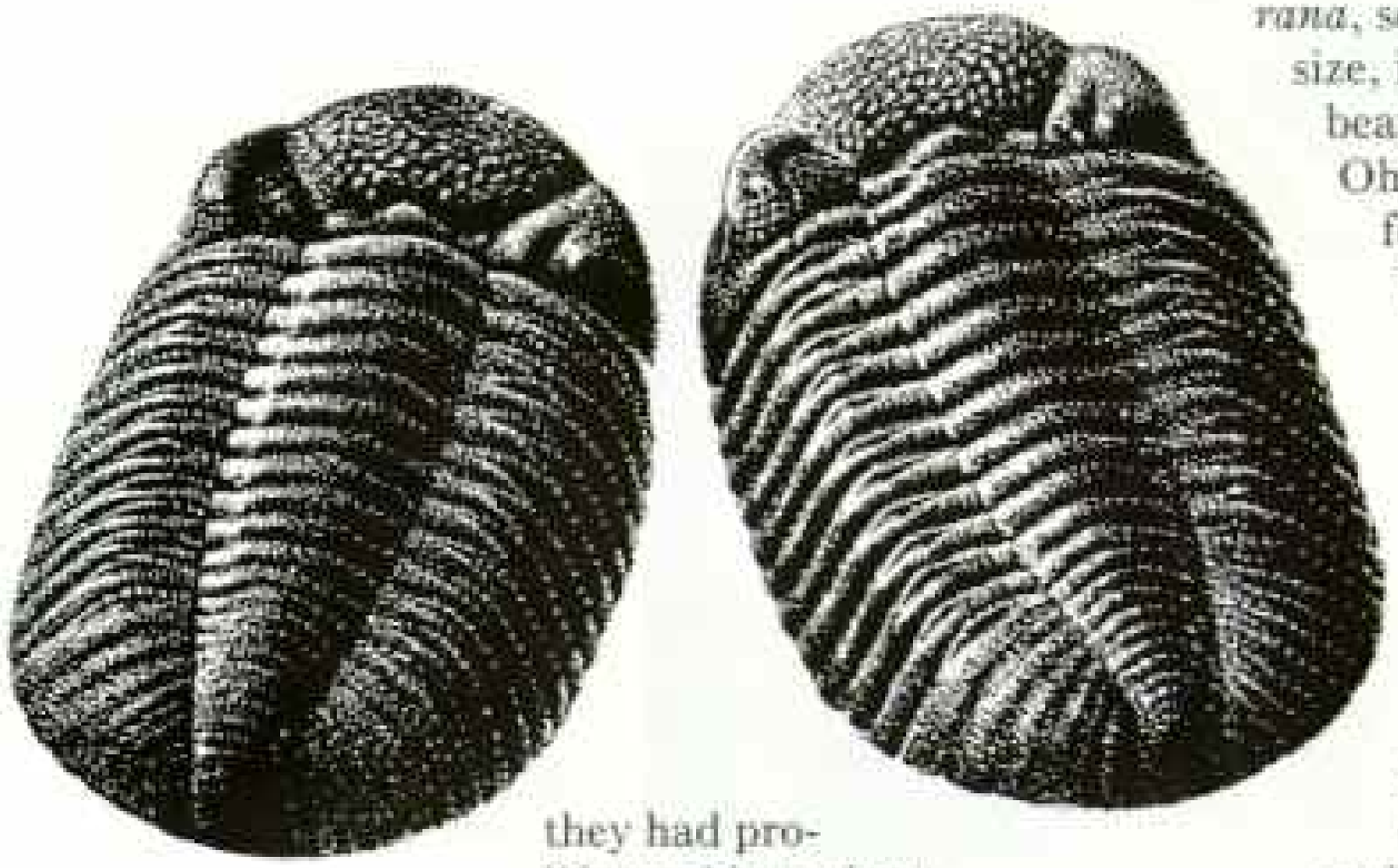
Trilobites, long-term rulers of the planet

Once upon a time, and a very long time it was, creatures like these dominated the planet. They first appeared 570 million years ago, and by the time they vanished some 340 million years later,



they had proliferated into about 10,000 different species. Their onset marks the beginning and their demise the end of the Paleozoic era. Numerous and well-known, they are an aid to paleontologists in dating other fossils.

