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With 25 Illustrations and Map

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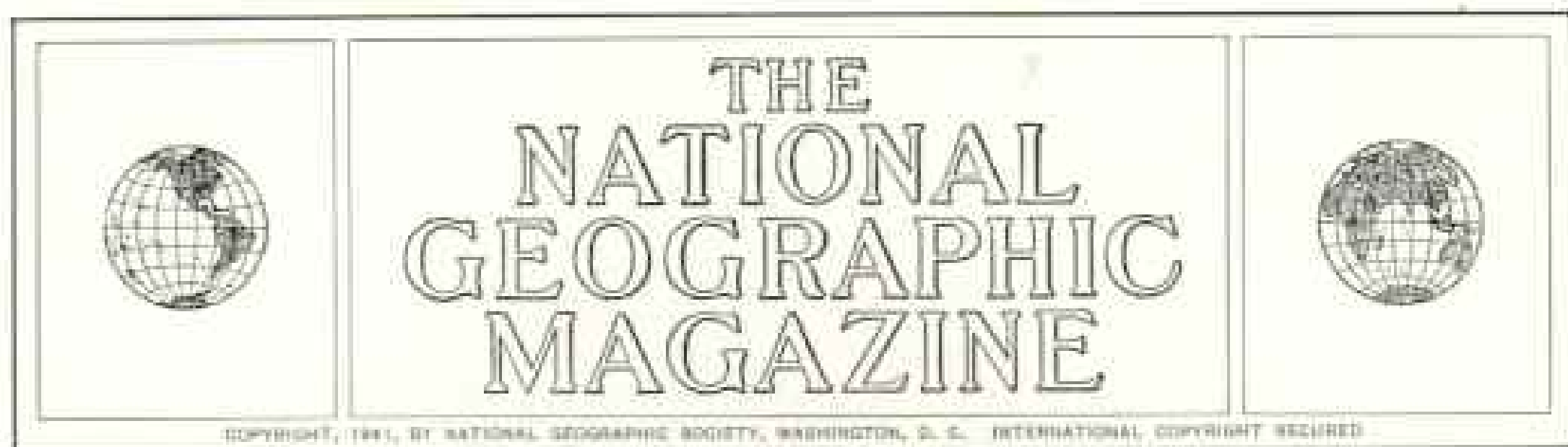
EUGENE E. WILSON

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## Westward Bound in the *Yankee*

BY IRVING AND ELECTA JOHNSON

“ALL ASHORE that’s going ashore!”  
Overhead the “click-click-clack” of the halyard blocks gave notice that our “landlubber” crew was hoisting sail.

The *Yankee* cast off her lines and headed for sea, away on another voyage around the world. It proved to be a year and a half before she tied up to that dock again, her amateur crew turned to hard-bitten sailors.

Barren Galápagos, named by the Spanish for the turtles found there; Easter Island with its weird statues; and romantic Pitcairn, South Sea hide-out of the *Bounty* mutineers, all were logged as ports of call (maps, pages 4 and 91).

The last of the paper streamers dropped over the side. Good-bys from the dock grew faint. There was a breeze that called for all sail. One after another we set them: foresail; mainsail; forestaysail; jib; maintopsail; fisherman staysail. Finally the square sail dropped from the yard, and the raffle rose above it to the top of the foretopmast. It was all new canvas, spotless and beautiful, over 6,000 square feet of it. All her rags! (Plates I and IX.)

War already had broken out, though seemingly still remote from America, when the *Yankee* sailed out of Gloucester, Massachusetts, that day. Would it dog our tracks on the high seas, perhaps interfere with our plans for care-free delving into the world’s far places? But we were all too busy with pleasant anticipations to spend much time on forebodings as the *Yankee* plowed southward. It was good to be off again in our stout schooner, already a veteran of two previous voyages around the world.\*

Before any of us was born, our 92-foot ship was sailing the North Sea. She was built as a husky pilot schooner by the Netherlands Government in 1897 and spent nearly thirty years in that service.

