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Cuba—American Sugar Bowl

With 13 Illustrations and Map
42 Natural Color Photographs

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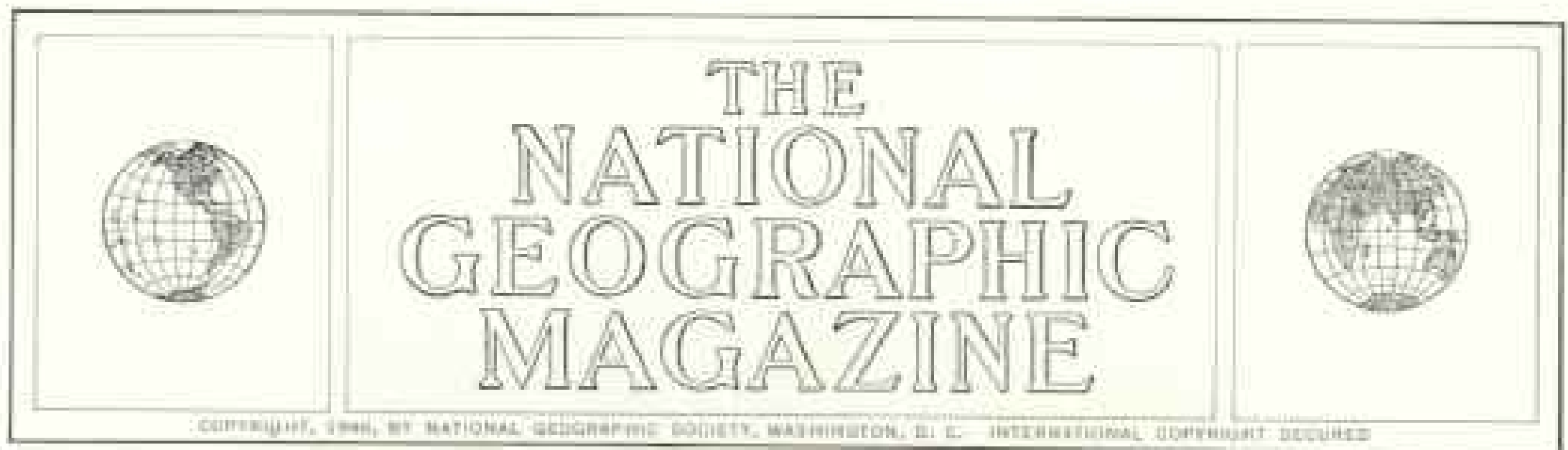
JENNIE E. HARRIS

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Cuba—American Sugar Bowl

BY MELVILLE BELL GROSVENOR

With Illustrations from Photographs by the Author

"WE LOST two sugar stamps today," my wife lamented. "They lapsed because I couldn't find any sugar to buy."

Here was a tragedy. Our family talked about it for days.

"Where does most of our sugar come from?" my young son asked.

"From Cuba. This year Cuba will send to this country more than 30 pounds of sugar for every man, woman, and child."

"Cuba is really our sugar bowl then," he said.

Friends who had visited the "Pearl of the Antilles" extolled its many virtues besides sugar. When vacation time rolled around, I decided to see the island for myself.

After lunch in Miami, Florida, I boarded a Pan American Clipper for Havana (Habana). The flight was memorable, across the southern tip of Florida and shoal-studded Florida Bay.

LSD Will Ferry Cars to Havana

Far below, I saw tiny mites crawling along a thin white string. They were automobiles speeding along the Overseas Highway which spans the sea on stilts to Key West. Soon cars will board a ferry at Key West, I mused, and six hours later roll off at Havana.

GATCO (Gulf Atlantic Transportation Company) is converting a landing ship to make this car ferry. A remodeled LSD, which repaired our amphibious craft in the Pacific war, will whisk 230 cars 100 miles across the Straits of Florida to Cuba.

Passing over Key West, our Clipper climbed above huge white clouds and headed south over the sapphire Gulf Stream.

In a few moments we picked up the rugged north coast of Cuba and then flew over the bottleneck entrance to Havana. Morro Castle crowned one side and the Malecón, Havana's Riverside Drive, bordered the other. Ships and docks crowded this important port, haven of vessels for 438 years. We passed directly over the colorful city, with its red-tiled roofs, green plazas, and the huge domed Capitol marking its heart (Plate I).

This big island of Cuba, with its Spanish speech and Old World atmosphere, lies only an hour and a half by air from Miami.

Columbus used all his superlatives to extol the virtues of Cuba. "A thousand tongues could not adequately relate its loveliness," he wrote after the island's discovery, October 27, 1492, on his first voyage.

Although my son and many others think of Cuba as a sugar bowl, to smokers it is the world's cigar box.* Havana leaf for making cigars is considered tops.

The island also is a huge repository of iron, manganese, copper, tungsten, and other vital ores. During the war Cuba sent many shiploads of precious nickel to toughen the steel our armament plants used (page 40).

Cuba ranks fourth among the nations of the world in iron ore reserves. When our deposits run out, we may be glad that this vast source of iron ore lies at our doorstep.

My travels in Cuba began with the drive into town along the Malecón. This wide, curving boulevard borders the rocky coast

* See, in the NATIONAL GEOGRAPHIC MAGAZINE, "Cuba—The Sugar Mill of the Antilles," by William J. Showalter, July, 1920, and "Cuba—The Isle of Romance," by Enrique C. Canova, September, 1933.



Alexander Graham Bell Grouse

Beyond Morro Castle's Drawbridge Lies the Heart of Havana

Since the days when Sebastián de Ocampo careened his caravels here in 1508, ships have sailed through this narrow entrance to the harbor. Cruise ships pass close to the sea wall, giving passengers a close-up view of the President's Palace with its low, yellow-tiled dome, the statue of Gen. Máximo Gómez (left), the tall-domed National Capitol, and the Malecón. This high-speed boulevard connects downtown Havana with the suburbs. The view has been compared to that of Washington, D. C., from the Virginia hills.

from suburban Vedado to the Plaza de Armas, birthplace of the city of Havana (Plate IV).

Gen. Leonard Wood, USA, our much-loved first Governor General of Cuba, built and extended this magnificent highway.

"Havana will grow as the Malecón lengthens," predicted the General. Now the boulevard is being pushed to the Almendares River, haven for fishing boats and yachts (Plate V).

Cubans "Remember the *Maine*"

Should you drive your own car down the Malecón, go fast or you will be "blown" off the road by impatient drivers. Look out for turning cars—quick-acting Havana drivers dart left or right with no warning. Think fast when you reach one of those broad places where the traffic is four-way, parallel, and going in opposite directions!

To see the sights, I let my friend, Lucius

Tippett, Jr., drive. An American born and raised in Havana, he had just been mustered out of the U. S. Army.

We stopped and studied the gleaming *Maine* monument, rising on an island in the Malecón. Everyone recalls how the U. S. battleship *Maine* steamed into Havana Harbor on a goodwill mission and two weeks later, February 15, 1898, mysteriously blew up at her moorings. War with Spain followed, and Cuba won her independence.

Grateful Cubans erected this monument, facing the blue sea, in memory of the officers and men who were lost. "Remember the *Maine*," the slogan of the Spanish-American War, has not been forgotten in Havana (35).

I rowed across in a boat and climbed over the battlements of famous Morro Castle (Plate V). I saw sharks swimming close to the rocky cliff and the chute where bodies of fever vic-

tins and casualties were thrown to the sea wolves. Down in the dungeons I marveled at the wax figures, clasped in the tight grasp of Spanish torture machines.

With Dr. Domingo Ramos, an old-time friend, I visited the National Capitol (Plate I). As it was a hot day and we were coatless, we were obliged to rent coats for 25 cents before we could enter.

In the rotunda a huge gilded statue, representing the Cuban Republic, greeted us. We wandered through the marble halls where the Senate and House of Representatives meet. Each desk had its microphone.

I roamed the narrow streets and drank coffee in the tiny open-front cafes.

In the evenings I strolled with all Havana along the tree-shaded Prado, which cuts straight across the heart of the city to the Capitolio. Along the benches at its side people rested and couples made love. Boot-blacks, lottery ticket sellers, and souvenir vendors constantly accosted me in English and Spanish (Plate III).

One afternoon we climbed the hill on which Principe Castle is set to view the city. While photographing the old gate and deep, dry moat, we found ourselves under arrest. The castle now serves as the Havana prison, we were informed. Our photographs might help prisoners escape!

I sent my card in to the prison director. At once our guards became our escorts, and we were shown into his office, an old gunroom of the fort.

The director told us about Principe.

"After the British marines and American colonials captured Havana in 1762, this castle was built to guard the Capital's rear approaches," he said. "It was a case of locking the door after the burglar had walked in. Nevertheless, Principe stands as one of the finest Spanish star-shaped forts."

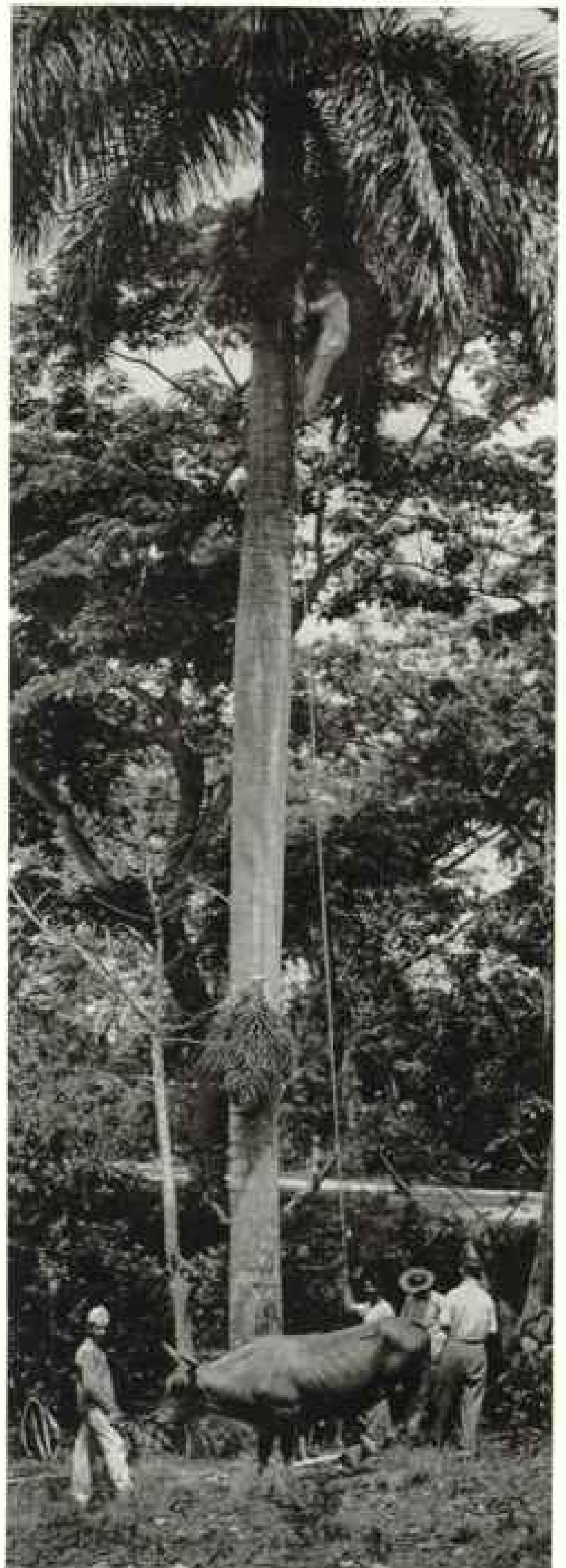
Some 1,400 prisoners in neat dungaree uniforms were drawn up around the blue-and-gold-tiled patio for evening colors.

"The prisoners make all their attire, from shoes to clothes," the director told us.

In a gunroom we saw a statue of José Miguel Gómez, a prison inmate from March 8 to September 24, 1917. "I asked if this Gómez was the former President of Cuba.

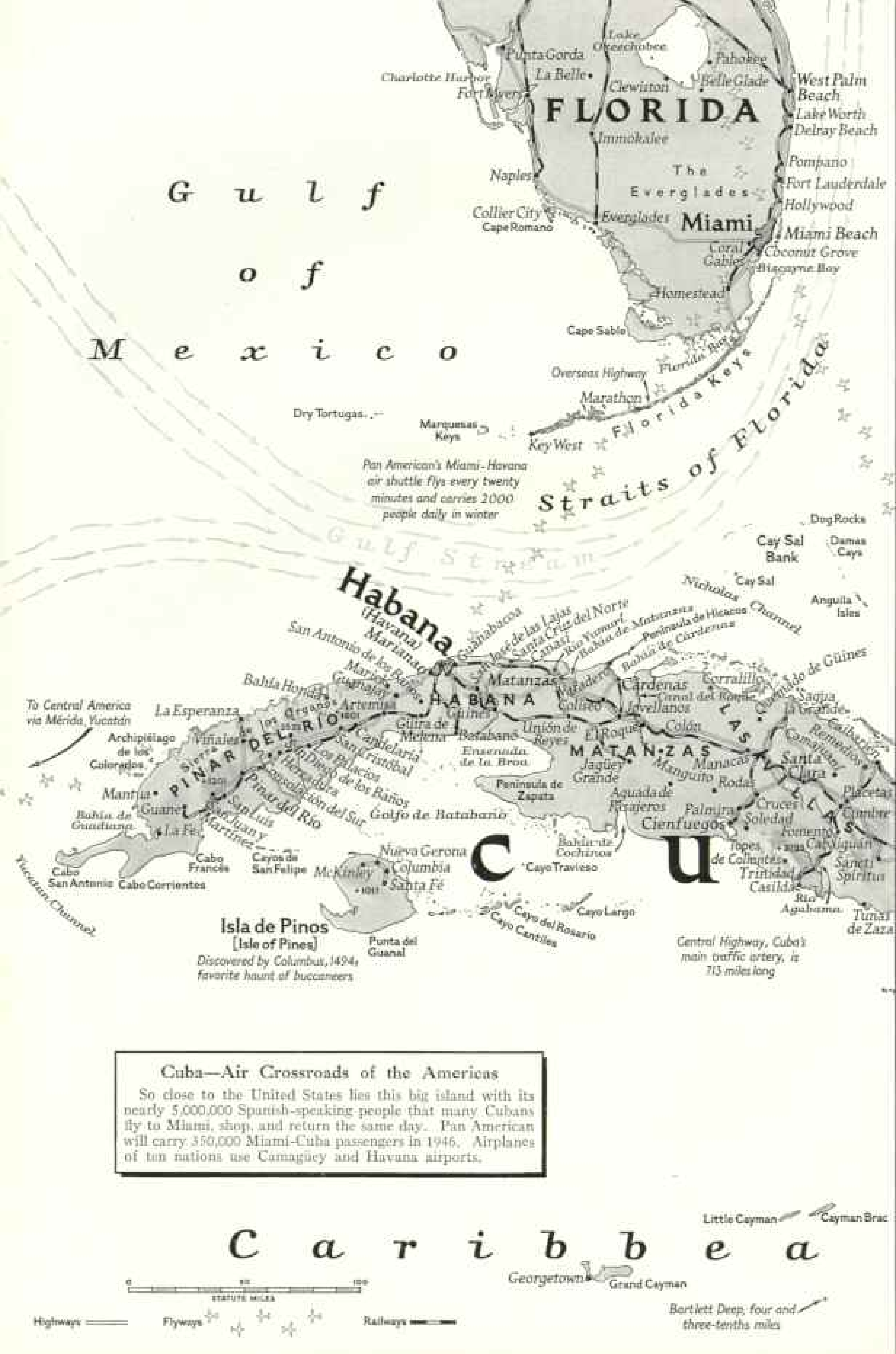
"Yes, President Gómez occupied this very room. Even the present President, Ramón Grau San Martín, served time here in 1933. In fact, many distinguished leaders of Cuba today are proud to call themselves 'alumni of Principe.'"

Not until I planned my motor trip did I appreciate the tremendous size of the moon-



Hog Feed Is Lowered from a Palm Top

Seed clumps weigh 50 to 60 pounds. If chopped off 60 or 80 feet up, the berrylike seeds are scattered by the fall. Royal palms are known as one- or two-hog trees, depending upon the seed they produce. This Pinar del Rio climber goes up quickly with the aid of stirrups and a rope strap around the trunk.



G u l f

o f

M e x i c o

FLORIDA

Miami

Dry Tortugas

Marquesas Keys

Straits of Florida

Pan American's Miami-Havana air shuttle flies every twenty minutes and carries 2000 people daily in winter

Habana
(Havana)

HABANA

MATANZAS

C
U

Isla de Pinos
(Isle of Pines)

Discovered by Columbus, 1494, favorite haunt of buccaneers

Central Highway, Cuba's main traffic artery, is 713 miles long

Cuba—Air Crossroads of the Americas

So close to the United States lies this big island with its nearly 5,000,000 Spanish-speaking people that many Cubans fly to Miami, shop, and return the same day. Pan American will carry 350,000 Miami-Cuba passengers in 1946. Airplanes of ten nations use Camagüey and Havana airports.

C a r i b b e a



Highways ——— Flyways * * * * * Railways ———

Bartlett Deep, four and three-tenths miles



Water Stays Cool and Fresh in a Palm "Belly"

Curious barrigona palms, with large paunches, grow in clumps around Consuelación del Sur. During the summer wet season the palm stores up water in its bulge. Farmers cut out this section, dig out its spongy inside, and use it as a water barrel (page 7).

shaped island of Cuba. For instance, the distance by road from Pinar del Rio to Santiago is 713 miles, farther than from Washington to Chicago.

Down the center of the island stretches a wonderful highway, the Carretera Central. To the road system of Cuba this fine boulevard is like the backbone of a fish. Lateral roads, running out to the seaports, are the rib bones. Many of these are impassable even to a high-wheeled jalopy.

Our first trip was to Pinar del Rio to visit a tobacco plantation (map, pages 4-5). As we left Havana, the highway bustled with traffic—buses, horse-drawn carts, bicyclists, daredevil motorcyclists, and a few automo-

biles. The din was terrific; drivers honked at the slightest provocation.

Leaving the fine country residences of the suburbs, the highway straightened into a broad macadam road. Huge laurels interlaced overhead to make a dark tunnel. The largest were planted by the Spanish.

We passed lush cane fields, dotted here and there with royal palms. Tiny thatched cottages were scattered everywhere.

Huts from Palms

Early Spanish chroniclers described neat huts like these, made entirely from the royal palm. Fronds thatch the roof, and board-like slices of palm form the side walls. Every home has its veranda, with a thatched or tile roof. Women were sewing on the porches while their menfolk smoked. Many had radios blaring. Aerials led from palm-leaf eaves to near-by royals.

As we approached Guanajay, the red soil became unbelievably rich. Cane fields were luxuriant. Bananas,

mangoes, flamboyant trees, and purple bougainvillea were thriving.

Some years ago a crew was boring for oil in this smiling country. Examination of the cores showed fertile soil nearly 70 feet deep! Earth brought up from this depth supported tobacco seedlings as well as surface soil.

Turning off the smooth Central Highway at Guanajay, we drove to Mariel to see Cuba's Naval Academy (Plate XVI). The road, pitted and rough, winds through a lovely countryside. Small cane and tobacco fields climb the slopes of gentle hills. On each green dome a farmer perches his little castle—a palm-thatched cottage.

Early historians told how Indians, too, built

their homes on hilltops to catch the constant breezes that blow across the island.

At Mariel, noted for its seafood, I tasted my first *moro* crabs. These crustaceans rival the Maine lobster in flavor.

Its fine harbor was often filled with ships of the corsairs. The British fleet based here in 1762 for the overland attack and capture of Havana, only 25 miles away.

In northern Pinar del Río Province asphalt is found. Near Mariel a large deposit is mined like coal. At one spot ocean breakers roll up on a black beach. The sand is saturated with asphalt. It makes excellent road material.

Pineapples Scent the Air

Leaving Mariel, we rolled through flat pineapple and cane fields to Artemisa. The air was scented with fragrant pineapple. Plants, with long, swordlike leaves, grow for many years without replanting in the rich soil.

Sierra de los Organos stood out against the sky as do the Alps. Appropriately named are these Organ Mountains. A stentorian overture booming out from the giant pipes and fluted columns would not have surprised me.

In San Cristóbal farmers were gathered at beer parlor "clubs" to gossip and spread the news. Horses with ornate saddles were tethered to the porches.

Every house had its grilled windows. We saw even thatched cottages with iron bars. Behind the grills of one palm home a pretty girl, "dressed to kill" in a pink frock, was waiting for a troubadour.

We passed many buses, crowded beyond standing room only. Passengers hung to doorsills and rode the spare tires on back.



Plucked for the Pit, Not a Grocery Counter

In Pinar del Río an attendant lifts the wing of a fine fighting cock to show its bare body and bright-red legs. Feathers are left only on the wings, neck, and tail. Removing feathers streamlines the rooster, makes him harder to catch. Throughout Cuba cockfighting is a favorite sport (page 25).

Youngsters clung even to the tops! One conductor hung out a rear window, waving at friends along the way.

Since gasoline is rationed and few Cubans own private automobiles, bus service is frequent and regular. People stood in line at stops waiting turns. No pushing or crowding.

Palms with Paunches

As the sun set, royal palms waved against the red sky. Countryfolk strolled by the roadside. Horsemen trotted along to their "clubs." One rider held a big bundle of sugar cane in his arms. Even his horse was carrying home a stalk in his mouth.

At Consolación del Sur we came upon a

grove of curious palms. Their trunks bulged in the center like a black snake that had swallowed a big rodent.

"They look six months along," Lucius commented.

We visited a small tobacco farmer, whose place was studded with barrel palms.

"Barrigonas store water in their 'bellies' during the rainy season to tide them over long winter dry spells," he told us. "When we need a water tank, we cut out the bulgy section and dig out its spongy inside. Come up to the house and I'll show you one."

In the shade of his thatched porch rested a hollow palm tank. His daughter dipped rain water for me (page 6).

"We also make barrellike chairs from barrigonas," he said. "We cut the bulge in half and scoop out the insides to make armchairs."

As we drove into Pinar del Río, people crowded the streets, talking noisily. Loudspeakers blared. This was a pre-election night.

Dinner in the Hotel Globo was a great success. From a menu listing 35 main-course dishes, I selected *biste con papas* (beefsteak with mashed potatoes). Referring to my Spanish-English dictionary, I could not find the words.

Lucius said many items were in Cuban idiom rather than true Spanish. "Cubans are so accustomed to their slang that some find it difficult to understand Castilian."

For dessert I had a typical Cuban dish, cream cheese and preserved guava, while Lucius had grated coconut in sugar syrup. Both were delicious.

Everyone in the dining room had a big quart bottle of mineral water at his place. As in many other cities of Cuba, tap water might be contaminated.

After dinner we walked up the main street named for José Martí, the George Washington of Cuba. Shop windows were bright with fluorescent lights. Everything one could wish for was on display, from Parker "51" fountain pens to nylons and electric irons.

At street corners crowds of young men listened with laughter and catcalls to politicians' big talk. Older men discussed the elections over their dominoes. Tables were set up on the sidewalk before nearly every shop. After each hand, the men mixed their huge dominoes vigorously and noisily.

Once in a while a car covered with political placards tore down the street, blowing its horn. Or a showy coupé crawled past broadcasting a speech or rumba.

That night we slept in high-ceilinged rooms with tile floors. Snow-white mosquito nets

covered our beds like canopies for royalty. Throughout Cuba, excepting in Havana, we slept beneath mosquito nets, as do Cubans.

Palm Seeds Feed Hogs

Driving out to Viñales valley, scenic Mecca for Cubans, we saw a man climbing a royal palm to harvest its seed clumps.

Giant royals not only provide thatch for roofs and sidings, but their seeds furnish food for hogs (page 3).

"How do you start new palm forests?" I asked the climber.

"We scatter seeds over the ground," he replied. "No cultivation is necessary; seeds root naturally."

Royal palm climbers have much prestige among the countryfolk. They travel far and wide.

Leaving the hot, flat plain, we climbed a mountain road and suddenly came upon fantastic Viñales valley. Brick-red tobacco soil and green pastures made a colorful carpet (Plates II and XI). Rising sheer, huge domes formed a city of castles. The sun, streaking through the clouds, spotlighted the towers.

The monoliths are honeycombed with caves. Stalactites hang from the ledges. Domes and turrets may reach 1,000 to 1,200 feet. The monoliths reminded me of similar ones photographed by T. C. Lau and Herbert Clarence White in southeastern China.*

Naturalists have found blind fish and shrimp in subterranean streams. Inside one cavern a dam furnishes power for the countryside. From the side of a cliff a stream flows. In the rainy season it reverses, the waters running back into the mountain.

Where Havana Leaf Is Grown

Next day friends took us out to San Juan y Martínez in the heart of the tobacco country. Soon the Central Highway will follow this road to La Fe. From there the motorist will jump the 125-mile gap to Yucatán by ferry and continue homeward through Mexico by the Pan American Highway.

Curing barns were everywhere.

"Perhaps under that thatched shed \$15,000 or \$20,000 worth of tobacco is curing," my friend said. "Our finest wrapper is grown under netting. While we may raise the best cigar leaf here, we produce the poorest cigarette tobacco."

We turned into a large group of buildings

* See "Landscape Kwangsi, China's Province of Pictorial Art," by G. W. Groff and T. C. Lau; and "China's Wonderland—Yen Tang Shan," by H. C. White, Deng Bao-ling, and Hwang Yao-tso, in the NATIONAL GEOGRAPHIC MAGAZINE, December, 1937.

Cuba—American Sugar Bowl

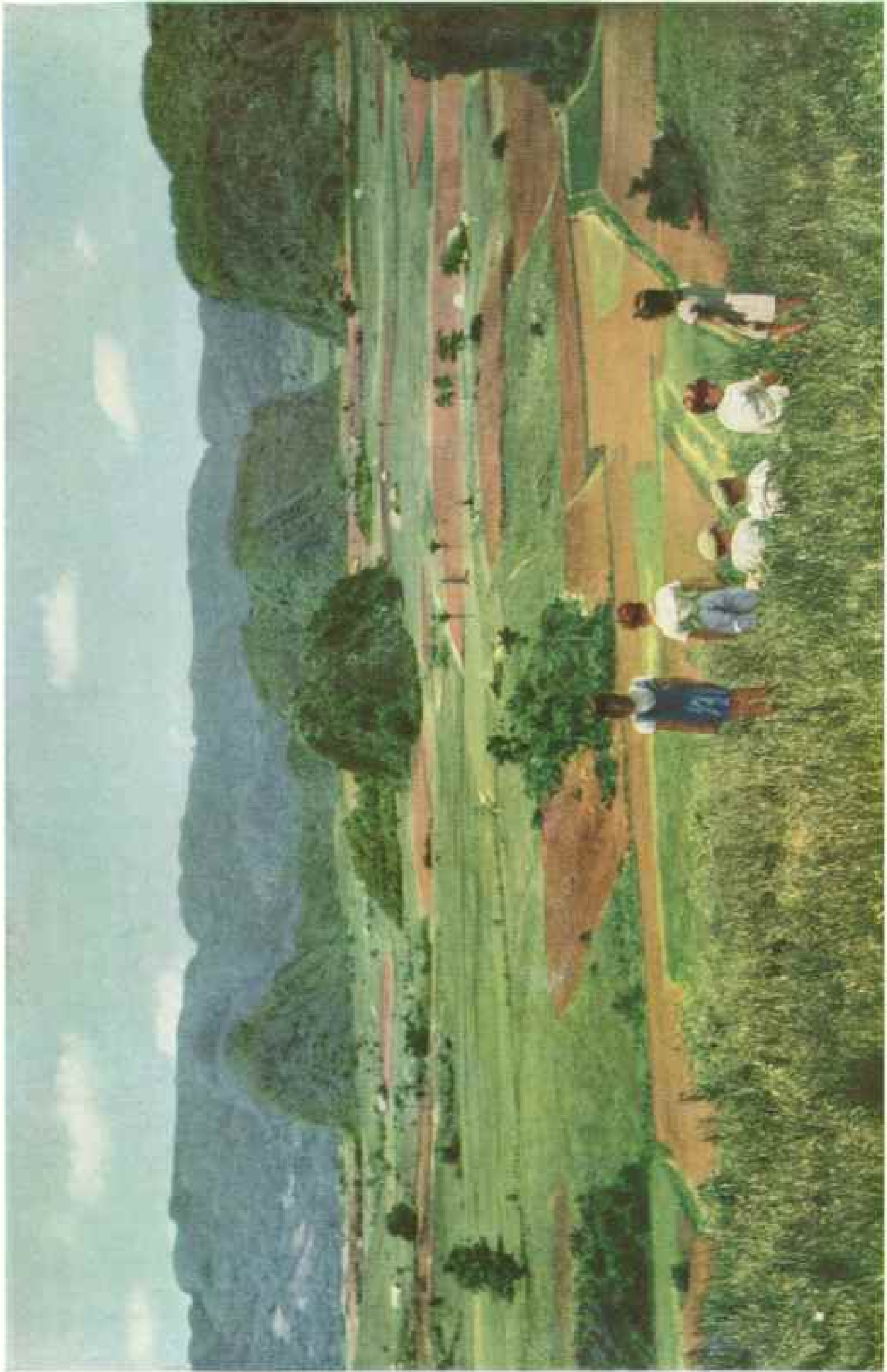


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Reduction by Mabelle Bell Grosvenor

Dominating All Havana, the National Capitol Thrusts Its Dome 308 Feet above Fraternity Park

Cubans are justly proud of their Capitolio, designed by a Cuban and completed by an American firm in 1929. The House of Representatives and Senate occupy sumptuous halls in either wing. Nearly every office has its airy patio. This bronze head of Lincoln stands in Fraternity Park. Political posters are plastered even on royal palms.



© National Geographic Society

Green, Castlelike Mounds Push Up from the Red Tobacco Soil in Fantastic Viñales Valley

Palms and flowering tropical plants cling to crevices in the sheer rock faces. Blind fish and shrimp live in subterranean pools and streams which honeycomb the limestone formations. These children dwell in one of the neat thatched cottages lying in the valley below.

Kobachmann by Melville Bell Grosvenor



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The Cuban Flag, Too, Was Born in a Revolution

Like the Stars and Stripes, the red, white, and blue flag was first flown when the island republic was fighting for independence. It replaced the red and yellow colors of Spain. This friendly peddler on the Prado displays Old Glory in honor of many American visitors.



Introduction by Melitta Pitt-Greener

A Fashion Plate Goes Shopping in Havana

Women were secluded in the home a generation ago. Parents frowned on their daughters' working for a living. Now Cuban women have equal rights with men. They vote, throng to the university, and are active in sports, politics, and the business world.



© National Geographic Society

Redrawn by Melville Bell Grosvenor

Havana Was Born and Grew Up Around Plaza de Armas

Diego de Velázquez careened his ships in the harbor in 1519 and established a settlement. On the second floor of Casa de Gobierno (City Hall), formerly the Spanish Governors' palace, Gen. Leonard Wood handed the reins of government to Cuba's first President, Don Tomás Estrada Palma. The date, May 20 (1902), is a national holiday. Statue of King Ferdinand VII of Spain, disliked by Cubans for his bad treatment, has a broken nose. American Embassy faces this square. Beyond the City Hall archway (center) a Columbus statue welcomes visitors.

Cuba—American Sugar Bowl



Sea Wall of the Malecón Is a Favorite Picnic Ground for Havanans

Across the deep blue of the harbor entrance stands Morro Castle, built to protect the capital from pirates who ravaged Cuban ports in early days. A chain once was stretched across the channel to keep out the buccaniers.



© National Geographic Society

Photographer by Merrill Jeff Goussier

Yachts and Fishing Craft Moor in the Almendares

A few years ago this river was far out from Havana. Now it passes between two of the city's finest suburbs, Miramar, background, and Vedado. During the fall hurricane season boats take refuge upstream.



© National Geographic Society

Boys and Girls of Havana University Chat on the Steps of the School of Law

Memorial for Melville Bell Grosvenor

Cuba's foremost University played a key role in her long fight for independence. Students and professors kept the torch of freedom burning. A memorial near the Prado marks the spot where eight medical students, ages 16 to 20, were shot by the Spanish authorities in 1871.



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Students from Mexico City Visit Havana

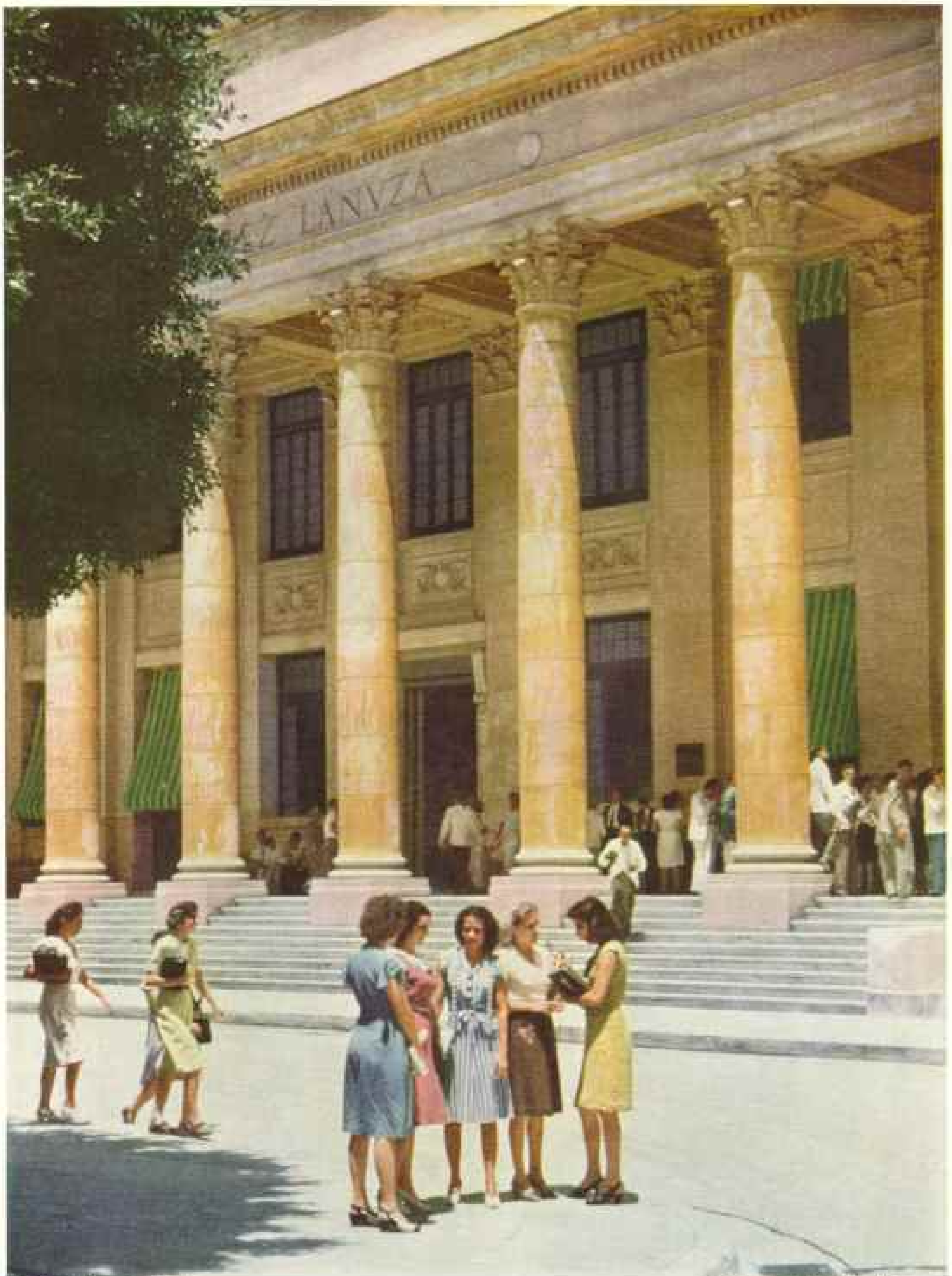
With Indian blankets over their shoulders, they chat beside one of the bronze lions of the Prado. Cuba encourages the exchange of students with the United States, Mexico, and other Pan-American countries to promote understanding.



Photographs by Malcolm Peck Grouse

A Geography Professor Plans a Field Trip in University Plaza

Dr. Salvador Massip makes geography interesting for his students by taking them on expeditions. His wife also teaches geography in the University. The students' husbands and wives accompanied them to the Isle of Pines (Plate XII).



© National Geographic Society

Colorized by Melville Bell Grosvenor

University of Havana Has Grown from 379 Students in 1900 to Some 15,000 Today

Gen. Leonard Wood moved the University from its city quarters to this fine site overlooking the capital. The Medical School's clinic for sprue is curing many patients by new drugs and special diets. Formerly this dread tropical disease was generally incurable. Chief sufferers are countryfolk who lack vitamins.

Cuba—American Sugar Bowl

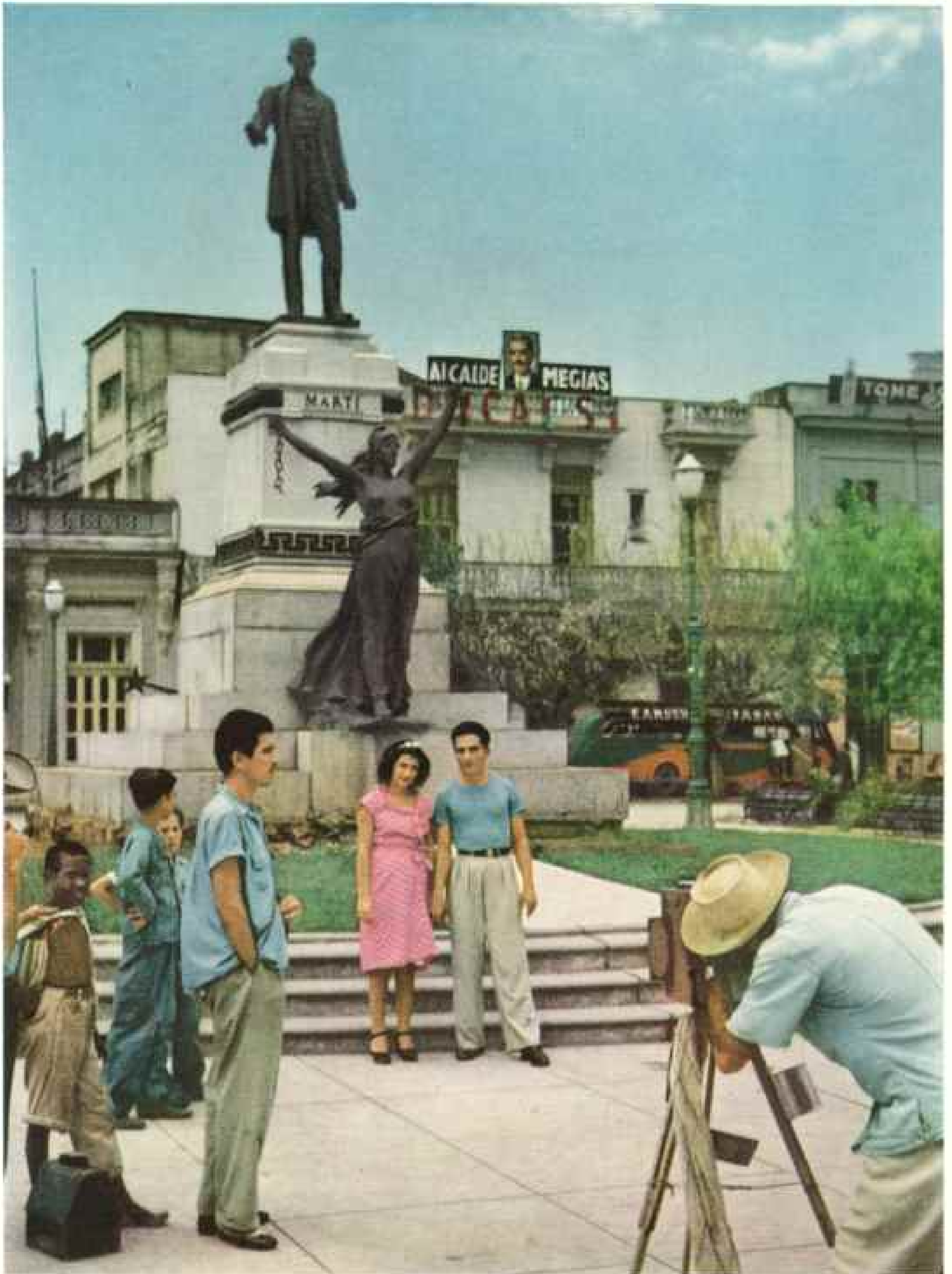


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Reduction by Merville Hill Grayson

A Bit of Old Spain as a Cuban Representative Sees It from the National Capitol

Through grilled windows he looks out upon Central Park in the heart of Havana. Centro Gallego, a club (left), covers an entire city block. It houses the National Theater, where operas, comedies, dramas, and motion pictures are presented. In its ballroom 5,000 persons may be entertained. The Asturian Club (right) is similar.



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Photographs by Melville Bell Grosvenor

Before the Statue of Martí a Honeymoon Couple Is Photographed in Matanzas

Many patriots were executed in the Parque de la Libertad during the old regime, including Cuba's beloved poet, Plácido. Once Matanzas was a rich sugar port, but in recent years the bulk of the island's cane production has moved eastward to Camagüey and Oriente. The bronze figure holds aloft broken chains of Cuban liberty.

Cuba—American Sugar Bowl



Boys with Red Dust Pants Watch Dad Get In the Last of His Tobacco

Here near Viñales a farmer cuts leaves, ties them in "hands," and places them on a pole. The tobacco will be sun-dried and then aged and cured in his shed. This leaf of fair quality will serve as filler for cigars.



© National Geographic Society

Kodachromes by Melville Bill Goussier

Deftly Graders Inspect Wrapper Leaves, Select the Best

This Pinar del Rio tobacco, grown under cheesecloth to protect it from the hot sun and insects, is some of the finest in the world. A good leaf must be thin and silky and have tiny veins. Each will wrap two cigars.



© National Geographic Society

Photograph by Marjorie Bell Greenleaf

A Geography Class from Havana University Visits the Home of José Martí on a Field Trip to the Isle of Pines

Here the poet-patriot, dear to Cuban hearts, found refuge during the long years when Cubans were fighting for independence. Inspired by wildcat promotion, many Americans emigrated to the "Island of Paradise." Failing to make a fortune in citrus fruits and farming, the disillusioned people returned home. On March 11, 1925, the United States gave the island to Cuba. Many Pineros still speak English learned in American schools. McKinley and Columbia are town names.



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Lose a Heel? He'll Put a New One On while You Wait

Here a cobbler displays an assortment of rubber heels on the sidewalk in the shadow of the National Capitol. Bootblacks, photographers, candy sellers, and rumba-tittle (maraca) vendors swarm the parks, catering to visitors.



Reference by Michelle Bell, Greenville

"Welcome to Pinar del Rio—the Tobacco Capital"

When the price of leaf is up, people are happy and prosperous; when it is down, the whole city suffers. Fortunately, depressions are rare, for production is limited. The world demand is great for this fine tobacco.



