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# THE NATIONAL GEOGRAPHIC MAGAZINE

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Return to Manila

With 21 Illustrations and Map

FREDERICK SIMPICH

Smiling, Happy Philippines

21 Natural Color Photographs

J. BAYLOR ROBERTS

Along the Old Silk Routes

With 33 Illustrations and Map

LAWRENCE AND MARGARET THAW

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With 14 Illustrations

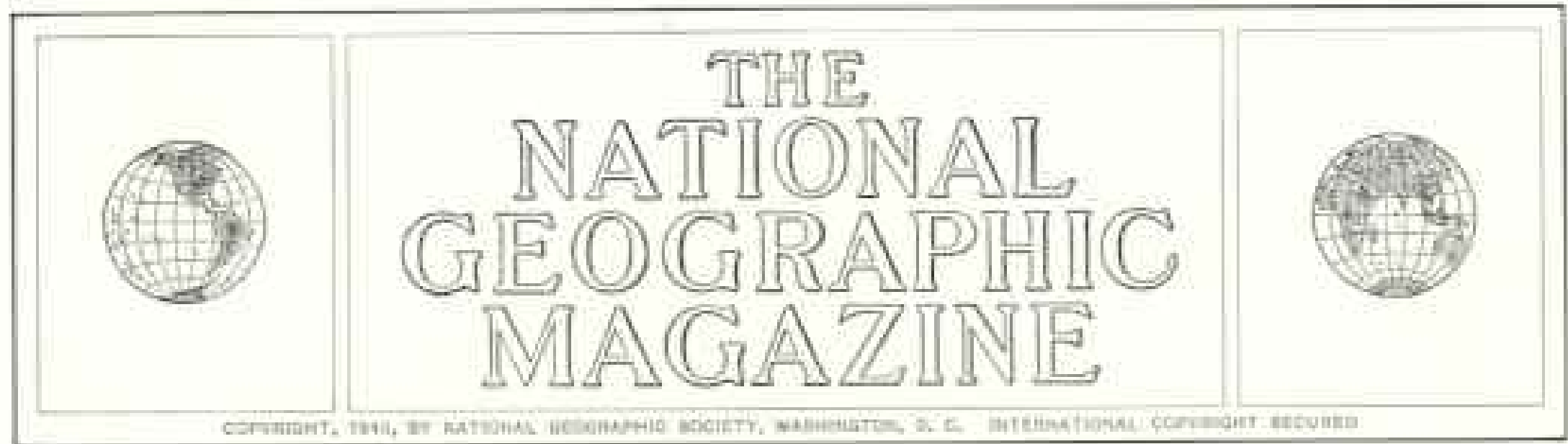
WALTER E. KETCHAM

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## Return to Manila

BY FREDERICK SIMPICH

*With Illustrations from Photographs by J. Baylor Roberts*

I'VE just come back to Manila. I wanted to see how it has changed since, nearly 40 years ago, I wrote for its pioneer American newspapers and taught Filipino boys and girls at night school to spell "cat" and recite "Mary's Little Lamb" in English without calling Mary "Maria" and her lamb a "lamp."

Particularly, I wanted to see what effect 42 years of American rule have had on the Filipinos, who by law are soon to rule themselves.

To show you what Manila *was*, and what it's like now, I must "cut back" a bit, as film plays do, to let all the actors in at their right places.

Dewey had just sunk the Spanish fleet in Manila Bay. That was May, 1898.

Excited Americans from Beacon Hill to Puget Sound started a mass raid on the old family atlas. Where *were* the Philippines? What kind of place was Manila, anyway?

Volunteer regiments sailed to find out. In President McKinley's makeshift troopships they swarmed across the Pacific, to Uncle Sam's long, strange adventure in these 7,083 tropical islands that sprawl off the southeast coast of China.

On crowded transports sweating officers grunted over maps and Spanish verbs: some soldiers, as soldiers will, matched wits with Lady Luck; Boston lost its shirt to Billings or Little Rock, and all joined in abusing the "embalmed beef" of that day, grandpa of the "corned willie" of a bigger war. All hands, as they neared Manila, sang "There'll Be a Hot Time in the Old Town Tonight."

Once ashore, they found Manila, the capital, a picturesque, lazy Spanish-Malay city set on

a vast bay indenting Luzon Island, northernmost important island of the group (map, page 413).

Last week, when I landed at Manila again, the first familiar sight was a fat water buffalo, or carabao, hitched to a cart.

Symbol of Filipino life, this Manila bull persists, despite trucks and taxis (Color Plate XVI). He belongs here, as our mule belongs down south. From this big, mud-splashing bovine, Washington's famed Military Order of the Carabao got its name. Like the animal they exalt, this order's members also enjoy regular "wallows"; all are veterans of Philippine campaigns. They shoved their mules off transports into Manila Bay and let them swim ashore. They put down the insurrection and helped start civil government.

### Old Guard Gone from New Manila

In this new Manila, where I write, I find few of this old guard. They belong to "the days of the empire." But when you pause at some once-familiar place, say Malacañan Palace, where William Howard Taft gave lively parties when he was governor, memory begins to conjure up names and faces like those of once-famous actors seen in the revival of an old-style silent movie. "Fighting Bob" Evans, Funston, Leonard Wood, "Hell-roaring" Jake Smith—they're all now in that silent movie we call "history." Today's big Manila play is a talkie, in colors, with Filipinos and not Americans as actors.

Making these notes, I sit on the veranda of an old Spanish house, with sliding shell windows, that overlooks the Pasig River. I loafed on this same porch when it belonged to



Photograph by U. S. Army Signal Corps

### With Blanket Rolls, Canteens, Knapsacks, and Guns, Doughboys of 1899 Embark for Pasig River Fighting.

Officers in "campaign hats" of Spanish-American War style sit under deck awnings. Thousands of veterans from "days of the empire" who read the NATIONAL GEOGRAPHIC MAGAZINE will study these men, seeking to recognize a buddy of long ago.

the Manila Times, in 1906. Then, spanning the river just before us, stood that classic, mossy stone structure, the Bridge of Spain. It's gone now and a new one takes its place—with a less romantic name (page 436).

But the yellow, muddy river, its swift current bringing down floating islands of green plants and rafts of coconuts, still smells in the good old Manila way. *Cajcos* and dugout canoes throng its shores, and about its mouth small island steamers toot and fuss for room to turn around (pages 411, 414, 415).

Particularly at night now the whole aspect of Pasig River is transformed. Time was when only the torches of fishermen danced their beams on its dark waters, to drive fish into nocturnal nets. Now from atop tall new office buildings that crowd its banks flashes a veritable Times Square fiery furnace of electric signs, urging you to do this and that.

Fort Santiago near the Pasig's mouth—one

of the oldest under the Stars and Stripes—is conspicuous because in all this billboard inferno it flaunts no blazing signs. Solid as when Spaniards built it, this stronghold stands on the same site where a Malay raja held his stockade of mud and logs in Moslem days.

### Proud City Grows "Outside the Walls"

Little changed, too, is Manila's ancient Walled City, tied to Fort Santiago. "Most graceful and extensive sample of medieval architecture in all the Far East," you hear its people say. With its moss-grown palaces, churches, convents, and monasteries; its Santo Tomás University, older than Harvard; its silver altars, Gregorian hymnbooks, and sacred images and archives, what a paradise for students and historians! How vividly remembered by all pioneer Americans who once fussed at its squawling cats and noisy church bells and fought mosquitoes, rats, roaches, and



Photograph by Fanni Jants from *Three Lines*

### Liners, Freighters, Dredges, *Cascos*—All Crowd the Busy Pasig River Which Flows Through Manila

To thwart wharf rats Manila puts these metal shields on ships' hawsers. No ropewalking rodent can sneak aboard. Through intensive war on rats public health has been vastly improved (page 473). Floating plant "islands" lodge against the harge.

prickly heat in the roomy old Spanish homes whose second stories overhang its narrow cobbled streets! (Page 451.)

Look now at another Manila, with some 620,000 people. It rushes and roars outside the classic Walled City; it stretches far up and down the Pasig, and is almost three times as large as when Dewey's guns startled people coming quietly out from morning Mass. Its wide streets lead to new suburbs that run far out to what were rice fields, wild mango groves, nipa shacks, and cockpits barely a generation ago. Extramuros—"outside the walls"—the Spaniards called it, and even in their time it had grown to be no mean city.

Today its marble-white, air-cooled structures rise over muddy estuaries; broad, mansion-lined, tree-shaded Dewey Boulevard runs like an oriental Riverside Drive along Manila's ocean front. Motorcars honk in vain for right-of-way against 6,000 jittery horse-drawn ye-

hicles. Radio rocks the tropic air, with now and then a news flash in any tongue from Tagalog to Chinese, or a scholarly "news behind the news" comment by smooth, fast-talking Filipino journalists.

Where once stinky, muddy moats breathed their foul fumes about city walls stretches now a vast, green, man-made turf. Golfers drive off from No. 1 in the shadow of the monument to Legazpi, that bold Spaniard who first made this a white man's camp, the same heroic Legazpi who heard here the whistle of bigger and harder balls. That was in 1571—and even then the Filipino forts mounted their own homemade cannon and made their own powder.

They made gunpowder before Magellan shot at them with it!

That fact, alone, is significant. Here, in 1521, was found a civilization on islands Europe had never heard of. To it the narrative must come back. But look first at the



These Boys Built Their Own Miniature Planes for Entry in Manila's Annual Model Flying Race



With Dummy Guns Baguio Cadets Await the Drill Sergeant's Morning Commands

From similar raw material, in years past, American Army men built up the famous Philippine Scouts and Constabulary. Besides being courageous in battle, Filipino soldiers are usually obedient, quick to learn, and take readily to military life (Plate X).



Drawn by Ralph H. McAlister

### Daily News of Tension in the Far East Emphasizes the Importance of Manila

On the main ocean lanes that tie Japan and China to Australia, Manila lies only 800 miles from French-owned Indo-China, and 1,500 miles northeast of Britain's powerfully fortified Singapore. Hong Kong, British Crown Colony, is but four or five hours away by weekly Pan American Clippers. Corregidor, Uncle Sam's highly fortified Far Eastern base, is a tree-clad rock in the entrance to Manila Bay (page 450). Excellent motor highways link Manila with various strategic points on Luzon, whose northern tip is only 220 miles from Japanese-owned Formosa.

Filipino of 1940. What kind of man has Uncle Sam made of his ward? What good has come from 42 years of Anglo-Saxon social impact on the Malay mind and way of life?

#### America's Most Precious Gifts

Of many people, from President Quezon and Archbishop Michael J. O'Doherty to students and movie actresses, I asked this question: "Assuming that Uncle Sam has done you more good than harm, what gift from America do you chiefly prize?"

By far the most said, "The English language."

Many said, "Better health"; others said, "Democracy." Most boys said, "Athletics and sports, especially baseball and boxing." Some girls held for the movies, styles in dress, roller skating, tennis, and dancing; a few said, "More social freedom, and equality with whites."

Let's listen first to their English. Some speak it fluently, especially those educated abroad or long associated with cultured Americans and British. At least 1,700,000 children use it in school, and millions more speak it, although imperfectly, because they learned it

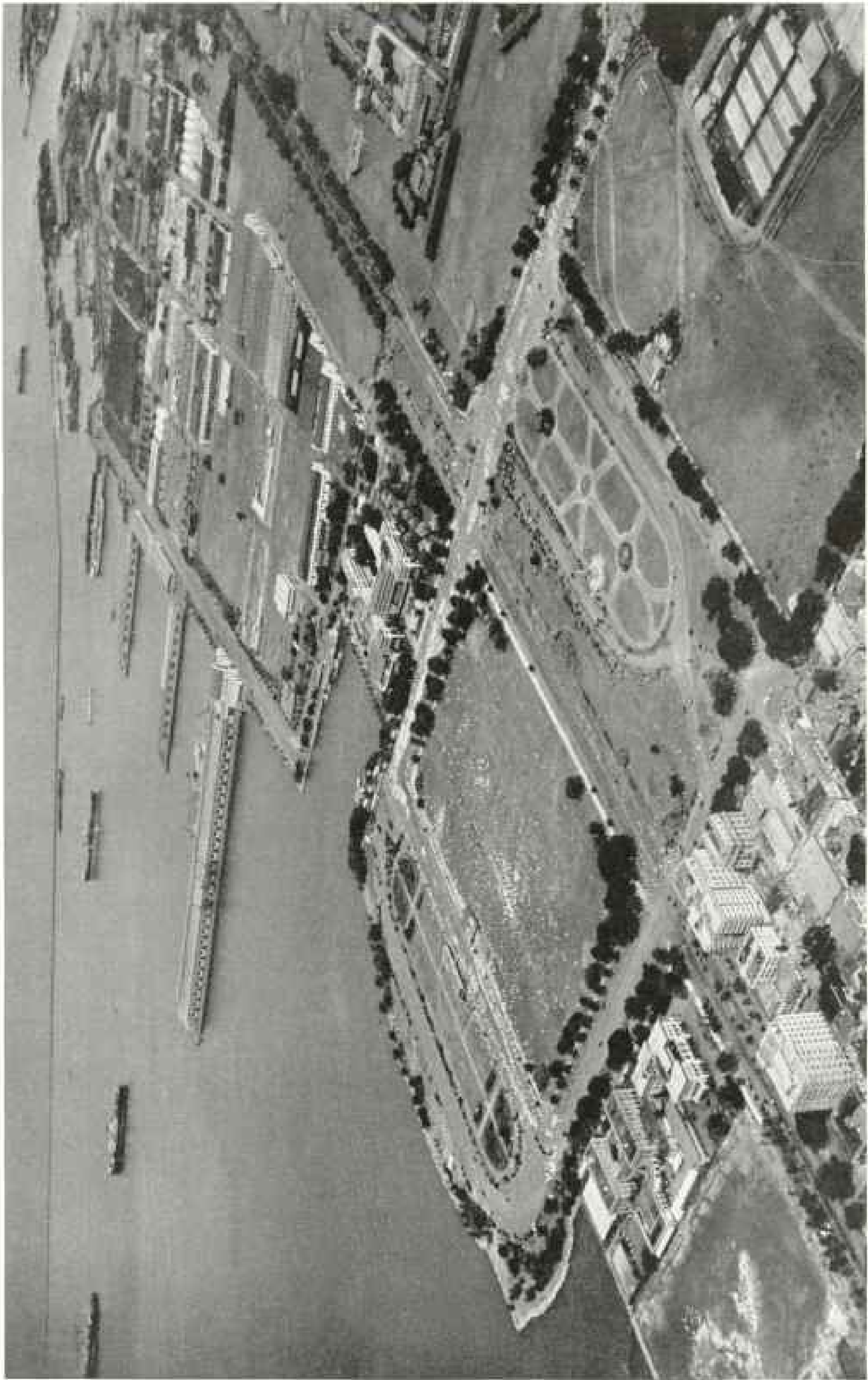
at second hand from native teachers who themselves got it from American teachers a generation ago. They can read it well enough, but vocal efforts remind you of the average American college student's "French."

When I talked with a Manila class in journalism, I found it hard to understand some of the questions pupils asked. On the other hand, some of the best English in the whole Far East is being written now by Filipino journalists. Five Manila writers have been cited in Edward J. O'Brien's annual book of *Best Short Stories*.

Proof of the spread of English is seen in the number of English papers and magazines edited and read by Filipinos, and in the tons and tons of American magazines, from slicks to pulps, that reach the islands; each month about 500,000 copies of magazines printed in the United States go to the Philippines.

Manila women study our fashion magazines, as well as screen reviews. Thousands read *THE GEOGRAPHIC* and it is widely used in schools.

Filipinos do not as yet read many books, say the college professors; but they do prefer newspapers printed in English; of some 270



Official Program U. S. Army Air Corps

### Much of Manila's Magnificent Water Front Was Low-tide Mud Flats Till Long After American Occupation

On made land now stand many clubs, hotels, playgrounds, piers, Government offices, and warehouses. The original Luneta, or seaside promenade, is seen now far inland (right center); today's Luneta is next to the water. Beside the indented bay is the Philippine Government-owned, air-cooled Manila Hotel. Pasig River mouth appears at far upper right (opposite page).



Copyright Photograph by U. S. Army Air Corps

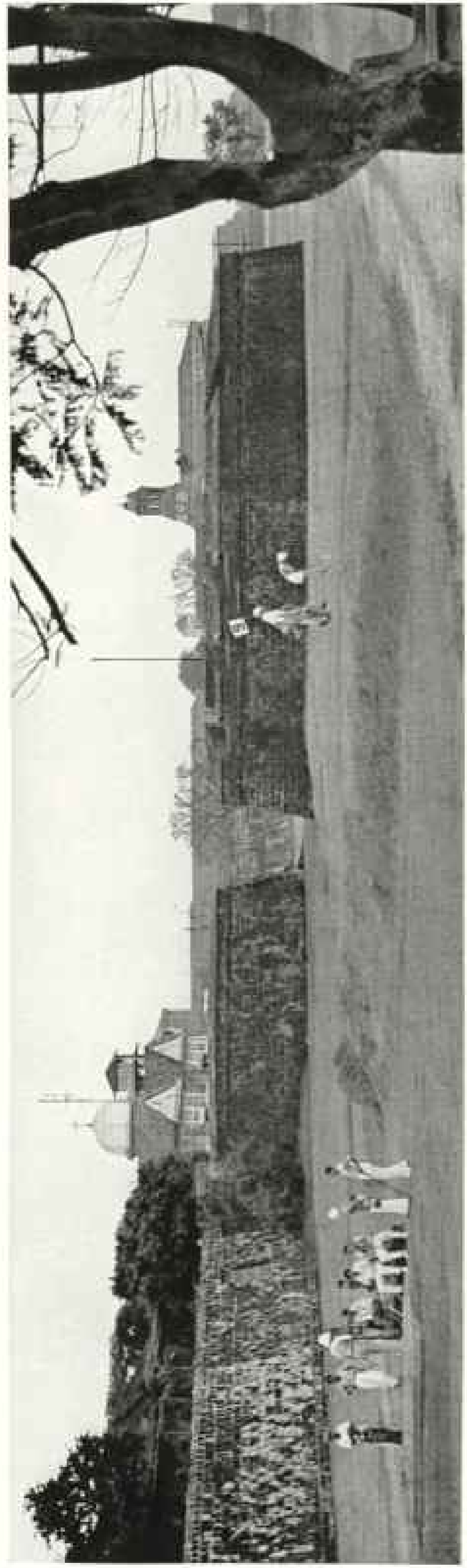
### Swift, Muddy, Strewn With Floating Islands of Green Plants, Pusig River Splits Manila and Pours into the Bay

Walled City is at the left; attached to it and forming its apex is Fort Santiago, insular military headquarters. The fort's thick stone walls form part of the river bank. The city's wholesale, warehouse, banking, and shipping interests crowd the right bank. Inland vessels tie up at the wharves to discharge hemp, copra, lumber, tobacco, etc., and to load machinery and manufactured goods for distribution all over the busy archipelago.



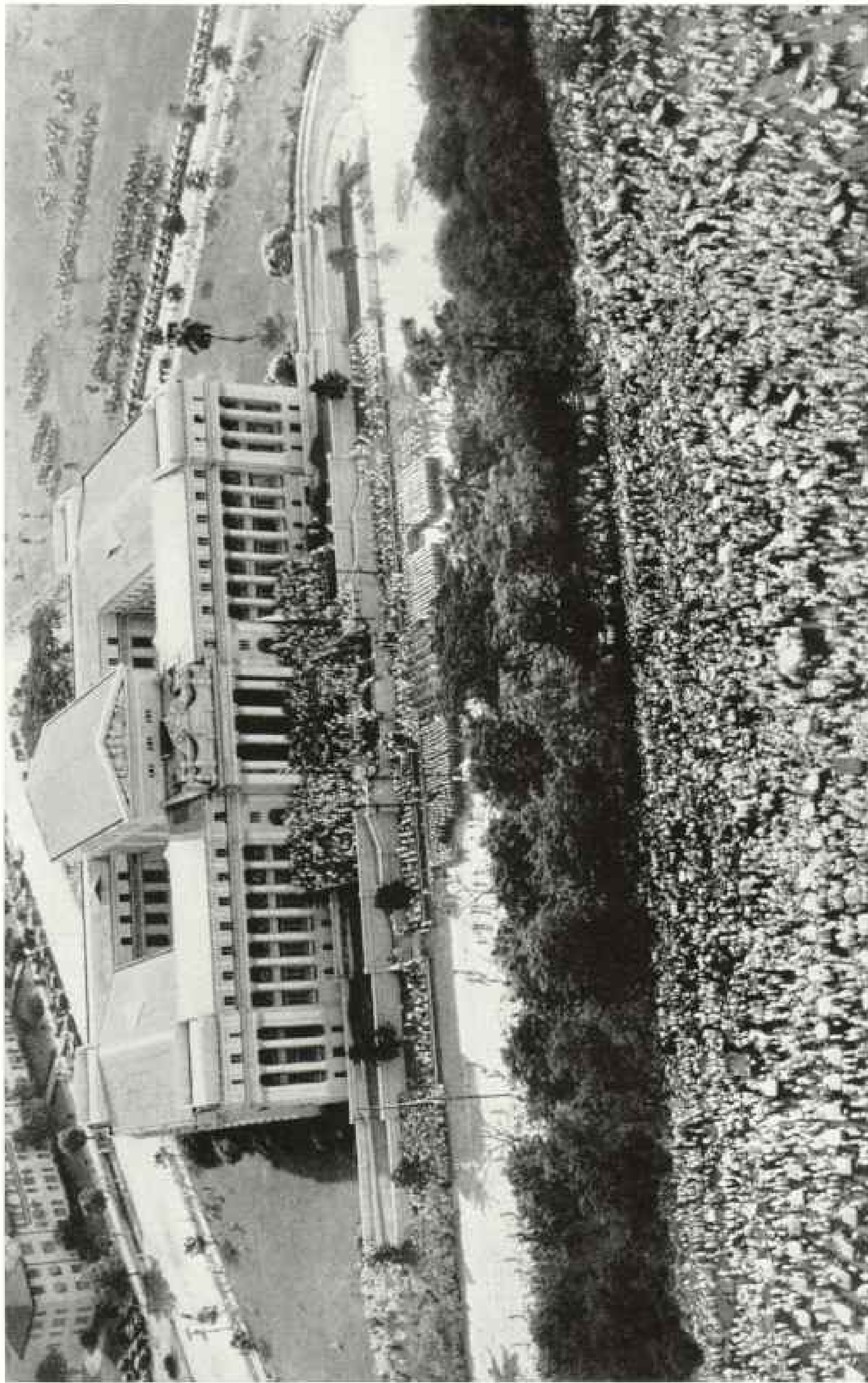


President Quezon "Throws Out the First Ball" in a Game Between U. S. Navy Shore Station and Asiatic Fleet Teams  
Rizal Memorial Stadium, with armchairs in its boxes and its electric scoreboard, is the pride of all Manila athletes.



Many Artists Insist That Manila's Ancient Walls Represent the Best Medieval Architecture in the Far East

Pythons once haunted the weedy moat beneath these walls, now filled in to form a golf course (page 440).



AP Photograph from Koyohasu

### Thousands Cheer as President Manuel Quezon Is Inaugurated Before the Philippine Legislative Building

Massed troops, ranks of singing school children, marching brass bands, news cameramen, motion-picture folk, and 250,000 everyday citizens crowded to see this imposing ceremony. President Quezon took office on November 15, 1935. This picture was flown to San Francisco on the first mail-carrying voyage of the China Clipper. Originally, by law, the Philippine President could serve for only one term of six years. Now, by amendment, he may serve two terms of four years each.



Photograph by M. Buntola

### In Malacañan Palace, the Filipino "White House," Lives President Manuel Quezon

In a new addition at the right are executive offices, with military aides, secretaries, clerks, and interminable streams of callers. In generations past, this ancient palace was occupied first by Spanish rulers, then by the American Governors General, the first of whom was William Howard Taft.

publications in the islands, with a total circulation of 1,500,000, more than half are in English. Manila has about 95 monthlies, 20 weeklies, 15 dailies, and 20 fortnightlies. A steady factor in the spread of English is the growth of high school and college dailies, weeklies, and magazines. Scores of them are excellent in make-up, illustration, and style of writing.

#### Radios Speak Several Languages

Manila radio talks also reflect the language problem. KZRF broadcasts regular program features, and news is flashed out in various tongues.

"It certainly is confusing," agreed one Manila editor, "to speculate on what the official Filipino tongue may be, say 50 years from now." But when I asked an opinion of Dr. Bienvenido Maria Gonzales, a Ph.D. from Johns Hopkins and President of the University of the Philippines, he said:

"The future place of English in the Philippines is quite assured. It has secured a foothold not only in business but also in education and in the homes of the more enlightened families.

"With the separation of the Philippines

from the United States, there will naturally be fewer Americans with whom our people can come in contact. Also, because any country tends to develop its own language, it is to be expected that the English spoken in the Philippines will tend to differ ultimately from the original English, or as it is spoken by the Americans who first brought it to the islands.

"This should cause no surprise, as it will be just one more English dialect added to such other types as Canadian English, American English, African English, Australian English, and pidgin English. It will probably be sufficiently close to American English to make it understandable to those speaking any of the other English dialects. In turn, English-speaking Filipinos will probably be able to understand quite as well the other brands of English."

#### The Roots of Filipino Culture

Shops, offices, doctors' and lawyers' reception rooms, book and music stores—in every one you find well-dressed, businesslike Filipina girls, and they invariably speak fluent English. No American town is quicker to pick up new slang phrases than is Manila; for this, teachers blame the movies.

Divers racial strains form the Filipino people.

We found 6,000,000 Filipinos here in 1898. Today, with better public health and less infant mortality, there may be 16,000,000.

In 1946, by the Tydings-McDuffie Act, they are to set up their own republic.

Among the citizens and voters of this new Yankee-tutored nation will be the Moslem Moros of the southern islands; small groups of Chinese, Japanese, and mestizos; such mountain folk as the Negritos, Igorots, and Ifugaos; and the millions of Christian Tagalogs, Visayans, Ilocanos, etc., who form the great bulk of the people.

The Negritos were the first Filipinos. They fled to the mountains of Luzon, Mindanao, Panay, and Negros, where they still live, before later waves of Indonesian and Malay migration.

When you look at the modern Manila youngsters, who "swing it" in the night clubs, who play good, snappy baseball and tennis, who are fast, skillful boxers, who take college degrees and succeed as lawyers, doctors, and journalists, you instinctively ask yourself, "How could they make all this progress since 1898?"

Well, they didn't! Civilization did not begin here only with the Spaniards—nor even with the 509 American schoolteachers who came on the army transport *Thomas* in 1901—but long centuries before.

The truth is, many people here could read and write centuries before Magellan. They used a "fish worm" writing, with characters similar to those employed in India, during King Asoka's time, long before Christ.

#### An Ancient Love Note—and a "No!"

Examples of this ancient writing can be seen at the University of the Philippines. There I saw rolls of palm leaves covered with characters written with cuttlefish ink or some similar nonfading fluid. Most of these scrolls are rituals, folklore, and genealogies. But there exists, too, a deed to land, etched on a joint of bamboo; also a love letter from a boy to his girl, and her answer saying "No!" scratched just below his fiery message.

"This old language is fairly rich," said Dr. H. Otley Beyer, who heads the Department of Anthropology at the University of the Philippines. "We have found 2,000 words of Filipino or Malayan origin in the Century Dictionary; many are place names, of course, but others are well known in English. 'Taffy,' for example, is a Tagalog word, and 'humbug' comes from 'hambug,' which means in Tagalog exactly what it does in English."

Into this native writing the Jesuits translated the Apostles' Creed and other sacred texts; you can see some in the Library of Congress at Washington, D. C.

Not only were many people literate before the advent of the Spaniards and Americans, but they enjoyed a culture comparable to that of civilized Siam (now Thailand), India, and other eastern lands. Witnesses to this are historians who wrote soon after Magellan "discovered" the islands.

Mining, gold washing, weaving, poultry raising, distilling, pearl fishing, and weapon making were all phases of their industrial life. I saw in the university museum ancient samples of their goldsmith work; also some pre-Spanish green glass bracelets of patterns and style amazingly like the ten-cent plastic imitations worn now by Manila girls.

Old beads from the Antioch of Greek and Roman times, coins minted by Alexander the Great in Turkestan, brass vessels and jade pieces bartered here by Chinese in the long, long ago, and ample evidence of Arab traders having been here centuries before America was discovered, prove the antiquity of Filipino overseas connections.

All this proves, too, that when Uncle Sam began giving these Filipinos their 42-year lesson in democracy, he had some good material to work with.

#### Women Freed, Compete with Men

As in Turkey, so here women have changed their whole way of life. About the Luneta at sunset you still see the little convent girls with their jet braids, white waists, and blue skirts stroll two abreast, guarded by black-robed sisters. But they seem the last link with an ancient order. For better or worse, Filipinas, taking their cues from movies, tourist women, and fashion magazines, try to dress and act like their modern American sisters.

In one election nearly 500,000 women voted; hundreds hold public office; thousands compete with men in all manner of vocations and office work. One woman heads a busy air line; another, with whom I talked, helps her husband produce motion-picture plays.

"Our women take to education like ducks to water," to quote President Gonzales again. "Each year more women than men continue into higher education, so much so that there is already a tendency to discriminate against them in certain professions.

"There are some professions in the Philippines which used to be monopolized by males, but which have now become almost exclusively female callings. For example, at this moment, 96 per cent of our students in pharmacy are



Dr. Nieva Eraña, Filipina Specialist in Child Dentistry, at Work in Her Manila Office

To amuse young patients and keep their minds off the instruments, office walls are decorated with characters copied from Sunday's funny papers. Dr. Eraña, after graduating from the Centro Escolar University in Manila, took a special course in children's dentistry at the University of Maryland (page 419).

women; in education it is 91 per cent; in music, 78 per cent; in the graduate department (mostly education), 55 per cent; in dentistry, 52 per cent; and in the liberal arts, 42 per cent. Nursing, of course, is almost exclusively a woman's profession."

No woman, as yet, has been elected to the National Assembly; but its galleries are often packed with them, for all Filipinos love oratory and debate.

#### Verbal Swordplay on "Capitol Hill"

Exciting scenes in the National Assembly make you think of similar sessions in Washington, when packed galleries follow the foren-

sic fury of Capitol Hill.

Parliamentary procedure is akin to ours. From the press gallery I saw Speaker Yulo call the Delegates to order in Manila's magnificent new Assembly Building. The clerk read a special message from the President; then a speaker got the floor and treated us all to a soul-warming example of spell-binding at its best. He made 'em laugh and he made 'em weep, and he ran the gamut of quotations from the classics to William Jennings Bryan's rousing words about the Cross of Gold and the Crown of Thorns.

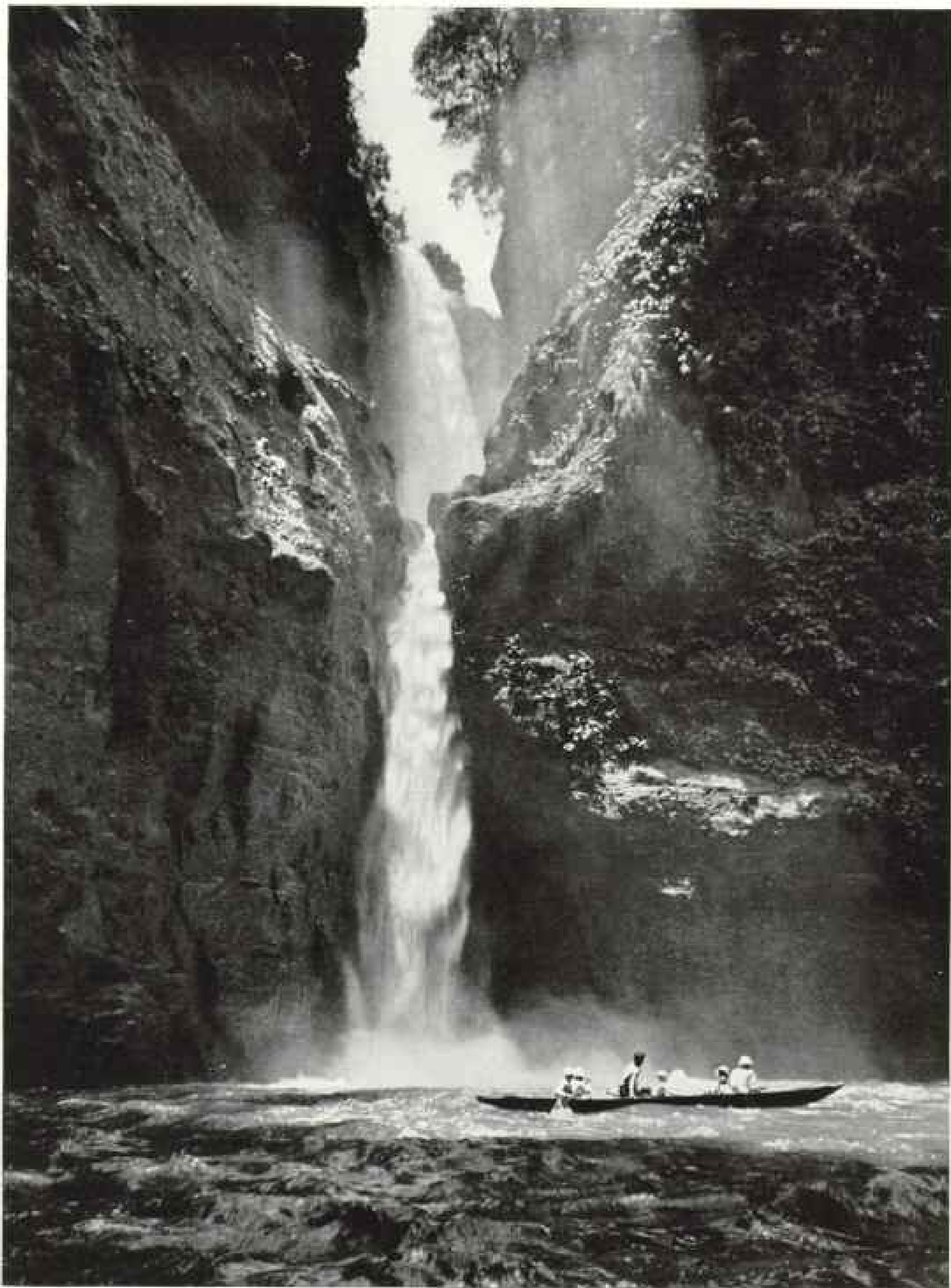
All this was in English. Then suddenly a fellow member interrupted, speaking in Spanish. In the urbane manner of deliberative bodies the dignified orator yielded to "the distinguished delegate from Oriental Negros." Somebody else spoke out of turn, in Tagalog, and a free-for-all argument exploded in a stormy confusion of tongues.

Roman holiday for delighted galleries! They laughed at each sally of wit or sarcasm;

in vain the speaker pounded his gavel. News cameramen swarmed around the rim of the floor, making flashlights; political commentators beside me scribbled furiously; and official shorthand reporters moved close after the speakers, notebooks in hand, getting it all word for word.

Ninety-eight members compose this law-making body; it consists of one house only. One member is an Igorot, the hill people's delegate. Another is a Moro; here he dresses like anybody else, not in the turban, silk pants, and fancy kris of his Mindanao constituents.

Nothing else, in my close look at Manila after forty years of American tutelage, was



#### Pagsanjan Falls Is a Favorite Picnic Spot for Manila Week-enders

Arriving by motor, visitors go upstream to the falls in a dugout pushed and paddled by two natives. The walls of the narrow gorge rise to dizzy heights; often monkeys are seen jumping across between overhanging trees. Coming back downstream, an exciting experience, canoes shoot the rapids.



Manila Still Clings to Its Carabao Carts and Horse-drawn *Carrromatas*

Shiny automobiles park by Chinese bazaars; a penthouse looks down on architecture obsolete even in Dewey's day. Bull carts persist, despite traffic experts' wails. When the author was a reporter in Manila shortly after American occupation, he wrote an "ode" in praise of the patient bull which the Army then used to haul its carts. It ended: "Don't you worry, wall-eyed carabao, nor care a cuss if poets let you slide. You're more good than poets, anyhow. Long live your fuzzy phiz and tough old hide!"



#### On Your Sun Porch You May Have Such Rattan Chairs

Wicker furniture—bamboo, bent wood, cane, and rattan—is a prime Manila industry. You see these chairs in homes, clubs, and hotels all around the world. Here one man bends the arms and legs, another weaves the cane back and bottom, and still another over in the corner binds the chair firmly together.

quite so significant as this frank, friendly open-forum argument among men whose various tribes for centuries made war on each other.

#### Doctors Routed Rats and Pestilence

"Manila is the cleanest city in the Orient." You hear its people say that, proudly. Certainly no American achievement here compares in social value with the task done by medical men, their nurses, and trained sanitary squads.

When we old-timers first knew Manila, it was a cesspool of disease. Half of all babies died in their first year. The morgue was piled high with cholera dead.

Unrestrained, some 10,000 sad, lonely lepers wandered among the island towns, begging alms. Insane folk were chained under houses like dogs, writes Victor Heiser, veteran health officer, in his *An American Doctor's Odyssey*. Plague victims died, uncared for, wherever the pest knocked them down.

On moonlit nights we used to see rats literally swarm along the water front and about the garbage cans. I have even slapped them

off my bed. In plague epidemics these flea-laden rodents cost thousands of human lives.

One day an editor friend of mine fell ill and died in 48 hours. Soon after, in the drawer of his desk, the health squad found a dead rat, with live plague fleas still hopping about.

To rid the filthy old town of rats and thus check plague, the American health officers waged a rat-killing campaign. Whenever alarms sounded that plague victims had been found in some part of town, flying squads of rat catchers took the field. They wore flea-proof clothes and smeared kerosene on their necks, wrists, and ankles to keep off deadly fleas.

Some rat-killing gangs had their own Australian fox terriers; others used ferrets. Ferrets were even more effective than dogs, says Dr. Heiser. "The rat stood no show. You could hear the crack as the ferret's sharp teeth severed the spinal column. The ferret never shook a rat, as the terriers did, and never attempted to eat him. He was a killer, pure and simple."

Now Manila has had no bad plague outbreak in many years. In our time it was com-



mon to see Pasig River rats not only move boldly about among grain bags and piles of freight, but also crawl out to steamers on the hawser ropes. Today rat-proof concrete docks and eternal vigilance on ships arriving from suspected ports help keep Manila clean (page 411).

Malaria there is—and may always be. But by widespread quinine and mosquito control, labor's efficiency has been increased by 40 to 50 per cent and the frightful toll of early days is a curse of the past.

When American soldiers marched into Manila, its only water supply was an antiquated, polluted system. In grim fun we used to say: "Boil all Manila water 24 hours, then throw it away and drink beer." Now all Manila habitually drinks water from anybody's faucet in perfect safety.

Food, too, was not so good in early days, and most of us got dysentery. Every old-timer remembers the monotonous Malay diet of fish, rice, and bananas and the soldier songs about this "gugu chow." Now the modern Manila family still eats rice instead of bread, but, since they earn higher wages than ever before, they also eat imported American corned beef, Vienna sausage, much deviled and potted meat, canned pork and beans, and even canned fish.

#### Better Health Makes Filipinos Taller

When I asked the local Libby, McNeill & Libby agent why Filipinos buy our canned fish when their own waters teem with this food, he said, "They only buy it in rainy weather; they don't like to go fishing in the wet season." He also said that Manila imports about 500,000 cases of evaporated milk a year, besides a vast amount of condensed milk.

"No effect of American occupation," said Field Marshal Douglas MacArthur, of the Philippine Army, "is more noticeable to me, as an Army man interested in soldier physique, than the improved physical condition and even the increased stature of the Filipino recruits." Over and over I heard observers say this: that today's Filipino, in the cities at least, is an inch or more taller than he was a generation ago.

"Our young people *are* in better health; they're not only stronger and taller, but also they have larger legs and arms than their parents had. Look at a crowd of boys and girls on any college athletic field and see for yourself. I know this for a fact, and you can quote me: Our girls once had such skinny legs they didn't buy American hosiery because they could not keep it up; it bagged and

wrinkled! Now they buy it because they can fill it!" That observation is from Don Carlos Romulo, dynamic American-trained editor of the Philippines Herald, Manila's largest Filipino-owned English newspaper.

#### Manila a Busy Motion-Picture Center

Flicker fans pack Manila's air-cooled theaters, and its audiences are quick to spot a hit or a flop.

In the Hollywoodlike home of Sampaguita Pictures, we watched the Filipino film world at work. Here were directors, stars, supers, bit players, cameramen, property men, script girls—all the machinery of the talkies. It was so hot that before each shot somebody would run in with a towel to wipe the sweat from the shiny faces of a pair of lovers. In English you heard the directors shout all the familiar movie-lot orders, such as "Quiet please! Camera! Cut! Take it over!" and "O. K. for sound!"; but all film-play dialogue is in Tagalog, which proves that English is not yet the common tongue (page 437).

Manila makes about fifty films a year; you may see a company on location shooting scenes anywhere from Bilibid Prison to the cockpits.

Assemblyman Pedro Vera, President of Sampaguita, says that Manila prefers love stories to adventure or gangster pictures; that tragedy is always a flop because the public must have its happy ending.

"We adapt most plays from native novels," said Mr. Vera. "Others are especially written for certain players. Some plots are lifted bodily from American pulp magazines. As in Hollywood, what we need here is better stories; ours are too much alike."

Manila too has its favorite stars; they include such players as Rogelio de la Rosa, Corazón Noble, José Padilla, Elsa Oria, Rosita Rivera. Popular also is a San Francisco-born Filipina, Yolanda Márquez. She told me she can't understand one word of Tagalog, but in every play she has to memorize her Tagalog lines like a parrot.

Manila's stars drive big cars; they earn what are big salaries for Manila, and, of course, influence Filipino dress, speech, and behavior.

#### Junks, Galleons, and Air Clippers

When I first landed here our Army transport dropped her mud hook far out in Manila Bay. A gale was blowing. On the way ashore in an Army launch, my baggage washed overboard. Sailors hooked it up again, but my shotgun and typewriter were soaked in sea water, a set of Dickens was wet pulp, and Dean Swift's tales were saltier than ever. Now all that's changed. You walk off your ship and

## Smiling, Happy Philippines

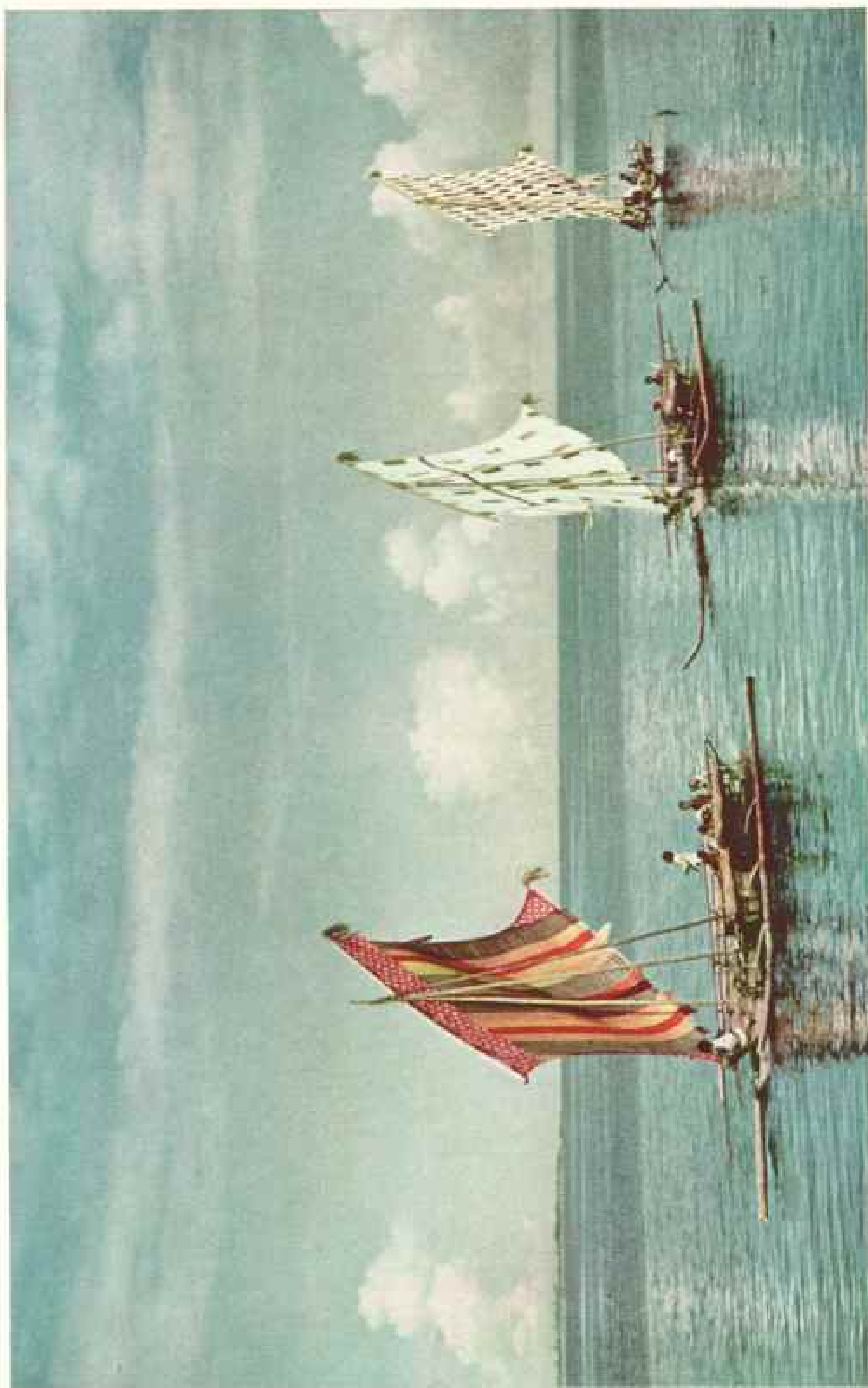


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Photograph by J. Baylon Roberts

### Students at the University of the Philippines Gather for a Morning Lecture

All over the archipelago this institution profoundly influences social and political thinking among younger Filipinos. The sculptural group, representing Agriculture, is the work of Guillermo E. Tolentino, a member of the Arts Faculty. University President Bienvenido Maria Gonzales received his doctor's degree from Johns Hopkins.



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Illustration by Magill and Miller

### Fancy Colored Sails Are Hoisted by Moro *Vintas*, or Outrigger Boats, on Holiday Celebrations

Often these fleet Moro craft are merely dugout canoes, of narrow beam, steered by outriggers. Though commonly used for fishing, they have also been employed in piracy, and in them astonishingly long sea voyages have been made. This fancy-looking trio was pictured off the concrete pier at Zamboanga.