But the *Yankee* had more than strength and beauty. She was ideally suited to our purpose. We wanted a home and a ship that amateurs could sail.

### No Passengers on This Cruise

All hands shared in the expenses of the cruise. Irving was owner and captain. Everyone but the cook joined in the work of sailing the ship, standing regular watches day and night, steering, handling sail, rigging, and sail-making. The three most experienced sailors became mates and each took charge of a watch.

Down below, the *Yankee’s* layout is especially adapted to a large crew. In the stern is a good-sized after-cabin for the captain and his wife, and from this a narrow hall leads forward, with the engine room and the bathroom on one side and a single cabin for our two small boys and a double stateroom for the two girls on the other. The hall ends in the main cabin with 14 built-in bunks, upper and lower, along its sides.

Selecting our crew required extreme care. The ship’s company would live in close quarters for 18 months as one big family. Besides the skipper and his wife, Electa (better known as “Exy”), twelve young men between 18 and 30, two young women, and our two small sons, Robert, one, and Arthur, three, were signed on. The group included a doctor and men qualified to handle the auxiliary Diesel engine and the radio, and to make photographs.

Fritz, our sea cook, was the only professional on board. He could cook in any weather, even keep ahead of our sailors’ prodigious appetites.

Female members of a ship’s crew must be given berths on her roster, too, so the girls were

\* See Commander and Mrs. Irving Johnson’s books *Westward Bound in the Schooner YANKEE* and *Sailing to Sea*, published by W. W. Norton and Company, New York City.



Dr. Barnum A. Dillie

### "Sunk" in the Trough of a Mountainous Wave

An instant later the *Yankee* bobbed up again on the crest of a swell (opposite page). Lounging along in this storm rig, *Yankee* was dry and comfortable. The camera used for this photograph and the one opposite was kept dry in a waterproof can until the instant of picture taking.

signed on as blacksmith and sailmaker, both old windjammer jobs, and the skipper's wife as bath stewardess!

At sundown after leaving Gloucester the wind failed, so under power we headed down through the Cape Cod Canal, nearly freezing on the way. By noon we were off Cutty Hunk and with a fresh breeze coming up were well beyond Block Island by nightfall. So far the weather had been quiet and smooth, for which we were thankful, with a tired and green crew and many small articles not yet stowed securely.

The next week, however, is remembered by some of the crew as a series of nightmares. We met with three cyclonic storms and sailed di-

rectly through the center of two of them. Once, just before we got the *Yankee* properly hove to in a nasty cross chop near the storm's center, she rolled close to 45 degrees. The mate, the radio operator, and the cook were the only ones not under the weather.

Though the wind blew harder during the last hurricane, the crew was getting its sea legs, and many were out on deck watching the seas. The *Yankee* was hove to and the wheel lashed hard over. What a ride we had! We would climb way up the steep side of one of those huge waves, then dive headlong into the next hollow. Fascinated, we watched the seas come at us.

Our little schooner could take it all right; she rode the seas like a gull.

It was a fine show that afternoon, but we would have liked it better if the wind had let up before dark. Full gales are never much fun at night. The roar of the wind, the battering of the waves against the hull, and

the motion of the ship are all intensified in the dark.

In the morning things had eased up enough so that we could hoist the mainsail again and be on our way. We certainly were proud of the *Yankee*.

### "Bos'n Chairing" Thrilling Sport

Once south of Cape Hatteras, the life of the ship changed. With sunny days and warmer breezes, seasick sailors recovered. Everyone took it easy, sprawling on deck in the sun, reading in the shade of the boats, and enjoying relief from the boisterous North Atlantic. Below, everything dried out and the sun shone down the wide-open skylight.

As the *Yankee* sailed steadily along in the warm blue seas of the Tropics, the skipper introduced the crew to his favorite sport, "bos'n chairing."

A davit is swung out and the boatswain's chair hung from it on block and tackle. You climb in and someone on deck lowers away. Then you get a real ride, dragging through the water at the *Yankee's* side.