A Rainbow Leads to a Pot o' Good Cheer at Varadero

Visitors at Club Kawama go for a spin on motor scooters. They live in thatched cottages nestling under pines along the snow-white beach. At night they dine and dance to rumba music on a terrace overlooking the sea.



© National Geographic Society

Illustration by Melville Bell Grosvenor

"I Caught One This Big," She Says, but the Tape Measure Spoiled Her Story

A fishing party rows in to the beach at Varadero, one of Cuba's favorite resorts. Sand here is as white and fine as powdered sugar; the water blue as sapphire, shading to aquamarine.

Cuba—American Sugar Bowl

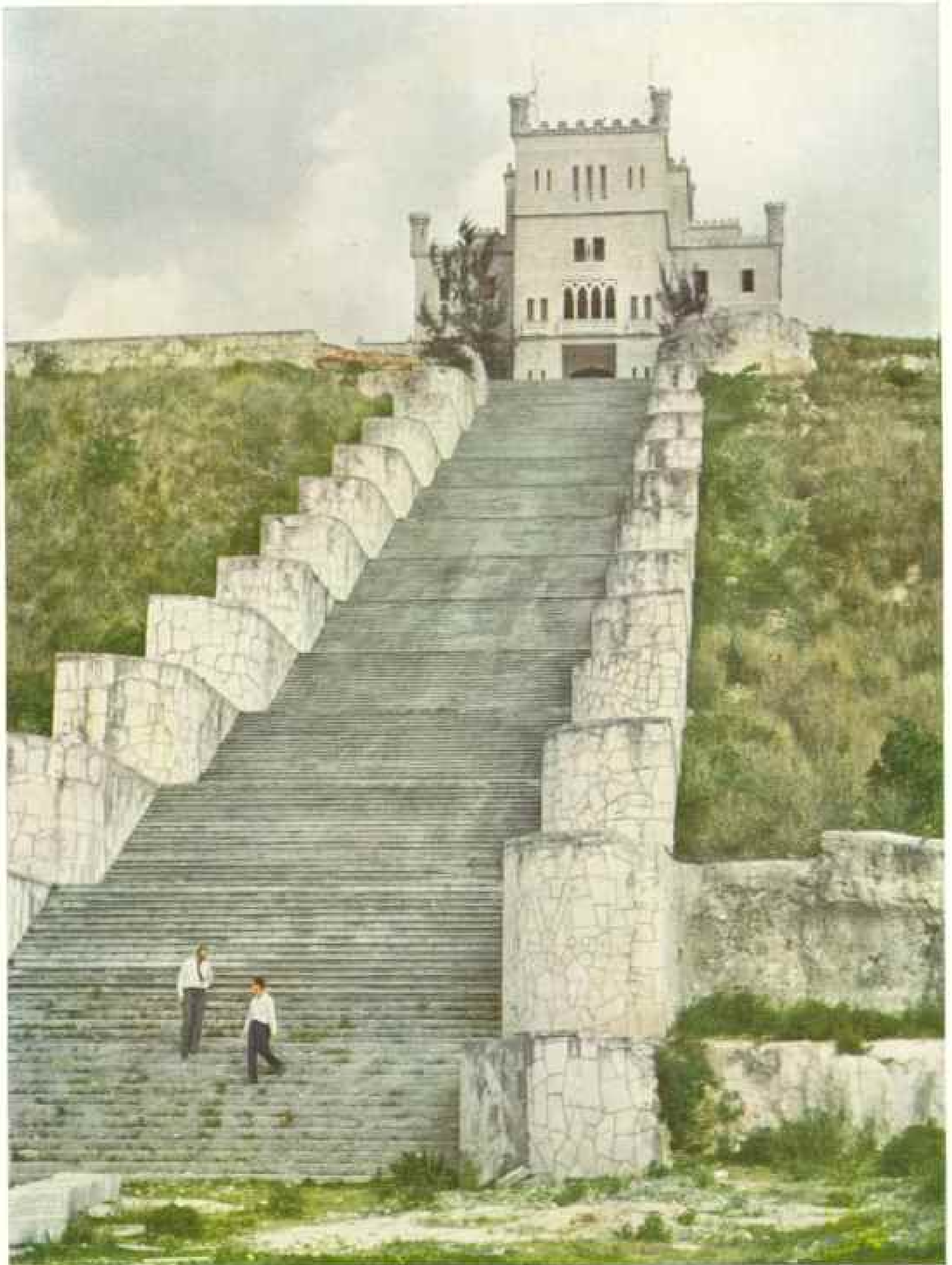


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Reproduction by Melville Bull Goussard

From Her Pedestal Marta Abreu Still Watches Over the People of Santa Clara

Marta inherited vast wealth—land, sugar, and cattle. She risked all in support of the revolution. A Cuban patriot said if she were a man she would be elected President of Cuba. Her husband, Luis Estévez, became the first Vice President instead. Around her statue boys and girls promenade on Sunday and holiday evenings.



© National Geographic Society

Kodakama to Met(ile Bell) Gessert

In a Castle of Learning at Mariel, Cuban Cadets Study to Be Naval Officers

The turreted hall, originally built as a gambling casino, became the Naval Academy in 1916. The steeply pitched stairs have a more ornamental than practical use. Once a cadet, in a hurry to see his girl below, started running down. Gaining momentum, he lost control, took off, and finally humped all the way to the bottom.

standing around a huge ceiba. From the seed pods of these bulbous trees, which look as if they had elephantiasis, comes the silky kapok for life belts, cushions, and mattresses. Farmers in Cuba, especially the Negroes, revere the great trees and seldom cut one down, even if it occupies choice tobacco land.

"All the tobacco grown and smoked around the world is descended from the tobacco Columbus found in the New World in 1492," Jacinto Argudin, manager of the *finca* (plantation), told me. "Columbus's men found the Indians smoking 'tabacos,' which still is the Cuban word for cigars. The Indians took a handful of leaves, rolled them into a cone, stuffed them in a hollow reed, and then inhaled the smoke through the nose.

"During the last 75 years we have produced our best tobacco here in the Vuelta Abajo section with the help of irrigation. The texture of our leaf is due to soil and climatic conditions. Plants from our seeds, grown elsewhere, do not have the same quality."

Tobacco Seed Like Brown Pepper

Mr. Argudin produced a small vial of brown tobacco seed. It was as fine as coarsely ground pepper. A tablespoonful will plant $6\frac{1}{2}$ acres.

Cultivation and curing of tobacco are much the same throughout the world. In Pinar del Río the tiny seeds are planted about September 19, and then at 15-day intervals, in covered seedbeds. The plants grow rapidly, reaching 10 to 12 inches in height in 40 days.

A mechanical planter opens the furrows, sprinkles water, and covers the seedlings, but it does not plant them. Two men or women sit on low chairs extending out from the rear of the machine. As it moves along, they deftly drop the plants into the furrow.

All wrapper tobacco for top-grade cigars is grown under cover to protect delicate leaves from the hot sun and insects. Workers cultivate it, fight natural enemies, trim unwanted shoots, and top the plants so strength will go to leaves, not flowers.

Tobacco is harvested, leaf by leaf, for several weeks. The lowest leaf, called No. 1, is "primed," or picked, first. The second picking of the 5 or 6 middle leaves makes the best cigar wrapper. The upper leaves produce dark covers.

Everybody helps on the plantation during the growing season. Mr. Argudin employs 2,000 people—men, women, and children.

After cutting, leaves go to the curing sheds, where they are dried slowly until they rustle on the lancewood poles and vivid green has turned to rich brown. Then they are piled in "bulks," leaf on leaf, to ferment. This is

called "sweating." The same skill is required here as in aging fine wines.

Next, the leaves go to the grading room, where they are moistened under a misty spray. In the grading room I visited, 250 men and women were patting and smoothing each leaf and comparing it with the others. The best leaves were put aside to wrap the finest cigars; the imperfect ones, to serve as fillers. Not a word was spoken; the only sound was the faint rustle of the tobacco (Plate XI).

One young woman grader handed me a perfect leaf. "Press your finger into it. See how thin it is—like rubbery silk," she said. "Note its tiny vein and its rich brown color, not golden."

After grading, the leaves are gathered in "hands" and packed in palm-frond covers. These bales are sent to Havana cigar factories or to the United States.

Driving back to town, we were charged by a large herd of cattle coming down the highway. A farmer on an ox called to the animals and they separated, giving us a passage.

The driver was smoking a cigar of finest quality. In New York, cigars made of that tobacco might sell for 50 cents.

Cockfights Replace Movies

"Have you ever been to a cockfight?" a friend asked.

"Then you must see one, for cockfights take the place of movies and the theater for Cuban countryfolk."

A chorus of crowing greeted us as we walked into the fighting cocks' clean whitewashed room. They were strange-looking creatures. Their bodies were plucked bare as a chicken on a grocery counter. Their legs were bright red. "Sunburn," the caretaker said (page 7).

Twenty-five of the roosters were purchased in Spain, the owner told me, at \$50 each. *Gallos* are never allowed to see a hen during their fighting careers. The best ones, the winners of, say, five or six bouts, are turned out with the hens for breeding.

We joined the crowd of men in the round cockpit. All were seated on benches in tiers around the sawdust-covered floor.

The roosters were put inside two small cages in the center. At a signal the cages were hoisted, and instantly the gallos flew at each other, striking out with rapierlike spurs.

One cock aimed at the other's eyes. Soon it was evident this bird was done for. I asked the attendant if he were going to separate them.

"No, we must let them fight to the finish," he said.

"But one bird has lost an eye," I replied. "He can't possibly win."



Mr. Béquer Chats with a Señorita Behind Her Bars in Trinidad

His great-grandfather, John William Baker of Philadelphia, settled here, made a fortune, and was knighted by the Spanish king. Great-grandson Manuel, though he has mannerisms of an American, cannot speak English and spells his name Spanish style (page 31). He wears a comfortable *guayabera*, a thin, coatlike shirt, ideally suited to Cuba's climate.

"A cockfight is a duel to the death. Bets are not paid off until one is dead."

That rooster fought on valiantly. Even when he lost his other eye he made blind passes at his opponent and would not give up. That was how the term for a brave man arose, "game as a fighting cock."

"Gallos become so much a part of an owner that he actually feels disgraced if his bird quits and runs," said the attendant.

Off to Santiago and Points East

On May 19, Martí Day, we left Havana for our 800-mile trip by car to Santiago, visiting the principal cities of Cuba. Fifty-one years ago this day, front-page editorials

told us, Martí was killed in the Battle of Dos Rios in Oriente.

We were fortunate that Dr. Salvador Massip, head of the Department of Geography, Havana University, could accompany us. In recognition of his outstanding services as a teacher of geography and for his notable books on the geography of Cuba, the Board of Trustees of the National Geographic Society has elected Dr. Massip a Jane M. Smith Life Member of The Society.

Shaded by old laurel trees, the Central Highway runs smooth as velvet with gentle curves to Matanzas. Approaching Güines, we passed through "the market basket of Havana," where vegetables and fruits are grown for the Capital. Sugar fields, too, stretched as far as the eye could see across red, rolling soil.

"Unlike tobacco, which Columbus found native in Cuba, sugar was introduced by the Spaniards," said Dr. Massip. "Cane probably came from India; Arabs imported it into

Spain. Later the Spaniards took it to the Canary Islands and thence, by way of Hispaniola, to Cuba. Since early days sugar has been the main source of income for Cubans."

Matanzas once was one of the island's richest Provinces and its capital an important sugar port. But today the "Athens of Cuba" still feels the effects of the great cane depression of the early twenties. Although much cane is still grown in the Province, the bulk of Cuban production has moved eastward.

The city of Matanzas sprawls at the head of an aquamarine bay. Driving through its narrow streets, with pastel house fronts, we caught quick glimpses of home life through the grilled windows.

We wandered around the Parque de la Libertad, swarming with sightseeing countryfolk and photographers. A honeymoon couple were having their bridal pictures taken (Plate X).

We climbed the hill on which Monserrate Hermitage is perched to view Yumuri Valley, a natural amphitheater. Limestone hills, 600 feet high, surround the green bowl, floored with cane fields, pastures, and royal palms.

"The river has cut an opening gorge," Professor Massip told us. "If the land here should subside 100 feet, the ocean would flow into Yumuri and form another bottleneck harbor, like Havana, Santiago, or Cienfuegos."

We passed a baseball game, close to the bay's edge. A beautiful double play, a peg like lightning from first to third, stopped the game as we watched. Backdrop was the colorful city and blue harbor, whipped by whitecaps from an approaching squall. A mile farther we saw another game before a thatched cottage, and still farther a third with Negro players. Instead of roadsters, horses were parked at the side.

"During the struggle for independence, Cubans played American baseball to taunt the Spaniards," Dr. Massip said. "It became a symbol of liberty. Now baseball is our national game and we are proud of the 60 Cubans who play in the U. S. big leagues."

Most Cuban farmers economize on fence posts. They cut a branch of a tree and stick it in the ground. It soon sprouts and becomes a living post that never rots. We saw one such fence with flamboyant trees for posts. The bright-orange blossoms set the blue sky on fire.

We passed two prosperous sugar plantations near Coliseo.



Rodolfo Allows Passengers to Pet His Favorite Gallo

This fighting-cock breeder from Morón carried his rooster in his arms on the train from Cumbre to Trinidad. Feathers will be plucked in another year when the cock is ready for the pit (page 25).

"Millowners give pet names to their *centrales*," said Dr. Massip. "Popular are names of girls or wives: 'Conchita,' 'Mercedes,' 'Delicias.' Even countries, like 'Australia,' 'Cuba,' and 'América,' and heroes, such as 'Washington' and 'Maceo,' are recognized. Indian words, too, are popular, like 'Jaronú.'"

American Minister Paves Cárdenas Streets

Bursting out of an afternoon rain squall, we came to the brow of a hill and there below lay Cárdenas, bathed in sun, gleaming beside a turquoise bay.

On nearly every door or house front in Cárdenas was painted the word "Mil."

"Does 'Mil' indicate some secret society?" I asked.

"No, the houseowner is a member of the Wharton 1,000 Club," replied Dr. Massip.

After the Spanish-American War, an American, Rev. Robert H. Wharton, came to Cárdenas to be minister of the Presbyterian church. He opened a school. It grew and expanded into a college, La Progresiva.

The city government would not improve the muddy streets. Dr. Wharton persuaded a thousand friends to contribute a dollar a month to a street fund. He called them the "Mil" and acted as treasurer. With the money collected, Dr. Wharton surfaced the streets so that today Cárdenas is one of the best-paved cities in Cuba.

When Dr. Massip was a young man, ships anchored in the middle of the bay because of the shallow water. It cost nearly as much to lighter cargoes ashore as to haul them from Spain. Cárdenas people raised the money to dredge the channel and build a pier. Now the city prospers; tankers, Liberty ships, and other vessels unload efficiently onto trucks and railway cars on the docks.

A perfect rainbow greeted us when we reached Varadero, Cuba's famous beach resort (Plate XIV). We stayed at the Club Kawama in the bridal bungalow, on the beach. Its thatched roof and red-tiled porch overlooked the bright-blue sea. Lacy pines framed the view and gave shade.

From our terrace we stepped onto the white sand, fine as powdered sugar. The sun set in a red ball on the horizon behind several yachts anchored offshore. After a supper on the club terrace, to the music of a rumba orchestra, Dr. Massip asked our waiter if he knew La Progresiva.

His face lit up. "Why, I am a graduate! And two other boys are from the school, too.

"Graduation is tonight, in 20 minutes," he said. "Dr. Wharton himself is delivering the baccalaureate sermon. Why don't you go in?"

Along the road to town countryfolk were out for evening strolls. Farmers were grazing their horses, each tenderly holding the bridle so Dobbin would not wander out onto the road. Land crabs by the dozen scuttled across under our headlights. The big fellows waved their giant claws as they ran.

"Country people eat land crabs. The big claws are delicious," Dr. Massip explained.

The Presbyterian church was packed with faculty, graduates, and their families. Black-capped and gowned bachelors were in front; behind them sat white-garbed secretaries and graduates of the commercial school in gray. Each señorita wore a fine lace gown, an heirloom, which peeked out from beneath her scholarly robe.

After Dr. Wharton's sermon in Spanish, lights were turned out for an old-fashioned candlelight ceremony. The pastor lit a candle and passed the light to the superintendent of the school. He passed it on to the faculty, who in turn lit the candles of the graduating class. It was an impressive ceremony.

"The candles symbolize the giving of love and wisdom to the pupils," Dr. Wharton told me. "Marching out into the world, the graduates spread knowledge far and wide."

A month later I attended my daughter's baccalaureate at a New England college. The ceremony was similar, except for the candlelight procession.

Cuban "Rabble" Outsmarts Spanish Regulars

At the crossroads town of Coliseo we stopped at a small restaurant to get gasoline. Surrounded by chattering farmers and cane workers, Dr. Massip told how the Cuban "rabble," as the Spaniards called the revolutionaries, outwitted a Spanish army near by.

To protect Havana the Spanish general drew up his army of 15,000 men along the railway from Matanzas to Unión de Reyes.

Cuban generals, Máximo Gómez and Antonio Maceo, with only 2,000 men probed this strong Spanish line near its middle, then marched parallel to the south. The Spaniards, thinking the Cubans were running away, left their fortifications.

The Cubans circled northward. Gradually they worked back to the thinly held railway. In a fierce battle they beat the enemy and broke through the impregnable line.

Gómez then marched on to Havana, and he and his men watered their horses in the Almendares River, in the Capital's outskirts (Plate V). Thus they reached a goal set when they began their invasion from Oriente.

So humiliated was the Spanish general by this defeat of his 15,000 men by 2,000 Cubans that he resigned.

Gen. Valeriano Weyler supplanted him. "The Butcher" began a reign of terror, trying to quash the revolution by exterminating and starving the Cubans. Many thousands were killed. The United States protested and eventually, after the sinking of the *Maine*, declared war on Spain.

In central Matanzas we came to a vast low area of some 800 square miles, where no natural rivers drain the soil. In years of heavy rains the island was nearly divided by a sheet of water which stretched across this flat expanse. Near El Roque we crossed a deep, broad ditch, a dry canal. In the rainy season Canal del Roque becomes a temporary river and drains off this excess water.

Since there are no protecting mountains along the coast here, cold waves, called "northers," sweep unchecked across the plains. Temperatures of 32° F. have been recorded, the lowest on record in Cuba, except in the high mountains.

Cubans who have lived all their lives on the island have never seen snow. A light fall has been recorded in the mountains of Las Villas.

Long after dark we reached Santa Clara, capital of the Province of Las Villas. The brilliant lights and crowded streets dazzled us after several hours of motoring through dark, lonely savannas.

Vidal Park was jammed with people noisily talking and milling around the statue of Marta Abreu (Plate XV). A band blared popular rumbas, classical pieces, and American jazz. Boys and girls, dressed in their best, paraded in circles. Senoritas kept to one lane and senors to the other. It was May 20, Cuba's Independence Day.

Busy Santa Clara lies almost in the geographical center of Cuba. Sugar, cattle, and tobacco are its principal products. Santa Clara tobacco stands next to Pinar del Rio's in quality and quantity.

Next morning we window-shopped through Santa Clara's business section, which seemed like any small American city.

On a side street we visited a shop where saddles were made, mostly of western cowboy style. We watched the carpenters fashion wooden trees, a foundry forge pommels, and men stamp designs on the leather in basket-weave pattern. The factory was filling an order from the United States for 300 saddles. The manager learned his trade in Philadelphia and copies American saddles from an illustrated catalogue.

Sister Cities Wage War

Santa Clara originally was founded at Remedios in 1514. Pirates sacked it so many times that many people moved inland and founded the present Santa Clara.

Bitter rivalry developed into a fratricidal war in 1690. Santa Clarans sacked Remedios and took their Spanish captives home. Remedios, off the beaten path today, has never regained its prominence.

On the road to Cienfuegos we passed through a veritable canyon of aroma. For miles on either side, this impenetrable thorny thicket spread across once-rich sugar lands.

"Originating in Madagascar and Africa, aroma was introduced into Cuba as an ornamental plant," we were told by Dr. José Alvarez Conde, professor of Natural Sciences of Santa Clara Secondary Institute. "It spreads

like wildfire and renders land useless for cultivation. Cut down, aroma grows even faster and thicker. Cattle eat the seeds but do not digest them; thus they spread the pest. Even wind scatters the seeds. Aroma is an ever-present danger to Cuban fields. The only defense is constant cultivation and alertness on the part of the farmer."

Humble Farmer, Courteous Gentleman

Near Palmira we passed a model thatched cottage shaded by a giant flamboyant (royal poinciana) tree. It was so attractive and typical of Cuban country homes that we stopped to call (Plate XIX).

Humble as he was, the farmer was a courteous gentleman. He introduced us to his wife and eldest son. As the lad shook hands, he bowed and said, "José Ramón, your servant."

Pigs were resting in the shade of a flamboyant on a carpet of orange petals. One son was pounding and winnowing yellow rice in a mortar hollowed from a palm trunk. A *totí*, or blackbird, hovered on a near-by fence to pick up any stray grains the chickens missed.

"We dry the rice on a pan in the sun, and what the *totí* leaves we pound and winnow," the farmer said.

"Is the *totí* really such a thief?" I asked.

"Yes, the rascal will steal anything. We have a saying when things go wrong, 'Blame the *totí* for that.'"

As our host bowed us into his home, he said, "This is your house."

Inside, the cottage was neat. Family portraits hung on the whitewashed walls. Hard-packed earth was the floor. Grandmother, oblivious of us, continued her sewing in a rocking chair in the corner. Small youngsters peeked coyly through the kitchen door.

Señora Luisa offered us coffee, and we knew then that we had been accepted as "simpático."

She ground the beans herself and served the coffee sweetened with raw sugar. It was thick but delicious.

We passed a wagon and a horseman resting in the shade of a big algarroba tree. The cowboy called out "Many happinesses" as we passed.

"Cows stand under algarrobas so long, waiting for fruits to fall, that they get thin!" said Dr. Conde. "But, kidding aside, the fruits are used as feed. They are sweet, and cattle like them. Farmers believe the fruit produces more and better-tasting milk. Algarrobas are planted in pastures and to shade the roads."

When Spain ceded Florida to the United States in 1819, Col. Luis d'Clouet came



From an Old-fashioned Filter Zoraida Pours a Drink

Formerly, nearly every house in Cuba had a stone filter like this one in the Béquier home in Trinidad. Water seeps through the porous stone bowl, imported from the Canary Islands, and drips into the crock below, which keeps it cool. Yellow-fever-carrying mosquitoes bred in such containers when the water was allowed to stand uncovered.

to Cuba with a number of other families and founded the city of Cienfuegos (Hundred Fires). Its harbor, with narrow bottleneck entrance, is one of the finest in the world. We saw a Liberty ship loading sugar for Norfolk.

Not far from Cienfuegos is Harvard University's Atkins Institution at Soledad. The late Edwin F. Atkins furnished the ground and much of the funds for the equipment of this garden, where scientists and Harvard graduate students study botanical and zoological problems and conduct biological field work.

Teak, first introduced into Cuba at Soledad, grows rapidly. Its timber resists decay and termites. The tree is now being planted in

Cuban soils not suited to agriculture.

Mr. F. G. Walsingham, the manager, showed us a corcho "palm," native only to Cuba. It really is not a palm, he told us, but a "living fossil," a connecting link with the ferns of the Coal Age. The corcho can be spotted by its stubby spiral leaves, which seem trimmed by clippers.

To see the country life of Cuba we took a local train from Cumbre to Trinidad. Funny old-fashioned cars like Toonerville trolleys carried a motley crowd of farmers, well-dressed landowners, and politicians down the Agabama Valley to Trinidad. It was the only way to reach this old city, except by water.

Climbing on the train, I brushed against a man with a sack over his shoulder. A loud squawk spelled a fighting cock (page 27).

Rodolfo sat in front of us, petting his beautiful rooster all the way to Trinidad. He regaled passengers with stories about his fighting cocks and how he breeds and trains them.

Our train wound through a lovely gorge, high above the river. It reminded me of a rugged Swiss valley, except thatched cottages replaced chalets. We stopped at villages to take on big mahogany and cedar logs and bags of charcoal, the fuel for most Cuban kitchens.

Ranchers in boots, spurs, and sombreros gathered at the little stations.

At one stop a local politician got on with his band. This jolly group serenaded us, blowing battered horns and banging pots and homemade drums. The noise was deafening.

At every stop the band attracted a crowd of countryfolk. Then a politician walked up and down the platform, haranguing the crowd

in the stentorian voice of a portable "bull horn," or loud-speaker.

Trinidad was one of the six cities founded by the Spanish in 1514. Cortés recruited men here for his conquest of Mexico. The city grew slowly, along with its sugar and coffee trade. When the Pilgrim Fathers landed at Plymouth, Trinidad boasted a population of several thousand people.

Pirates and English sea rovers attacked the city frequently. Crews of two British ships attacked Trinidad after an overland march in 1762. The Trinitarios ambushed the sailors and killed many. They captured the ships' flags and carried them back in triumph.

An American Is Knighted by King

So pleased was the King of Spain that he granted permission for Trinidad to add two white ensigns to its coat of arms. The colorful insignia is painted on a wall in the City Hall, above the mayor's chair (page 32).

In 1820 an American shipowner, John William Baker, came to Trinidad and liked it so well he settled there. He married a Cuban girl and made a fortune in the sugar business. He became a Spanish citizen and was knighted by the King of Spain.

Baker became so wealthy he wanted to tile his palace parlor with *onzas*, Spanish gold pieces, but the Government forbade it because people would walk on His Majesty's face!

"All right, I'll put the coins on edge!" said Baker.

Our train pulled into an old Spanish barracks converted into a station. An antique taxi took us bouncing over the cobbles to our comfortable hotel.

That evening I asked one of our hosts if the story about Mr. Baker really was true. Imagine my surprise when he replied in Spanish, "Certainly, Mr. Baker was my great-grandfather"!

My Trinitario friend had the appearance of an up-and-coming American. Yet his name was spelled in the Spanish style, Béquér, and he could not speak a word of English (p. 26).

Progress Has Passed Trinidad By

Trinidad is a bit of Toledo or old Seville, set off by itself near the south coast of Cuba. Its very isolation has preserved its charm. Its people live much as they did in Spanish colonial days of a century ago.

Everywhere I looked there was a picture. Houses are gaily painted in pastel tones—blue, pink, green, canary, and all shades between. Peddlers on foot or burro bring the market to the housewife's door or grilled window (Plate XXI). Boys talk to señoritas

behind barred windows, just as in old Spain.

Mr. Béquér was most anxious that we see the National Sanatorium built on a mountain-top at Topes de Collantes. "This huge hospital, nearly finished, is one of the wonders of Cuba," he said.

Piling into a high-wheeled jalopy, we bounced over the cobbled streets. On the outskirts we crossed a rickety bridge over a river, where Trinitarios claim Cortés moored his ships while recruiting crews for the conquest of Mexico.

Our jalopy corkscrewed up the road hewn in places from solid rock. Now and then we caught glimpses of tiny tobacco patches, banana trees, and cornfields growing in bottom lands.

Emerging from a deep cut, we were startled by a huge skyscraper crowning a hill directly ahead. It was stupendous, like Christophe's Citadel in Haiti or Carcassonne's castle rising above the plains of southern France.

The huge hospital, built to accommodate 1,000 patients, was the dream of a former President of Cuba, Fulgencio Batista. Begun in 1941, it was to be an international center for the treatment of tuberculosis. No expense was spared to make of it what the designers thought would be an ideal hospital. Though 90 percent complete, all work was stopped in 1945, and it may never be finished.

Walking through this colossus was like a trip with Alice through her Wonderland. Nothing was complete—men had stopped work just where they were.

The magnificent lobby was lined with marble but unfinished; stairways were built but had no banisters; giant iceboxes for frozen foods had doors but no freezing units; a little theater for 400 people was nearly finished, but it had no floor; carloads of cement and kitchen utensils were stored in wards and doctors' offices.

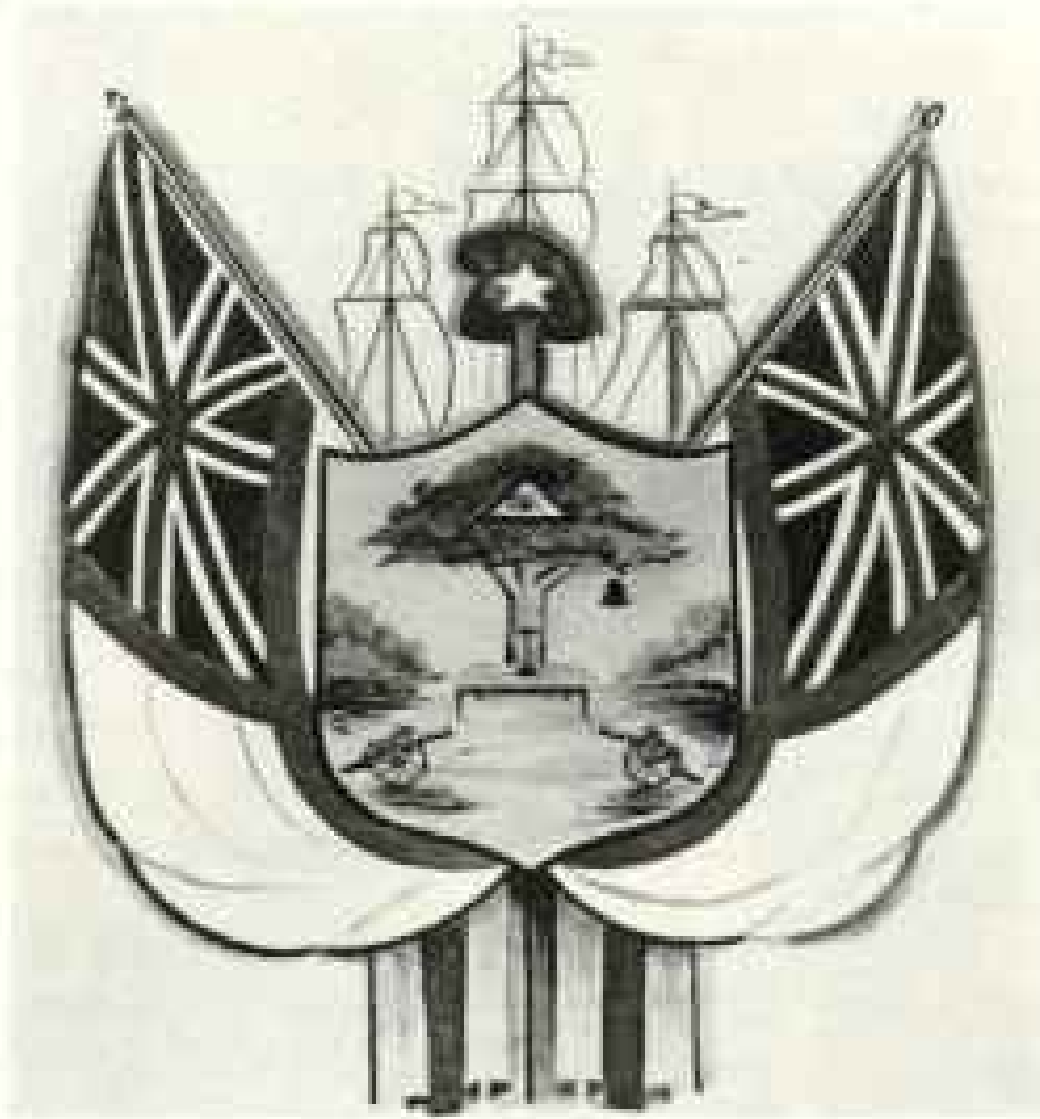
Most incongruous of all, corridors ran along the outside walls instead of down the center. Result: most rooms were inside and opened on corridors, like interior cabins of a steamer. Windows were of frosted glass so one could not see the gorgeous mountain views.

All supplies, every brick and bag of cement, had to be hauled laboriously up the mountain road by convoys of trucks.

"We have hopes that Topes will become a tourist hotel," our guide told us. "The climate is too moist for a sanatorium."

Spurs, Boots, and Sombreros

Sancti Spiritus, one of the pioneer Cuban cities, was like an old-time western United States cattle town. Its streets tinkled with the



White Ensigns Adorn Trinidad's Arms

British ships attacked the city when Havana was captured in 1762. Trinitarios repelled the invasion and captured flags and guns. So pleased was the Spanish King that he permitted Trinidad to add the trophies to its coat of arms, here photographed above the mayor's chair in the City Hall (page 31).

sound of blacksmith shops. Cowboys were everywhere. Many were well dressed, with fancy sombreros and boots. All wore big jingling spurs. Horses, tethered to restaurant porches, nearly blocked some streets. Frequently we brushed horses' tails in passing and were afraid they would kick the car.

Sellers of lottery tickets were ubiquitous.

One nice-looking woman was so beguiling, when she came to our table, that I bought part of a ticket for 23 cents. She used an uncommon word, and Dr. Massip instantly knew she was a Canary islander. Many of these people settled in Las Villas Province.

The end of my lottery number was 23. Our waiter, noting this, for everyone is interested in the lottery, said "steamer." I couldn't understand what steamer had to do with 23. Dr. Massip explained that the waiter was using the Cuban underworld slang, called the *charada*. Every number from 1 to 100 has its name, used in gambling games.

Quickly the waiter rattled off the names of odd numbers we suggested: 1, horse; 2, butterfly; 3, sailor; 4, wildcat; 8, dead man; 13, peacock; 20, small cat; 48, drunkard; 51, soldier; and 100, automobile.

At the next table sat a cowboy dressed like the hero of a Western movie. He wore a big felt sombrero, green silk shirt, snow-white riding breeches, boots, and the largest

spurs I had seen, with big sharp points. In contrast he had on dark sunglasses, like an off-duty movie star!

Before leaving the "City of the Holy Spirit," we filled our gas tank with *motembo*. This natural gasoline is used in automobiles just as it comes from the wells. No refining is required; Nature distilled the petroleum deep in the bowels of the earth. Unfortunately, these wells are quickly exhausted and the yield is small.

Nevertheless, *motembo* saved the day for us, for no regular gasoline was available in Sancti Spiritus. Our car ran satisfactorily with it, though the engine knocked on hills.

Driving toward Camagüey Province, we rolled through a flat country with many cattle grazing on grassy pastures. Spaniards found this Trocha region thickly forested, but now it is practically treeless.

During the "Dance of the Millions," the sugar boom of World War I, Ciego de Ávila and Morón became mushroom cities, their populations increasing 15 or 20 times in a few years. Giant sugar mills were built, and Nuevitas, on the coast, became for a while the busiest sugar port in the world.

When the price dropped from 22 cents to 4 cents and less in 1920, many were ruined, from the plantation owners to the laborers who depended on the sugar mills for their living. So rich was the land, however, that the people of La Trocha soon staged a comeback.

For miles we drove through sugar, banana, and pineapple fields. Between rows of banana trees the pineapples grew. The air was scented with the sweet smell of pineapples.

Camagüey, "Like a Fairy Castle"

We could see the spires and red roofs of Camagüey from miles away. The city rose above the green fields like a fairy castle.

"Camagüey is the 'City of the Patricians,'" Dr. Massip told me. "Many old families trace their ancestry back to the sixteenth century. Dr. José Agüero, who will guide us through the city, is directly descended from one of the founders of Camagüey in 1514."

Dr. Agüero appeared in a shiny white suit of starched linen. He teaches natural history in the Camagüey Institute.

Agüero is a famous name in Camagüey. Members of this family have long played heroic roles in the city's history. Francisco de Agüero, one of the first Cuban martyrs, was hanged by the Spaniards in the Plaza Agramonte on March 16, 1826. Another revolutionary hero, Joaquín Agüero, a Cuban Nathan Hale, was shot in August, 1851.

Plaza Agramonte honors many revolutionary



Beneath a Giant Ceiba Bronze Books Record Those Who Gave Their Lives at San Juan Hill

On July 17, 1898, Gen. William R. Shafter accepted near this Peace Tree the surrender of Santiago de Cuba and of the Spanish forces. Captured Spanish gun barrels and bayonets serve as a railing. Here Col. "Teddy" Roosevelt and his Roughriders won fame (page 38).

heroes. In its center an equestrian statue memorializes General Ignacio Agramonte, born in the city and killed in battle in 1873, during the ten-year Cuban revolution (1868-78). Camagüey gave many splendid fighters to this first unsuccessful war for independence, which cost 250,000 lives and 300 million dollars.

With Dr. Agüero as our sponsor we were welcomed as guests in several of the old homes of Camagüey. Dr. and Señora Aurelio Izquierdo showed us their beautiful home, simply but tastefully decorated. It has one of the finest patios I saw in Cuba (Plates XXVI, XXVII, and XXIX). Huge red-clay water jars, typical of Camagüey, adorned it.

Across Finlay Street from the Izquierdos' home was born Carlos Juan Finlay, the eminent Cuban physician who suggested that yellow fever was conveyed by the mosquito.

Dr. Finlay graduated from Jefferson Medical College, Philadelphia, Pennsylvania. Then he began the study of yellow fever, which killed many hundreds each year in Cuba. In 1881 he announced his theory that mosquitoes spread yellow fever. Since he could not definitely prove his contention, no one believed him.

Even as late as 1900 doctors tried to stop

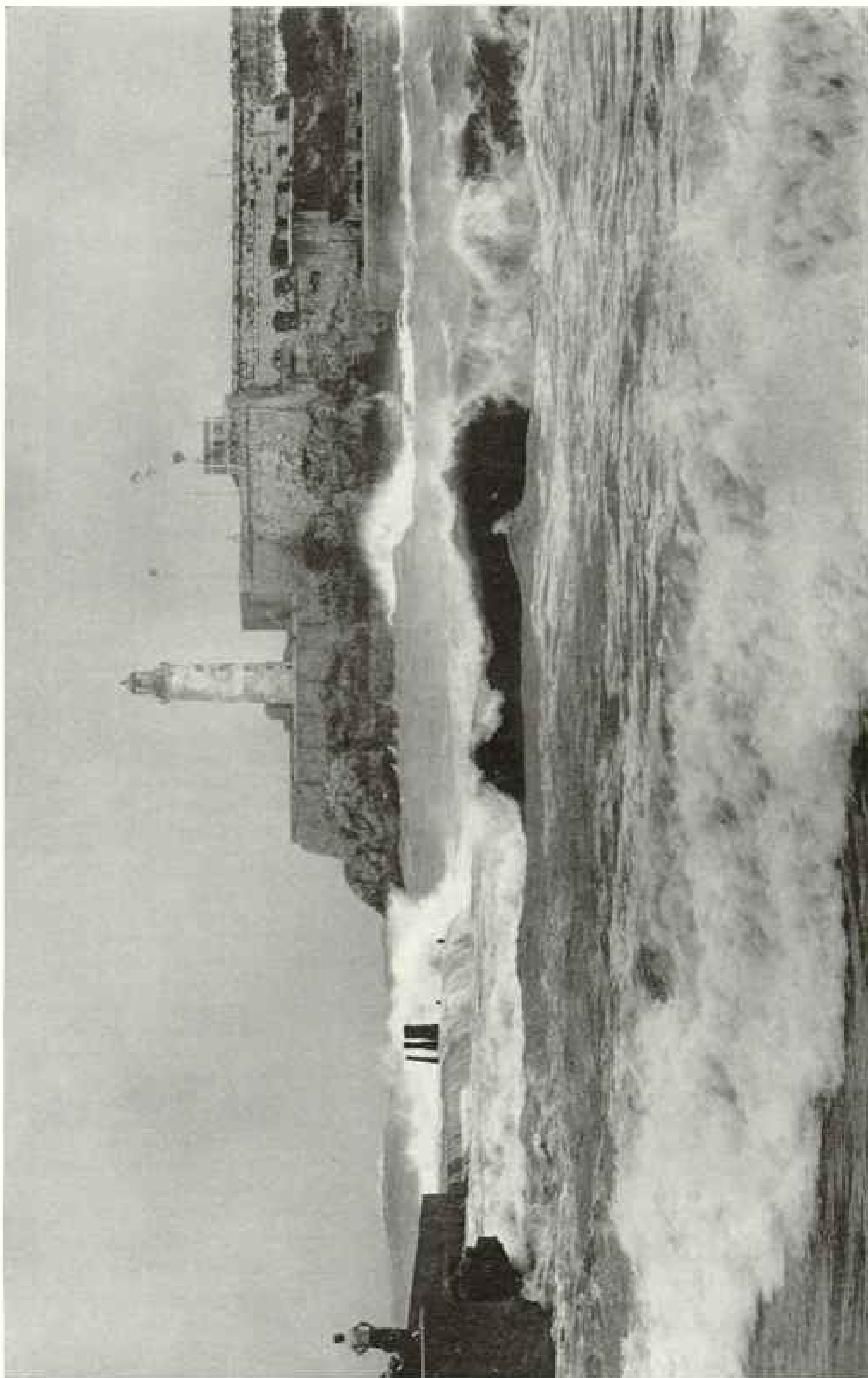
the yellow fever scourge by fumigation, isolation, and the burning of fomites (the clothing and bed linen of infected patients). But to no avail. Yellow fever continued to kill. American soldiers died like flies. In the Spanish-American War thousands more were killed by "yellow jack" than by bullets.

Finally, Maj. Walter Reed and his United States Army Yellow Fever Commission proved that Finlay was right. Volunteers, bitten by *Aedes aegypti* mosquitoes which had fed from yellow fever patients, came down with the disease. Others exposed to the fomites failed to contract it. Thus the source of yellow fever was proved beyond doubt.

Maj. William C. Gorgas cleaned out the breeding sources of the mosquitoes in sewers and ditches in Havana. Soon not a case of yellow fever was reported in the city. Later, Gorgas went on to Panama, where his eradication of the yellow fever mosquito made possible the building of the "Big Ditch."