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Illustrations by J. Baylour Roberts

### Pan American's 74-Passenger California Clipper Docks at Cavite, on Manila Bay.

Filipino children, their feet in warm, lapping salt water, stare at the alvery monster which has just flown in six days from San Francisco across the wide Pacific. Through coconut groves and Tagalog towns a 22-mile high-speed motor road runs along the bay shore from Manila to Cavite. At one point offshore, the rusting wrecks of Spanish warships sunk by Admiral Dewey in 1898 may still be seen.



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**Another Paul and Virginia Look Out Over Southern Seas**

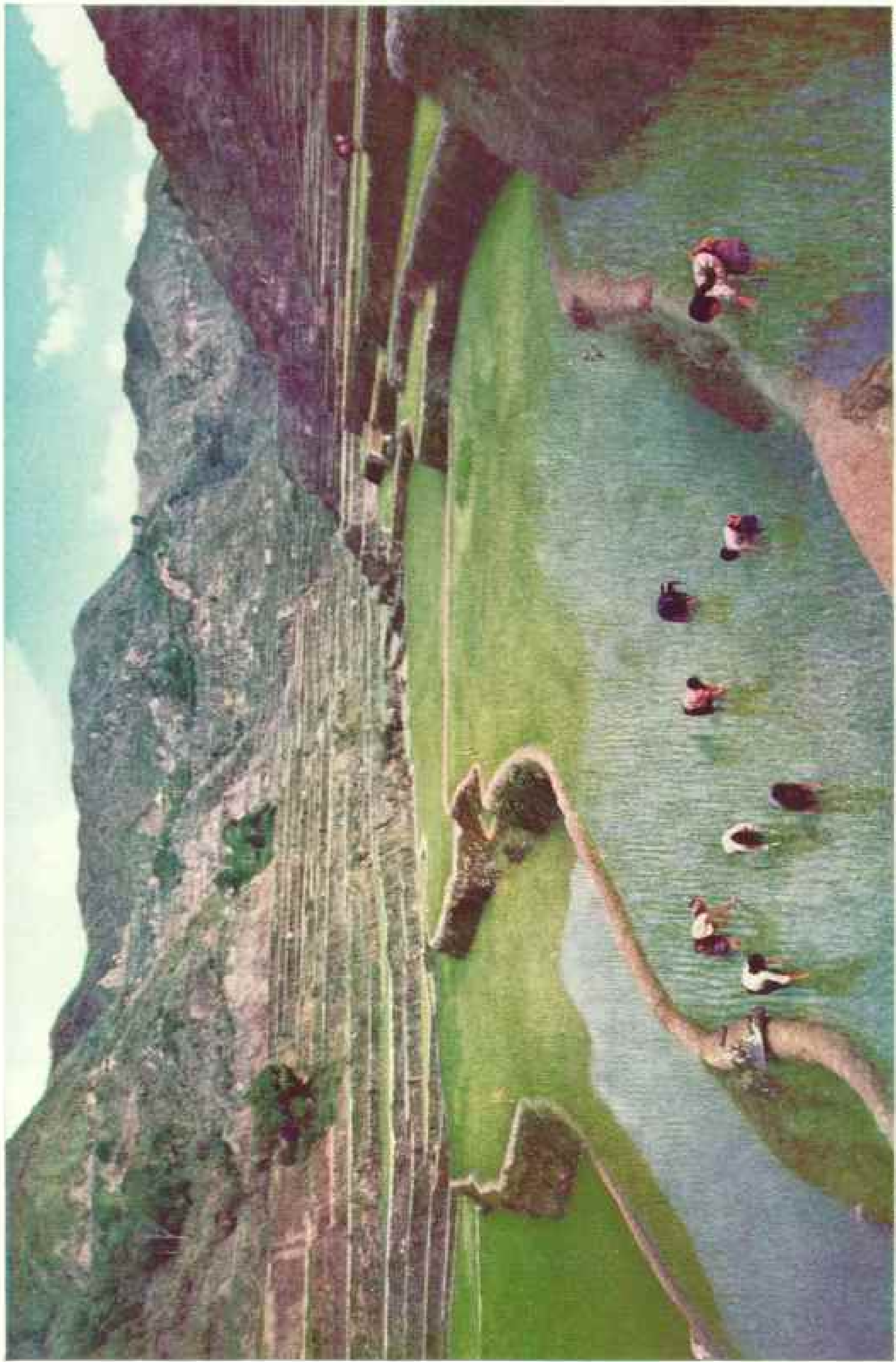
Like those unforgettable children in Bernardin de Saint-Pierre's romance of Mauritius, they feel that the whole world centers in their island. The girl holds a bouquet of hibiscus, which grows profusely in Manila gardens.



Exhibition by J. David Rogers

**She Weaves Rugs in Patterns as Fancy as Her Tattooed Arms**

One end of the loom is strapped to her hips. She is the wife of an Igorot soldier of the Philippine Scouts stationed at Baguio's Camp John Hay and helps support the family by making cloth.



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**Like Seats in a Roman Amphitheater, Ifugao Rice Terraces Climb Luzon Hillsides**

Long centuries ago primitive hill tribes built these ingeniously co-ordinated levees and irrigation ditches, making it possible to grow rice on steep slopes. Water comes from springs higher up. These particular fields are near Banawe, in Mountain Province, Luzon. Rice is the chief diet of the hill dwellers.

Rede-fouur by J. Bayler Roberts



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Illustration by J. Bayler Roberts

### Folk Dances Are Staged by Manila School Children during the Annual Philippine Exposition

Tremendous crowds flock to the Capital City for this annual festa. On Wallace Athletic Field, east of Manila's Luneta, stands this open auditorium, with the Carnival Flag flying between the Stars and Stripes and the colors of the Philippine Commonwealth. One afternoon each year is given over to a great ball for children.



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**"Do You Think Felipe Would Like Me in This Pattern?"**

Smiling salesgirls "strive to please" in Manila's vast Yango market, which fills every household need. Drygoods here include cotton, silk, and rayon, mostly imported from Japan, the United States, and China. *Bobis* on end, behind the salesgirl, are *combray* cloth made from abaca fiber, the "Manila hemp" which also makes rope.

Kodakman by J. Bayler Roberts





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### Girls from Five Tribes, Dressed in Colorful Native Garb

These girls' clothes suggest the costumes of their respective tribes, Bontoc, Benguet, Iugao, Kalinga, and Apayao. Till American teachers braved Luzon hills, most tribal women wore no clothing above the waist. The girls, standing beneath bougainvillea, are students at Baguio's Trinidad Agricultural High School (Plate XI).

under the roof of as fine a pier shed as there is in the East.

Old Manila has seen her sea trade borne in many a craft, from China junks to China Clippers. Today Pan American seaplanes cross the Pacific to Manila in six days, as against 200 in the Spanish galleons!

In his barge I rode about Manila Bay with Rear Admiral John M. Smeallie, Commandant of the 16th U. S. Naval District, Cavite. He lives in an ancient stone fort in the very same quarters where Spanish admirals lived generations ago.

"I'm going to write a history of Cavite," he said. "This has been a naval base of some kind since time immemorial. Moro pirates, the Chinese, Dutch, and British fleets of war all fought around here long before Dewey came. Also, some of the early galleons for trade with Mexico were built right here in the old Cavite shipyards."

In all Manila's romantic annals no chapter is more soaked in tales of piracy, desperate fights at sea, and sheer blue-water adventure than is the story of these Manila galleons. Padres at Santo Tomás museum show you a rusty strongbox in which some old galleon once carried its treasure.

One such ship, owned by the Spanish Government, left Manila every year for Acapulco on the Mexican west coast. After more than 200 days at sea, the first land sighted would be the coast of California. They carried spices, ivory, amber, perfumes, Chinese porcelain, silk and other fabrics.

Returning, the galleons brought Mexican recruits for Manila garrisons, Spanish officers and their families, mail from Europe and America, and vast sums of silver, often more than a million dollars' worth.

From 1593 to 1815 these galleons gave Manila its only contact with America.

Says Dr. Gregorio F. Zaide, Filipino historian: "Due to the fury of typhoons, officers ignorant of navigation, or overloading of vessels, many galleons that left Manila were never seen again. Stranded on the Japan coast in 1596, the galleon *San Felipe* was lost with vast treasure. In 1604 the richly laden *San Antonio* was lost at sea with 300 persons. Still more galleons fell into the hands of Dutch and British pirates."

Such sea dogs as Sir Francis Drake and Sir Thomas Cavendish both preyed on this rich trade. It is written that Cavendish, after sacking the *Santa Ana* off southern California, landed his prisoners on that beach and sailed for England with enormous wealth, running up the Thames "with sails of Chinese damask and silken riggings."

Thus for 200 years Manila's ties with Mexico were strong and close. All this ended when the galleon trade broke up in 1815. A few years later Mexico gained her independence from Spain, and American sailing ships began to appear in Manila Bay.

#### Uncle Sam's Fifth Overseas Customer

Today, from 70 to 75 per cent of Philippine overseas trade is with the United States.

Since Dewey's guns boomed, this trade has multiplied many times. Now hundreds of trainloads of our goods move each year to Atlantic, Gulf, and Pacific ports for shipment to Manila. In 1939, for the first time, the Philippines became America's fifth overseas customer, jumping up from eighth place in 1938.

From these islands we get hemp, hardwood, sugar, copra, and other tropical products. There's hardly a person in the whole United States who does not wash his hands with a soap containing Philippine coconut oil.

What will happen to this trade after 1946 unless Uncle Sam continues to let Philippine imports come into the States duty free is a problem that now gives Manila its worst headache since pirate times.

When Taft was governor here, any pioneer Manila American with a share of stock to sell had to write the facts on a blackboard fastened up in front of a bank or carry the certificate around in his pocket till he found a buyer.

Now Manila has a stock exchange equipped with every up-to-date mechanical device. It may be busiest long after midnight, when, because of difference in time, the New York Exchange is open. So swift are communications now that a Manila broker may call and talk with a New York correspondent in less than two minutes; orders have been placed in Manila, coded, sent to New York, and executed all in less than 12 minutes.

In gold-boom days Manila had three exchanges and incredible turnover of shares. In 1937 (says the Manila Daily Bulletin of February 15, 1938), total shares traded amounted to about 2,850,000,000! But since many of these were quoted at a cent or less, the total value of this astronomical number was only about \$190,000,000.

The price of seats was equally astonishing. On one exchange a seat that sold in 1927 for \$250 brought \$42,750 at the peak of the gold boom.

Listed on the Manila board today are such securities as those of local banks, sugar mills, and other industries. But gold is the magic of it all, and Philippine gold has a long, romantic history. In the museum of anthropology at



### Hemp Rope Stout Enough to Hang a Dozen or More Big Elephants

This colossal coil, known as ship towrope, is 750 feet long and weighs 3,250 pounds. In its 4-inch diameter there are 855 separate hempen strands. Manila hemp, made from abaca fiber, is used by ships all over the world. For this "strategic material" the United States depends entirely on the Philippines.

the University in Manila they show you amazing examples of ancient goldsmith art—delicately made rings and bracelets. Washed out of Paracale River sands by an American prospector, these had come from graves in the site of a long-forgotten town when the flooded river had cut deep into its banks.

Near Mambulao town, in the Province of Camarines Norte, Ernie Heise, an American prospector, located an old mine whereby hangs an odd tale. Long ago Filipinos bartered gold to Chinese traders who came to these coasts. Moro pirates, knowing this, used to raid these coastal towns, and kept it up even long after the Spaniards came.

Now, in Mambulao town there lived one Dona Panay, who was rich; she sent a petition to the Queen of Spain asking for help against the pirates, accompanying her request with a gift of a life-size hen and a setting of eggs, all in virgin gold! The Queen took action, apparently, for to this day at Mambulao town are the ruins of what was once a strong fort.

"Learn Gold Mining by Mail!" says a Manila newspaper ad.

This year the Philippines may produce upwards of \$40,000,000 in gold. And yet, say the sober-minded, more money has been poured into holes in the ground than has ever been taken out of them.

Of young Filipino students in the University's Department of Mining Engineering, of which he is the head, Professor V. V. Clark told me: "Our first class of mining engineers all found work within a month. After graduation many boys undertook mucking, timbering, drilling, etc., in the mines. They wore old clothes, blistered their hands, and were plenty tired at the end of each day's work."

#### Learning the Dignity of Labor

One of the hardest jobs Uncle Sam had here was to teach his wards that working with one's hands is no disgrace; today, thanks to painstaking effort with trade and farm schools, young Filipinos are learning to respect the dignity of labor.

"When the Americans came," said Professor J. B. Panganiban, of the University of Santo Tomás, "education became free to every one. The ambition of every provincial parent then was to educate his son and elevate the family in the social scale in the sense that parent and son would not have to do menial work. Clerical posts, soft-collar jobs, became preferred to farm labor. Students aspired to a long string of degrees after their names. For a time, they were the gods of the country.

"But, when the depression came, academic degrees lost their meaning. It became 'What

can you do?' and not 'What degrees did you get from the University?' We recognized the necessity of vocational studies. There were too many lawyers in peanut jobs, too many physicians without practice. Students began to flock to trade and farm schools; now the dignity of labor has come to be recognized."

#### Weather Bureau Is World Famous

"But there's one thing Uncle Sam can't do," said an engineer whose new mountain road had just been washed out. "He can't do anything about our weather!" Yet the observatory brilliantly operated by the Jesuits knows this weather's tricks and saves many a ship by its timely warnings.

Set at the eastern edge of the stormy China Sea, in the very midst of a troubled area where typhoons spawn, Manila has often felt their fury. I went through the awful one of 1906. From a sheltered nook behind a stone wall near the old Bridge of Spain I watched the unseen power of the wind. Carriages tipped over in the street and rolled away with the struggling horses still tangled in the harness. Trees, telephone poles, and tall smokestacks went down, not snapping down, suddenly, but lying down, almost leisurely, before the steady, mounting pressure of the storm.

Flocks of myna birds were blown clear out of Manila and lost at sea. Barges in the Pasig, launches, and island steamers snapped their moorings and moved in a mass across the river, to pile up in confusion on its leeward bank.

Tin roofs, trees, lumber, and signboards passed over my head as if borne on a rushing torrent of water; so loud was the roar of the wind that I could not hear my companion shouting. I knew he was shouting only by the way he kept working his face. As usual, credit for the best "typhoon story" went to a Yankee sailor. At Cavite, he said, the wind blew into a cannon's mouth so hard that out flew the breechblock!

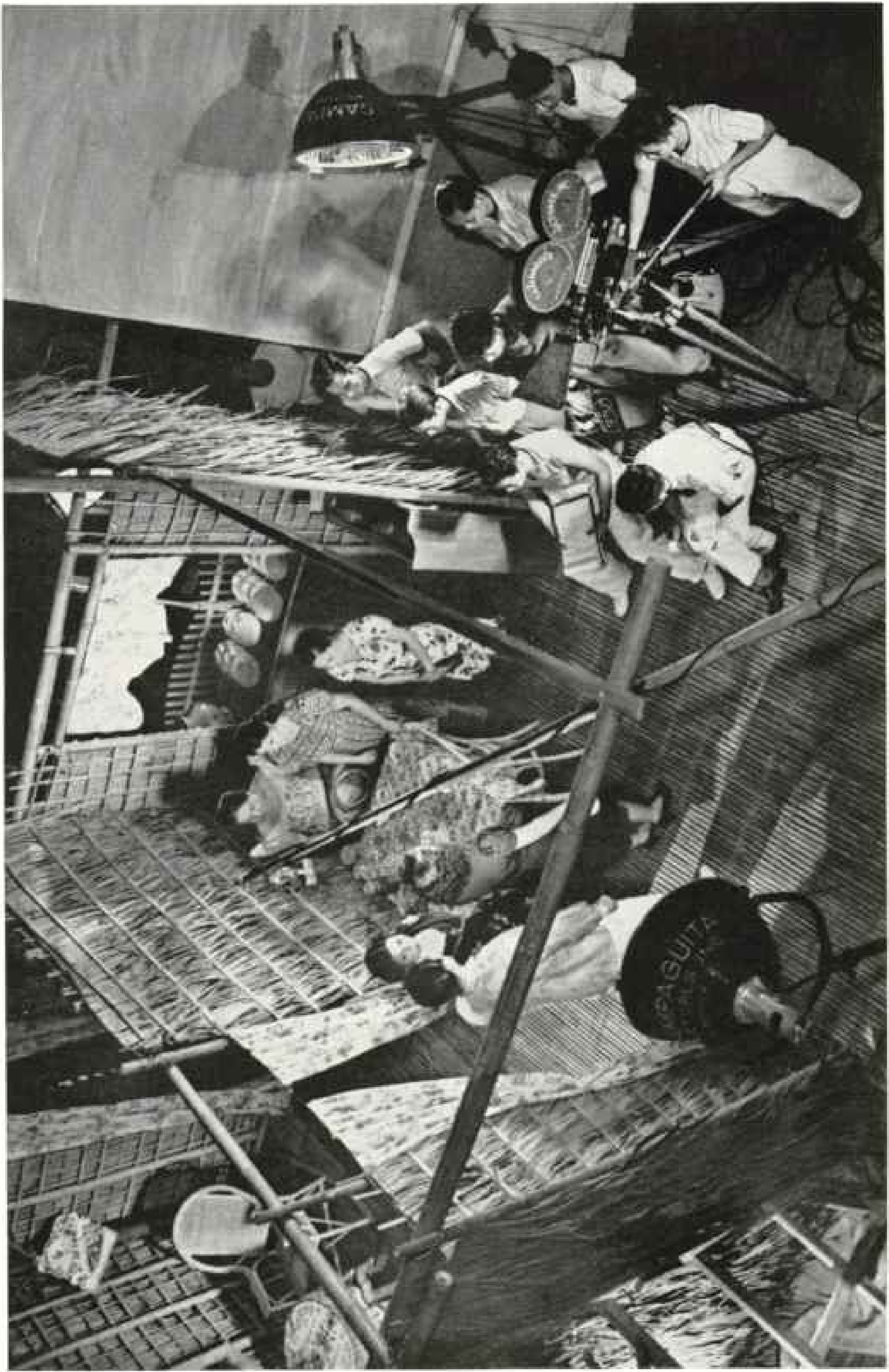
To the Jesuits, who founded the Manila Observatory, navigation all over the Orient owes an incalculable debt. A book, *Cyclones of the Far East*, written by Father José Algué when he was director of his observatory, is known wherever men study weather; the "barocyclonometer," also developed by him, is well known as a reliable indicator of an approaching typhoon.

Besides its useful work in collecting daily weather reports in code from points as far away as Borneo and Japan, and issuing forecasts and storm warnings, the observatory also does important work in its seismological, magnetic, and astronomical departments. The



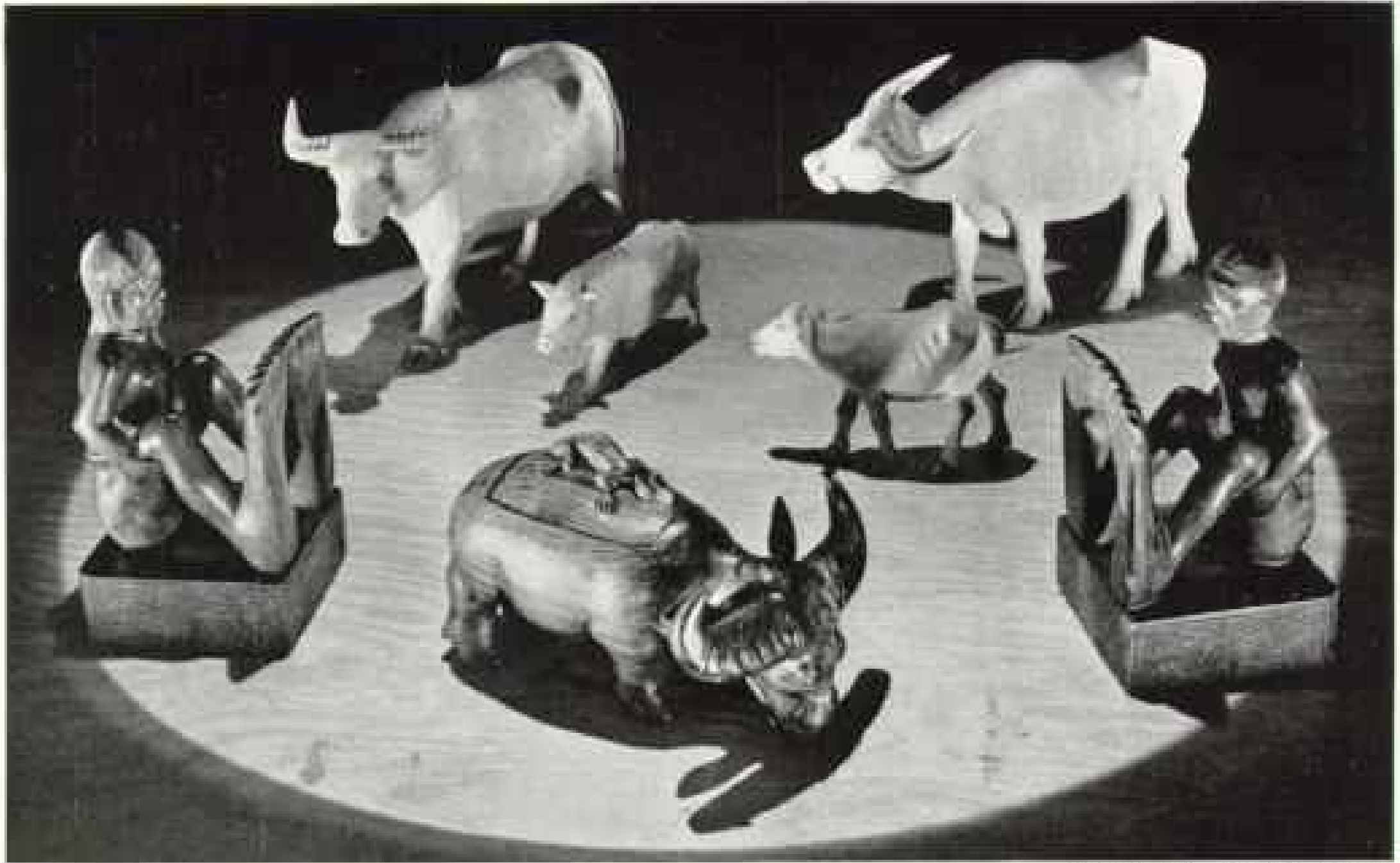
The Historic Bridge of Spain Spanned the Pasig at This Point When Americans Came in 1898

Today's less beautiful but more commodious structure, known as the Jones Bridge, carries heavy traffic (page 415). Most of modern Manila is to the left: Walled City is to the right, but unseen. The huge new structure at upper left houses the Bureau of Posts, Telegraph, and Public Works.



**In the Studio of Sampaguita Pictures, Inc., Movie Players Film a Scene of Manila Domestic Life**

Bamboo floors and walls of nipa-palm leaves, with some players in native dress, add verisimilitude and local color. Directors' orders are all in Hollywood terminology, but actors' dialogue is in Tagalog, for box-office reasons (page 424).



Photograph by Willard B. Foster

**With Common Pocketknives Untutored Filipinos Carve Excellent Figures in Wood**

Igorots made the men with big feet. These figurines from the Philippines belong in the author's collection of wooden men, birds, and beasts (page 440).

U. S. Naval Station at Cavite, in fact the whole archipelago, depends on these Jesuits for daily time signals.

We all dashed into the street one day when an earthquake tried to shake our house down. These frequent quakes also keep the Jesuits busy with their seismographs. The story goes that when the Americans first started big, heavy streetcars in Manila they gave the studious padres a bad turn; their earthquake indicators went crazy. So they moved them out to Antipolo, some 15 miles away.

Funny things happen, even in an observatory. "Listen to this," said a padre. "A certain town in the southern islands kept asking us to send them a forecaster. Finally we sent one. It was not long before they were begging us to take him away. Then came a most frantic petition, which said: 'Since your man got here we have had worse weather than ever before. Each storm is harder than the one before it. Now comes the last straw. He predicted a typhoon; it came, just as he said it would, and blew down all our coconuts. Get him out of here!'"

Odd requests often come in. One man wrote that he planned to build a house out on a given cape, but, before going ahead, he'd like to know whether an earthquake would occur there, and if so, how soon! Frequently women want the observatory to cast their

horoscopes, and a well-known Manila editor wanted to learn whether war always broke out when Mars was in the ascendant.

**Odd Beliefs That Survive**

Superstition dies just as hard in Manila as it does in Missouri, or Ireland, or in any other place where men have lively imaginations.

Don't throw anything out of an open window at night without saying "Excuse me" is a Tagalog belief. You might hit a spirit.

"If you kill a pig with your car, you're sure to have a blowout," said my Manila driver. "And if I kill a snake, I turn right around and go home, slow and careful."

"I think monkeys are bad luck," a Visayan woman told me. "When I was a little girl, a monkey got into our house, struck a match, and set fire to the bed and window curtains. However, today the airplane pilots think a monkey is good luck, and I know some pilots on the Manila-Iloilo run who keep them as mascots."

If a lizard crosses your path as you start fishing, turn back at once.

Never let your child play with a turtle, for that will make him feeble-minded.

Somebody in the house must surely die if a black butterfly comes in.

Don't wake a man too quickly, for in a deep sleep the soul is absent from his body. Wake



#### Skating Craze Has Put Little Wheels Under Little People the World Around

This evening scene in Baguio's Burnham Park symbolizes social change. The girl in front wears American-style slacks. Behind her comes a small boy, just learning. Baguio, high up in Luzon's mountains, is the summer capital of the Philippines.

him gently so his spirit may have time to get home.

How these islands came to be is explained by an old legend. According to this, a giant used to carry the earth about on his shoulders. One day he became angry and threw down his load, which broke into pieces, and now these 7,083 fragments form the Philippines!

Only those whites long in Manila know these things as part and parcel of Malay life; to the transient they cannot be obvious. Visitors ashore from cruise ships, or awaiting the next boat, hurry off to see the Philippine wonders they've read about. They want to see Pagsanjan Falls (page 421), and to shoot the rapids there; to see Taal Volcano, or Mount Mayon down in Albay Province; or to run the few miles out to Las Piñas and see that unique bamboo organ, built there by a priest in 1818, in which bamboos serve as pipes; or to see the Virgin of Antipolo.

Nestling on a hill some 15 miles east of Manila is the village of Antipolo, famous since 1626. In that year Governor Juan Niño de Tabora came from Acapulco, Mexico, bringing an image of Our Lady of Peace, which was enshrined in Antipolo's small church.

Stories of miracles, from generation to generation since then, have brought fame to this village. Now it is a mecca for millions of pil-

grims from April to July. This image is believed to protect ships; that was why, on his dangerous galleon passage from Mexico, Tabora had it brought along. Having this Holy Virgin with him, the governor reached Manila safely; after that the image was named our Lady of Peace and Good Voyage.

#### Mile-high Baguio, Summer Capital

"Let's fly up to Baguio and cool off," says Manila on hot days. Only an hour away by plane, but a mile up in cloud-capped mountains where you need a wood fire after sundown, Baguio is indeed the Philippine Simla.

Air-cooled trains also carry thousands every season. From Manila they run for lush leagues through green rice fields, coconut groves, primitive palm-leaf huts, and Tagalog towns; past sugar mills and mud puddles where wide-horned carabao wallow all submerged except for their sullen, brooding blue faces. At steep foothills passengers leave the trains for buses that wind up the dizzy zigzag; here, in a few minutes, you quit the hot sticky lowlands air for the cool Baguio breezes. Many go all the way from Manila in their own motorcars.

What a ravishing ride that mountain road is! A turn through the Alps or the Colorado Rockies might be comparable if such roads



were bordered with singing waterfalls tumbling through lacy vines, infinite kinds of green trees, flowering plants, troops of monkeys and wild chickens, plus sweet-faced, soft-eyed maids in bare feet, waiting beside the road to offer you luscious fruit or fresh-cut bouquets.

Baguio itself sprawls along miles of winding, pine-shaded walks and drives. Here is the summer home of the President of the Philippine Commonwealth, a luxurious mansion for the American High Commissioner, hotels, hospitals, schools, barracks, golf courses, and the hot-weather homes of many Manila families.

Set in Baguio's city park is an artificial lake; about it are artificial bamboos and banana plants, made of cement and painted green, and climbing over them are *artificial* monkeys. Why, when the jungle is full of live ones?

Best Baguio sight on Sundays is the market, when all the reformed head-hunters flock in. Here you see Igorot wood carving at its best and at its worst—every article from pagan images and wooden spoons with hideous faces for handles to book ends in which two naked men push at each other with feet ten times their natural size! (Page 438.)

What gluttonous heaps of things to eat! Incredible, this superabundance where once Igorots had to eat dogs to satisfy their meat hunger. How symbolic of tropic fecundity this market is! Trees, plants, vines, everything seems to fructify. Village hens cackle with hilarious abandon; every sow and cow you see seems pregnant; even the stork seems at his gay, blithe best, for has not population almost trebled since Dewey stopped shooting?

Here, too, tropic life may take odd shapes. You see fish formed like vegetables, and queerly shaped tubers that look like worms, small animals, or even human hands and feet.

All this you ponder rolling down to Manila: Would there have been a Baguio so opulent, with one of the world's greatest gold mines, had not the Navy ordered Admiral Dewey to Manila 40-odd years ago? And off to our left, beyond Tarlac, rises Mount Arayat, its dark-green slopes as brooding and mysterious as on that day long ago when we went there shooting.

Somewhere up in this jungle is a village to which we once came at sunrise. All men and boys had gone down to work in valley fields. Village women and children came running to meet us, crying in panic. They said, "Hurry up and help! Monkeys have come down from the forests. They ate up our sweet potato patch. Now they're in our houses."

It was as they said.

We shot a few monkeys; then all the rest, chattering in alarm, scrambled back up the hill and climbed into trees.

Later that same day, when I narrowly escaped from a wounded wild boar and then got frightfully stung by giant ants, my Filipino guide said: "I knew we would have bad luck today; it's always bad fortune to shoot a monkey."

On the slopes of that same Arayat there live great flocks of flying foxes. As we approached a clump of trees, these queer fruit bats, hanging by their hind feet, heads down, looked like huge pears. When we fired into them, to get food for the guides, the whole flock let loose to swoop and glide about, emitting queer, shrill cries.

#### Fried Locusts and Pet Snakes

Returning from that same hunt, still with fever from the ant bites, we got a big fat iguana as a feast for our Chinese cook. Its meat looks white and delicate; Chinese crave it, as we crave fresh oysters.

After all, man eats that food which he can get; if a Malay's food tastes good to him, and sustains him, he too is an epicure. Take the locusts, for example. Great swarms sometimes sweep the green fields outside Manila. I have seen them swirl thick as snowflakes, covering every tree and bush. Then the people run out with nets, like seines, sweep them up, and sack them for food. John the Baptist ate them with wild honey; I had mine fried, and they tasted not unlike whitebait.

Even snakes help enliven Manila life.

In many homes people keep a snake in the attic. It fights rats. One night, a woman said, such a snake fell down on her dining table with a rat in its mouth.

After a typhoon flood, I once saw a python crawl out of the Manila moat. Men came running, counted "one, two, three," and then jumped on the live snake; they straightened out its coils, lashed it to a long bamboo pole, carried it away, and sold it to the zoo.

Dreaded among reptiles here is the *dakon palay*, the arrow-headed rice-leaf snake. I heard of a barefooted Tagalog boy riding his carabao through a muddy field of green rice near Manila when he was bitten on the leg by one of these snakes. He soon died. Yet you can spend months here and never see a snake.

Get out of Manila's crowded clubs and hotel lobbies, and—if you can circumvent the peddlers of lottery tickets—walk the pulsating, kaleidoscopic streets. They never know a dull moment; here is so much that guidebook writers overlook.

Smiling, Happy Philippines



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**United States Marines Hoist the Stars and Stripes Over Cavite's Ancient Fort San Felipe**

Top lines of the tablet read: "On this staff the American flag was hoisted for the first time over the Philippines on May 3, 1898, at 8 a. m. (by Commodore George Dewey, U. S. N.);" Today this ancient Spanish fort forms part of the U. S. Navy Yard at Cavite. Dewey sank the enemy fleet near here in 1898.



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**The Military Academy at Baguio Is to the Philippines What Our West Point Is to the United States**

"March Week" here corresponds to "June Week" at West Point. Their tents pitched high up among the mountain pines, Filipino generals of tomorrow enjoy an ideal environment. Except for long coattails, their dress uniforms resemble that of United States cadets.



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**Farmerettes Dig Potatoes at Baguio's Trinidad High School**

Luzon hill tribes, slowly becoming civilized, now send their children to Christian schools. Of 500 studying American farm methods, 150 are girls (Plate VIII).



Photograph by J. Maxton Roberts

**Bishop Brent Founded Baguio's Easter School for Igorots**

Giggling girls dress a playmate in native Benguet costume. Their benefactor, the heroic bishop, was known around the world for his fight against opium traffic.



Manila Maud Mullers Hulling Rice on a Summer's Day

Machines there are for rice threshing; yet farmers love to harvest their favorite food crop in the ancient way, singing old, old folk songs as they toil.



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Kodachrome by J. Bayler Roberts

Baguio Farm School Strawberry Pickers, Each in Her Own Tribal Costume

These alert, intelligent girls are but one generation removed from wild, non-Christian, head-hunting ancestors.

## Smiling, Happy Philippines



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Kodachrome by J. Baxter Roberts

### "I'll Take the Yellow Ones, with Cut-out Toes—and Wood Soles"

Manila makes shoes out of anything, from straw and wood to carabao hide and imported leather. Clogs, or *sapatillas*, seen here in the colossal Yangco market, are difficult for newly arrived American women to keep on; unpracticed wearers "back out" of such slippers till they learn to bend their toes!



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**From Pandan Leaves Larzon Women Weave Hats, Bags, and Mats**

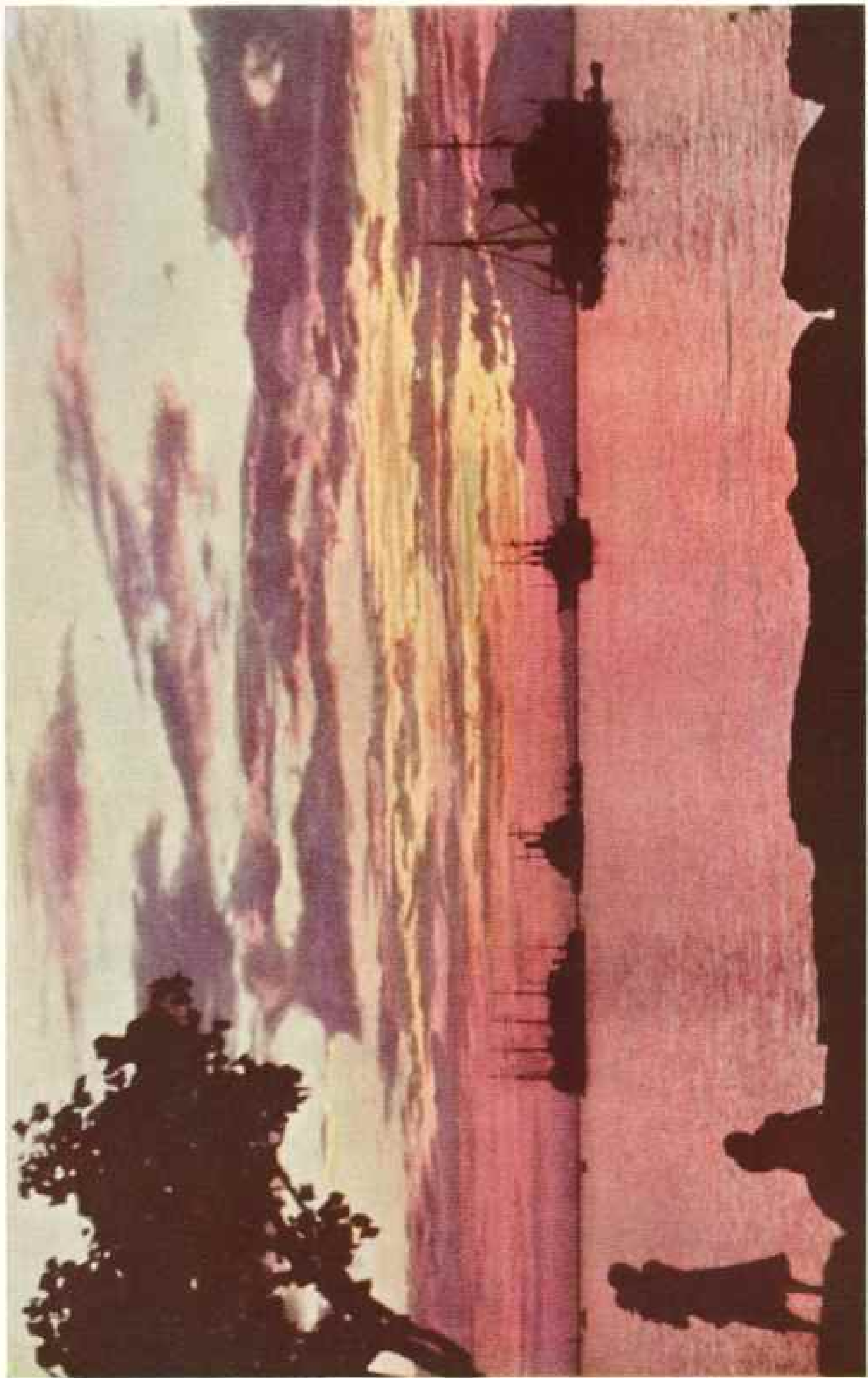
Houses they build without nails; banyans, lashed with vines, form the frames. Roofs and walls are of palm leaves. All Malays are clever at making useful things from twisted or plaited grass, bark, leaves, and vines.



Continued on p. 2. Hapton Roberts

**She Picks Up Exactly 30 Cigarettes, Without Counting**

Manufacture of cigars and cigarettes is a leading Manila industry; it employs thousands and uses latest labor-saving machines. While most Filipinos smoke even from childhood, they are not "heavy smokers."



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Illustration by J. Taylor Roberts

**Sunsets Over Manila Bay Soothe the Souls and Quicken the Imagination Even of Americans Who Have Lived Here 40 Years**

Swiftly changing cloud forms and startling plays of color rapidly sketch one scene after another. You may imagine any figure from a distant mountain to Niagara Falls or a kneeling camel. At right, across the bay, is Mariveles Mountain. Here the U. S. Asiatic Fleet bases from December to May.





Kodachrome 10/William Bruhn

Creaking Carabao Carts Slow Down Bridge Traffic Over the Pasig River



© National Geographic Society

Kodachrome by J. Bayler Roberts

At Baguio Markets Hill Tribes and Lowlanders Meet on Friendly Terms

Suspecting a bad egg, a skeptical Igorot mother holds it up to strong sunlight in the Sunday-morning mart.

In the hotel itself a footnote on your menu says, "We wash our vegetables in permanganate of potash."

#### Birds in the Hotel Dining Room

As in a poultry yard, birds flock into Manila Hotel's vast open seaside dining room, which has an acre of slippery waxed floor. Hopping after crumbs thrown by guests, the birds slip and fall; then out rushes a cat to grab herself a bird, and she slips and falls, too, and goes sliding along on her side. She actually looks her embarrassment, as might a fat woman who slipped and fell while dancing. Guests giggle. A boy comes with a flit gun and goes methodically about. Leaning over, he pokes the gun under a table where ladies are dining, and calmly squirts the vapor on their ankles to drive off mosquitoes.

Past the hotel now comes a busload of Chinese schoolgirls singing "America," and is stopped by a traffic jam. A tired pony has fallen. He remains so, dreamily at ease in a restful nap while police, chauffeur, and hack driver wrangle over who's to blame.

In a cafe sits a popular sports-news broadcaster, talking to admiring friends who hang on his words just as Dr. Johnson's disciples used to relish his pearls of wisdom in Fleet Street's Old Cheshire Cheese.

Arcade Cafe advertises "Frog legs raised in Japan from ancestral frogs of Louisiana origin."

Here in a narrow Walled City street is a wood carver and a window display of his perfectly sculptured carabao; and yet another artist, cutting away on a life-size effigy of the Saviour. On a stone pavement, their squares marked with charcoal, street gamins gamble for pennies at checkers, using tin bottle caps as "men."

In ancient Dominican Church hangs a curious painting, crude but graphic, that shows Dominican missionaries being executed in Japan when they tried to Christianize that country in 1617.

Dusty hymnbooks four feet high, bound in brass and weighing 35 or 40 pounds, are preserved in the Dominican Monastery. Music, done by hand on parchment, shows square black notes big as poker chips, visible to the whole choir. By this plan only one book was necessary. These canticles or Gregorian chants have been sung since the days of Pope Gregory. No sharps or flats are indicated, but the sharply drawn type is graceful and easy to read.

In one church various confessionals were labeled for the hearing of confessions in five different tongues.

Years ago, in this Walled City, we heard the early-morning clang of church bells, the chants of priests, and the song of choirs. Now is added another sound, the Santo Tomás students giving a snappy class yell. Also, the neighbors' radios!

#### Sunday in the Suburbs

Today is Sunday. Ride through suburban villages and you see old men massaging their fighting cocks, ready for the bloody pits. Boys cut each other's hair, free, like taking in each other's washing. Here on the Cavite road is General Emilio Aguinaldo's home; over the door of his curiously ornate wooden house is a big stone carabao head, flanked by two Moro brass cannon.

Somebody has just barbecued a pig; it is being cut up and sold in savory chunks, and a 4-year-old boy absolutely naked dashes up, grabs a piece of the hot, tempting pork, and runs with it; everybody laughs. Two girls in pink, pajamalike slacks are making orange water for the day's trade, and men go by leading racing ponies out to the track.

There is vast Santa Ana taxi dance hall. When the fleet is in, the sailor is a knight for a night and 9,000 people dance at once on yet another "world's largest ballroom floor." And here's a Japanese tattoo artist, who has just gone bankrupt. "All the sailors want to be gentlemen now," he says, "and all the work I can get is taking off their tattoo marks." No more blue anchors on brawny arms! No more hearts entwined, no fat girl on a flying trapeze!

Back from adventure in Japan, safe now under the family bamboo, sit two Filipino students. You talk to them. "Yes, going to college is much cheaper in Japan than in the States. One of us took a course in paper-making; I studied the Japanese fisheries. Three other friends are still up there taking aviation."

In fresh evening breezes strolling people throng the Luneta, an elliptical park fronting the bay (page 414). This has been Manila's chief pastime for generations; that stroll in the cool of evening is a way of life, an hour of rest for a hot, tired city. Always, too, here come again the little convent girls, pig-tail braids and blue skirts, walking two abreast, eyes averted. Music rides on the breeze, from an American Army band playing a medley of familiar old tunes, but never "Home, Sweet Home"—that's against the traditions of American exiles in the East.

Inland from the cool green Luneta stretches old Bagumbayan field, where Spaniards used to garrote their rebel prisoners. Here also



#### Old-time Scenes, Sounds, and Smells Are All Suggested by This Cross Section

Above the plaza towers the classic old Quiapo Church, before which wary itinerant traders set their stalls on festa days. Emerging from Mass, congregations shop about for bargains, anything from a dollar watch to a fighting cock. Coming toward you here is a carabao cart loaded with lumber. Two-wheeled *rromatas* ply for hire. Every aspect is "Old Manila" except the automobiles parked before the church door, the telephone poles, and the girl in the zipper dress.

risers now a monument to José Rizal. But for a Spanish firing squad, he might have become the Simón Bolívar of the Philippines.

Then sunset. Sunsets on Manila Bay! They stir the soul of even old Americans who've watched them for forty years; they befuddle the Filipino poets (Plate XV). In their swift plays of color and twisting cloud effects, one may envisage almost any spectacle, from fiery volcanoes to a Mississippi flood.

One evening I saw that very flood re-enacted in the skies as years before I had seen it in reality. Beyond a yellow river, full of floating trees, rose the hills of Tennessee, formed by darkish cloud banks, and on the rim of these rose still more trees and a field of haystacks, where fleeting cloud wisps moved like fat bovines.

Sunset on Manila Bay—and on grim, gunstrewn Corregidor, forbidden isle that guards this sheltered water! Every ship that comes

to Manila must undergo its cold, impartial scrutiny. By night, from its mysterious heights bright, league-long searchlight beams break suddenly on passing ships, to the consternation of boat-deck spooners.

Look at sleepy, tree-clad Corregidor from your ship, as you sail by, and it seems empty and innocent enough, almost vacuous, like the face of a prize fighter in evening dress. But don't let that fool you (map, page 413).

Those green, restful forests were planted there by Army engineers, ever so artfully, for they hide mortars, big-gun emplacements, mouths to secret tunnels, and many another mystery of this forbidden rock. No sane pilot would try to fly over it, and any ships except U. S. Government craft venturing too near do so at their own risk. Few outsiders ever see Corregidor; to get a permit is not easy.