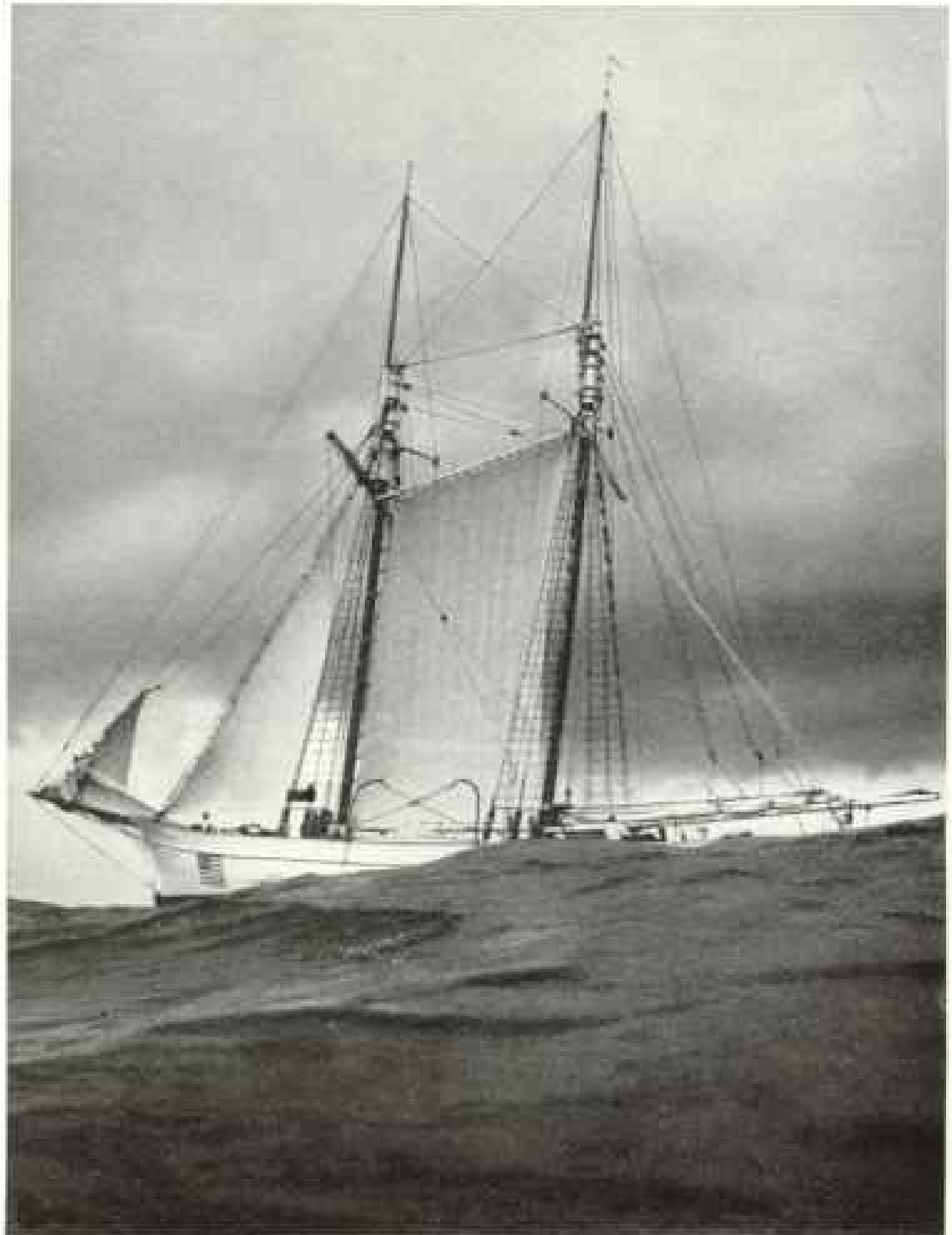
At three knots it is a languid, cooling bath; at five it is a brisk ride; at seven you whip through the water with every bit of energy absorbed in holding yourself upright; at nine only a few of the men try it, and everyone gathers at the rail to watch (p. 7).