Chief Hatuey Burned at Stake

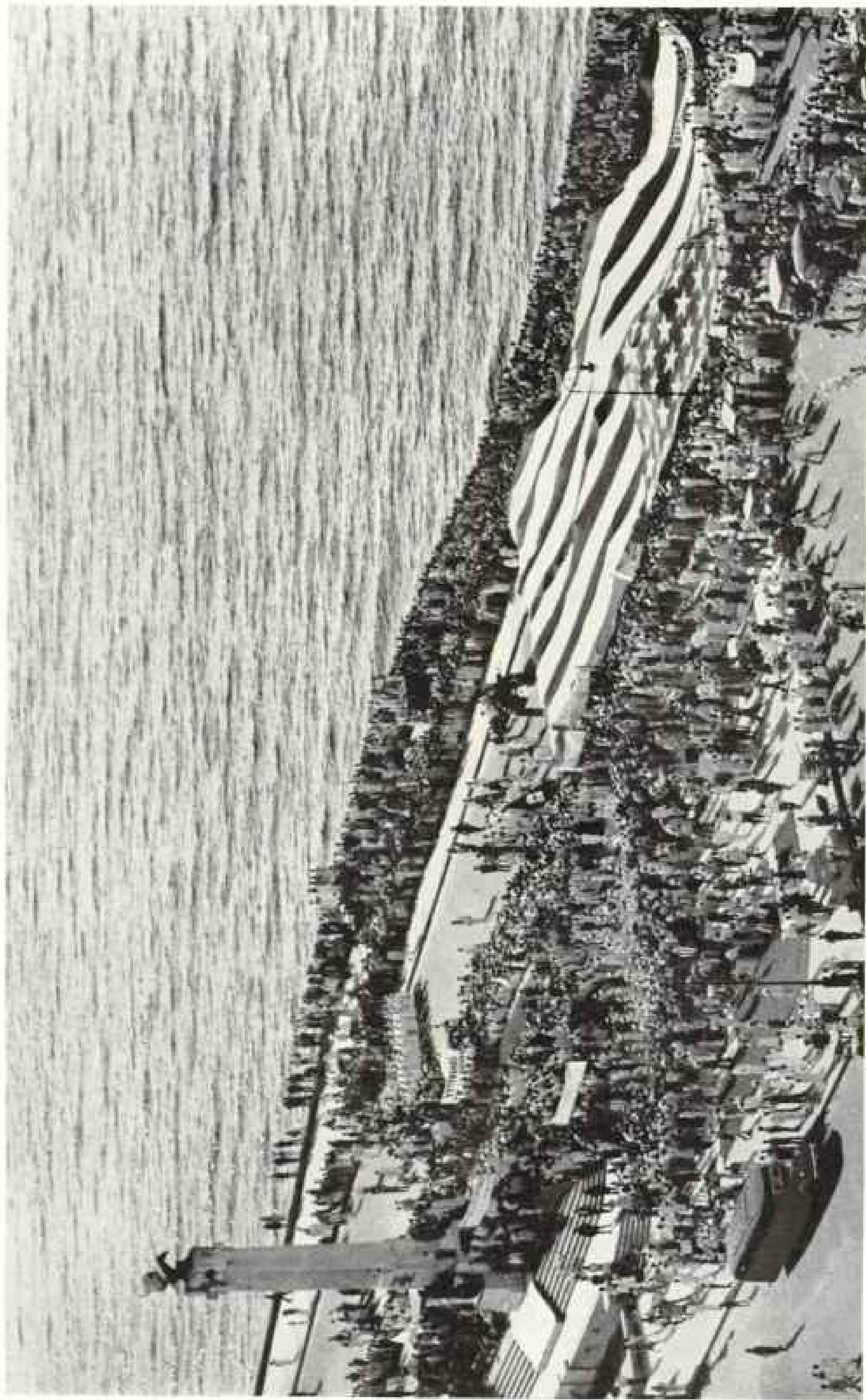
As we drove through the rich sugar and grazing lands of eastern Camagüey, Dr. Massip told me of the Indian chief, Hatuey, for whom a town and a Cuban beer are named.



American Photo Company

When Winter Northers Blow, Huge Sea Horses Crash Against Morro; Spray Dusts the Lighthouse Top

Sir Francis Drake dropped hot shot into Havana in 1585, doing irreparable damage. Morro and two other castles, Punta and Fuerza, were then built to defend the rich city. A British army, aided by Connecticut, New Jersey, and New York colonials, besieged Morro for seven weeks in the summer of 1762. Soon after its capture, Havana surrendered. Yellow fever took a terrific toll. Until General Wood cleaned up the city, this water front was its dumping ground.



International

Cuba Remembers the *Maine*! On a Fourth of July, Havaneese Present a Huge Old Glory to the American Ambassador

This fine monument rises on an island in the Malecón overlooking the blue Atlantic. Plaques record the names of the 260 officers and men who lost their lives when the battleship blew up in Havana Harbor, February 15, 1898 (page 2). Two 10-inch guns and anchor chains from the battleship form the monument base. The first bronze eagle to perch atop the pedestal took off in a hurricane and landed some distance away.

When Columbus first settled Hispaniola in 1492, his colonists treated the Indians badly and enslaved many. Chief Hatuey fled to Cuba and aroused the Indians there. When Diego de Velásquez landed at Baracoa with his first colony in 1512, he was bitterly opposed. The Spaniards with their fine armor and swords easily defeated the poorly armed savages and chased them back into the mountains. Through treachery, Hatuey was later captured and burned at the stake at Yara.

Just before his execution, a friar tried to make a Christian of the chief, telling him that if he died a heathen, he would go to Hell instead of Heaven.

"Are there any Spaniards in Heaven?" he asked.

"Yes, there are many there, for Spaniards are Christians," answered the friar.

"Then I don't want to go where there are Spaniards," replied Hatuey, and he refused to be converted—even when his executioners were lighting the fagots.

Nearly 400 years later, another Hispaniolan came to the island and led the Cubans in revolt against the Spaniards. This was Gen. Máximo Gómez, who led the Cuban Armies in the final war for independence and co-operated with the American Army.

Well-trod paths parallel the Central Highway nearly its whole length. Often we saw horsemen galloping along, tenderly holding fighting cocks in their arms like babies.

"We are now entering the sixth Province, Oriente, the largest and least developed of Cuban Provinces," said Dr. Massip. A million and a half people live in Oriente, and it contains vast mineral wealth—copper, iron, manganese, nickel, and many other valuable ores.

Columbus Sent Ambassadors to Chinese Emperor!

When Columbus was exploring the coast of Cuba on his first voyage in 1492, he sent ambassadors inland to call on the great Chinese Emperor! Instead of an oriental city these men found an Indian village of some 50 thatched huts. Called Cubanacán, it occupied the present site of Holguín. "Cuba" came from this Indian word.

Although the ambassadors brought back no gold or glad tidings from the Emperor, they did introduce tobacco to Europeans. They saw Indians smoking *tabacos* (cigars) stuck in their nostrils.

Holguín today is a busy commercial city, center of a sugar district. The evening we were there, crowds of country people thronged its streets to see the movies and to visit and chat in restaurants.

Uninhabited savannas, lined with cacti, aroma, and poor grazing grounds, stretch between Holguín and Bayamo. We bowled along at a good clip through this undeveloped country. Soon we picked up the Sierra Maestra on the horizon, the highest mountain range in Cuba. Bayamo nestles in its foothills.

Bayamo is called the "Heroic City" by Cubans, for here the wars for liberation were born and fostered. Cuba's National Anthem is named for Bayamo, where it first served as the battle song for the patriots.

Bayamo was one of the six cities founded by Velásquez in 1514. Its golden days came in the 17th century when the Spanish government forbade commerce with foreigners. Its people prospered from smuggling and trading in hides, smoked meat, and preserved foods. The British and Dutch in return brought luxuries, works of art, and tapestries.

Here Tomás Estrada Palma, first President of the new Cuba, and Carlos Manuel de Céspedes, hero of the Ten Years' War, and many poets, artists, and novelists were born.

Bayamo People Burn Own Homes

Céspedes, with 140 poorly armed men, began Cuba's Revolution in 1868 with his cry, "Independence or Death." When Bayamo was threatened with capture a year later, Céspedes' men and the inhabitants burned the town rather than surrender it (Plate XXV). I saw blackened walls of some of these buildings still standing.

I climbed to the top of the belfry of San Salvador Church with the brown-robed Capuchin friar. He insisted that the stones at its base were the original ones laid four centuries ago, and I could well believe him, so worn were the steps. The fine church bells were cast in Spain nearly 200 years ago.

The friar told us he listened every evening to the radio and enjoyed especially NBC broadcasts in Spanish from the United States.

Rounding a bend in the mountains, we came upon a wide green valley with a gleaming white cathedral in the distance.

"That is El Cobre, shrine of Cuba's patron saint, the Virgin of Charity," Dr. Massip said. "Thousands of Cubans come on pilgrimages, hoping for miracle cures."

We visited the cathedral and the shrine, pictures of which hang in many Cuban homes.

The Cobre copper mines have been worked off and on since their discovery in 1547. In the early days Indians and slaves carried the ore on their heads up ladders from great depths. Bloody rebellions broke out from time to time. The workings have been closed for some years,



Sugar Research Foundation

Sugar for Your Coffee in the Making—Unloading Cane at a Cuban *Central*

Cane is still harvested by machete and loaded by hand. After the first plowing and planting, it requires little cultivation. Fields yield for an average of five to seven years, but may produce for 15 or 20. Sugar cane flourishes so well that Cubans say, "Stick a stalk in the tile floor and it will grow."

but a big red gash on the hillside marks the spot.

We were welcomed to Santiago by the senior officers of the Geographical and Historical Society of Oriente.

Founded in 1939, the Society has within it the Humboldt Group, amateur geographers who like to do their own exploring. Its members have conducted some 62 field trips. On one expedition they climbed Cuba's highest mountain, Turquino, 6,560 feet, on Oriente's south coast.

Their most interesting excursion was to the old French coffee plantations established in the early 19th century, now in ruins. Thousands of French people from New Orleans and from Haiti prospered here, building fine homes, even palaces, with marble statues, swimming pools, chapels, and slave houses. They built aqueducts and fine roads up to the

mountains (Sierra Maestra). Then a coffee depression and the revolution of 1868 ruined them. They first backed the Spaniards, so Gómez destroyed their plantations.

Now the jungle has swallowed these fine homes. The explorers found iris, roses, lilies, and hibiscus growing where old gardens had flourished. Huge mango trees, trunks three or four feet in diameter, were surrounded by thousands of small seedlings. Beneath this grove golden fruit was so thick that horses and men slipped and stumbled.

Hobson's Choice Was Heroic—Santiago

Velásquez selected Santiago's site in 1514 because of the magnificence of its harbor and the fertile hinterland.

Spanish ships crowded the port, bringing silks, soap, clothes, footgear, and other necessities. They took back gold, hides, and, later,

sugar. The city grew rich and prosperous, but severe earthquakes inflicted much damage.

Our visit to Morro Castle on a blistering hot day was a highlight of my Cuban journey. We boarded a small launch and steamed over the *Merrimac*, which Hobson sank to block Cervera's fleet in the Spanish-American War (Plate XXXII).

Then we headed out through the channel to see Morro Castle, built in the 17th century.

"When the Spanish fleet steamed to certain destruction that day, July 3, 1898, the ships commenced firing while still in this narrow channel," Dr. Pedro E. Cañas, the Society's President, told me.

"What a sight they must have made as they rushed forth, a bone in their teeth, to battle the mighty fleet of Sampson and Schley on the horizon!" (Plates XXX, XXXI.)

"As the Spanish ships reached the sea, American shells took immediate effect," Dr. Felipe Martínez, the Secretary, put in. "The rocky coast was soon strewn with burning, wrecked ships."

The Battle of Santiago sealed the fate of Cuba. From then on, United States ships were free to roam the Cuban coast at will.

Our launch landed us at a yacht club, and we walked up the steep path to Morro.

"The castle was never taken from the sea, but it was captured several times by land," Dr. Cañas said. "Henry Morgan and his men, who raided numerous Cuban cities, sneaked up a valley back of the castle and struck at its weakest point."

We climbed over the crumbling battlements, still much as they were after the naval battle. We saw pillboxes and walls shattered by naval shells and the dark dungeons where hundreds of Cuban patriots were imprisoned.

San Juan Hill—"Teddy" Wins Fame

Next we drove out to San Juan Hill, and our friends described the battle—the infantry's capture of the blockhouse and Col. Theodore Roosevelt's charge up "Kettle Hill."

"Most people think Teddy's Roughriders charged the hill on horseback," Dr. Cañas said. "The truth is that only Teddy and some of the officers had chargers; the mounts for his men did not reach Cuba in time. Teddy distinguished himself by riding up and down in front of his men and urging them on. He was slightly wounded and several men were killed within arm's reach."

From the top of San Juan Hill, now crowned by royal palms and a red-brick memorial, we could see the valley for miles around.

"These rich fields still hear the crack of guns," said Dr. Martínez. "We shoot quail,

doves, and guinea fowl here; also deer and wild pig in the mountains."

Vast quantities of fruit, mangoes especially, are grown in the region. We saw boys picking ripe red fruits and eating them under the heavily laden trees. Mangoes are a natural candy for Cuban youngsters.

Proudly the geographers escorted us to the Santiago cemetery and showed us its fine monuments and mausoleums. Many heroes are buried here, including Martí, the greatest of all Cuban martyrs.

No roads thread the mountainous eastern section of Oriente; so we took to the air to visit the "Banana Coast." Our pilot banked our transport over Santiago's bottleneck entrance so that we could see the magnificent harbor and the site of the naval battle.

Over the beachheads of Siboney and Daiquiri we looked down on the French-blue waters where our transports lay on D Day (June 20), 1898. Here our men and their Cuban allies poured ashore in small boats to begin their march through the jungle to San Juan Hill and El Caney, a march which ended in the surrender of Santiago on July 17 (page 33). Daiquiri is known today because of the rum cocktail, and Siboney for a song.

Skirting the great U. S. Naval Station at Guantánamo, we could see the new runways and vastly enlarged facilities. The monster carriers *Franklin D. Roosevelt* and *Midway* were lying there, dwarfed by the immense bay.

Airplane Substitutes for Bus and Train

At Guantánamo we picked up a farmer and his wife with their new baby. The steward told us they had been flown out from an inland town so that the mother and child could have modern care.

Before the coming of the airplane, people of Oriente mountain villages and lumber camps, many of them with Indian blood, traveled between towns on horseback. Now they go by air. Big transport planes, operated by the *Compañía Cubana de Aviación*, a subsidiary of Pan American, hop from town to town across this roadless wilderness.

On the rugged peaks and in the valleys we saw lumbermen hewing out mahogany and other valuable woods. A fortune still stands in timber here; isolation preserves it.

Our landing at Baracoa was sensational! The pilot glided down between two peaks. Our wing tips seemed to brush the fronds as we floated in to a narrow strip cut through coconut palms. During a two-hour stopover, Dr. Massip and I drove to town along with the mail and three secondhand tires.

So enticing were Columbus's descriptions of

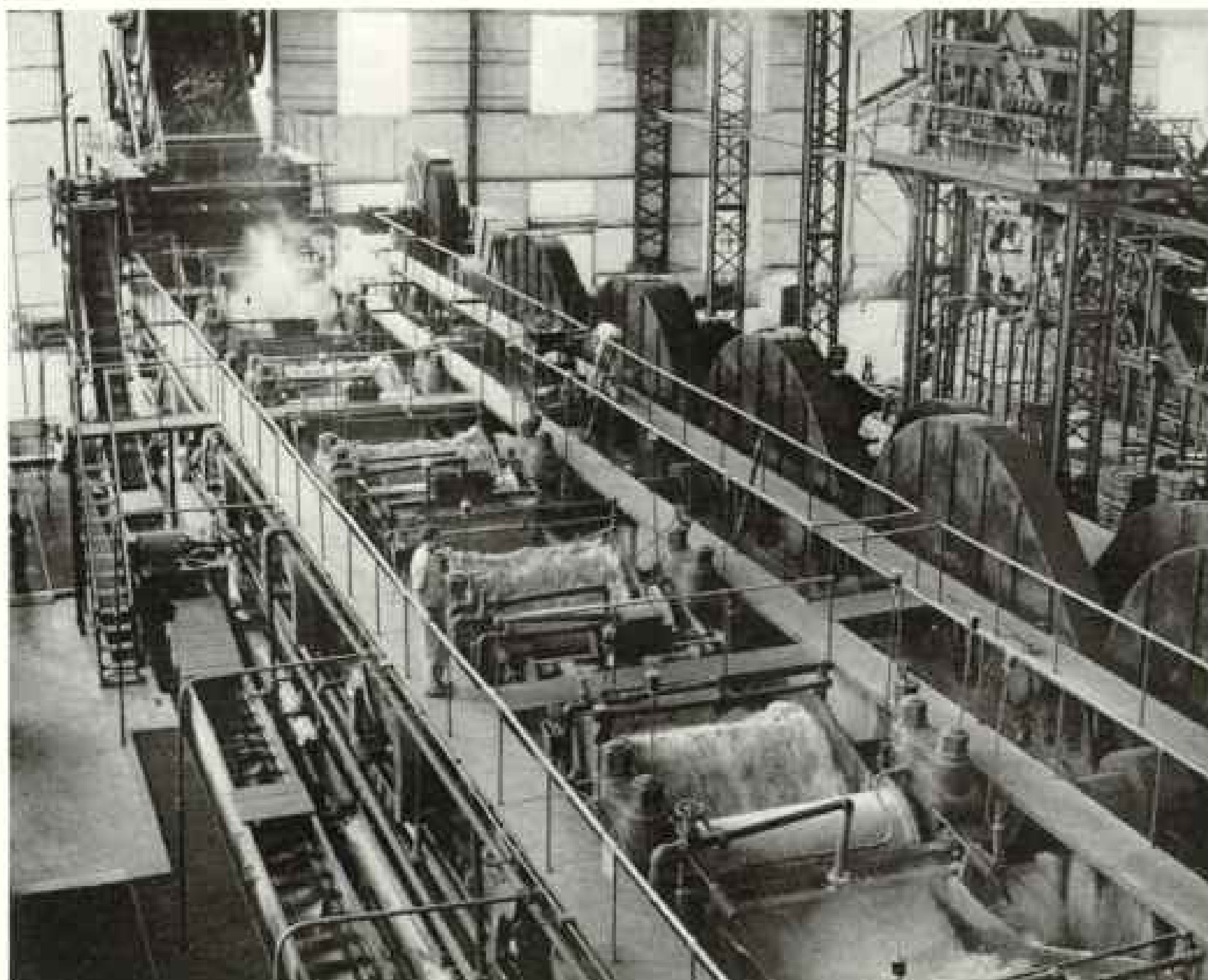


Photo Research Foundation

Giant Rollers Cut, Crush, and Squeeze Juice from the Stalks in a Continuous Operation

Conveyor belt at the far end dumps the cane upon revolving knives, which cut it into chips. Then it passes along to the shredders, which tear it, and to the crushers, which break it and express a large part of the juice. As the crushed cane advances through the mill train water is sprinkled on to extract additional juice. Then a complicated refining process produces sugar and molasses (page 40).

this circular harbor that Velásquez picked it for the first Spanish settlement, only 20 years after its discovery (Plate XXII).

Columbus's Tracks at Baracoa

Our taximan took us through the sleepy town, out to the point at the harbor entrance where Columbus's men put up a huge cross. From the crumbling Spanish fort marking the spot we marveled at the bowllike port.

"Baracoa belongs among the strange and curious of geographic phenomena," said Dr. Massip. "See that curved beach with the fishing boats drawn up? It was formed by the current which, sweeping through the headlands, circles the harbor and deposits sand around the rim. The river should empty across the way, but it is blocked by the beach and flows behind it to emerge on this side. Columbus reported it so deep 'a galley could enter.'

"Cortés, as a young man, was imprisoned on a ship here by Velásquez because he refused to marry his mistress," he continued. "The future Conquistador escaped by jumping overboard. Eddylike currents, after nearly drowning him, cast him up on the beach. Eventually he did marry the girl."

Columbus greatly admired the Indians' gaily painted war canoes but not their lack of bravery. The Tainos ran away at the brandishing of a Castilian sword. The Discoverer was disappointed at the lack of gold and spices.

Velásquez, finding Baracoa too isolated, soon transferred the capital to Santiago, where it remained until it was moved to Havana.

A few years ago Baracoa was a prosperous coconut and banana town. Severe blights attacked its palms and banana groves. Bunches of big fat bananas are still exported to the United States, but the quantity has diminished,

From Baracoa we flew along a coast dimpled with round harbors and with deep rivers flowing into the Atlantic. Columbus explored these thoroughly and described them in his chronicles of the first voyage. In fact, yachtsmen cruising these waters have used his descriptions, recorded by Las Casas, for navigating their boats.

Along the Oriente coast winds blow offshore at night and reverse during the daytime, the fresh northeasterly trades funneling into the harbor entrances. Columbus took advantage of this. Leaving port, he got his ships under sail before dawn. Returning, he entered in the daytime. Thus he had fair winds both ways. Sailors still use these tactics.

"We are flying past a vast treasure house of mineral wealth," Dr. Massip told me. "In these mountains of northeast Oriente some four billion tons of iron ore await development, according to latest surveys."

"Then Columbus was right when he reported that red stones along this coast indicated iron ore," I said.

Nicaró Produces Nickel for Jet Engines

"Nickel, too, is mined and refined here," Dr. Massip continued. "During the war, when nickel became so vital to United States' war industries, a new hush-hush nickel plant was built at Nicaró."

Landing at Cayo Mambi, we hopped another plane to Preston and then took a ferry out to Nicaró. The plane passed right over the big metallurgical plant, standing on a "bird's tongue" peninsula (Lengua de Pájaro).

Here was a dramatic sight. From tall stacks reddish smoke plumes streamed out before the easterly trades, blowing in a pinkish cloud across the blue sky. A model village with red-tiled roofs and gardens sprawled over the peninsula.

"Ground was broken in an old pasture in September, 1942," Mr. Forbes Wilson, the administrator of the Nicaró plant, told me. "Nine thousand workers waded ashore through the mangrove swamps. Houses had to be built, Bahía de Levisa dredged for big ships, and all materials imported. Yet 16 months later our first nickel oxide was produced. It was an extraordinary achievement."

By a new and complicated process, still "under wraps," the red ore passes through drying kilns, furnaces, and tanks to emerge as green nickel oxide. Shipped in 65-pound bags to the United States, this nickel oxide toughens steel to make a heat-resistant alloy, now used for jet airplane engines and stainless steel. Toward the end of the war Cuba was producing 10 percent of our nickel.

Jumping back to Cayo Mambi in our "grasshopper" transport, we looked down on green fields of sugar cane. We could see ox teams hauling heavily loaded carts to a railway. Miniature trains were puffing along a spiderweb of tracks to a big sugar mill with "Tánamo" written across its red roof. Smokestacks belching told us that the mill was in operation—one of the few we had seen working, as most of the cane had been harvested and the "dead season" had begun (page 37).

Landing not far from the big mill, we drove over to it and had lunch in the comfortable guesthouse.

How Sugar Is Made

Here we saw the cane enter one side of the mill and emerge as raw and granulated sugar at the other. Although Tánamo is not one of the largest, it is typical of Cuban mills.

Hour after hour, day after day, a conveyor dumps the cane into the maws of the rollers, which cut it, crush it, and squeeze out its sweet juice (page 39). When it emerges, the crushed cane, known as bagasse, is fine and nearly dry. It fuels the mill's big boilers.

The cane juice is first strained and analyzed to test its percentage of sugar.

Then the liquid is limed and heated to precipitate impurities. It goes through an elaborate process of clarifying, evaporating to reduce moisture, and crystallizing. In a bank of centrifugals, the syrup is whirled rapidly. Mother liquor, molasses, is forced out through a screen, leaving yellowish crystals in the basket. This is raw sugar, the product of most Cuban mills. For household use it must be refined further.

The molasses, or left-over liquor, is reboiled and put through the centrifugals to obtain a second crop of crystals. Again and again the molasses is reboiled and centrifuged until it no longer yields sugar.

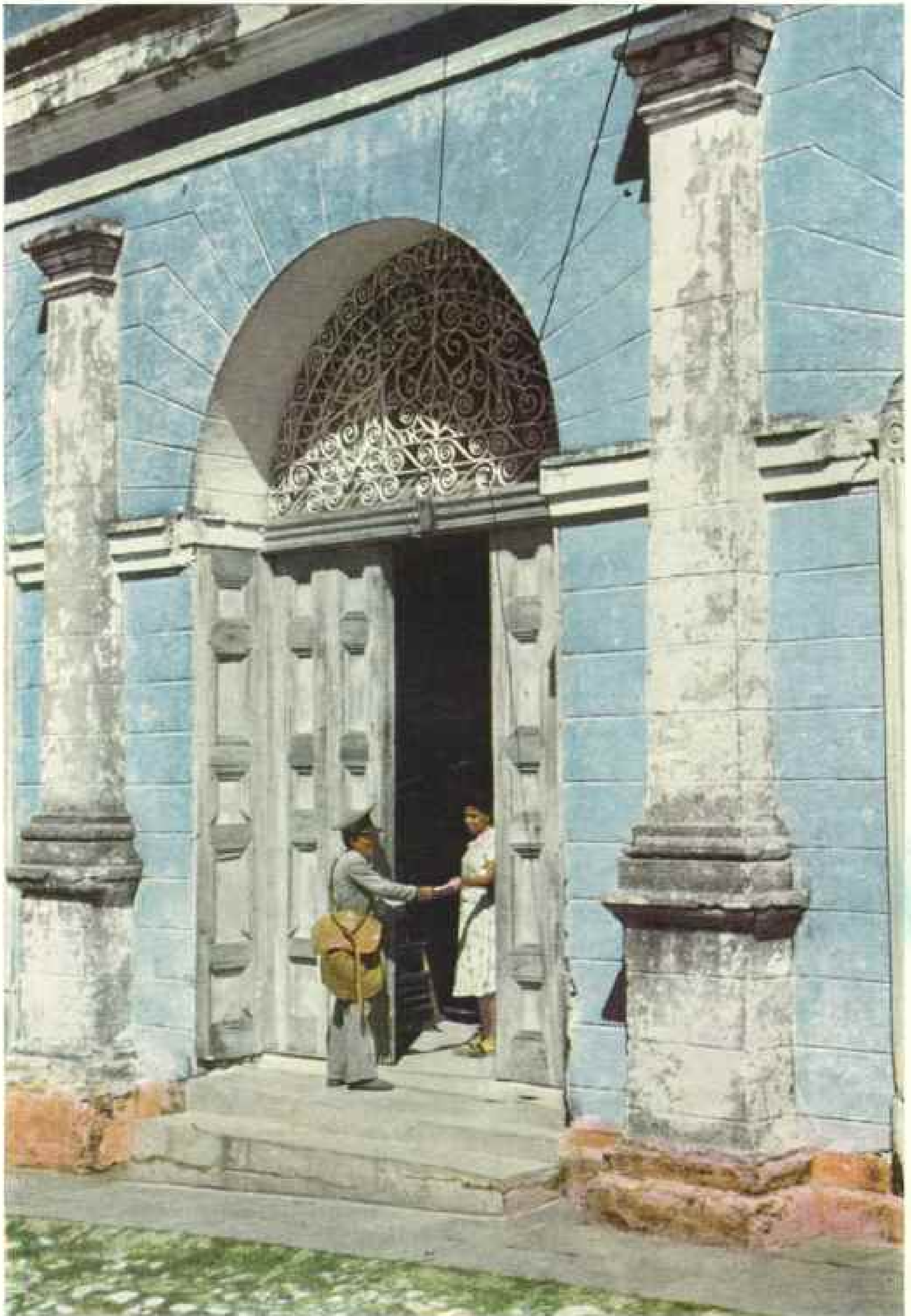
The final molasses, called "blackstrap," is distilled to make alcohol and rum. Some also goes into cattle feed. Cuba shipped 233,684,199 gallons of molasses to the United States in 1945.

At the time of my visit, Tánamo had just opened a brand-new refining plant. From it poured snow-white granulated sugar familiar to every housewife.

Cuba will sell an estimated 3,768,000 tons of sugar to the United States this year. That represents 85 percent of her production.

But we do not keep it all for ourselves—some goes to the world sugar pool.

Even so, our Cuban neighbor will fill nearly half of Uncle Sam's sugar bowl in 1946. Next year she will send still more.



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Photograph by Myrtle Bell Gossamer

The Twentieth Century Knocks at the Door of the Eighteenth in Trinidad

Set off by itself on the south coast of Cuba, this old town sleeps on as it did in early colonial days.



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Photograph by Melville Bell Grosvenor

Cheering Wildly and Waving Hats, a Light Brigade of Cowboys Charges the Author's Car near Cienfuegos

Wearing Cuban flags in their hats and carrying pictures of their candidates, these horsemen have gathered from far and wide for a political and social meeting. In this cattle-raising and farming section the horse is still king; automobiles are few. The leader (right, center) is a graduate of Havana University.



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"This Is Your House," Was Ramón's Greeting.

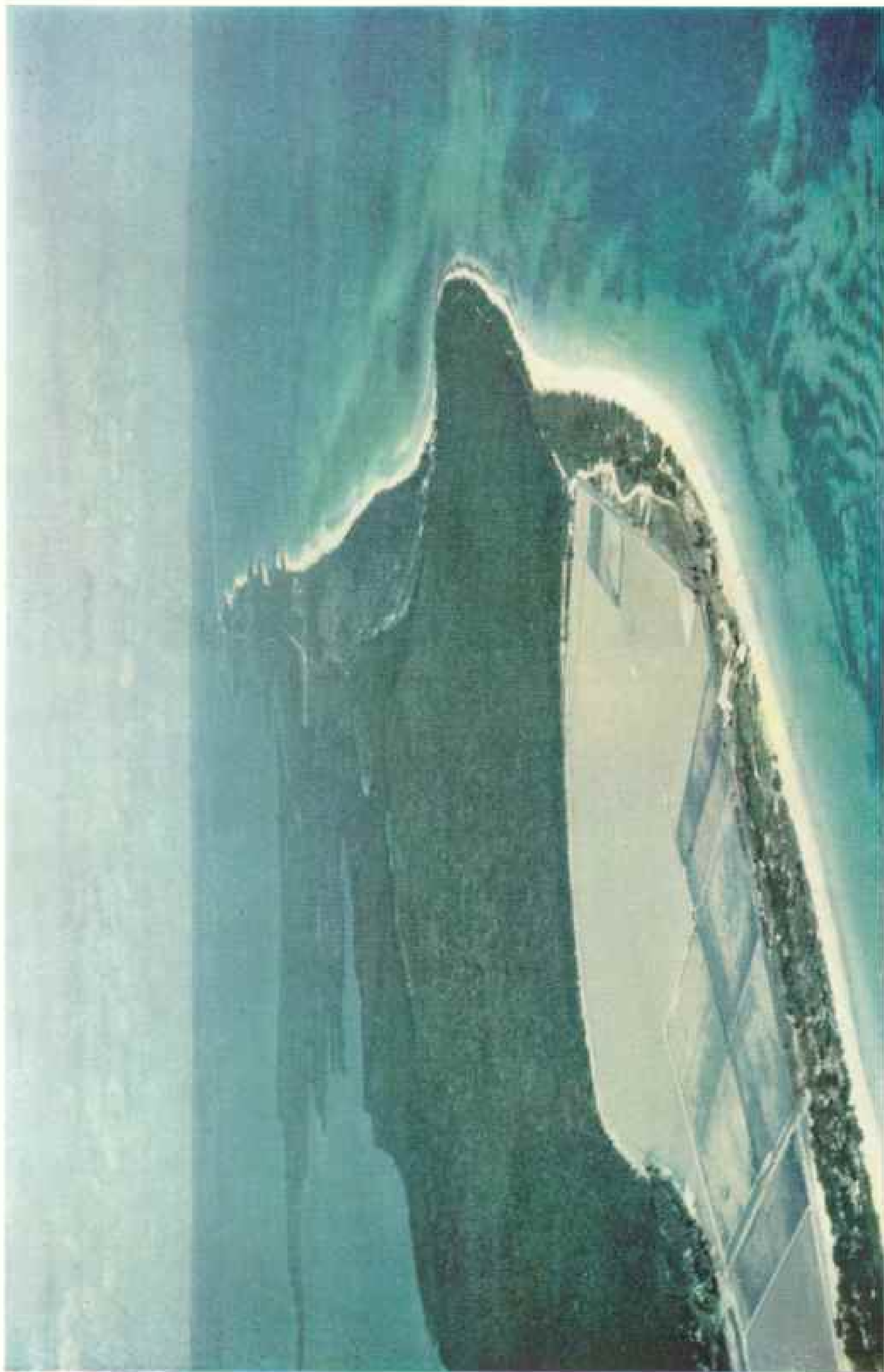
He and his family live comfortably near Cienfuegos in their cottage built from the royal palm and shaded by a flamboyant (royal poinciana) tree. Self-sufficient, they grow their own rice, coffee, and vegetables, and raise enough pigs, goats, and chickens for their needs.



Kodachrome by Merrill Bell-Grosvonts

Off to Market with Two Turkeys, Oranges, and Bananas

Everyone rides in Las Villas. Native horses are descended from those the Spaniards brought over as early as 1514. They are short and stout, but tough and of a gentle disposition. Many have an easygoing gait which enables them to travel long distances with little fatigue.

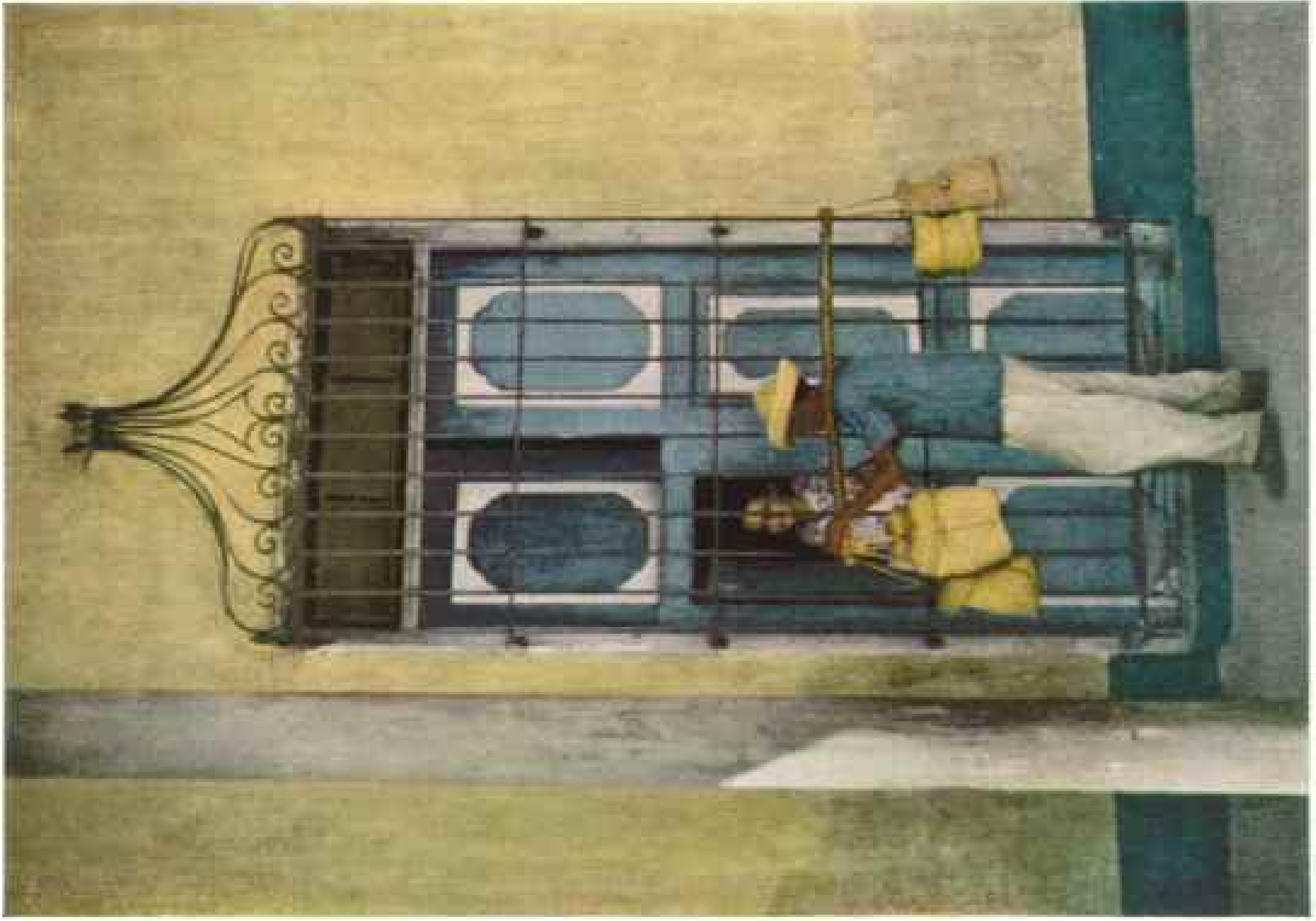


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Reproduction by Malcolm Bell-Gunn

The White Sand Beach of Varadero Coats This Tongue of Land Sticking Out into the Atlantic

Houses and clubs fringe the beach facing the broad-studded coastal shelf. Shallow Bahía de Cardenas (upper left) has been dredged to make a deep-water channel to Cardenas. On the tip of Peninsula de Hicacos (foreground) an evaporating pond draws salt from the sea water.



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The Market Comes to Your Door in Trinidad



Photographs by Mitchell Post-Grossman

José Chews Tasty Cane while Two Trinitarios Argue Politics



© National Geographic Society

Author's name by Melville Bell Grosvenor

On His First Voyage Columbus Put into Baracoa. "A Most Singular Harbor—Like a Porringer—with a Mountain Lofty and Square"

So glowing was his description of this harbor with its table-top mountain, El Yunque (The Anvil), that Velázquez picked it for his first Cuban settlement in 1512. Columbus saw 70-foot war canoes moored here under palm-thatched houthouses. Today it is a banana and coconut port, isolated except by airplane and ship.



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Girl Talks to Boy Through Bars! Tradition in Reverse

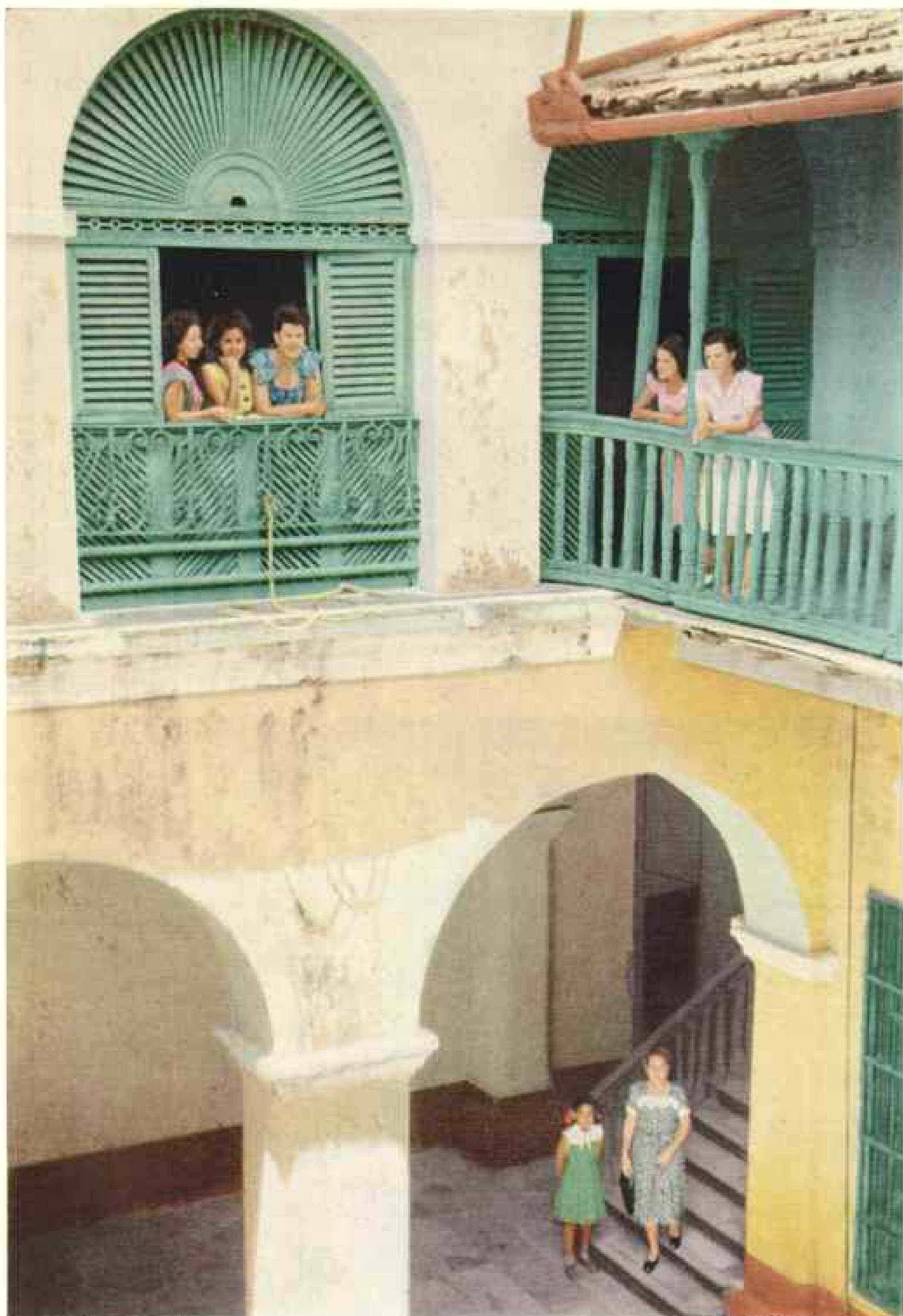
Houses in old Trinidad front on the narrow, sloping streets. Barred windows, such as this, protrude so that people inside can see all that goes on. Every-
one stops to gossip with friends along the way.



Reproduction by MetLife Bell Sprouver

A Movie Starlet in Trinidad?

Smiling from the patio balcony of the Brunet Palace, Zoraida is typical of the lovely dark-eyed señoritas one sees throughout Cuba. In this old city many families trace their ancestry back to early Spanish settlers.

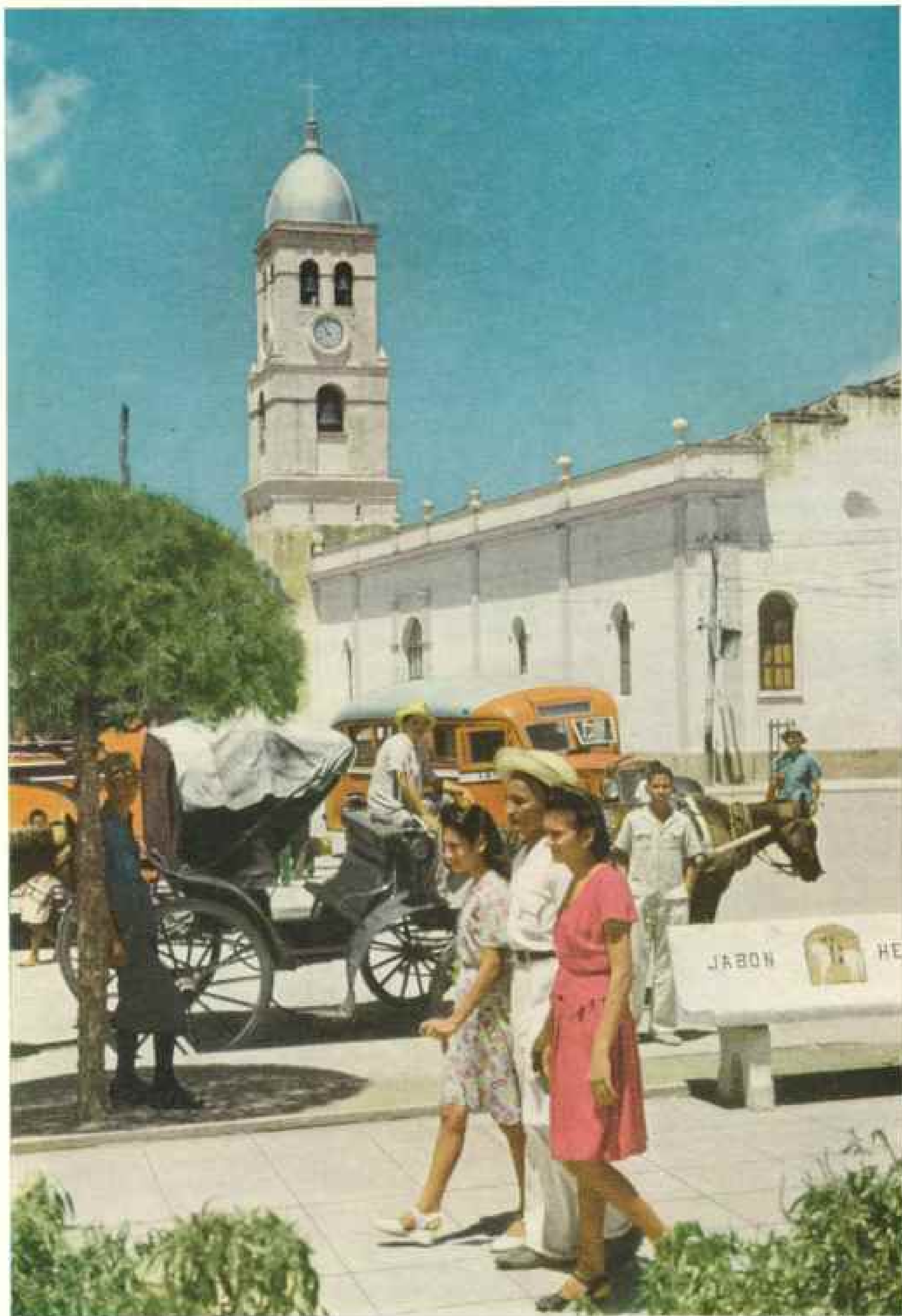


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Kodachrome by Melville Bell Grosvenor

The Patio of Brunet Palace Still Reflects the Glory That Was Trinidad's
Many families became wealthy from the sugar business and built large palaces. Brunet was one of the finest.