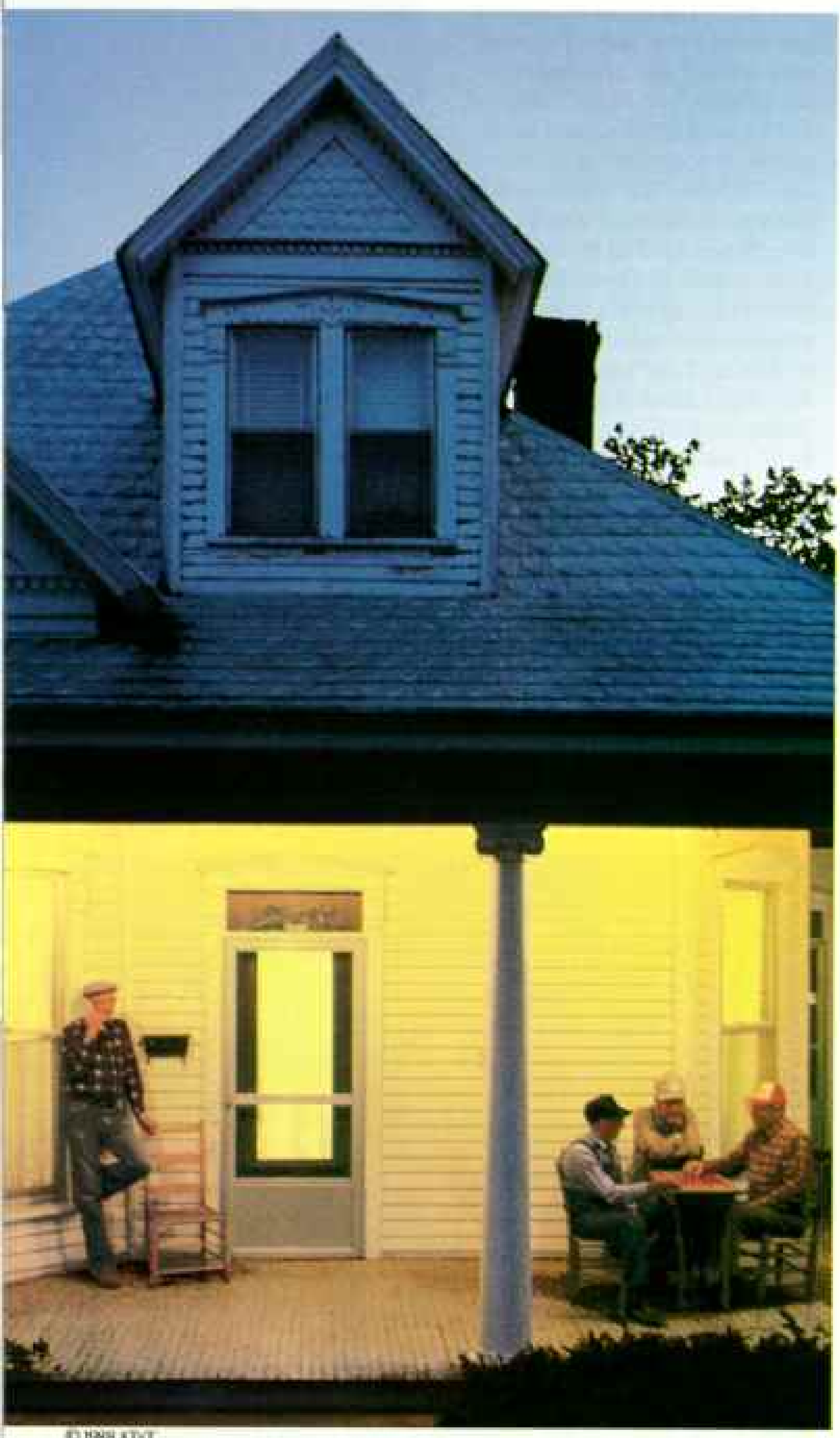
Scientists call them trilobites for the three ridges, or lobes, that run the length of their bodies. Like other members of the phylum Arthropoda, these invertebrates had an external skeleton supporting the soft organs. A primitive armor, it also protected them as they crawled along the sea bottom in search of food. The exoskeletons they shed and the animals themselves became the fossils we find today in rock formations that have survived undisturbed from early times, as David Jeffery reported in the August 1985 NATIONAL GEOGRAPHIC.

Best known of the North American trilobites, *Phacops rana*, seen here about life-size, is often found beautifully preserved in Ohio. Another genus, found in rocks near Boston, grew to 45 centimeters (18 inches) and weighed 4.5 kilograms (10 pounds).

Trilobites were the first creatures to have jointed legs. One segment was used for walking, the other for respiration.