Sometimes the rider is completely out of sight in a smother of foam; sometimes he is in mid-air for several seconds between the top of one wave and the next. It is a mad ride, and never a silent one. Whoops and shouts come from the boatswain's chair, often cut off abruptly just in time to avoid swallowing the next wave.

Pausing at Cap-Haïtien, Haiti, we met and went aboard one of the United States destroyers patrolling the West Indies. Her crew was quite envious of the *Yankee's* long voyage, which contrasted so strongly with their job of cruising the Caribbean in their uncomfortable ship.

Crossing the Caribbean to the Panama Canal, we sighted several times the looming hulks of steamers at night showing no lights whatever, bringing to mind the fact that war invades even the easy Tropics. The *Yankee* was inspected for bombs before entering the Canal, and on the way through she carried two armed soldiers.

At Panama the *Yankee* settled lower in the water than ever before. She was loaded with



Dr. Raymond A. Gillen

### *Yankee* Hove To in a Blow

With only her forestaysail and foresail set, the little schooner rides the rough seas like a gull. These two photographs were taken from a pneumatic boat, made fast to a long line and towed astern. The United States yacht ensign is painted on the ship's bow.

all sorts of supplies not only for the crew but for friends in the Galápagos and Pitcairn Islands. We took on board for the descendants of the *Bounty* mutineers their radio transmitter which had been here for six months after being repaired, bags of mail, boxes of tools, and bales of clothes.

Our own supplies included a ton and three quarters of coal for the galley stove and a quarter of a ton of butter.

While we were loading, a government mine layer was dropping mines not far away like a turtle laying eggs. We headed south with the scuppers streaming coal dust, but it wasn't long before the shore dirt and coal dust were washed off and the ship spick-and-span.



### *Yankee's* Track Through Boisterous Atlantic and Sunny Pacific

Starting from the old fishing port of Gloucester, Massachusetts, the amateur crew received their initiation in cold, stormy New England seas, sailed south to Hispaniola and through the Panama Canal. Then began the most romantic part of the voyage, with visits to the Galapagos Islands, ancient home of buccaners and center of strange sea life; Easter Island, with its mysterious statues; and Pitcairn, home of the descendants of the *Bounty* mutineers (see also map accompanying *Java Assignment*, page 91).

As we neared the Equator, King Neptune came over the bow one day to initiate the whole crew, except Fritz, Arthur, Exy, the doctor, and the skipper. With so many newcomers on board, we "shellbacks" needed some help for the initiation ceremonies, so the three mates were given special attention in the morning. Among other things, they were required to paddle ahead in a leaky dugout we had found at sea, and with a huge pair of wooden scissors cut "the Line" for us to cross.

The ship sailing steadily along felt good to us. Her behavior brought back the familiar

feelings that make sailing fascinating. There is the sensation of lying in a groove instead of a flat bunk as the ship heels over and the equally familiar jolt when you suddenly forsake that groove as the ship comes about and leans the other way. Your ear, only a foot from the blue ocean upside, grows used to the sound of seas roaring past.

Soon you identify the activities of the crew overhead by the deck noises. A sudden rush of many feet forward means something has let go in the head-sails. A roar from the officer of the watch—the helmsman has wandered off the course. The tune of the rigging tells whether the wind has increased or died down. And the impression that someone overhead is trying to jump through the deck only means that his feet are a bit cold.

On deck, noontime brings out the navigators with sextants. During the early evening someone is consulting the Light List and noting those we should see during the night, with all their peculiarities: red flashes,

white flashes, varying intervals and candle power. We are continually on the lookout for passing ships.

One night our second mate was sure there was a tuna fisherman somewhere around, though no one could see anything. He said he had a sailor's hunch. Finally the mystery was traced to the smell of sardine sandwiches in the deckhouse!