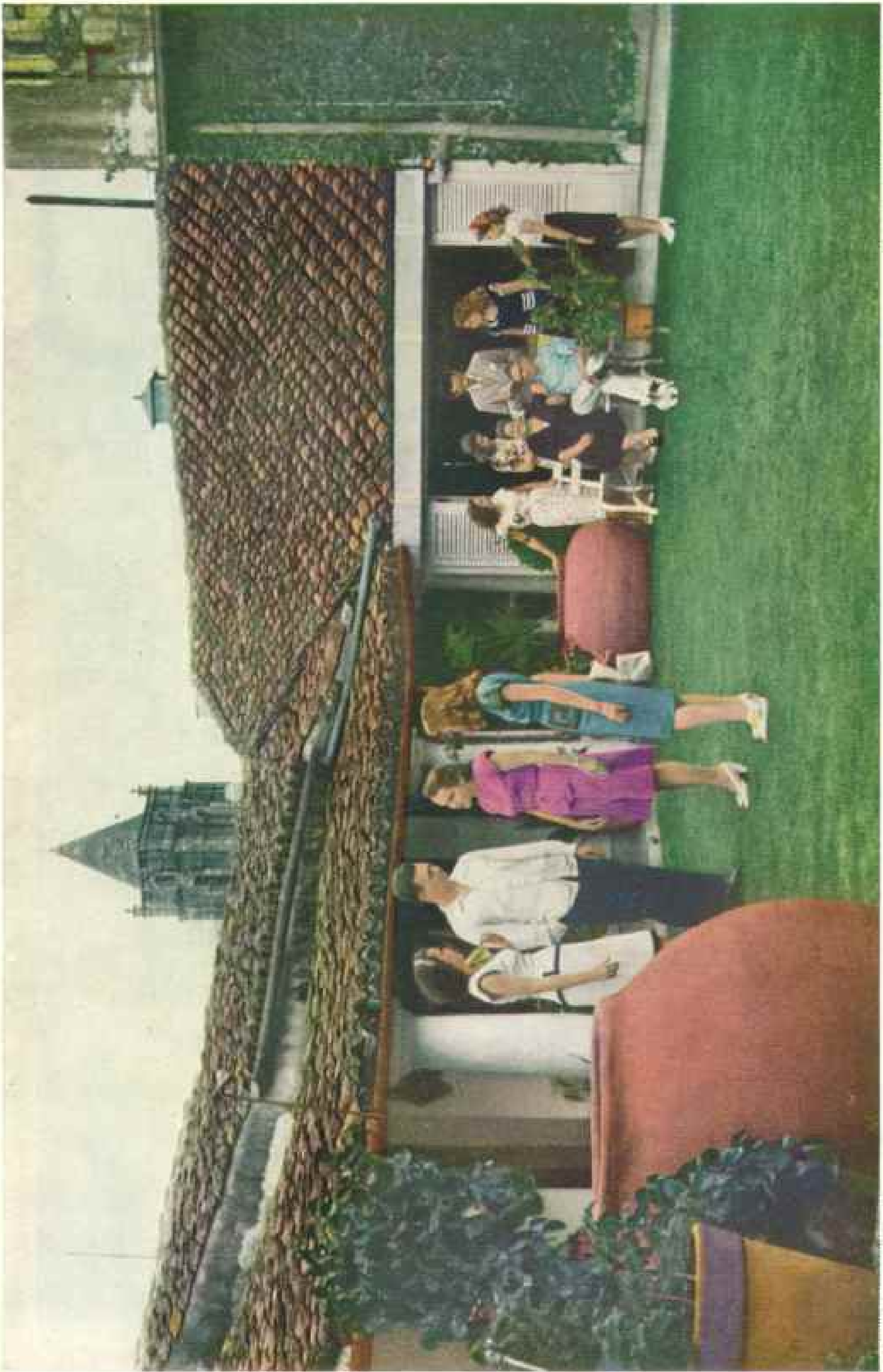
Cuba—American Sugar Bowl



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Reproduction by Melville Bell Grosvenor

Bayamo Patriots Burned Their Town Rather than Surrender It to Spaniards in 1869
Even the cathedral was gutted. The "Heroic City," rebuilt, is now a prosperous cattle town.

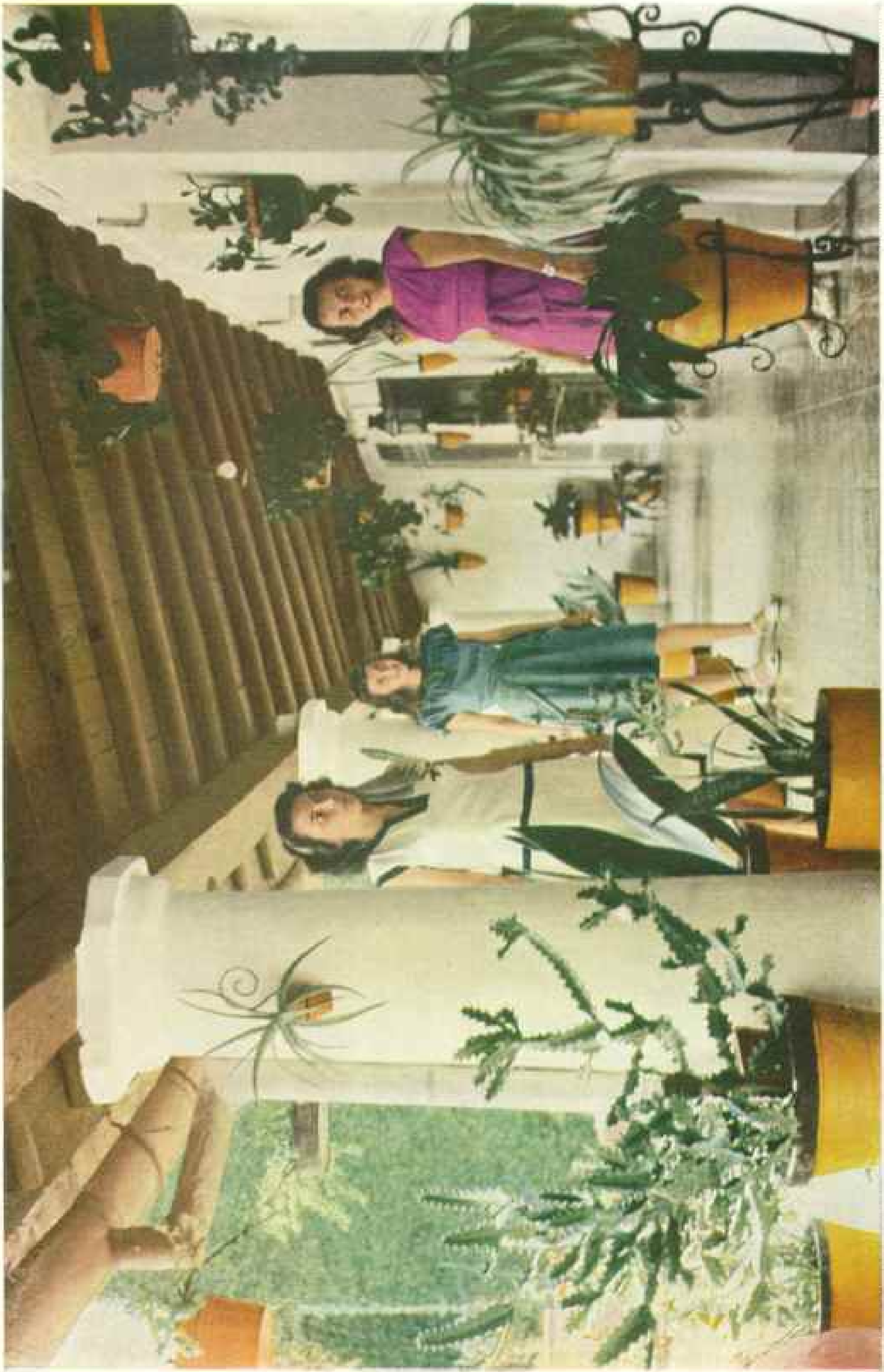


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"Drink from These Red Jars and You Will Return to Camagüey!" Señora Izquierdo Admonished Guests in Her Fine Patio

Many old homes still preserve the jars which formerly collected rain water—and mosquito "wigglers"! After Walter Reed proved that the *Aedes aegypti* mosquito carried yellow fever, open containers were covered. Across the street was born Carlos Finlay, the Cuban doctor who suggested that mosquitoes spread "yellow jack."

Illustration by Marjorie Bell Grosvenor



© National Geographic Society

Illustrated by Mabelle Bell Gossman

Lovely Patios, with Pots of Cacti, Vines, and Flowers, Provide Natural Air Conditioning for Cuban Homes

Doors and windows, always open, let the prevailing breezes sweep through the houses. Slats, like Venetian blinds, may be closed to keep out cool winter northerners. Floors are invariably of tile, often in colorful designs suggesting rugs. Farmers' thatched cottages have packed earthen floors.



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Illustration by Melville Bell Grosvenor

While Neighbors Peek from Windows, a Housewife Buys a Red Rooster

Any excitement in the street brings curious eyes to the bars. This is one of the oldest sections of Camagüey, founded on the site of an Indian settlement in 1528. It suffered many raids from buccaneers. Perhaps the worst was led by Henry Morgan, whose 700 rascals captured it in 1668 and locked the people in a church.

Cuba—American Sugar Bowl



A Returned GI from the 98th Division Is the Bean Brummell of Sibaniéú

Some 2,000 Cubans volunteered for service in the armed forces of the United States during World War II and distinguished themselves on all fronts. While Cuba declared war on the Axis, she did not send an army overseas. She did her bit by supplying the Allies with sugar, molasses, alcohol, vital minerals, and other products.



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Estadísticas by Mafreth Bell Gervent

A Sunburst of Cuban Smiles Lights Up a Lawn Party in Camagüey

Another guest thumbs a NATIONAL GEOGRAPHIC MAGAZINE. The host was a member of The Society for many years.



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During the Battle of Santiago, July 3, 1898, the Spanish Ships, on Fire and Sinking, Were Beached along This Rugged Coast

Standing on the battlements of Morro Castle, officers of the Geographical Society of Santiago point to the spot where two destroyers were beached. Though it looks grim and forboding, Morro played a small part in the battle, for it was armed with 18th-century guns. Its walls still bear scars from the naval bombardment.

Reproduction by Melville Hill Garrison

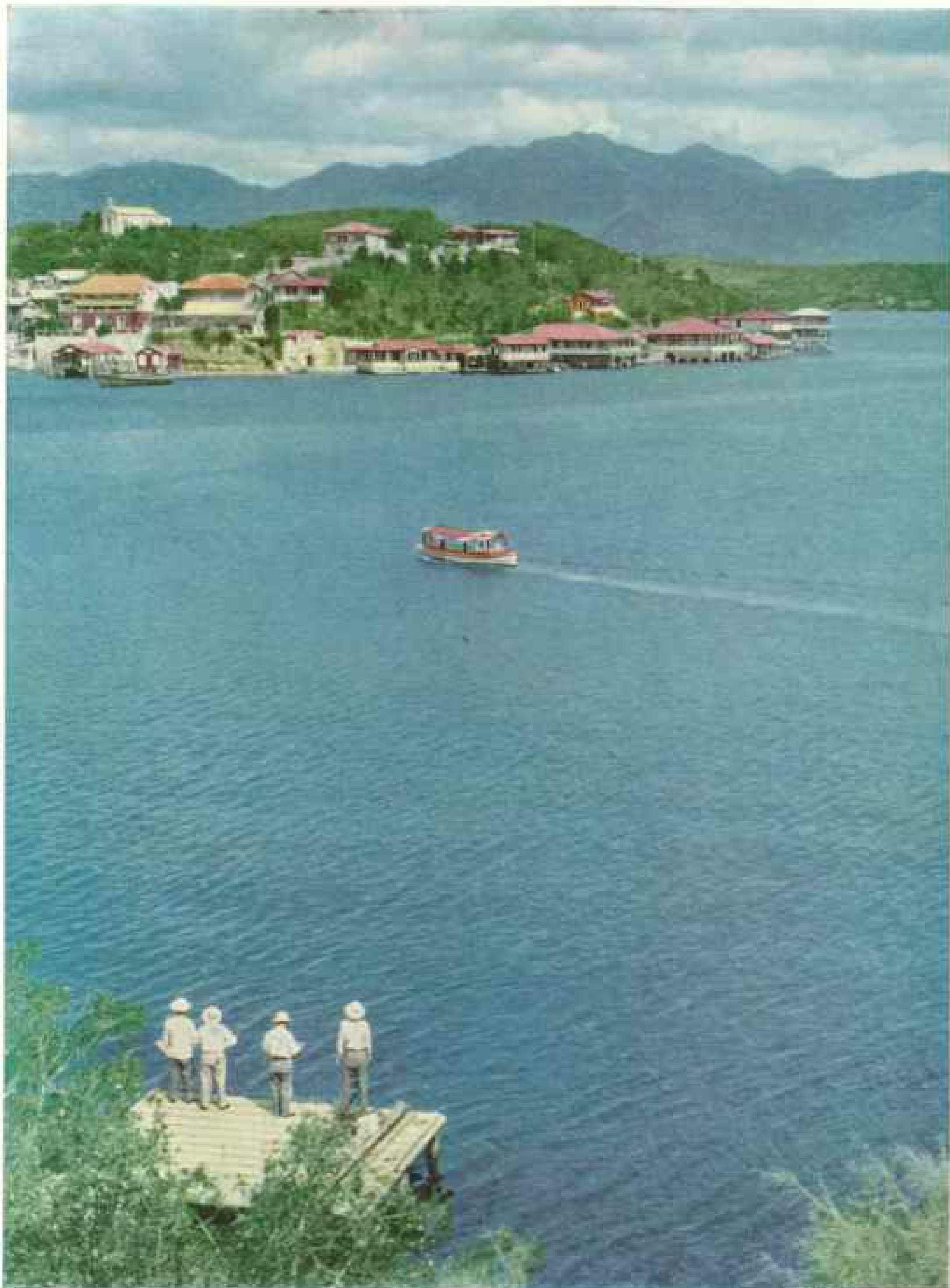


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Illustration by Melvin Bell Browman

Guns Blazing Impotently, Cervera's Ships Charged Out This Narrow Entrance in One of History's Bravest Sorties

Though the Spanish Admiral knew his ships were outmatched by the American fleet waiting offshore, he obeyed orders and dashed out to certain destruction. The Battle of Santiago cleared Cuba of Spanish ships and allowed our armies to land at will. A U. S. Navy plane buzzes the channel (foreground).



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Reproduction by the United States Government

"We're Right over the *Merrimac* Now," Shouts the Skipper of the Launch

In a heroic attempt to bottle up Cervera's Spanish Fleet, Lt. Richmond P. Hobson, USN, sailed an old collier past the forts guarding Santiago and tried to sink it across channel. Unfortunately the project failed because the ship foundered a few yards to the side. Smith Cay, beyond, is crowded with summer homes.

What I Saw Across the Rhine

BY J. FRANK DOBIE

FOR months I traveled through Germany as a civilian lecturer in the United States Army's Information and Education Division.

What I write here is personal, nowise official. My point of view, to an extent, is that of many thousands of civilians attached to the Army. After they get into Germany and Austria, they cannot eat, sleep, ride in a train, smoke a cigarette, or buy a pair of socks except by provision of the army.

It was December of the first winter of peace when I headed for Germany from Paris. The run to Frankfurt was at night, and the train was mostly loaded with American soldiers who had been in Paris on leave.

Two of the five who shared my compartment were sergeants in an engineering company which helped keep German trains running. One spent his spare time hunting wild boar and deer in a German forest.

The third soldier was a Texas cavalryman who had not ridden a horse since he entered the Army. The fourth was a radio broadcaster, and the fifth was a private in the Medical Corps who was much concerned over the way some GIs sympathize with Germans.

Armed Guards Protect Baggage

Every time the train stopped, armed guards would get off and patrol to see that no thief crawled into the baggage car. Dawn came as we were creeping across the Rhine on a temporary bridge alongside the dynamited ruins of the great bridge at Mainz, of which the Germans were once so proud.

From the station at Frankfurt (page 58) we drove in a jeep through the devastation caused by Allied bombs, then beside bleak fields to Höchst, a suburb.

Here the monstrous I. G. Farben Company had built the heaviest, dreariest office buildings imaginable. They sprawl amid smokestacks and streets of dwelling houses untouched by war. In these Farben buildings are the Information and Education offices, with Army newspaper, radio, photographic services, carloads of paraphernalia, and tons of pamphlets.

A mile away a big area of dwellings commandeered by the Army is enclosed by barbed wire, with the gates constantly guarded. This is known as "The Compound." I was assigned a room in one of its houses.

Nearly all American officers and many enlisted men in the occupied zone of Germany live in private houses requisitioned from the Germans. So do their families.

Two middle-aged German women kept the two apartments, on two floors, in the house where I stayed. Since only four men occupied it, the women's duties were not heavy. One of them was, with her husband, the owner. Upon being evicted from their house, they had been quartered on another family outside the compound.

This woman used to ask me how long the Americans were going to stay. When I told her I did not know, she would say, "If I do not have my home back in one year, I will hang myself."

For laundering our clothes and shining our shoes we gave our landlady PX candy and cookies. Like other household labor, she was paid by the Germans on order from the American Army. Along with other workers in the compound, she arrived at 8:30 in the morning and left about 5 p. m.

The only soap she had was what we bought at the PX and gave her. It was sufficient not only for the provider's clothes but for her family. Many a German woman working for Americans gets more soap and candy in a month than forty Frenchwomen get in a year.

Some of these German women have a dignified reserve; more of them fawn with spaniel-like familiarity. They have proved themselves generally honest toward all personal property. My own landlady was so methodical that she always insisted on hanging my eyeshade on the hatrack. I could not get her to leave it on my writing table.

The mess for officers and civilians at Höchst is in the Casino, another I. G. Farben structure, very big and very heavy. At the door an armed soldier stands constant guard to prevent unauthorized persons from taking advantage of the excellent dollar-a-day board.

Prized Tip Is a Cigarette

The waiters, as at other messes, are Polish or other DPs (displaced persons). A cigarette or two is considered a fair tip for any service anywhere in Germany. The collector of ashtrays at a table where cigarette smokers have lingered is a highly favored individual.

Near downtown Frankfurt, Army headquarters are located in another set of I. G. Farbenindustrie office buildings. Rumor had it that the buildings were spared by Allied bombers so that the victorious armies would have needed office space. The corridors in them are as long as the Rockefeller Center is high, and they have as many offsets as the Norway coast has inlets.



U. S. Army Signal Corps, Official

Though Badly Bombed, Frankfurt's Railway Station Still Serves Travelers

Repeated Allied air attacks broke every pane of glass in the depot, one of Germany's largest, but the steel framework remains intact. Civilian travel in postwar Germany is sharply restricted. Buildings of Frankfurt's I. G. Farbenindustrie now house headquarters of the United States Forces in the European Theater.



AP Photo Press Ass'n.

Their Leaders May Argue, but These Allied Soldiers Stroll Happily Together

Members of Vienna's International Patrol, they represent four nations—Soviet Russia, the United States, Great Britain, and France. Men serving with the force seldom understand each other's language, but they usually get along well, the author reports (page 67).

In Frankfurt there is a Casino mess also. Here, as in many other Army messes and hotels for transients in Germany, musicians play during the main meals. Some of the musicians are DPs; some are Germans. Occasionally an American will order a bottle of wine or a round of beers for the musicians to encourage them.

Civilian Coal Scarce

In the winter of 1945-46 there was no coal for civilian use. I got used to seeing dignified, well-dressed men and women stepping out into the street to pick up any nugget of coal dropped from some truck hauling for the Army. Fortunately, the winter was mild.

A piece of coal, no matter how small; a cigarette stub, no matter how short; or a bit of horse manure, precious for fertilizing a kitchen garden, will disappear almost as soon as dropped on any German street.

Ten miles out from the center of a city one

may see civilians pushing prams or wheelbarrows loaded with wood gathered in the forest. Often the wood is little more than twigs. Used to obeying orders and being regimented, the civilians do not hack down any tree they can find. They take only what the forest supervisors designate. Bicycle riders carry in bundles of fuel from long distances.

A few trucks could have hauled away the bulk of goods for sale in all the stores in Frankfurt. I never saw a furniture store anywhere in Germany, though a German agent can find a whole set of furniture if offered enough cigarettes. I noticed a manufacturer of hand luggage sell a new suitcase for four cartons of cigarettes. He said he would use them to get priority on meat at controlled prices.

Frankfurt had more than half a million inhabitants before the war. Not a single department store or any other large store was left undestroyed downtown. A department store



U. S. Army Signal Corps, Official

Girl, Boy, and Waltz King Brighten the Gloom of Vienna

In the background is the bronze statue of Johann Strauss in the Stadt-Park. The marble figures represent lovers rising from the waves of the composer's "Beautiful Blue Danube." The Viennese girl explains the memorial to an American soldier. Near by, the author saw a newly-erected monument to Russian soldiers (page 69).



U. S. Army Signal Corps, Official

From Vienna's Historic Rathaus He Gets a Bird's-eye View of a Youth Day Rally

Cleated mountain-climbing boots help the boy cling to his perch on the pedestal of a statue. He holds a flag bearing the initials of his youth organization. Instilling democratic principles in such future citizens is part of AMG's program for the rehabilitation of occupied countries.



U. S. Army Signal Corps, Official

Orphans of the War, They Can Still Muster a Smile

Four Polish children, happy because at last they have food and shelter, beam from a schoolhouse window at a camp near Salzburg, where displaced persons are cared for under an UNRRA rehabilitation program. Their expressions belie the horrors they saw and experienced in years of wandering over Europe.

of several stories in Höchst was taken over by the Red Cross. The Red Cross manager there had trouble preventing German help from getting away with sacks of doughnuts.

From Frankfurt I set out on my job, which was to talk to American soldiers. My uniform was bright with braid and brass, but it bore no insignia of rank. My theme was Modern Citizenship, or The Necessity for Thinking. The Army orientation plan calls for two hours of lecture and discussion for all soldiers each week.

Some Listened, Others Slept

Sometimes I talked to soldiers in formation, and I have watched some of them thus in attendance under orders sleep very soundly. As long as they did not snore, they did not disturb me.

More often I talked at Red Cross clubs, where only volunteers come. I have gone to a club and found no volunteers to listen; again, I have stayed with eager minds until midnight.

My first orders directed me to Munich and thence south to Third Army headquarters then at Bad Tölz, in the fringe of the Alps.

In Munich curiosity led me at once to the Hofbrauhaus, the beer hall where Hitler

founded the Nazi Party in 1920 and in which the Party members annually celebrated the founding until the RAF stopped them. One of the most visible ironies in Germany is the American Red Cross giving out free doughnuts to GIs in a restored portion of this supreme shrine of the Nazis.

"Now I'll have something to write home about," the GI will say.

In another Munich Red Cross club I was asking directions to an art exhibit. A German frau in attendance said: "You will see a golden woman with her wings spread out, high up on a column at the end of the avenue."

"Oh, yes," I said, "I have seen that figure. I wondered what it could represent."

"It is the Angel of Peace." The German woman had piety on her face and piety in her voice as she gave me this information about the German love of peace.

"What peace does this Angel commemorate?" I asked.

"That of 1871," and the piety was not quite so bright.

That was the year after Germany's first successful invasion of France. The Angel of Peace represents Germany's seizure of Alsace-Lorraine from France. A towering monument



U. S. Army Signal Corps, Official

Caring for Homeless Germans Is One of AMG's Biggest Problems

In tiers of bunks like these, several thousand civilians whose homes have been bombed find temporary shelter in a 5-story building at Krefeld, in the Rhineland. The author visited one area where, he was told, immigrants had swelled the population from 250,000 to 450,000 (page 79).

in Berlin also represents this act of "peace"—and now the French Tricolor flies above it.

People swarm the downtown streets of Munich. One wonders what their business is. Many an individual puts in hours a day locating and bartering for some commonplace piece of food or household article.

The central part of the city looks 90 percent destroyed, but miles of apartment houses on the outskirts shelter hordes of human beings. They all seem to walk somewhere for some purpose, or jam into the trains of streetcars, three cars coupled together and driven by one motorman. GIs ride these cars free. Hanging onto the steps is *verboten*, but they are as crowded as the inside.

Munich Clock Gives Daily Show

Many carry briefcases or some other kind of bag. They swarm around the wooden stands built on squares to market food brought directly from the country. They bank up three and four deep merely to gaze at painted cards, wooden trinkets, and other knickknacks displayed by some renovated shop in a building otherwise unusable. These knickknacks are the only goods on a free market, except a deluge of paintings, mostly mediocre.

Shortly before 11 o'clock every morning a crowd gathers on the square in front of the "new" Munich Rathaus (City Hall), now occupied by the Military Government. When the clock starts to strike eleven, complicated sets of figurines begin acting out a pantomime under the clock.

One day while I was waiting for the display, a clean-faced boy of 11 years took his position beside me. Like many German school children, he spoke fair English.

The clock made its first stroke, and two little iron men went to beating on bells. Then began the parade of military figures—two circles of them moving in opposite directions, foot soldiers first.

"Now you will see two soldiers on horses," the boy said.

Two knights on horseback appeared, tilting at each other.

"The next time they meet," the boy said, "one will kill the other."

Again the horsemen passed each other, and one tilted the other out of his saddle.

"This tells the story of a war between Bavaria and Austria," the boy said. "Now the people below the soldiers will dance to celebrate the victory."





SWEDEN

LITHUANIA

BALTIC SEA

Bornholm (Denmark)

SOVIET EAST

PRUSSIA
POLISH ADMINISTRATION

Kolberg

Köslin

Neustettin

Stettin

Schneidemühl

Bydgoszcz

Grudziadz

Gdynia

Danzig
Tczew

Allenstein

Gradno

Lomza

Bialystok

Mlawa

Ostrów Mazowiecka

Inowroclaw

Wloclawek

Poznan

Gniezno

Warsaw

Siedlce

Brzesce nad Bugiem
(Brest Litovsk)

POLISH ADMINISTRATION
SILESIA

Kalis

Zgierz

Lodz

Pabjanice

Piotrkow

Breslau

Czestochowa

Butta

Hindenburg

Gleiwitz

Katowice

Oswiecim

Krakow

Tarnow

Rzeszow

Przemysl

Moravska Ostrava

Cieszyn (Teschen)

Nowy Sacz

Carpathian Mountains

Boryslaw

CZECHOSLOVAKIA

Ceske Budejovice

Olamouc

Prostejov

Brno

Znojmo

SOVIET ZONE

BRITISH ZONE

YUGOSLAVIA

HUNGARY

Five Nations Govern Germany
Heavy banded shading indicates the Third Reich's pre-war boundaries of Jan. 1, 1938. The Allies have divided Germany into four occupation zones, shown by the narrower shaded lines. Dotted lines mark Austria's four zones. While not an occupying force, Poland administers Germany east of the Oder and Neisse Rivers. Inset (below) shows Berlin's four zones.





U. S. Army Signal Corps, Official

"Hold Still, Hans—This Won't Hurt!"

This youngster, like all refugees passing through Berlin, is dusted with DDT powder as a safeguard against typhus and other insect-borne diseases. DDT, developed during the war and now in general use as an insecticide, has played a large part in preventing major epidemics in ravaged Europe.

Figurines below the military action danced. Actually they represent dancers of the Middle Ages who kept the people of Munich cheered up during a famous plague. The boy's interpretation, however, was all in terms of war.

"Now," he said, "the chicken will sing."

A cock high above the human groups began to flap his wings and crow.

This boy was a nice kid. I gave him a PX bar of candy from my raincoat pocket. With proper teaching he would not look upon everything in terms of war. What he called a war between his Bavaria and Austria is, as the mechanical figures under the clock depict it, only a tournament.

The boy's interpretations harmonize with popular representations of Bismarck. In villages and cities all over Germany you see heroic-sized monuments of Bismarck, foremost of German statesmen, though he was a warmaker. And always you see Bismarck with an iron helmet on his head, a sword in his iron hand, and on his face an expression as iron-hard as the Hindenburg Line (page 78).

Few, if any, other people on earth have made or would make their supreme statesman into a supreme soldier. One cannot imagine America so representing Thomas Jefferson, England so representing Pitt, France so representing Clemenceau.

One afternoon two German plumbers came into my room in the Excelsior Hotel in Munich to repair the drainage pipe under the washbasin. They soon had the pipe unjointed and a coupling off. Then they spent at least two hours in and out of the room trying to get something to fit. Evening came and they left.

The next morning they were back, and it actually took them most of the day to finish the repairs. I judged that they were efficient enough; they simply could not find new piping to fit an old coupling, or a new coupling to fit old piping. Imagine this kind of thing multiplied millions of times all over Germany in the mighty task of rebuilding.

In this same hotel I was the unintentional participant in a kind of pantomime that represents the way masses of Germans react to their conquerors. The Excelsior Hotel, a long block from the railroad station, is reserved for Allied officers and civilians. It is the only whole building left in an area of several blocks. Large numbers of Germans pass it continually on their way to and from the station, itself a ruined shell.

As the passers-by know, it is one of the few places in Munich, all of them American-operated, where plenty of room, warm food, warming drinks, heat, fresh linen, hot water, soap, bathtubs, and other material comforts can be enjoyed. To the have-not Germans the Excelsior Hotel represents the all-having of their conquerors.

The front of the Excelsior Hotel has a remarkable amount of plate glass. One day while I waited in the lobby for a delayed automobile, I stood against one of the big windows, watching the world go by.

It is rarely indeed that one sees a German in Germany under the influence of strong drink. However, one laughing man in bedraggled clothes came right up to the window and motioned for me to come out and help him celebrate.

His was the only genial face I saw during my wait. There I stood, representing in my uniform the dominators of the country. Many looked at me and then averted their faces. Some looked with only sullen indifference, others with open aversion.

If Looks Could Kill

A well-dressed man and woman passed, engaged in lively and presumably pleasant conversation. The man happened to turn his eyes upon me and the smile on his face froze instantaneously to an expression of the deadliest hatred; the woman changed likewise.

The looks, taken all together, were much more expressive than those an American sees when he walks the streets as one of the crowd or goes into a shop. Instead of being masks, they were revelations.

In Bad Tölz, an hour's ride from Munich, I found one of the numerous towns of Germany untouched by bomb or artillery fire.

Bells jingled on horses drawing sleighs loaded with wood or other freight. In the shops were cheeses and meats. The people did not have that sullen, gray, caged look they have in the cities. Here, as everywhere else in Germany, many homeless Germans have been quartered upon the residents with good houses, but the general atmosphere is one of hope.

In the same area I visited skiing resorts operated for Americans. These resorts have native instructors, and Americans in Germany and Austria have learned fully as much skiing as they have taught baseball (page 82).

The Military Government has been increasingly encouraging Americans to "play ball" with German youth and try to democratize them through sports. Of their own accord, American soldiers teach baseball, like gum-chewing, to every people they encounter.

Vienna Dreams of Its Past

The only American approach to Vienna is by railroad or highway out of Germany and across a long stretch of Russia's Austrian zone, which I crossed in the night.

Three things about Vienna made a profound impression upon me: (1) an extraordinary American Red Cross club called the Town House; (2) the way the Viennese seem to dream of the past; (3) the way the Russians seem to be striding away from it.

At the time of my visit, the Town House seemed to me the most civilized and interesting Red Cross club in Europe, American to the core, and yet a tolerant melting pot of nationalities. It was coffee-drinking and talking headquarters for the International Patrol.

A squad of this International Patrol consists of one soldier from each of the four countries occupying the city—Britain, France, Russia, and the United States. The four go about together (page 59). Not many of the patrolmen are proficient in languages foreign to their own, but some are. While I had a chance to associate with them, all seemed very understanding and friendly with each other.

The character of the club emanated from the program director, Miss Helen Beko, of St. Louis, Missouri. She stimulated scores of soldiers to read and talk about foreign affairs and for a while taught a course in American history to Americans enrolled in the University of Vienna.

One night while I was leading a discussion at the Town House, a giant of a sergeant named Bob Hartnick, who speaks Russian fluently and who had really organized the International Patrol, told a story that can explain a great deal of the friction between Russians and English-speakers.

Not long before, Sergeant Hartnick said, he was riding in a jeep in Vienna when he saw an American military policeman and two Russian soldiers in what appeared to be a violent "misunderstanding." He pulled up his jeep and heard one of the Russians say in his native tongue, "Now you have held us here half an hour and we still don't know what we



Planned from Black Star

AMG Checks Germans for Signs of Malnutrition

This housewife is measured by a British member of the 4-power Field Ambulance Unit at a Berlin street-corner clinic. Height and weight figures help determine the lowest bases for rationing civilians so they may work and avoid disease. In areas where heavy work is the rule, such as the Ruhr Valley, the ration is larger.

have done wrong. I tell you again to take us to your commandant for explanation."

The Russian was speaking with intensity.

"Say that again," the American MP burst out with just as much intensity, "and I'll smash your blankety head into a jelly."

At this Sergeant Hartnick took a hand. The Russians had undertaken to drive their car past a streetcar on the left-hand side, which is against the rules though a procedure practiced by impetuous drivers of all nationalities. The Russians had been arrested, but they had no idea why, and their arrester, waxing more and more wrathful at their "dumbness," was powerless to tell them why.

The Town House in Vienna reminded me of a wise saying made by Viscount Grey of Fal-lodon, British Secretary of State for Foreign Affairs during World War I. He said, "Nothing so disposes men to understand as making them feel that they are understood." If we had more Town Houses, we might have fewer deadlocks among the representatives of the four powers now dominating Austria and Germany.

"Vienna, Vienna, I love you," the barrel organ played on the street. Every night of the week two symphony concert companies played and two opera companies performed, though the great opera house had been bombed beyond use. Frequently Strauss's "The Spirit of Vienna" was given.

Beautiful music makes all people remember. It takes the Viennese back to the glory that was Vienna when their city was the capital of an empire.

Monuments, too, express remembrance. The figure of Mozart has been toppled from its pedestal, but in bronze bas-relief on that pedestal a little

boy still plays the violin and two children kiss to its music. On Mozart-Platz, a bronze flutist still flutes a waltz into which a lovely lady blends her grace.

The bombed streets, the empty shops, the empty people are gray and dreary, but the "Blue Danube" still flows through Vienna. One can still hear snatches of gay laughter, but somehow it seems to belong to the past.

Overlooking the broad Ringstrasse is the giant statue of Maria Theresa, who was Empress of Austria when the Hapsburg Hussars expressed the gallantry of the Empire. She and the Hussars are now as obsolete as a horse's nosebag would be on a jet-propelled

plane carrying an atomic bomb.

Down the Ringstrasse and around a corner is a very different kind of statue. It is the Russian monument to Russian soldiers, erected a few months after the Soviet Army captured the city.

A marble shaft rises to support a soldier who seems not so much to remember the past as to remember the tears inherent in all human affairs. Behind him and flanking him is a colonnaded semi-circle of stone. On top of one end column is a pair of artillerymen with their cannon; on the other end, a pair of machine gunners.

All four lean forward with intense alertness. As you look at them, you get the idea that they have run, crawled, walked, crept across thousands of miles of steppes, marshes, forests, ice.

But they do not look back; they will not be sniped off; they will not be lulled or lured by any softness. Their vitality does not linger over a glamorous past; it surges out of the present and pulses with expectation.

Before leaving Austria I visited the rugged Alpine province of Salzburg. When I shed first my overcoat and then my jacket in the glittering snow outside an Americanized ski lodge on a mountain overlooking Zell am See, I thought that surely this Alpine climate must be at once the most delightful and the most invigorating east of wintertime Arizona.

At Zell am See, the Rainbow (42d) Division was running a university of its own and claimed to have more fine apparatus for the study of physics than many universities in America possess. It all belonged to German research centers in that area.

In the Alps in the same vicinity I went



American Red Cross by Atkins

Three's a Crowd in a Sporty German Roadster

An American Red Cross girl and two soldiers fit snugly into this requisitioned automobile. Here they receive directions from a Berlin traffic policeman before starting on a sightseeing tour.

stag hunting from a lodge that the Hapsburgs once owned and that an artillery regiment of the Rainbow Division took over from the elder Krupp. The old munitions maker lay critically ill in a cottage across the road—too ill to be taken to Nürnberg for trial.

Cows Hitched as Oxen

On a duck hunt with American officers through farms outside Augsburg, I saw more cows hitched up as oxen than I ever saw oxen in old-time Mexico. Neither these cows nor their ancestors ever heard the clatter of a tractor (page 76).

We passed several small flocks of sheep on our rounds. When a shepherd saw us nearing



International

He Loses a Zither and Gains a Silk Scarf in a Berlin Barter Market

The German soldier, still in his field-gray uniform, seems pleased with his bargain. This method of exchange was established by Allied authorities to combat Berlin's black market. On designated days in each of the city's four occupation zones, Germans flock to the open-air trading posts with clothes, household utensils, tools, musical instruments, and other articles.

him, he would stand at attention and remove his cap. This deference was not to Americans, but to military uniforms. Perhaps it also was to the car. The Man on Horseback gave way a generation ago to the Man with a Motor, but peasants of Germany as well as of other European countries still live in the feudal age.

At Augsburg a blithe Red Cross girl told how a Polish soldier in a hospital said to her very pleadingly: "You are beautiful. Please marry me so that I can go with you to America. You need not see me after we are married."

Dachau Houses Toughest Nazis

A medical officer in the same outfit told me that a woman from Luxembourg, living in Augsburg with her sister, had offered him \$500 if he would marry her and take her to America. There she would divorce him at once.

At Dachau, where the Nazis cremated more than a quarter of a million civilian victims, the

toughest SS prisoners are now guarded. I scanned the faces of maybe two hundred. No nightmare could conjure up faces more cruel, depraved, debased, and thuglike.

The Nazi implements of horror and their cages and chambers of torture are preserved for exhibition. I met a colonel commanding the Air Forces reinforcement depot at Fürstentfeldbruck, not far away, who was transporting all recruits fresh from the States to this infamous place so that they might visualize what the Allied armies had fought. He considered the tour a commentary on the proper limits of fraternization.

In Heidelberg, which escaped bombing, the stores had more shoes and clothing than any others I saw in Germany, though all such articles are, of course, severely rationed. More Germans lingered in front of the display windows of a big clothing store for American officers than anywhere else.



International

Ivan Wants the Bicycle, but Anna Says "Nein!"

An interpreter is needed to settle this international disagreement near the Brandenburg Gate in Berlin. Seeking to buy her bicycle, the Russian soldier gave the frauken some money. She, however, failed to understand his intentions until he started to depart with the vehicle. Like all soldiers away from home, the Russians in Berlin are eager shoppers.

In the venerable University of Heidelberg the Americans have built up the best library of English-language books to be found in the occupied countries. Though it is largely run by German help, no German student is allowed to read the books.

Two I. and E. sergeants who had furnished a corner store with periodical and other literature to encourage reading by soldiers said that they could have sold many copies of American magazines to Germans for ten or even a hundred marks apiece. (The official Army value of a mark is 10 cents.)

Germans, intellectually starved, are hungry for reading matter out of the democracies. The most grateful German I met was a professor to whom I gave two pamphlets, one on democracy and one a summary of events in Washington.

A long time ago, while the thoughts of my youth were "long, long thoughts," I read

Macaulay's account of the trial of Warren Hastings before the House of Lords. I thought then I would have preferred being present at that trial to observing any other event in the entire pageant of recorded history.

War Crimes Trials a Mighty Drama

I know now that in attending the war crimes trials of twenty-one German officials at Nürnberg I have witnessed a mightier drama, with far more human significance. No person with a sense of history who has seen it can ever forget it.

In front of the courthouse American soldiers, as spick in appearance and as precise in movement as the famous guards of Buckingham Palace, walked their posts. They stood in booths at every entrance. Beside the courthouse they were mounted on machine-gunned tanks, looking, looking.

Inside the courthouse, in every passageway,



U. S. Army Signal Corps, Official

She Foretells the Shape of Things to Come in German Women's Fashions

The model displays the latest in playsuits at Berlin's first fashion show since the war. Watching her is a group of Allied newspaper correspondents. Sponsors said the performance proved what could be done with little material and much ingenuity.

wearing white helmets and carrying revolvers in white holsters attached to white belts, they allowed no one to pass without credentials that were examined and reexamined. In the courtroom itself a row of immobile guards stood behind the two rows of seated prisoners.

Other guards had other positions. A guard looked down from a window high over the room. Another white-trimmed sentry, as alert as a wild turkey gobbler, noted every movement of every person in the visitors' gallery; his counterpart scrutinized as watchfully every gesture among the press seats.

It took time for a spectator to forget the guards and pay undivided attention to the tribunal, the prisoners, the attorneys, and the battalion of interpreters whose translations came into the adjustable earphones in four languages.

The courthouse was an island in a sea of devastation. Virtually all of ancient Nürnberg inside its deeply moated walls had been

utterly destroyed by bombing. Not one house stood whole; streets were still littered high with debris. Along battered ways outside the walls, streetcars ran and electric lights dimly illumined the night.

When I left Nürnberg, about dark, I rode in a compartment on a civilian train with a young woman who had come for a visit from Würzburg. Her GI friend had escorted her to the compartment and fondly bade her farewell. She was joyful over having been in a city with streetcars and lights. When I got into downtown Würzburg, I could understand her perspective.

Around Würzburg I had my most revealing views of displaced persons. An American captain took me to two camps of Latvians, about 600 in each camp. Being cared for in Military Government camps in Germany were some 46,000 of these Latvians, reluctant to go back to Russian-held Latvia.