Photograph by Ferns Jarrin from "Three Lines"

### Family Life Is Free and Easy in the Privacy of Spanish-style Patios

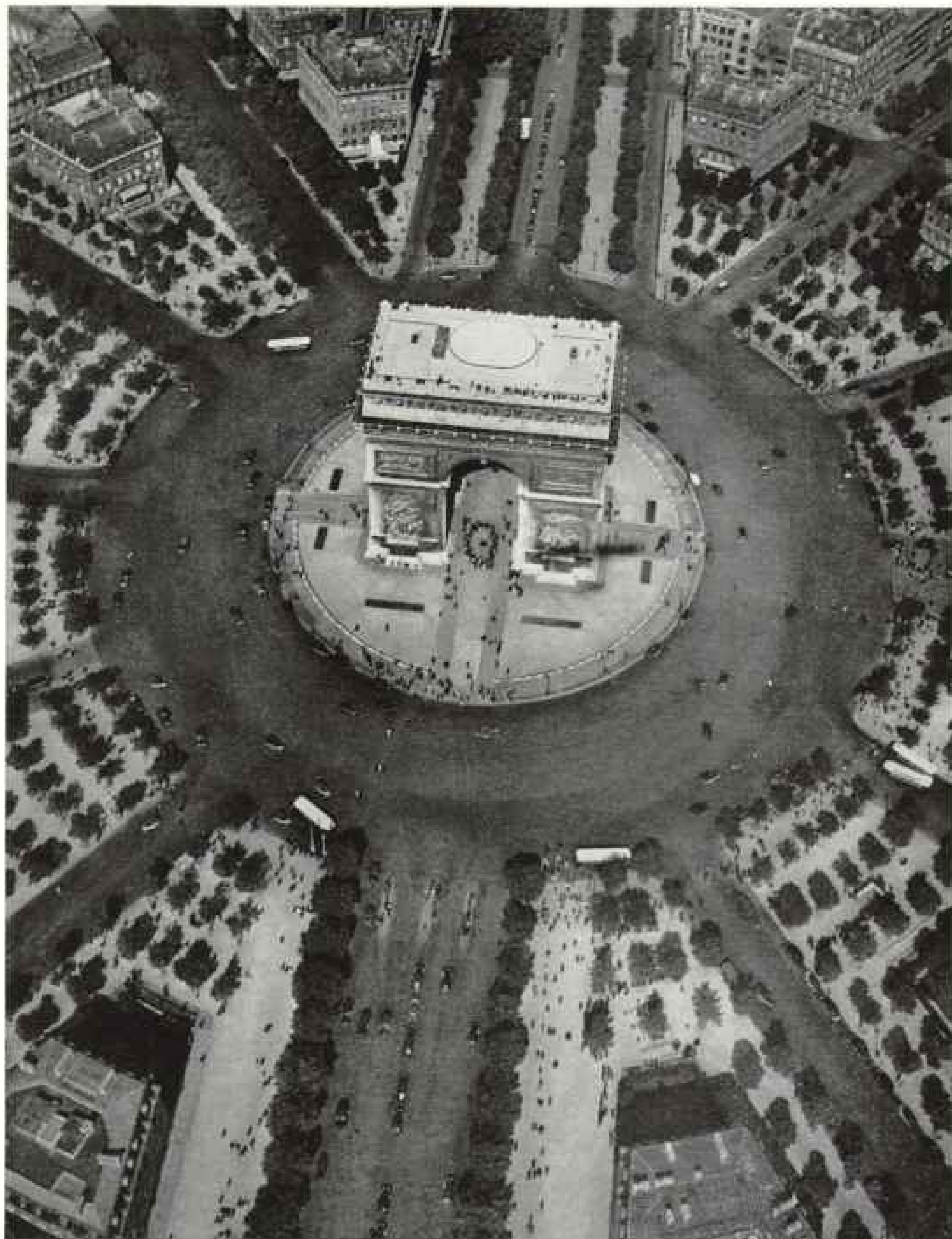
Servants and horses live on the stone-paved ground floor, amid curts, laundry, potted palms, and domestic impedimenta. Upstairs, in spacious rooms with shell windows and floors of hewn mahogany boards, lives the family, the *gente fina*, fine people. At night heavy, prisonlike doors shut this Walled City patio off from the street.

On this rock live 8,000 people; you don't see them, either, as your ship goes by. Some are civilian workers, and some of their children, born here, have never been off this rock. Here is a streetcar system unique in all the world. It has tracks, cars, stations, and all that, but no conductors, for nobody pays any fare! You ride anywhere, free. Far underground is stored much fuel, food, water, means for making light, and many other things.

Smaller islands near Corregidor also point their guns to sea. Sailors call one of these the "stone battleship"; you see it plainly, and are fooled by it as you sail past. To make it, ingenious Army engineers whittled down a rocky islet, shaping it like a battleship; to gain verisimilitude they even put realistic masts and turrets on it, and painted it gray. Now, when waves break over its bows, the illusion is perfect; you see a battleship plowing into head seas, a bone in its teeth.

Along with Britain's powerful naval base at Singapore, and her gun-covered rock at Hong Kong, Corregidor forms one leg of an Anglo-Saxon tripod of power in the restless, changing East. Into its mysterious defenses Uncle Sam has put years of study and effort, and a lot of money. Corregidor is the symbol, now, of American strength and authority in Asiatic waters. It, too, must revert to the Filipinos, if and when America finally withdraws her last man, and Manila faces the future as the capital of a new republic.

You ponder all this, as darkness falls; lights flash in the Luneta clubs; in a hotel ballroom a swing band works hard on "Umbrella Man," and Filipino couples are gracefully dancing. In forty years Uncle Sam has given them many things, from toilets, neckties, and radios to airplanes, iceboxes, and free speech in the English language. They have come a long way since Dewey commenced shooting.



Photograph by Gaudon from Victor Lamm.

### When the Expedition Left Paris, the Arc de Triomphe Still Symbolized an Unconquered France

Beneath it, encircled here as usual by people who have come to offer respect at the shrine, burns the eternal fire over the grave of the Unknown Soldier of the First World War. Reliefs on its façades depict the victories of Napoleon. The top is reached by stairs, for ascending which a small fee is charged. From this vantage visitors obtain a view of much of the beautiful city. The magnificent arch stands in the Place de l'Étoile, from which streets and avenues radiate as from the United States Capitol.

# Along the Old Silk Routes

A Motor Caravan with Air-conditioned Trailer Retraces Ancient Roads from Paris across Europe and Half of Asia to Delhi

BY LAWRENCE COPLEY THAW AND MARGARET S. THAW

*With Illustrations from Photographs by Mr. Thaw*

THE Great Silk Route! What visions of mile-long caravans of camels laden with spices and of the tramping march of invading hordes these words conjure up!

Stretching east from Beyrouth or Antioch (Antakya) on the Mediterranean, it was known to Darius before Alexander and to the Assyrians before Darius. Imperial Rome used it as a direct means of communication with the East.

By it Greek merchants, coming through Antioch, crossed the deserts of Mesopotamia (now Iraq). They paused at the mighty city of Baghdad before passing through the defile of the Zagros Mountains to reach the great trading center of Tehran and its near-by Caspian ports. After putting behind them the deserts of eastern Persia and the two-mile-high passes of the Hindu Kush, they crossed the Khyber and other passes to the gold and spices of India (map, pages 456-7).

In the 7th century parts of this mighty caravan route of the dead past were traversed by the Chinese pilgrim Hsüan Tsang. Six centuries later Marco Polo followed similar parts of its tortuous course.

Changes were made in the great land route from time to time as a result of new geographical discoveries or political complications, but the general direction remained the same.

## Ancient Way of Spices and Gold

We planned to follow with our modern caravan the western portion of this ancient route, reaching its beginning at Beyrouth by traveling first across the Atlantic to France, and thence overland from Paris through western and central Europe, the Balkans, Turkey, and Syria. At Kabul the road split, its northern branch crossing the Oxus to China, its southern fork, which we meant to follow, going to India.

To say it was hot in the forward hold of the *President Roosevelt* on June 22, 1939, would be ridiculous understatement. Yet six of us were toiling in the stagnant air of that hold, making a valiant effort to wedge into two specially constructed Chevrolet trucks some ten tons of film, camping equipment, food supplies, and miscellaneous gear. We had sailed from New York the day before.

Our labor was required because Larry, fearful that a war might interrupt the plans which had required two years of unremitting effort to perfect, insisted that our vehicles be loaded and ready to start the moment they were slung over the side of the ship in Le Havre.

Around the enormous heaps of materials and the seemingly tiny trucks that must hold them we staggered: John Boyle, cinematographer (Director of Photography, A. S. C.); Earle Fahrney, mechanical engineer, lent to us by the General Motors Corporation; Larry, the cause of it all; and three unsuspecting friends, fellow passengers, shamelessly inveigled into yeoman service.

A tiny patch of blue sky showed through the hatch opening far above us, except when it was obscured by Peggy (Mrs. Thaw). From time to time she would peer down and ask whether we were ever going to be finished.

Our lunch was lowered on a line at noon and at dusk we climbed out, too weary to take much interest in the night life of the ship. Loading operations, as far as the capacity of the trucks permitted, were completed in four days. Larry had wirelessed for a third truck to follow on the next boat, which docked only two days after us.

Besides the trucks, we had a Buick car with a small trailer for camera equipment; and on the deck reposed our "land yacht," a fantastic contraption weighing nearly 13 tons. Little wonder that planning had taken so long. We had been obliged not only to arrange transportation for this modern caravan over a 20,000-mile route, but—vastly more important to the photographic success of our mission—to take measures which would insure us the position of honored guests within each country or principality to be visited.\*

After the two Chevrolet trucks were loaded, the boys had a few days to relax before the

\* With the unstinting assistance of the American Department of State and its foreign representatives, the British and French Foreign Offices, the British India Office, and the Home Department in Delhi; plus the magnificent co-operation of the British Empire Society, and the East India Association of London, the Musée de l'Homme of Paris, our own National Geographic Society of Washington, D. C., and the American Museum of Natural History of New York, and a dozen Indian Princes, arrangements were made for the extensive educational films we planned.



### After a Harrowing Drive through Night and Rain, Paris, Door to Adventure!

Lights were still burning, few wayfarers were abroad, and the Eiffel Tower was a skeleton against a watery sky as the expedition entered the city. Here, later in the day, the caravan is seen rounding the Place de la Concorde. It soon attracted crowds like a circus parade.

momentous afternoon of June 29 brought the coast line of France into view through lowering clouds and gusts of rain.

On the pier of Le Havre, as the *President Roosevelt* drew alongside, stood our six Indian servants (three drivers, a cook, and two personal boys) immaculate in white dress uniforms with blue-and-white turbans. The oldest among them, Mohammed Bux, presented Peggy with a huge armful of roses and made a speech of greeting.

#### Indians Learn the Ways of Autos

These trained servants had been imported by us from India. All Mohammedans from the Northwest Frontier section, they had arrived from Bombay only a few days before. Each had been carefully selected by our Indian agents, and the three drivers had devoted a month in the General Motors assembly plant in Bombay to familiarizing themselves with the vehicles.

It was nine at night before the large trailer, the Buick car and its small trailer, and the two loaded trucks had been set on the dock and filled with gasoline.

A nerve-wracking all-night drive took us to Paris in pouring rain. Our drivers had not even seen their vehicles until now, and for the first time they were driving to the right. The road was terra incognita to them.

The large trailer was literally what we have called it—a land yacht. Forty feet long, it contained four rooms. Forward was a salon, which, complete with recessed desk, folding bar, and radio, served by day as living and dining quarters for all four of us. At night it could be made up quickly into a comfortable bedroom for Boyle and Fahrney.

Next came the kitchen, containing an electric refrigerator, a stove, ample storage space for several days' supplies of tinned provisions, and a sink with hot and cold running water from a 100-gallon tank under automatically maintained 45-pound pressure. There was a neatly recessed hot-water heater.

In the middle of the "yacht" was the bathroom, with a tub and shower, a regular water-flushing toilet, and a washstand. Aft was the bedroom, in which were two regular beds and more closet room than even Peggy knew what to do with.

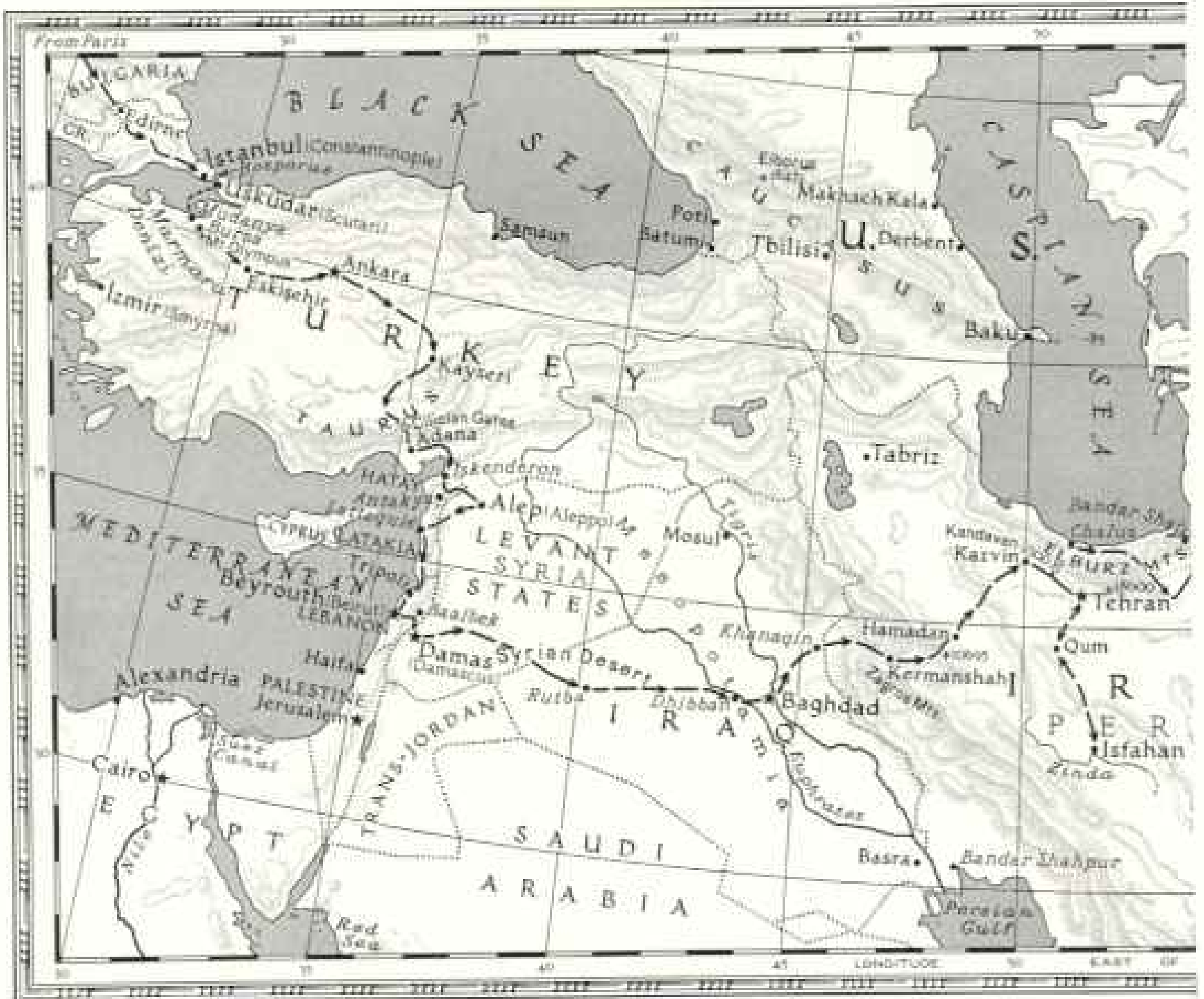


Vienna Traffic Halted as the Expedition Entered the Royal Palace



Traffic Policemen Whisked the Trailer through Baden at Breakneck Speed  
Whenever a momentary stop was made, a helmeted officer kept the crowds back with a curt gesture.





The entire trailer was electrically run. In the engine room, forward of the salon, three 1,000-watt Delco generators provided ample power for the concealed lighting system and for the host of electric pumps, blowers, refrigerator, radio, vacuum cleaner, and other just plain gadgets too numerous to mention. A separate four-cylinder engine ran a large air-conditioning plant.

Trailer and tow truck, apparently one, but really completely separate units capable of turning at a 90° angle to each other, had been the special headache of most of the General Motors engineers for a year. This 25,500-pound contraption not only had to be comfortable, sturdy, and practical in its inner functions, but it had to be capable of going literally anywhere an army tank could get.

It is not too easy to construct such a vehicle to travel the good roads of America and Europe. To engineer and design one that could, despite its length, negotiate the twisting, narrow, rocky caravan tracks of Afghanistan, plow through the sand of the Syrian Desert, and be undaunted by either the mud of India

or the grades of the Hindu Kush passes was an altogether different proposition.

Nevertheless, our apparently unwieldy 40-foot yacht was more maneuverable than a coupe. It could be turned, when necessary, in a 21½-foot radius, or 43-foot circle, by the expedient of steering the rear wheels as well as the front.

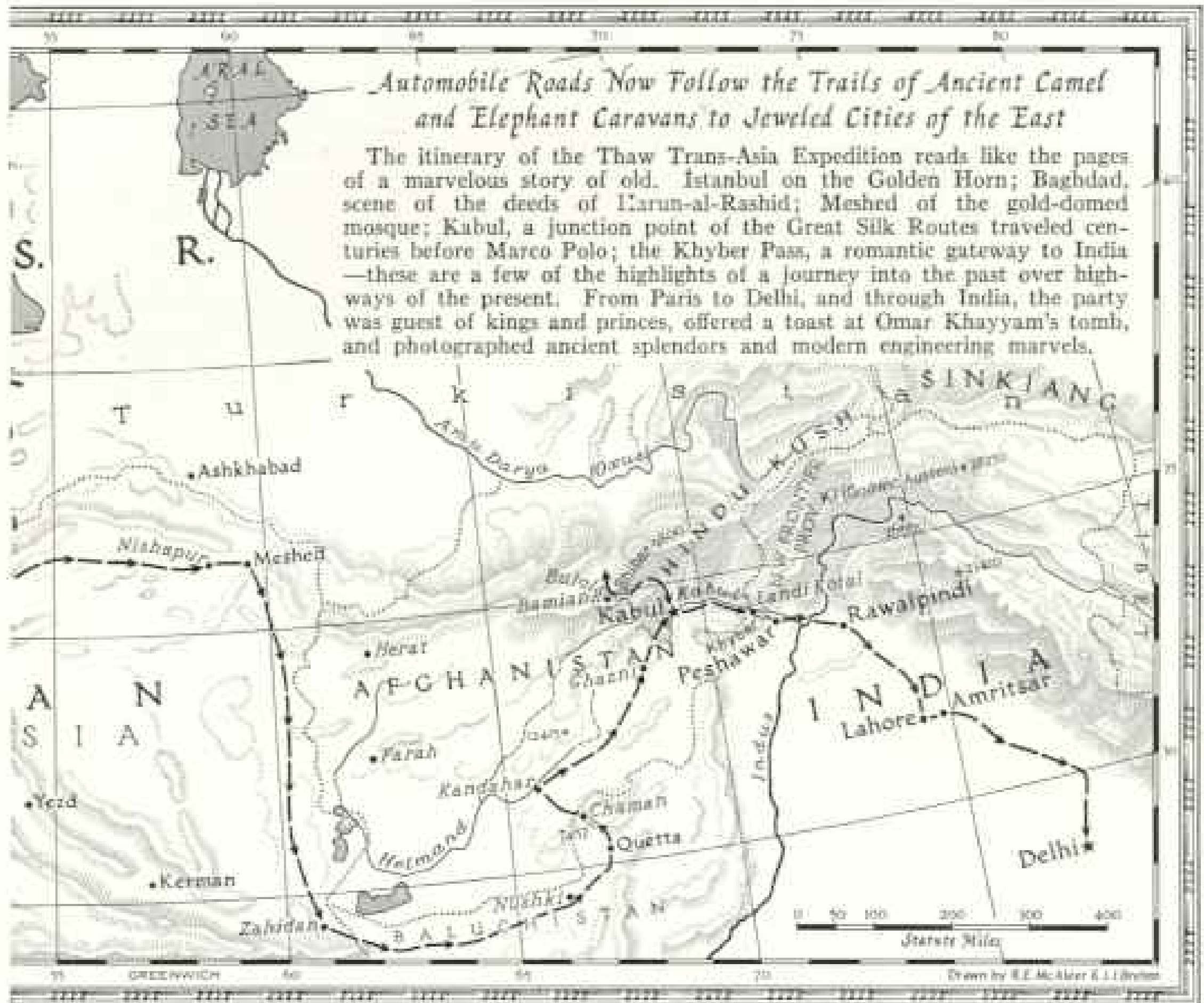
A watery dawn had broken when a tired motorcycle police escort met us at the outskirts of Paris and convoyed us around the Place de la Concorde and the Place Vendôme to our last hotel for many months to come (pages 452 and 454).

#### Final Scramble—Adventure Ahead

We put in a hectic five days in Paris in final preparations.

On July 6 we finally rolled out of the French capital, with our new truck fully loaded, said good-bye to our police escort, and pointed the lead car's nose east, our general direction for the next 12,000 miles.

The first night's camp, made just outside a small village near Nancy, was a nightmare.



Our servants were wholly unfamiliar with the inner workings of the trailer and had no idea where anything was.

"Sahib, where is the rice? . . . Master, we can't seem to get our tent up . . . Only two blankets apiece, why we'll freeze . . . Hey, Larry, listen to how well Schenectady comes in . . . Master, are there any snakes in this land? . . . Get the extinguisher quick! The stove is on fire! . . ."

A madhouse on wheels; and around it, in deep rows, the grave faces of the villagers who had turned out en masse to see the strange antics of the new circus that had come to town.

As we rolled through the pleasant streets of old Strasbourg and headed our half-mile-long cortege for the Rhine bridge, we were thankful we had prearranged for customs courtesies in every country we were passing through, as well as for a government official to act as courier and facilitate our passage.

Little did we imagine how seriously the Germans would take Larry's request for speed in the early stages of our expedition.

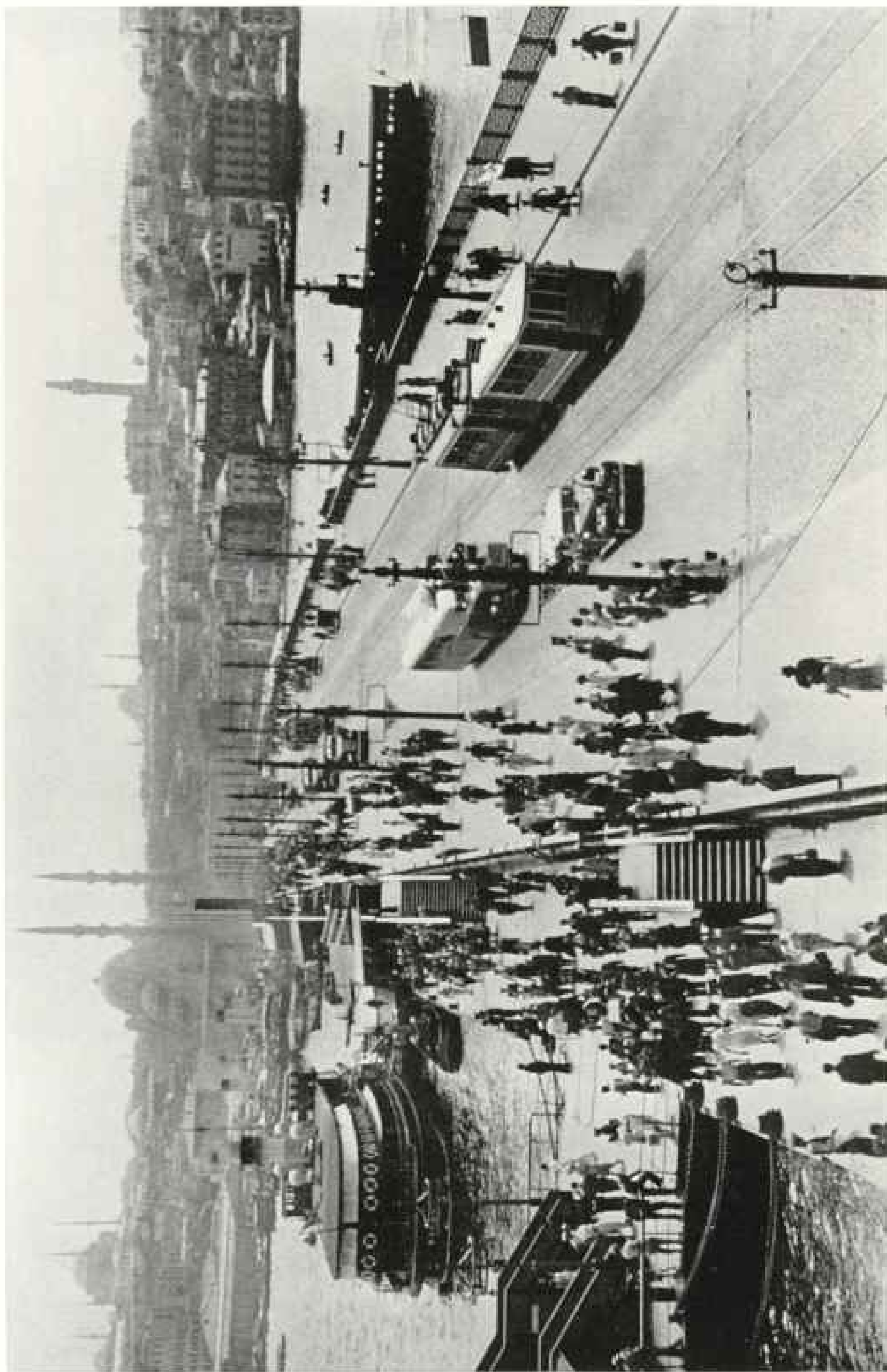
As we crossed the bridge into Kehl, we noticed a considerable crowd waiting at the customs barrier. We stopped; and, with prodigious heel clicking and Heil Hitlering, we were presented to our courier and protector, the N. S. K. K. Obergruppenführer, the Baron von Behr. In a Mercedes car as long as the trailer and apparently first cousin to a dive bomber, and with the aid of two A. D. C.'s and two motorcycle outriders, he was prepared to get us through Germany.

#### Trains Stopped to Let Trailer Pass

There was never a pause on our part; everything stopped for us. Such minor encumbrances as trains were halted, snorting, at crossings by the front motorcyclist.

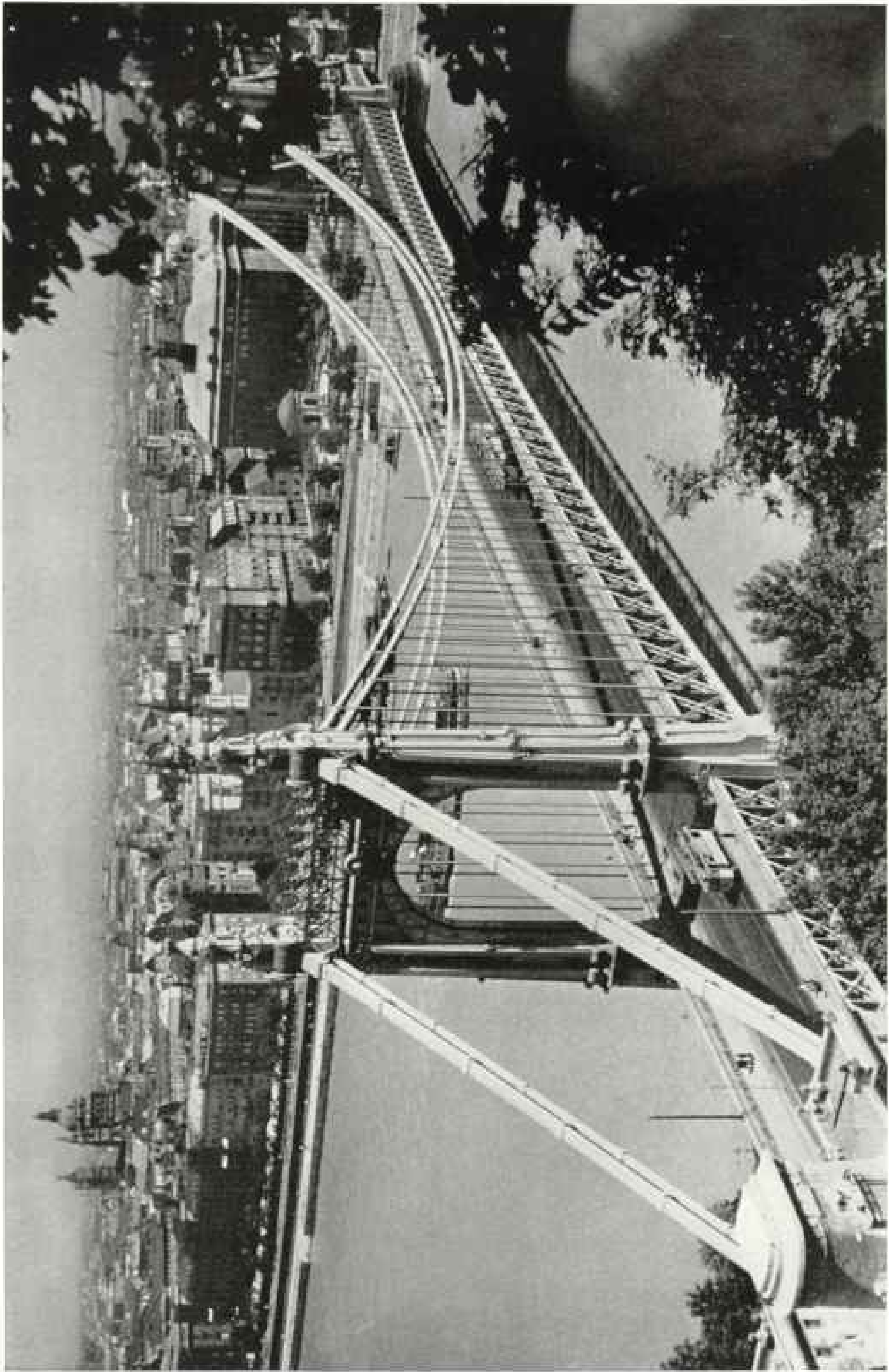
The Baron and his A. D. C.'s waved to the side of the road all traffic, including large sections of the German Army, which was on the move everywhere.

A second motorcyclist, like a faithful sheep dog, kept his flock together by tearing back and forth the length of the line of vehicles. Before we entered any city or large town,



**In the Evening Rush Hour, the Expedition Crossed the Golden Horn to Istanbul**

The Galata, or New Bridge, spanning a waterway steeped in history, looks as modern as a similar thoroughfare in New York, but the skyline of mosques and minarets on either side of it retains the mystery of the East. After entering the Turkish metropolis, the trailer disrupted traffic by sticking tight in a narrow street (page 465).



Over the Beautiful "Blue Danube" at Budapest Sweeps the Elizabeth Suspension Bridge

This modern span links the romantic twin cities of Buda and Pest (across the river). For a camp site the expedition was given space in a hotel parking lot on St. Margaret Island in the middle of the river, and there all hands were kept awake by "swing" music from a night club (page 463).



#### At a Wayside Spring in Yugoslavia the Trailer's Water Tanks Were Filled

The stone trough was built during Turkish occupation. Purely pastoral, the countryside south of Nis affords grazing for sheep and goats, main source of livelihood for the people.

the local police were advised by telegraph, and the streets cleared.

It was all very exhilarating, but a rather frightening exhibition of what appalling celerity military efficiency can achieve in moving cumbersome units through densely populated districts! (Page 455.)

Everything was done for us, even to the marketing for our boys and ourselves.

There was apparently a good reason for this last-named service. In Vienna a quiet prowl around the city's leading meat and vegetable markets revealed *one* rather antique sausage and a few potatoes that had seen better days! In explanation the Baron proudly declared that Germany's food supplies were being stored away in vast, strategically located reservoirs. Never again, he said, could a blockade starve the country out.

Maybe Larry was not so silly, with his fears of war, as we had thought.

We said good-bye to our Nazi couriers at the Hungarian frontier, changed the swastika flags of Germany for the red, white, and green ensign of Hungary on all our cars, and followed the magnificent highway that

skirts the Danube most of the way to Budapest.\*

The two-way, short-wave telephone sets, with which each of our units was equipped, were in operation and we were conversing pleasantly from one unit to the other as we rolled through the peaceful Hungarian countryside, when suddenly Fahrney's voice broke in, bidding us all stop.

Larry and Peggy in the leading Buick turned back to find that Fahrney, driving the big trailer, had sideswiped a bicyclist.

#### A Mishap in Traffic

The bicycle had been thoroughly wrecked, though, so far as we could determine from a blast of incomprehensible gutturals, only the dignity of its rider had been injured. A crowd quickly gathered, including a rural gendarme.

In German, French, and Arabic we could usually get along beautifully, while our servants were privy to the mysteries of Persian, Hindustani, and Pushtu. None of these seemed to fit the present case.

\* See "Magyar Mirth and Melancholy," NATIONAL GEOGRAPHIC MAGAZINE, January, 1938.



**Child Star of a Dancing Troupe near Sofiya (Sofia) Is the Ballet Leader's Daughter**

Although only six years old, she is expert in the intricate acrobatic steps. Her costume, like those of the older performers, is gay with color, green, white, black, and red predominating. At the authors' request she made a little speech before the microphone (pages 462, 464-5).



**To Skirl of Pipes, Singing, and Handclapping the Dance Goes Faster and Faster**

The Bulgarian entertainers near Sofiya furnish their own music, voices and flutelike bagpipes carrying the air, while percussion instruments mark the rhythm. Sound recordings were made of this "orchestra" as it played for the performance of the ballet leader, his little daughter, and the chorus (pages 461 and 465).

Naturally, we were completely broke. I say "naturally," since this was our chronic condition throughout the expedition when leaving a country with stringent currency regulations. We had not a pengő among the ten of us; and the farmer and the officer of the law looked with jaundiced eyes at the letter of credit and travelers' checks the badgered Larry was waving at them.

In the third place, we were in the wrong. By no stretch of the rules of the road could we justify ourselves.

What was rapidly threatening to become an international border incident was resolved by Larry's placing the shattered bicycle on top of one of the trucks, Peggy's smiling winsomely at the still-muttering policeman and gently urging him into another, and Boyle's hustling the protesting cyclist into the third. A hundred-mile ride brought us to Budapest where the tangle was quickly straightened out.

In the Hungarian capital a thoughtful government had arranged for us to camp in the parking lot of the Palatinus Hotel on St. Margaret Island, in the middle of the Danube and in the heart of the city (page 459). This was a fine central location, with an ample supply of water for the trailer and a certain degree of privacy. But it had one grave defect. It was immediately opposite the city's large night club, the Parisian Grill.

This dance hall got under way about midnight, with the noisiest jazz band that side of Harlem, and the last revelers were swept out by the cleaning women just about the time we were getting up.

Larry still did not feel too comfortable about the distance we had put between ourselves and any possible theater of war. He wanted to get well into Yugoslavia before beginning any serious photographic work. Consequently, our stay in Budapest was limited to two days. On the morning of the third, as we were ready to leave, Fahrney went to the small wall safe in the trailer to get out the ten passports. The safe refused to answer its combination!

#### A Safe-cracker to the Rescue

Larry groaned as he recalled that the affair was guaranteed both fireproof and burglar-proof. To blast it open would wreck the entire trailer.

Peggy had an inspiration and spoke to the policeman whom the authorities had detailed to guard the camp.

"Open your safe? Why, nothing could be simpler! All I have to do is locate old Hans, who is surely in jail somewhere."

Hans was a safe-cracker of whom the local

police were not without their pride. There was nothing from a pig bank to the vaults of the Treasury that his magic fingers could not open. Apparently he had lived a good part of his 60 years behind bars.

A quick telephone call located good old Hans doing a three-year stretch in the local calaboose. Within an hour he arrived, securely handcuffed to two guards.

Boyle wanted to give him the combination, but Hans waved the suggestion aside and, anxiously followed by Peggy, whose jewelry was also in the safe, had the door open in thirty seconds flat!

The guards beamed, and old Hans smiled deprecatingly as Larry made him a small gift to help while away the next year and eleven months.

We crossed the Yugoslav frontier at Subotica. There we acquired a representative of the Yugoslav Foreign Office, and there began a gradual disintegration of our roads, which was destined to continue in geometric ratio with but brief respites right through to India. There also began the serious purpose of our expedition—the making of educational motion pictures.

#### Mass Production of Flower Seeds

We worked a week in northern Yugoslavia, in and around Senta, filming the lives of the people and making a fascinating study of the flower-seed industry that flourishes in this district. Somehow flower seeds had always impressed us as something bought in a small packet with extremely varying and dubious ultimate results. They never had struck us as being the object of mass production.

To see hundreds of acres of petunia, phlox, larkspur, etc., forming brilliant geometric patterns as far as the horizon, while groups of women, in long skirmish lines, slowly worked their way through the fragrant blossoms, picking the seeds, was entrancing.

Then we visited the large factory where these were duly threshed, sorted, and packed.

We all now realized the immense value of the painstaking preparatory work that had enlisted the government of each country to work with us.

The seed season was not under way, and yet seeds were picked and the factory was made to function. Special electric mains were laid for our lights, and the astonished natives found their homes and farms invaded by a group of obviously mad Americans and themselves turned into Clark Gables and Myrna Loy for a day.

Slowly we worked our way through Yugoslavia. We camped for a few days on the





#### A Sudden Bump in Bulgaria Necessitated Roadside First Aid to the Trailer

When the jolt occurred, the engine shifted forward, and the fan chopped up the radiator. The engineer of the expedition repaired the damage with aid of the Mohammedan driver mechanics.

outskirts of Belgrade, working in this lovely Serbian city on the Danube.

As we descended the Balkans, the roads deteriorated. Asphalt or concrete we had left behind in Hungary. The heat was terrific and the dust stifling. What a respite at night the air-conditioned trailer!

#### From Berlin to Istanbul

As we entered Bulgaria, acquiring two couriers from the Foreign Office in Sofiya (Sofia), the highways disintegrated as far as we thought possible. (We hadn't begun to see anything yet; just wait for Turkey!) It was maddening to see the concrete "Berlin to Istanbul" military road under construction immediately paralleling long stretches of the cow path along which we were laboriously bumping.

And how they were working on that express highway! Not only in Bulgaria, but in Yugoslavia as well, tens of thousands of men were working day and night. Every five miles were large camps, and the work apparently never stopped. Modern road-building machinery was in use everywhere, including a weird gasoline-driven tamping machine that leapt into the air with each explosion. Obviously the road would have been ready for us had we arrived a few months later.

In Sofiya we camped well out of the town in a delightfully rustic setting. Half a hundred men and girls entertained us our first evening with most strenuous and athletic dances. Garbed in their colorful costumes and led by a young chap with his six-year-old daughter as première danseuse, they formed a fascinating spectacle (pages 461, 462, 465).

Here we began to get our first taste of the great Mohammedan world through which we were to travel for many months. The city is now predominantly Christian, but past Turkish invasions are marked by a large mosque on one of its principal streets. One of the main landmarks is still the 12th-century Church of St. Sofia, for whom the city is named.

In the mountains south of Sofiya we photographed the many complicated processes that take place between the time of the milking of the sheep and the setting away in a storehouse for aging of the singularly tasteless white cheese.

#### People Parade on Any Pretext

Slowly we traveled southeastward through the Balkans. We dropped from the rolling country of the north to the valleys south of Plovdiv. The road became steadily worse, and the sight of the new highway that paralleled



#### The Troupe Leader Dances Sitting Down

One of the most difficult feats in the performance by the dancers who entertained the members of the expedition near Sofiya, Bulgaria, this routine, made famous by the Russian Cossacks, requires amazing agility. The man squats on one foot as he kicks the other forward, and then reverses the movement with incredible speed (pages 461-2, and 464).

it, still under construction, more and more annoying.

The Bulgarian farmers are mad about parades. The slightest pretext is sufficient to bring them surging into the narrow village street to celebrate. They even had a parade in our honor, in the little village of Sadovo. That ended by Larry's being greeted by the mayor, priest, and other village dignitaries and presented with a bunch of flowers by the prettiest of the girls. Such hospitality was all very touching, but not conducive to speed.

The ninety-odd miles of road from the Turkish frontier, through Edirne (Adrianople) into Turkey cannot even now be mentioned calmly. The all-important new road was nearly finished; consequently, no one bothered much about the detour.

Finally we came to the finished section of the new military highway and experienced the joy of bowling along on concrete for the remaining miles into Istanbul (Constantinople). We vowed then and there to return when the road was finished and motor again from Belgrade south.

Crossing the Galata, or New Bridge (page 458) over the Golden Horn one lovely August evening as the sun was setting behind Istan-

bul's many mosques, and hordes of people streamed on to the commuter boats of the Bosphorus, we all heaved a sigh of relief.\* Surely a war could not ruin our expedition now, with Asia but a quarter of an hour's ferry ride away.

Our two Turkish couriers, a policeman and a member of the Foreign Office, attempted to direct us through some of the narrower streets to our selected camp site far above the city. They took no account of the trailer and of the unfortunate fact that it was easy to get it into tortuous alleys, but quite another matter to get it out.

#### The Trailer Blocks Istanbul Traffic

The trailer securely stuck in one of the city gates, blocking all traffic during the height of the rush hour. The curses of donkey drivers, the braying of the donkeys, and the fulminations of the police did no good whatever. Two hours of patient effort won for us freedom. To the citizens we caused to miss boats, we humbly apologize.

For a week we worked amid the wonders of Istanbul. Famed St. Sofia (now a national

\* See "The Transformation of Turkey," NATIONAL GEOGRAPHIC MAGAZINE, January, 1939.



#### War News Necessitated Precautions at the American University of Beyrouth (Beirut)

While the expedition was parked on the tree-shaded campus, United States flags were painted on the tops of all vehicles, and headlights were dimmed with blue color. No one knew when Italy might enter the conflict, and send planes to this part of the world. The caravan, it was feared, would make an easy target for bombers, if not unmistakably marked with insignia of a nonbelligerent country (page 471).

museum), the Mosque of Ahmed I, or "Blue Mosque," the Bosphorus as far as the Black Sea, and Üsküdar (Scutari), on Asia's shore saw our coming and going. We waxed social for the first time in a month and had the pleasure of returning the American Ambassador and Mrs. MacMurray's hospitality with a dinner party for sixteen under the trailer's marquee.

We could easily have taken our equipment across the Bosphorus to Scutari on the fine ferryboats that make this short run, but the road from Scutari east was in a fortified area that no one was permitted to pass. The Turkish Government most kindly provided us with a large ferry that made the 60-mile journey across the Sea of Marmara to Mudanya in five hours. It was a little rough; and not all our boys were good sailors.

That Kemal Atatürk accomplished miracles in the modernization of the old Turkey of the Sultans none can deny. His chief monuments

are the city of Ankara—the new capital—and a fine system of railroads. Possibly he did not relish the idea of motor competition with his rail carriers.

Whatever the reason, the last apparent road work had been done in the days of the old Greeks. Fahrney swore he could see traces of chariot wheels in the faint track that lurched from Bursa, ancient capital of the Ottoman Empire, at the foot of Mount Olympus (Uludağ), through Eskişehir, to Ankara.

There was never a dull moment on this stretch. As we whizzed along at eight miles an hour, every bridge became a problem in engineering. If it had a few railroad rails under it, fine!

If only the usual wooden beams stood between us and the river beneath, the Buick was first driven over. If the Buick did not cause a sag too alarming, a truck next attempted the crossing. But the big thrill was always the



### To Celebrate a Wedding, Hatay Villagers Dance a Stately "Stomp"

These people, who inhabit the mountains of the Syrian frontier, live in flat-topped houses. Because of the lack of level ground in the region, they do much of their farm work, such as threshing, on the roofs. Marriage is observed with elaborate ceremonies (page 469).

trailer. What groans and snaps and saggings!

Fortunately all the bridges held. What we could have done if one had collapsed is hard to imagine. Timber for rebuilding was nonexistent.

Ankara (Angora) is an amazing monument to the energy and vision of one man. The ancient town crowns a hill in the middle of an area of vast, barren highlands. Surrounding it and blending into its maze of narrow alleys is stately, majestic Ankara the new. There are wide boulevards, architecture of the most modern type, and American bustle in the busy movements of the people.

#### Turkish Courtesy Limitless

Our reception by the Turkish Government was gracious. Not only were we assured of every facility, but Mr. Burhan Belge, a high official in the Press Department, offered personally to accompany us. His charming, and

exceedingly pretty, young Hungarian wife also came along.

A delightful camp site was given us—the summer home of the great Atatürk. Grateful to us after our many dusty miles were the fresh green of his orchard, the cool streams—part of the remarkable irrigation system he created—and the simple peasant hut which was his private retreat from public cares.

Most of our photographic effort in Turkey was to be concentrated in the south. We learned in Ankara that the road across the Taurus Mountains to the Mediterranean was wholly impossible at that time. Without a moment's hesitation the authorities placed at our disposal a train of freight cars for the equipment and a single Diesel-driven passenger car to take us from Kayseri, 200 miles southeast of Ankara, to Adana, on the plains near the sea.

Our rolling home and the rest of the equipment went one evening, and we passed the



*Curious Visitors Joined the Authors at Luncheon Between Beyrouth and Damascus*

In the yard of a wayside inn, tables were set beside a little mountain stream where a flock of remarkably tame and pampered geese was swimming.

night in a hotel in Kayseri.\* This experience made the air conditioning, running water, electric light, and other conveniences of the trailer infinitely precious to us.

We left in our Diesel car the next morning. The ride was fascinating. Absorbing scenery were the towering crags and deep gorges of the rocky Taurus Mountains. When lunchtime came, we stopped at a small station where a delicious repast awaited us. In the late afternoon we passed through the Cilician Gates and descended to the flat plains.

We were most anxious to obtain a record of the fast-vanishing customs of the Turkoman (Turkmen) people as they make their annual migration from the fastnesses of the Taurus Mountains to the Adana plains. A telegram from Mr. Belge arranged everything.

A tribe was enlisted to pose for us; the entire Adana museum was called upon for Turkoman tents, camel saddles, and costumes,

\* See "Multicolored Cones of Cappadocia," NATIONAL GEOGRAPHIC MAGAZINE, December, 1939.

and three truckloads of props were hauled out to our selected location where the tribe awaited us.

*All in a Turkoman's Life*

The details of the Turkomans' making their nightly camps, from the first unloading of the gaily carpeted saddlebags from the camels to the placing of these in a row to form the rear wall of the black goathair tent, the covering of the floor with skins of animals and rugs, and the hanging of the weapons on the middle tent pole, were filmed.

We shot the chores of their camp life: making butter from goats' milk; baking pancake-like unleavened bread, and weaving carpets. We even persuaded the giggly oldest daughter of the chief to go through the routine of an engagement ceremony.

After our experiences on the north Turkish roads, we were not disappointed when word came that floods had damaged a bridge between Adana and Iskenderon (Alexandretta)



### Well-to-do Damascenes Wear Occidental Costumes in Their Oriental Living Room

In striking contrast are the fashions from Paris and the Moorish-tiled walls and floor. The sofas are covered with Turkish rugs. The room is a niche off the central courtyard, or patio.

and that the Government had generously placed the private freight train at our disposal for this short run. We did not use the Diesel car, but slept right in the trailer as it traveled on its freight car.

Alexandretta, subject of dispute since the Treaty of Versailles, had been ceded back by the French to the Turks only a few days before our arrival, and the Turkish occupation of the city was not yet complete.

We had intended to continue right on to Syria, but our prodigal hosts wanted a film of the Hatay villagers who inhabit the mountainous region of the Syrian frontier. In view of their many kindnesses we could hardly refuse, even though the rumbles of war, which came over our radio from all Europe, and from Schneectady, were becoming louder day by day.

For two days we worked in a tiny village of stone houses, perched precariously on the side of a rugged mountain (page 467).