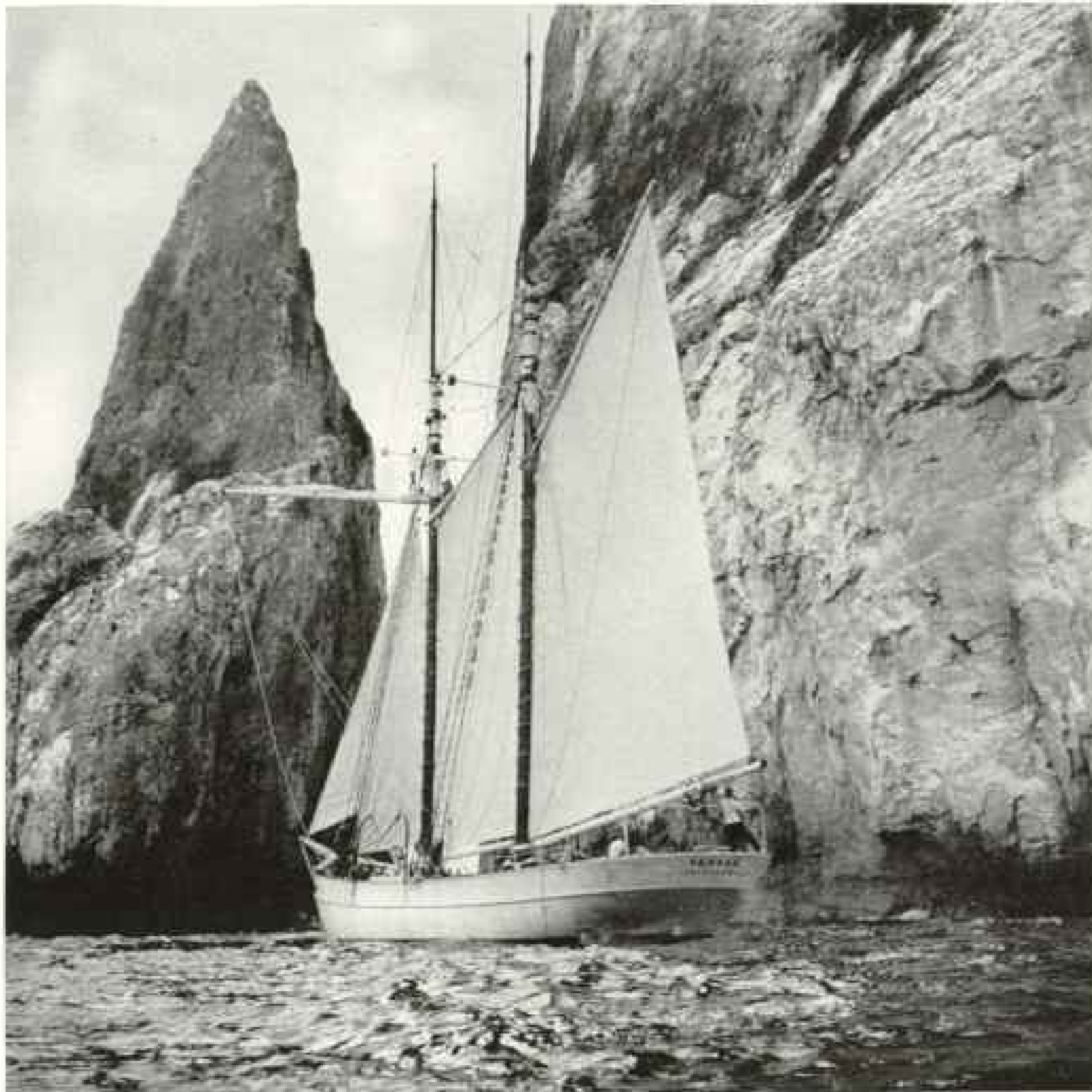
We roared out to the Galapagos in jig time, anchoring first at Wreck Bay on San Cristóbal (Chatham) Island. This is a strange-looking island of lava rock, volcanic contours, peaks



Dr. Raymond A. Hiller

### "Loy Aloft and Furl the Square Sail"

Up the ratlines run the crew to take in the big sail before a squall strikes. Able seamen are these lads now after their months of training at sea. Each is an amateur who has signed on for the cruise around the world; each shares in the expenses of the voyage and does his bit in working the ship. In the Tropics the men go aloft barefoot, which makes it easier to hang on. Insteps soon become toughened to constant climbing.