I talked with a highly educated lawyer, a



Berlin's School Feeding Program Helps Build Future Citizens

These solemn youngsters line up for hot soup at one of many kitchens set up in Berlin. Since the feeding program started in November, 1945, fewer children have suffered diet deficiencies, and school attendance has increased. The health of the population is constantly checked. Adequate food is provided children, even if it means less for adults.

kind of major-domo of one of the camps. From him and others I gathered that these DPs would be satisfied if given passports to America, or perhaps to Australia or Canada.

What they prefer and expect, however, is for the United States and Great Britain, with the aid of the Germans, to battle Russia out of the Baltic States. They feel certain that this will happen; to them the only question is that of time. They seem contented, so long as they are fed, to wait.

Sudeten Germans Return to Fatherland

The U. S. Army has been responsible for sending about 2,900,000 displaced persons from within the United States Zone of Germany to their own frontiers. Meanwhile, an estimated 2,000,000 Germans expelled from Hungary, the Sudeten of Czechoslovakia, and elsewhere, have come into the zone. Of these, about half come from the Sudeten.

I went aboard one train of boxcars just arrived from Czechoslovakia. Each car had a stove in it and such food, clothes, bedding, and other possessions as about fifteen persons were permitted to carry away from the republic they had betrayed.

In a processing camp where another consignment of wretched members of the "master race" awaited billeting orders, I heard them singing a plaintive song composed by one of their number, about "the old clods" they had left, "which the Czechs are haunting now."

Among a thousand or so of these displaced Germans I did not see a single young man of sound body, only old men, children, and women of all ages. A grizzled farmer told me that his ancestors went from Germany to the Sudeten 900 years ago.

Every house in Germany, whether in village or city, is subject to taking its quota of the influx, as well as of the houseless who belong



Armit

Berlin Still Has Sidewalk Cafes, but Little Gayety

Easter paraders relax glumly before a cafe on the wide Kurfürsten-Damm, in the British occupation zone. Instead of the fine wines and liqueurs of peacetime, they drink imitation fruit juices and ersatz coffee. This section was known to prewar visitors for its smart shops, theaters, dance halls, cabarets, and restaurants.

to the area. The burgomaster of every hamlet must find quarters for numbers allotted to his district. Incidentally, there are almost no isolated farmhouses in Germany. Farm folk live in villages and go out to their fields, sometimes miles from their homes.

One of the revealing sights of Germany is the way anchorless populations travel. In the seatless, cavernous railroad stations of the cities you see these people sitting on their luggage, sometimes eating bread, often drowsing, nearly all of them apathetic, waiting for hours, sometimes for days, for a train. They must have permits to buy tickets unless they have a travel order.

A citizen I saw at one of the stations in Frankfurt told me he had escaped hours of waiting in line by offering a clerk a package of cigarettes. He had motioned to the clerk, who left the line of people he was serving and went behind the building to take the bribe.

On a daylight trip out of Frankfurt to the

east, I rode a civilian train. One compartment in a third-class coach was reserved for Allied personnel.

Germans on that train and trying to get on it reminded me of moths clinging to the window screen of a lighted room on a summer night. Some were on top of coaches, though this kind of riding is *verboten*.

On the open platform in front of our compartment eight or ten people occupied all the standing space all day.

The man I sat with happened to be an American citizen of German birth who was working for the Army as a censor of private letters. He said that the passengers were mainly houseless people who had recently come into the United States Zone, had been mistakenly sent to Frankfurt for quarters, had found none, and now were going somewhere else—like the boll weevil in the old song, "just a-hunting for a home." They did not look undernourished.

Because of lack of fuel and cars, German highways show nothing like America's "Okie" travel which John Steinbeck's *Grapes of Wrath* made familiar to the world. Now and then one may encounter a German car fueled by charcoal, but civilian highway travel is virtually nonexistent.

Charmless *Autobahns* Express Efficiency

The wide, straight *autobahns* built by Hitler for military purposes express efficiency but lack charm. They do not follow "fleeting beauty." The most welcome sight that an American sees on one of them is a Red Cross station with hot coffee and doughnuts, especially in cold weather when frozen snow slicks the road.

In places the parkway between the double line of lanes was cemented over and the *autobahn* was thus converted into a runway for bombers and fighter planes.

Retreating Germans blew up all the bridges I saw on the *autobahns*, and it will be a long time before some are rebuilt. The roadbed was not laid to bear up under the heavy, swift traffic that Americans make. Lateral roads are not so good as in England.

In late April I spent a day in the Oden Wald (Odin's Woods) country near war-flattened Darmstadt.

Wild cherry trees were in bloom on the ridges. Strips of planted rape in full flower were as golden as buttercups. No peanuts or soy beans are raised in Germany; oil comes from poppy and rape seeds.

With me was a lieutenant colonel borrowed by the Military Government from the U. S. Department of Agriculture. We went first to a cooperative farm settlement established by the Nazis in 1933-1935. The date is on a granite monument in the center of the settlement, but swastika signs in the granite have been badly mutilated.

There are 28 farm families in the village settlement. They were picked from northern Germany, and all are Protestants—for in this land church differences are often almost as strong as color differences are in America. The land they settled on was a marsh before Hitler's government drained it and sold it to the farmers on a 54-year time basis. We spent an hour with one family.

This farmer and his fat wife had seven children. Two boys were killed in the war; another was then a prisoner in Russia. Their 50-acre farm was worked by four horses, though there were five tractors in the settlement. The farm had five cows, ten chickens, three ducks, two turkeys. Its average yield of grain during years of fertilizing was 35

bushels per acre; in 1945 the yield was 17 bushels per acre, and no more was expected in 1946.

Like hundreds of other farm folk we saw over the Oden Wald, these looked well fed and hearty. Inside the house we found cake-baking in progress on a big scale. The cake was to celebrate the youngest son's fourteenth birthday. He was graduating from the one-teacher village school, which had 32 pupils scattered from the first grade up to the last grade under high-school level.

In the kitchen I saw a bucket of eggs. The law allows each member of a family to eat the eggs from one hen; 60 eggs apiece must be turned in annually, at controlled price, from all others. German hens are supposed to average 98 eggs apiece annually. The chicken population in the United States Zone of Germany is about 70 percent of normal.

Up in this farmer's loft I saw bins of wheat, oats, and barley, though no commercial surplus. Grain elevators are comparatively rare in Germany; most of the grain is stored on farms.

Electric Lights, but No Bathroom

Like the dwellings of most German villages, the house had electric lights and running water in the kitchen. The toilet, however, was out in the stable, and human manure was spread with that of the animals.

"It is far better than the commercial manure," the farmer said.

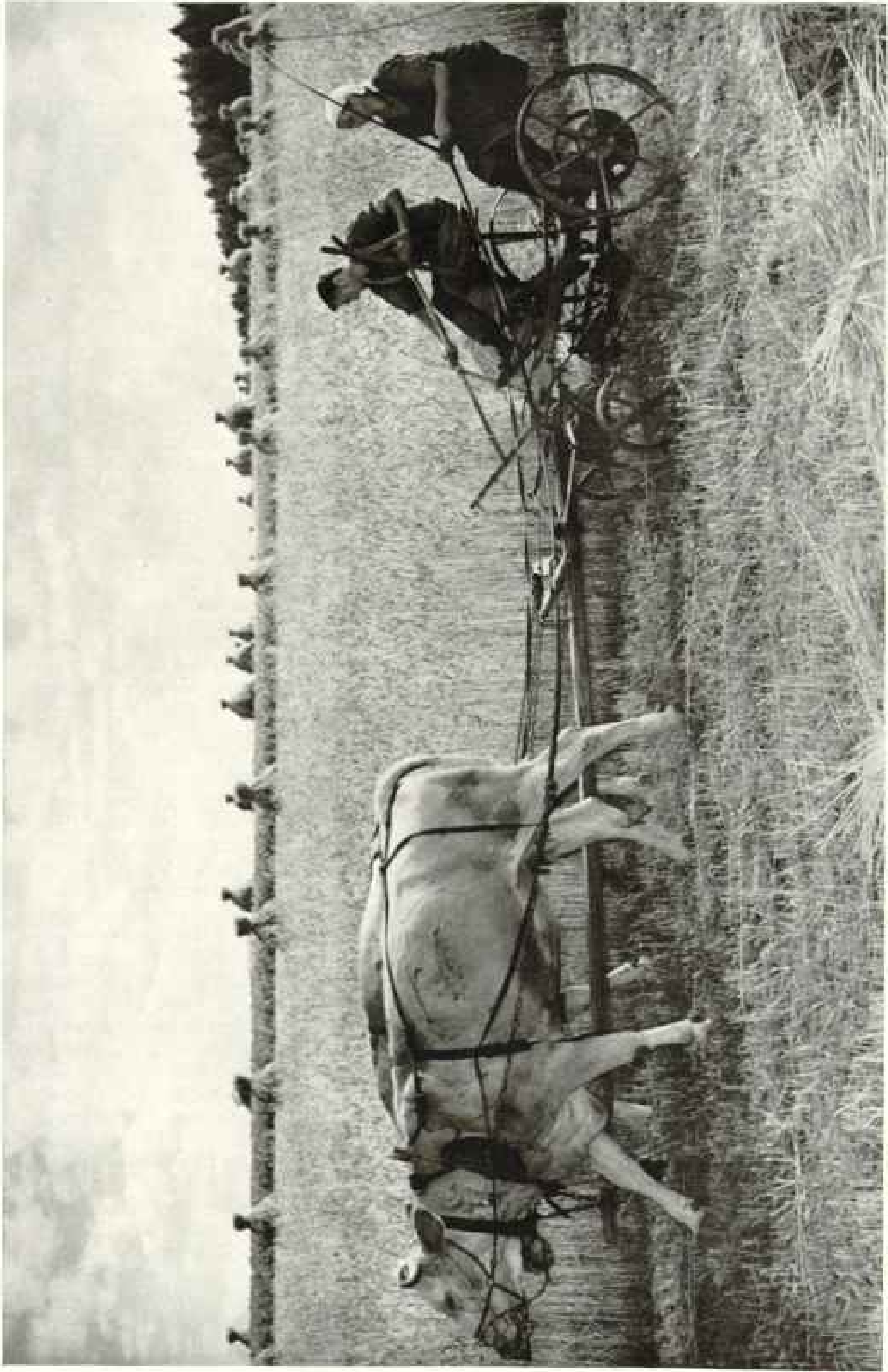
Tin tanks on horse-drawn wagons collect human manure in German cities and then scatter it on fields. A large block of farm land near Darmstadt is fertilized directly from sewage ditches supplied by the city.

In one of the two bedrooms of the farmhouse we visited were three beds; in the other, two beds. A daughter and her husband and baby lived with the family. In the small living room I saw no books. Out in the yard stood the big zinc tub that is taken into the kitchen for Saturday night baths.

Without my even hinting at the subject, this farmer assured me vehemently that the Nazis had tried to eject him for not joining their party. He "just stayed on." I don't know how he came to get a Nazi farm without being a Nazi himself.

In 1945 the crop yield throughout the United States Zone of Germany was 25 percent short of the 1939-44 average. Only a slight increase for 1946 could be expected. Implements were worn out and lacking; labor was short; but the missing essential that kept all farm production down was fertilizer.

During the war, nitrogen plants were



D. R. Army Signal Corps, official

Triple-purpose Cattle Help Defeated Germans in the Grim Struggle for Existence

The cows drawing this cooper through a wheat field also give milk. After they have grown too old to work they will be killed for beef. Postwar territorial changes cost Germany about 25 per cent of its agricultural production. Lack of manpower and bad weather conditions also have aggravated the food problem.



From Friedrich Jensch

Spared the Devastation of War, Old Heidelberg Remains a Citadel of Learning

Because of its cultural and historical importance and lack of major industry, the venerable university city was not bombed by the Allies. Retreating Germans destroyed the Neckar River pedestrian bridge at right and highway spans in the distance. In the university (foreground) Americans assembled an English-language library.



Bismarck, Apostle of Prussian Might, Surveys Magdeburg's Tumbled Ruins

Everywhere the author saw statues of the "Iron Chancellor," who advocated solving Germany's problems by "blood and iron." Some monuments escaped damage, as did the one standing in this devastated Prussian city. An important industrial center, Magdeburg held high priority as a target of Allied bombs.

converted to manufacture of explosives; some have been destroyed. Production of nitrate fertilizer in the U. S. Zone depends largely upon importation of ammonia from the French Zone and of coal from the British Zone. The French do not have enough coal to operate their own industries fully; the production of coal in the British Zone remains fractional.

Germany used to import some rock phosphate from Murmansk, Russia, and more from Africa, for conversion into fertilizer. There was no importation at all from the summer of 1943 to the spring of 1946.

Coal Is Energy for Europe's Industry

Germany has adequate deposits of potash, but again, the process of purifying the mined potash for fertilizer requires coal.

Coal, coal, coal. It is the energy of the European industrial world, except in areas like Norway where water power has been so plentifully transmuted into electricity.

The Military Government estimates for fertilizer production in all of Germany for 1946-1947 are, in percentages of what is required: 70 percent of nitrogen; 30 percent of phosphate; and an exportable surplus of potash. With sufficient fertilizer and some new farm machinery, Germany could produce enough potatoes to feed her population.

From the collective farm we went to a co-operative dairy on the edge of Darmstadt. It pasteurizes, separates, and otherwise processes the milk from an area about twenty miles square. The area includes about a hundred villages, and no farmer within it is supposed to sell milk to any other agency.

The dairy is managed by an Austrian, the former manager having been "denazified"—that is, he was put out of his job. "Denazification" in the Military Government sense means, first of all, removing an individual physically from his job.

Speaking excellent English, this Austrian

manager said that fully twenty percent of the milk due his dairy was being sold on the black market.

In 1944, 14,800 milk cows in the area provided nearly 90,000 quarts of milk a week. In 1946, 14,000 cows in the same area furnished some 48,600 quarts per week.

The shortage is not all due to black marketing, by any means. A high percentage of it is due to shortage of proteins in the stock feed—lack of fertilizer again.

In 1945, while the American Military Government was overseeing the area, the farmers sent in nearly 69,000 quarts of milk per week. Now the Military Government has turned supervision over to the local German government, which is very timid. It is supported by only a minority of citizens.

A farmer caught selling milk on the black market is fined ten, twenty, maybe thirty marks. The paper marks mean little to him. He can black-market a few gallons of milk and pay all the fines assessed.

The normal population of the area is around 250,000 people. But so many expellees had been brought in that, according to the Austrian manager, it had risen to 450,000. His figures on the number of immigrants may be too high, but there are tens of thousands. It is estimated that not more than 20 percent of them are good for any kind of labor.

This dairy sells all the milk that is sold legitimately in the area. Naturally it cannot provide milk for 200,000 extra people when the supply for the normal population has already been nearly halved. The American Government is furnishing large quantities of powdered milk to help offset the deficiency.

In the terribly devastated city of Darmstadt we stopped at public market tables on a square. A woman, enormously fat, sat behind the best-stocked table. It was loaded with cheeses—to be bought only with coupons, of course—which her family has been making for generations. She also had eggs to sell, for coupons. The per-capita allowance in December, 1945, was four eggs; in April, 1946, two.

As far as food goes, a farm family with two or three cows, a few chickens, and a few acres in wheat is better off than the wealthiest urban manufacturer.

Berlin Dreary, Desolate

Like most Americans in Germany, I wanted to get to Berlin. After an excellent supper in the dining car, at a cost of 25 cents in marks, and then a night of sleep on a hard bolster, I looked out the window and saw that our train was running through a forest country, mostly small timber.

The soil was sandy, like most of the forest land in Germany that I have seen, little of it worth cultivating. If this kind of ground is denuded, it blows away; and Berlin's soil would blow away, they say, like the dry lake next to Mexico City, if the surrounding forests were cut down.

My first view of Berlin was in an Army jeep driven by a 24-year-old German guide who had been a fighter pilot in the Luftwaffe.

Among other questions, I asked him about the Berlin newspapers. There are four or more, sponsored by the British, Russians, French, and Americans, respectively, besides various other papers. I asked him which he read.

"All," he replied.

"Which gives you the most facts of consequence?" I asked.

"The British," he answered. The Russian paper, he said, has too much propaganda, and the American paper is too lacking in realism.

We drove first through Grune Wald, an enormous park, in which much wood was being cut. Later I saw the denudation of the Tiergarten in the heart of the city. This famous park is now more naked of trees than of statues and is pitted with shell and bomb holes.

German Shows Hitler's Chancellery

What was the main part of the city is in the Soviet Zone, and in no other urban center have I seen such a dearth of human activity. In front of the ancient Castle, right in the midst of what was Berlin's busiest area, a woman and two men were pulling and pushing a cart loaded with freshly killed beef. They had the whole street to themselves.

My guide was more eager to show me Hitler's Chancellery than anything else. One can still walk through the gutted rooms of imitation marble that the Nazis erected for their Führer.

"Now," said the guide, with what seemed to me like reverence in his voice, "we come to the most important of all the rooms. Here was Hitler's desk. There by the fireplace Hitler held his most secret conferences. That door opens into his bedroom.

"The bunker out the window there is over the bombproof shelter in which he took last refuge. Next to it you see Ribbentrop's house, then the house of Hitler's mistress, Eva Braun. They say that his and her bodies were burned four yards from the bunker door. I don't know if this is true or not."

An Englishman and an American with cameras had joined us and wanted to take a picture of the bunker. "A Russian guard is



E. S. Arner Signal Corps, Official

Shortages of Fertilizer and Implements Trouble German Farmers

This man spreads liquid manure by hand in a field near Bamberg, in Upper Franconia. During the war, nitrogen plants made explosives; some were destroyed. Given sufficient fertilizer and tools, says the author, Germany could produce enough potatoes to feed her population. (page 78).



AP Photo Press Ass'n.

These GIs Literally Make Hay while the Sun Shines

On occupation duty, they use their spare time attending an agricultural college at Triesdorf, in Middle Franconia. Here they cut and rake hay on the 550-acre school farm. The Army sponsors the courses, with both American and German instructors.

inside," the guide said. "It is against orders to take his picture."

The camera hounds approached the bunker for a nearer view. I went with them. A guard came out as the cameras were raised. A shake of his head put them back in their cases. A sentry at the entrance of the Chancellery had incensed my guide, though he remained silent, by demanding his identification card. This Russian spoke sharp German.

Near the Reichstag, which the Nazis burned in order to destroy the German Parliament, and overlooking the great avenue which cuts through the Tiergarten, the Russians have erected their monument—a mighty soldier, with columns of inscriptions on either side. At the soldier's feet and at the bases of the columns are many fresh wreaths. A lone Russian soldier, fully armed, stands guard.

The monument was not so impressive to me as the one the Russians erected in Vienna. I wonder how many years a Russian man

of arms will stand guard here in Berlin and how long the monument will last after there are no guards to protect it.

The United States Zone of Berlin, the southwestern residential part of the city, embraces the least-damaged business area. The British Zone, which includes the Hitler-built Olympic Stadium surrounded by hideous beer-hall-looking statues, has assumed a casual and well-managed appearance. The French, who can always be depended upon for a fine gesture, have the Tricolor flying above the soaring Column of Victory built to celebrate their defeat 75 years ago.

Not one of the great hotels in which Berlin used to entertain the world is left.

Nowhere in Berlin did I see such crowds of people walking the streets as one sees in Frankfurt and Munich in the United States Zone and Hamburg in the British Zone. The shops that are left seem to have a limitless supply of bread and eyeglasses; surely no



William Wainstein from Black Star

It's "Shoulder Skis" Instead of "Shoulder Arms" for These Americans

Members of an Army team, they pass a rest-camp hotel on their way to the slopes near Garmisch-Partenkirchen.



European

Russians Admire Bears—Even Those in Cages

Squatting amiably behind bars in the Vienna zoo, Bruin is a far cry from Kipling's symbol of Russian might, "the bear that walks like a man." Soviet Army soldiers are enthusiastic visitors to the zoo. Although Vienna is in the Soviet Zone, the city is under 4-power government.

other country in the world supports so many optical shops as Germany.

The visiting shopper is offered many rag dogs, indifferent pictures, and beautiful as well as ugly oddities in glass and china, along with bronze commonplaces. In one shop in which I asked the price of a small carving of whalebone, the reply came, "Three hundred marks [\$30], or two packages of cigarettes."

A young German teaching his language to soldiers at a Negro Red Cross club asked me to recommend a book that would reveal "the right America." I went with him to the library shelves and pointed out Benjamin Franklin's autobiography, two lives of Thomas Jefferson, a history of America by Nevins and Commager.

Germans Cry on American Shoulders

Within about two minutes this young German was telling me how the Russians had burned up his money during the Siege of Berlin, and how therefore he could not go to the University of Berlin. A German woman, who claims she refused to work under Goebbels and who is now librarian in a Red Cross club, told me in tragic tones how she and her family had lost all in the Siege of Berlin.

Both of these people cried on my shoulder without any invitation, and neither seemed to have the slightest realization of the fact that they and their people have merely reaped what the Germans sowed.

An interpreter in criminal investigation told me that most thievery of Army supplies in Berlin is being done by boys from 12 to 15 years old. To combat this the Russians did a quick job in re-establishing schools. They did not bother to wait to get new textbooks; they ordered teachers to use whatever textbooks were available, and told the teachers that any one of them caught teaching German nationalism or race prejudice would be immediately shot.

Some of the economic policies of the American Military Government look odd in divided Berlin. For instance, the order against trading in I. G. Farbenindustrie stock can be enforced only in the United States Zone. Any German in the U. S. section can walk into another zone and sell or buy Farben stock.

GI Attitude Toward Germans Varies

What is the GI attitude toward the Germans? It is as diverse as human attitudes usually are toward anything.



U. S. Army Signal Corps, Official

All They Own Is on Their Backs

Two Russians, liberated from the Nazis who held them as slaves, arrive at a displaced-persons camp near Krefeld to await transportation back to the U. S. S. R. Their clothes were assembled from many sources; the man at left wears GI shoes and British Army leggings.

One night in Berlin a battle-experienced sergeant told me that only the preceding evening two fresh recruits from the United States, both feeling pretty high, stopped him on the street and said, "Come on. Let's give some of these blankety Krauts hell. The way to treat 'em is to be rough with 'em, and we're going to be rough."

The sergeant didn't go with them. "I've seen all the roughness I want to see for a long time," he told me. "At one bridgehead in one day I saw my company of 185 men reduced to 78. Some of these recruits seem to think that they have to be rough now to make up for the war they missed."

A neat, soldierly looking, battle-proven

driver of a jeep carrying me across miles of streets let himself out on both the Germans and the boyish recruits now taking over the Army of Occupation.

"They want to be soft," he said. "They soak up German flattery and the German whine for sympathy like sponges soaking up rain water. It's pitiful. I haven't met a German yet whose word I would trust.

"Not long ago I saw a German woman and her little girl on the street. The little girl asked me for candy. I gave her a bar. My mother taught German in an Oklahoma school, and she taught me the language. I understood the little girl's words of thanks. As I walked away, I also understood the German woman's words.

"'Yes, thank the American swine,' she said, 'and remember they will not always be our conquerors.'

"Before I thought, I slapped that woman's mouth. If these recruits had some conception of reality, they wouldn't be so soft."

I was happy to leave

Berlin. I remember the women picking up rubble by hand, one piece of brick at a time, and loading the pieces in a truck. I remember a lawyer friend of mine in the Military Government telling me how officers of high rank came to him for advice on how to invest their black-market marks in German securities.

I remember the general purposelessness that so many men of the Army of Occupation seem to feel as they perform their assigned functions in the far-spread American sector of this vast, sprawling, ruined, and wretched capital of Germany.

Bremen was cozy after Berlin. The Americans now bring most of their freight and personnel into Germany through Bremen and

Bremerhaven. These ports are in the British Zone, and I heard numerous comments on how well the two nations get along together. As I write, first steps have already been taken for the economic unification of the two zones.

A Ride in Himmler's Limousine

My first experience in Bremen was being transported in Himmler's bulletproof car, the glass an inch thick, the body as long as an eight-mule team. The German driver seemed to think that he himself was Himmler. I had no sense of being in danger from reckless driving, but his arrogance toward everybody and everything in the streets riled me. Recent development of self-assurance in Germans toward Americans is very perceptible.

When I finally boarded the military train for Paris, I had a great gladness in my heart, as much because I was leaving Germany as because I was coming home.

When daylight came and I looked out the curtainless window of my compartment, I knew that we were no longer in Germany. It was not alone from knowledge of geography that I knew. It was from something of lightness and brightness in the air, the grace with which fields flowed into woodlands.

The patches of forest alongside the railroad had been planted by man, but the trees seemed free and not regimented, as all the trees I have looked out upon in Germany seem.

After land has been lived on, cultivated, built upon, warred, walked, and loved over by a people for a thousand years and more, their character and tastes pass into it.

I remember the first skylark I heard in Germany. It was spring and I was at Nord-



Silken Threads Picture Russia's "Man of Steel"

Generalissimo Stalin's likeness appears on the cylinder of this silk loom at Gera, Thuringia. The textile factory is busy filling a Soviet general's order for 200 full-length portraits of his chief. A portion of the plant's output goes to Russian reparations; the rest is for domestic use.

holz, not far from the North Sea. I was walking across a piece of wasteland covered with a kind of salt grass. I heard a sound that I have gladly listened to many times in England. I could not believe my ears. Then I saw a skylark rising while it trilled down the cascade of silver that so many English poets have made more lovely by their interpretations of it.

This skylark and its companions, for there were many larks rising, descending, skimming, and singing, seemed to me like aliens there in Germany. They belong there, I know, as the grass and sky belong; but German song has not made the skylark an integral part of the German landscape as English song has made



Hans Hartman from Black Star

A Back Yard Helps Americans Make Themselves at Home Abroad

With their children, two American wives of Army officers take the sun outside their quarters in Wiesbaden. Washing hangs on the line overhead, and the husbands watch from a balcony. During the first 17 months after V-E Day more than 18,000 dependents of American military personnel were shipped overseas. Of these, 9,500 went to United States Zones in Germany and Austria.

this lovely bird a part of English landscape.

The train brought us to Paris in the fresh morning, and during the few days I stayed there the faces of the people remained a perpetual benediction. The mobility of the facial features and a kind of brightness given by hope seemed to belong to another world from Germany, where for months I saw on nearly all human countenances only heaviness, secretiveness, depression, surliness, and often hate.

Even if they had nothing but colored water to sip, the Parisians sat at their boulevard tables and sipped with spirit.

Many of the mademoiselles I saw had clothes of lesser quality than some German frauleins wear, but they wore them with a brighter grace. I remember the lilt with which

a middle-aged Frenchwoman at headquarters mess took my raincoat for checking. There is as much difference between the general run of frauleins in Germany and the general run of mademoiselles in France as there is between a German figure of Bismarck and a French figure of Joan of Arc.

I returned by way of England and felt free again. What startled and struck me repeatedly when I got to New York was color. Color in the shop windows, color in lights, color in clothes, especially women's, color on so many cars and other manufactured objects, color in voices and human movement.

The color intensified the profound and almost unrelieved grayness that in some ways seems to me to sum up Germany today.

Canada's Caribou Eskimos

BY DONALD B. MARSH

Anglican Archdeacon of Aklavik, Northwest Territories, Canada

With Illustrations from Photographs by the Author

THEY call themselves Padlermiut, People of the Willow Thicket. White men have dubbed them Caribou Eskimos, and with good reason.

Fifty years ago these people were dependent upon one animal, the caribou, for life itself. Men, women, and children alike dressed in skins of caribou, which they hunted with bows and arrows. They fed on caribou meat, mainly raw and frozen. Caribou bones and antlers were their tools. Caribou hides covered their summer tents.

Though they lived on Canada's Northern Plains, only slightly west of Hudson Bay, theirs was an inland culture (map, page 91). Unique among Eskimos, they possessed no traditions of the sea. They spoke a language like that used in Greenland, yet they had no lore about the hunting of aquatic mammals, Greenland's means of sustaining life. Seal, walrus, and polar bear were unknown to many of them. Salt water and tides were mysteries.

Today the Padlermiut depend as much on traders as on caribou. They hunt with guns instead of bows. Within a lifetime they have emerged from the Stone Age; the high-pressure existence of modern times stares them in the face.

20 Years Among the Igloos

Before their primitive customs disappear entirely, I should like to picture these Padlermiut, southernmost of four Caribou Eskimo tribes, from a missionary's vantage point.

In summer I have shared their smoky caribou-skin tents; in winter, their freezing snow-block igloos. For 20 years I have watched them struggle with the elements and with advancing civilization.

When I first set sail from Churchill, seat of a small Church of England mission, I scarcely knew what to expect at Eskimo Point, my destination, 160 miles north on Hudson Bay.

Even then, some twenty years ago, changes had already overtaken the Padlermiut. For one thing, those I met were encamped beside the sea.

As the anchor dropped, I saw against a background of conical caribou-skin tents a group of old men with long flowing hair and wrinkled, seamed, but smiling faces. All were clad in caribou skins, many of which were so

stained with dirt and grease as to look the color of the earth.

They stooped slightly forward as they walked, as if to help themselves along; yet theirs was the dignity and poise of men who are sure of themselves.

The women had straggly, matted hair and greasy skin clothes, but they too greeted me with friendly smiles. With a shrug of the shoulders as they shook hands, mothers hitched the babies they carried on their backs so that the young generation might peep at me over the maternal shoulder and perhaps shake hands too.

Babies Wary of Strangers

Almost all the babies set up a howl on viewing the stranger, for they were not used to white men—especially one with glasses. But one little copper-colored maid shyly regarded me with big brown eyes and at last stretched out a chubby hand. After touching mine, she withdrew like a flash into the safety of her pouch, but not before I saw the little naked body so close to the bare back of the mother and thought how nice and warm such a nest must be in the rigors of winter.

The young men and lads were grouped by themselves, and their appearance gave me a shock. Surely these were not Eskimos! Almost without exception they were dressed in sweaters, many with encircling bands of color, while the crowns of their heads were close-cropped, tonsure fashion.

Sweaters and pants alike were store goods. Only on their feet did they wear the traditional sealskin or caribou-skin boots of the Eskimos. They looked badly out of place and appeared self-conscious in their finery.

So this was one of the changes coming to the North! Later I was to learn how prophetic it was of the startling transformation taking place in the lives of these Eskimos.

Even in those days the Caribou Eskimos had learned to drink tea, which they now consume in enormous quantities. They bought a brand put up in lead-covered packages so that the metal might be melted down in frying pans to make bullets.

Fire sticks, flints, and steels were still to be found in their tool chests. I often marveled at the patience of men who sat all day splitting matches to make them go twice as far.



Fire Cooks on a Rock on Snow Bench; Smoke Climbs a Snow Chimney

Inside the porch of her igloo, the Eskimo wife boils tea, first having placed the leaves in the water when it was cold (page 91). She has repaired her imported pipe with a willow stem.

One old man had a block of iron which he was shaping into a harpoon head with the aid of a toothless file. His task already had taken two days; he expected to devote three more to it. He was in no hurry; what did time mean in the Arctic? He expected to hunt seals so that he might have blubber in which to dip his frozen raw caribou meat the next winter. He was learning the ways of shoreline Eskimos.

An Igloo's Furnace—One Candle

He had not yet learned, however, to use the seal-blubber lamp, trade-mark of Eskimos all over the North. Instead, he had a lamp fed by caribou fat in which a heap of dried moss served as a wick. It gave a candlelike flame, a feeble warmth to anything suspended just above it.

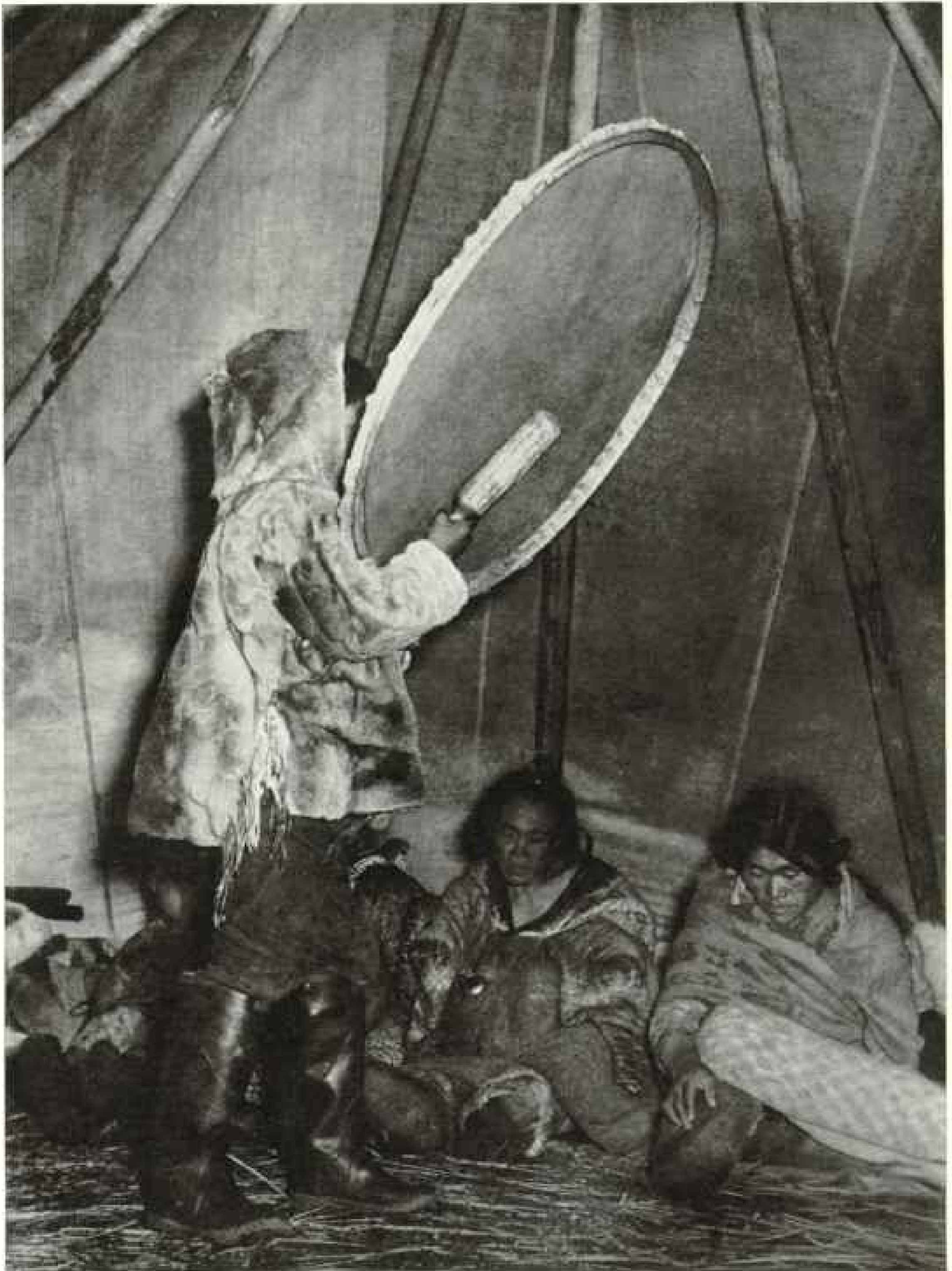
Characteristically, its owner walked with a perpetual stoop, for during winter he and his fellows huddle for warmth about these flickering flames.

In winter the temperature within the igloos fell as low as 30 degrees below zero. Though they were sealed tight against polar winds, these snow houses were almost as cold as outdoors.

A big igloo was 28 feet in diameter and 12 feet or more in height. Tent poles from the summer tepees sometimes served as rafters. Caribou skins from the tents were often used for roofing.

Neither tent nor igloo has changed much in the last 20 years (Plates VI, VII, VIII). The struggle for food—caribou and fish—goes on, though with improved weapons and tackle.

Food, not unnaturally, dominates the



A Drum Dancer Shod in Jungle Rubber Beats the Arctic's Barbaric Tom-tom

In his nocturnal rituals the Caribou Eskimo sways like a chained elephant. At times as he sings his own private song he howls and groans, as if in a trance. His one-face drum consists of a skin stretched over a hoop. Usually he beats the vibrant rim rather than the skin. The women may chant, but drums are for men only (p. 96).



A Sledder in Tire Trouble Simply Squirts Retreads on Runners

First he shod his sled with peat mud; now he needs a slick coating of ice. To get it, he wets a bearskin and moistens the peat. Freezing, the ice tire resists drag, but it must be recapped frequently. On hard journeys it is usually necessary to re-tire at noon. For a steady supply of tepid water, some sled drivers carry thermos flasks.

thoughts of the Padlermiut. Quite literally, they often do not know where the next meal is coming from.

From the flesh of a single animal, the caribou, they contrive a surprising variety in diet. They eat steaks frozen, raw, cooked, or dried. Boiled tongue they preserve frozen for long periods. Marrow from leg bones is served raw, cooked, or preserved.

Horns are sometimes eaten when in the velvet, and rendered back fat stuffed into caribou intestines makes a sausagelike delicacy. Boiled head is another prime delicacy, but the favorite is fat breast meat. At one time liver, head, and lungs were taboo, even to the

dogs, but now only the lungs go uneaten.

Speaking of meat reminds me of a question put to me by an old Eskimo friend.

"How do you suppose," he asked, "the Eskimos in olden times used to cut their meat in the middle of winter before they had tools of steel or iron?"

Knowing the granite hardness of caribou meat at 40 or 50 degrees below zero, I could only suggest that they must have battered it with stones, but I didn't sound or feel very convinced.

The old man laughed and gave me the answer, which is so simple that I wondered I had not thought of it.

At their home camp the Eskimos kept open a hole in the ice of a lake, building an igloo over it to prevent its freezing too solidly. Into the lake water they lowered a raw, frozen carcass and left it to thaw, overnight if necessary. Hauled to the surface by plaited sinew ropes next morning, the meat could easily be cut with stone knives.

When they have caribou the Padlermiut eat one big feast of cooked meat each day. As the meal is prepared, word is sent to all the igloos, "Come and get it." Men and women eat in separate quarters.

For Cutlery, Diners Have an Ax

Shall we, say, join the men? For an appetizer, a haunch of frozen raw caribou, together with an ax, is placed upon a snow bench (Plate II). Anyone really hungry may chop off a portion. Your finicky eater, however, waits for the heaping, steaming dish of boiled meat.

Your host invites the guests to fall to. For politeness' sake, there is some show of reluc-

tance. Then, eyes lighting up, each man grabs his favorite portion. Sinking his teeth in one end, he shears off the remainder with one thrust of a short butcher knife. The stroke, made up or down, just misses the diner's nose and chin.

Sinew, cartilage, fat, or flesh—all are grist for powerful jaws. No one talks, but silence does not reign!

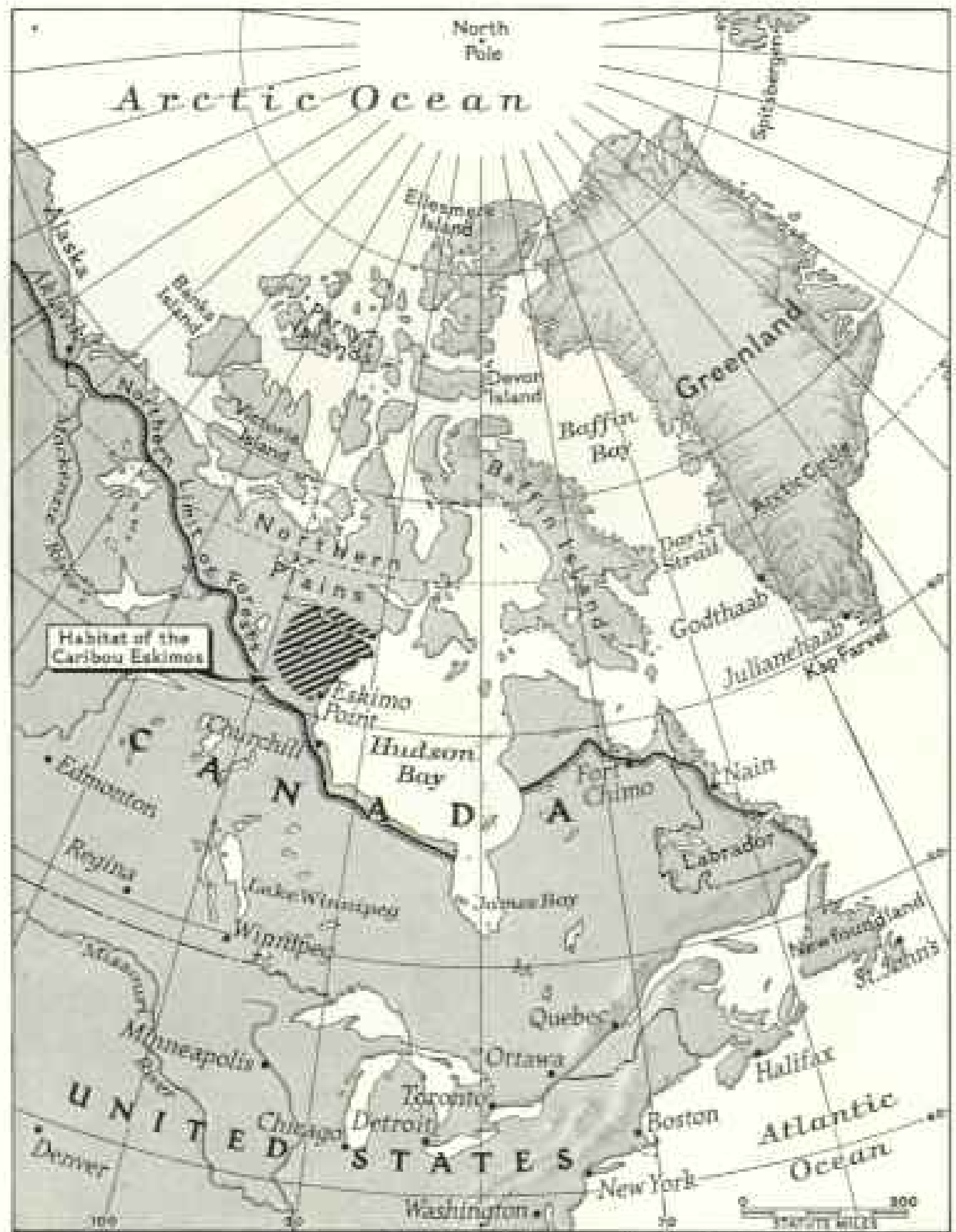
Eat Marrow from Bones

At last the flesh is devoured. Now the men crack the bones and extract the marrow with specially shaped bone implements.

It is time for a beverage. Formerly the standard drink was the water in which the meat had been boiled. Today tea reigns supreme, black, strong, and bitter. Handfuls are placed in ice-cold water, which is then brought to a boil and kept boiling for some time. Used leaves are stored for times of scarcity.

In times of abundance a man may be invited to a number of such banquets in rapid succession. I saw one man stagger out of his fourth en route to his fifth. As he had not known the other meals were to follow, he had done his utmost at every one to see that nothing was wasted. I was told that this glutton, making a visit to Churchill and dining about with similar abandon, had had to slit his coat front and back before he completed his rounds.