Our grand finale was a wedding ceremony, and Larry had selected a pretty peasant girl

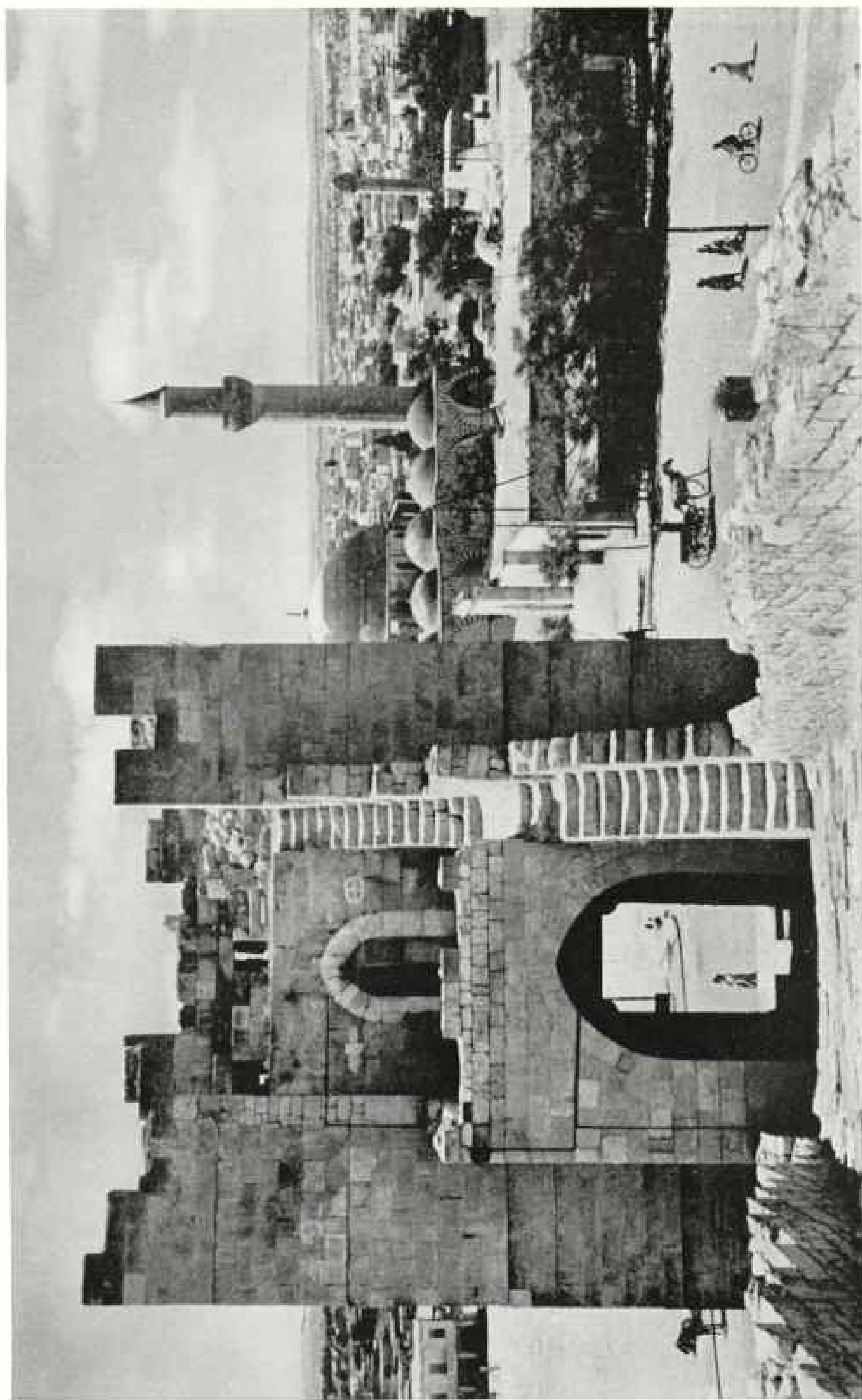
to play the lead. There was much palavering when our object was made clear. Marriage is evidently something not a matter for play acting among the Hatay people. We gathered that the girl might find herself actually married to our leading man!

A hasty change was effected in the cast, and a married woman substituted; evidently there was no risk of bigamy. Affairs proceeded, with Mr. Belge directing several hundred villagers by means of our sound-recording apparatus, which we turned into a public-address system.

### War Almost Wrecks All Plans

At the Syrian frontier a representative of the High Commissioner's Office in Beyrouth (Beirut) awaited us with ominous news. It was September 1, and the conflagration bade fair to break out any hour. We hurried the few miles to Alep (Aleppo), making camp on the heights outside the city (page 470).

We were in a completely bankrupt condition,



The Citadel of Aleppo Stands on an Artificial Hill

In the remote past this remarkable eminence was raised above the otherwise entirely flat landscape. The present ruins, reached by the dilapidated stone steps seen in the foreground, surmount others more ancient and long since buried.

as usual (page 463), but this time we had nearly empty gasoline tanks as well.

Gasoline was 60 cents a gallon in Turkey, 18 cents a gallon in Syria. Our tanks held nearly 600 gallons! Syria was the place to fill them.

Early in the morning of September 2, Larry presented himself at the bank.

"I should like to cash some money on this letter of credit."

A long, lusty laugh was the only answer.

"We have dealt only in French francs for the last several days, monsieur," the clerk replied.

"You mean to say that, faced with war, your bank will not sell francs for dollars when you gain by the exchange?" an astonished Larry asked the clerk.

A shrug was the only reply.

"But how am I to buy gasoline for our expedition?" Larry wanted to know.

An even louder laugh was the answer.

#### Gasoline Ration, Five Liters a Day!

"You will not require much money to buy the quantity they will give you, monsieur. It is only five liters (1.32 gallons) a day."

Five liters a day! and we needed almost 2,000 liters (about 530 gallons) to fill up all tanks! No money; and ten people to be fed! Larry went into action with all sails drawing.

Money for the pressing requirements of food was borrowed from the General Motors and Standard Oil agents, who had been instructed to show us every courtesy.

All gasoline tanks were emptied into the auxiliary engine tank so that our electrical generators would continue to function. The local military authorities, who had superseded the civilian government in control of all matters, were visited. An ominous line of commandeered vehicles stood before the Quartier Général.

"Mon Général," Larry addressed the C.O. of the city, "we are here on schedule, in accordance with arrangements your Government has been fully aware of for many months. There are ten of us, and our appetites are enormous. At the rate of five liters of *essence* a day, the war will be over before you are rid of us; and you are apt to find your food supplies greatly diminished. Don't you think it would be wiser to give us enough fuel to get us out of the country?"

Much telephoning to Beyrouth followed. How much gasoline did we require? Well, a thousand liters (265 gallons) would get us to Beyrouth. A thousand liters! Name of a name! That would move a dozen tanks to Beyrouth! Well, if the general would honor

us with a visit to our camp, he might see something about the size of a dozen tanks. Much grumbling, but finally Larry left with the precious order for 1,000 liters (200 days' ration) of gasoline.

Then another call at the bank. As a great favor, sufficient money to buy half the gasoline was forthcoming. The balance must be obtained in Lattaquié (Latakia).

September 3 found us on our way south following the direct shore route and with all ideas of visiting Baalbek and other famous cities jettisoned. We had seen too many mile-long columns of commandeered trucks and motorcars to venture to do other than get through Syria as rapidly as possible. What if a French general should take a fancy to our large trailer as field headquarters?

As we paused at Lattaquié to get the balance of the money and gasoline, the general mobilization orders were being posted. Peggy stood alongside an old French peasant woman down whose cheeks the tears coursed silently. They read the dread announcement which was headed:

Armée de la Mer—Armée de la Terre  
Ordre de Mobilisation Générale

The old woman turned to Peggy. "Things like this make sisters of us all," she said.

The day was more than hot. The smooth, straight macadam road followed the sea. Just beyond Tripoli we came to a beautiful beach where the blue Mediterranean softly lapped the white sands. Peggy suggested that a swim might help. The water was like pea soup, but we went on considerably refreshed. As night fell, we crept through the blacked-out streets of Beyrouth, and took two hours to find the American University (page 466).

There President Bayard Dodge met us and permitted us to put our traveling home on the loveliest part of the campus, a spot from which we had a view of the city and sea below and of the magnificent college buildings behind us.

#### Beyrouth Made a Madhouse by War

Beyrouth was a seething hive of troops and of people who wanted to be somewhere else—just where didn't appear to matter. Ships came and went, taking on and discharging staggering human cargoes. Buses that had not already been commandeered were doing a tremendous business running frantic passengers to Haifa, where there were rail connections for Cairo; or over the mountains to Baalbek, where the main north line connected with the Taurus Express. Thomas Cook & Son's office was a madhouse. The manager had not been to bed in three days.

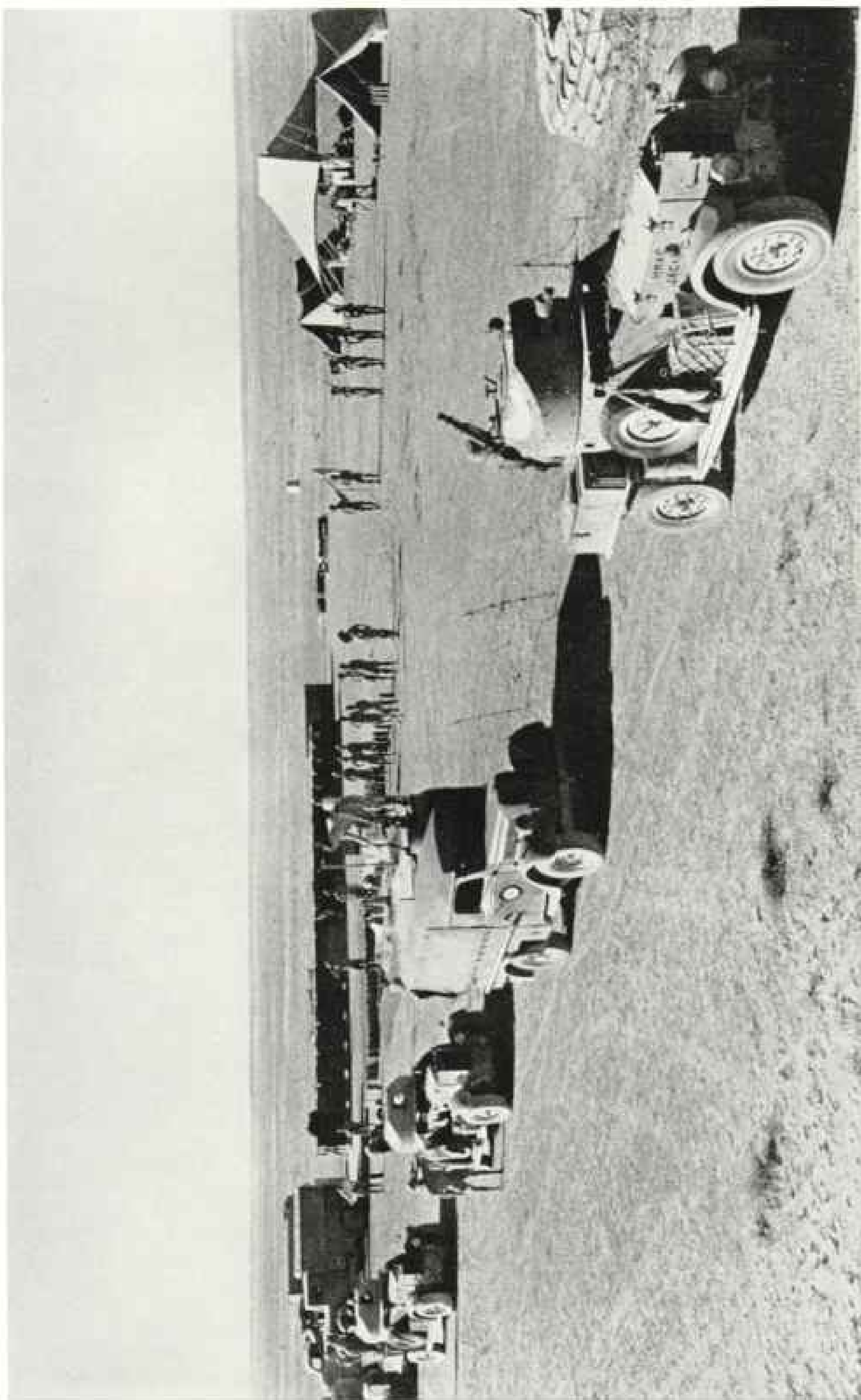




Jerusalem Bound, 79 Royal Air Force Trucks Leave the Station Near Rutba Wells



Near Baghdad the Sheik's Horsemen Pass in Review Before the Luncheon Guests (page 474)



**In the Burning Desert Between Rutba Wells and Baghdad, a Detachment of the British Royal Air Force Carries On**

Only source of water is miles away at the walled fort at Rutba, and sole means of amusement is chasing gazelles in armored cars. The semimonthly advent of a train of army trucks enroute from Jerusalem to the aviation field at Dhibban is a major event in the monotonous lives of the men at this station. As far as the eye can see in every direction is a flat expanse of sandy gravel (page 474).

We stayed only long enough to paint large American flags on the roofs of each of our vehicles (the Italian air force was expected any minute) and to be delightfully entertained by Mr. and Mrs. Ely E. Palmer, the American consul general and his wife. The dinner they gave consisted of fascinating Syrian dishes, all highly spiced.

Then we set our course east over the mountains to Damas (Damascus). Another strong position with the military authorities filled all petrol tanks, and we started out for the 600-mile crossing of the Syrian Desert to Baghdad.

Not even the endless flat expanse of sandy gravel could dampen our spirits. We were traveling due east, away from any possibility of the war's wrecking our plans! We even washed from our headlights the blue paint used in Syria for a black-out.

Peggy was slightly upset at not being permitted a bath, which the appalling dust made a virtual necessity. But our hundred gallons of water were hoarded for drinking purposes. Dishes were "washed" in sand.

Two days out from Damascus, in the middle of the desert, we came to the western outpost at Rutba wells (page 472).<sup>\*</sup> Inside the fort we filled our water tank and luxuriated in hot soapsuds. Four Iraqi officials—Foreign Office, Police, Army, and Department of Education—had come all the way from Baghdad to meet us, bringing with them a squad of Iraq Desert Patrol troops in a machine-gun car to escort us the remaining 300 miles.

Apparently there was unrest among the Bedouin, farther east, and two men had been shot a few days before.

Just outside Rutba the larger trailer hit a terrific bump that bent the front axle. From then on we traveled at snail's pace, offering a marvelous opportunity for any raiding tribes. Our four couriers were nervous and insisted we pass the night within the protective wire of a Royal Air Force camp. With our armed escort this seemed an unnecessary precaution, but, feeling it would be pleasant to hear the English tongue again, we acceded.

#### Dull Life in the Lonely Desert

This camp consisted of three British officers and some 30 Assyrian members of the British Army, who dwelt within an acre of barbed wire and sand-bagged machine-gun nests. Why the officers did not go mad from sheer ennui baffled us (page 473).

Twice a month a 70- or 80-truck convoy from Palestine paused for water on the way to or from the big R. A. F. camp near Baghdad. The rest of the time the sole sport consisted of chasing gazelles in an armored car.

Slowly we bumped across the bridge which spans the Tigris in Baghdad's heart and came to rest in the race-track grounds just behind the pari-mutuel booths. There, we were told, were the only trees that would give shade during the fierce heat of a September afternoon (page 476).

Now that we were beyond the war hazard, we could all relax. We started relaxing by all hands taking a cholera inoculation, for we had heard that there was an epidemic on the Iran-Afghan frontier. Such "relaxation" is not the way to begin a vacation. Administered with a hypodermic that looks as if it came from a veterinarian's bag, the shot virtually cripples the unfortunate arm.

Since we had expressed a desire to film the life of the Bedouin, our four guides introduced us to the Sheik of the tribe of Beni Tamim. He was a charming host. Because he did not speak a word of any tongue but Arabic, conversation was slightly stilted, but the traditional hospitality of his people, with which he showered us, was unbounded.

#### Food Enough for a Multitude

Not only did he permit us to browse around his camp, some 40 miles north of Baghdad, filming the life of his people, but he gave a sumptuous luncheon in our honor.

About fifty guests attended, including the American Minister and Mrs. Knabenshue; the British Ambassador, Sir Basil Cochrane Newton; the French Minister, M. Jean Lescuyer; the Iraqi Prime Minister, and other high Iraqi officials.

We were first given an exhibition of marvelous horsemanship by several thousand of the Sheik's followers (page 472), and then led to the large goathair tent for the inevitable coffee (seemingly 50 per cent sugar) that precedes every business or social act in the Near East.

While this was being consumed, the luncheon was laid on fine oriental carpets in an adjoining tent.

There were huge mounds of rice with whole roasted lambs and vast areas of vegetables, all copiously curried, with stacks of pancakelike bread. It was all delicious, and there was enough in sight to feed an army.

Forewarned by Sir Basil that the Sheik would surely offer her as a great honor the right eye of a roasted lamb, and cautioned that she *must* eat this tidbit with all outward signs of gratification, Peggy had little appetite but sat pale and anxious, awaiting the dreaded moment. When the time arrived, she accepted the horrid object with the utmost politeness.

<sup>\*</sup> See "Flying the World," NATIONAL GEOGRAPHIC MAGAZINE, June, 1932.



#### Feisal II, 4-year-old King of Iraq, Liked American Soft Drinks

Accompanied by his uncle, the Prince Regent, who is sitting behind him, he enjoys refreshments after inspecting the expedition's camp in Baghdad. He is talking earnestly with Mr. Thaw of the boy's father, King Ghazi, who had been killed in a motor accident only a few months before (text below).

and, saying the honor was too great for a woman, handed it to Sir Basil!

The rest of us ate with knives and forks until about to burst, but made no appreciable dents in the mountains of food. We need not have worried about its going to waste, however, for it disappeared "like snow upon the desert's dusty face" when the Sheik's followers were turned loose on it with their fingers.

We returned the Sheik's hospitality by inviting him to our camp for tea and later taking him to Baghdad's chief night club.

We were also honored by a visit to our camp of His Majesty, King Feisal II, and the King's uncle, the Prince Regent. Our readers may remember that this four-year-old boy's father, King Ghazi, was killed in a motor accident April 4, 1939.

His Majesty was fascinated by everything and almost gave his English nurse heart failure by the quantities of Coca-Cola he consumed.

Many a stiflingly hot afternoon (and he

who knows not a Baghdad summer has no conception of heat) was passed in the American Legation's swimming pool and in having tea with the Knabenshues in the air-conditioned Legation home.

Ninety miles northeast of Baghdad we came to Khanaqin, the frontier of Iran. There the flat desert expanses of Iraq end abruptly in the rugged mountains of Iran. A truly magnificent customhouse gives an intimation of the progress that His Imperial Majesty, Reza Shah Pahlevi, has made in his country.

East and north, through Hamadan and Kazvin, the route leads over a succession of passes, some more than eight thousand feet high. At Kazvin we branched east and followed the plateau that abuts the Elburz Mountains, into the capital city of Tehran.

We had had an inkling of the modernization of Iran in the customhouse at the frontier and in the very passable and marvelously policed road that wound its 500 miles to



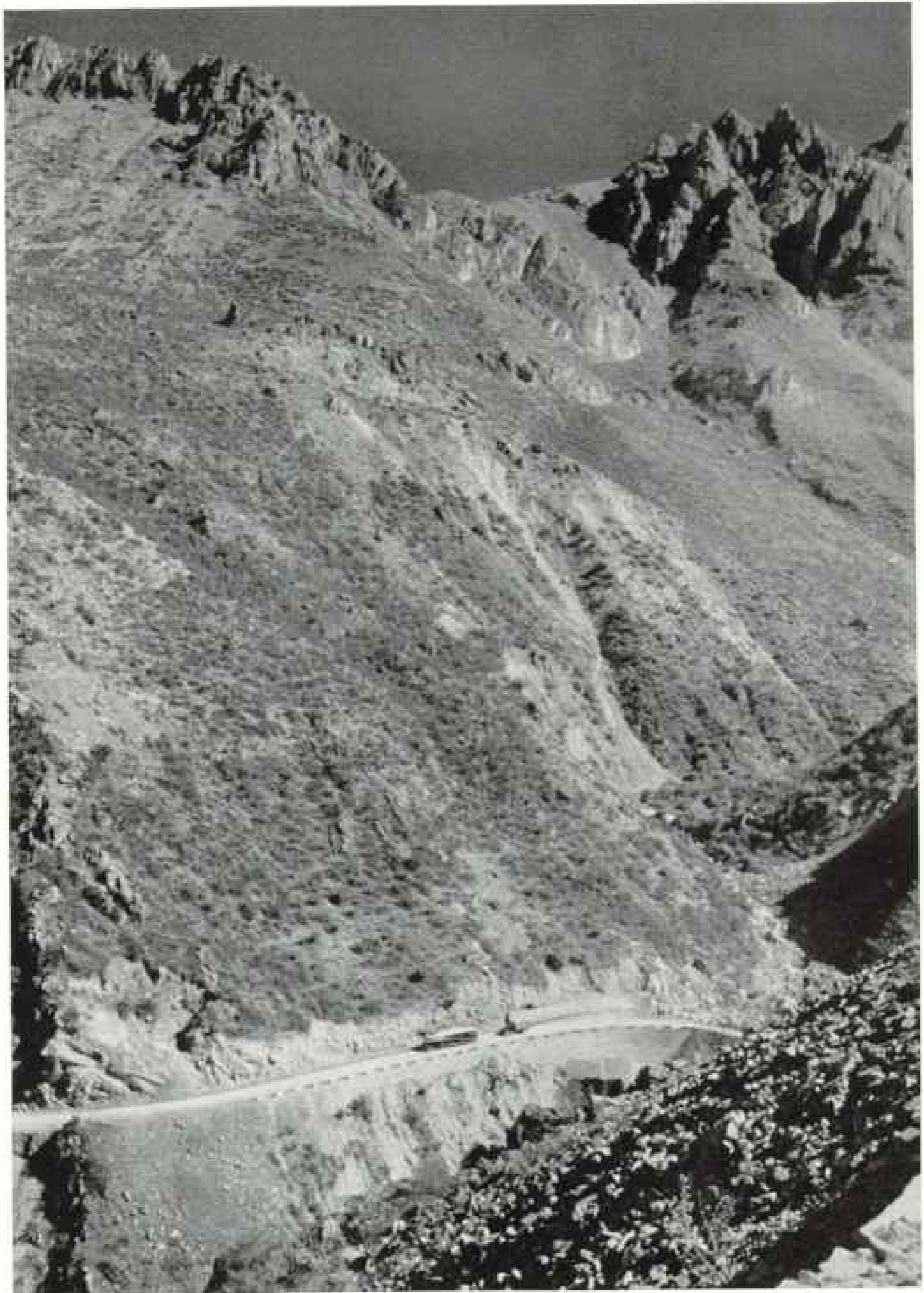
**Across the Tigris in Fabled Baghdad Stretches This Modern Bridge**

Recently built, it replaces the old pontoon structures so long associated with the Baghdad scene. To the right is a mosque (page 474).



**Baghdad Was So Hot That the Boys Put Up Only Mosquito-Net Sleeping Tents**

They served as protection against myriad sand flies which swarmed everywhere. The camp was in the race-track grounds near the pari-mutuel booths, strange modern touch in the city of Harun-al-Rashid.



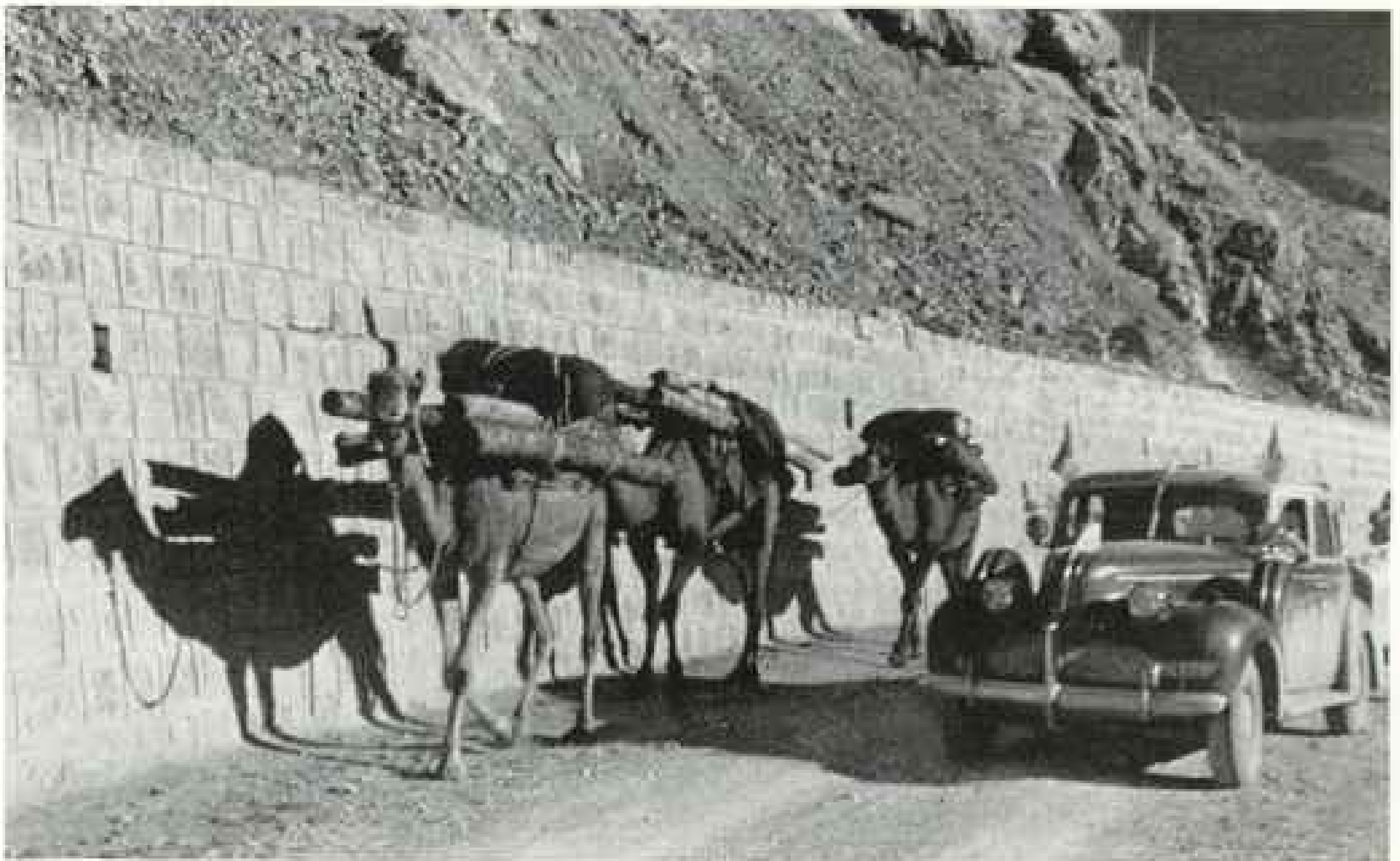
Down the Rocky, Barren Elburz Mountains Winds the Road to Chalus, Iran

Following it gave the members of the expedition a taste of all kinds of weather. They experienced burning heat and desert dryness, the chill of winter on the heights, and the humidity of dense rain forests on the lower altitudes near the Caspian Sea (pages 478-480).



#### Iranian Artistry Flowers in the Great Mosque of Meshed

The edifice is covered with exquisite tiles forming intricate patterns. The dome on the right and the lining of the central archway are thickly gilded. The dome on the left and the minarets are blue (page 480).



#### Old and Modern Caravans Share the New Chalus Road Over the Kandavan Pass

A triumph of engineering is this highway which connects the arid southern highlands of Iran with the rain-swept coastal belt of the Caspian Sea. The altitude here in the Elburz Mountains is 7,000 feet.

Tehran. But it was the capital itself that brought this out most forcefully.

To grasp the significance of this amazing development, one must remember that a scant 15 years ago the great majority of Iran's 15,000,000 inhabitants were still dwelling in the Middle Ages.

In a country almost three times the size of France, its southern sections were under British domination, its northern region under Russian influence, its central parts overrun with bandits, and its entire area dormant under many of the modes of life of a thousand years ago.

#### Tehran Product of Modern Magic

In the incredibly short span of 15 years Iran has been jerked from the Middle Ages to the 20th century, and this fantastic feat has been entirely due to the boundless energy and farsightedness, coupled with a necessary ruthlessness, of one man: His Majesty the Shah!

The crippling hold of the mullahs (priests) over the people was broken, foreign domination ended, banditry suppressed, and a large and most efficient police force spread over the country.

The miserable lot of the women was changed to practical European freedom for their sex; and, with the flowing gold of the oil wells in the southwest, a 20th-century state evolved in the unbelievably short period of 180 months!\*

A railroad that is a marvel of engineering reaches from the Caspian to the Persian Gulf; thousands of miles of motorable roads have replaced the camel-caravan tracks; a modern army has been built up; and education is spreading among the masses.

The modern city of Tehran, which has risen among the mud hovels of prewar Persia,



A Tunnel Was Under Construction at the Top of the Chalus Road

Although the work was not completed, there was an open way wide enough for the trailer, and the expedition had no difficulty in going through. The highway represents an amazingly difficult road-building achievement.

is an architectural wonder. It aptly expresses the amazing progress of the country as a whole.

We passed some time in Tehran, camping in the grounds of the American Legation, through courtesy of Mr. Cornelius Van H. Engert, legation counselor. It was a typical Persian garden, with its running water and fragile beauty of floral growth.

#### A Side Trip to Fabled Isfahan

Before leaving Tehran, to continue our journey east, we made a round trip, 275 miles south, to the ancient capital and center of arts and crafts—Isfahan. We stayed only two days in this lovely city on the Zinda River,

\* See "Old and New in Persia," NATIONAL GEOGRAPHIC MAGAZINE, September, 1939.





#### Parts of the Road to Chalus Are Still Under Construction

At this point in the Elburz Mountains, Iran, heavy blasting had been done to widen the track, and the way was temporarily blocked by huge fragments of rock. Workmen obligingly opened a narrow path and the expedition got through with little difficulty.

where we marveled at the beauty of the Madrasah (sacred college) on the grand boulevard known as "Chahar Bagh." Its fine blue tiles give the whole massive structure the appearance of a great iridescent bubble.

There we watched the master craftsmen painting their incredibly fine miniatures on ivory and mother of pearl.

On the way back we paused at Qum to see the tomb of Fatima, sister of the prophet Reza. The golden dome we saw, glistening in the sun, from afar.

From the 3,800-foot plateau, on which Tehran stands, the Shah has caused to be built a road over the 9,300-foot Kandavan Pass of the Elburz Mountains to Chalus.

It is a wonderful piece of engineering culminating in a tunnel more than a mile long at the summit. From the chilly altitude of nearly two miles the road swoops to the Caspian, which our altimeter showed to be about 85 feet below sea level!

#### A Toast at the Grave of Omar Khayyam

Here, as we had been warned, we experienced a sharp change in the weather.

The fertile stretch of country between the Caspian and the mountains is as rainy as the

southern plateau country is arid. Rain poured all the time we were skirting this sea, for a hundred miles.

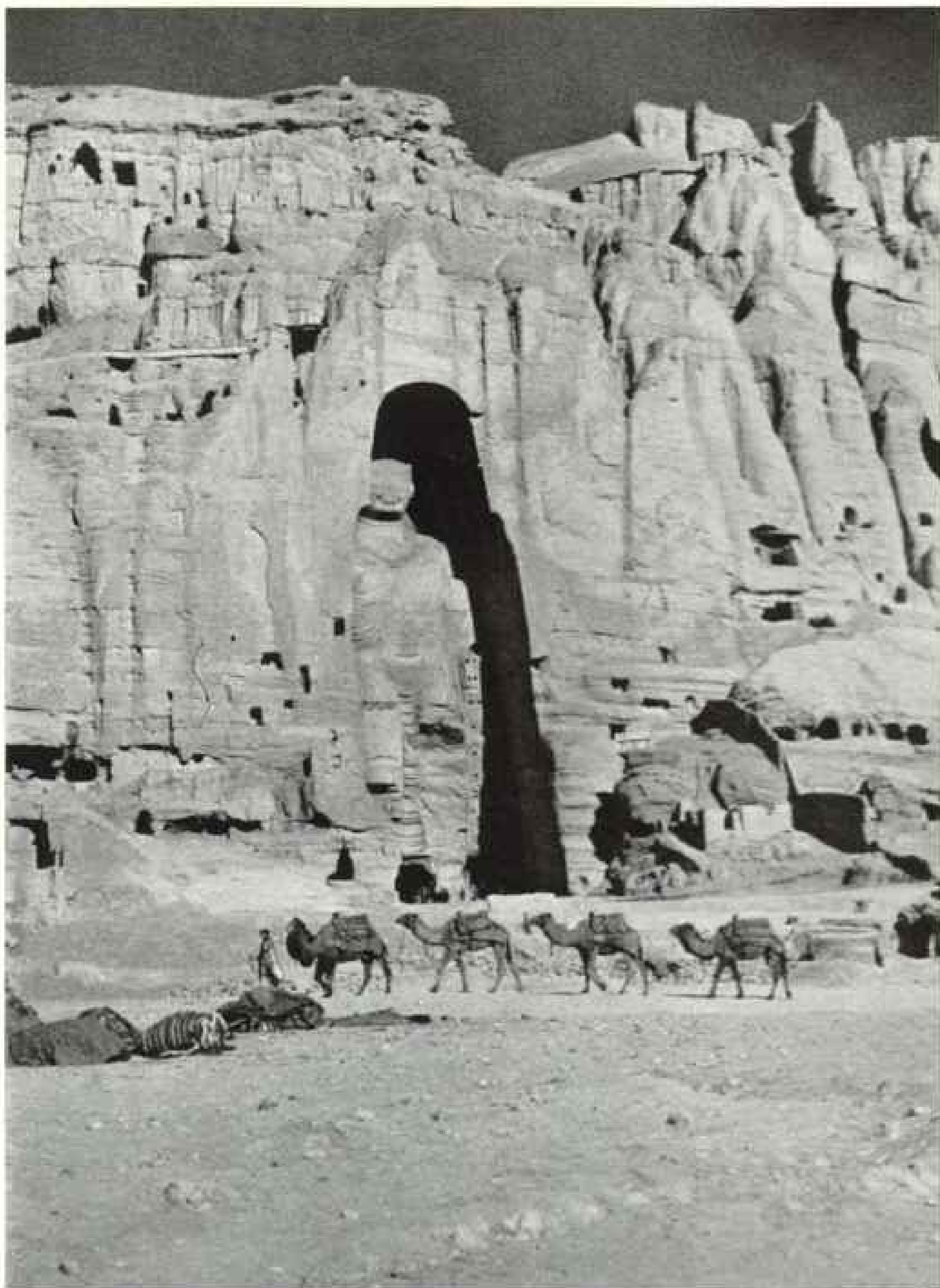
As we approached Meshed, Larry thought it appropriate to stop in Nishapur and drink a silent toast to the poet Omar Khayyam.

While one of our cars was undergoing repairs, we visited that architectural wonder, the Great Mosque of Meshed, the shrine of Imam Reza (page 478). The largest mosque in Iran (one of the largest in the world), this impressed us as also being the most beautiful. Its four great courtyards have each three blue-tiled arches and one gold arch, the whole covering acres of ground.

Here we had a bit of bad news that caused us to make a long detour. We learned that the bridge over the Helmand River, between Farah and Kandahar, in Afghanistan, had been washed away, thus precluding our entry into that country via Herat.

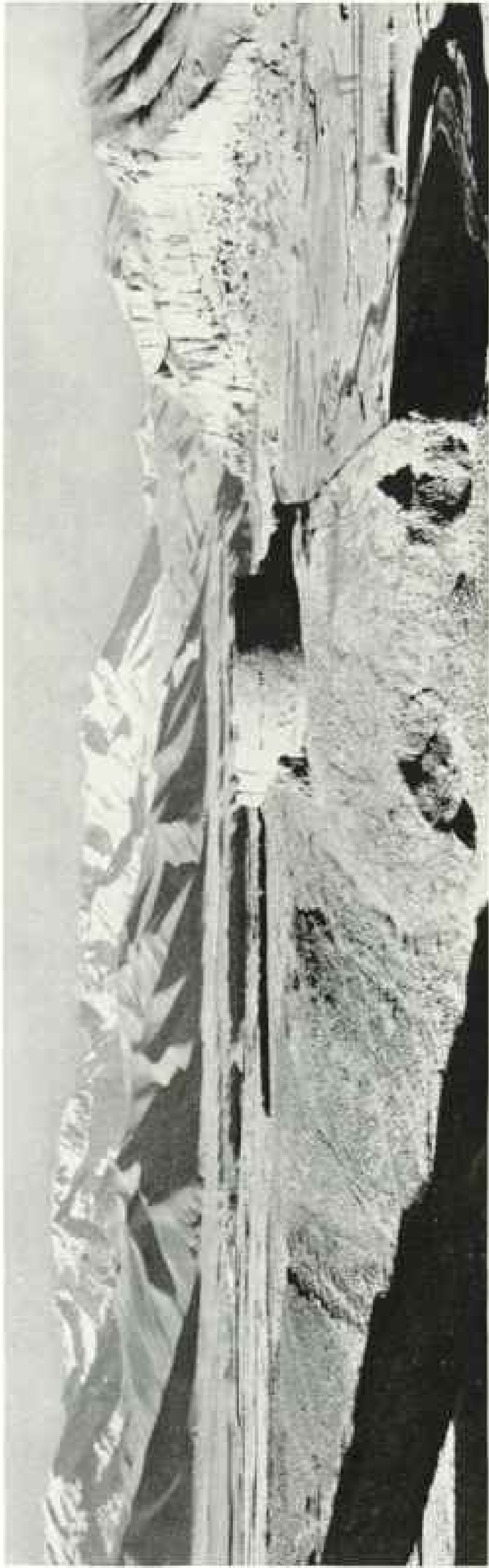
We were forced to make a long loop to the south, traveling via Zahidan (Duzdab), across Baluchistan to Quetta, and northwest to Kandahar, nearly 1,000 miles farther than the shorter loop through Afghanistan.

However, there was little use in bemoaning our ill fortune. At least our forced revision of

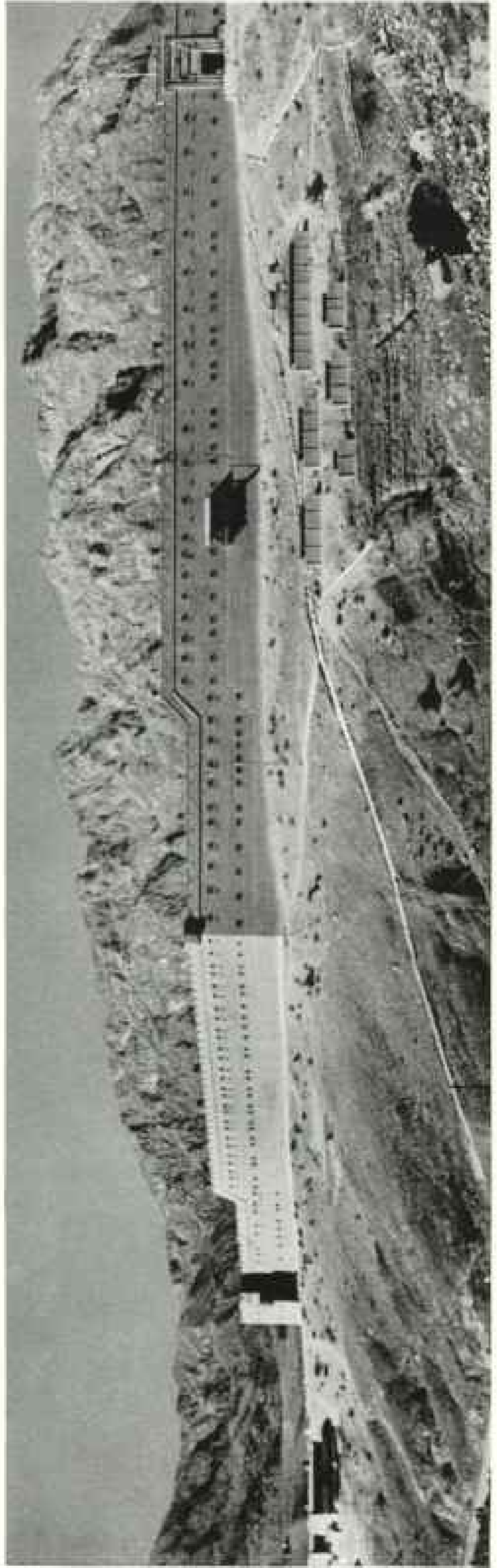


A Buddha 175 Feet High Looks Out from a Sandstone Cliff in Bamian Valley

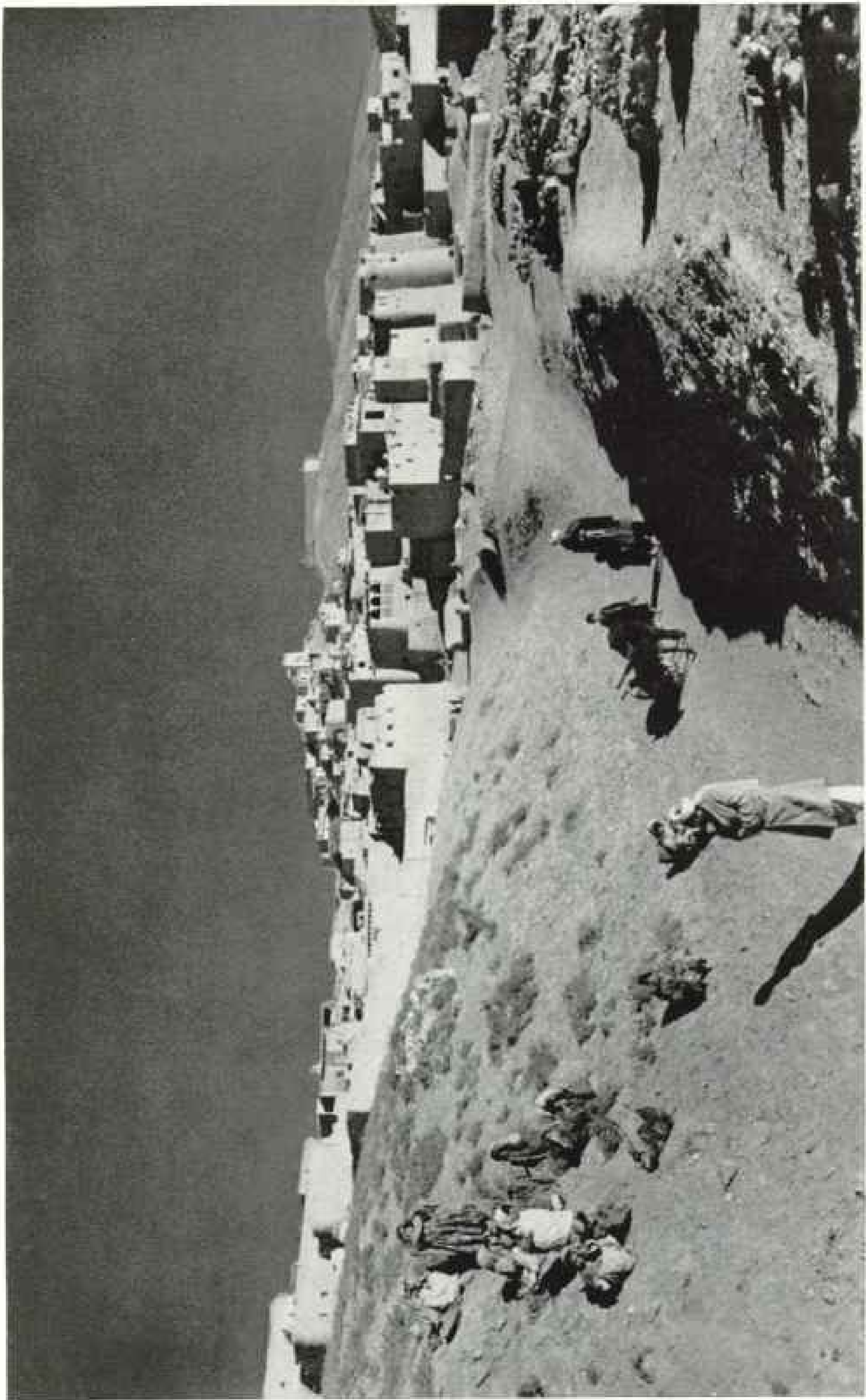
This is the larger of two mammoth figures of the founder of the faith; the other measures about 116 feet in height (page 485). In the hundreds of caves which still pockmark the yellow rock walls in Afghanistan, Buddhist monks and their followers dwelt more than a thousand years ago, before Mohammedanism conquered this region. The expedition found the weather intensely cold at this altitude, about 8,500 feet. Yet camel caravans were moving along the way, even in November (page 482).