Dr. Raymond A. Dillim

### With Men Aloft, *Yankee* Considers Sailing Through This Rocky Cleft

Her foreyard proved too wide, but the schooner drifted up close for a look at Kicker Rock, off San Cristóbal Island, in the Galápagos. The peak, 486 feet high, seems split as though by a giant's axe.

and slopes, all in brown with only scrub trees.

Terrible stories occur repeatedly in Galápagos history, a chronicle of shipwrecks and deaths of crime and thirst.

Pirates also fit into the Galápagos picture. Many knew the archipelago well and may have buried treasure there. Darwin visited the islands in the *Beagle* in 1835 and formed basic theories on evolution from his observations.

For human habitation, the prime drawback of the Galápagos is the lack of fresh water. San Cristóbal Island is the only one with a dependable amount, and consequently supports the only real village in the archipelago. Spots where anything green can be found growing are scarce.

This very condition has been responsible for the specialty of the islands, land tortoises, or, in Spanish, *galápagos*.

These creatures, which seem hardly animate, may live one hundred years or more, grow to huge size, and, except in their extreme youth, get along for months at a time without food or water. We saw one weighing about 300 pounds, and they once are supposed to have reached some 600 pounds. Yet, surprisingly, they are excellent eating; the old sailors knew this well.

Whalers, merchant ships, and men-of-war carried off thousands of them. The beasts could be dumped in the holds and forgotten until wanted.



Dr. Raymond A. Dillen

### The Skipper Plays Porpoise Alongside *Yankee* Roaring Through Tropic Seas

This exciting sport was called "bos'n chairing" by the crew. From the davit is rigged the boatswain's chair, a swinglike seat used for doing repair work aloft. The rider climbs in, is lowered away, and the fun begins. He planes over the water at wild speed, slapping and diving through the seas (page 3). Another favorite sport is "godunking." The chair is suspended from the bowsprit and every time the ship noses into a sea the "godunker" is ducked in the swell.

With an eye to stocking up for long voyages, the whalers left donkeys, dogs, pigs, and cattle here, which survived under the most adverse conditions. Now they run wild over some islands, live on a poor diet, and slake their thirst with dew or at sources unknown to men.

Since we needed fresh meat for our long run across the Pacific, we decided to emulate the whalers and catch some turtles. One of the boys dove on the back of one monster found basking in an inlet and hung on until we grabbed him from the boat. Later at Academy Bay on Santa Cruz (Indefatigable) Island we

caught four more after a scramble (page 21). Sharks were swimming and jumping around in the same cove, but they paid no attention to the diving boys.

The ocean roundabout the Galápagos is as prolific as the land is barren. Many kinds of fish and other sea creatures abound, but where life on land is blighted by the lack of fresh water, the sea is cursed with numerous sharks. They cruise in every bay and swarm in the outlying waters.

We were excited at seeing giant rays, or devilfish, those huge batlike creatures which



may measure as much as 22 feet from tip to tip and weigh up to two tons. Sometimes we would see them jump clear out of the water and then plop back with explosive splashes.

Sea lions live in colonies on some Galápagos beaches; penguins flourish in the islands, their only home in the Tropics; and dragonlike iguanas and huge turtles hide among the uninviting rocks. An Antarctic current casts a nightly chill over these strange islands, which bake under the equatorial sun at midday.

#### The Boys Harpoon a Whale

While trolling off Wreck Bay, we suddenly found ourselves in the midst of a huge school of tremendous blackfish. These small whales, rolling and diving, escorted us in formation like destroyers.

The boys insisted on having a try at "whaling," so we rigged up a harpoon on a long line attached to a big oil drum. At the right moment the harpoon was thrown and the frantic blackfish dashed away, trailing the big orange drum behind.

We lowered away the dinghy. How tiny she looked, surrounded by the plunging herd! It was surprising that one of the big mammals didn't come up under the boat and overturn her, as did Moby Dick.