Women, of course, do the cooking. If the igloo is small, one woman does all the kitchen work. In large camps, at communal meals, one woman generally cooks for the men and another prepares meals for her sisters (Color Plate VII).



Drawn by Theodora Price and Irvin E. Aldman

Frost-bitten and Treeless Is the Caribou Eskimos' Land

West of Hudson Bay dwell the Padlermiut, an isolated people just emerging from the Stone Age. They speak the common Eskimo tongue and cherish centuries-old folklore. Unlike their kinsmen from Alaska to Greenland, they do not hunt walrus and seal, but depend on the migrating caribou herds.

Nowadays they boil the meat in a gasoline drum or a washtub. In the old days they used huge stone pots so polished that they resembled marble.

Family Dinner Platter an Heirloom

The family dinner platter is a wooden tray four feet long, a foot wide, and two inches deep. Carved from a tree trunk, such a tray is a valued possession, an heirloom to be handed down from generation to generation, except that in case of death it may be buried with its owner for use in the next world.

Since the Padlermiut live on the Northern Plains, where few trees except stunted wil-



Spyglass Sights the Herd; Arms Wigwag, "Hunters, Come and Get Your Caribou Meat!"

Twice a year the caribou slowly migrate, north in spring, south in autumn. If the Eskimos catch the herd, there is feast; if they miss, famine. A can beside the sled holds kerosene for an oil stove.

lows grow, it is surprising that they find enough fuel to boil vast quantities of meat. In winter, when snow covers the landscape, not so much as a twig may be in sight. Yet fuel is there.

It is the lot of a camp drudge, usually an unmarried woman or a widow, to scrape away the snow from patches of reindeer moss or from willow thickets lining a creek's banks, where she cuts 10-inch twigs or even shorter ones. For all her pains she has only a sled load by evening (Plate IV).

Family Hearth on a Snow Platform

Hauling the fuel to her igloo, she carries it down a flight of steps into a long, low, tunnel-like porch.

Near the door leading into the igloo proper the porch widens to accommodate a snow platform. On this bench are two or three flat rocks—the family hearth (page 88).

The sight of a fire roaring on a snow bench within snow walls has never failed to astonish

me. One might imagine that the flames fed on the snow itself. Smoke swirls around the porch, blackening the cook's face and reddening her eyes. Then, drifting upward, the fumes flow into a snow chimney.

Handful by handful, twigs are tossed to the insatiable fire. In two to three hours the meat is done.

In early times food was common property. If there was meat in camp, no one was allowed to go hungry. When caribou were scarce, the successful hunter gave away most of his kill, keeping the smallest share. It made him happy to boast, "To me has fallen the privilege of providing for the camp."

They Love to Pay High Prices

Today the rule holds good only as it applies to native food. White man's food obeys white man's laws. Flour, lard, and tea bought at the store in exchange for fox furs are private property, not given away lightly.

As a shopper, your Caribou Eskimo is a

realist. His standard does not call for marked prices, unchanging from day to day. If his need is great, he is eager to pay the highest price.

For example, one Eskimo offered a trader seven fox furs for his only safety razor. The Eskimo was keenly disappointed when the trader, not wanting to grow a beard, refused the extravagant offer.

Another Eskimo went to a trader to buy a butcher knife for use as a snow cutter.

"I want to give you three foxes for this knife," he said. "I lost many foxes this winter because I couldn't travel. That happened because I couldn't build an igloo without a snow knife."

Why the trader refused to accept more than the standard price completely baffled his customer.

This philosophy of prices shows equally curious instances of undervaluation, or seeming lack of gratitude.

Many a policeman or trader on leaving the Northern Plains has given away his wardrobe. To one Eskimo, recipient of a Mountie's magnificent gift, I remarked, "Don't you think it was pretty nice of him to give these things to you?"

"No," replied the Eskimo, "if the policeman had had any use for them he wouldn't have given them to me."

Practical values gained by bitter personal experience are learned in the Eskimo's childhood. In a large part he studies from Mother Nature.

Bow-and-arrow games teach the boy to be a hunter. Using frozen mud and water, he learns how to smooth his sled runners until they glide almost without friction (page 90). With her dolls, the girl learns to be a mother.

Frowns, Not Spanks, Rule Children

Eskimo children enjoy a deep parental love. They seldom have to be spanked or scolded; the sign of disapproval on Father's or Mother's face is too marked to be ignored. Children assist in the daily routine of camp and trail. Like boys and girls everywhere, they love games. Adopted wards, it must be admitted, are sometimes forced into drudgery.

Reading, writing, and arithmetic are comparative newcomers to the Eskimos' curriculum of life. They owe these benefits to the church (Plate VIII).

Some years ago the Reverend E. J. Peck, who lived 40 years among the Baffin Islanders, adapted the Cree Indian characters to the Eskimo tongue.

Now most of the Eskimos in the eastern Arctic can read their own language. At the

mission the youngsters learn English, a good language to know when they later deal with traders.

For history, however, the Eskimos have never needed the written word. A marvelous tribal memory serves them faithfully. Across 3,000 miles of the Arctic the centuries-old folklore is almost word for word the same, even among the most isolated tribes.

Taboo—the Tribe's Unwritten Law

Rigid preservation of those customs which control the life of every member of the community is accomplished by strict taboos. There are thousands of these unwritten laws, both tribal and personal. One decrees that no woman in her fertile years may eat eggs.

I recall vividly the devastating results of one broken taboo.

A wolf hunter, having wounded his prey with a shot, killed it with an ax. In doing so he broke one of the wolf's bones—violation of a rigid taboo. His death followed—the direct result, his fellows said, of the broken law.

As a compensation, the widow was compelled to abstain from certain foods for a long time. I found her starving. Her three-month-old child, whom she apparently valued less than the menacing words of her tribe's medicine man, was nought but skin and bones. Fed by bottle at the mission, the baby was restored to health.

An *angakok*—medicine man, shaman, or conjuror—may be either man or woman, wizard or witch. Each has his or her own familiar spirit for consultation in weird and fearsome ritual. Usually the *angakok* is called upon to attend a sick person. His fee is fixed according to his success.

Some witch doctors have performed such unbelievable feats that they have acquired a virtual life or death power over their bewitched, superstitious fellows. Various Eskimos have testified to instances of *angakoks* ordering men to commit suicide and gaining strict obedience.

Such a powerful wizard lived among the inlanders of the Northern Plains. His fellows swear they have seen him make walrus tusks grow from his jaws.

Buried Alive in a Frozen Lake

At a trial of strength, undergone at his initiation into shamanism, he was reported to have had himself buried alive in the freezing water of a deep lake. Three days later he was chopped out and, the Eskimos said, was none the worse.

A not uncommon claim among Eskimo



Big Game Fills the Northern Plains. Sled Dogs Sniff the Air, Whine with Eagerness, and Strain at Harness.

No need for a whip his the hunter. His dogs, pursuing the herd, stop only when he tosses out the sled's antler anchor. Here they pause while he takes a shot. With the rifle's crack, dogs resume the chase, and the hunter must fling himself on his sled if he is not to be left. Caribou range these Northern Plains by the hundreds of thousands. When rivers are open, they are trapped and speared by canoe-men.



She Cleans Her Window with a Knife—the Pane Is Ice!

To make an igloo window, choose a block of ice and set it in a snow wall. Then plane the six-inch thickness down to half an inch. On bright days you will have more than enough light to read by. This girl scrapes obscuring frost.



She Sews Skin Socks with Steel Needle and Thimble

Though it is winter, her shelter is a skin tent. Her people can neglect wind-free igloos because they live far inland near more abundant firewood. Light shines, not from the lantern, but from an ice window set in a willow frame.



Jabbing Spears at a Spinning Target, They Risk Wounds Gambling for Prizes

A caribou antler hangs on a cord. As it revolves, contestants aim at the hole in its center. The first to pierce it wins a fox fur, perhaps even a rifle; then he must put up a prize for the next round. This inning has resulted in a draw, two spears having pierced the bull's-eye. Sitting in a circle, the players are exposed to accidents. Some wear mittens as armor.

medicine men is the ability to tell what is happening many miles away.

The wearing of charms comes as naturally to the Eskimo as his belief in shamans. I have seen some so smothered in tokens that they appeared to be in rags. Little bags may contain a fish heart, a length of sealskin sewn on to give strength, a weasel skin to impart cunning as a hunter, or a strip of cloth as a token from a well-wisher.

The Eskimo's primitive qualities are best seen at a drum dance (page 89). There he really lets himself go back to barbarism.

Darkness and Drum Beats

Let us go and watch one. Though you have received your invitation early in the evening, it is impolite to rush. Delay an hour or so. After all, you have the long Arctic night in which to watch the dance.

Now the sun has sunk; darkness suspends the taboo against drum beating. Soon the reverberating booms of the drum pulse through the night.

For the dance, two conical skin tents are joined to make one roomy tribal dance hall. Be careful how you thread your way within its Stygian depths. Men loll around in a

rough outer circle. Women squat shoulder to shoulder in a tighter inner ring.

Singing a monotonous chant, the women keep time by swaying to and fro. Many close their eyes as if in a trance.

That man now stepping into the women's circle is the drummer. He picks up a stumpy clublike stick and the huge caribou-skin drum. Gently he taps the edge of the drum. Now he looks up as if trying to remember his song.

Louder sing the women.

The drummer revolves his instrument, striking first one side and then the other. His body sways rhythmically. Then his knees bend until his caribou-skin coattails sweep the ground. With short steps he hops around the ring. A candle's flickering flame throws his shadow in grotesque shapes and highlights the onlookers' faces, grimly intense.

As the song dies away, the drummer's wife softly starts another. Soon he is once more in full swing.

You close your eyes and visualize the tomtoms of Africa.

This is 1947. The Eskimos' clothes have changed, their food habits have changed, but this is the dance they have danced for centuries. This is the Stone Age.

Canada's Caribou Eskimos



A Woman in Caribou Skins and Brass Brow Band Smokes Cranberry-leaf "Tobacco"

One of Canada's few hundred Caribou Eskimos, she lives on the Northern Plains west of Hudson Bay. Unlike seal-hunting coastal tribes, her people live inland and prey on caribou. Without them they would starve.



© National Geographic Society

Illustrations by Donald B. MacIsaac

In Winter, When Caribou Are Scarce, Fishing Saves the People from Famine

This woman, crouching for hours above a lake, drops her line into the community water hole. Despite her "overcoat," hair outside, she needs a wind shelter of snow blocks. Her reel is willow, line a sinew, and hook a nail.

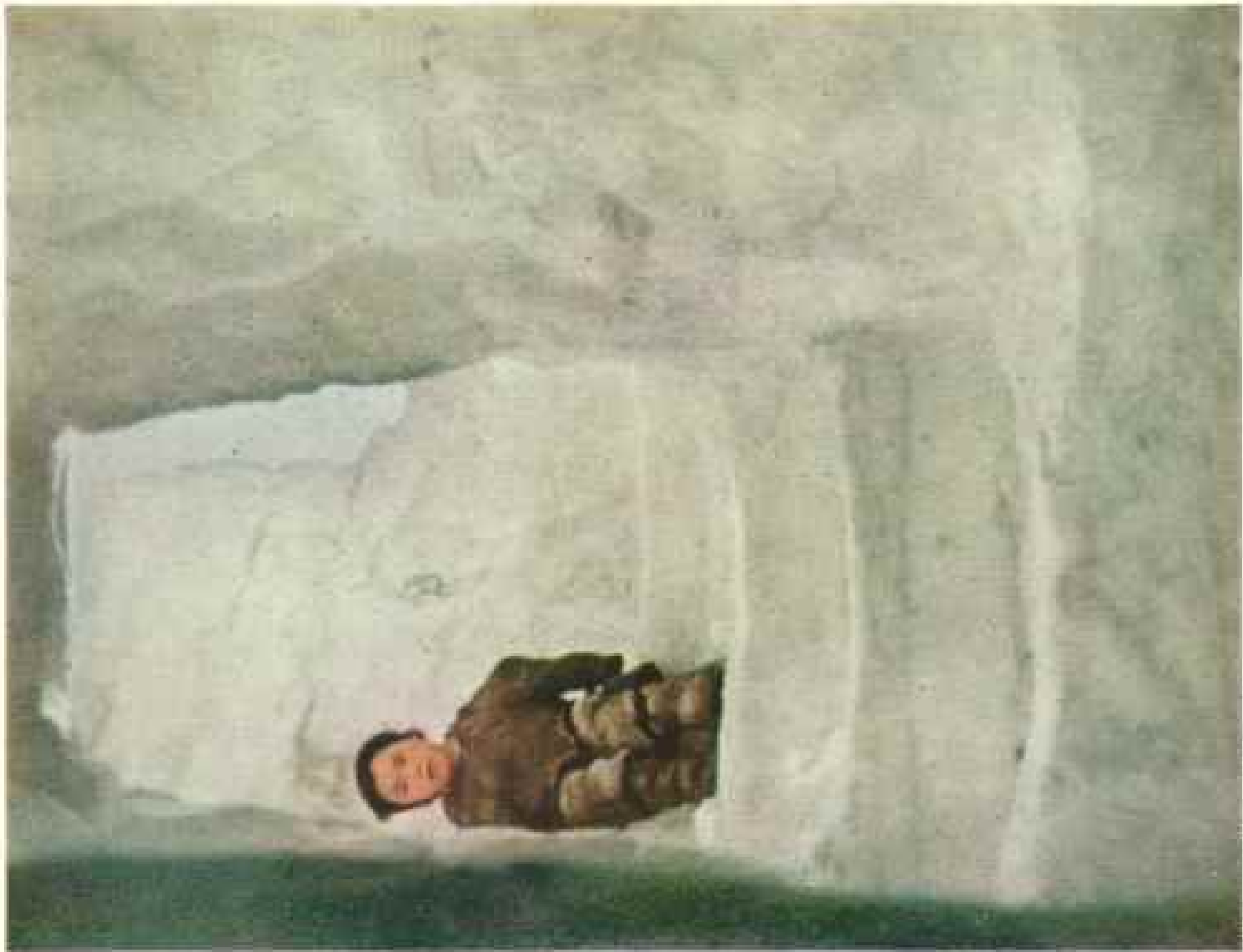


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Kulchranis by Donald R. Marsh

Hunters Chop a Frozen Caribou and Devour It Uncooked. Indians Called These Northern Tribes Eskimos, "Eaters of Raw Flesh"

In autumn migrating herds fill the landscape. At river crossings, stone fences, and pitfalls they are trapped. Much of their flesh, fat and tasty, is cached for winter. These men drink tea, strong and bitter, in succession, ate until he had to slit his clothes.



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A Child of the North Rests on the Steps of Her Snow Home

Lacking lumber, Caribou Eskimos use snow. In autumn this doorway was at ground level. When winter piled up layers of snow, the passage had to be excavated and steps cut. Now the entrance resembles a basement apartment's.



Illustration by Donald B. Marsh

In Her Snow-walled Igloo a Widow Sews with Caribou Sinew

She sits on a snow platform covered with skins—her bed, table, and chair. For light she has a caribou-fat lamp, and perhaps a window of thin ice. Nowadays her needle is steel; it used to be caribou bone.



© National Geographic Society

Kinshamma by Donald B. Marsh

Icy, Timberless Wastes Hold Fuel for Those Who Know Where to Dig Reindeer Moss

From mittens to boots, this wife wears caribou skins; their vertical stripes distinguish her tribe, the Padlermitt (People of the Willow Thicket). All day long she has searched for fuel beneath the snow. By evening she has only a sled load. Other fuel hunters gather twigs from snow-covered willow patches.

Canada's Caribou Eskimos



A 12-year-old Architect Builds a Playhouse with Butcher Knife and Snow

Keenoogark, having dug to earth, builds upward and inward with the excavated material. Capping the dome, she will seal herself in. By cutting a way out, she will fashion a door. Thus play prepares her for life's work.



© National Geographic Society

Eskimos by Donald B. Mason

Her Igloo Melting, Ivrank Peers Out of Her Roof and Wonders about Spring Moving Day

For a while she will cover the gap with caribou skins. If rains wash holes in walls, she will plug them with old boots. Later she will erect a tent (Plate VII). Her walls are stained with lamp soot.



© National Geographic Society

Eskimos Can Afford to Laugh at the White Man's Housing Shortage. In an Hour They Can Build a Snow Home Lasting All Winter

It is cold inside—perhaps 30 below zero—but wind does not penetrate. Smoke drifts from the porch and snow chimney (left), but the tin stovepipe (right) is used sparingly lest it melt the roof. Fire twigs, furs, harness, and boxes clutter the walls. A long-handled scoop is used for clearing ice from fishing holes.

Illustration by Donald H. Martin



(1) National Geographic Society

Winter's Lean Days Are Ended; Women Prepare Spring's Daily Feast of Caribou Heads, an Esteemed Delicacy

Soon the men will noisily cram the best pieces into their mouths, slicing off the portions they cannot chew. Women dine separately. Here a skin tent has replaced a melted igloo. Cooking is done in the big oil drum. Trader's goods litter the ground. Shawls and dresses are imports.

Illustrations by Donald B. Moran



Scrapbooks, Gifts of Canadian Children, Brighten a Dull Day under Snow

Mary Ollibuck, the mother, reads a prayer book printed in Eskimo. Her children learn English as well. Baby rides a pouch in the back of mamma's frock. Some Padlermiut children bear evidence of white blood.



© Nathaniel Osgood & Co. Society

Kodachromes by Donald B. Macell

Snow-blind, a Father of Three Children Wears Goggles Within His Summer Tent

Baby brother whimpers at sight of the photographer. For a caress, he will get a nose rubbing. These people have no chiefs, no nobility, no slaves. Life's merciless struggle confines conversation largely to food and clothing.

Adventures in Lololand

BY RENNOLD L. LOWY

With Illustrations from Official AAF Photographs by the Author

OUR TRUCK bounced violently along the road following the Anning River north of Sichang. Just beyond Lichow we heard the crack of a rifle and the whine of a bullet.

"Lolos!" was my first thought, as the truck ground to a halt. For a few minutes we waited and wondered; then five Chinese came down the road and talked with our Chinese driver. James Chen, our interpreter, went forward and added his voice to the babble. Soon he climbed back aboard and reported:

"Everything is O.K. We can go ahead."

The truck rolled on with a clashing of gears. Chen settled himself on a bedding roll and appeared disposed to shed no more light on the matter.

Who Shot at Us?

"Well," I asked, finally, "who shot at us?"

Chen shrugged. "Who knows? Perhaps a Lolo. Perhaps a Chinese bandit."

Several hours later, after a few breakdowns, we were dining on C rations in the manager's living quarters of an alcohol distillery at Luku. The first day of our expedition into the Lolo country had ended.

This was in October, 1944, more than two years before Americans were disturbed by reports that our flyers, after crash-landing or parachuting into this wild region near the "top of the world," were being held in slavery by the Lolo tribesmen of southwest China.

I had been serving as a combat cameraman with the 14th Air Force. Just after my sixteenth combat mission I was ordered to headquarters at Kunming. There I learned that I was to accompany an Air-Ground and Aid Section party into Lololand to seek and assist any American airmen who might be held captive or who for other reasons were in distress.

The area assigned to us was the Lolo country lying along the eastern border of Sikang Province and extending into western Szechwan, a land of towering snow-capped wastes dominated by 24,900-foot Minya Konka and 21,190-foot Mount Grosvenor.

American bombers had to fly over this country to strike at the Japanese. At Chengtu, Szechwan capital northeast of our search area, was a then secret base where 20th Air Force B-29s were maintained by supplies flown over the Hump from India.

At Kunming our party assembled under the leadership of Maj. Robert C. Greenwood, a flight surgeon. There were six of us, including Chen, our Chinese civilian interpreter, and myself as photographer and historian.

A C-47 flew us to Sichang, where we spent four days assembling equipment and receiving further instructions. We signed waivers which freed the Chinese Government of responsibility for our safety in Lolo territory.

Black Lolos and White Lolos

We had long conferences in Sichang with the man who did most to assure our safety among the Lolos. He was Lin Gwan-dein, a 32-year-old Black Lolo who controlled an area near Tienpa. Unlike most Black Lolos, Lin cooperated with the Chinese and was serving as a magistrate.

We learned that the Lolos are members of a tribe classified politically as a branch of the Yi (*i. e.*, "primitive") people. Ethnologically, they are a branch of the Tibeto-Burman group. More than 500,000 Lolos live in Yunnan, Kweichow, Szechwan, and Sikang Provinces.

The distinction between Black Lolos and White Lolos is not in color but in family relations. Black Lolos are the real Lolo people; their descendants born of intermarriage with other races, mostly Chinese, are White Lolos.

Reaching Luku after our 45-mile ride from Sichang, we unloaded our gear from the borrowed Chinese Army truck and prepared to proceed with the horses and *mafoos*, or horseboys, awaiting us in accordance with advance arrangements made by Lin.

Departure from Luku was scheduled for dawn the next day, but the horses changed that. So violently did they object to the strange shapes of our equipment, as it was loaded upon their bony backs, that it was almost noon before we left.

We covered the twelve miles to Mienshan in about five hours. A wooden saddle added little enjoyment to my first horseback experience.

Mienshan I remember as a singularly drab collection of mud huts surrounding a hostel which was the playground of some of the largest rats I have ever seen.

Most of the next day we spent climbing over a saddleback pass dividing the head-



U. S. Army Air Forces, Official

Seeking Missing Flyers, an American Meets a Lolo Queen

Maj. Robert C. Greenwood, leader of an AAF rescue expedition, presents cigarettes, candy, and cloth to the wife of a Lolo chieftain whose domain near Tienpa includes about 300 families. Many own Chinese slaves. In right background is James Chen, the party's Chinese civilian interpreter. Beside him is a Lolo guide.

waters of the Anning and the Naitung. At the very top the trail led through a cluster of Lolo huts. The villagers observed our passage in dour silence broken only by occasional requests for cigarettes.

At Chungsopa, between Mienshan and Yuehsi, we were warned by the local magistrate to prepare for possible attack. Black Lolos had raided a neighboring village the night before, he said, and a number of girls and young men had been carried off into slavery.

We stationed guards over our equipment, and the magistrate assigned some of his own men as outposts. Then we set up our radio transmitter and reported our position to Kuming, adding that there was a chance of action that night.

But nothing happened, except that once, after midnight, there was a great deal of yelling and running about by the Chinese guards. We were awakened in the morning by school

children singing the Chinese national anthem around their flagpole.

The horseback phase of our trip ended at Yuehsi, which we reached after traversing a valley floor so smooth that we wished we had jeeps. At Yuehsi we spent three days in the mission of a Chinese Catholic priest who had studied in France. The first night the priest gave us a banquet and on the second night we reciprocated, serving C rations, which he pronounced delicious.

Pressing on from Yuehsi, with 34 coolies and a foreman replacing our 18 horses, we really began to see Lolos. Our Chinese coolies were to be paid \$1 a day, part of this as a bonus for venturing into country where they risked capture and enslavement. Beyond Tienpa, six days' travel from Yuehsi, our coolies knew of no Chinese villages and we would plunge into Lololand proper.

As we drew near Tienpa we saw demonstrations of Lin's influence. Lin had notified all



U. S. Army Air Forces, Official

Lolo Youngsters Sing to the Accompaniment of an American Organ

Near Tienpa, where Lolos live at peace with Chinese neighbors, the AAF expedition found a primary school. At the console is the teacher, who was wounded while fighting under Stilwell in Burma. The organ arrived twenty years ago, with an American missionary. Coolies carried it over 500 miles of trail from Chengtu.

the Lolo villages of our coming, and, wherever we stopped, emissaries from the next village on our route would meet us and take over as guides.

During the day we saw tall smoke columns and at night great fires flickered in the mountains. This was the Lolo telegraph, reporting the approach of the white men who were to be allowed to pass unmolested.

Our cigarette lighters and even our matches were unerring sources of amazement to the Lolos. To impress a Lolo, I would rub my lighter against my jacket and casually flick the wheel, as if to indicate that the flame was produced by some magic property of my clothing. Then I would covertly loosen the flint, hand it to the Lolo, and watch him vainly try to produce fire.

Our firearms fascinated them most of all. I was offered as high as 16,000 Chinese dollars (almost \$1,000) for my carbine. Most Lolos carried very old European and American

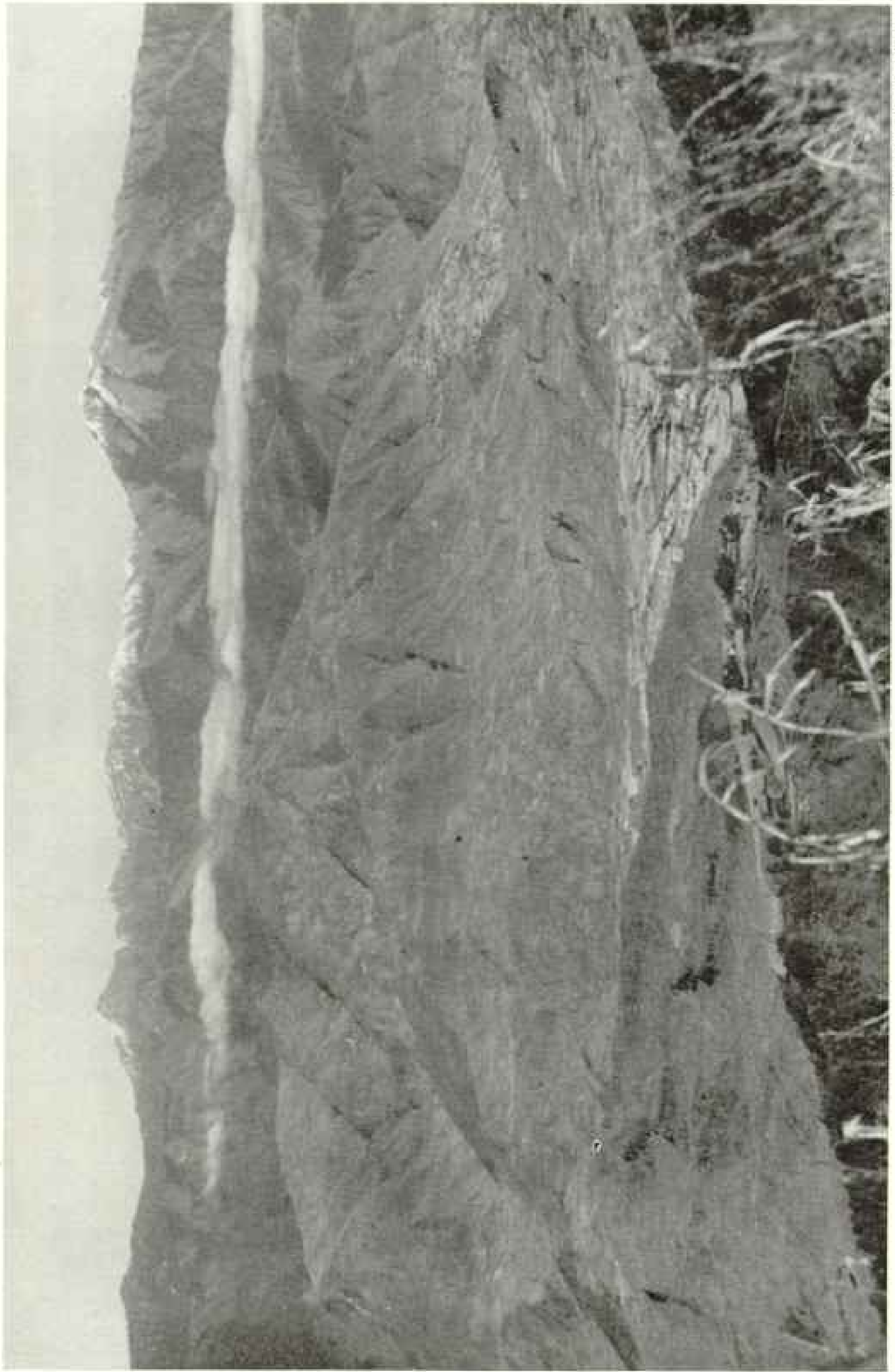
rifles. Others carried spears made of bamboo poles with knives stuck in the ends.

We frequently demonstrated our arms to warn the Lolos, not too subtly, that it would be dangerous for them to molest us. A favorite trick was to fire a few bursts from a tommy gun, then hand it to a Lolo and watch his bafflement when it failed to work for him. Before handing it to him, of course, we would set the safety lock.

Traces of a B-29 Crash

At Gungow, between Tienpa and Fulin, we saw the first definite trace of a crashed B-29. We were plodding along a rough trail when two Lolos suddenly appeared. Our Lolo guide talked with them and was told that they had found a burned wreck. There was further parley, with Chen relaying his findings in English.

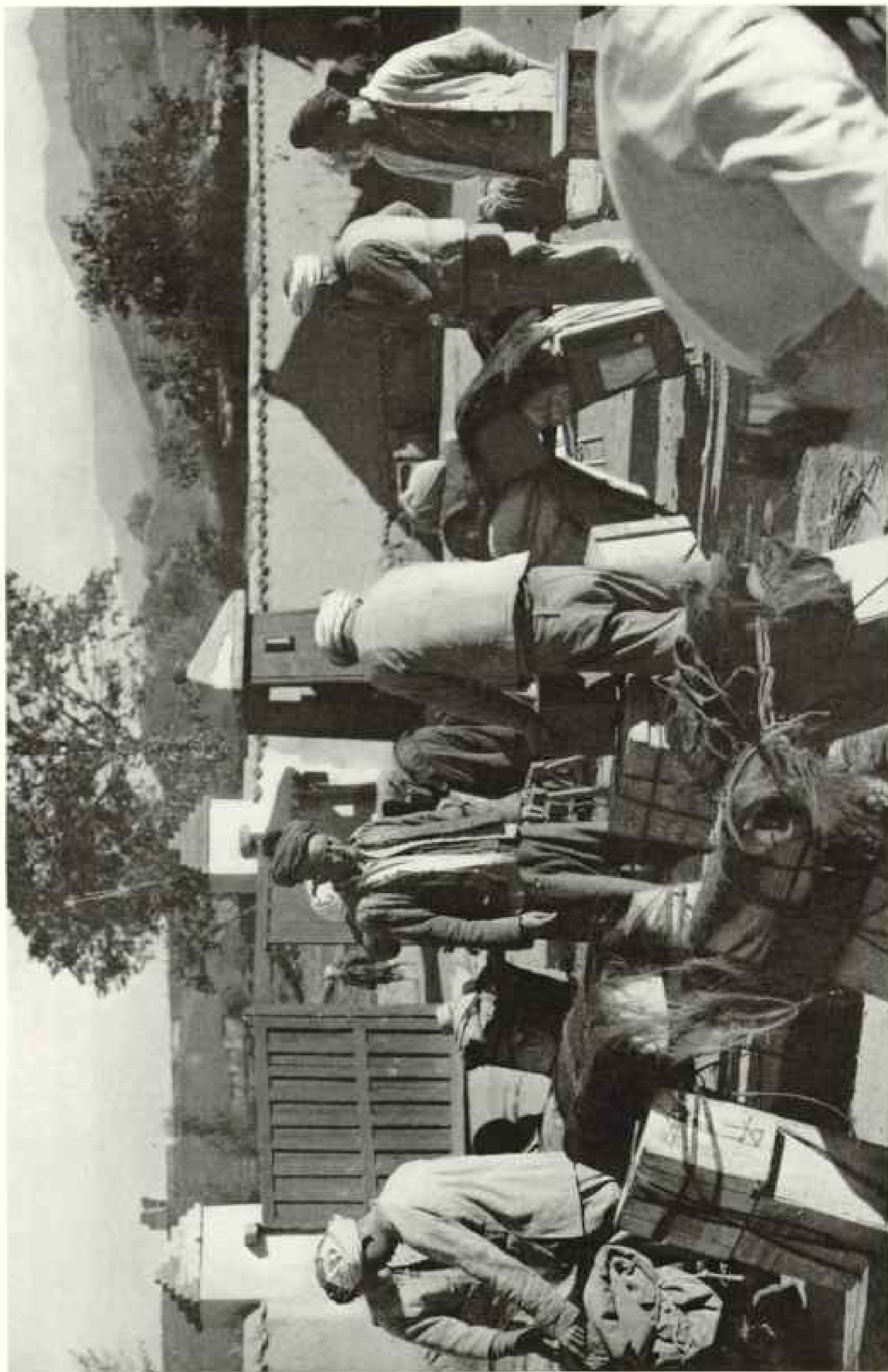
Finally, the two Lolos shouted toward a near-by rocky fastness and ten more staggered



U. S. Army Air Force, China

Beyond These Cloud-draped Mountains Lies the Country of the Black Lolo

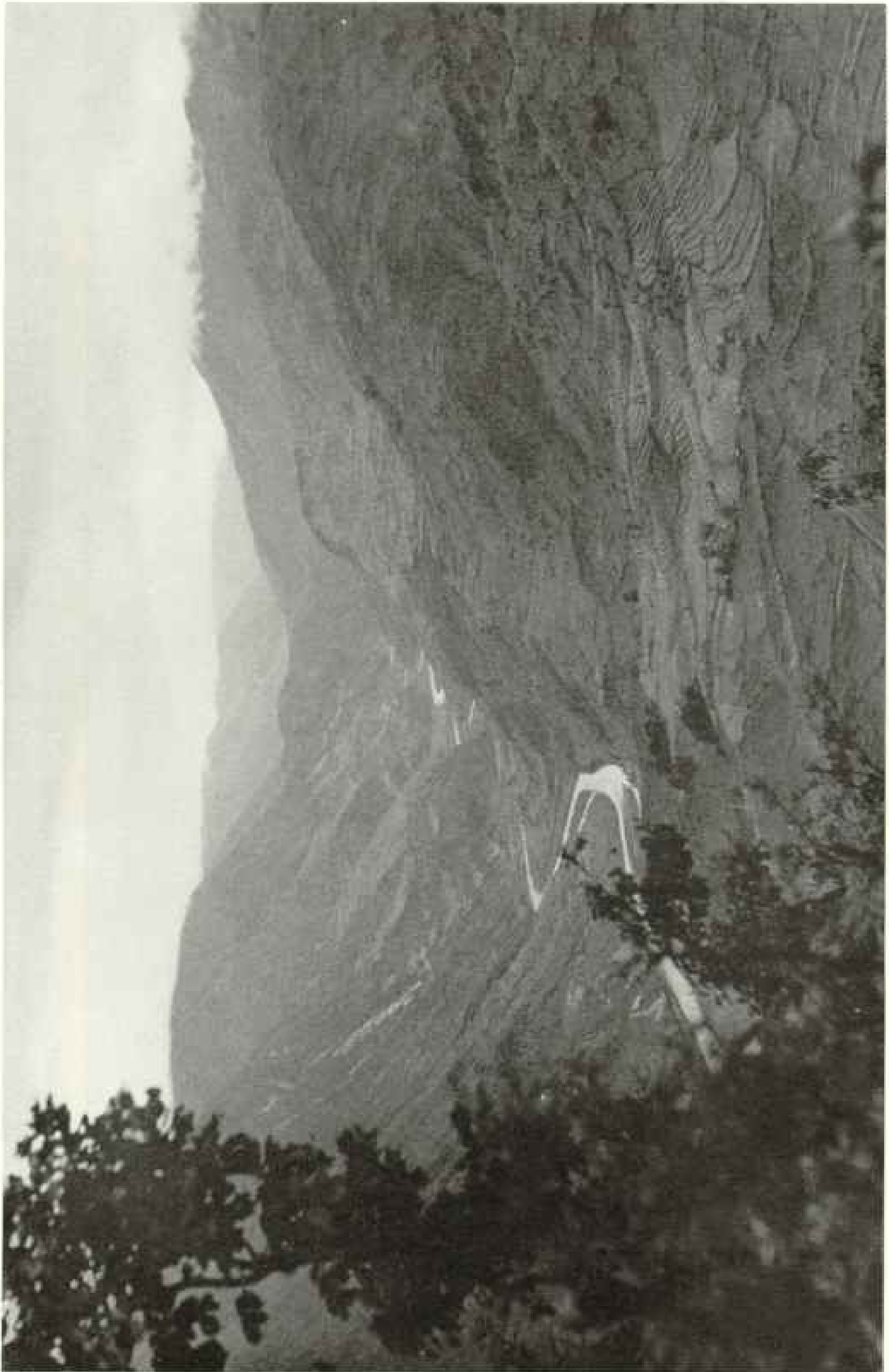
From Yutien, in eastern Szechuan Province, the author's party planned to venture into hostile territory to check rumors of wrecked bombers. Sudden collapse of a 400-year-old bridge across the Naitung River, which flows behind the mountain in foreground, prevented deep penetration.



E. H. ARMOUR (All Photos, Official)

Turbaned Coolies Load American Supplies on Packsaddles for Many Days' Travel over Difficult Trails

At LuKu, 45 miles from the starting point at Szechang, the party transferred from a single Chinese truck to horses. Here coolies prepare cargoes in the compound of a distillery which produced alcohol from rice and corn for use in Chinese military vehicles.



U. S. Army Air Force, Official

Sikang Province's Naitung River Follows a Serpentine Course at the Foot of Cloud-capped Peaks

Over terrain like this, the author's party often spent a full day traveling 20 to 30 miles to cover an airline distance of three or four miles. Rice and corn grow on the terraced fields. Water is fully utilized by a system of dams, which holds it on each terrace for several days at a time.



U. S. Army Air Corps, Official

Robed White Lolo Tribesmen Walk Peacefully with Chinese along the Main Street of Yuehsi

At this trading center on the Naitung River the AAF party transferred its gear from pack horses to the backs of 34 coolies. Near Yuehsi are the mountain hide-outs of untamed Black Loles, who frequently swoop down on Chinese and White Lolo villages to abduct girls and young men into slavery.