Cold and Rugged Is the High Bamian Valley of Afghanistan (pages 481 and 485)

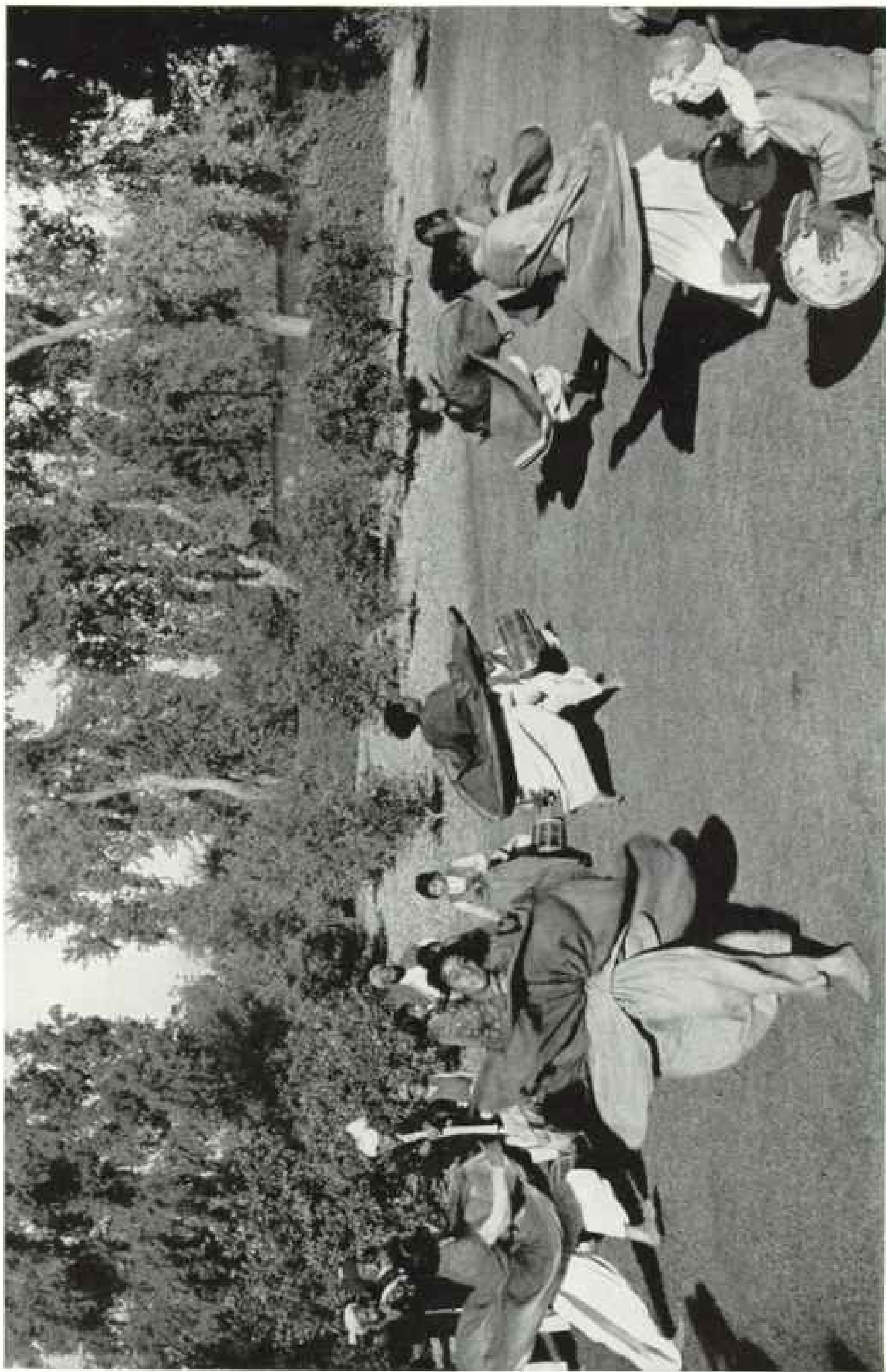


Fort Shagai Guards the Khyber Pass, a Historic Gateway to India (page 486)



Way Station on the Kabul-Kandahar Trade Route Is the Walled City of Ghazni

Ancient capital of the plundering Ghasnavid dynasty, this city is still important in commerce. During the Afghan Wars, Ghazni was captured and partly destroyed by the British. There is a legend that centuries ago its entire population save a single family was smothered in a tremendous snowstorm.



**Boy Dancers Dressed and Made Up Like Women Perform a Brilliant Ballet in Peshawar**

Their routine includes much whirling to display their brightly colored costumes, and all their mannerisms are feminine. Only in Northwest Frontier Province of India was the expedition entertained by such a troupe.

route took us out of some bad cholera country in western Afghanistan, and we derived such consolation from this as we could in bumping south over the 700 miles of arid plateau to Zahedan.

The north Baluchistan track to Quetta introduced a new hazard—soft drift sand. It took us three days to man-haul our vehicles over 38 miles of particularly bad going, for in places we had first to make as hard a foundation as possible with sticks cut from the sparse desert vegetation.

At Nushki there was a short, but exceedingly steep and narrow pass that took us the better part of two hours to get over and necessitated more use of our towropes. However, as we approached Quetta we came upon a fine macadam road that made us forget our past troubles.

#### Quetta, Where Death Struck Quickly

Quetta, the scene of the disastrous earthquake of May 31, 1935, is a city of temporary structures rising on the ruins that crushed 30,000 persons to death in a few seconds.

Despite the fact that the crescent moon heralded the beginning of the month of Ramadan, when the Mohammedan expects to do as little work as is necessary, we had a not inconsiderable amount of overhauling to do on our vehicles, and rounded up as many mechanics as possible. We got some sixteen.

It was estimated that their combined efforts did not quite equal in useful work those of a single American mechanic's helper. We appealed to the army, which co-operated nobly in the loan of men and the use of its shops. In four days we were ready for the road again.

The fine British military road that leads from Quetta north to the Afghan frontier ceased at Chaman. There a representative of the Afghan Government awaited us, and we entered the territory of one of the least-known independent monarchies on earth.

A fair road led us northwest to Kandahar, where we branched right and followed a valley through Ghazni, a most romantic old walled city (page 483), forded the Kabul River, and rolled into the guest palace in Kabul just as the sun was setting behind the jagged mountains which hem the capital city on every side.

We passed a wholly delightful week in and around Kabul. Its streets had a never-ending fascination. Every type in the East could be seen, from the blond Russians, north of the Oxus, to the swarthy south Afghan tribesman, and from the hawklike features of the Arab to the Mongolian eyes of the squat inhabitants of Chinese Turkistan.

The ponderous march of a line of great shaggy Bactrian camels would be interrupted by the vociferous honking of an Indian motorbus, which had been intended by its American manufacturers to carry 20 passengers, but which never carried less than 40, plus high-piled baggage on the roof.

These buses resembled stately Spanish galleons in a heavy sea as they bumped along the muddy streets. Horses, mules, donkeys, goats, veiled women (Afghans are the Puritans of Islam), heavily laden men, and men too proud to carry anything but the inevitable rifle—all made a kaleidoscopic scene.

Kabul was for many centuries a junction of the Great Silk Routes, a point where the main route continued to China and a branch dropped down to India.

We dined at the British Legation with Lieut. Col. Sir William Kerr Fraser-Tytler and saw where the Legation staff was besieged for several weeks in 1928-9, and rescued by airplanes from India. We were invited to bring our equipment over to the Royal Palace, where His Majesty and staff inspected it minutely.

The present monarch is in his twenties and has been on the throne only a few years. He has much interest in the mechanization of his army; hence the close inspection of our equipment. He and Larry conversed in their only common tongue, German.

#### Past the Buddhas of Bamian

Northwest of Kabul, over the 9,800-foot Shibar Pass, we traversed the historic route in eastern Afghanistan connecting with Russia. We passed through the gorges of Bulola, vertical cliffs rising hundreds of feet, with barely room for a motorcar to squeeze between the rocky wall and a frozen stream. We debouched into the great Bamian Valley, 8,500 feet up (pages 481 and 482).\*

Flanked on one side by the snow-capped peaks of the Hindu Kush, the other side of the Bamian Valley is formed of clifflike walls. More than a thousand years ago this valley was a holy spot of Buddhism. Hundreds of caves dot the cliff side, wherein dwelt Buddhist monks and their followers. Two enormous Buddhas, one about 175 feet and one 116 feet high, are carved into the solid rock.

Is it not strange that the religion founded by the Nepalese prince of the sixth century B. C. should have engulfed China's teeming millions, conquered part of Afghanistan (to be later replaced by the Word of the Prophet),

\* See "Citroën-Haardt Trans-Asiatic Expedition Reaches Kashmir," NATIONAL GEOGRAPHIC MAGAZINE, October, 1931.



Mr. Thuw Dons Bedouin Garb Near Baghdad

At his right side stands the Sheik of Mosul's nephew, Sheik Mesham, the only one of the leaders whose costume was large enough for the guest. The pure white headdress is worn only by ruling members of the tribe, and gold bands about it signify chieftainship.

left but a small impress on India, and settled in Ceylon, where it exists to this day?

It is less than 200 miles from Kabul, over the Khyber, to India, and this is Afghanistan's important trade route. The road, narrow, twisting, rough, and precipitous, is also unquestionably the worst we saw in the country.

Our progress was further impeded by seemingly endless lines of camel caravans descending in the annual migration of the frontier tribesmen to the plains of India. Strings of a hundred are frequently led by one family that rides the lead camels, while the others string out for a mile behind.

#### Over the Khyber Toward Delhi

After the passes of Iran and Afghanistan, the 26-mile-long Khyber was somewhat of a disappointment. A magnificent highway for motorcars only (camels and donkeys have a parallel road of their own) leads from the frontier to Landi Kotal, summit of the pass, then on to the plains of north India, Jamrud Fort, and to Peshawar. What it lacks in height (the summit registered about 3,500 feet on our altimeter) it made up for in scenic beauty.

The British-owned strip, through the Tribal Territory area, is only a few miles wide, but

is heavily guarded. On every hill is a block-house, and in the middle of the pass Fort Shagai could house a regiment (page 482). Every few miles are monuments to past battles with the elusive tribesmen in this vital area.

Hanging on the steep slopes of the rocky mountains are the fortified villages of the Afridi. The scene was all very Kiplinguesque. We had reached India, 11,063 miles and five months out of Paris!

The sprawling frontier city of Peshawar, surrounded by barbed wire and heavily garrisoned, received us. The Governor of the Northwest Frontier Province entertained us at luncheon and arranged for us to camp in the grounds of the chief minister's house.

Only a comparatively short distance separated us from the end of the first part of our adventure: the imperial capital city of Delhi. Down the wide, straight, tree-shaded stretches of the great northern highway, the Grand Trunk Road, we raced.

Rawalpindi, with its vast army cantonment; Lahore, with its Shalimar Gardens; Amritsar, with its Golden Temple of the Sikhs, slipped behind us. Just in good time for a Christmas dinner we pitched camp in the shadow of the old Fort. We had arrived.

All India lay before us.

# Our Air Frontier in Alaska

BY MAJOR GENERAL H. H. ARNOLD

*Chief of Air Corps, U. S. Army*

NOT ALL the outlying "ramparts we watch" are tropical or semitropical. Alaska, mighty northwest territory, reaches far beyond the Arctic Circle. It presents many new and tricky problems for those charged with the Nation's defense, particularly airmen.

Alaska has leaped almost overnight from the Stone Age to aviation. By air is the logical way to travel between its widely scattered cities. But air transport in the far north is still studded with question marks.

Winter temperatures of 60° below zero in some parts of Alaska's interior call for new types of clothing and tent hangars. Sudden cold fogs quickly coat plane wings with ice. Spongy tundra makes landing fields expensive and difficult to build. Metal bomb sights, machine guns, and plane controls need special adjustments in the intense cold. The Russians and the Finns faced some of these problems last winter, but Alaska presents many of its own.

Since the United States bought Alaska for \$7,200,000 in 1867, little money has been spent on its defense. Little was needed until the airplane proved that the air route of the future between the Orient and the Americas would follow the great circle via Alaska.

In recent months ships, men, planes, guns, and other materials of war have been rushed north to strengthen this strategic outpost. Runways and hangars are being built. Tent cities have sprung up. Weather stations and beacon points are being erected, and harbors dredged. New land and naval bases in construction dot the map of Uncle Sam's northernmost domain.

Almost as much money is being spent on the air defenses of Fairbanks alone as the entire purchase price of Alaska. Altogether, more than \$25,000,000 has been appropriated for Army and Navy works in the Territory.

## Inspecting Our Alaskan Defenses

To see some of these developments, especially those under the wing of the United States Army Air Corps, I made an aerial inspection tour of central and southern Alaska in July.

In a little over a week I flew 10,000 miles, inspecting, on the ground or from the air, Fairbanks, Circle, McGrath, Talkeetna, Tanana Crossing, Anchorage, Seward, Iliamna, Cordova, Yakutat, Juneau, and Sitka (map, page 490).

While the United States sweltered last summer, our sturdy Army Transport Douglas C41 carried my staff and me in 27 hours' flying time to a land where glaciers glisten in the sun and clear streams of ice-cold water flow into deep pools which reflect snow-capped peaks.

Our plane left Washington at seven o'clock in the morning, made stops in Chicago and Bismarck, North Dakota, and arrived in Spokane for the night.

Next morning we headed north, and, after three hours' flying, we were in Prince George, British Columbia. An hour for fueling and customs clearance, and our plane was off for Whitehorse, in Yukon Territory.\*

Turning northwest from Whitehorse and following the long meandering course of the Tanana River, we broke through a dark wall of forest-fire smoke and there, spread out 8,000 feet below, was Fairbanks, near the junction of the Chena and the Tanana (page 493).

A noticeable scar on the landscape southeast of the town marks the new air base being carved from hills, trees, and tundra. Its 7,000-foot runways form the head of a great arrow that points straight to the thriving little city two miles beyond.

## Following an Air Corps Trail

As we landed on the long two-way strip of the commercial field, the citizens of Fairbanks came up to greet us. For me it was a happy reunion with those who had welcomed an expedition of ten Army bombers I led to Alaska in 1934, following the air trail blazed by the Army Air Corps in 1920.† Then we mapped a large portion of Alaska and spent several weeks in Fairbanks.

The city at midnight was still light as day, for the sun had set but an hour before. It was merely behind the Arctic Circle and reappeared within an hour. Street lights are not turned on in the summer time in Fairbanks. There is no need.

We had spent only a few hours in Alaska before it was evident that it is one thing to decide that national defense requires air bases up near the Arctic Circle, with air units stationed there, and quite another to accomplish these results.

\* See "Today On 'The Yukon Trail of 1898,'" by Amos Burg, NATIONAL GEOGRAPHIC MAGAZINE, July, 1930.

† See "The First Alaskan Air Expedition," by Captain St. Clair Streett, NATIONAL GEOGRAPHIC MAGAZINE, May, 1922.





Photograph from U. S. Army Air Corps.

### Major General Arnold in His Flying Togs.

The Chief of the Army Air Corps gives the take-off order from the controls of his twin-engined Martin bomber, in which he led a squadron of ten planes to Alaska in 1934. Last summer he flew to Alaska again to inspect new air defenses. The General's fur-lined jacket and helmet are standard cold-weather flying equipment, but are insufficient for wintertime patrols in central and northern Alaska, where temperatures reach 60 degrees below zero, Fahrenheit.

The overseas garrisons of our military forces in the past have generally been in the Tropics—Panama, the Philippines, Puerto Rico, Hawaii; we have had meager experience in military operations in the Frigid Zone and no aviation experience in the Arctic. We have much to learn, and the building of these new air bases soon brings this out.

All building materials, except sand, gravel, and timber, must be imported from the States, and there is only a brief period in the summer for uninterrupted work. The tundra is far from ideal as a land type and texture for airport construction. From several inches to sev-

eral feet of this spongy moss or mixture of mud and vegetable matter must be peeled off to expose the bare gravel before concrete or other surfacing can be laid.

This peeling process is not easy, since the tundra six inches below the surface is permanently frozen the year round. It must be thawed before it can be moved.

### Problems of Arctic Flying

We found, on inspecting the cold-weather station at Fairbanks, that our construction engineers were learning rapidly; they have astonished old settlers who told them airports could not be built in winter. They scraped the snow, thawed the ice, and peeled the tundra in midwinter. So rapidly have they worked that by mid-July we found technical buildings, hangars, and runways nearing completion. Cold-weather tests can be advanced one year. Our airplanes, and combat and maintenance crews, can come this fall rather than next year, as originally planned.

It would be impossible, obviously, to build enough heated hangars to house our General Headquarters Air Force if it should be required suddenly in Alaska, so we must learn how to operate planes left out in the open. That is no mean task. It requires the development of methods and equipment for warming engines and thawing out controls and other movable parts. Wings may have to be thawed out, too, for ice-covered surfaces change shape and assume new and dangerous flying characteristics.

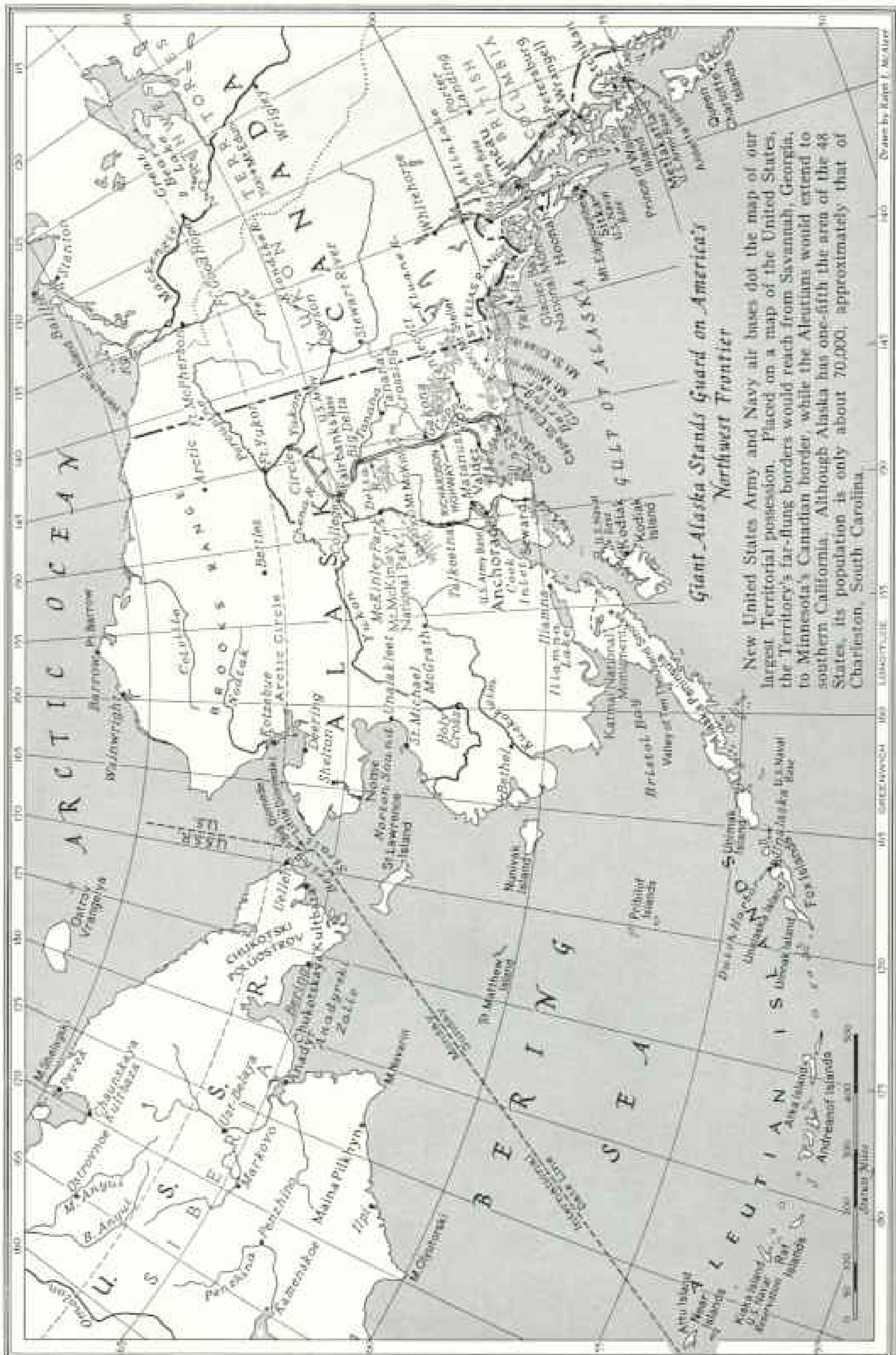
We believe, from reports of our observers who have watched fighting in Arctic climes,



Photograph by Anon. Dora

**From Living Trees Northwest Coast Tribes Made "Family Trees"**

The totem pole is an Indian's manner of depicting his mythological ancestors. Early travelers along the Alaskan coast found no such elaborate poles, although they noted small carved grave posts. Not until the white man's tools became plentiful did totem-pole art flourish. These stand in Sitka National Monument.



**Giant Alaska Stands Guard on America's Northwest Frontier**

New United States Army and Navy air bases dot the map of our largest Territorial possession. Placed on a map of the United States, the Territory's far-flung borders would reach from Savannah, Georgia, to Minnesota's Canadian border, while the Aleutians would extend to southern California. Although Alaska has one-fifth the area of the 48 States, its population is only about 70,000, approximately that of Charleston, South Carolina.

Drawn by Ralph T. McAlister

that special clothing must be devised. There are fewer than 250 suits of the proper type of clothing obtainable in all Alaska. More suits must be made from reindeer fawn by Indian labor at the missions.

The Army Air Corps is not alone concerned in the building of Alaskan bases. The Civil Aeronautics Authority has been busy for more than a year laying out emergency fields. These are vital to any scheme of air defense. We flew to many of them to observe them from the ground or from the air. We chose sites for five weather stations to belt the perimeter of Alaska.

#### Alaska Brews Weather for the States

When these weather stations are occupied this fall, their equipment installed, and their upper air soundings coming in, we shall have our hand on the continental weather pulse for the first time.

Much "flying weather" down in the States originates up Alaska way. New stations for charting upper air currents and temperatures will help to indicate what weather will descend upon us in the Temperate Zone and when it will come.

We studied the broad aspects of the air-defense system in Alaska, comparing map and ground and noting how our bases co-ordinate with the Navy's stations at Sitka and Kodiak. We saw the Aleutian chain, pointing like an accusing finger toward the vast expanses of the Pacific, and noted how close our Alaskan shoulder, from Nome to Point Barrow, comes to Siberia (map, page 490).

Alaskan friends told us of Russian air-base work across the Bering Strait and of activities on lonely Big Diomedé Island (page 504).<sup>\*</sup> Also we learned that German and Japanese walking parties have recently been touring Alaska.

After a detailed inspection of the new Fairbanks air base, we started on a long trek into the interior by automobile and canoe to examine the country, check auxiliary landing fields, and perhaps do a little fishing. Our hosts and guides were Dr. John Sutherland and E. B. Collins, two sourdoughs and proud of it, who came down from the Klondike in 1904.

We drove through the chilly morning along the Richardson Highway, which leads from Fairbanks south to Valdez, a little more than 410 miles. This is the longest motor road in Alaska.

As our highway trailed the Tanana, our host told us tales of this treacherous stream in the early days, and how if one fell overboard his clothing would be so filled with silt within a few minutes that he would sink. The Tanana

has been flowing from glaciers for centuries, and the mills of the gods have been grinding great stones to a granite dust finer than gunpowder and depositing it in the stream.

#### Motor Roads Supplant Dog Trails

Every few miles, as we followed the winding highway, we came to deserted cabins. These, our guides told us, were roadhouses where trapper or prospector rested his dog teams at mealtime or for the night.

"Mary's" is a log roadhouse at Big Delta, on the Tanana, built to serve not only old-timers but also motorists. There is no bridge across the Tanana where the Delta River flows into this stream, and automobiles must cross on a crude cable tram, or flying ferry.

Mary Hansen was born of Italian parents in Alaska. Last winter she decided to go to the hospital in Fairbanks, as it was but a few weeks until her infant was to be born. She hitched her dog team to a sled made by her husband and in two days mushed alone the 96 miles over the frozen crust of a 5-foot snow to the hospital in Fairbanks.

A month later, when her infant daughter was two weeks old, she wrapped the child in furs, placed her on a sled, and again drove the team of six huskies back to her home by the ferry.

Every year Mary enters her dog team in the races for the championship of the northwest, finishing well up among the ablest of her male competitors.

Bert, her husband, is a clever Scandinavian who has sailed the seven seas. He finally drifted out of Bering Sea up the Yukon and the Tanana to join Mary, and to build the roadhouse by the ferry.

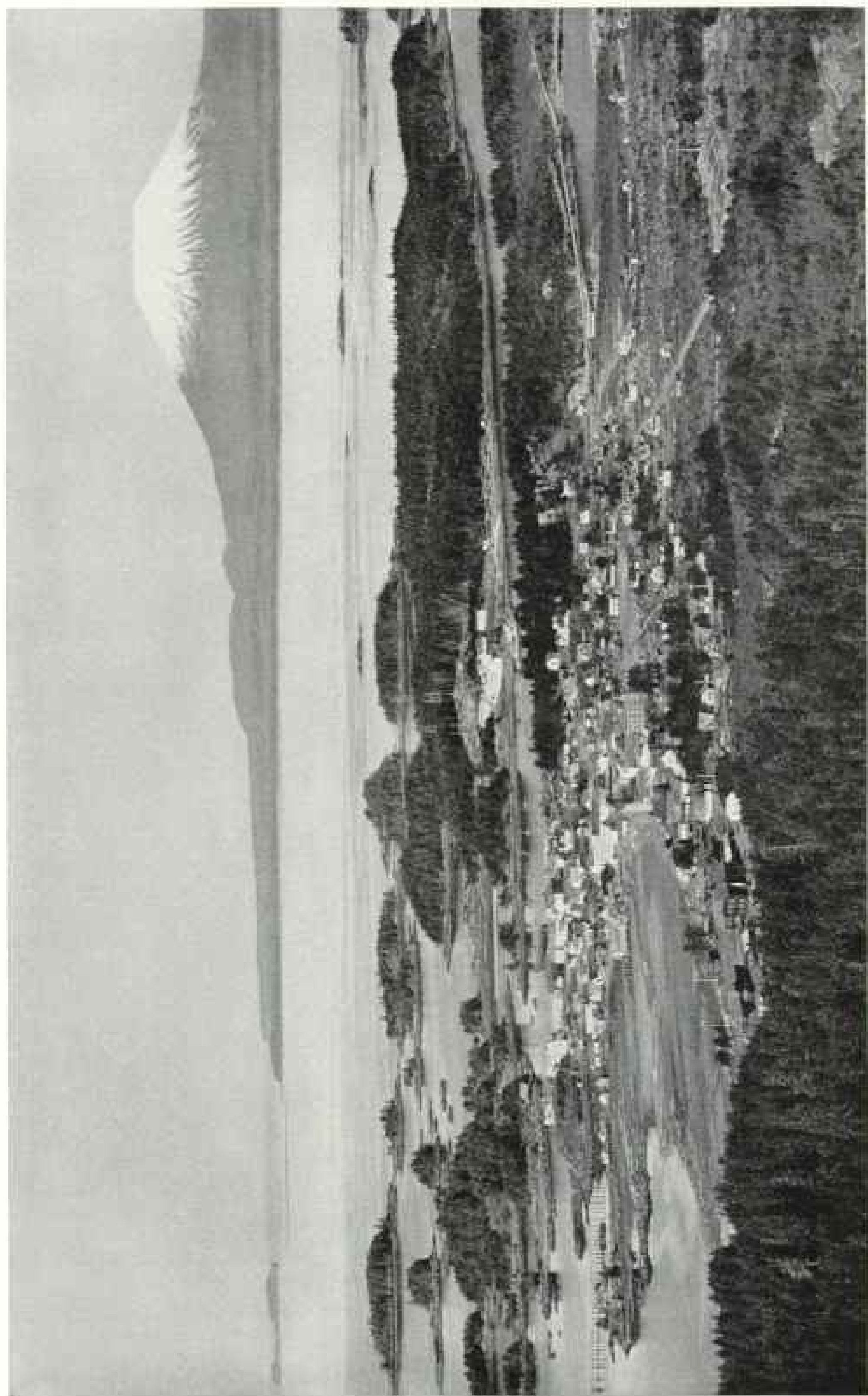
As the sun climbed over the crest of Mount McKinley, highest point on the North American Continent, we dropped canoes into the murky waters of the Tanana and headed upstream.

The sun was hot and the glare and heat reminded us of a summer day back home. The fir and birch forests which lined the banks were unmarked by ax or saw.

#### Why Carl "Settled Down"

In the afternoon we paddled around a great bend and our host said, "Now we are coming to Carl's cabin." A tall, heavy, hairy-chested trapper was standing by the river, ready to pull our canoes to shore. We exchanged greetings and a cold bottle of beer for a glass of his spring water.

<sup>\*</sup> See "Exploring Frozen Fragments of American History," by Henry B. Collins, Jr., NATIONAL GEOGRAPHIC MAGAZINE, May, 1939.



© The Curtis Studio, Seattle

**Snow-crowned Mount Edgecumbe, an Extinct Volcano, Dominates the Strategic Harbor of Sitka**

Capital of Alaska when it was a Russian possession, the historic city is now becoming an important U. S. Navy airplane base. Sitka's outstanding landmark is the old Russian Cathedral of St. Michael, dedicated in 1848.



Photograph by Bradford Washburn

### Fairbanks, Metropolis of Interior Alaska, Has Had Many Distinguished Aerial Visitors

On its well-located commercial field (upper right) Wiley Post, Howard Hughes, and other famous flyers landed to refuel. The new Army air base is being built southeast of the town (upper left). Center for deep placer gold mining, Fairbanks is a thriving city of nearly 4,000 on the meandering Chena River. This photograph was taken north of the city.



Official photograph U. S. Navy

**A Trio of Navy Patrol Bombers Rounds the Gibraltarlike Tip of Cape St. Elias**

Planes from Squadron 41, Seattle, based at Sitka, keep constant watch along the Panhandle, the rocky south coast, and far out into the Aleutian Islands. In addition to Sitka, the Navy has bases at Kodiak and Unalaska, and a listening post on remote Kiska Island (map, page 490).



Photograph by Friedrich Waples.

### Gakona's Landing Field Was Carved from a Wilderness of Trees and Tundra

Alaska is dotted with many small airports, to which planes bring prospectors and supplies bound for remote mining and lumbering regions. Such cleared areas can also be used as emergency landing fields by transport and military planes. This one lies between the Copper River (left) and the Gakona.

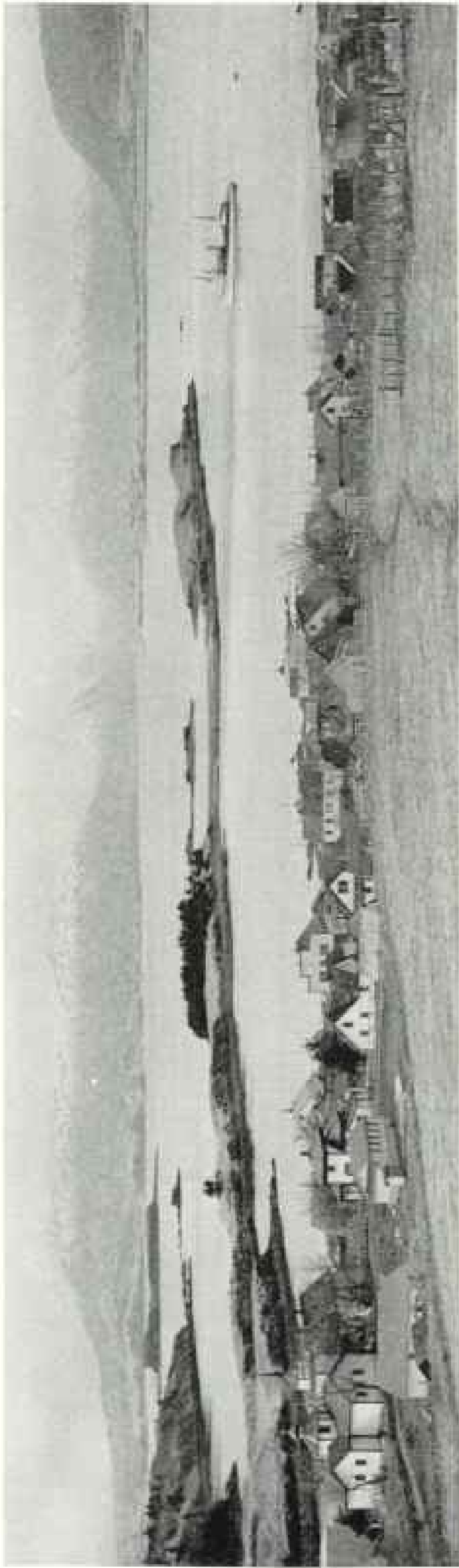




Photograph courtesy Pan American Airways, Inc.

**Clipper Ships; Familiar to the Tropics, Now Link Seattle With Alaska's Capital**

Pan American's new air line provides seven-hour service between Puget Sound and Juneau, compared with three days by steamer up the Inside Passage.



Photograph by Louis H. Haber

**Kodiak, Old Russian Settlement on Kodiak Island, Guards the Western End of the Gulf of Alaska**

In this landlocked harbor the U. S. Navy is building one of its principal Alaskan bases. Back in the wilds of Kodiak Island roams the huge brown Kodiak bear, largest carnivorous animal on earth.



Photograph by Louis B. Huber

**In the Rugged, Storm-tossed Aleutians, Many Aids to Navigation Are Needed**

Members of a shore detail from the U. S. Coast and Geodetic Survey ship *Discoverer* make ready to return to their ship in the small boat (left) after a day spent building a signal atop one of the many rocky islands. With a climate like that of northern Scotland, the Aleutians are often wrapped in mist and fog.

Carl had fought with the Russians, with the Austrians, and in the German Navy. He was with our own Navy for three years and ended his World War service with the Air Corps, giving us much in common to talk about. I asked him why he had chosen this beautiful little valley beside the dark river.

"Well," he replied, quite matter-of-factly, "after thirty years of roaming the earth, I found myself up in this part of the world with the Coast Guard.

"I left the boat and headed inland. On an early fall afternoon I came around this bend in the river in my canoe. Over there a little brown bear was chinning himself on a tree. Down here a little way an old moose was standing knee-deep in the water, her head buried in the lily pads, a young calf alongside her. From that sand bar over there in the stream rose six great white swans and a large flock of Canadian honkers. There were ducks over here by the lagoon.

"I said to myself, 'If this is such a fine place for all the animals, it's good enough for me.' For forty years I had neglected my restin' and my meditatin'. For the last fifteen years I been catchin' up."

We looked at Carl, hale and hearty at 70, and decided there was sense in his philosophy, particularly when we recalled that many of our fellow officers and civilian friends between 40 and 45 are falling by the wayside, with bad hearts from strain and overwork.

Carl's nearest neighbor, twenty miles away, is nearly 80. This old-timer lives alone, works his own trap line in the winter, and tends his fish nets in the summer. Last winter he had a narrow escape from death when seized with an attack of rheumatism. He was unable even to build a fire or feed himself. His dog froze to death on the steps of the cabin because he could not get up and let him in. The old trapper had given himself up.

Flyers passing that way saw no smoke coming from the chimney and landed to investigate. This was normal; flyers do this in Alaska. They found the sorry state of the old trapper, bundled him into their plane, and took him to the hospital, where he recovered.

#### Airplane Makes Land Habitable

Alaskans—white, red, and yellow—of all ages and occupations, point to the airplane as the implement, the instrument, and the medium of transportation which has made most of Alaska habitable. Tell them you are an airman, and they take you instantly to their hearts. Alaska probably has more flying per capita, I was told, than any other section of the world.

In the summer planes land on the few fields or sand bars on wheels, or on the many lakes and rivers on pontoons. In the winter all planes land on skis. Pan American Airways has started a twice-weekly Clipper service between Seattle and Juneau (page 496), connecting with Pacific Alaska Airways to Nome and Bethel, via Fairbanks.

On our way down the Tanana River and away from some of the finest grayling fishing in the world, we passed a gold mine. At the top of a 75-foot shaft, we could see the big buckets of sand and gravel and rock coming up and being dumped high on the scaffold. The gold is recovered by amalgamation (collected on mercury-coated copper plates).

Another mine near by is a placer operation. The side of a hill was being washed away. Although it was summer, the hill was frozen. Cold water melted the crusted gravel tied tight in the ice's grip and started it down into the sluice boxes, where riffles and quicksilver traps retained the gold, while the gravel rolled merrily on.

Other rare things were being uncovered as this hill melted away—the foot of a baby mammoth, the brown hair still good as new, although the infant was buried many thousands of years ago. Near by, miners were beginning to uncover a mastodon. They would cut you a piece of mastodon steak. It is not good, as it is dark and coarse, but it was unique to see meat centuries old.

#### Gold—Then and Now

A little farther along we met the remnant of an Indian tribe. The only male survivor was a young boy of some eleven years. The senior member, a squaw, was now married to a white man. The latter was panning gold, and showed us proudly the takings from a pan—10 to 15 cents' worth of the yellow dust.

"When I came here out of Yukon nearly 40 years ago, we were taking \$100 to \$130 in a single pan," our guide said. "In those days I thought a nugget the size of my thumb was a great find. I was not long in learning that pebbles of that size sometimes mark the end of a strike.

"You may find only one or two such pebbles per month, and it will not pay you to work your claim. It is better to find gold dust on top, because then the chances are that you will have sand and gravel below before you come to the bottom nuggets of pebble size."

In addition to Fairbanks, the Army Air Corps defense plans include Anchorage, 260 miles to the south, near the coast at the head of the Cook Inlet. There we have just begun



Photograph by Pacific Aerial Surveys, Inc.

### The University of Alaska Is Only 115 Miles South of the Arctic Circle

America's farthest-north institution of higher learning has grown from six students in 1922 to more than 200. Its campus stands on a knoll at College, near Fairbanks, in the midst of rich farms and forest along the Tanana River. Many adults from Fairbanks take courses in geology, metallurgy, mining, chemistry, education, arts, and letters during the long winter months of enforced idleness. The student newspaper is called "Farthest North Collegian."

to scratch the surface of the largest air base in Alaska. The land has been procured and foundations for buildings completed. Runways are being cleared.

Construction of this type in Alaska is of necessity slow. All material and much of the labor must be brought in from Seattle and other outside points. Shelter must be built for the labor. Transportation is slow, but, despite these handicaps, within a year we should be flying planes from this new air base which guards the south-central coast of the Territory.

Already a battalion of infantry has arrived to garrison the area and to help erect structures. During the winter these infantrymen will be introduced to the life of a foot soldier up by the Arctic Circle.

New ways of life are coming to Alaskans. The little town of Anchorage had 3,200 people

last spring. We shall move several times that many soldiers into the air base. Food which our soldiers now consume has to be shipped in from the States, with the exception of some garden produce, a few gallons of milk, and the fresh eggs produced in the Matanuska colony, 30 to 40 miles away.

### The Boom at Matanuska

Matanuska, a famous experiment, should flourish if it can raise enough farm products to make the new Army and Navy posts less dependent upon imported food. Farmers from Wisconsin, Minnesota, and other northern States, who emigrated to this rich Matanuska Valley in search of homes, good land, and moisture, live a short distance from the expanding air base at Anchorage.

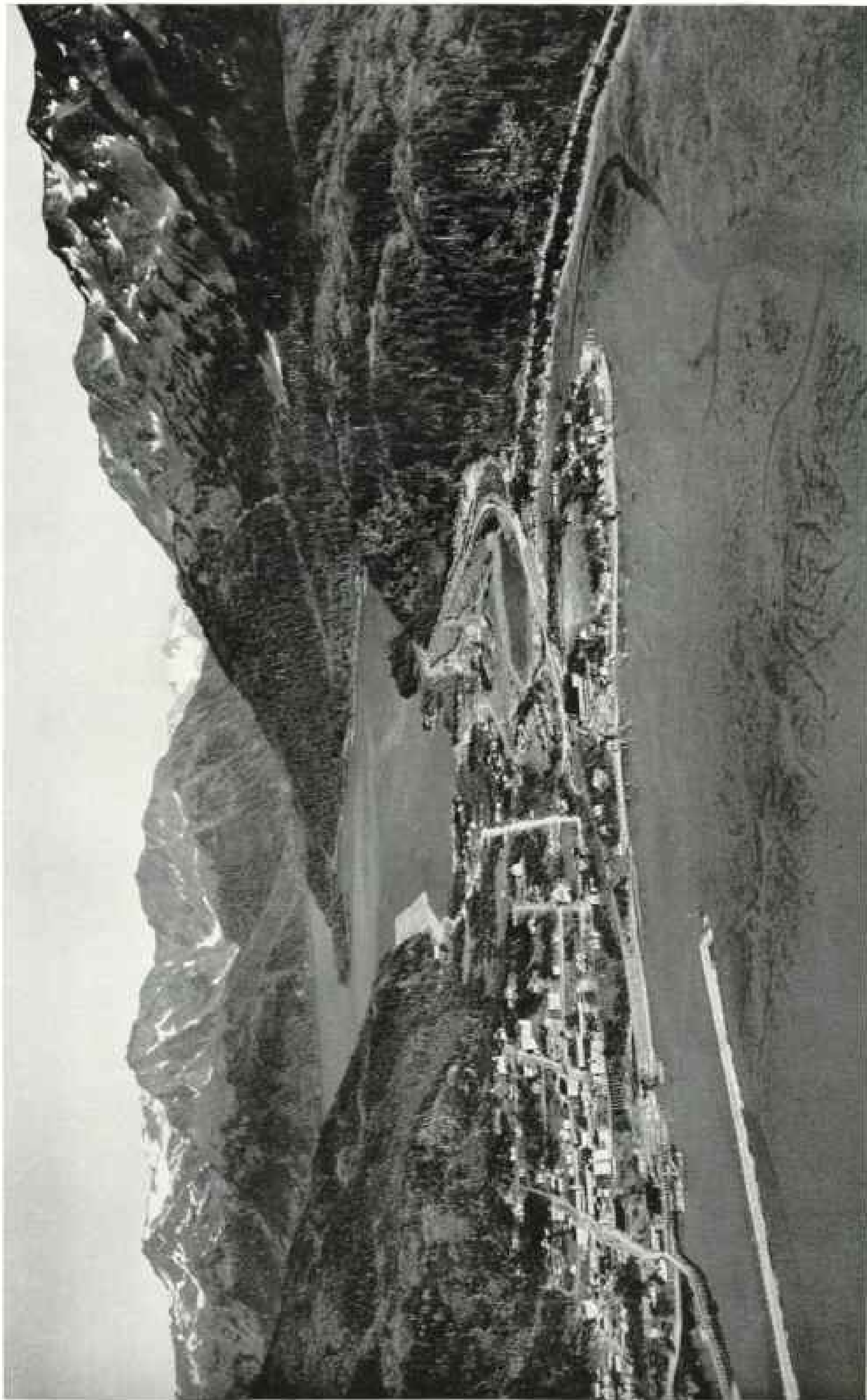
On a reconnaissance flight out of Anchorage, down Lake Iliamna way, we saw large flocks



Photograph by Anna Durr

**Fishing Fleet and Gold Mine, Chief Sources of Alaska's Income, Greet the Visitor to Juneau**

The Territory's capital and largest city (middle distance) lies on the sheltered Inside Passage, about halfway up the Panhandle. On the hillside (right) is a lode mine, whose thundering quartz mill rivals the lone prospector with his pan and the giant dredge in wresting golden riches from the Alaskan earth.



Photograph by Bradford Washburn

### Cordova, on a Strip Between Lake and Sea, Once Was a Bustling Copper-shipping Port

A railway, closed in 1938, linked this southern Alaska city with the rich Kennicott copper country. More than \$100,000,000 worth of the red metal poured through Cordova before the ore was exhausted. In its early boom days miners roistered in 26 saloons, one of which was transformed into a church on Sunday by lowering an altar from the roof beams. The collection plate was a bear mug in which silver dollars were dropped. Like most enterprising Alaskan towns today, Cordova has an airport (left center, on the lake shore).



Photograph by James Hutz

### "Alaska—A Land of Flowers; Not Ice and Snow"

Thus residents of the southeastern Panhandle describe their climate, modified by ocean currents. Long hours of sunlight in summer also help produce such luxuriant gardens as this, in front of a mink farm near Wrangell. Mink and silver, red, and blue fox furs are sources of income in southeastern Alaska and on islands off the coast.

of mountain sheep grazing at the 5,000-foot level on mountainsides. As we passed them, only a hundred feet off our right wing, they showed little concern, but the rams shook their great horns, museum pieces, at us in belligerent protest.

A little farther along, not far north of the Valley of Ten Thousand Smokes, discovered by the National Geographic Society,\* we were thrilled to see the hulk of a great grizzly sleeping in the sun. He merely raised his head unconcernedly as our plane roared past, for he knew that not even the largest eagle will interrupt the nap of a grizzly.

Later we headed toward Bering Strait to look over landing fields and airway areas and to locate weather stations. A rare day had torn the hood from Mount McKinley † and there she rose, with glaciers at her feet, deep fir forests up her sides, tons of brilliant snow heaped like a bridal veil at her forehead.

\* See, by Robert F. Griggs, in the NATIONAL GEOGRAPHIC MAGAZINE, "Valley of Ten Thousand Smokes," January, 1917, February, 1918, and "Our Greatest National Monument," September, 1921.

† See "Over the Roof of Our Continent," by Bradford Washburn, NATIONAL GEOGRAPHIC MAGAZINE, July, 1938.

Viewed from afar, more than a hundred miles away, she gave the impression of a huge measure of ice cream which had been carelessly spilled on the plateau.

### A Railroad Adventure

As a guest of Otto F. Ohlson, General Manager of the Alaska Railroad, we took a short inspection trip in his private car, an auto with steel rims for riding the rails. Occasionally we saw moose, wolves, and bears as we rode through the virgin country.

At a small town with only eight houses, I read on a bulletin board an enthusiastic letter addressed to the Chief of the Air Corps, inviting him to establish an air base in this little village, which, it related, had wonderful advantages not possessed by other places. The letter was signed by the president of the local chamber of commerce.

The Chief of the Air Corps received this information first hand because he had not received the original, which had just been forwarded to Washington!

This caused considerable embarrassment to the president of the chamber of commerce, because he didn't realize that the rough-look-



Photograph by Arno Blaz

### Their Indian Forefathers Found Safe Haven at Metlakatla

A successful refugee colony was founded by the native followers of the English missionary, Father Duncan, on Annette Island, near Ketchikan, in 1887. Today their island is the scene of much activity as Army engineers, U. S. Forest Service technicians, and a crew of 400 C.C.C. boys complete a strategic airport which will serve as an intermediate landing field for U. S. Army Air Corps planes flying between Seattle and the big new bases at Anchorage and Fairbanks. It will also serve commercial aviation.

ing wayfarers were in reality officials from Washington.

Farther along, the good old gas buggy went "sour," several miles from the nearest habitation.

The General Manager of the Alaska Railroad, the Chief of the Air Corps, and two or three staff assistants pushed the car along the tracks until it came to a steam shovel, the crew of which quit work and towed our little car to the nearest roundhouse, where it was repaired.

In spite of these delays, however, we were able to reach the hotel at McKinley Park Station in time to see the big mountain in all its glory at 11 o'clock at night, when the sun gleams like a red jewel above it.

#### Mount McKinley a Natural Beacon

When we turned homeward, Nature favored us with another rare view. Flying alongside Mount McKinley, we could see the great cracks in the glacier, and just above, snow-capped, rose the top of the Alaskan world almost in our grasp. North America's tallest peak forms a natural beacon night

and day for flyers, commercial and military.

As we flew east and then south toward the Panhandle of Alaska, the clouds were on the mountains.

There were rain and snow east of Cordova (page 501), and over the Bering Glacier. Cloud blankets hid Mount Steller, Mount Miller, and Mount St. Elias from 10,000 to 18,000 feet up.

Finally we turned inland, came along the Kluane River, and landed at Juneau, capital of Alaska (page 500).\*

#### And Then, Salmon Fishing

We had an invitation from Governor Ernest Gruening to inspect the airfield not far from Juneau, consider with him plans for its expansion, and then have a look at the glacier behind the town. There was an added invitation to go salmon fishing.

The inspection and the fishing expedition developed as advertised. Governor Gruening produced better than a salmon apiece, weighing 18 to 25 pounds, which even with our

\* See "'Nakwasina' Goes North," by Jack Calvin, NATIONAL GEOGRAPHIC MAGAZINE, July, 1933.