Why did trilobites become extinct after surviving a third of a billion years? Jawed fishes evolved and could have preyed on them. For whatever reasons, they are—like the dinosaurs—gone forever with only their fossils to tell us of their long existence on earth.

We still think there's a lot to be said for small talk.



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On Assignment

"I THINK OF HISTORY as a story to be covered," says Senior Associate Editor JOSEPH JUDGE. "Journalists, like scholars, try to find out what happened." And where. Judge, here costumed for a Spanish colonial festival in St. Augustine, Florida, began tracking the 16th-

century Spanish era of the southeastern United States a decade ago. But nagging doubts about Columbus's first New World landfall detoured him; his research eventually led him to relocate it at Samana Cay in the Bahamas (November 1986).

Judge's watercolors of Jerusalem's Jaffa Gate, Moscow's Red Square, O'Hara Gap in Australia, and Alaska's Turnagain Arm hang in his office, recalling a few of many assignments during his 23-year GEOGRAPHIC career. Alaska also inspired a book of poems, published by the United Arts Club of Dublin.

ALASKA PROVIDED fresh material for author LARRY L. KING (upper right), who took the Anchorage assignment in part because he had never been there. He immediately experienced déjà vu. "The oil-field workers reminded me of those I worked with when I was growing up in west Texas," he says. "That sort of hard drinkin' and hard playin' is a big part of Anchorage." A Lone Star tribute went last year to the state's native son, famed for *The Best Little Whorehouse in Texas*. He received this copy of a granite plaque emplaced in a sidewalk in Austin. King's latest play, *The Night Hank Williams Died*, just opened in Washington, D. C., his home for 30 years.

WHEN THIS ISSUE went on press in January for its 10.7-million-copy run, it marked the first time since 1951 that GEOGRAPHIC's Quality Control Manager JOE M. BARLETT (left below) was not guiding the logistics. "When I started to work here, our press run was under two million," says Barlett, now retired. "In all, I think I've

ERIC KINGSLEY

overseen the printing, binding, and mailing of 2.5 billion magazines." At Krueger Ringier in Corinth, Mississippi, where the magazine has been printed since 1977, he checks the colors on the January cover with pressroom supervisor Jack Roberts. Ten million pounds of paper, 385,000 pounds of ink, and an entire month of press time go into each GEOGRAPHIC issue. That each copy comes close to printing perfection is to Barlett's credit. "Joe instilled this in us," says his successor Frank S. Oliverio: "Reach a little higher."

PHOTOGRAPHS ABOVE AND UPPER LEFT BY BILL BALLENBERG

Nuclear energy can help America find a way out of our dangerous dependence on foreign oil

Oil imports are increasing to dangerous levels. As the uncertainty in the Persian Gulf continues, the ability to rely on America's nuclear energy becomes more important than ever.

During the 1973 embargo, when we were importing 35% of our oil, prices skyrocketed as supply nose-dived. In the last 18 months, America's dependence on OPEC oil has increased dramatically. We're even more dependent now than we were in 1973. Oil imports have risen by over 25% while domestic oil production has fallen nearly 10%. Looking to the future, the situation is even worse.

In fact, if projections from the Department of Energy are correct, America may be importing as much as 50% of our oil by 1990.

That would seriously jeopardize our national energy security.

Nuclear Energy Saves Oil

Electricity generated from America's 108 commercial nuclear electric plants saves us over 750,000 barrels of oil a day. Every day. Without nuclear energy's contribution, we would need to import even more foreign oil than we already do.

Nuclear Energy for the Future

America's use of electricity has been growing steadily to fuel our growing economy. At current growth rates, electricity demand will overtake supply in the early 1990s.

New nuclear electric plants should be in planning *now*. But they are not, despite the fact that most Americans believe that nuclear energy is important and that we will need more.

Too many financial, political, licensing, and regulatory uncertainties stand in the way of America's being able to fully utilize its nuclear energy resources. For example, it has taken some plants as long as 12 years to be completed. If nothing changes, that means that a plant begun now might not be operating before the year 2000.

As America's economy continues to grow, America must find ways to keep pace with its growing electricity needs. Nuclear energy can play a major role in meeting those needs as well as keeping us less dependent on foreign oil.

For a free booklet on energy independence, write to the U.S. Council for Energy Awareness, P.O. Box 66103, Dept. NS04, Washington, D.C. 20035. Please allow 2-3 weeks for delivery.

Information about energy America can count on

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