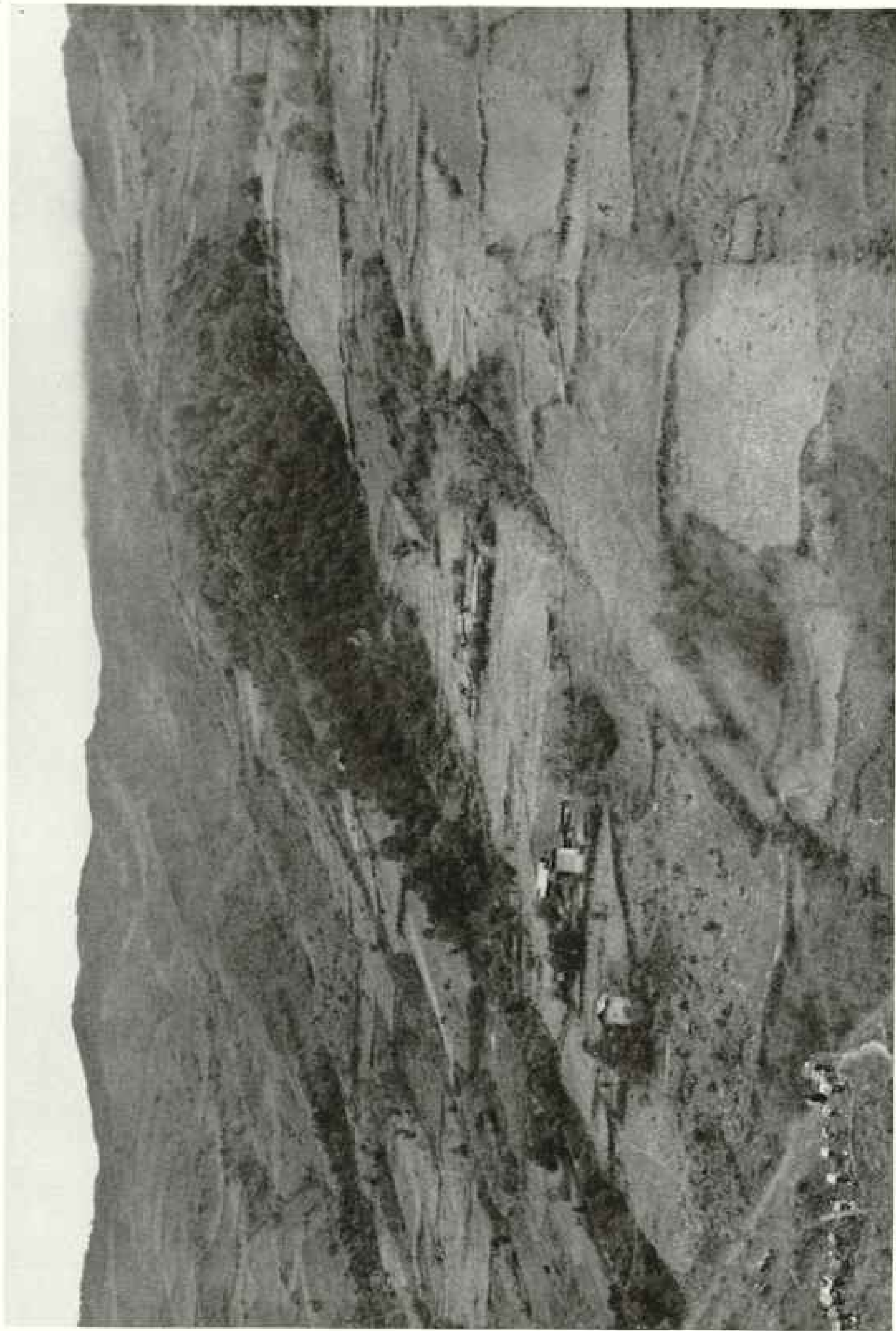


An Air Forces Rescue Party Climbs a Roller-coaster Trail as It Heads into Lolo Country



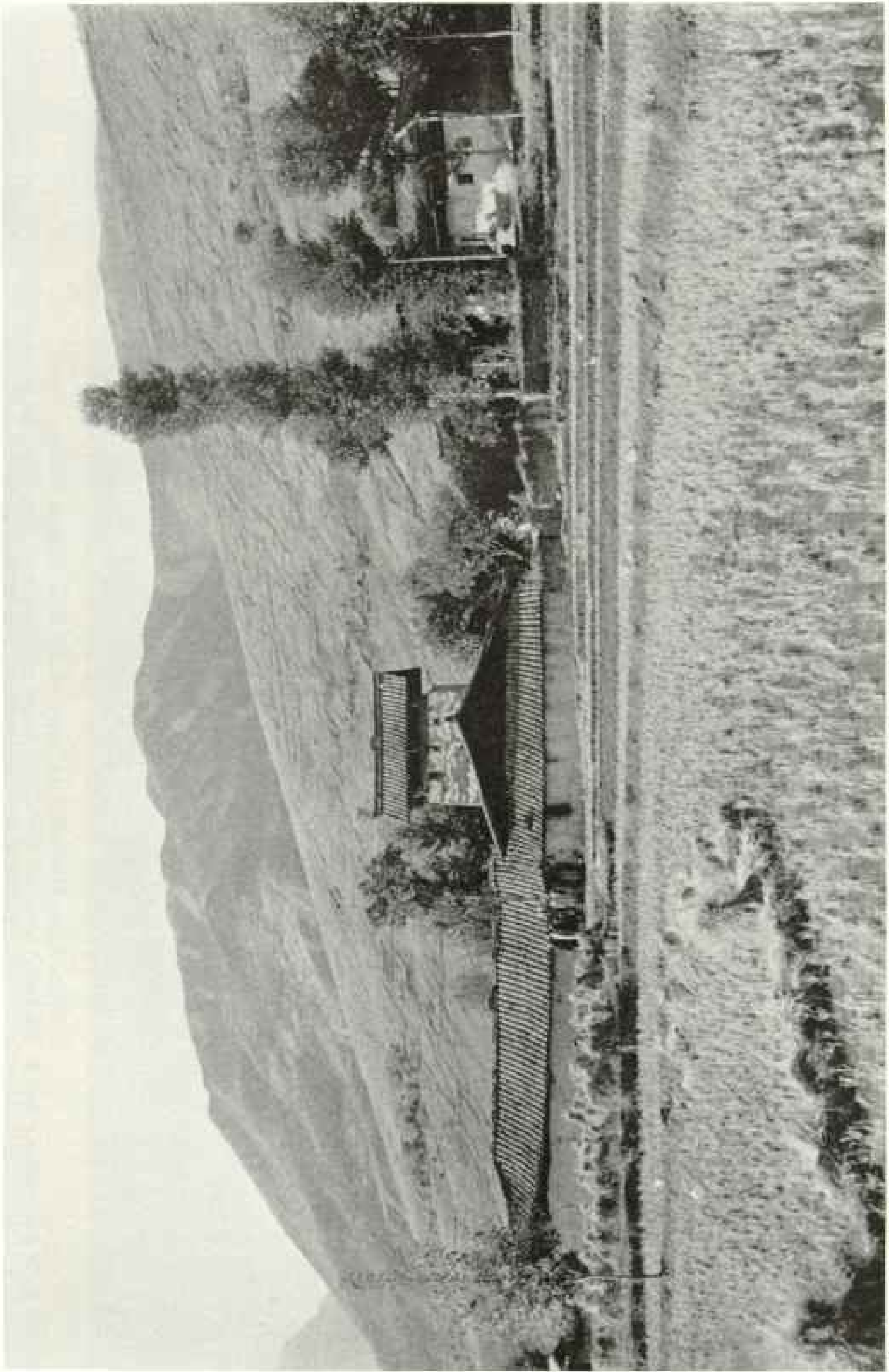
U. S. Army Air Force, Official

Each Coolie Packs 90 Pounds of Supplies and Gets Extra Pay for Risking Capture by Lolos



U. S. Army Air Force, 1944

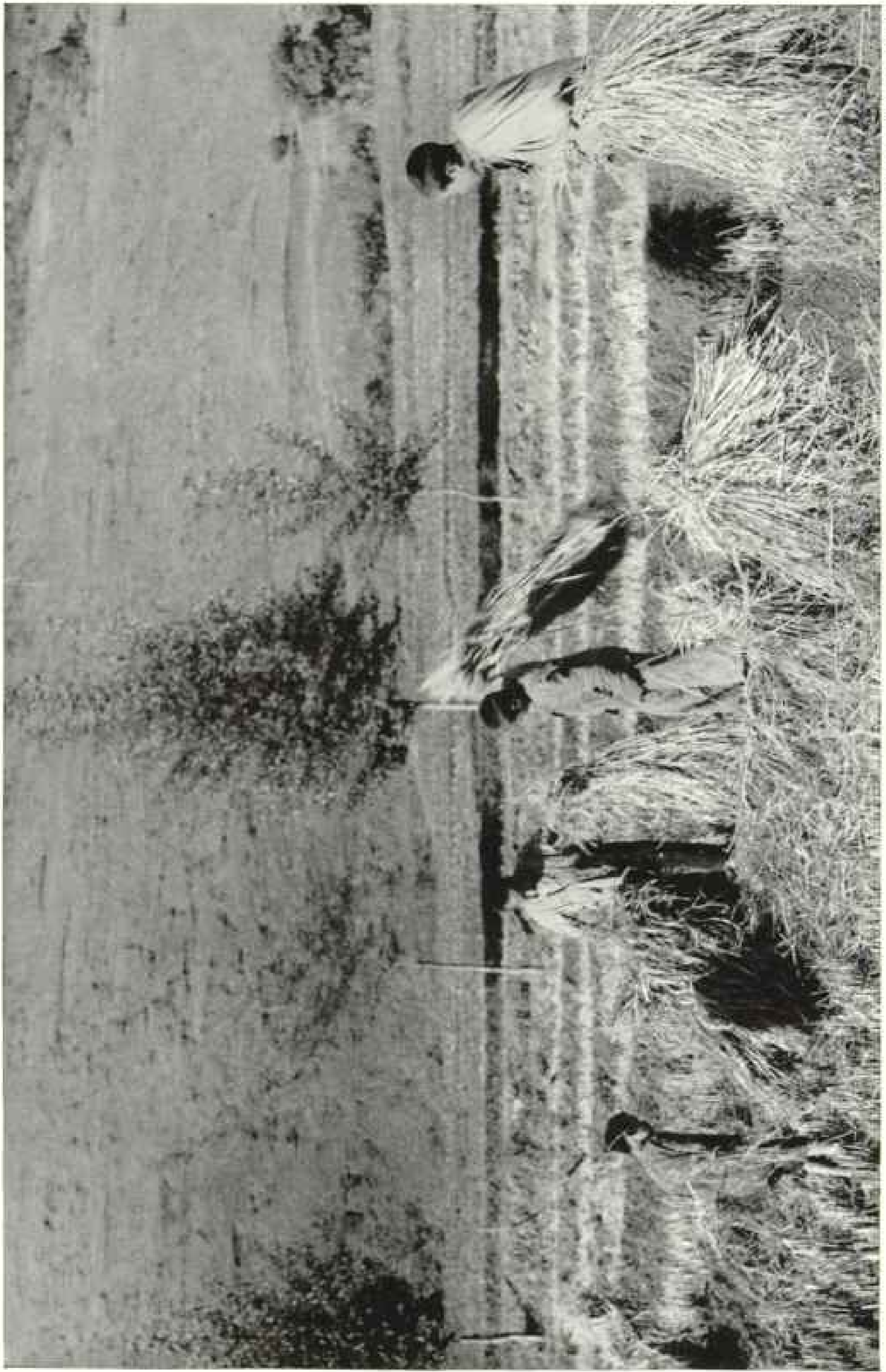
Lolo Families Live Communally in Clusters of Mud Huts and Till Paddy Fields Like These



E. H. Army Air Force, 05/10/41

A Dozen Families Share This Palace of a Lolo "Little King"

Here, near Ticupa in eastern Sikkang Province, the rescue party spent five days with friendly Lolos. The tower was built originally as a lookout post, but now is used for storing tobacco and grain. At right is the village school and assembly building.



U. S. Army Air Forces, Official.

Young Lolos Harvest Rice Straw as the First Step in Making Paper

The boy in the center shakes a sheaf to dislodge dirt particles. After drying, the straw is boiled into a pulpy mass, then poured onto a bamboo mat where the fibers knit together as the water evaporates. No chemicals are used.



To Touch a Lolo's Sacred Topknot Is to Insult Him

High cheekbones and darker skins set them apart from most Chinese. All men wear the topknot, sometimes covered with a turban. These tribesmen cooperated willingly with the rescue party, but while in their village the Americans suffered the theft of 500 rounds of ammunition.



Lighly She Bears Her Duties as Lolo Queen

This 23-year-old mother of three children helps rule a remote mountain area near Tiempa, on the Sikiang-Szechwan border. Her heavily embroidered smock covers numerous petticoats. Earrings are of tortoise shell. Her hat, made of several layers of stiffened cloth, is held in place by her coiled pigtail (page 106).

U. S. Army Air Forces, Gimat



U. S. Army Air Force, Official

Lolos Help Plan a Search for Airmen in Distress

James Chen (left), Chinese interpreter, confers with tribesmen over a map showing the area where a B-29 was reported to have crashed. Another map, drawn on rice paper from memory by the village elder at right, checked accurately with the rescue party's own topographical charts.

forth under the weight of three 50-caliber machine guns and many belts of ammunition. Since the guns bore serial numbers, we were able to confirm, in radio conversations with Kunming, that they came from a B-29 which had crashed six months before. The wrecked plane and crew lay buried under many feet of snow on a mountaintop.

The Chinese magistrate in Fulin, knowing of the crash, had warned the White Lolos under his jurisdiction that so large an airplane must mount at least eleven guns and that the finders must return all or face dire consequences.

These men, however, had been able to recover only three guns and, fearing to face the magistrate with so few, had learned of our coming and waited to surrender them to us.

While staying at Lin's village near Tienpa, we made plans for a journey to the southeast into country populated entirely by unfriendly Black Lolos, where no white men had ever been before, so far as we could ascertain. Here we might learn why some of our aircraft had vanished without trace.

To reach this forbidding region it was necessary to cross the deep gorge of the Naitung River. The only bridge was a rickety affair of ropes and slats near Opiencha.

We spent several days planning the journey with the aid of a village elder who had mapped the terrain on rice paper from memory. We were just about to set forth when a runner brought word that the Naitung bridge had collapsed, dashing four Chinese slaves to death 200 feet below.

A local patriarch told us that the bridge was at least 400 years old and that he had repaired it "in his youth." He was at least 85, and knew of no other repairs having been made in his time.

Since there was no other way to reach the Black Lolo country, save by methods for which we were not equipped, the expedition was brought to an end and we started back to Kunming.

Lolos of Lin's village loaned us their personal horses and maoos for the trip to Fulin. Then came a truck ride to Loshan, in southwestern Szechwan, and a two-day sampan trip down the Min River to Ipin.

From Ipin a China National Aviation Corporation transport flew us over the Hump to 20th Air Force headquarters near Calcutta. Five days later, on December 4, 1944, we were back in Kunming, enjoying a 10-day leave and resuming our speculation as to when the war would end.

Sponge Fishermen of Tarpon Springs

BY JENNIE E. HARRIS

STANDING on the brink of blue water at Tarpon Springs, Florida, I watched an incoming boat of many colors. Such a boat entered Aegean ports in the epic days of Homer.

High-curved bow and open deck were reminiscent of those ancient craft, while dangling from its main pole and crowded in bundles on deck was a similar weird cargo—skeletons!

But these skeletons few would recognize. No limbs, no skull, no gaping eye sockets here. Over them once was skin, but it resembled dark, thin rubber. Inside dwelt life, but never blood, heartbeat, or sense organs; only the power to absorb food, grow, and reproduce.

These fiber skeletons were sponges from the Gulf of Mexico. The skins they supported have been scraped off by deck hands' knives. Life has been squeezed out, washed out by waves, dried out by the brisk sea air.

Classic Names in Florida Waters

Like a homing bird the boat came to rest, anchoring alongside other sponge boats. Bright orange and black are these boats; or all blue; or white, blue, red, and black; or white, gray, orange, and green—each with its owner's own choice of color, each with its own proud name: *Aegli*, *Kaliopé*, *Vaseliki*, *Venezelas*, *Democratia*, *St. Nicholas*, *Posidon*, *Geo. Washington*, *Christai Lo*.

The names stand out in black.

About 150 sponge boats anchor here together. They line the curving dock at Tarpon Springs farther than eye can see—diving boats and hooker boats, all fresh-looking (page 124). Most of them are empty, their assorted cargoes safely stowed in the barred cells of the Sponge Exchange.

Soon these new, dark, smelly sponges will lie there as well. Deck hands spread them on the dock (page 135). Captain and crew look them over. A good haul here!

But the divers hasten home or enter coffee-houses. Painted scenes of Byzantine history stare down at them garishly from small walls; and lively Greek faces glance up. "Hello, Nick!" "Hi, yourself." "How's the sea?"—or the Greek equivalent of such speech.

They sit at little tables, drink Greek coffee, read papers they have not had for weeks (page 126). Some saunter out, stretch their sea legs, drift back to the dock or the Exchange, and patiently, with a tinge of amusement, tell visitors what it is like to "pick sponges."

"But don't you feel a terrific pressure down there on the bottom of the sea?"—"Well, madam, it's like this. . . ."

Multiple centuries ago sponges washed ashore by Mediterranean waves padded the helmets and shields of Greek warriors. Aristotle tells of these. Then Greek fishermen learned to go down into the sea and pluck sponges from the reefs. No diving suits then—just a marble weight in one hand to carry the diver to sea bottom.

Then for centuries the Dodecanese became centers of the sponge world. Among these sponge-fishing islands were Kos, where Hippocrates, father of medicine, had lived, and Patmos, where the exiled St. John wrote the *Revelation* of the Bible.

Who found the first Gulf of Mexico sponge nobody knows; nor how long those rich sponge reefs had lain unmolested and multiplying.

But by the 1870's, when the archeologist Heinrich Schliemann was proving Troy to be more than a legend in a blind poet's brain, bringing to light paved streets, tiled baths of Troy—where, perhaps, beautiful Trojan women once used sponges in perfumed baths—Gulf fishermen were hunting sponges.

They went out, those fishers, two to a boat. One rowed. The other peered for sponges through a glass-bottomed bucket. When it was rough, he poured oil on water; he could see better then. "Steady. Here's a good one!" He plunged down a long-poled hook and drew the sponge into the boat.

Ten cents a pound was the price for these sponges at Key West, first center of Gulf sponge-fishing business. But time brought changes. In 1890 John K. Cheyney became interested in the possibilities of sponge fishing, and began to buy and send out hooker boats from Tarpon Springs.

Most of the Key West sponge fleet was gradually bought and moved northward along the Florida coast. The Tarpon Springs Sponge Exchange came into being, and prices climbed as Mediterranean sponges became rarer, more costly.

Then Came the Greeks

"Deep-sea divers—they're what we need!"

In 1905 Cheyney proposed sending out diving boats. A Greek in his packing house—John Corcoris, the first Greek here—suggested bringing divers from Greece.

"You and your kin go down again and again to sponge beds your ancestors worked before you. Sponge beds in America, in the



Hamilton Wright

Ready for His Helmet, the Sponge Diver Takes a Final Puff Before Descent

His suit of double waterproof canvas has an inner layer of rubber (page 123). On the bottom, some 50 miles offshore and down to 120 feet beneath the surface, he may fill his net sack in a few minutes. Or at times he may walk a mile before he finds a sponge big enough for picking.

Gulf of Mexico, have never been touched! Millions of sponges are waiting for you divers—and growing larger every year. Bring your diving suits; bring plans of your diving boats."

Eagerly those divers came—from Greece, from the islands of Aigina, Khalkē, Kalymnos, and Symē. They brought diving suits, diving-boat plans. They also brought their families, family customs, prayers, dress, language, dances, their love of color, music, and the sea.

"Sea and Greek interpenetrate," the saying goes. The sea means livelihood, strength, and forms the background of much of Greek religion.

Here, suddenly, was a fresh livelihood

against a fresh background. Sponges had, in a way, reversed procedure; they had sent out invisible hooks themselves and tugged the Greeks here.

Some 3,000 Greeks now live in this coastal, many-bayotted town. They found a kinship to old Greece here: winds rustling through the palms with the stiff, thin sound of rain, shells for stuccoing homes, orange trees as in Corfu or the Cyclades, air spiced with peppers and pines.

No Arch of Hadrian they found, no ruined Temple of the Olympian Zeus, but the same mellow light that transformed white-templed marbles of Greece to gold—and sponges, thou-



Margaret Brothers

Her Ancestors Sought Sponges in the Mediterranean

The father of this Greek-American girl is skipper of the *Socrates* in the Tarpon Springs sponge fleet. Greek sponge divers began to come to the Gulf of Mexico in 1905 to carry on an age-old vocation. Now some 3,000 residents of this Florida community are of Greek parentage or were born in Greece. Here they have kept alive Greek custom and tradition.

sands of square miles. Along the west coast of Florida and up to fifty miles offshore waited a crop ripe for the gathering—more than 9,000 square miles of ready harvest!

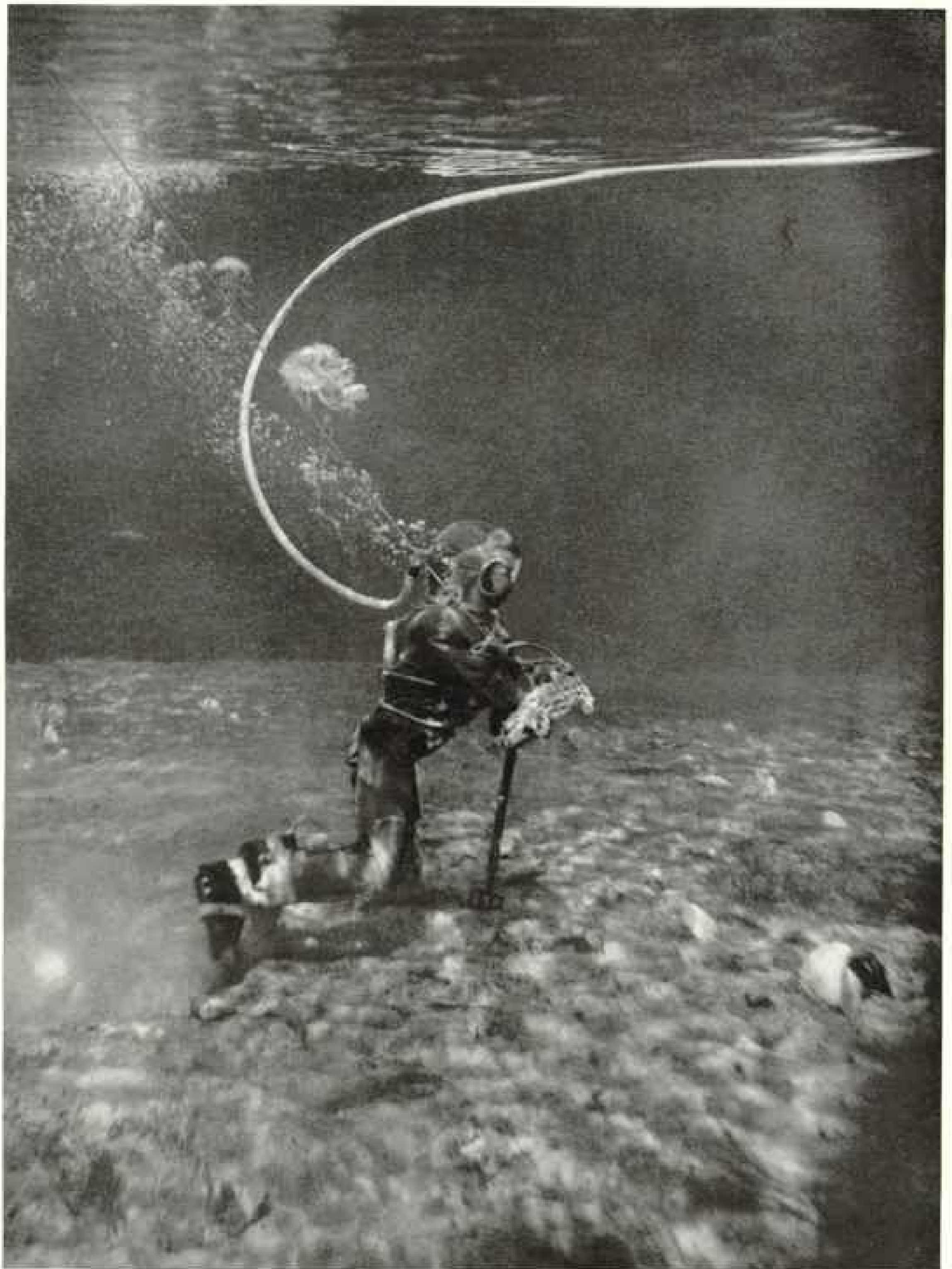
New sponge boats were modeled after the old triremes—double-enders, with curved bow and curved stern. Today the boats have a square stern and Diesel engine; otherwise they are unchanged.

The newcomers kept their colony delightfully Greek. It stays Greek. Homes spill brightness inside and out with lavish color, musical instruments, figurines, vases of crisp paper flowers. Sponge, shell, and coral shops

line the waterway. Hot sugar and butter fragrances float from the Greek bakery to mingle with coffeehouse smells.

Family prayers are held at home each night. Little children, their dark velvet eyes solemn, make the sign of the cross at bedtime, facing where the sun will rise. In the morning they make the sign of the cross before a likeness of the Virgin. From the new St. Nicholas Cathedral bells peal for further prayer.

Thoughts of many go to sea, where grandfathers, fathers, brothers, husbands, sweethearts, and sons peer for sponges through lowered sponge glasses or drop sounding lead



Hamilton Wright

Bubbles from the Diver's Suit Tell Boatmen Above Where He Is Working

Curving air line and taut cable are his links with the surface. He bends to his work here in a practice demonstration, loosening a sponge from a rock with his three-pronged hook. Into his net bag it will go. He sees sponges of many kinds, shapes, and colors. Only a few varieties have commercial value.

to detect rock or coral where sponges cling, then follow a strange outward path of air bubbles rising from the inflated suit of a diver, fathoms below.

Prayers are said on the boat as well. No part of Greek life is separated from Greek religion. Each boat carries a religious picture. At dawn the captain prays for his men, for safety for them all. Divers make the sign of the cross before going into water.

The hooker boats work in water up to 30 feet deep. Rowboats or dinghies are towed to sponge waters, and there the fishermen pair off. As in the primitive way, one guides while the other kneels over the side, lowers a glass-bottomed bucket about an inch in the water, below surface ripples, and watches for sponges.

Ah, a good one! Now, with a hook fastened to a 40- or 50-foot pole, he must tear the sponge from the rock.

Hooker boats stay at sea off and on for three to six months, returning when holds are full.

Walking the Floor of the Sea

Diving boats work in water 30 to 120 feet deep. They make two main trips a year, with an occasional brief return to unload sponges and get supplies.

Diving holds tremendous fascination. The Greeks have the saying, "A diver for two years is a diver for life." The youngest diver I saw was 16, the oldest 63. The veteran diver of the colony had dived for 15 years in the Mediterranean, for 32 years here.

A diving boat crew may spend about nine months of the year on the water. The deep-sea diver spends about two months of the nine *under* water, in everlasting twilight, walking the floor of the sea.

His suit of double waterproof canvas has an inner layer of rubber; the rubber cuffs that bind his wrists all but stop circulation; his collar is clamped with a watertight joint to his breastplate; his shoes are soled and tipped with brass or lead (pages 120, 129).

Such a garb is not light to move around in; but he stays dressed, ready, till the lead sounds out promising rocks or reefs below. Then, with bronze helmet clamped to his collar, lead weights laid over his shoulders, air hose and lifeline adjusted, he sits on the edge of the boat and drops into the water (page 125).

Weights carry him down; his feet strike bottom. Thanks to the protection of his 188-pound suit he has little sensation of pressure. His head presses and releases a little valve in his helmet, regulating the air supply.

All around him a deep blueness and greenness prevails, as if he looked on a lustrous

world through thick, dark sunglasses. His 35-pound shoes give back no sound of foot-fall, arouse no echoes as he treads these gloomy miles of solemn water, peering through the glass windows of his helmet.

Many bars prove "dead," devoid of sponges. A diver may walk a mile before finding one large enough for picking.

Law forbids picking sponges smaller than five inches in diameter. Those of 16 to 18 inches are considered ideal, and rarely a 36-inch sheepswool sponge is found.

Sponges develop from tiny free-swimming larvae. They grow very slowly the first months, then about a half inch in diameter a month, according to divers, but a half inch a year according to some books.

The diver must see at least six feet ahead, or descent would hold little value. On good days he can see at distances of 30 to 50 feet. With water exceptionally clear, he can look up and see the bottom of his boat a hundred feet above him.

Excess bubbles rising from his suit proclaim where he is. The boat follows the line of bubbles. The sun blazes on the ever-moving water. The white-rope lifeline disappears in the water. Beyond that rope, far down, walks the invisible harvester of sponges—always at a 45-degree angle against the tide, the better to detect them (page 122).

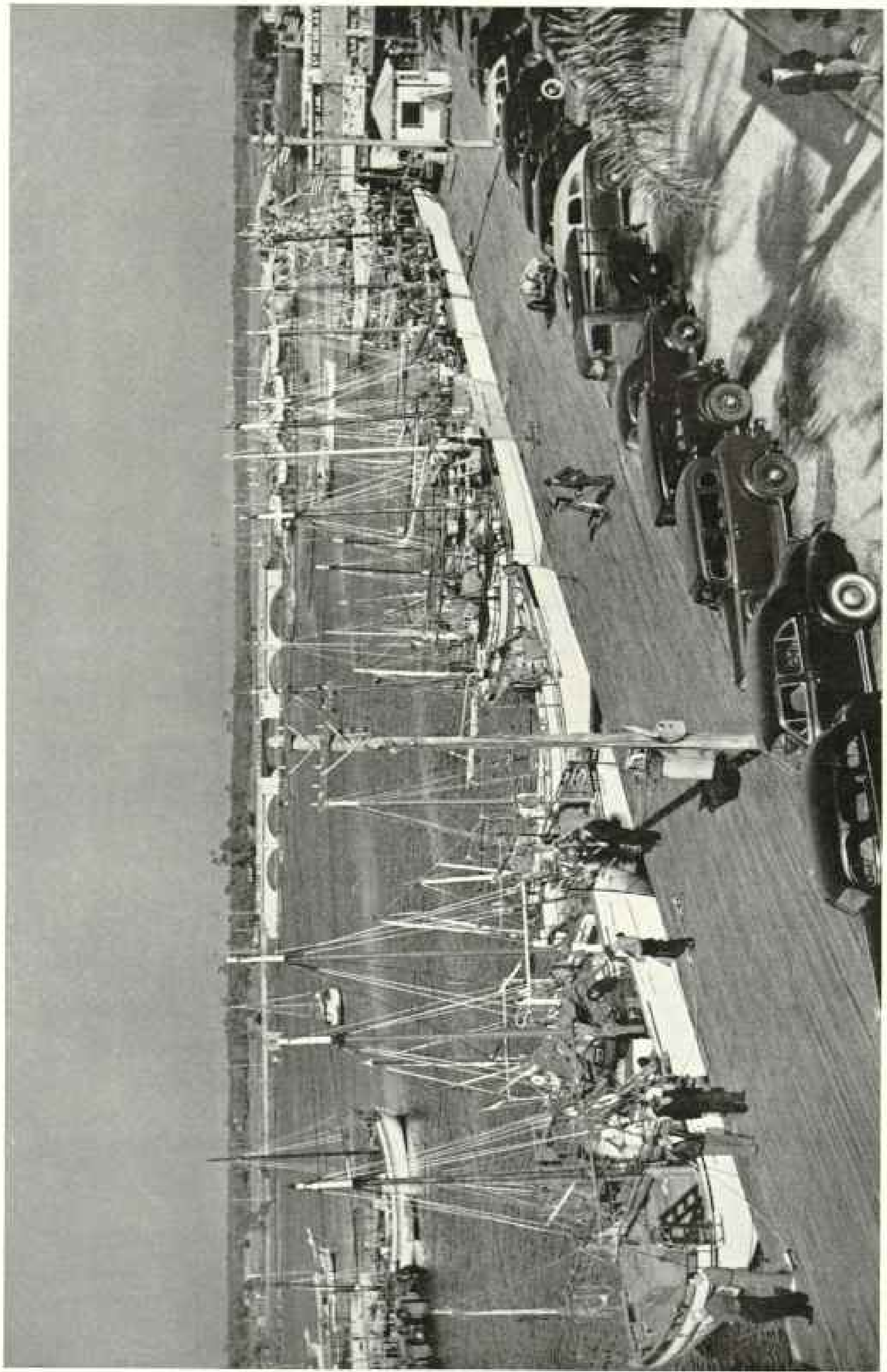
In one bare hand this walker of the sea clutches a net sack, in the other a heavy three-pronged hook. At last, a sizable sponge! Out swings his hook. He wrests the sponge from the rock it had bound itself to for life, drops it into his sack, and clutches the top so the sponge cannot float up and out.

Diver Roams a Weird World

Beauty dwells down here. Fantastic tropical fish swim past, their eyes inquisitively bulging. Seaweeds move in a slow life of their own. Flat sea fans, wide open, confront the diver. He enters, and backs out of, a grotto of dim lace, its pattern as fragile-seeming as frost, though actually so strong as to last for centuries.

Coral formations are poems in stone, exquisite as a fragment by Sappho. Beauty is everywhere, alive or uncannily fixed and still, with blue, gray, or brownish cast, in unearthly formations. But the diver's eyes and mind are on sponges, on a specific part of this hoary deep.

Heights, valleys, orchards, meadows, all lie down here as on top the earth. Water is the everlasting cloud, mist, or fog that veils them. A mountain crag looms. No man has climbed it; no trail winds up. Its ghostly



Beth Davis

When the Sponge Fleet's In, Florida's Tarpon Springs Water Front Suggests the Mediterranean

Square sterns and Diesel engines are modern; otherwise the gaily colored boats are of Grecian design. They are built from plans brought to Florida by Greek immigrants. Some color combinations are orange and black; white, blue, red, and black; and white, gray, orange, and green. More than 150 craft line the dock.



H. H. D. B. B.

Hook and Net Bag in Hand, a Sponge Diver Leaps Overboard to Begin His Underwater Quest

His shoes are soled and tipped with metal, and lead weights are laid across his shoulders to reduce buoyancy. Rubber cuffs bind his wrists, leaving hands free. At the rail amidships stands the guardian of his all-important air line. The ladder will be lowered for him when he returns to the surface. Sponge festoons dry in the breeze.



Dimitri Brothers

Home from Sea, Sponge Ship Captains Spin Yarns and Smoke Turkish Narghiles

In this Greek water-front restaurant they can relax and enjoy shrimp fried in olive oil, lamb and spaghetti, or other Grecian dishes. They spend about nine months of the year at sea. Voyages last from two weeks to two months.

shape moves, virgin and weird, fanned by the drift of water.

The diver's sponge-accustomed eyes detect, at the top of that crag, a rubbery cushion, dark, slimy, large. He wants that rooted sponge.

By temporarily closing his air-outlet valve he makes himself light and climbs up. A curious sensation, this. Water becomes a ladder. He lifts himself, and the water buoys him higher.

Perhaps not one sponge, but several, of various kinds, cling here together, almost a sackload in one haul. His hook tugs them loose. Tiny mollusks hide in their hospitable cells. He has no time to shake them away. Already he has been down too long.

"In Case of Sharks, Stand Still!"

"Up!" he signals on his lifeline—one sharp tug. The waiting tender catches the sudden signal and starts quick action.

But no! Suddenly he dare not come up. Not yet. Sharks swim near, scenting blood. Sharks seem to smell the blood of even a tiny scratch on a bare hand, a scratch caused by a scrape on rock, by the cut of a wiry weed.

"*In case of sharks, stand still!*" Experience has taught him the divers' rule: "Fold your arms, hide your bare hands under your arms, and don't move till sharks depart."

At last! Now rule number two: "*And don't come up too fast.*"

Numerous Gulf deep-sea divers are cripples, but not because of sharks. They stayed in deep water too long; they went down too often without sufficient rest between descents; or they came up too fast. They were "hit"—afflicted with "bends," temporarily paralyzed. The diver can gauge speed of ascent by the air bubbles moving up white above his head. That speed depends on depth of water and amount of time the diver spent on the bottom.

The lifeline tender (perhaps for 25 years



Harriet Brothers

With King-size Needles Workers Thread Quality Sponges into Giant Garlands

Thoroughly cleaned and dried, they still are not ready for retail sale. When they leave Tarpon Springs they are dark in color. Wholesale buyers bleach them, usually with permanganate of potash.

a tender of lifelines) draws the diver toward the side, assists him up a lowered ladder. Relieved of his helmet, the diver still waits, head down, as if completely exhausted, leaning against the boat till shoulder weights come off. Then he can step aboard.

His suit still buoys out a little, thrusting from chest, hips, legs. He is soaking wet—not from sea penetrating that impenetrable outfit but from perspiring work, if this is summer, under tropic waters at heavy pressure.

He changes clothes completely before going down again, heavy woolen underwear and socks being part of his water suit. Two big sea bags of his clothes are aboard, but never a suitcase. Suitcases bring bad luck. Try bringing one onto a sponge boat and the captain will throw it overboard. Besides, boats are crowded. There is little room for a suitcase.

With clothes rinsed out over the side of the boat and drying, dry clothes on, hands and

wrists soaped for pulling on rubber cuffs, and the inflated suit on again, he rests while the other diver goes down. A boat has two divers so as not to lose any daylight chances at spying sponges.

They wear the same helmet. As soon as its windows can be washed, it is fastened over the second diver's head and shoulder weights are laid across *his* shoulders. Then it is this diver's turn.

Each diver makes three to six descents a day, depending upon weather and depth of water, staying down a few minutes, a half hour, or longer. If a sponge bar proves rich, so that he fills his sack fast, he makes two sharp tugs on his lifeline. These two tugs say, "Sack." The tender hauls the filled net bag to the boat and sends down an empty one. A good day's catch for one boat is 150 to 180 "pieces."

No food or water during a deep-water diver's day—rule number three. Strong black coffee suffices; Greek coffee, red-brown, as finely pul-



Ben Dyer

In Wreaths and Garlands, Sponges Go from Boat to Storage Locker

On ship they have been washed, dried, and scraped with knives. This frees them of their rubbery skin and a queer gelatinous matter called "gurry." Then they are strung on 40- to 50-foot lines, festooned in the rigging to dry (page 125). Sponges are sold in shorter strings called "bunches" (page 130).

verized as cocoa; it looks like mud in the cup. The diver drinks it black.

His appetite is apt to be enormous after the day's denial. "Now, boy, can I eat!" He eats spaghetti, wienies, beans, soup, rice, salted meat—whatever the cook, aiming to please, has taken from its tin and heated on a compressed-gas stove. Dinner may or may not be a group affair, depending upon work at hand.

Nothing Too Good for a Diver

"The diver is highest man on the boat," a lifeline tender remarked to visitors. "Maybe he'll say, 'Bring me a cup of water,' if it's a time when he can drink water, and he sprawls

out at rest. Maybe the rest of us are working-like dogs, but somebody stops and takes him water.

"Temperamental? I'll say he is! I may not pull the lifeline fast enough, or something else goes wrong below. He comes up sputtering as soon as his helmet is off. 'Why didn't you do this, or that?'

"We don't mind. We know his work is dangerous; exacting, too. He's soon grinning like the rest of us.

"Once, maybe, he was engineer, air-line tender, cook, deck hand, taking some other diver's thunder. But he won't be engineer, tender, cook, deck hand again. That would be demotion."

"Meanwhile, what do you fellows do?"

"We get out the gurry."

Gurry, that queer gelatinous animal matter! Newly caught sponges are piled on deck and covered with burlap until they "ripen." Then the rubbery skin dries and cracks, allowing part of the gurry to escape. Deck hands use short-bladed knives to scrape

off the skin, then dip the sponges into buckets of salt water and wring out the gurry.

Sponge skeletons are tied on the rails to sun, hung overboard at night for waves to cleanse further, strung up in the rigging on long lines, while daily the divers go down and bring up more of the sea's strange load.

One boat may work within a half mile of another, or not near at all. A diver may, fathoms down, come within seeing distance of another. They can talk, if close enough to put helmeted heads together. "Going home soon?" in English or Greek. "Hope so." Then they separate, to work silently, aloof, on the mutely beckoning sponge reefs.

After dark—music. The sponge boat is



Dorsett Brothers

From Deep-sea Meadows a Veteran Diver Brings a Harvest of Sponges in His Net Bag

Beyond a depth of 30 feet divers gather sponges from the bottom of the Gulf. Working in eternal twilight, the diver confronts exotic beauty and ever-present danger. Sharks, twisted air line, or effects of pressure may cut short his career. The captain is also usually one of the divers; he gets an extra share.



Elli Abbott

Ready for Market, Fluffy Wreaths Await Buyers in the Tarpon Springs Sponge Exchange

About 90 percent of our domestic sponge production is landed at Tarpon Springs. Customers from all over the United States bid at the sponge auctions, often buying up to \$45,000 worth in a morning session. Yearly sales on the Tarpon Springs exchange reach \$2,500,000. Gulf sponges normally furnish about half of U. S. consumption.



Harriet Drouhart

Prime Sponges for Milady's Bath Must Be Cleaned, Shaped, Manicured

In a Tarpon Springs storage room one man uses a mallet to knock off particles of adhering rock and shell. When ready for market, all that is left of a sponge is the fibrous skeleton of the original organism. Although living sponges absorb food, grow, and reproduce, they have no blood, heartbeat, or sense organs.

then a little island of sound on the starlit sea: song, mandolins strumming, the radio on for music, news. Then it's early to bed; but first, candles are burned to the Virgin Mary. Every night comes the candle ritual. The soft-pointed flames of the candles answer the glow of stars overhead.

Fresher and fresher fraternities of stars wheel up over that wide view of water as the earth makes its oval loop and the seasons pass. From January, after Epiphany, till Apostles' Day in June, from August first till Christmas, the diving boats stay out.

Often in the teeth of screaming winds during squall or tempest, the boatmen may well be thankful that the framed face of St. Nicholas, a patron saint of seafarers, is aboard; or the framed likeness of Christ or the Virgin, shining out over the bunks and the white, even piles of life belts.

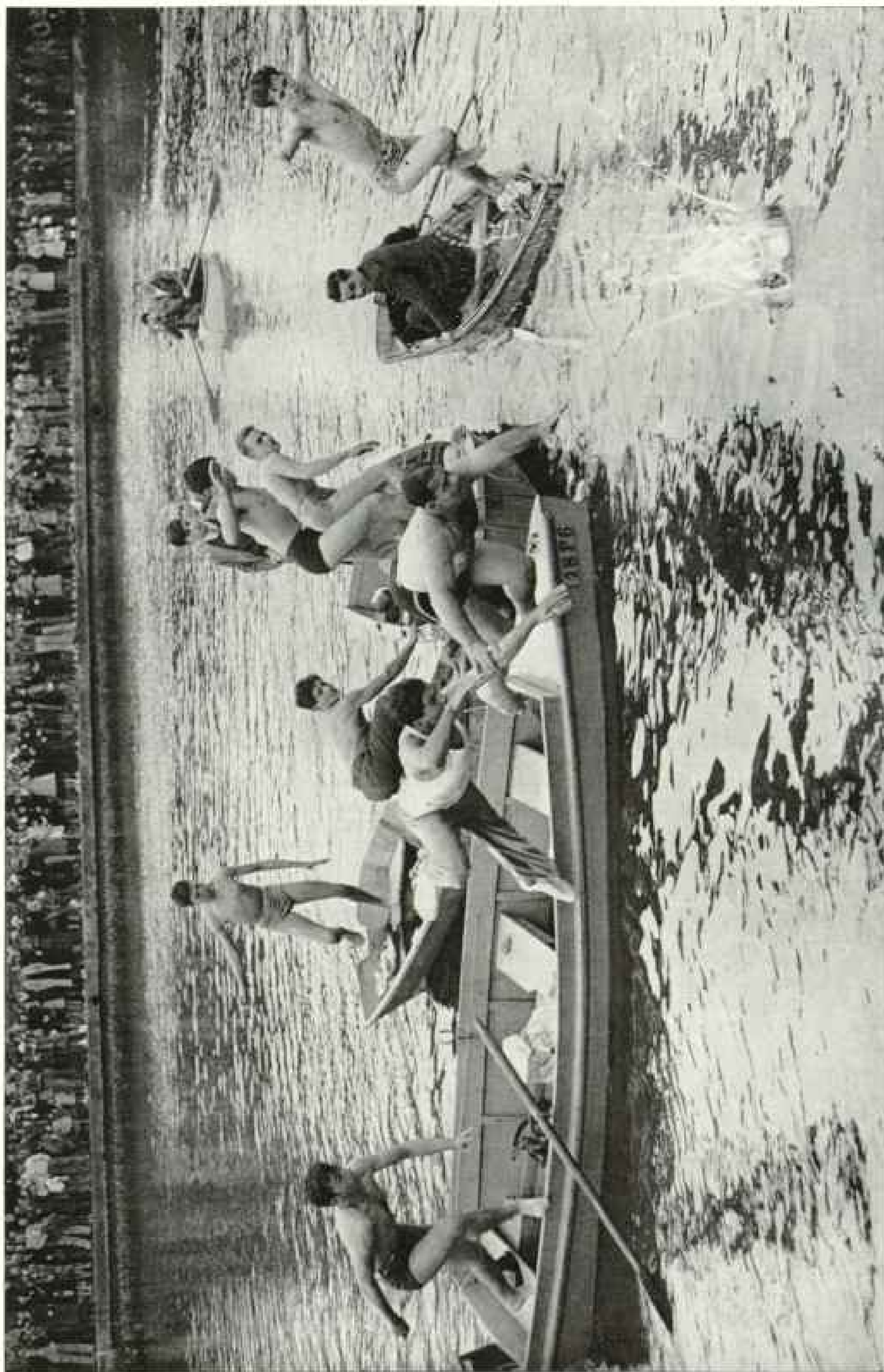
Returned to port at last, safe, with the catch also safe and stored in a cell at the

Sponge Exchange, divers and crew wait till Tuesdays and Fridays for pay; those are auction days. Each boat's catch belongs to the boat. Wages depend upon catch and are allotted by shares. The diver receives four; deck hands, cook, lifeline tender, and engineer, two each. The captain, usually a diver, gets an extra share.

World's Largest Sponge Market

Big lightweight wreaths of sponges, well woven on cord, lie in the Exchange arena—dark, fantastic wares (page 130). They make this market unlike any other in the United States, and the largest sponge market in the world. They attract buyers from near and far. The buyers prod them. They size them up as to softness, firmness, resilience, absorptiveness, other qualities. They write out their bids. The auctioneer calls highest offers.

Brisk moments, these; tense competition. The sponge auctioneer shouts the names of



AP from Press Ass'n.

Splash of a Gold Cross Thrown into Spring Bayou Sends Greek Youths Diving for the Church's Blessing

Thousands of visitors jam Tarpon Springs every January 6 to watch the Greek colony's elaborate all-day Epiphany celebration. As part of the observance, the cross is tossed into the bayou. Greek youths dive to recover the precious emblem (page 136). Later, the waters, so important to this sponge-fishing colony, are blessed.

the boats and the number of strings each has brought in. "All in?" he calls, as bids are collected. Soon he is calling out highest offers. Sales hinge on a few dollars' difference tacked to a several-thousand-dollar offer. The Exchange, packed at early morning, looks like a clean-picked sponge itself by noon, with barren cells and arena.

Packers cut the wreaths, crack off shells and other clinging stuff, trim and bale the sponges for shipping—to New York, it may be; to Chicago, Cincinnati, St. Louis, or elsewhere; often overseas (page 131). Gulf sponges normally furnish about half of U. S. sponge consumption. Bleaching is done at destinations, usually by permanganate of potash.

Best sponges, from deepest waters, now sell as high as \$27 a pound. Sheepswool sponges for baths or window washing rank first; next, yellow sponges, less durable and absorbent; then wire sponges, scratchy; grass or basket sponges; and, last, finger sponges, too fantastic for commercial use.

One morning's sale may total \$35,000 or \$45,000, and with the money captains and boatmen make ready for the next voyages. Yearly sales here have reached \$2,500,000.

Boys Named for Grandfathers

Thus sponge folk keep busy. Homes stay happy. Divorce, until a decade ago, was unknown among these Greeks. It is still rare. Fathers are devoted to their children. Sons are named after grandfathers. A Demetrios, Emmanuel, Nicholas, Theodore, or John of today traces his name back through alternate generations for centuries.