Photograph by Henry B. Phillips, Jr.

### Where the U. S. S. R. Is But a "Stone's Throw" from the U. S. A.

Across this narrow strip of water American Little Diomedé Island (foreground) faces Russian Big Diomedé Island. From the latter come reports of recent activities (page 491). Both the international boundary and the international date line pass between the islands, so that an entire day is gained or lost in making the short boat trip between the two. The Diomedes are situated about midway between Siberia and Alaska in Bering Strait, which here is only 55 miles wide.

lack of skill we were able to hook according to instructions.

We wanted a look at Ketchikan and Metlakatla (the latter an auxiliary airfield), Prince Rupert, and the water route down Seattle way, but the weather was not favorable. So we headed northeast again to take the inland route, across Atlin Lake south of Whitehorse and into Prince George, and in the afternoon we were back in Spokane.

Another day and we were home.

#### Airways of the Future

Air bases and airways facilities, emergency landing fields, radio beacons, weather stations, and other air improvements which the Federal Government is introducing in Alaska

are equally usable by civil air commerce.

They lie along the logical air routes from the Far East to the industrial centers of the United States. They are the airways of the future.

There is no gainsaying that Alaska will play a vital part in the scheme of national defense. The responsibility which goes along with that realization demands that our air frontiers be made secure.

Some day soon I hope to return to the north. I shall see those air bases completed, and equipped with the clothing and the hangars designed to permit flyers to operate at 50° to 60° below zero.

And again I want to greet the sturdy, hospitable people who inhabit that amazing land called Alaska.

# Hail Colombia!

BY LUIS MARDEN

*With Illustrations from Photographs by the Author*

**I**N SIX hours you can fly from Miami, Florida, to Colombia in South America. Snub-nosed "tin fish," flying 200 miles an hour at 17,000 feet, whisk 33 passengers over the Caribbean Sea from a United States breakfast to a South American lunch.

Thus has aviation foreshortened the Western Hemisphere and made neighbors of peoples who only a short time ago were far apart and virtually strangers.

When I visited the widely separated cities of Colombia, I found that airplanes are the chief means of transportation within the country as well. The map shows why (page 509). Three ranges of the rugged Andes run northward through Colombia, interposing tremendous barriers to road and rail.

The country's capital is enthroned on Andean heights more than a mile and a half above the coasts—six days to two weeks from the Caribbean by river steamer and train, three hours by air.

All kinds of people use the air lines. One day I saw a red-sashed, magenta-robed bishop debark with his entourage from a seaplane.

## German-founded Air Line Now Colombian

Such a premium is placed upon air transport by Colombia's mountainous geography that one of the world's first regularly scheduled air lines was established here. Germans founded it in 1919 and ran the line until this year, when it was nationalized by the Colombian Government.

At Barranquilla, northern Colombian port on the Magdalena River, these planes connect with Dutch and North American lines.

With the captain in charge of the river airport, I watched a big Pan American flying boat glide in for a landing, or, rather, a "watering," as the Spanish language puts it.

"Mail and express packages that leave here tomorrow morning on the Clipper will be in Miami in the afternoon," he said, "and in New York the next morning.

"All our coast trips start from here. The big Boeings that fly to Bogotá and other inland cities leave from the airfield beyond the city."

Barranquilla has many soft-drink and ice-cream stands. The varicolored rows of bottles displayed reminded me of the old-time drug-store windows with their globes of red and green. Most carts or wagons have names;

one I passed daily near my hotel was called "The Hand of God." Another epitomized Barranquilla's progress in the title "From Burro to Airplane."

## Landslide Helped Open the Harbor

Not always has Barranquilla been a seaport; only recently have deep-draft vessels been able to come the seven miles upstream from the mouth of the Magdalena to the city itself. Big sandbars at the river mouth originally prevented the entry of ocean-going steamers. The building of jetties, aided by a submarine landslide that helpfully lowered the bottom, has enabled large ships of several lines to make Barranquilla a port of call since 1935.

Steam navigation of the Magdalena was attempted as long ago as 1825, and an ever-increasing fleet of paddle-wheelers has carried passengers and freight between Barranquilla and upstream ports. The twin-stacked stern-wheelers, reminiscent of Mark Twain days on the Mississippi, are made in the United States, shipped piecemeal to Colombia, and reassembled on the banks of the Magdalena (Color Plates III and XII).

For the benefit of my camera the captain of a fast packet volunteered to put his craft through her paces.

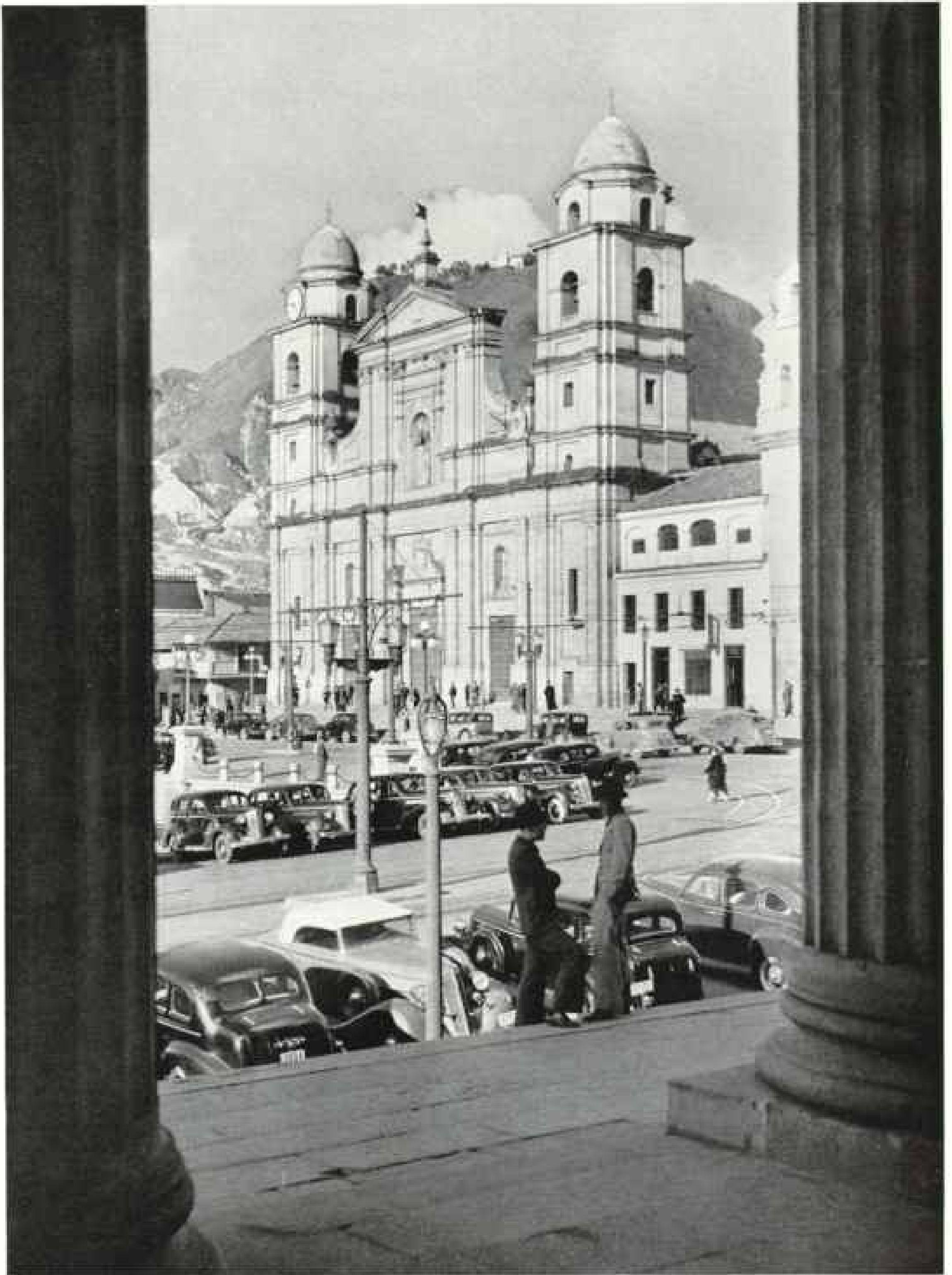
"Have no care," said he. "Everything is as good as arranged."

Taking me on board at the warehouses where freight is loaded on the barges pushed by the steamers, he put me ashore at a grassy spot and churned obligingly up and down until I had enough pictures. He even had his engineer open valves so that twin stacks poured out smoke especially thick and black.

## Cows Eat Water Hyacinths

Near the passenger terminal dense masses of floating water hyacinths like those which clog Louisiana bayous had collected in back eddies of the steamboat canals. There were not enough in the fast-flowing main stream to impede navigation, but bordering the road from the docks to the city a vivid green carpet of hyacinths undulated gently on the surface of marshland water. Cows grazing on the succulent plants were nearly submerged in what seemed to be solid turf.

Most of industrial and commercial Barranquilla has been built up in the last ten years.



Lofty Monserrate Shrine Gleams Between the Towers of Bogotá Cathedral

Columns of the portico of Colombia's National Capitol frame this view of the Plaza de Bolívar and the Cathedral (page 522). Bogotá was founded in 1538 and named for Bacatá, Indian chief whose tribe occupied the land where the city now stands.



### Every Street Is a Forum and Every Café a Town Hall in Bogotá

Here citizens discuss business, politics, señoritas, and each other on Seventh Avenue, the capital's principal thoroughfare. When congestion is thickest, about five o'clock in the afternoon, all vehicles except streetcars are prohibited. Two friends at the left grasp each other by the upper arm in the conventional gesture of greeting. The headline in the *Siglo* (Century) of Bogotá, dated just after war was declared, says, "Germany proclaims she will attack neither France nor England."

Single-story straw-thatched houses are still seen beside multi-storied office buildings, and horse-drawn carriages with orange-painted wheels compete with streamlined automobile cabs of United States manufacture.

"Luncheria Americana," says a sign over a quick-lunch restaurant, itself an imported institution, at the city's busiest corner.

#### Stop Lights Serve Also as Billboards

Traffic stop-and-go lights are oversized and cylindrical. The red section is generally lettered with some short advertising plug, such as "Buy Buick!" Because no one stops on the green light, of course, that segment bears no legend.

Many industries and factories in Barranquilla belie its character of hot tropical port. Cotton, wool and rayon fabrics, beer, rubber sheets, oxygen, macaroni, ice, hats, ships, soap, shoes, metal furniture, and cement tile—all these and more are made on the banks of the Magdalena.

The English manager of a textile mill showed me sacks of raw cotton brought down from upstream ports. The sacks are purchased by weight. "If we were running a

foundry as well as a textile mill, we would have plenty of raw material," the manager remarked wryly, showing me a rusty heap of scrap iron. Fractured anvils, cracked engine blocks, and the like are frequently inserted in the bags of cotton to add weight.

Despite the increment of old metal, however, this largest cotton mill of Colombia manages to spin, weave, dye, and finish 300,000 pounds of cotton each month.

#### "Cartagena of the Indies"

Cartagena, southwest of Barranquilla along the coast, is perhaps the best preserved of the old Spanish fortified cities in the Americas. I drove there one morning over the automobile road from Barranquilla.

Just outside the city proper the hill called La Popa looms up on the flat horizon. At one time the strongest fortress of the walled city commanded the harbor entrances from atop this hill. Massive ruined ramparts and forts testify that Cartagena of the Indies—as it was and is still sometimes called—well deserved the reputation of being the most strongly fortified place in the New World (Plates I and X).



#### A One-man "Fur Sale"

Outside the Hotel Granada, Bogotá's patriarchal pelt dealer offers skins of jaguars and other animals. Both he and the boy wear the short woolen poncho of the highlands. Except in the early-morning chill, these are usually thrown back over the shoulders.

Galleons from Spain came regularly to Cartagena to take on gold and silver for the royal treasury. In their wake came—invariably—Drake, Morgan, and the rest of the adventurers who for more than 150 years found Cartagena as much a regular source of revenue as did the Spanish royal treasury.

Through the triple-arched Bridge Gate, surmounted by a steeple and the "public clock," we went into the center of the city. The enclosed plaza, with its cobblestones, wooden-barred balconies, and open carriages, suggests the Cartagena of two centuries ago.

Most of Cartagena's narrow, straight streets are partly shaded by wide overhanging wooden balconies that run along the upper stories of

the houses. The balconies usually have bars of white-painted ornately turned wood. As the sun climbs higher toward the middle of the day, the intensely blue shadows retreat under the balconies, and each street is left deserted, with a line of white fire down the middle (page 510).

#### Crabs Walk Cartagena's Streets

The nights are different; then the old city is at its best. As I walked down to the end of a street, things scuttled away before me in the darkness with a dry scratching sound. By the light of a corner lamp I saw that they were gray crabs, apparently come up from the beach beyond the embrasured walls, so close is the sea to Cartagena.

As in Manhattan, nearly every street, if followed far enough, leads to the water. As I approached the darker shadows that indicated the sea wall at the end of the street, a flat-toned whistle sounded softly before me. Its melancholy note was taken up far to the right, and then

in diminishing succession other whistles answered faintly along the ramparts.

Up on the wall a clink of metal and the red dot of a cigarette indicated the night watchman. I hailed him cautiously and he invited me to come up.

"No," he said, in answer to my question, "a regular guard is no longer kept on the walls; there is no need. Night watchmen still are, however, stationed at different points throughout the city and periodically we whistle to each other to pass the word along that all is well."

Many more than a handful of night watchmen once kept guard on the ramparts of Cartagena. From the time of its founding in

1533, the city grew rapidly; it became increasingly important as a leading seaport of the Spanish colonies, and with its prosperity grew the military defenses.

In 1543 a Frenchman was the first of the "boucaniers" to raid Cartagena. He took from the treasury about \$40,000 in gold. That began a regular series of depredations that lasted until the end of the 17th century.

But all this was mere "chicken feed" compared with the final exploit of the buccaneers in 1697. In conjunction with French naval vessels under the Baron de Pointis, they bombarded the port for 14 days. When the city fell, they took from the vaults of Cartagena fabulous sums in gold and silver.

To cruise passengers who stop briefly, Cartagena is known as the place to get all sorts of things made of tortoise shell. Visiting the leading worker of this craft, I found him soaking and scraping plates of shell from a carapace nearly a yard long.

"This is not the shell of the same turtle usually sold for eating," he explained. "Though the flesh of this *tortuga*, too, is edible, the other one, the green turtle, is more esteemed as food. And, to balance things, the shell of the green turtle is practically worthless. Turtles, like Christians (human beings), have their specialties, too."

"But how do you bend and form the shell into so many shapes?" I asked, noticing that he worked with only the simplest of tools—small saws, pliers, and files. "With steam," he replied.

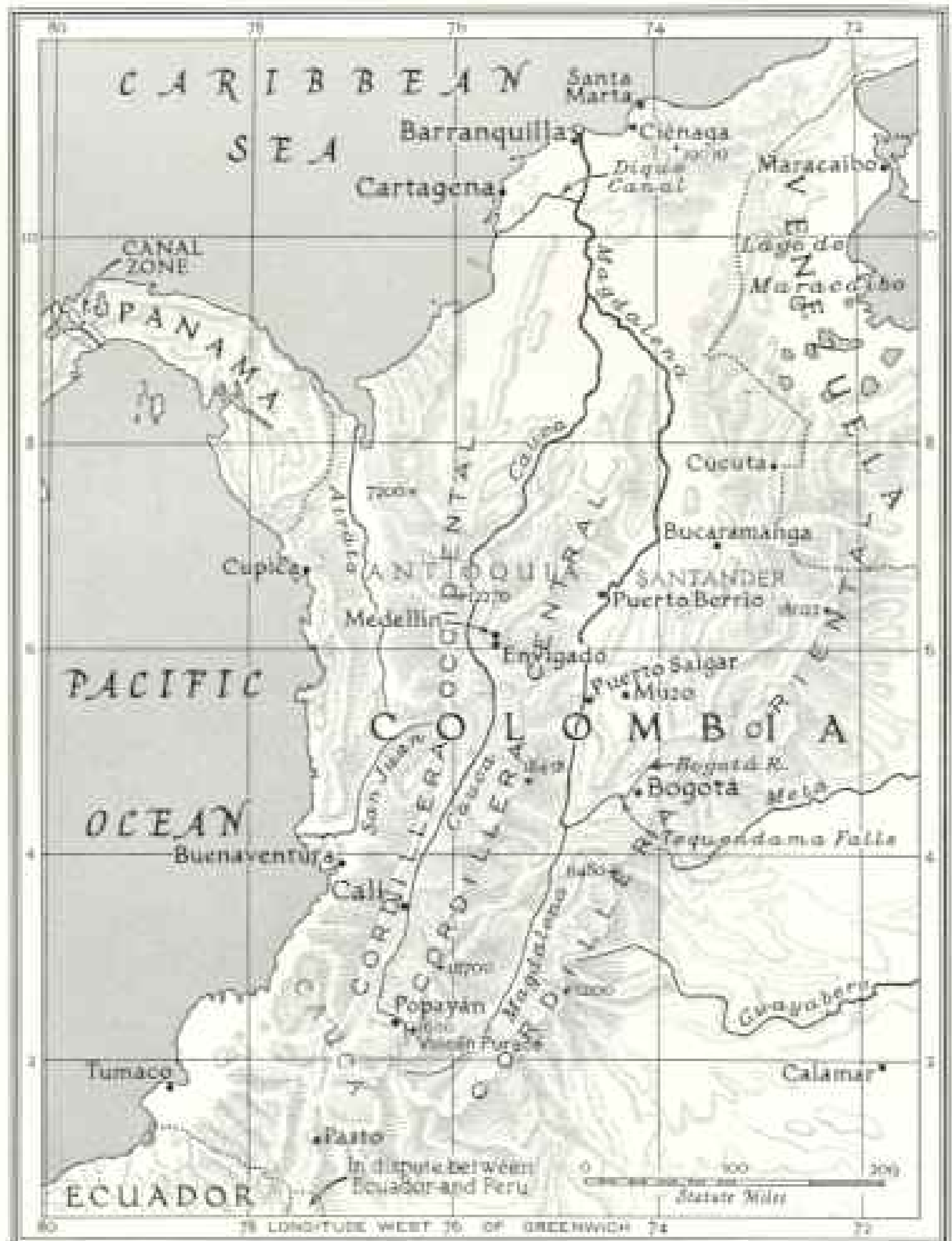
"And the joining?"—"Also steam."

In the shop was a big Spanish comb, the

kind Spanish women traditionally wear under the lace mantilla. The comb, nearly a foot high, was painstakingly sawed and filed from an unusually large plate of shell.

Hold such a comb up to the sun to see the tawny streaks of red and gold that run through the amber shell. You realize why the ornament was often the most prized possession of the colonial dame or miss.

When widespread use of tortoise shell several decades ago made the genuine article scarce, ingenious imitations began to appear. Fireproof synthetic shell from Germany soon replaced the earlier celluloid imitations. In Veracruz, Mexico, I have been offered pocket



Drawn by Ralph E. McIlroy and John J. Hensley

### Three Rocky Fingers of the Andes Run Through Colombia

The broad Magdalena, Mississippi of Colombia, divides the thickly populated section of the country. Most of the Republic's heavy freight passes up and down this arterial waterway. Colombia borders both the Atlantic and Pacific. Its climate ranges from the tropical heat of the coasts to the coolness of its capital, Bogotá, more than a mile and a half high.



At Noon Cartagena's Narrow Streets Offer Little Protection from the Tropic Sun

Because overhanging balconies cut off little glare, the midday siesta is a physical necessity. Cartagena is one of the best preserved of the old Spanish fortified cities in the Americas. Its tile roofs, churches, cobblestoned plazas, open carriages, and ponderous walls recall the days when the fort was a colonial outpost of Spain.

combs that were "tested" in a match flame; the combs did not burn—nor were they genuine tortoise shell.

#### "Beefsteak" of Turtle

I did not find in Cartagena the omnipresence of turtle meat that is usually a by-product of the shell industry, as in Campeche and Yucatán in Mexico. In those places beef is the unusual meat; venison is more common. Yet, because Spanish, like French, has adopted wholesale the English word "beefsteak," spelling it phonetically *bistec* or *bistec*, I used to see in Yucatán menus marked "bistec of venison" or "bistec of turtle."

Water-girt Cartagena has grown to be one of the principal seaports of the Republic.

Magnificent docking facilities handle huge quantities of oil and coffee. The oil is brought to Cartagena through a 365-mile-long pipeline from the Department of Santander, the line running for the most part beside the Magdalena. A canal, the Dique, connects Cartagena with the Magdalena above Barranquilla, so that incoming goods can be transhipped to interior river ports.

On the 84-mile drive back to Barranquilla, I was stopped three times for inspection by the police, who searched the car and luggage for smuggled goods.

Flying from Barranquilla to Bogotá you at first follow the valley of the Magdalena (page 525). Later the sinuous stream makes a wide loop to the right of the airline course, only to return once more just before the airplane heads in toward the Plain of Bogotá. The air whistling through the cabin ventilators gets colder as the ship slants upward toward the plateau on which the capital stands, more than a mile and a half above sea level.

From the air, you can see how Bogotá lies up against the base of the mountains of the Eastern Cordillera, at the far edge of the fertile Sabana (plain) de Bogotá (Plate VIII).



Spanish Stirrups of Brass Are Still Seen in Colombia

The sole of this one is worn through in places. Richly ornamented stirrups sometimes serve as wall flowerpots in Bogotá, and cast aluminum copies are often seen.

Bogotá is connected with other Colombian cities and with the coast chiefly by air and is approached laboriously by land. Because of its enforced isolation, the capital has remained individual.

In the dining room of the Hotel Granada I met Signor Rossi, Italian traveling salesman for a Milan dry-goods house, whom I had first known on the voyage from Venezuela to Colombia.

"You'll find this a great change from the climate of the coast," he said. "Just wait until the sun goes down." He was right; the thin air of the 8,660-foot-high plateau does not retain heat for long after the sun sets. I got out heavy woolen clothes, and a muffler and topcoat were useful after dark.

#### Bogotá a Vast Forum

When my friend and I walked along the main street, Seventh Avenue, at five o'clock, the thoroughfare was choked with men in black fedoras who filled both sidewalks as well as the street itself. No vehicular traffic other than tramcars is permitted in the busiest blocks of Seventh Avenue (page 507).

The preponderance of men in the streets;



and the dark clothes, give Bogotá a Spanish look. All day long, but particularly in the late afternoon, men gather in front of the cafés, on corners, and in front of chalked-up news bulletins to discuss politics, sports, and business.

The *charla* is the all-pervading mania of the bogotano. *Charlar*, or "to chat," is a specialty in the capital. When two men meet in Bogotá, it is the custom for each to grasp the other by the upper part of the arm instead of shaking hands. They usually remain thus while conversing, and groups of several friends can be seen all holding on to each other's arm, linked together like a string of sausage, talking animatedly and blocking sidewalk traffic.

Rossi introduced me to some acquaintances he found talking outside the café.

"My friend here," he said, nodding in my direction, "is much taken with the custom of the *charla*. He just asked me when you gentlemen find time to eat."

"Oh, whenever we go home," one replied.

Rossi told him that in his own country he had fixed hours for meals and that his wife expected him to come home at those hours.

"What!" exclaimed one incredulously. "Interrupt the *charla* to go home and eat? Not I! I prefer to finish my discussion."

Inevitably in such a "café society" as Bogotá possesses there arise many types and nicknamed characters. With characteristic aptness, coffeehouse habitués had named one tall, thin fellow, who walked always with his head held a little to the right, "Five Minutes of Six."

#### Five Clear Days a Year in Bogotá

Most of the days were cloudy while I was in the Colombian capital (July and August). At night and in the early morning it was usually so cold that men wore short woolen *ruanas*, or ponchos, over their business suits. As the day progressed, the corners of these woolen squares draped over the shoulders were thrown back, until finally the rising sun made them unnecessary (page 508).

In the hope of observing the forthcoming opposition of the planet Mars, I called on Dr. Álvarez, director of the National Observatory in Bogotá. For some weeks prior to the 27th of July (1939) the red planet had been growing steadily larger, until a few nights before it was at its nearest point it shone like a newly minted copper cent through the occasional rifts in Bogotá's cloud canopy.

But Dr. Álvarez soon disillusioned me. "My dear fellow," he said, "for over ten years I have kept records of daily weather observations. According to these tables Bogotá has

on the average only five completely cloudless days a year. Because of that we do practically no planetary observation here. Our work consists mainly of weather observations and latitude and longitude determinations."

Throughout the world there are several shrine-topped hills called Monserrate. Bogotá has one with a funicular railway that runs to the top. When the car emerged from the rock tunnel through which it goes for the last part of the ascent, I looked down on the sea of clouds that completely hid the city. By the time I had climbed puffing to the observation platform near the church, most of the clouds had rolled on across the plain.

From this point, about a thousand feet above the city, Bogotá spreads out, a white and ocher checkerboard, flat except for the upthrust oblongs of the business center (Plate VIII). The city is regularly laid out in straight avenues and streets. Only the main Avenida Jiménez de Quesada ambles crookedly down through the business center. This avenue, named for the man who founded Bogotá in 1538, is being extended and widened so that it will be the principal thoroughfare.

From that height Bogotá gleamed in the sun, silent except for an occasional faint automobile horn blast and the barking of dogs.

Beyond the city the flat green plain stretched to where clouds and distant mountain peaks met. A fellow contemplator pointed out the barely visible snow-laden summits of peaks in the Central Cordillera.

"You are lucky to get a look at them," he said. "Usually they are hidden behind clouds."

Even as he spoke, more clouds boiled down from the mountains behind us and swept across the plain, hiding everything in a gray fog.

"How is it that clouds take shape so rapidly?" I asked.

"They are formed behind us, up on the summits of these mountains," my acquaintance said. "Beyond that ridge at our back is a *paramo*, a high wind-swept plateau. When the sun-warmed air rising from the plain meets the cold blasts from up there, the *paramo* acts as a condensing table, and there the clouds are born."

#### Parks as Open-air Study Halls

In the main Plaza de Bolívar, down in the city, I watched university men studying on the broad terrace of the classic-porticoed National Capitol. Four or five of them walked slowly back and forth, reading with moving lips the open books they carried. In Venezuela, too, I had seen much outdoor studying.

## Beneath Colombia's Azure Skies



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Kodachrome by Luis Muñoz

### Colombia's Tricolor Heads Marching Youth in Cartagena on Independence Day

The national holiday, July 10, marks the anniversary of the first uprising against Spanish rule in 1810. Athletic, school, and patriotic organizations celebrate with parades and fireworks. The procession is leaving the old colonial plaza through the triple-arched Bridge Gate. Onlookers line the ancient parapets. Underground passageways connected the ring of forts that guarded Cartagena (Plate X).



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Endicott by Lila Marden

### Cut Orchids—From Colombia to Washington, D. C., in 48 Hours

Although such shipments are not numerous, blooms can grace the home of a hostess in the United States two days after they have been cut on a Colombia orchid estate, 2,250 air miles away. Here a Pan American Airways plane takes a floral cargo aboard at Medellin, for delivery in Panama. Some Canal Zone florists depend on airplane service from Colombia and Venezuela for the bulk of their stock of cut flowers.

## Beneath Colombia's Azure Skies



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Kochinoma by Luis Marden

### Barranquilla, Colombia Coffee Port, Is Journey's End for a Magdalena River Boat

From the heart of the coffee-raising district, this stern-wheeler has come with her brood of heavily laden steel barges. Across the dock, just out of the picture, lie ocean liners, to which the sacks are transferred by automatic conveyors and manpower. The pungent odor of the fragrant beans permeates the port. Founded by the Spaniards in 1629, Barranquilla is one year older than Boston, Massachusetts.

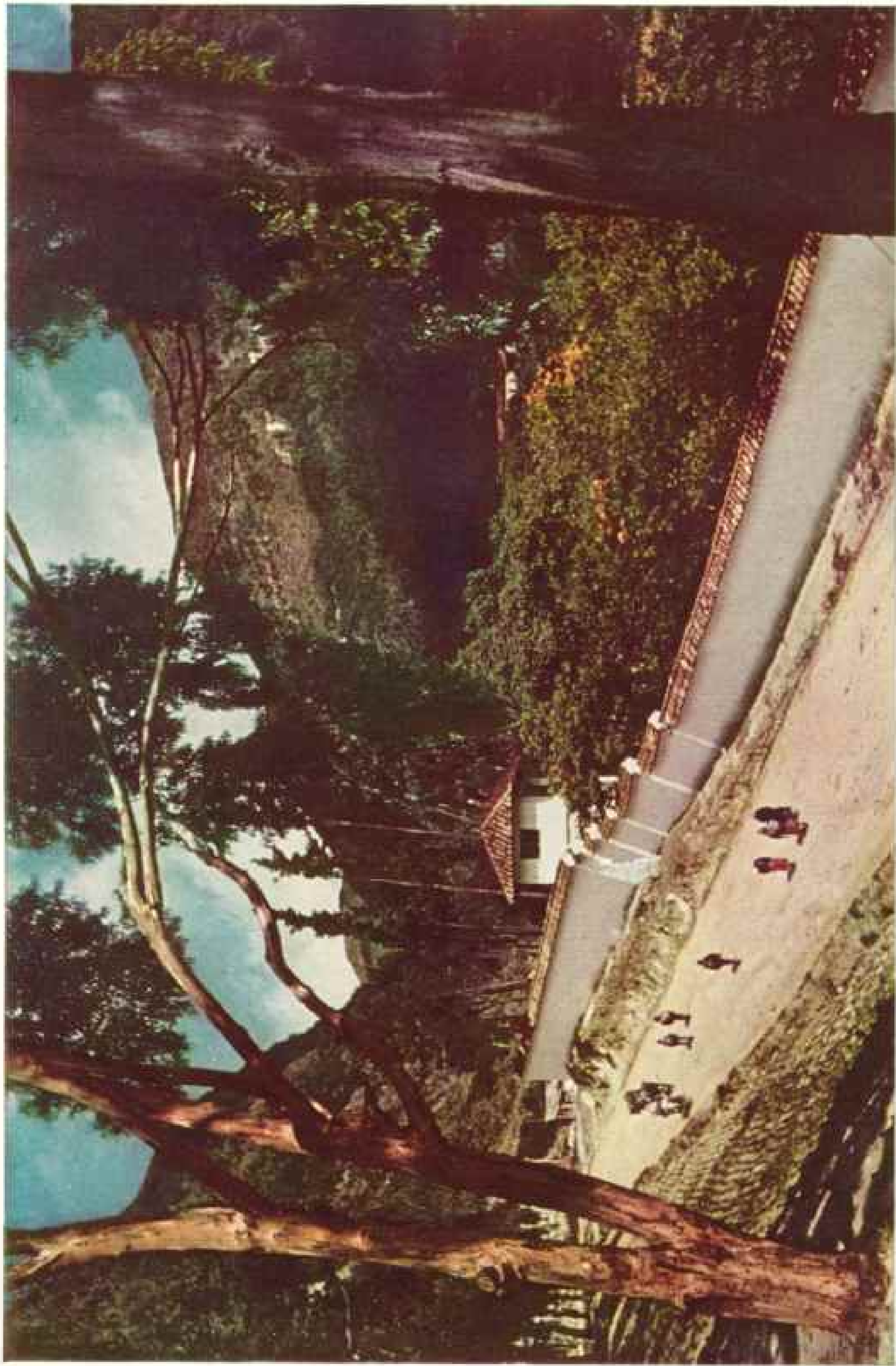


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Illustrations by Latta Morrison

### Hub of Bogotá Is the Plaza de Bolívar, With Its Statue of the Liberator

Adjoining the old Cathedral with its twin belltowers stands the newer Sagrario Chapel. A collection of paintings from the brush of Gregorio Vásquez, celebrated Colombian artist of the 17th century, is preserved within its walls. Fountains at the four corners of the plaza are illuminated with colored lights on holiday evenings. Guadalupe Mountain rises in background.

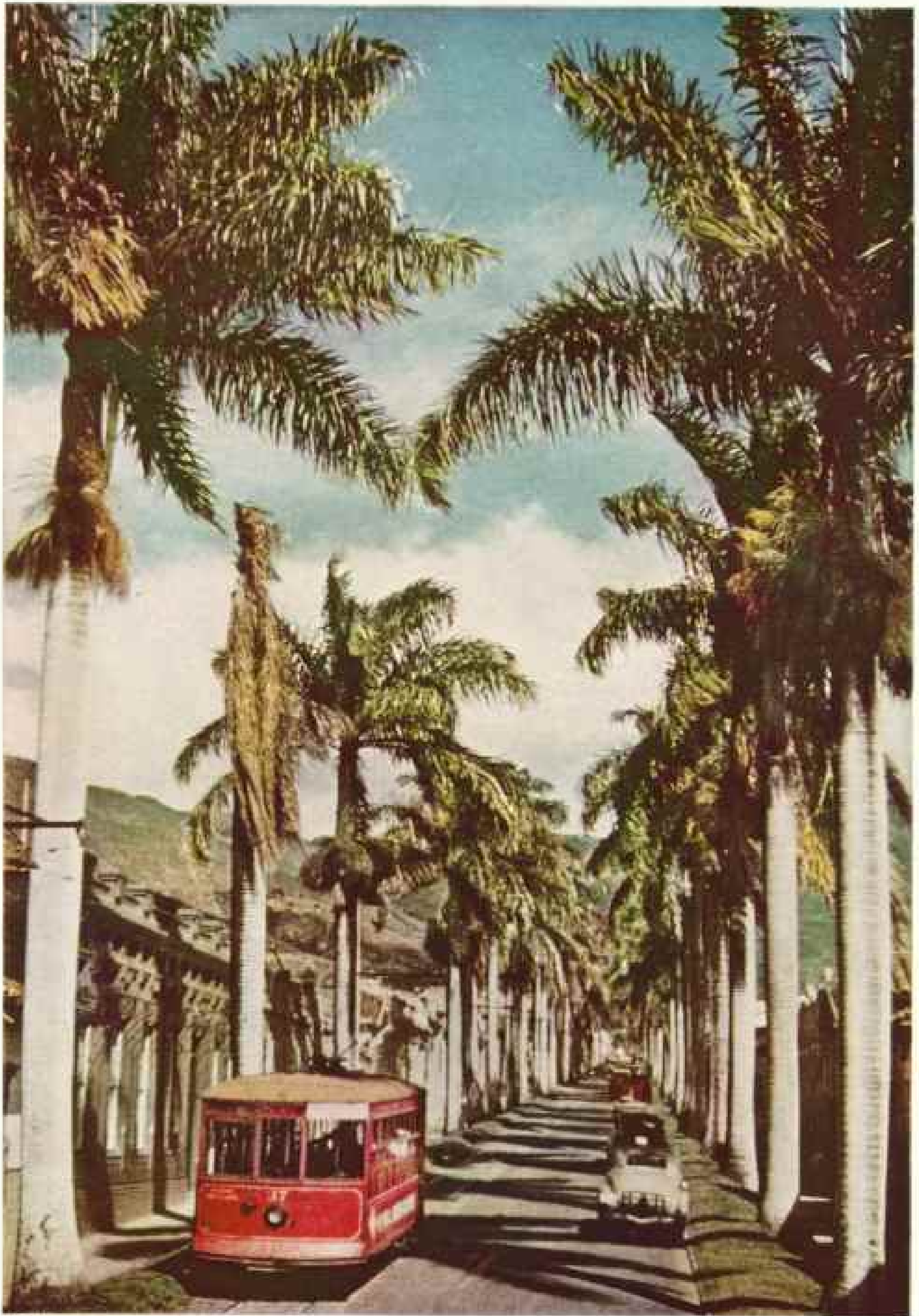


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### Colombia Preserves Simón Bolívar's Suburban Estate Outside Bogotá as a National Shrine

The country residence, gift to the Liberator from an admirer, was a favorite retreat. The main building (right) is almost hidden by foliage. In the small, enclosed pump-house (center) is preserved an iron rail from a balcony in the Presidential Palace at Bogotá. Over this rail Bolívar leaped one night to escape assassins.

Illustration by Jelle Marlin



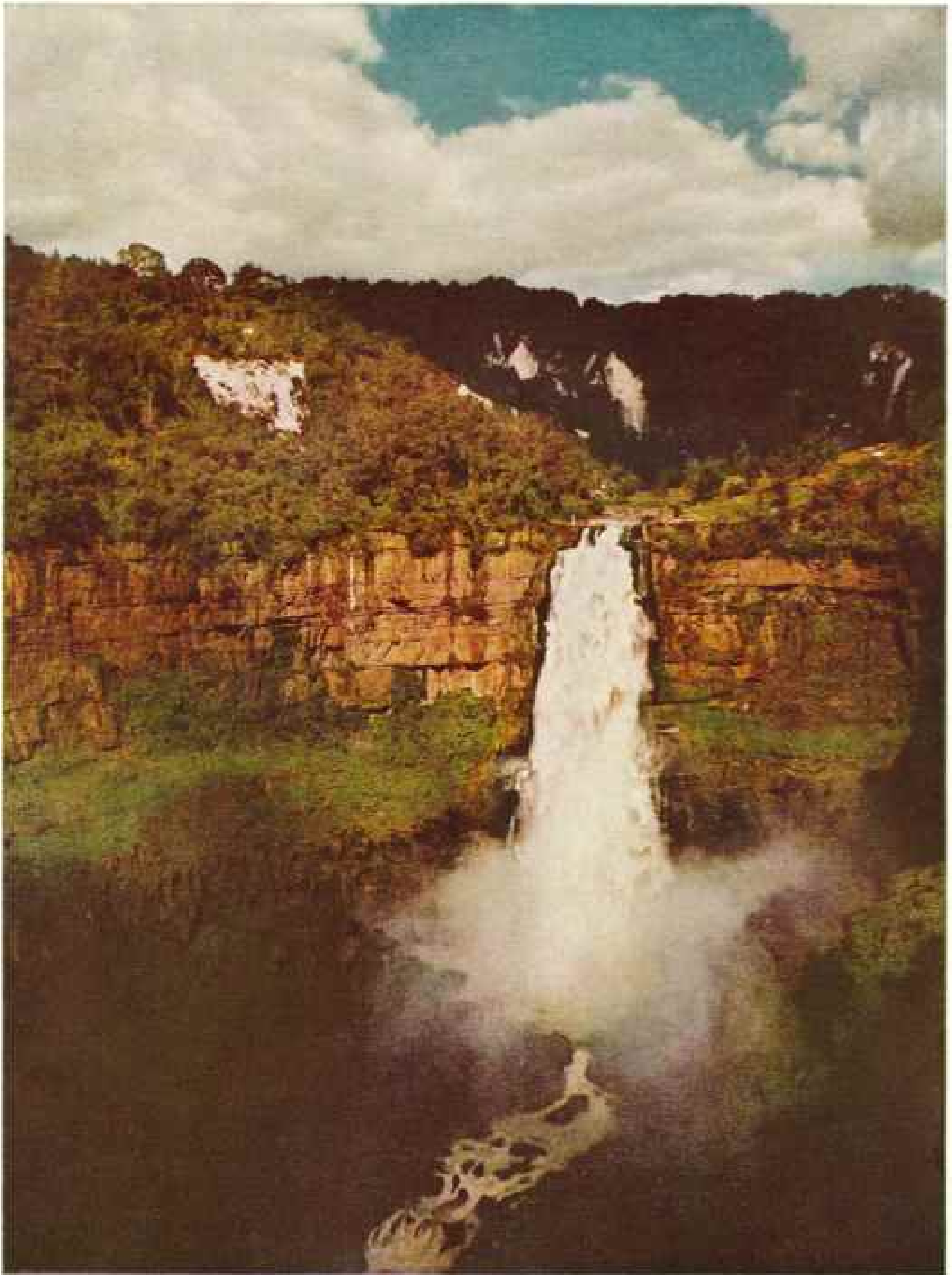
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Kolachanas by Lois Marlen

### Royal Palms Flank Bolivia Street in Medellín, Manufacturing Metropolis

Ornate homes line this residential avenue, but in the industrial district wheels turn in more than twoscore factories. Silk, cotton, wool, cigarettes, pottery, and glass are among the chief products. Medellín, nearly a mile above sea level, enjoys a summerlike climate the year round. Connected by rail with Puerto Berrio, on the Magdalena River, it is the Nation's second largest city.

## Beneath Colombia's Azure Skies



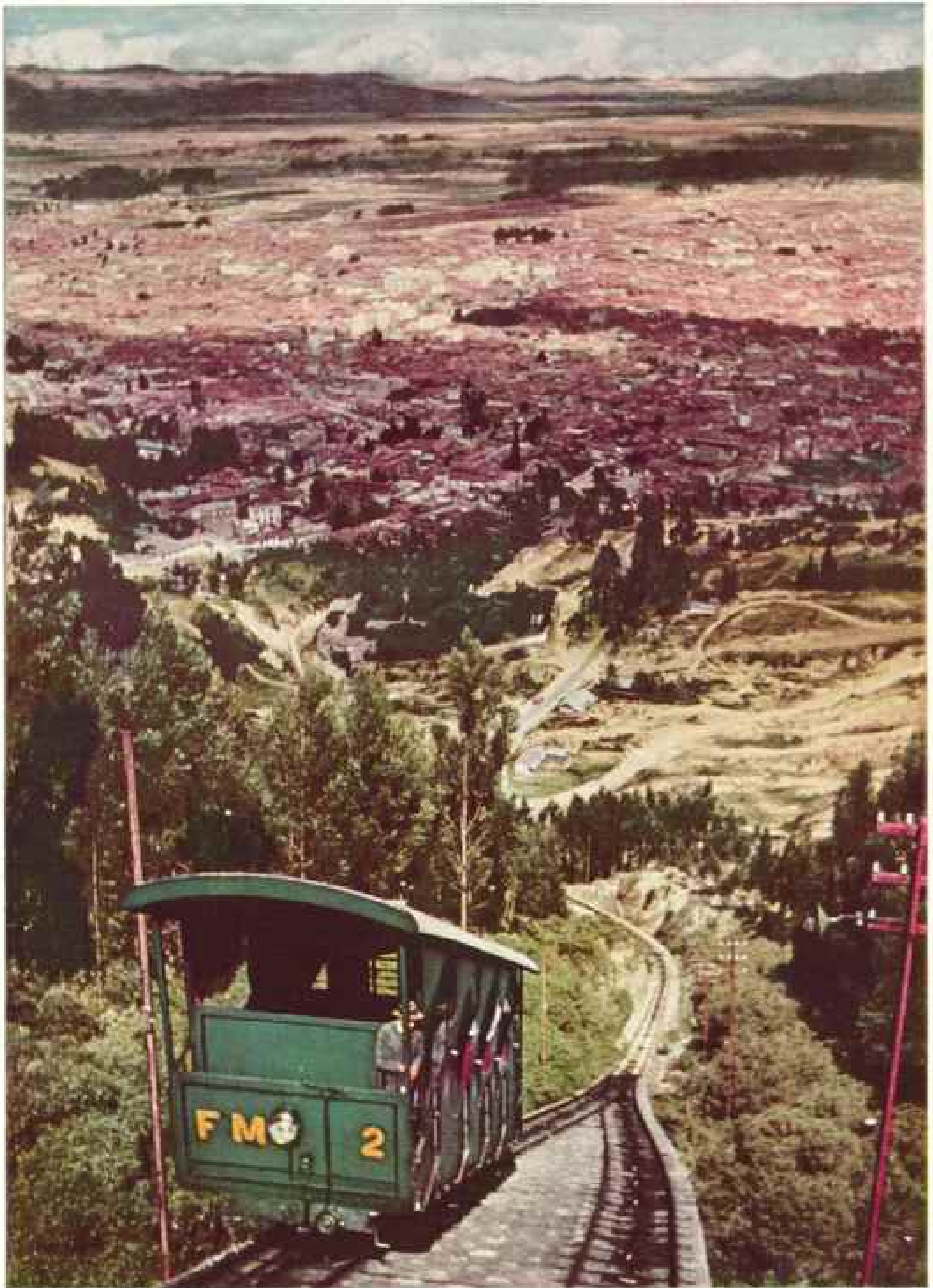
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Kodachrome by Luis Mardon

### With Thunderous Roar, the Bogotá Tumbles Over a Cliff in a 456-foot Plunge

Fifteen miles west of Colombia's capital, the river contracts to a width of 25 feet before taking its sheer drop at Tequendama Falls. Iridescent spray from the column of water, two and a half times higher than Niagara Falls, nourishes surrounding luxuriant vegetation. The photograph was made from the observation platform of a resort hotel, headquarters for Bogotanos, who crowd this natural showplace every week end.





© National Geographic Society

Kodachrome by Luis Marden

### Terra Cotta Rooftops Blanket Bogotá, Colombia's Capital

Verdure-clad mountains fringe the vast level expanse, 8,560 feet above sea level. The funicular railway, imported from Switzerland, leads to the summit of Monserrate, mecca for sight-seers and pilgrims, nearly a thousand feet above the plateau. The last part of the journey to the top is through a tunnel blasted out of rock.

There little groups of students gathered at night in the public parks or plazas and studied and argued until long after midnight.

So intellectually awake are the bogotanos and so numerous their institutions of learning that the city has been called an American Athens. One volume presented to me by the reference library of the City Hall is a lavish production which traces the growth of the city from its founding in 1538 by Jiménez de Quesada to the present metropolis of more than 330,000 inhabitants.

At the Botanical Institute in the University City, specimens of Colombian plants flourish in hothouses and outdoor plots. Beside a pool stands a pedestal surmounted by a bust of José Celestino Mutis, eminent Spanish botanist, who devoted the greater part of his life to Colombian research. On its base are the words of Linnaeus, "Immortal name that no age will erase." A trailing clematis named for the botanist winds about the base of the image.

Pending the founding of a similar institute "to study the fauna of Colombia," an exhibit of live and mounted birds and animals is also housed in the Botanical Institute. Dainty deer in one enclosure reminded me of a similar type called "small wrist" in Yucatán.

#### How King Vultures Got Their Name

From a large glass cage, eagles, hawks, and other predatory birds stare at visitors. In dignified isolation in one corner of the cage perched a great gray-and-white-plumaged vulture. White-rimmed eyes in a predominantly red-orange head gave this fellow a particularly cold and ferocious look (Plate XIII).

"That is the king vulture," the staff ornithologist told me.

"Not the bird about which I have heard so many old wives' tales?" I asked.

"The same," the man replied with a laugh. "You mean, I suppose, the stories about his being the ruler of all the vultures, and of his holding court in remote places.

"Such stories are probably true. The smaller birds are no doubt feeding on something when the big one arrives. Since birds will usually give a wide berth to larger ones of the same type, the buzzards all withdraw when the king bird comes. But, being buzzards and by nature patient, they probably sit around in a circle respectfully waiting for the king vulture to finish."

While we talked, Eliseo's (Elisha, as they had named this one) white-circled eyes had never left us for a moment, and I could well believe that he would be respected by the rest of his clan.

Before I left the Institute, the naturalist

showed me in his library copies of every magazine and volume on birds published by the National Geographic Society. He expressed high admiration for the bird paintings done for The Society and showed me beautifully executed drawings and water colors he was preparing of Colombian birds.

#### Emeralds Worth More Than Diamonds

Emeralds are the most valued gems in the world, and the best emeralds come from Colombia. The richest emerald deposits in Colombia are those of the Muzo area about 75 miles north of Bogotá.

In jewelry shops of the capital I saw gems from these mines. The best ones are of a limpid grass-green and look like crystallized chlorophyll. Examining several large stones closely, I noticed rayed cracks and flaws.

"Few emeralds are perfect," the jeweler said. "When they are flawless—if they are also of good color—they may be worth from three to five times as much as a diamond of corresponding size."

He explained that when the crystals are taken from the mine they are comparatively soft, but that they harden on exposure to air. During the hardening process, cracks may—and usually do—develop. I saw later some imitation emeralds so cleverly fashioned that even the typical branching flaw had been carefully reproduced.

When I asked to see an uncut emerald, the jeweler said that no one is allowed to possess an uncut stone. The Government has a monopoly on the mining, cutting, and marketing of all Colombian emeralds.

#### Medellin, Colombia's Chicago

Northwest of Bogotá is Medellín, the second largest city of the Republic. Flying there from the capital, I crossed again the broad Magdalena and flew over the Central Cordillera, highest of the three Andean branches that run through Colombia like the prongs of a trident.

Medellín lies in a valley several thousand feet lower than the plateau of Bogotá and therefore has a much warmer climate. Here I found a commercially advanced city of about 170,000, geared to the brisk pace of northern business (Plates VI and X). The city is the capital of Antioquia, one of Colombia's 14 Departments.

Colombia is exceeded only by Brazil in the amount of coffee exported, and much Colombian coffee is grown in the Department of Antioquia. The greatest wealth of the Department, however, lies in its mineral deposits, particularly gold.



The Colombian Senate and House of Representatives Meet in This Stately Capitol Facing Plaza de Bolívar

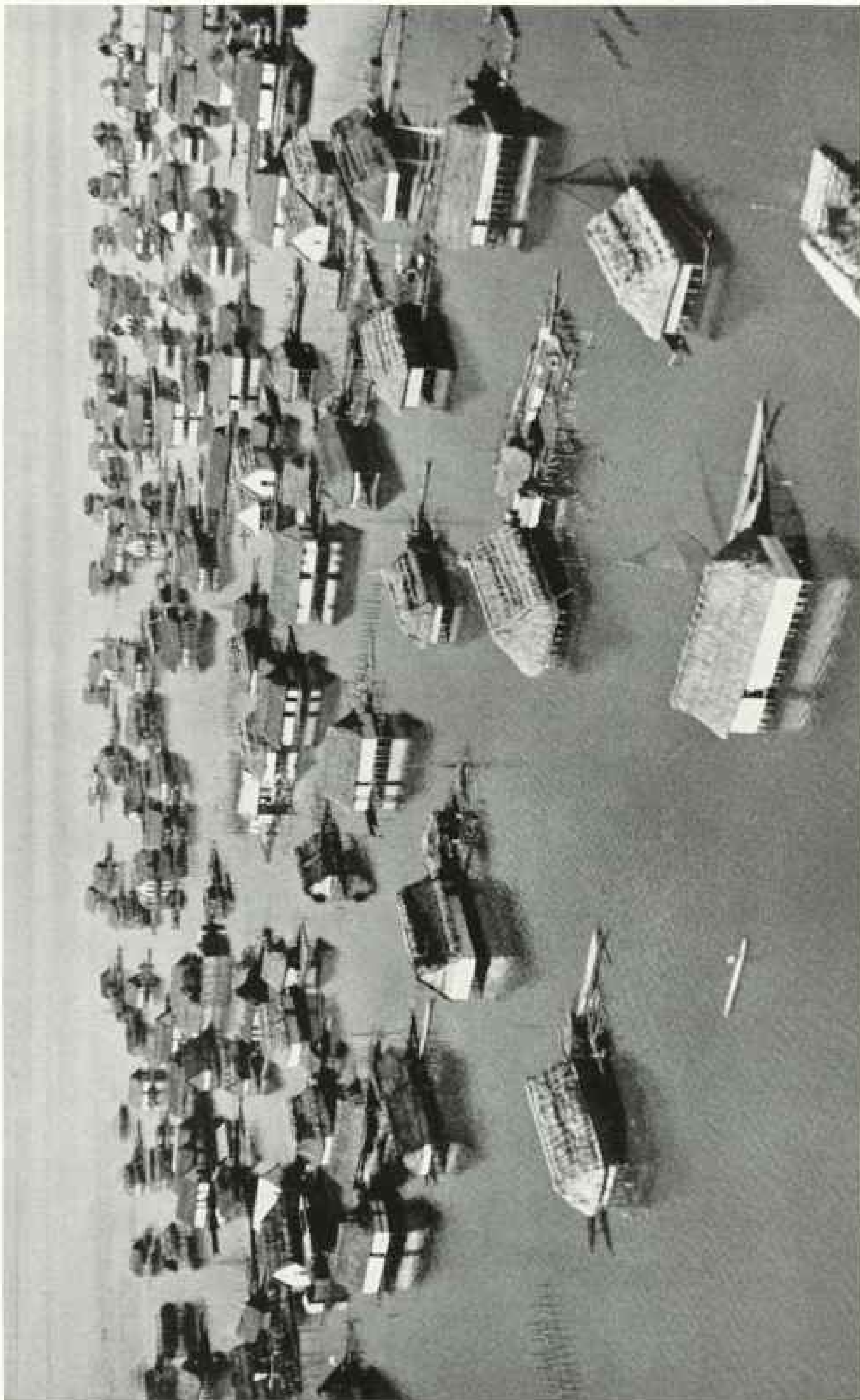
Up the street to the right appears the dome of the National Astronomical Observatory. Its director says Bogotá averages only five cloudless days a year.



Photographs by Hans Kornblat

**Like a Pastoral from the Brush of Millet Is This Scene in the Colombian Highlands**

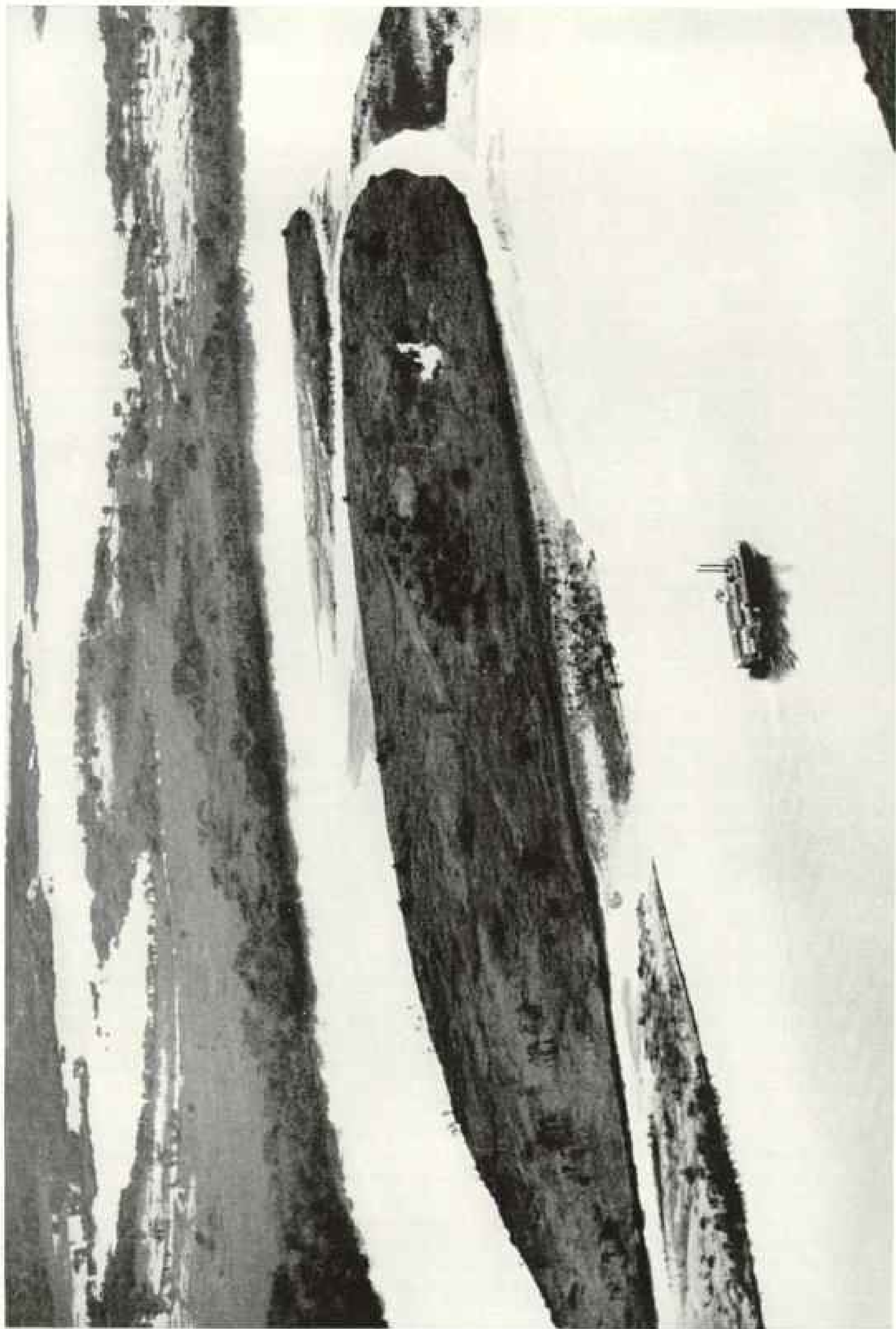
Sleek cattle and horses are familiar sights along the roads and in the meadows around the capital. Green fields of the Plain of Bogotá are excellent for grazing.



© Hans Koster

**Not a Flood Scene—Just a Normal Day in an Indian Village Near Ciénega, Colombia**

Such towns on stilts along the Caribbean coast caused early Spanish explorers to name the adjacent section of coast "Venezuela" (Little Venice). With their water streets, dugout canoes, and fishermen, these settlements have changed little since buccaneers first landed on the Spanish Main. The natives have become accustomed to flying boats roaring overhead daily on the Panama-Trinidad run.



© 1911

Liners of the Air Fly Between Barranquilla and Bogotá in 2½ Hours—Magdalena River Steamers Take 6 to 15 Days

At Medellín is the Casa de Moneda, a refining and assay office where the yellow metal is cast into bars of different degrees of fineness (Plate XIII). In one room girls were testing shavings drilled out of each ingot to check the degree of purity of the gold. The director explained that the variation of color in the bars was due to the amount of other metal present.

"Those long bars with the orange cast contain copper; the light yellow ones are alloyed with silver. Generally speaking, the lighter the color the purer the gold."

Gold from certain districts may have its typical color, too, and experts at the Casa de Moneda could tell at a glance from what region a sample of natural gold had come.

When a million *pesos* in gold bars were stacked up in the courtyard for me to photograph, it was done so casually that I asked the director if there was not some means of protection against theft. He smiled.

"Lift one of those bars and you'll see why we don't have to be too careful with gold in this form," he said.

"We do keep gold in coin and dust here, though, and at night we loose several big dogs in the courtyard."

Some of the gold coins he showed me were Spanish pieces from colonial times; there were also old English and United States coins.

#### Orchids to U. S. A. by Plane

Like Venezuela, Colombia is rich in orchids. Hundreds of species are found throughout the Republic. One kind, *Cattleya trianae*, blooms around Christmas and, because of the heavy demand for cut flowers at that time, is exported in quantities to the United States.

At the suburban home of Señor Rausch of Medellín grow some 30,000 orchid plants. Rausch began orchid cultivation as a hobby; his collection soon grew so big that he was practically forced into commercialization. Unlike most of his colleagues in the orchid exporting business, however, Rausch sends out cut flowers by air to the United States, instead of the actual plants (Plate II).

"They leave here on Saturday by Pan American Airways; that afternoon they are in Panama and the next day they arrive in the United States," Rausch said.

As we drove back to Medellín from the orchid garden, we passed through the suburban town of Envigado.

"This town is noted throughout the region for its fecundity," Rausch remarked. "Big families are common here. They say the fertility of the inhabitants comes from some miraculous power in the waters of the stream that flows through the town."

Notable even in Envigado was one family of 33 children, all of the same father and mother. Thirty-two of these were boys and of the lot there were eight pairs of twins!

All about Medellín graze white cattle of a local breed known as "black ear," for the ear alone is black. Driving over roads around Medellín after dark, I wished that the breed could be imported into our own Southwest, because they are so easily seen at night when they wander onto the highways.

In the Medellín cattle market most men carried or wore leather pouches on straps. With the countryman, the pouch takes the place of pockets. It is about as large as a woman's handbag, has several compartments, and is worn slung over the shoulder. The outside flap is usually covered with soft brown nutria fur.

#### Machine-made Coffee in Cali

From Medellín I flew south, down the long valley of the Cauca River to Cali. This city of 102,000 is connected with Buenaventura, on the Pacific coast, by railroad and automobile road, though the latter has a break in it that must be bridged on a train.

If Medellín had been industrious and active in a business sense, it certainly was quiet after dark. But here in Cali I found again crowded cafés and flowing street life as in Bogotá.

In a Cali café was the latest model of a coffee-making urn imported from Italy. About ten feet long and all shining chromium, with about a dozen nozzles and spouts, the machine does everything but grow the coffee it brews. The whole contrivance is appropriately surmounted by a spread-winged metal eagle that looks fiercely down on the customers consuming its potent brew.

While having black coffee in a Cali café early one morning I felt several earth tremors. These reminded me that I was entering a region of volcanic activity. Southward, near Popayán, is a volcano that erupts regularly, throwing ash and pumice over the surrounding countryside.

Popayán, founded in 1536 by the Spaniard Sebastián de Benalcázar, is a city of high cultural tradition. Its Cauca University has produced writers, painters, and statesmen of Colombia. Several presidents of the Republic have come from Popayán.

Though the city has now lost much of its colonial magnificence, it remains a quiet, leisurely retreat for men of letters, particularly poets (Plates XIV, XV, and XVI).

Poets and fleas are the two most celebrated products of Popayán today. Though the population of the capital of the Cauca Department



Photograph by Herbert from *Three Lions*

#### Former Prussian Uniforms Clothe Colombia's Soldiers

Colorful uniforms and brass-spiked helmets proved too good a target during the World War of 1914-18, so Germany sold the trappings to armies of South America.

is actually about 30,000, I was solemnly assured that there are 31,000 poets in Popayán. So far has this fame spread that a Colombian who journeyed south from Popayán to the Ecuadorian border was asked if it was true that Colombia's tariff lists were in rhyme.

Popayán is more than a mile above sea level; long-needled evergreens shade its central plaza.

Near the Cathedral on the plaza is a tower with a clock dated 1737. The clock has no minute hand; it has never had one. To Popayán's pace minutes are of little consequence. Poinsettias bloom in the Plaza de Caldas, and turtledoves fly about the bust of the savant at the center of the square. Over all the city is a brooding somnolence, a feeling of things gone by.

#### Emerald-studded Crown of Popayán

In Popayán are ten churches and four chapels. Formerly the Church possessed great riches in vessels and trappings; much of this wealth still remains.

Recently Popayán has become known in the United States as the place of origin of the so-called "Crown of the Andes," an emerald-

studded crown of gold (Plate XVI). In the home of the Olano family, former possessors of the crown, I was received most graciously.

"Fantastic things have been printed about the crown in your country," my hostess said, smiling. "In the first place, it should be called the 'Crown of the Immaculate Conception,' for it was made for an image of that Virgin.

"You must know that it is our custom, coming originally from Spain, to have religious brotherhoods. Each society adopts some saint or other holy figure as its patron, and sees that the figures are provided with rich vestments, jewels, and so forth to wear in the annual processions. The patron of the brotherhood of which our family has been the head is Our Lady of the Immaculate Conception. It was for that image that the crown was ordered by one of my husband's ancestors."

"How old is the crown?" I asked.

"The carved wooden image of the Virgin was made in Ecuador by Caspicara, a famous Indian wood carver, toward the end of the 18th century. The crown was finished after the completion of the image, probably between 1795 and 1800. Each year on the



eighth of December the crown was placed on the Virgin's head, and the figure, dressed in a rich mantle, was carried in procession on the shoulders of selected members of the brotherhood.

"In the last years some of the magnificence of the religious festivals has begun to pass away. Some time ago my husband, feeling that money from sale of the crown could be used in charitable works in Popayán, obtained permission from the Pope to sell the crown. After some negotiation the crown was sold and sent to the United States."

Later I went to the Cathedral of Popayán and saw the image of the Virgin in the store-room of the church. It was as the old books describe it, "on a globe of earth and surrounded by a halo of hammered silver." The figure has a thunderbolt in one hand aimed at the serpent of temptation beneath its feet.

At the gold-refining and assay office of Hernán López in Popayán I watched Indians from the back country bring in glass vials of small nuggets and gold dust. López would scrutinize the gold, feel of it, weigh it, and pay the man the current price for metal of that weight and purity. I wondered how he could tell how fine the gold was, merely by looking at it.

"By the color and feel," López said. "After long experience, you can estimate the purity of gold samples to within a fraction of a carat.

"Not all the gold that comes in here is newly panned or mined," the metallurgist said, showing me curiously worked nose rings and buttons, frogs, lizards, and other objects. "These come from ancient Indian graves. They found one grave not far from here a couple of years ago that had more than three hundred little gold frogs in it."

I was surprised to find that most of this is bought at bullion value and melted down. Much of such ancient gold is very pure, though often artifacts are found which are made of a low-grade alloy of gold with a high copper content.

Still more common are small barbless gold fishhooks. Dredges bring them up from river bottoms by the score. Remarkably, they are not soft and pliable, as gold usually is, but have a springy temper, probably imparted by hammering.

Through Señor López I met Maestro Guillermo Valencia, Colombia's eminent man of letters. I asked him why one of the titles given to Popayán is "The Tomb of Don Quixote."

"Because we of this city are heirs to the idealism and eccentricities of the knight," he

replied. "Why, I myself am of Quixote's family. Look, here is the coat of arms of my mother's family. You see at the bottom the family name Quijano. Does not Cervantes say in the opening paragraphs of his book that the mad Don was called Quixote, but actually came of the Quijana family of La Mancha? The surnames are similar enough to imply a distant connection, at least."

Not unlike some exploits of the eccentric knight was a story of a local character known—I wonder why?—as "The Customer." El Cliente, though a university graduate, of good family, and well versed in the classics and law, is noted for stunts that would do credit to a college fraternity initiation committee.

"Once," he told me, "I decided that I would like to go down to Buenaventura and work as a roustabout on the docks for a while.

"One hot day, while we carried passengers' luggage off a ship that had just arrived, word went around that a papal representative had arrived from the Vatican in Rome. I recognized him by his dress and, rushing forward to take his bags, greeted him in Latin.

"I was, after all, only a stevedore to him and dressed rather shabbily; the good prelate was amazed to be greeted in the language of ancient Rome.

"How is it?" he asked, "that you, a common porter, have such fluent Latin?"

"Ah, Your Excellency," I replied with a bow, "in Colombia all dock workers know Latin!"

### A Volcano "Explodes"

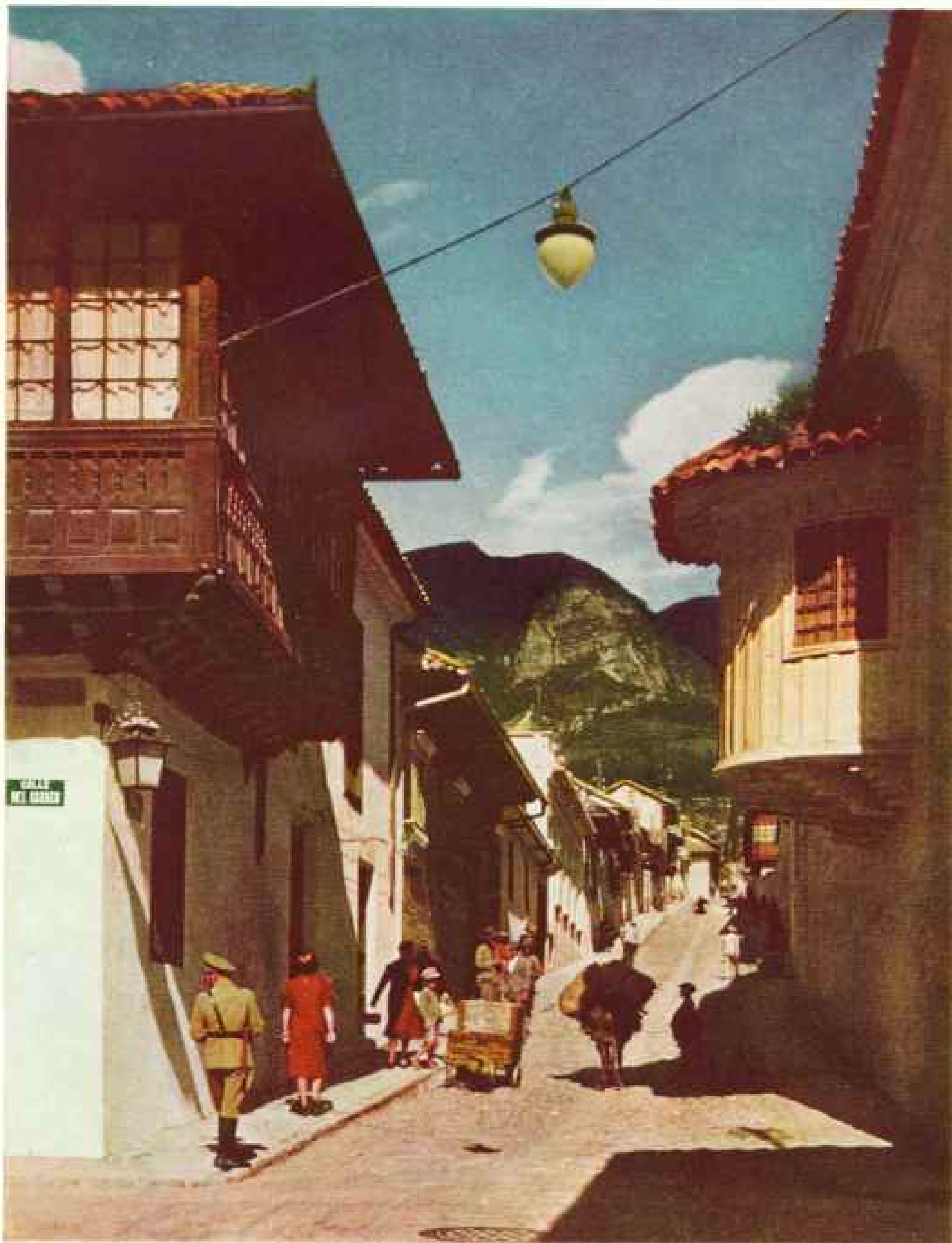
As I walked in the deserted Plaza de Caldas late the last night of my stay in Popayán, two heavy reports shook the city. I turned a corner just in time to see a ruddy incandescence stream out of Puracé, the volcano that overlooks the valley. For more than a minute the red glare lasted and then slowly faded. Almost imperceptibly a fine ash began to fall, and soon the street was covered with a gray layer of grit that crunched underfoot.

"It is nothing," said a man who had come out to watch. "Puracé always explodes before a change of weather."

In the plaza the poinsettias were gray with ash in the moonlight, and in the shadow of the tower of the minuteless clock a man mounted his horse and rode off over the echoing asphalt.

Though the airplanes of the age of speed now follow Colombia's deep-cutting rivers and cross its spectacular cordilleras, many a scene like this moment at midnight suggests the gracious and leisurely past that is South America's heritage from Spain.

## Beneath Colombia's Azure Skies



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Reproduction by Luis Marin

### Projecting Eaves and Overhanging Balconies Shelter Pedestrians on Rainy Days

Most highland dwellings in Colombia follow the architectural style of the buildings along this Bogotá street. Many lanes have gutters running down the center, a convenient path for mules. The old oriel window, at right, known as a *cumarín*, or dressing room, is a part of the Church of Carmen, erected in colonial days. Spiky green air plants, bromeliads, grow on the red-tile roof of the bay window.



Medellin's City Fathers Convene in a Modern Municipal Palace



© National Geographic Society

Kodachrome by Totto Martini

**Eight Cars Abreast May Drive Over Cartagena's Massive 16th-Century Walls**

Spanish galleons once lined the quays of the strongly fortified port, to take on cargoes of gold for the mother country. Buccaneers often tried to raid Cartagena (Plate 1). In 1697 they captured the city after a bitter struggle and, according to the legend, stole fabulous sums in bullion from its vaults.



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Redrawn by Luis Marín

**Walls of the Church of Veracruz Were Old When Colombia Won Its Independence in 1819**

Built in the days of Spanish rule, this somber building in Medellín contrasts strikingly with the city's modern structures. "Yankees of South America," its business-minded citizens often are called. The Department of Antioquia, of which Medellín is the capital, is rich in coffee, gold, and cattle. Palatial estates of prosperous ranchers and miners dot the near-by countryside.



© National Geographic Society

Photograph by Latta Marcus

**Life on the Magdalena—A Colombian Stern-wheeler Modeled After the Old Mississippi River Boats**

Built in the United States and reassembled in Colombia, the steamer is a counterpart of the vessels that intrigued Mark Twain during his boyhood in Hannibal, Missouri. With the exception of airplanes, these steamers are the only direct connection between Barranquilla (Plate III) and the interior.



© National Geographic Society

### Gold Bricks—Half a Million Dollars' Worth

This bullion belongs to the Mint and Assay Office of Medellín, in the heart of the gold-producing region. Much of it is obtained by panning. The girl holds in her lap gold coins from Spain, the United States, and England.



Photograph by Lois Marston

### A King Vulture Earns Prison Leave for Good Behavior

The bird is tame enough to be released occasionally from its cage in Bogotá's Botanical Institute and wanders freely about the courtyard. In the wild the King vulture feeds on carrion and snakes.



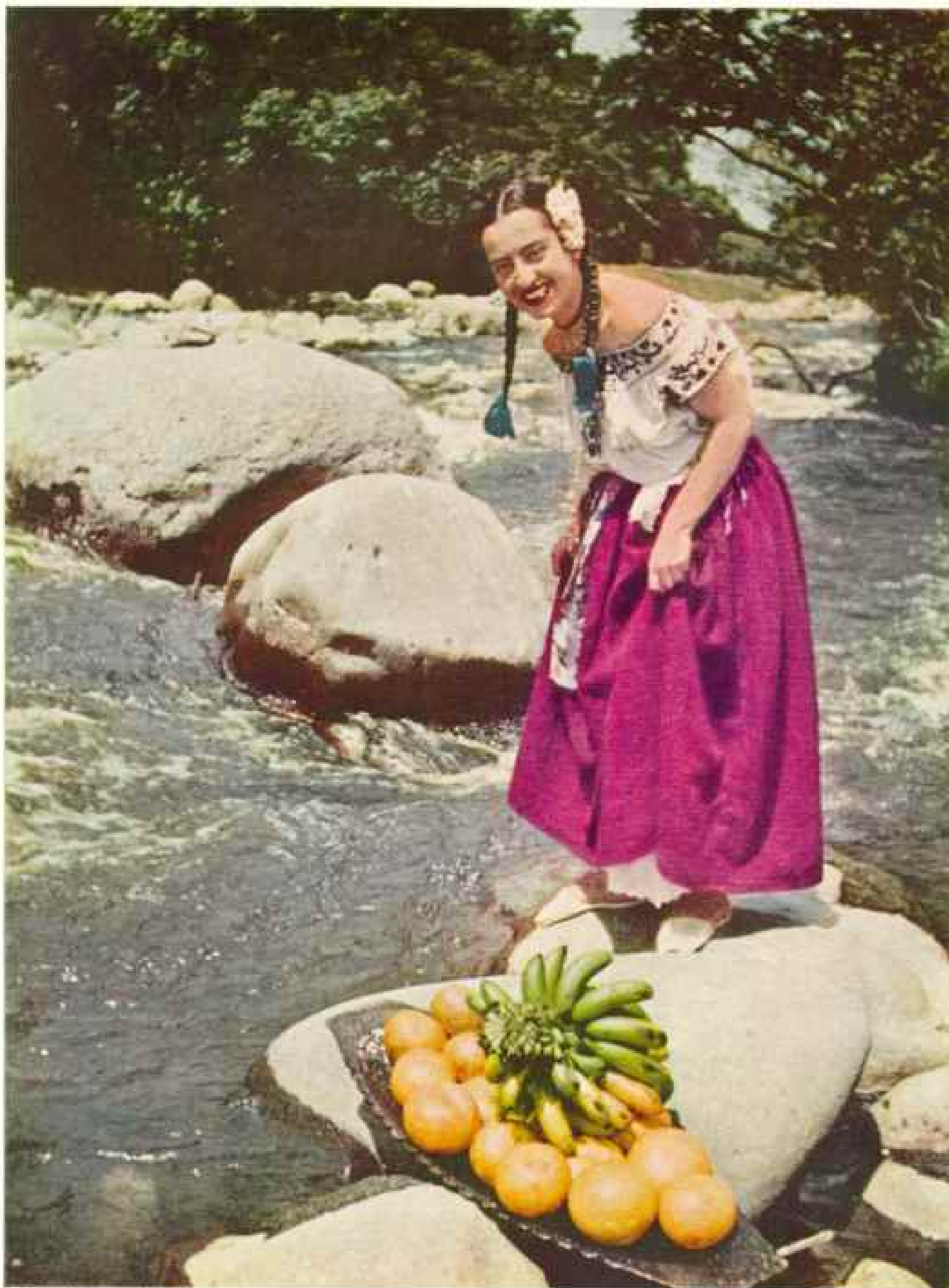
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Kodachrome by Lois Harlow

#### Hinterland Indians Regale Themselves with Cheroote on a Trip to Town

Visitors to Popayán, they are tricked out in their best ponchos and heavy strands of glass beads. Men and women dress alike and wear their hair cut in the same way. Often the Indians bring in to Popayán gold dust and small nuggets they have panned near their villages; also gold figurines taken from ancient graves. Dealers can tell quite accurately how much to pay by the color and feel of the metal.

## Beneath Colombia's Azure Skies



© National Geographic Society

Endowment by Luis Marín

### A Daughter of an Eminent Colombian Man of Letters Dons Native Costume

Her father is Maestro Guillermo Valencia, poet, author, and translator of English and French classics into Spanish. She stands at the brink of the Cauca River, near Popayán, garbed in the fast-disappearing *capunga* dress of the region. Bananas and oranges at the girl's feet are heaped in a boat-shaped, hand-carved wooden tray. Volcanic gases have so tainted this part of the Cauca that no fish can live in it.





© National Geographic Society

Photograph by Willard R. Oliver

### To the United States Has Come Popayán's Famous Emerald-studded Crown of Gold

A century and a half ago this rich crown was made for an image of the Virgin. It contains 453 emeralds, with a combined weight of 1,521 carats. One jewel weighs 45 carats, while the 17 pendent emeralds weigh from 12 to 24. The world's finest emeralds come from government-controlled mines in Colombia. This crown was purchased in 1936 from its original custodians, the Olano family of Popayán.

# Dipo, the Little Desert "Kangaroo"

BY WALTER E. KETCHAM

*With Illustrations from Photographs by the Author*

"RANCHO Dipodomys! What in the world does that mean?" exclaim city visitors when they notice the sign swinging from the porch of my California desert home.

"Wait till sunset," I tell them, "and you'll find out."

Later, when the Bullion Mountains, off to the north, turn pink and purple in the setting sun, I scatter handfuls of wheat on the porch and in the sand. Soon there come bouncing toward us, from all directions, small furry animals with long, tufted tails, hopping along on their hind legs like miniature kangaroos.

These are my kangaroo rats. They have been coming to me for food ever since I pitched my tent here thirteen years ago. Their scientific name is *Dipodomys deserti deserti*. Because they have been my constant—and often my only—companions all this time, I named the ranch in their honor.

Neither rat nor kangaroo is "Dipo," but a relative of the pocket gophers, and the most beautiful, interesting, and lovable of all my desert neighbors.

## Wanderers of the Night

The genus inhabits the desert and semi-arid regions of North America, particularly southwestern United States and northern Mexico. However, one may take many long trips to the desert without coming in contact with it, for Dipo is abroad only at night.

A few evenings after establishing residence on my homestead entry near the oasis of Twentynine Palms, about 130 miles (150 by motor) east of Los Angeles, I noticed several strange little animals searching for food in front of my tent. Their fur was light tan or sand-colored above, pure white beneath. I threw out some bread, which they immediately accepted, and within half an hour they were taking it from my hand.

This was my introduction to these little leaping balls of fur, and association with them has turned out to be profitable as well as pleasant. The tent has evolved into a guest ranch, since I have become known as "the man who has the kangaroo rats," and numerous visitors come here from cities along the Pacific coast.

Every evening now there may be a dozen or more Dipos busily moving about my porch like diminutive vacuum cleaners. Once I counted 25.

"How are they picking up the grain?" invariably ask my guests.

"With their forefeet."

"But I don't see any forefeet. They look like two-legged animals."

The answer is, they hold their tiny forefeet—one could almost say "hands"—so close to the body at all times, and the body so close to the ground when gathering food, that the forelegs are seldom seen.

## A Cache and Carry Device

Dipo does not eat when collecting grain, but stows it in his cheek pouches to take to his burrow. These fur-lined pouches are outside the mouth. What he carries home each trip would make me a generous portion of puffed wheat.

I soon learned that he prefers wheat to anything else. He also prefers, once he has lost his timidity, to gather it from my hand, where he can scoop it into the pouches instead of picking it up grain by grain from the porch.

If I slowly raise my hand, he will hop onto it and I can feel his forefeet tickling my palm as he gets the last few grains from between my fingers. The pouches gradually expand until the head appears twice its normal size. When Dipo has a full cargo aboard he looks as if he had a bad case of mumps (page 539).

The broad head is joined directly to the body, without visible neck. Dipo must move his whole body when he wants to look in a different direction.

"They scoot around like mechanical toys," my guests tell me, watching them erratically moving about gathering grain.

One evening I offered a whole slice of bread to one of my pets which I had enticed into the cabin. How to carry this home was a problem. Finally, getting it balanced up in the air, holding it with teeth and forefeet, he made for the door, hopping along erect on his toes. But he forgot the threshold. Tripping, he sprawled head over heels out onto the porch, dropping the bread. He persisted, however, and finally got the unwieldy load to his home.

To obtain their share of the supply of food on the porch, those living farthest from the cabin dash away five to ten yards, dig a small hole, empty the pouches into it, cover the grain, and hop back for more. There remains the rest of the night to collect this cached food and take it to the burrow.



### "Rancho Dipodomys" the Author Calls His Mojave Desert Home

Since Mr. Ketchum pitched his tent in this lonely region near Twentynine Palms, California, thirteen years ago, the little kangaroo rat (*Dipodomys deserti deserti*) has been his constant companion.

An individual gathering grain alone, without competition, takes his load straight home. This activity would be kept up all night if the grain lasted, for instinct impels these creatures to store against the next "depression," which they know will come.

#### Dipos' Homestead Sites

Hospitality to Dipo has resulted in my cabin's being surrounded by more than a dozen burrows. Individuals have moved in and established homes close to the abundant wheat supply. Distinct trails, about three inches wide, always lead from burrows to favorite foraging grounds, where seeds and dry grasses are collected. Converging on my cabin are numbers of these paths worn in the sand by my little neighbors. One led to a burrow nearly a quarter-mile away. No wonder the owner finally moved closer!

Dipo digs his own burrow, and never occupies one made by some other kind of animal. On the surface it is a lumpy, uneven area, 10 to 30 feet across, into which numerous sloping entrances lead down to a labyrinth of passages winding above and below each other to a depth of one to four feet. This underground network includes a number of storerooms and the nest, a roughly spherical

chamber filled with dry grasses, chaff, and vegetable down (page 540).

For security and evenness of temperature the nest is usually located at the end of a passage on a lower level. Here it can be easily plugged off with sand against a prowler, such as a snake or small carnivore. Some of the passages are so near the surface that anyone walking across sinks below his shoetops.

The burrow entrances are larger than an animal of this size would seem to need, being four to five inches in diameter. This is because Dipo hops rather than crawls into his home. I have never seen one of these entrances dug up by a fox or coyote. They apparently realize the futility of trying to catch a Dipo in this manner when the prey may be leaving by another opening some distance away.

#### They "Live Alone and Like It"

Dipo never seems content with his home, but constantly makes alterations—plugs one entrance, opens up another, digs new tunnels. I can hear Lucy, the one living under my cabin, moving sand about at any hour of day or night, since the floor is right down on the ground.

I am prepared to lose my "tenant" any day,



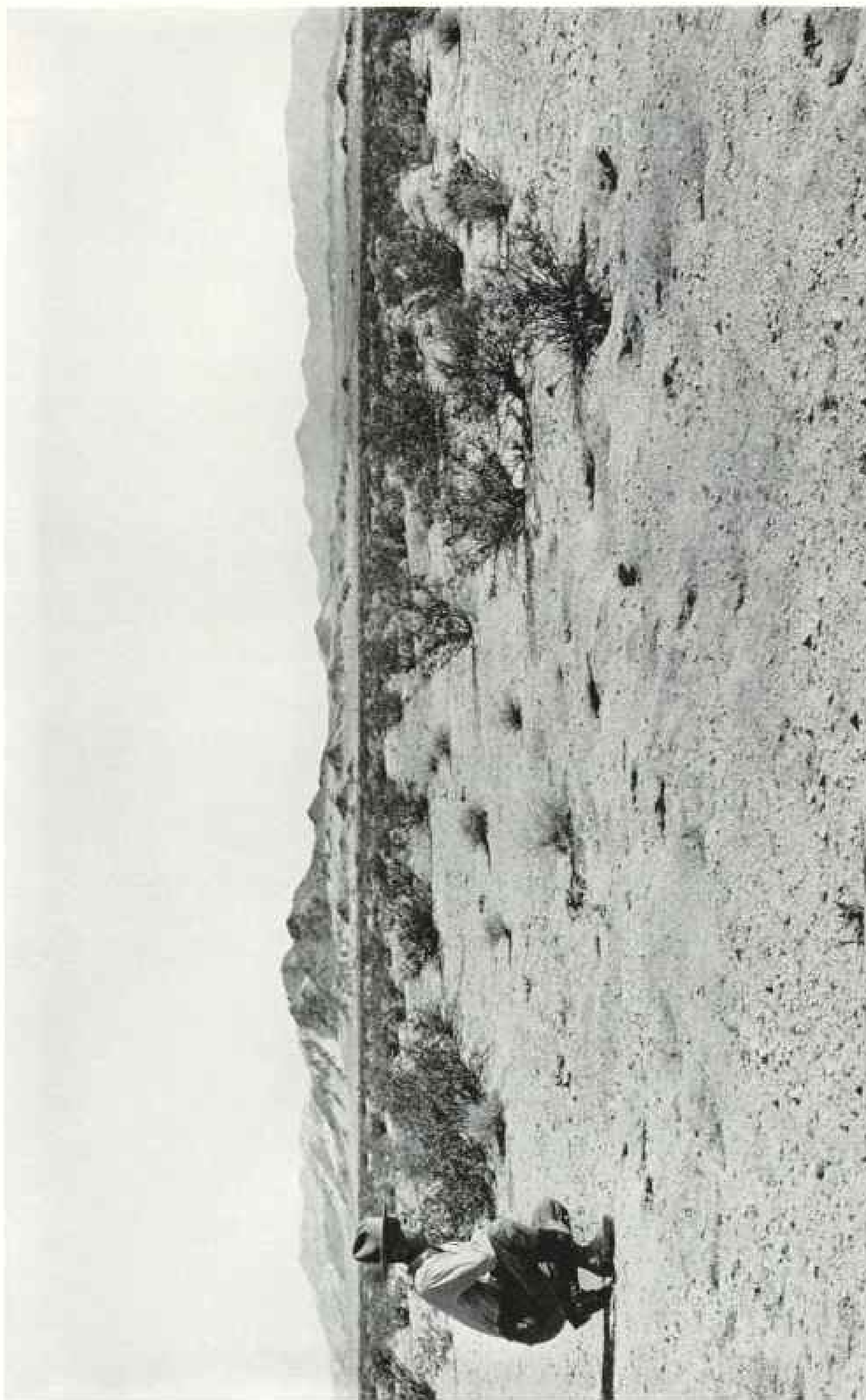
**Caught—in the Feed Box with Cheek Pouches Full!**

This flashlight tells its own story of Prowling Percy, who found the cabin door open and helped himself. His forefeet, used to stuff grain into his cheek pouches, are seen just below the nose.



**"Dipos" Seems to Have a Bad Case of Mumps**

This kangaroo rat is not eating from the handout. He is stuffing wheat into the pouches at the side of his mouth. Soon he will rush off to his burrow to store it. He will repeat as long as the supply lasts.



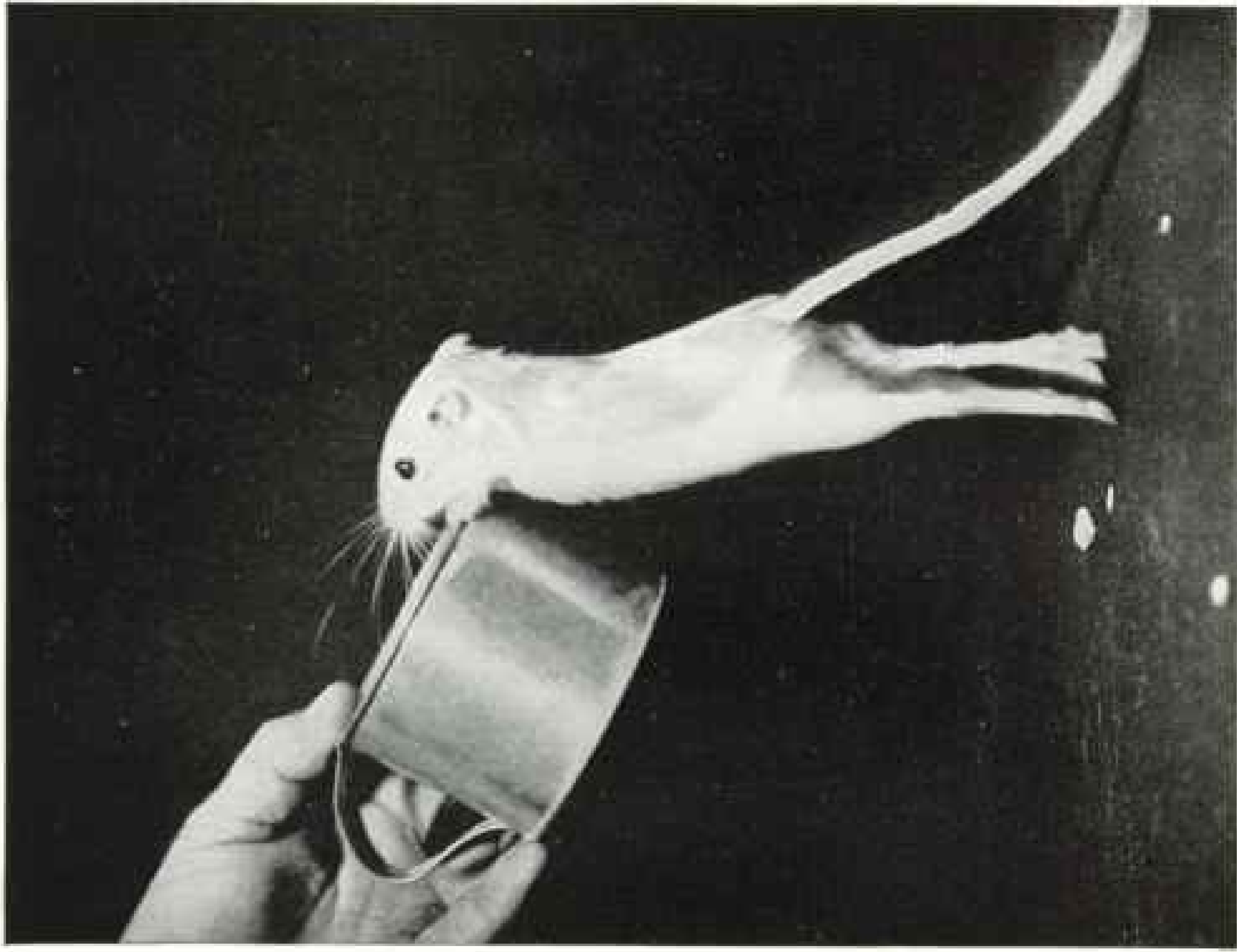
**On the Surface of the Desert Dipos' Home Show Only Lumps and Many Exits and Entrances**

Underground he digs a labyrinth of passages winding above and below each other to a depth of one to four feet. This subway network includes a number of storerooms and the grass-lined nest. The author has never seen foxes and coyotes try to dig into these burrows; in fact, foxes are never seen in the daytime, and coyotes but seldom (page 538). In the distance are the Bullion Mountains (see map supplement "Southwestern United States" in the NATIONAL GEOGRAPHIC MAGAZINE for June, 1940).



#### Mimi and Dipo Quickly Became Pals

The kangaroo rat is one of the friendliest of animals and will not bite unless forcibly held in the hand. If two are allowed to gather food from the hand at the same time, a fight is bound to ensue and often a finger may be nipped by mistake.



#### The Cup That Cheers Dipo Is Filled with Wheat

This little night prowler is hanging onto the cup with its tiny forefeet. With its long hind legs and beady eyes the kangaroo rat seems well named. Despite its name, however, it is neither rat nor kangaroo, but a relative of the pocket gophers.



Photograph by Laidlaw Williams

#### Both Balance and Rudder Is Dipo's Tufted Tail

The slender appendage enables the kangaroo rat to make "two-point" landings as it hops along on its hind legs or leaps away from an enemy. The tiny forepaws are never used for walking.

as these animals move frequently, digging a new home or taking over one which is unoccupied by another of their kind. A family consultation is not necessary. No burrow has more than one occupant at a time except in the case of a female with young.