All members of the Tarpon Springs colony adhere to the Greek Orthodox Church. "See you at Twelfthtide." "Yes, oh, yes."

Seas are forsaken and sponges lie neglected during four religious celebrations centering about the four-year-old St. Nicholas Cathedral of cream-colored brick and white marble.

Bright against the water of the Anclote River, the sponge fleet stands like a painting of itself, its fisherfolk home to celebrate Epiphany, when waters are blessed for all seafarers, or to observe Easter, when on Good Friday night a sepulcher under roses, lilies, and other perfumed flowers is borne through the streets past awed crowds.

Songs ring out softly, and in the church, ornate with lilies, the white-robed choir sings moving laments around the holy sepulcher.

From Saturday midnight till Easter morning again sounds the solace of ancient hymns. Boys on one side of the altar, girls on the other, mingle their pure voices, often without accompaniment. Easter Day is also feast

day—roast lamb, black bread, Greek cheese, much olive-oil and lemon-sauce seasoning for vegetables and meats.

Apostles' Day, at the end of June, marks also the end of the first sponge trip. It is a day of great rejoicing and dances, before boats are repaired and restocked for the next long trip of the year.

Christmas means, as elsewhere, a tree, Santa Claus, gift baskets for needy folk. Then, twelve days later, comes Epiphany.

"Feast of Lights" Draws Pilgrims

Nowhere else in all America is there a day like this, January 6, "Feast of Lights," which Greeks on the Gulf of Mexico celebrate as does old Greece on the Mediterranean. Locally considered the most important event in the calendar of the Eastern Orthodox Church, it celebrates, with blessing of the waters and diving for the cross, the baptism of Christ.

"Wherever Orthodox settle near a sheet of water, this observance is carried out," wrote Dr. Thomas J. Lacey, Episcopal clergyman of Brooklyn, New York, who had not missed an Epiphany pilgrimage here in many years. "But nowhere outside the homeland is it celebrated on a scale equaled in Florida."

From dawn till noon the church glows like a living jewel. Costumes of medieval splendor make the pageant of the cross seem a chain of gold, rubies, and sapphires, drawn with slow majestic chant toward Spring Bayou, a brimming cup of silver. From an airplane overhead it must look like that. Then a little flash of gold—the cross—disappears in sparkling water, and lithe bodies leap to its rescue.

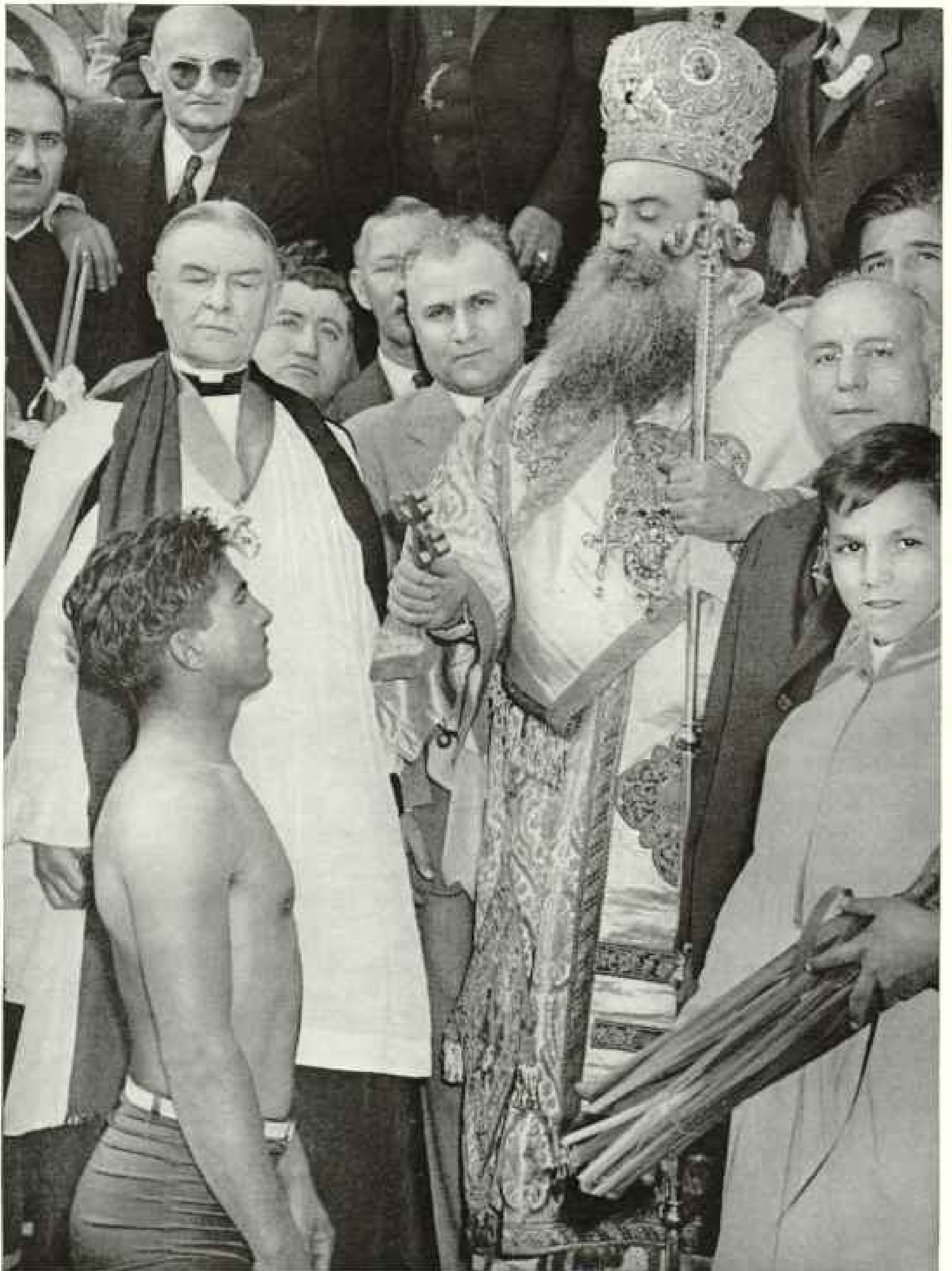
At white blaze of dawn the sexton of St. Nicholas starts ringing the chimes in its tower. "*This is the day, the day!*" intone the bells.

Red, white, and blue flags of the United States, blue and white flags of Greece, hang above the streets. Pennants everywhere bear pictures of Christ's baptism. In the shops coral and shell curios lie frostlike and ready. On streets away from church, vendors sell orange juice, popcorn, cotton candy. A hurdy-gurdy jerks a tune. A monkey struts in red jacket, red fez. This holy day is a gala day.

The Epiphany ceremony is conducted by an archbishop or other high dignitary of the Greek Orthodox Church, bearded and patriarchal.

"There he is," comes a cry in Greek, "he who is over all of us in both Americas!"

Streets jam with people. Cars bearing licenses of every State creep at snail's pace,



Bill Abbott

To the Victor Belong Good Luck, Happiness, and the Blessings of the Church

Fullest hope of a Greek youth is to retrieve the gold cross in the annual Epiphany celebration. Here Archbishop Athenagoras of the Greek Orthodox Church bestows a blessing upon the winner. Behind the kneeling victor stands the late Dr. Thomas J. Lacey, Episcopal rector who took part in the celebration for many years.



Hamilton Wright

Sponges Wrested from the Ocean Floor Dry in Florida Sunshine

They come from the boats in all sizes and shapes, for no two sponges are exactly alike. In 1938 a vicious blight struck Bahama and then Gulf sponge beds. A fungus growth would start inside a sponge, spread throughout. Shallow-water varieties were most critically attacked. The malady raged about a year, though its effects were felt longer. Gulf sponges suffered much less damage than those of the Bahamas.

honking a mild "Please," seeking room to park. Here are 15,000 guests.

Elsewhere in the world trees may break with sleet and rivers lie stopped with ice; but here grow flame vine and bougainvillea, and ebony trees supporting purple orchids.

Guests on a pilgrimage that dates back, in part, to the days of Antioch's glory have come at speed across distances that would have appalled those ancient pilgrims: past orange groves, pines, and turpentine stills; along highways slowed by cattle; by air and by sea.

From the little-known local church affair of 44 years ago, the day's ceremony has grown to hemisphere proportions.

First comes Mass in the packed Cathedral, bright with banners, flowers, glowing candles, and tall gold crosses; rich with the fragrance of incense and the violet-clove drift of sweet basil. The Liturgy is chanted in ancient Greek.

"In the solemn chanting of the Liturgy," Dr. Lacey writes, "we catch cadences of the Athenian tragedians reciting the sonorous lines of Aeschylus on the classic stage. We catch echoes of the Byzantine music such as filled the dome of Saint Sophia in the days of Constantinople's splendor."

Loud-speakers carry words and music into downtown sections, while indoors the pale candles silently consume their own lengths. A basil branch is dipped into silver urns, and parishioners are sprinkled with holy water. With further ceremonial prayer in the churchyard, the service comes to a close at noon.

Pageant of Splendor Moves to Music

Then the procession forms—altar boys, band, Byzantine choir, school children in native dress, Boy Scouts, Ahepa, Halki, Kalymnian, Aegina, and Taxiarchis Societies, city officials, guests, church dignitaries,

American Legion, Greek community officers.

They move in a pageant of splendor, altar boys carrying gilded insignia, holding up crucifix and staff. A girl bears a dove. Vestments that glowed only in dark richness in church reveal deep crimsons, blues, elaborate goldwork. The local priest's robe, so heavy it could stand without support, is cloth of gold, with beautiful scarlet background.

To slow, solemn music they move through the streets, the choirs singing "Christ in Jordan," that old, old song in minor key, or "Cherubim," the Angelus hymn. The destination is Spring Bayou, amphitheater of rock, sky, and sea.

Archbishop, clergy, and choir descend long steps and board a barge that takes them to the middle of the bayou. Witnesses throng the sloping banks. Now and then a fish flings up, sparkles, and splashes back again.

Thirty or more divers in shorts, their bodies lithe as though sculptured by Lysippus, wait poised in rowboats. Their gaze never wavers from the archbishop's face. He reads in Greek from the ornate Bible. Responses come in Greek. Someone reads from Matthew:

"... and lo, the heavens were opened unto him, and he saw the Spirit of God descending like a dove, and lighting upon him."

At these words the white dove is liberated. Up over the crowd it flies, with a whir of white wings, a flutter of blue ribbons tied to its feet.

Then the archbishop throws the cross. It flashes—an arc of light—and is lost in water. At once the divers plunge (page 132).

An airplane sails overhead; once one dropped hundreds of roses on the scene. But no one looks up. It is as if people can hear nothing, see nothing, but the churn of boy figures, breathless, eager, under the water.

"He has it! Yeh, Mike!" (Or Manuel, John, Theophilos, Tony, Stanley, Demetrios.)

Winner Gets Blessing and Good Luck

The winner holds the golden emblem aloft, swims vigorously toward the archbishop, and is drawn aboard, shivering, to kneel at his feet, while rivals still flounder and splash.

To the winner go the blessings of the Church, and, traditionally, good luck and happiness.

Once two divers got hold of the cross under water and wrenched it in two. One boy—you could see tears in his eyes—had to

give up his piece; the other boy got hold first and his was larger.

The cross divers are Greek, usually from near by. But one year a little man about 40, bald, from Long Island, asked if he could dive. He did, and came up with the cross. His ice-cream business should have thrived that year.

The losers are plucky, cheering the winner, making a hero of him.

"Yeh, Mike!"

The kneeling winner, face dripping and shining, feels the touch of the archbishop's hand on his forehead as he receives the Church's blessing (page 134).

Then comes the supreme rite of the day.

"Blessing," evokes the archbishop, spreading out his hands, "blessing upon these waters." During the war a new significance crept into the annual prayer: "That no enemy cross to attack these shores."

In pre-Christian times Egyptians celebrated the blessings of the Nile, and other peoples had similar rites. The custom of revering water, germinating in pagan days, intertwined with the later flower of Christian religion to become the full-blown splendor of the Greek Church's day of the cross.

A Hero for a Year

After this climactic ceremony, cross retrievers of previous years fall in behind today's hero. Tonight he leads the Epiphany Ball. For the year he will be hero of the colony; perhaps for another year and yet another, if he retrieves the cross twice or more, as did Steve John and Ierotheos Athanasiou some years back.

The new winner marches with former heroes, singing, through the streets. All carry silver trays, but on his tray is the golden cross. They stop before Greek after Greek, receive gifts for the needy.

The devout return to church for Communion and prayer, while crowds swirl through the town and on the side streets barkers shout, "Peanuts!" or "Cotton candy!"

As night falls, stars come out and twinkle like altar lights above the wide waters newly blessed. The sponge boats wait, their thick shapes and the thin lines of their poles penciled in silhouette as deepening darkness enfolds the waters. And underneath and far away, the clinging, living sponges also wait.

In response to requests from students of the Bible, classic languages, and ancient history, "The Grandeur That Was Rome"—a reprint in booklet form of the articles and paintings on Ancient Rome in the November, 1946, issue of the NATIONAL GEOGRAPHIC MAGAZINE—has been made available. Copies may be obtained by writing the National Geographic Society, Washington 6, D. C. Price: 75¢ each in U. S. and Possessions; elsewhere, 85¢ in U. S. funds. Postage is prepaid. Remittances should accompany orders.

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Articles and photographs are desired. For material The Magazine uses, generous remuneration is made.

In addition to the editorial and photographic surveys constantly being made, The Society has sponsored more than 100 scientific expeditions, some of which required years of field work to achieve their objectives.

The Society's notable expeditions have pushed back the historic horizons of the southwestern United States to a period nearly eight centuries before Columbus crossed the Atlantic. By daring the ruins of the vast communal dwellings in that region, The Society's researchers solved secrets that had puzzled historians for three hundred years.

In Mexico, The Society and the Smithsonian Institution, January 15, 1925, discovered the oldest work of man in the Americas for which we have a date. This slab of stone is engraved in Mayan characters with a date which means November 4, 291 a. c. (Spinden Correlation). It antedates by 200 years anything heretofore dated in America, and reveals a great center of early American culture, previously unknown.

On November 11, 1931, in a flight sponsored jointly by the National Geographic Society and the U. S. Army Air Corps, the world's largest balloon, *Explorer II*, ascended to the world altitude record of 72,195 feet. Capt. Albert W. Stevens and Capt. Cyril A. Anderson took aloft in the gondola nearly a ton of scientific instruments, and obtained results of extraordinary value.

The National Geographic Society-U. S. Navy Expedition camped on desert Canton Island in mid-Pacific and successfully photographed and observed the solar eclipse of 1937. The Society has taken part in many projects to increase knowledge of the sun.

The Society cooperated with Dr. William Beebe in deep-sea explorations off Bermuda, during which a world record depth of 3,028 feet was attained.

The Society granted \$25,000, and in addition \$75,000 was given by individual members, to the Government when the congressional appropriation for the purpose was insufficient, and the forest of the giant sequoia trees in the Giant Forest of Sequoia National Park of California were thereby saved for the American people.

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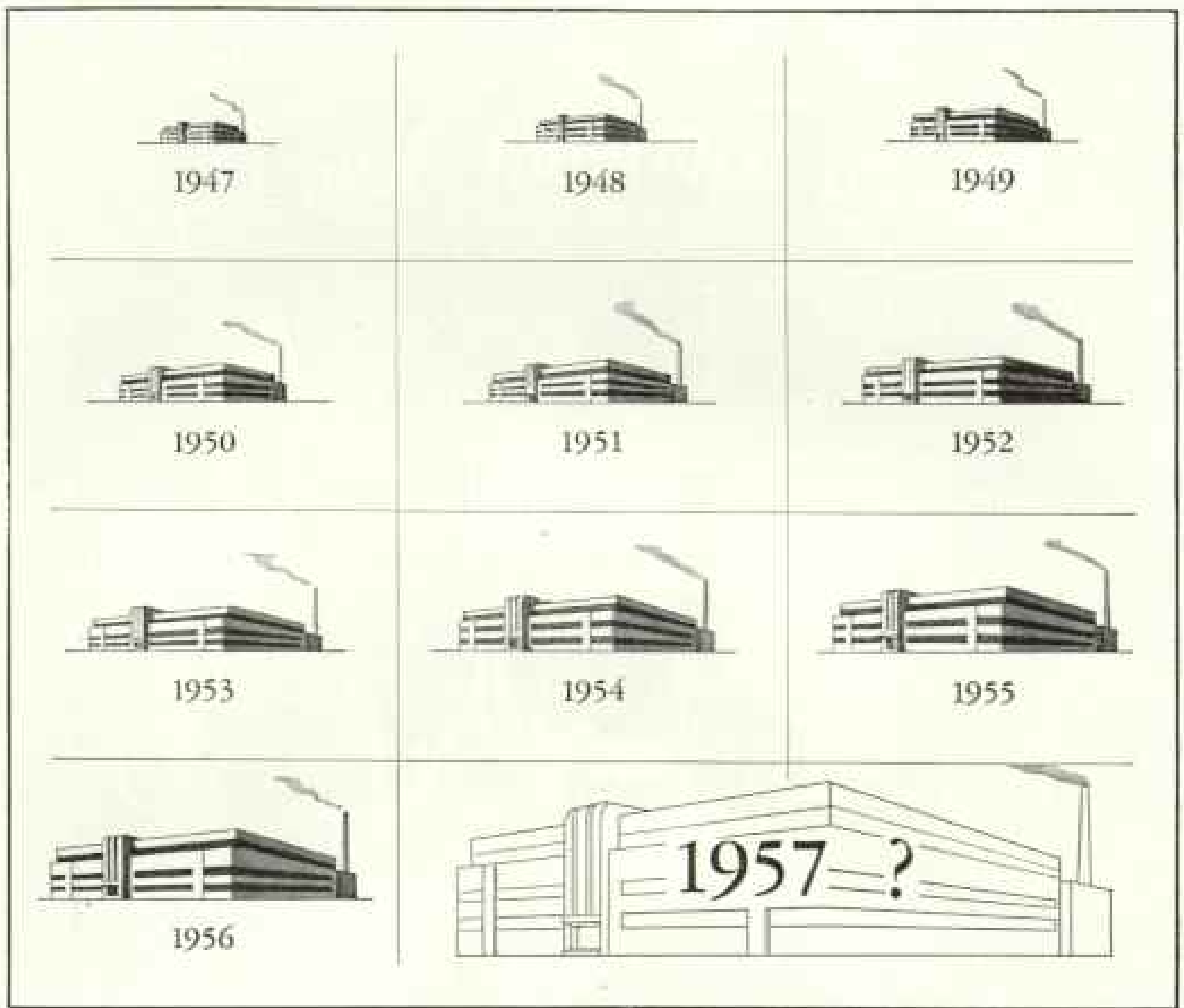
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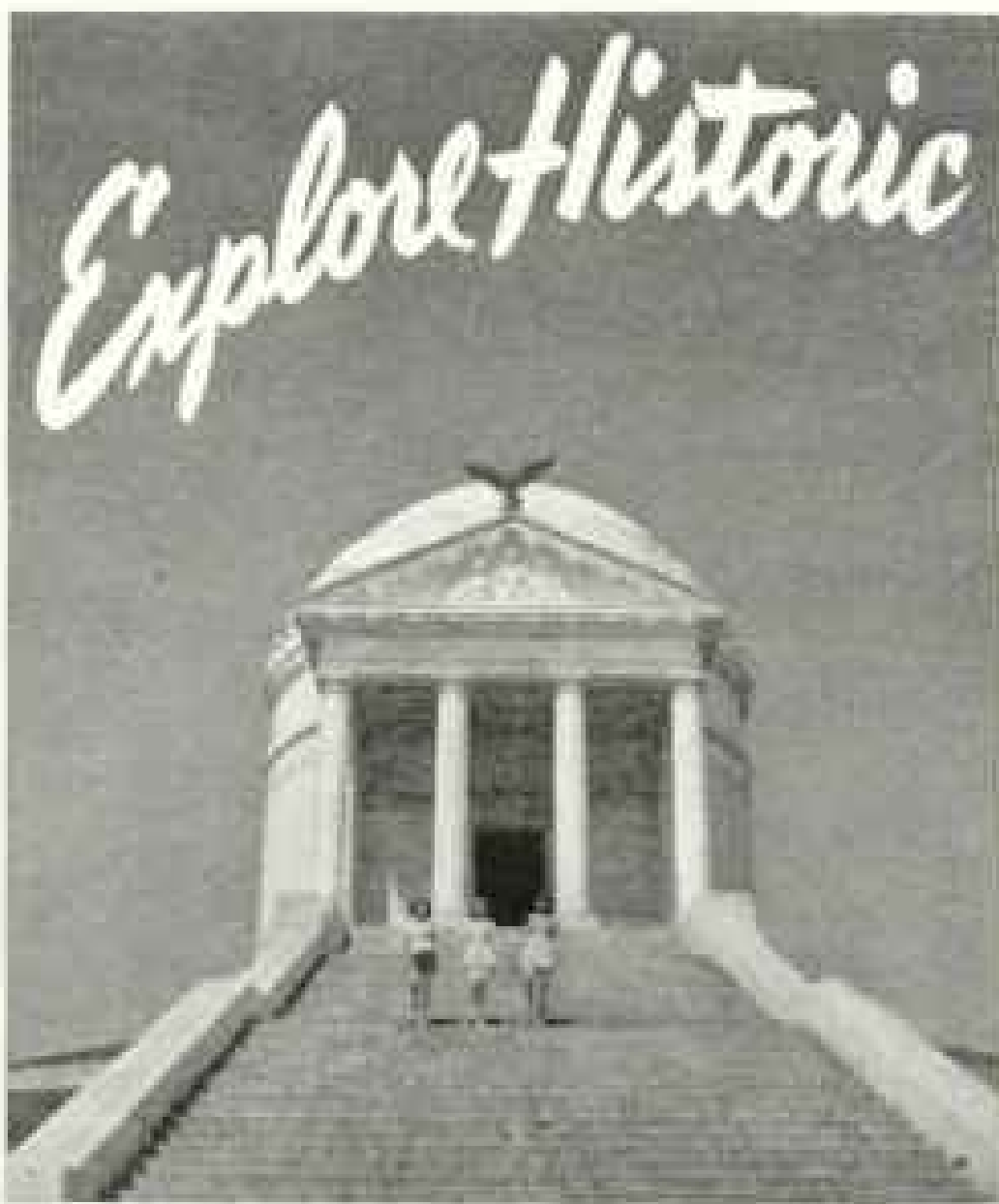


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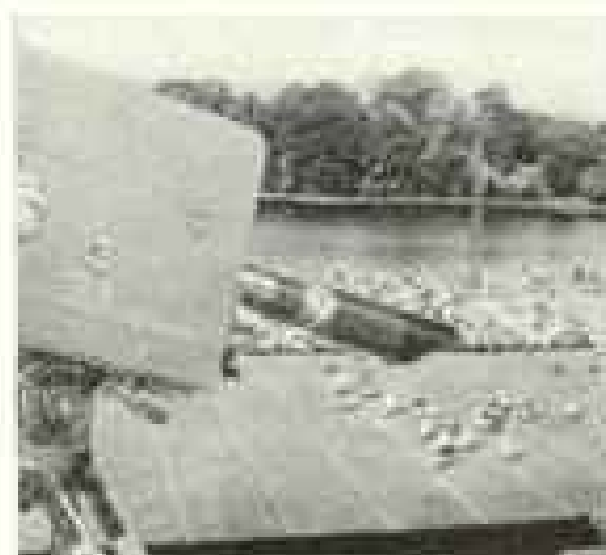
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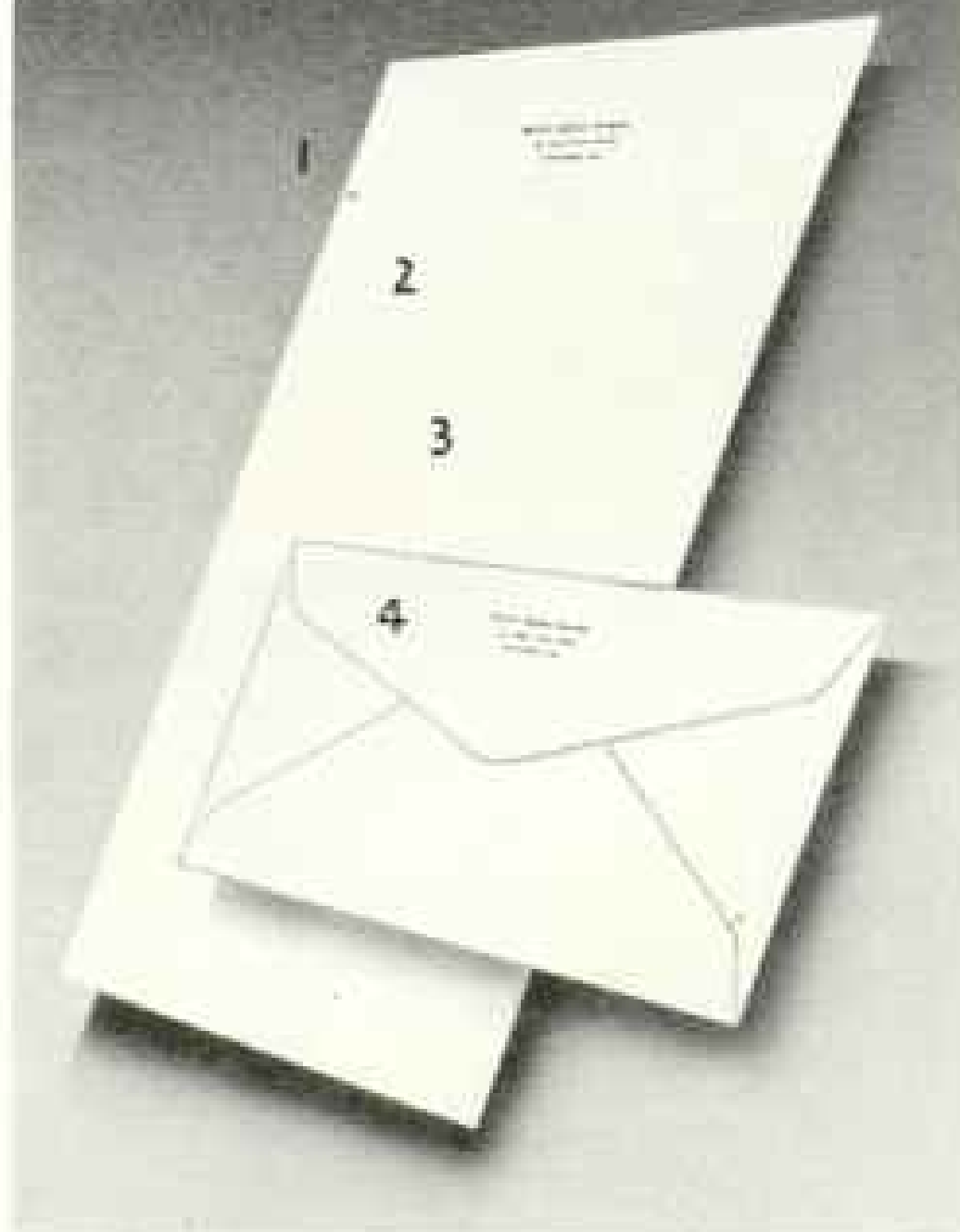


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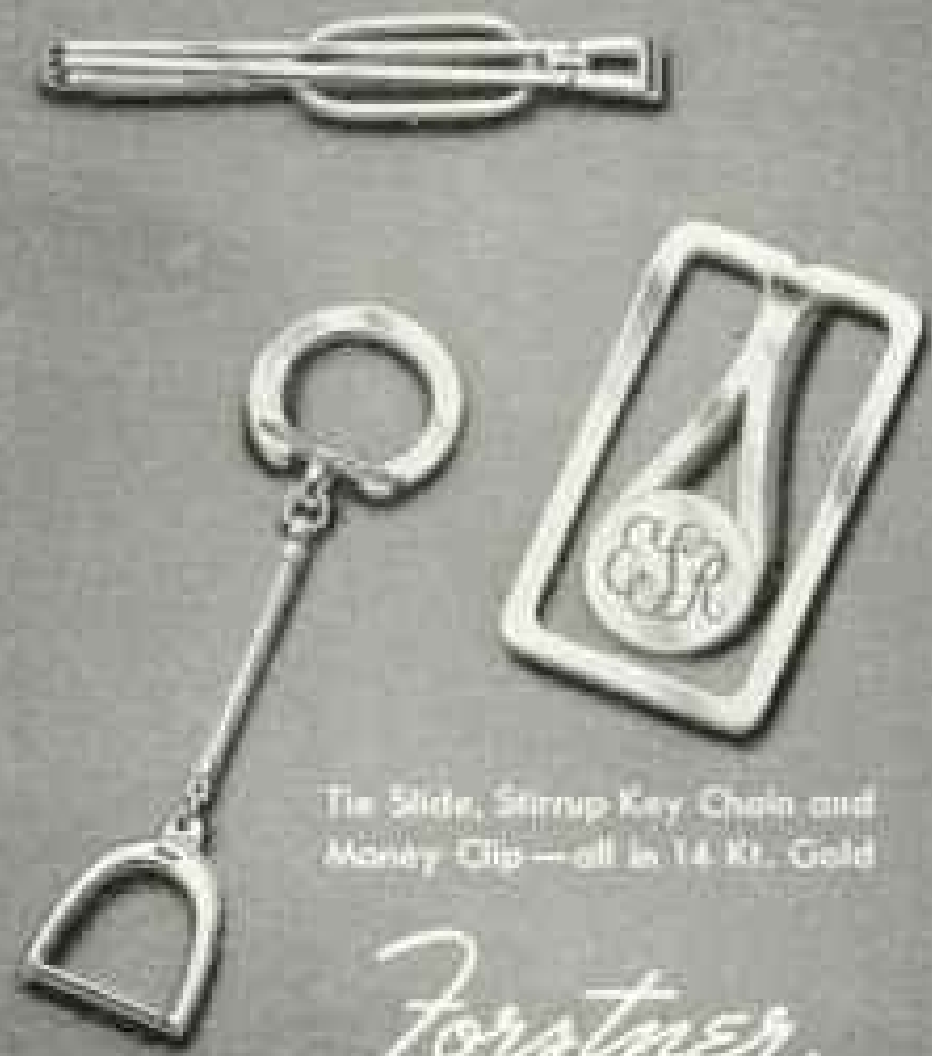
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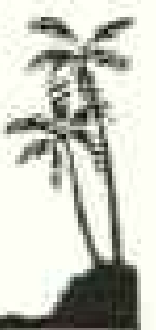
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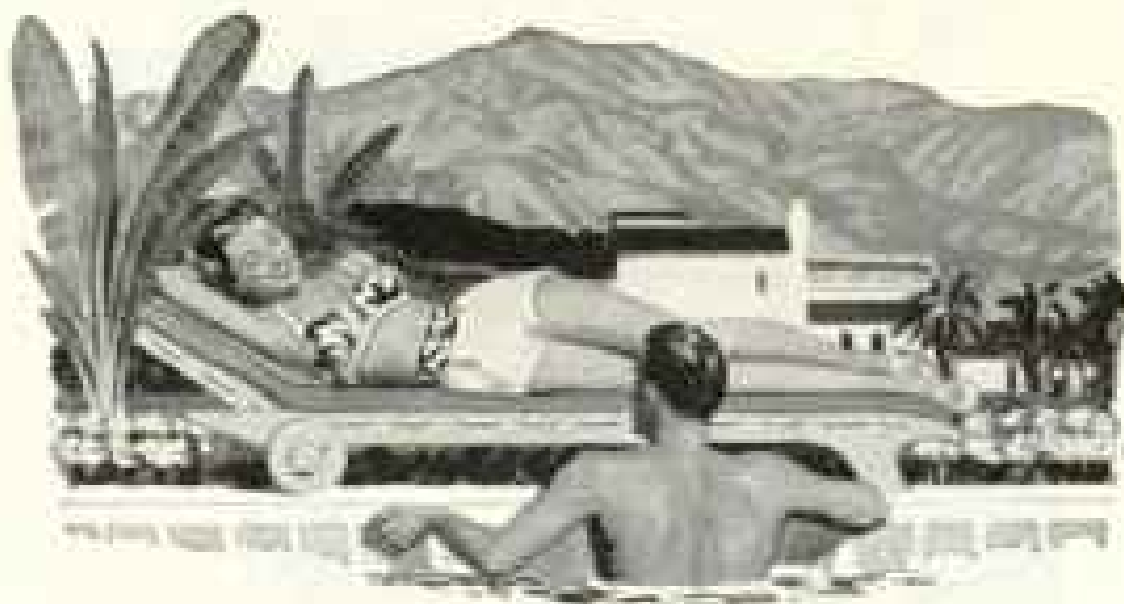


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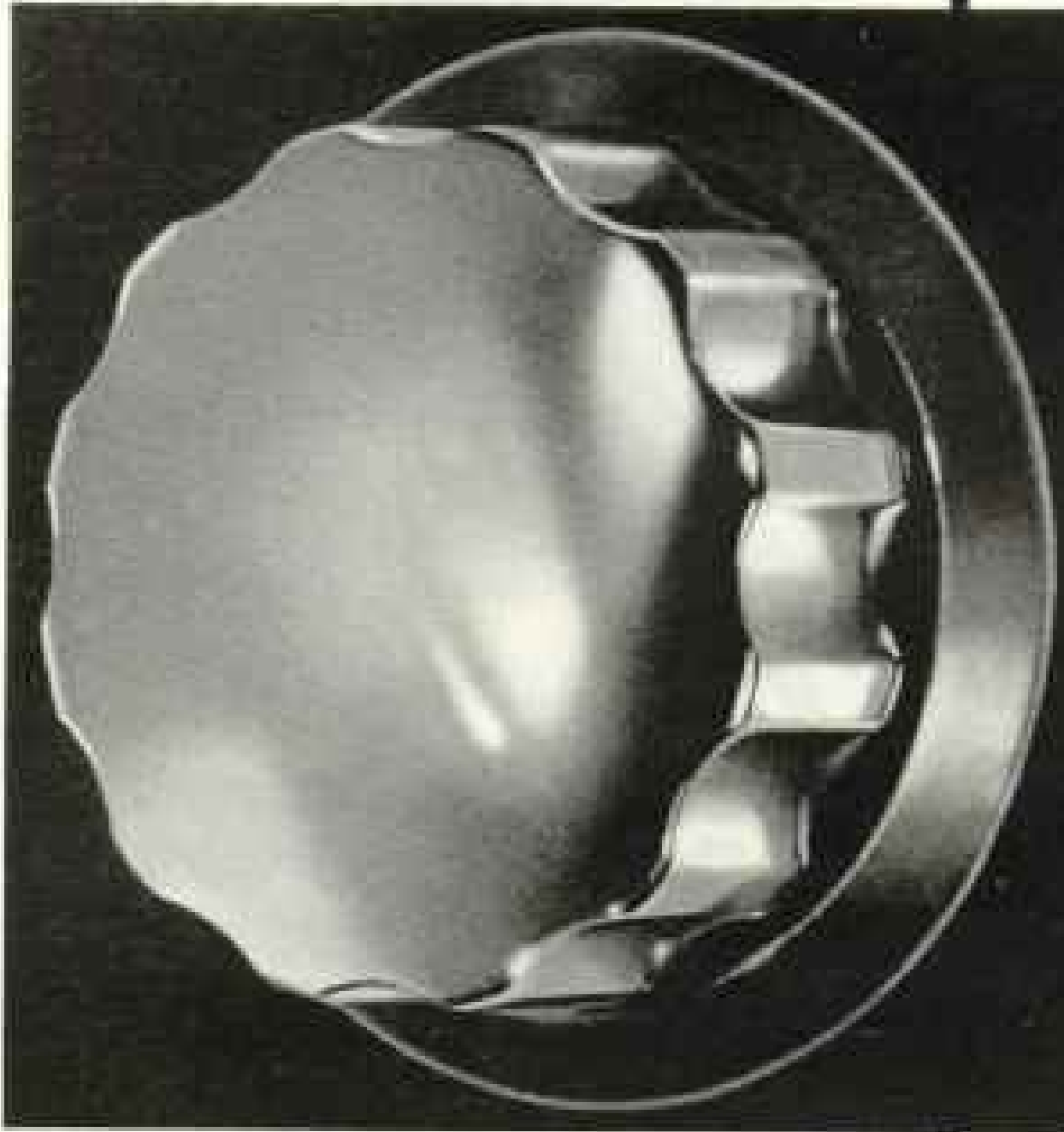
MOBILE, ALABAMA

Open the Year 'Round

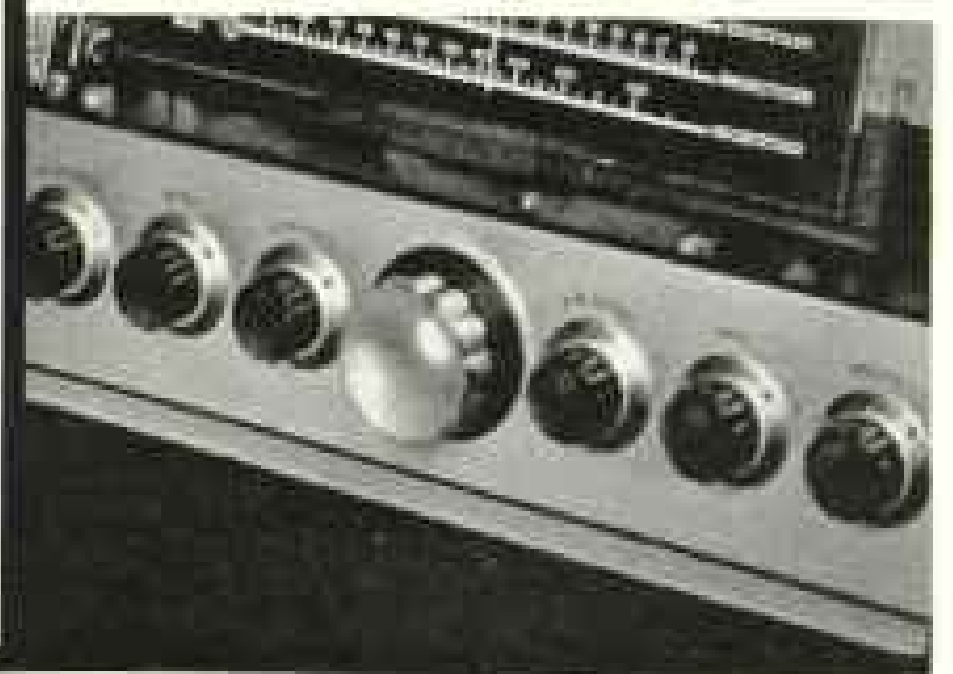
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Never neglect a cold!



That will help avoid pneumonia. But if pneumonia *should* strike,  don't let it frighten you. Medical science, aided by the sulfas  and penicillin, has reduced pneumonia mortality by about one half in the past 10 years.

If more people who have bad colds, or colds that hang on, would call their doctors, the pneumonia death rate would *drop still further!*

Fight pneumonia by
guarding against colds!

Try to keep in the best of health during the winter, for by keeping fit you lessen the risk of colds and pneumonia. However, if you get a bad cold, stay home and go to bed if possible, eat lightly, drink plenty of fruit juices and other liquids. Be especially careful not to get chilled.

Watch out for pneumonia's warning symptoms, which are usually a severe shaking chill followed by fever, coughing accompanied by sharp pains in the side or chest, and often rust-colored sputum. However, one type, *virus pneumonia*, starts slowly with a gradual rise in temperature, chilliness rather than a shaking chill, and a slight sore throat with a hard cough, but little or no sputum.

Some types of pneumonia, like virus pneumonia, do not respond to sulfa or penicillin. Whatever the type, calling the doctor quickly permits the prompt diagnosis and medical care which afford the best chance for rapid recovery. For other important information about pneumonia, influenza, and the common cold, send for Metropolitan's free booklet, 17N, "Respiratory Diseases."

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TO VETERANS—IF YOU HAVE NATIONAL SERVICE LIFE INSURANCE—KEEP IT!



Anhinga's a stick-in-the-mud...for a good reason

THE WATER TURKEY or snakebird, *Anhinga anhinga*, lives along the sluggish bayous and rivers of the Gulf Coast.

Anhinga is easy to see when he's sitting in the top of a tall cypress before he goes fishing. But when he's swimming around in the water, where he is apt to find a lot of enemies as well as a good meal, it's practically impossible to see Anhinga, unless he wants to be seen.

If he's frightened, Anhinga sinks in a flash, feet first. Then, when he comes up for air, he stiffens his sinuous neck, eases his head out of the water, sticking it straight up. To his most discerning foes, Anhinga then seems to be a dead limb sticking up out of the muddy water, exactly like all the others protruding from the swamp.

The water turkey's trick is typical of the way many living things, including man himself, figure out pretty effective ways to ward off trouble. But man, it seems, is the only animal able to go beyond these purely preventive devices and protect himself further—by compensating himself for loss that may occur when his best precautions fail.

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With insurance, you can make sure that an automobile accident won't cost you your car, your driving privilege, your life savings, or perhaps a big slice of your pay for a long time.

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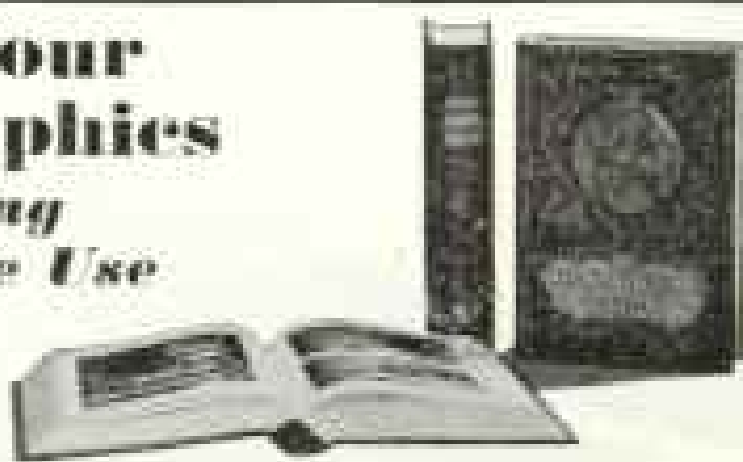
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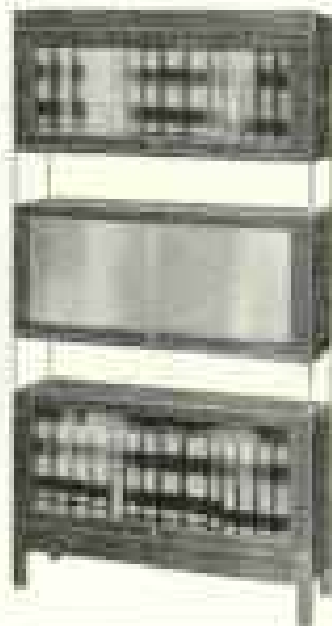


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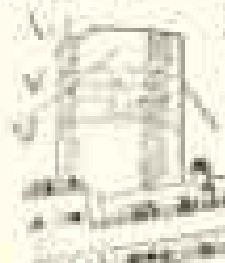
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