Occasionally I see one of my neighbors working at an entrance in the daytime. He pops out, looks about, then turns around, and, with head in the opening, sends the sand in spurts between his hind legs, like a dog. He then disappears for a time, working more material to the entrance, and ejects it. But if he spies me, work stops immediately and he vanishes.

#### Flashlights Fail to Frighten Dipo

Dipo is entirely unapproachable in daylight, no matter how friendly he may appear at night. Yet artificial lights, even flash bulbs, bother him not at all when he is gathering food at my cabin, and he takes little notice of noise or talking.

Like most animals, he is alarmed by quick movements. When suddenly frightened he leaps a foot or more straight up into the air. Once, stooping over, I grasped the tail of a trusting individual gathering grain at my feet. He jumped so high he bumped my nose!

This little trick has doubtless saved many lives. Imagine the disgust of a fox which

rushes a Dipo, only to see the delicious meal spring skyward! By the time the hunter gets in reverse, Mr. Dipo is far away.

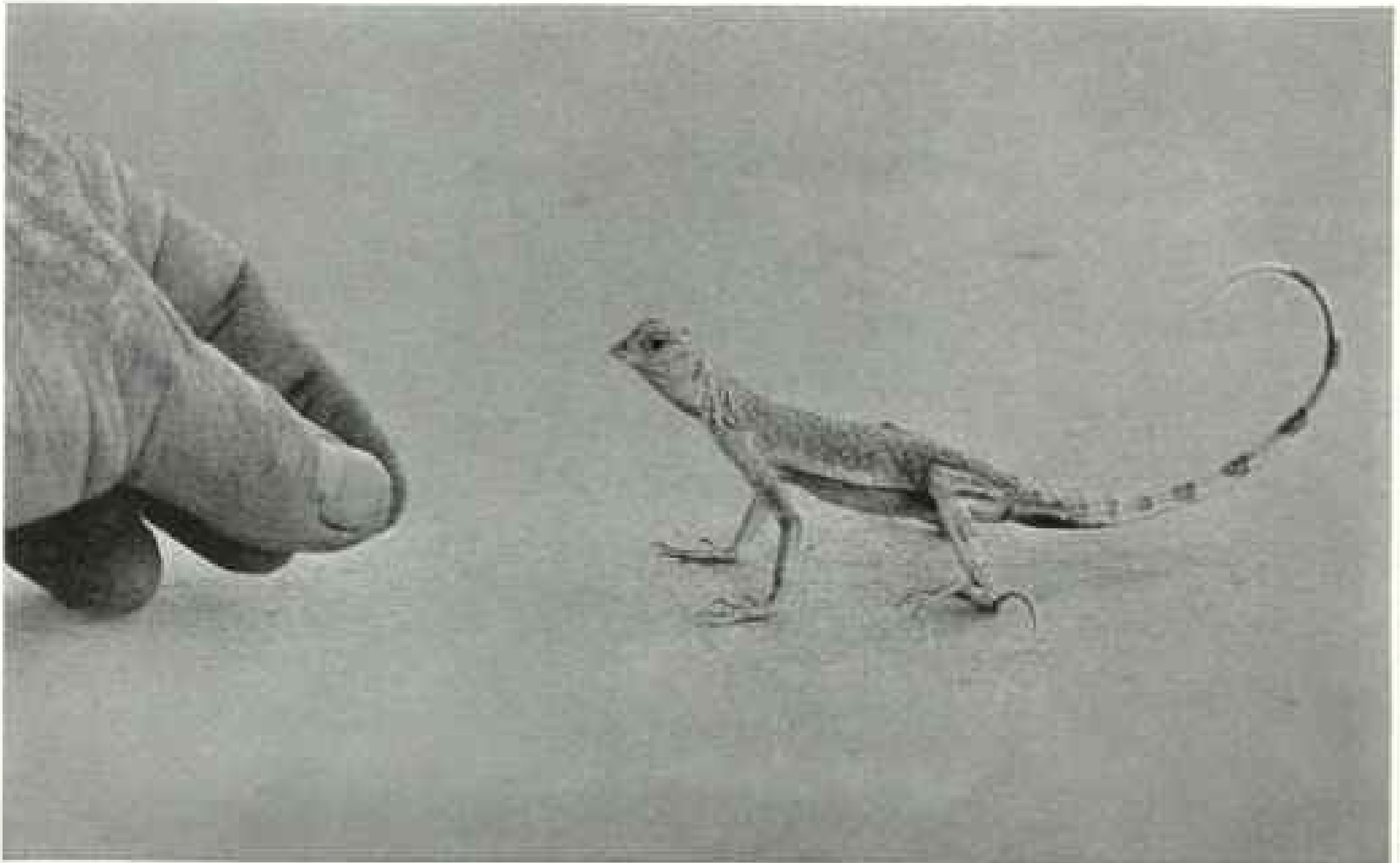
"What long tails they have—half again as long as the bodies!" is one of the first remarks my visitors make.

"They need them," I reply. "Kangaroo rats travel exclusively by hopping on the hind legs, and so require a balance and rudder, especially when leaping away from an enemy. Without that slender tail with the tuft at the end, there would be few 'two-point' landings. Dipo would probably tumble head over heels."

Quickness of movement and intricate burrows are *D. d. deserti's* only defense against natural enemies: the fox, coyote, bobcat, hawk, snake, and small spotted skunk. But this protection must be adequate, since he seems to hold his own even though there are not more than three young in a litter.

My pets are pugnacious among themselves, particularly when several are gathering food at the same place. Those living nearest the rich feeding ground consider it their special domain and try to drive others away.

Lucy will repeatedly rush at an intruder, leap into the air, and strike out with her strong hind feet, sending the kickee rolling. Returning to the grain, she will find that others have come behind her back and must be driven



#### Poised for Instant Flight, "Swiftly" Accepts a Fly

One of Diplo's most interesting neighbors is the zebra-tailed lizard (*Callisaurus draconoides*) which speeds over the desert sands so swiftly that it can catch insects in flight. When running, it curls its tail upward, revealing the bold black bars which give it its name. If badly frightened, it sometimes raises its forebody and races along on its hind legs for short distances. This reptile is entirely harmless.



#### Leconte's Thrasher Fills the Desert Air with Ecstatic Song

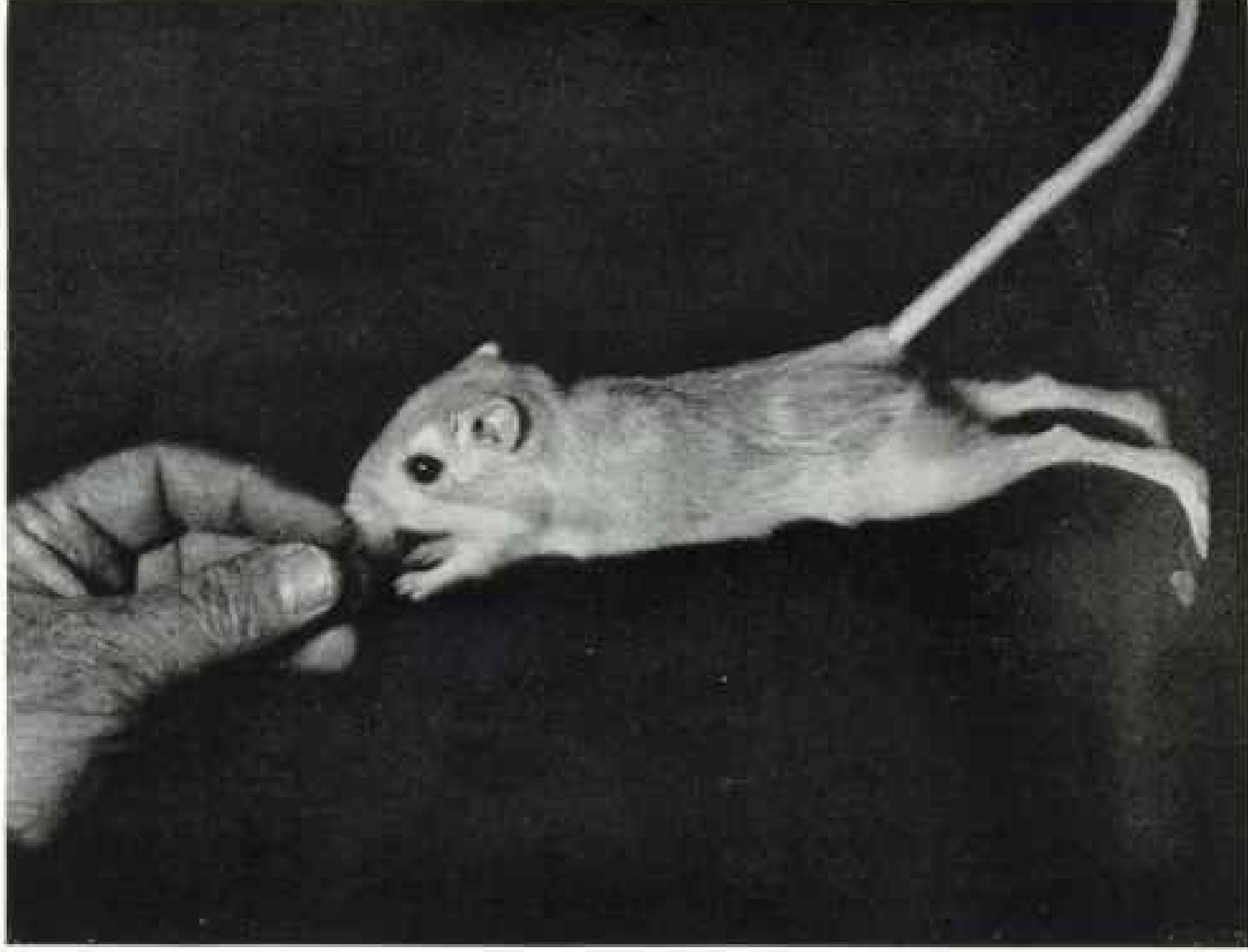
This bird can run almost as fast as a horse. One year a pair came to the ranch every day throughout the summer and autumn, favoring the author with their sweet song. On a memorable day in December, with five inches of snow, they appeared with feathers much puffed out. Though ordinarily shy, they came into the cabin through an open door, to escape that strange white blanket.





**Timid Cousins Will Not Feed from the Hand**

Meet *Dipodomys merriami merriami*, the smaller Dipos to the left and right, who look like the more familiar *deserti*, but are only five-sevenths as large. They are found wherever *deserti* occurs, but lack many interesting and audacious traits of the larger species.



**With an Embargo on Grain, Dipos Becomes a Shameless Beggar**

When the author failed to place food on the porch of his ranchhouse, some of the tamer individuals followed him around like bobbing puppy dogs. The small forelegs and forefeet are stretched to the utmost. The faint white hip stripe is found on all members of the genus.



**This Scene Might be Titled: "The Little Men Who Came to Dinner"**

Like born actors, Dipos seem to like an audience, or at any rate the spectators don't prevent them from scooping up all the grain in sight. When the camera was set up, there were more than a dozen feeding, but before the photograph could be taken some of them were already on hurried round trips to their burrows.



#### Beneath the Spreading Creosote Bush Dipo Finds Refuge

When foraging in the desert, the little animals hop and scurry from one bush to another, knowing that a swooping hawk or prowling fox or coyote cannot easily penetrate the stiff, harsh branches (page 548). Here grain was thrown on the ground under the bush for a flashlight picture.

away. She often spends more time in trying to corner the food supply than in gathering it.

If the one she attacks refuses to leave, they both stand erect, sparring like boxing kangaroos, watching for an opening to get in a good thumping kick. Or she may get hold of the other with her teeth. Then the fur flies. There is a wild *mélée* of scratching and squealing, and one usually emerges with nicked ears. But no matter how often or how far a Dipo is driven away, he always returns. The abundant food supply is too tempting to be relinquished.

Will kangaroo rats bite when handled? Scientific articles say not, and they may be correct regarding 69 of the species listed under the genus *Dipodomys*. But the seventieth, *Dipodomys deserti deserti*, with which this article is chiefly concerned, *will* bite.

My first experience was one evening in the

cabin with a crowd of guests. I had a captive in a glass-front trap, where he fearlessly and industriously gathered up some grain, then hunted for the way out. After a time he went to a corner and with a few rapid pushes of the forefeet against the pouches he ejected the contents in a small pile. Immediately he picked up the grain and again ejected it. After this had been repeated several times, I reached into the box to take Dipo out.

"Don't pick him up! He might bite you!" warned my guests.

"Oh no, he won't," I assured them, relying on the written word. But he did. And a *deserti* has never failed to draw blood whenever I have forcibly held one in my hand.

Dipo does not make a good pet in captivity. He shows no affection, and will not come to a person except to get food, leaving as soon as his pouches are filled. The only handling he



### Drop the Cup, and the Air Is Filled with Bouncing Balls of Fur

Dipos react instantly to anything that frightens them, leaping with equal facility upward, backward, forward, or sideways (page 542). Quickness of movement and intricate burrows are their chief safeguards against such natural enemies as foxes, coyotes, snakes, and birds of prey.

permits is a stroking of his thick silky fur and a gentle teasing when he is intent on scooping grain from one's hand. Normally having the whole desert to range in, he does not thrive in close quarters. I never try to keep any in restraint nor allow them to be taken away.

Dipo will not enter my cabin to stay and mess things up as other rodents have done. He much prefers his own home to live in, thank you. After gleaning all the grain from the porch, he may pop in through an open door, looking for more, but always leaves if permitted. When I inadvertently close the door on one of my pets, he soon lets me know by the sounds he makes in hunting a way out.

I taught Percy, one of the tamest, to come into the house and help himself from my supply of grain. Now that he knows of this, he is a light brown streak from the door to the box. Hopping in, he stuffs his pouches in a

few seconds and is away on a three-minute round trip to the burrow (page 539).

Sometimes Dipo rhythmically beats the ground with one hind foot, if vexed or startled. The sound may be heard at some distance, even when made inside a burrow.

Another little trick is suddenly to face about and contemptuously kick a blast of sand toward me with the hind feet. This is done, apparently, to determine whether an object is dangerous or not.

One evening Percy found a slice of bread which I had thrown out. When still some distance away, he kicked sand at it, then hopped away and watched. Coming nearer, he repeated the act. Getting no reaction from the thing after a third test, he decided there was no danger. He came up to the mysterious object, found it was food, and carried it away.

My little friends make a number of dif-

ferent vocal sounds, all difficult to describe. They squeal angrily when fighting on the ground. When one rushes another he gives forth a sort of purring growl, and if he chases another, he emits a grunt on landing after each hop, as if the sound were jolted out.

Timid individuals make a low clucking sound when picking up grain, as much as to say, "Now you leave me alone, and I won't bother you." Very young Dipos cry like newborn puppies. While I am writing this, a plaintive voice coming from under the floor indicates that Lucy's "nursery" is occupied.

#### A Camel Would Be Envious

*D. d. deserti* is a purely desert species, and has developed traits and characteristics possessed by few other members of the genus. His ability to go without water would make a camel shudder—for Dipo doesn't drink at all. He doesn't even seem to know what water is when I offer it to him.

During a two-year drought at Twentynine Palms, the usual spring plants and flowers did not appear. Desert growth became parched. The creosote bush, normally green, turned brown. Antelope chipmunks, gophers, jack rabbits, foxes, and coyotes disappeared almost entirely from my neighborhood. But Dipo was always here to spend the evening with me.

His menu, whether obtained from me or by foraging over the desert, consisted of dry material. There was not even a drop of dew.

Kangaroo rats are seldom found at the Twentynine Palms oasis, where water comes naturally to the surface and where there is considerable deciduous growth besides the palms. How do they exist without moisture? Water for bodily needs is obtained through their digestive processes, being created internally by oxidation of air-dry starchy foods.

Some species of the tiny pocket mice, belonging to the same family as *Dipodomys*, can also live without water. I occasionally find, here at my cabin, the silky pocket mouse, one of the smallest mammals in the world.

The antelope chipmunk, *Ammospermophilus leucurus*, really a small ground squirrel, is my daytime friend and Dipo's closest neighbor. He lives under the same conditions, but thoroughly enjoys moist food and drinks freely in the summer if water is available. He uses Dipo's burrow to hide from me, and is not welcome, I'm sure. Once I saw one shoot out and dash for home as if scared to death.

Later I learned that *D. d. deserti* has the chipmunk thoroughly bluffed. I discovered this while feeding a Dipo on one of the rare occasions when I have seen one away from his burrow by day. A chipmunk tried to

"muscle in" on the bread and was sent flying.

One thing that Dipo and the chipmunk share in common is the creosote bush, which grows profusely in this valley. When foraging over the desert, they hop and scurry from one bush to another, stopping each time to reconnoiter. A swooping hawk cannot penetrate the thick growth of stiff, harsh stalks, and the little animals at the base of the bush are safe from the rush of a fox or a coyote (page 546).

Once I took a Dipo to Pasadena, and kept him in my living room, but in these unnatural surroundings he soon became bedraggled, as if his fur were oily.

I was mystified when I first saw him shoving himself back and forth on my perfectly good rug. Then I recalled that Dipo bathes in the sand. Every evening, particularly in hot weather, my pets emerge from the burrow, play about, and enjoy a sand bath. This ablution removes any excess of an oil which is secreted apparently to dress the fur against its dry, dusty surroundings.

On my next week-end trip, I brought back for Dipo a carton of the good old desert sand. When I placed him in it, he immediately stretched out and rubbed himself back and forth with all the enthusiasm of a small boy plunging into a cool swimming hole after a week of hot weather. Within a day or two his fur was again clean and sleek.

It would be fascinating to play with the young kangaroo rats, but unfortunately they do not appear above ground until they are mature. They can be identified by darker, sleeker fur, particularly as they are most numerous when the adults are molting.

Only once have I been favored with the sight of half-grown youngsters. Investigating a queer sound one summer day, I discovered two on the surface of a burrow. They were too clumsy and weak to move rapidly, so I easily picked them up—at a creosote bush, of course. They wouldn't eat or gather food, and continually kept up their puppylike cry. When placed at an entrance of the burrow, they immediately entered, still complaining.

Shortly afterward I found a snake near the burrow, and I concluded that the mother, aware of this menace, had been moving her young and they had gotten out of control.

As far as size, form, color, and markings are concerned, I cannot distinguish between the sexes of *Dipodomys*. I generally call them "he," so it was natural for me always to refer to the one I had in Pasadena as "he."

Upon returning home one day after an absence of several hours, I found three perfectly hairless little babies in "his" sleeping box. "An' I learned about Dipos from 'er!"

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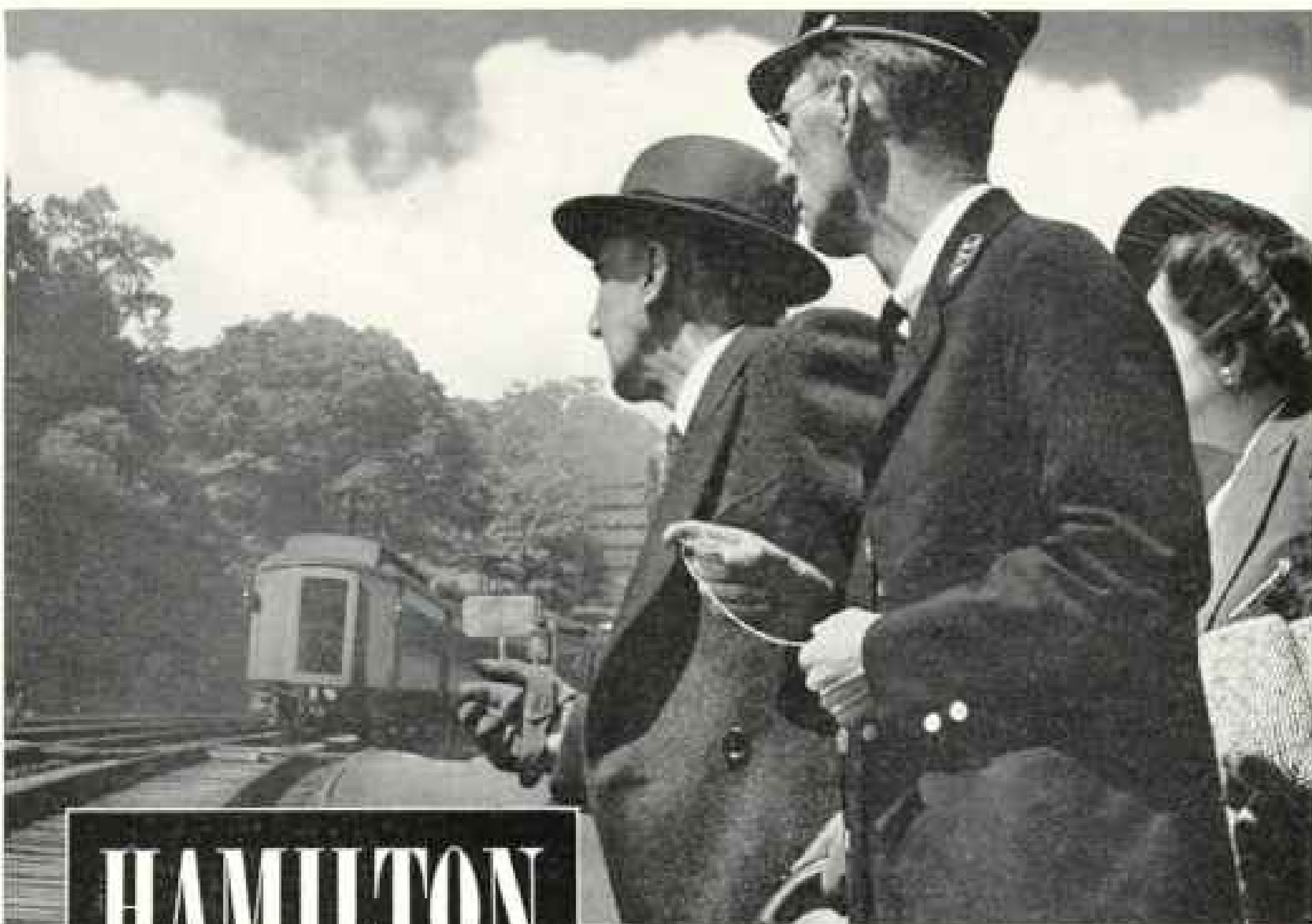
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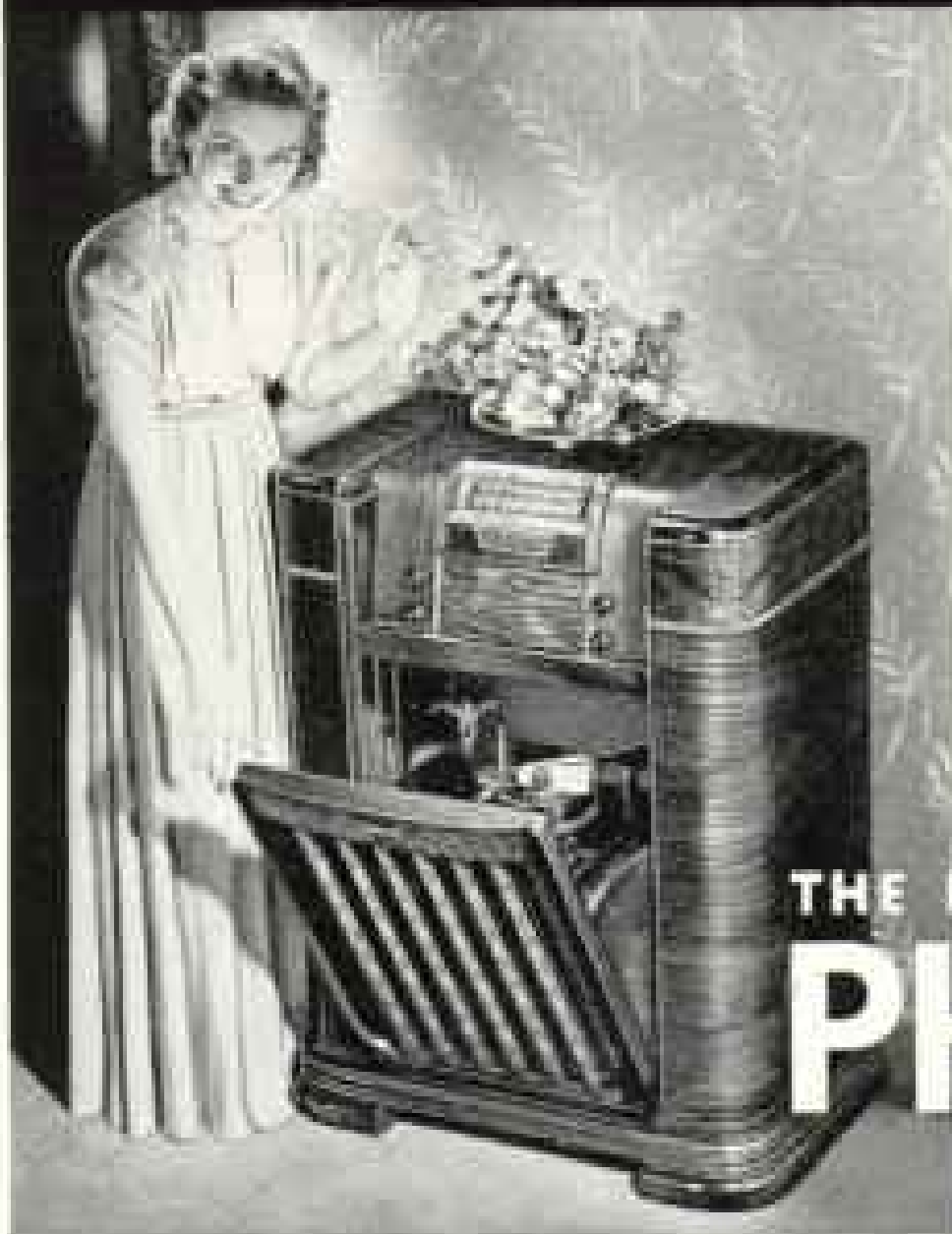
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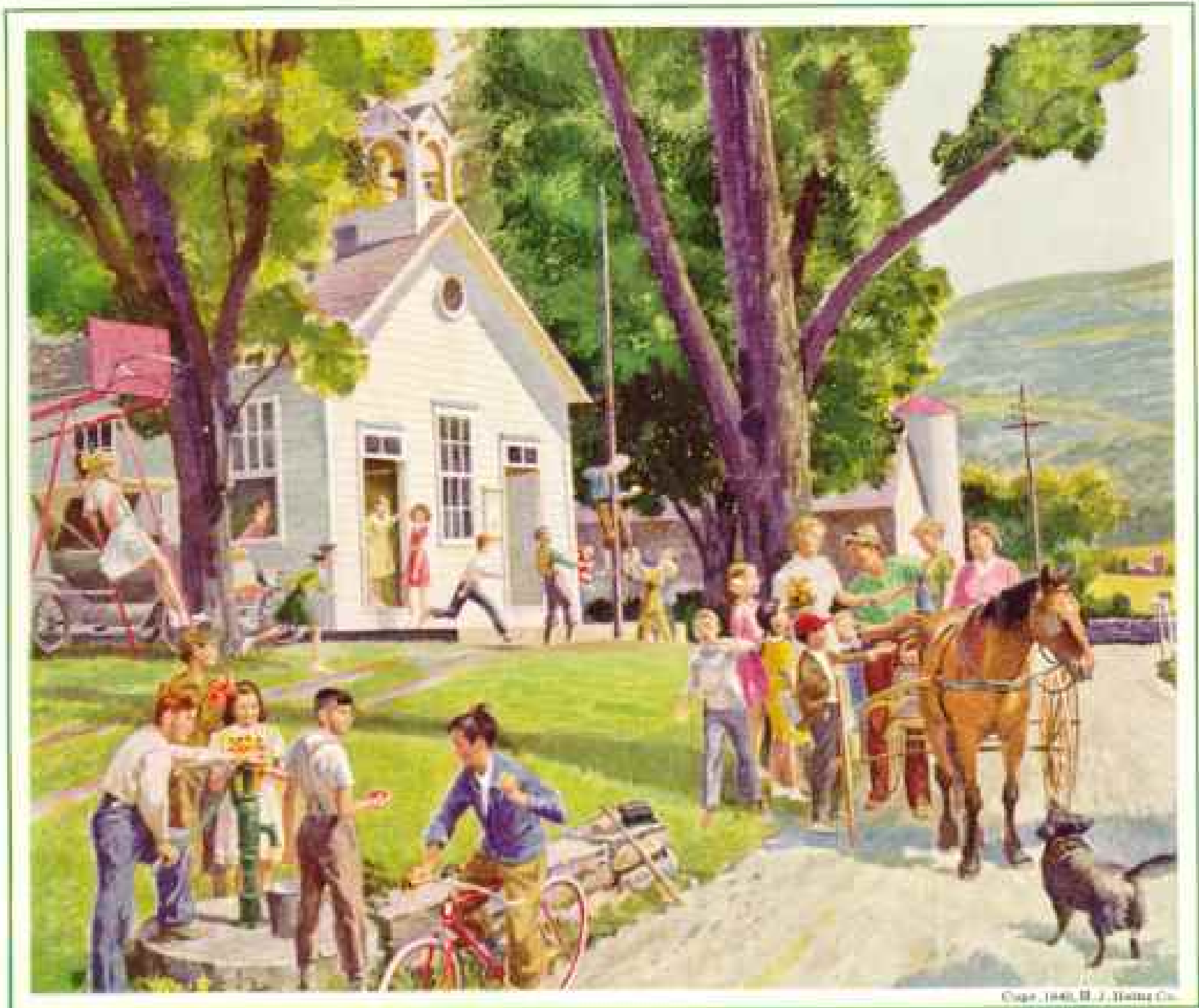
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St. Petersburg has planned a grand vacation for you—all kinds of recreation and entertainment, plus a type of hospitality that is notable. We have also prepared a number of booklets to give you the information you need for planning your vacation. First, there's a general booklet; then there are booklets on Hotels, on Apartments, on Cottage Colonies and Trailer Parks, on Fishing, and on Schools. Write for the ones you want. Address H. W. Neal, Chamber of Commerce—

**St. Petersburg Florida**  
THE SUNSHINE CITY



## SCHOOL DAYS

*An Old American Institution*

**I**F YOU LIVE to be a hundred, you'll never forget the excitement of the first day at school . . . your hair plastered down with cold water . . . squeaky new shoes . . . a shiny pencil box. Nothing, not even your name in gold on an office door, can equal the pride of writing 4B at the top of your paper—instead of 3A. You're *promoted* . . . to a new room, a new desk, a mysterious new arithmetic book full of the strange workings of long division.

**T**HIS year twenty-three million young Americans in our public schools will be putting down roots into the deep riches of American culture and they will be learning, along with their three R's, the history and traditions, the stories and songs of our great land:

"I love thy rocks and rills  
Thy woods and templed hills . . ."

*Thy rocks*—veiled by the fine, cool spray of waterfalls. *Thy rills*—the shallow brown rivulets, edged with forget-me-nots, that crisscrossed the low fields, early in spring. *Thy woods*, where you gathered the first pale arbutus for the teacher's desk. *The hills*, templed with apple orchards and solemn evergreens . . .

**S**UCH are the memories that build up your love of the land—the truest form of patriotism . . . memories of homely sights and sounds, scents and *tastes*,

And the *tastes* of childhood linger on the tongue, longer than remembrance of voices, longer than the look of a well-loved room. That's one reason the H. J. Heinz Company, maker of American foods for the past 70 years, has become so important a part of our national scene. Generations of Americans have been brought up with Heinz 57 Varieties—well know the satisfying flavor of Heinz good, old-fashioned cooking.

**T**IMES change—but good things stay the same. For instance Heinz Tomato Ketchup, Chili Sauce, Oven-Baked Beans or Heinz Strained Foods. They are heartening to the soul as well as the body, for they make folks feel more at home in a changing world.

**I**n a sense, the world-wide use of Heinz old-fashioned foods is a continuation of the neighborliness of other years. Nowadays Heinz helps out with the cooking in many a busy household. Every year more and more of America's favorite foods are added to the Heinz list to bring you modern convenience, along with that well-remembered savor that comes from the finest ingredients, careful cooking, old-time recipes—as dependable as old friends.

57

**H. J. Heinz Company**  
*An Old American Institution*



*SERVING ENGLAND...  
SCOTLAND... IRELAND  
... WALES*

*IN THE PAST* swift and comfortable expresses of the British & Irish Railways have taken thousands of American visitors each year to the delightful vacation spots in all parts of Great Britain and Ireland.

*TODAY* unfortunately Americans cannot visit these places they love so well, yet despite the sterner duties which are now being faced in Europe, the British & Irish Railways are maintaining their contact with their American friends through their General Traffic Manager in New York, Mr. C. M. Turner.

*IN THE FUTURE* when peace comes again it is their hope that visitors of the past will retrace their steps once more to the old country, and that new visitors will flock to their friendly islands when the time comes for them to be welcomed back.

*Associated British  
and Irish Railways*



C. M. TURNER, *General Traffic Manager*  
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# ANY BOY CAN *make a motor*

*by Westinghouse*



- *For a thing so important to modern life, an electric motor is an amazingly simple device. Just a few pieces of steel, iron and copper, wound with coils of wire. Any bright boy can follow instructions and make one that will run.*

- *Yet the most romantic story ever told could be written about the electric motor. It runs practically every mechanical device in use today. It turns the wheels of industry. It carries people to work from the suburbs to the topmost floors of tall buildings. It changes housekeeping from dreaded drudgery to delightful adventure. Our daily lives and livelihoods depend—more than we realize—upon the smooth, effortless spin of a thousand electric motors.*

- *In fact, electric motors are so common nowadays that we accept them as our*

primitive ancestors accepted air, water and fire. We flick a switch—and an automatic razor zips off our whiskers. We push a button—and our automobile motor starts. A faucet turns—and a faraway pump delivers water. A vacuum cleaner cleans, an electric fan cools, an adding machine adds, a phonograph plays—and it's all automatic, as far as most of us are concerned.

- *We have been making electric motors for a great many years—in fact we've made millions and millions of them. Naturally, we have improved their design and construction considerably since 1886. We can remember when we thought a ¼-horsepower motor, which took up more than a cubic foot of room, was a pretty commendable achievement. Now we can pack the same horsepower into a third of the space, sell it for less, and save the user a big dividend in operating cost.*

- *But after all, it's fitting the motor to the job that really counts. A ¼-horsepower motor and a 10-horsepower job just can't be combined. Neither can an oil rig and a motor designed for an air conditioning system. That is why Westinghouse offers stock motors in thousands of types, sizes and ratings. And if none of these is exactly what is needed, a special model will be built to order.*

- *The electric motor is "bread and butter" to us—and to almost everyone else. The more we learn about the jobs it can do, the more we can add to its usefulness. Meanwhile, we keep right on with the testing, experimenting and improving that have helped to make the electric motor the unsung hero of American progress.*

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AND **OWN...**

THE  
**SCOTT**



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When you see and hear a SCOTT RADIO, you quickly discover why Scott owners will tell you they have the "World's Finest Radio!" Then decide that you will own a Scott!

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The lady who  
never  
grows old



• This picture introduced Sani-Flush—28 years ago. It marked the end of a nasty job. Because Sani-Flush cleans toilet bowls without scrubbing and scouring. The same scene—brought up to date—appears on the Sani-Flush can today. Here is the easiest and best known way to keep toilets clean and sanitary.

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**Judd & Detweiler, Inc.**  
Printers

Eckington Place and Florida Avenue  
Washington, D. C.

This Magazine is from our presses

# "MY CRIES WERE WHISPERS AS MY LIFE EBBED!"



*A true experience of P. S. NICHOLLS, South Bend, Ind.*



"LATE ONE NIGHT, returning from a fishing trip, I dozed at the wheel of my car while going at a fast clip," writes Mr. Nicholls. "Suddenly there was a blinding crash!

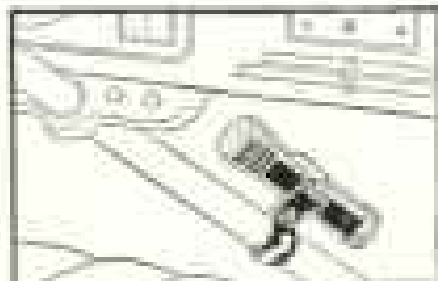
"MY CAR HAD VEERED off the road and smashed head on into a tree. My throat was gashed and bleeding badly. I was able only to whisper—and seemed doomed to die in the inky darkness. Then ...



"...I REMEMBERED MY FLASHLIGHT! Somehow I managed to get it from my tackle box and crawl weakly back to the road. Quickly the bright beam of the flashlight, waved in my feeble grasp, stopped a motorist, who took me to a hospital just in time. There is no doubt that I owe my life to dependable 'Eveready' fresh DATED batteries!

(Signed)

*P. S. Nicholls*



**SAFETY FIRST!** Keep an EMERGENCY LIGHT in your car—for tire changing, roadside repairs, locating lost articles, if lights go out, etc. The "Eveready" Auto Flashlight, shown here, complete with "Eveready" fresh DATED batteries and steering post clamp, only \$1.25.

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Three lengths—15", 18" and 24". Leg height—4 1/2". Special 6" legs, at slightly higher cost. Fire Dogs stand behind andirons, straddling bar. Unbreakable. Guaranteed forever.

Prompt delivery on all orders. Send check or money order now to: Box 12.

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The Cumulative Index with 1937-39 Supplement unlocks the vast wealth of material in 492 numbers of the *National Geographic Magazine*—from 1899 through 1939. It includes 15,200 references to topical headings, nature subjects, places, maps, authors, titles, and pictures. Brown cloth binding; 510 pages. \$1.25 in U. S. and Possessions; elsewhere, \$1.50. 1937-39 Supplement only, 25¢ in U. S. and Possessions; elsewhere, 50¢. Postpaid.

**National Geographic Society**  
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## Be careful of that match!

**THE FAMILIAR**, helpful match can turn into a dangerous enemy.

Employed carelessly, discarded thoughtlessly, or left within reach of children, the match ranks among the foremost causes of approximately 360,000 household fires which account for most of this country's 10,000 annual deaths from burns.

Naturally, the match isn't the *only* fire hazard we must guard against in our homes. Many other things we make use of are dangerous if misused.

In *your* home, for instance, are the following fire precautions strictly observed?...

- ▶ Are you sure that all electrical appliances are equipped with only standard, approved connection cords and wiring, and are in good condition?
- ▶ Do you avoid the use of gasoline and other flammable liquids for cleaning in the home?...the use of kerosene for lighting fires?
- ▶ Do you keep your gas burners clear of grease which might catch fire? Are your burners regulated to prevent too high a flame—particularly when broiling or frying fats? Do you tie back curtains and other flammable material which might blow onto the flame?
- ▶ Is every stove, furnace, or hot pipe shielded adequately from wooden surfaces?... Are ashes placed

only in metal containers?

These are just a few of the highly important safety measures which deserve your attention. If more of us had a thorough understanding of the various fire hazards, of fire prevention, and of effective fire fighting, the annual toll of 10,000 lives would be reduced, and an enormous saving could be made in the nation's annual fire loss—a loss which last year was estimated at more than \$313,000,000.

To help you safeguard your home and your family against fires and other accidents, Metropolitan offers a new, interesting, free booklet, "Home Safety Quiz." Co-operate with your local organizations during National Fire Prevention Week—beginning October 6th—by checking up on possible fire hazards in your home. Write to Dept. 1040-N.

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(A MUTUAL COMPANY)

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*Levy A. Lincoln*, PRESIDENT

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## It took 3900 years to solve this one

**A**S OLD AS recorded civilization is the law that a person whose negligence results in the injury of another is liable for damages.

You will find this law in the code of Hammurabi, ruler of Babylon some 4000 years ago. You will find it in the Mosaic code, and in the codes of civilizations that have come and gone since then.

This fundamentally fair law sometimes worked great hardship on the negligent person, causing him to lose all the property he owned. And, by doing this, the law's heavy hand fell on innocent people: the family and the employees of the negligent person, who lost their livelihood when the master lost his property.

About one hundred years ago, 3900 years after the time of Hammurabi, liability insurance stepped

in and provided solutions for many of the problems that this law had created.

Special liability policies are available for householders, landlords, merchants, manufacturers, and for men and corporations engaged in various activities. Probably the best known form is that carried by automobile owners. The various types of liability insurance not only safeguard your possessions, but free your mind of many worries.

Liability insurance of all kinds is sold by The Travelers. Let your Travelers agent or insurance broker advise you on what types you really need.

Moral: Insure in The Travelers. All forms of insurance. The Travelers Insurance Company, The Travelers Indemnity Company, The Travelers Fire Insurance Company, Hartford, Connecticut.

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Going from shop to shop, counter to counter, you spend something you didn't bargain on . . . energy. So when you're tired and thirsty, go straight to the soda fountain and enjoy *the pause that refreshes* with ice-cold Coca-Cola . . . a little minute that's long enough for a big rest.

5¢



THE PAUSE THAT REFRESHES



## *Life is a movie...* save its fleeting moments with a movie camera

**L**IFE flashes by so fast . . . how often you wish you could recapture some precious moment, to experience it more fully.

With a movie camera you can. Home movies bring back the very feeling of past events—their charm, interest, change.

Today hundreds of thousands of people are learning the fascination of home movies. Own your own movie camera—have the thrill of making living records for the future.

*Only Eastman gives you complete equipment and service . . . Ciné-Kodak—the home movie camera exactly suited to your needs . . . Ciné-Kodak Film . . . Processing that's convenient and included in the price of the film . . . Kodascope—the projector that shows your movies brilliantly—Eastman all, and all designed to work together.*

Your dealer will show you the range of Eastman home movie equipment and project sample movies for you . . . Eastman Kodak Company, Rochester, N. Y.

**KODAK'S NEW COLOR SHOW—AGAIN THE HIT OF THE NEW YORK WORLD'S FAIR**

Millions of people have marveled at the beauty and drama of Kodachrome full-color pictures projected on a 187-foot screen, longest in the world. Also at the Kodak Building—expert advice on picture taking at the Fair. Don't forget your Ciné-Kodak.

### **TO MAKE 16 MM. MOVIES . . .**

Magazine Ciné-Kodak, pocket size, effortless 3-second magazine loading, emphatically simple yet thoroughly versatile home movie camera, \$117.50. Ciné-Kodak "K," most widely used 16 mm. home movie camera, \$80. Ciné-Kodak "E," the low-priced "sixteen" that has many high-priced camera features, \$39.50.

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Kodascope Model EE, Series II, capable, low priced, from \$65.45. Kodascope Model G, Series II, Eastman's precision-built projector, from \$112.95. Both complete with lens and lamp.

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Eastman's finest home movie cameras





# "Where shall we stay?"

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**Marlborough-Blenheim.** For a beautiful Atlantic interlude by the sea. Boardwalk sun decks, tempting menus. Josiah White & Sons Co.

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**Hampshire House.** Central Park So. New York's most beautiful aptmt. hotel. Convenient to everything. Single from \$1; double from \$1.10; suites from \$1.50.

**Park Lane Hotel.** Park Ave. at 10th. Convenient, distinguished. Single rooms from \$1; double from \$1; suites from \$1.50. Apartments, permanent occupancy.

**Hotel Pierre.** Fifth Ave. at 61st St. Overlooking Central Park in most fashionable location. Single rooms or suites by the day, month or season.

**The Plaza.** New York, facing Central Park. Every year the Plaza becomes richer in tradition and more modern in convenience. Henry A. Root, President.

**St. Moritz-on-the-Park.** New York's truly Continental hotel. Home of Rimpelmayer's and Cafe de la Paix. Single, \$4. Double, \$6. Suites, \$8.

**The Savoy-Plaza.** at Central Park provides every service to make your visit to New York enjoyable. Henry A. Root, Man'g Dir. George Suter, Res. Mgr.

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**Hotel Seymour.** 20 W. 45th St. Near Fifth Ave., theatre, shops, art galleries, Radio City. Quiet, refined surroundings. Single \$4; double \$4.50; Suites \$6.

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**Bellevue-Stratford.**—"One of the Few World Famous Hotels in America." Rates begin at \$1.50. Claude H. Bennett, General Manager.

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**Fort Sumter Hotel.** on the famous Battery. Only waterfront hotel in Charleston. All outside rooms. Golf Club privileges. Folder. Jan S. Cutler, Mgr.

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## VIRGINIA

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**Cavalier Hotel and Country Club.** Open all year. 2 golf courses, tennis, riding, fishing, heated pool, Hottel Easton, Mg. Dir. Write for Booklet "G."

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\* **DUES:** Annual membership in United States, \$3; Canada, \$3.50; abroad, \$4; life membership, \$100. Remittances should be payable to National Geographic Society. Those from outside of continental United States should be made by New York draft or international money order payable in U. S. funds.

## RECOMMENDATION FOR MEMBERSHIP

IN THE

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\* *The Membership Dues, Which Are for the Calendar Year, Include Subscription to the National Geographic Magazine*

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1940

To the Secretary, National Geographic Society,  
Sixteenth and M Streets Northwest, Washington, D. C.:

I nominate \_\_\_\_\_

Occupation \_\_\_\_\_

(This information is important for the records)

Address \_\_\_\_\_

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Canada Ranks The National Geographic  
as Outstanding for Travel Advertising



REFER TO FILE NUMBER

DEPARTMENT OF TRANSPORT

CANADIAN TRAVEL BUREAU

OTTAWA, CANADA

March 29, 1939

Raymond W. Welch, Esq.  
Director of Advertising,  
National Geographic Magazine,  
Washington, D. C.

Dear Mr. Welch:

Rarely do I ever depart from the policy of this Department in connection with commenting upon the success or otherwise of publications we have used in our advertising campaigns in the United States. I think, however, I may make an exception in the case of National Geographic.

Since the establishment of the Canadian Travel Bureau in 1934, National Geographic has been the outstanding magazine used in our schedule. In fact, in view of the success we have had in the use of National Geographic, I cannot conceive of any organization desiring to develop and expand its travel possibilities excluding National Geographic from any media list.

Some figures in connection with our experience might perhaps be enlightening. I have kept a very complete record of all media used by the Canadian Travel Bureau since this Branch of the Federal Government was established. I find that in 1935 we received 349 inquiries as a result of copy run in National Geographic. We had two full pages and one half-page in that year. In 1936 we ran three pages and we received 1,224 inquiries. In 1937 we used exactly the same space as we did in '35 and received 2,879 inquiries. Last year, 1938, we continued to use the same space and received 1,524 inquiries. I am not one of those who is swayed by the cost per inquiry rating of any magazine from a travel standpoint, but even on that basis National Geographic has been the leader of our magazine list.

Briefly, I merely say this with respect to National Geographic; that I know of no magazine media more beneficial to a travel client, and it is always a "must" on Canadian Travel Bureau schedules.

Yours very truly,

D. Leo Dolan  
Chief





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