All the time the *Yankee* circled round and round the bobbing barrel. The boys finally got hold of the line and made it fast lightly so that it could be slipped off if the whale sounded. Without warning the blackfish started off at top speed toward the horizon, towing the boat foaming in its wake. What a thrill that whale gave them, a real "Nantucket sleigh ride."

Gradually the men shortened the line, but it took five hours of battling before the blackfish weakened. Its last effort was a wild plunge toward the dinghy. Its nose landed on the gunwale and nearly upset the boat. Then it fell back, finished. So were the fishermen.

We towed it back to Wreck Bay and hoisted it by the ship's halyards. It measured over 16 feet long and 4 feet across the flukes.

That night with the sunset lighting the quiet water to gold and the rising moon silvering the bay, we sailed slowly away for our next island—Santa María (also called Charles or Floreana).

#### Post Office Bay Lives Up to Name

We anchored in Post Office Bay. The land was a dull even shade of brownish green with hills rising far back from the beach.

The first thing we saw was a barrel on top of a pole, the "mailbox" which gives the name

to the harbor. In the old whaling days, ships, often out two or three years, would stop here to leave letters to be picked up by others homeward bound. The Post Office Bay service is still dependable, we found, if not on regular schedule. Our letters were delivered home some months later; a passing yacht had acted as mailman (page 18).

Here we had the best duck-shooting of the trip; a brief hour and a half expedition resulted in 39 for the ship's larder. The hunters complained that the ducks were too tame! To get them to fly, the sportsmen took turns firing preliminary shots.

The next day an even more interesting sport was discovered—lobster diving. With nothing but gloves to protect their hands, the men would dive and catch the spiny creatures in crevices in the rocks. Of course, the Galápagos "lobster" is really a crayfish and does not have the wicked claws of the Maine variety.

For the next few days we lived well on the *Yankee*, with a good supply of ducks and lobsters and even a roast of beef butchered from a big wild bull shot on the island by some of the crew.

On Santa María we visited our old friends, the Wittmers, who came here in 1931 "to get away from the world" (page 20). As they had heard about the war and doubted that we would make another cruise, they were overjoyed to see us and to learn that we had brought them needed supplies. It made a real Christmas possible for them.

Since our last visit, another couple, Mr. and Mrs. Conway, from California, had also taken up residence here, and we called on them. They have cleared land and planted many sorts of fruit, vegetables, and flowers. Their bunk and few belongings were roofed over by corrugated iron, but three sides of the shelter were open. They had two dozen books, of which they had read every word. We were able to leave with them fresh books and useful objects, while they provided us with bushels of fine oranges, limes, squashes, cabbage, and sweet potatoes.

#### Mystery of the Missing Baroness

Santa María Island still harbors a mystery which may remain unsolved. Seeking escape from civilization, five settlers came here from Europe. The first arrivals were Dr. Friedrich Ritter and Frau Dore Koerwin, who were followed later by Baroness Eloise de Wagner Wehrborn and two men companions, Robert Philipson and Rudolph Lorenz.

On the first cruise of the *Yankee* we visited all five of them, and it was evident that there was bad feeling between the two groups, although they were pleasant and hospitable to

## Storied Islands of the South Sea



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Reproduction by Malcolm Evans

"And all I ask is a tall ship, . . . and the white sail's shaking"

Under full sail, the schooner *Vander* seems to fit the lines from *Sea Fever* by John Masfield. Here she plows the Pacific on her third voyage around the world. On each cruise she was sailed by an amateur crew who shared expenses. Her square sail and triangular rafter proved helpful on the long, steady runs across the Pacific.



Kodakman by Irving Johnson

**It's Nip and Tuck Between Man and Big Tuna When Commercial Fishermen Hit a School**

Some of the Yankee's crew tried catching tuna with rod and line in the Galapagos Islands. The water is churned to foam by the tuna-fighting for live bait thrown from the ship. Poles and even fishermen themselves are jerked into the sea by larger fish.

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**A Young Sailor Finds Friends in a Seagoing Barnyard**

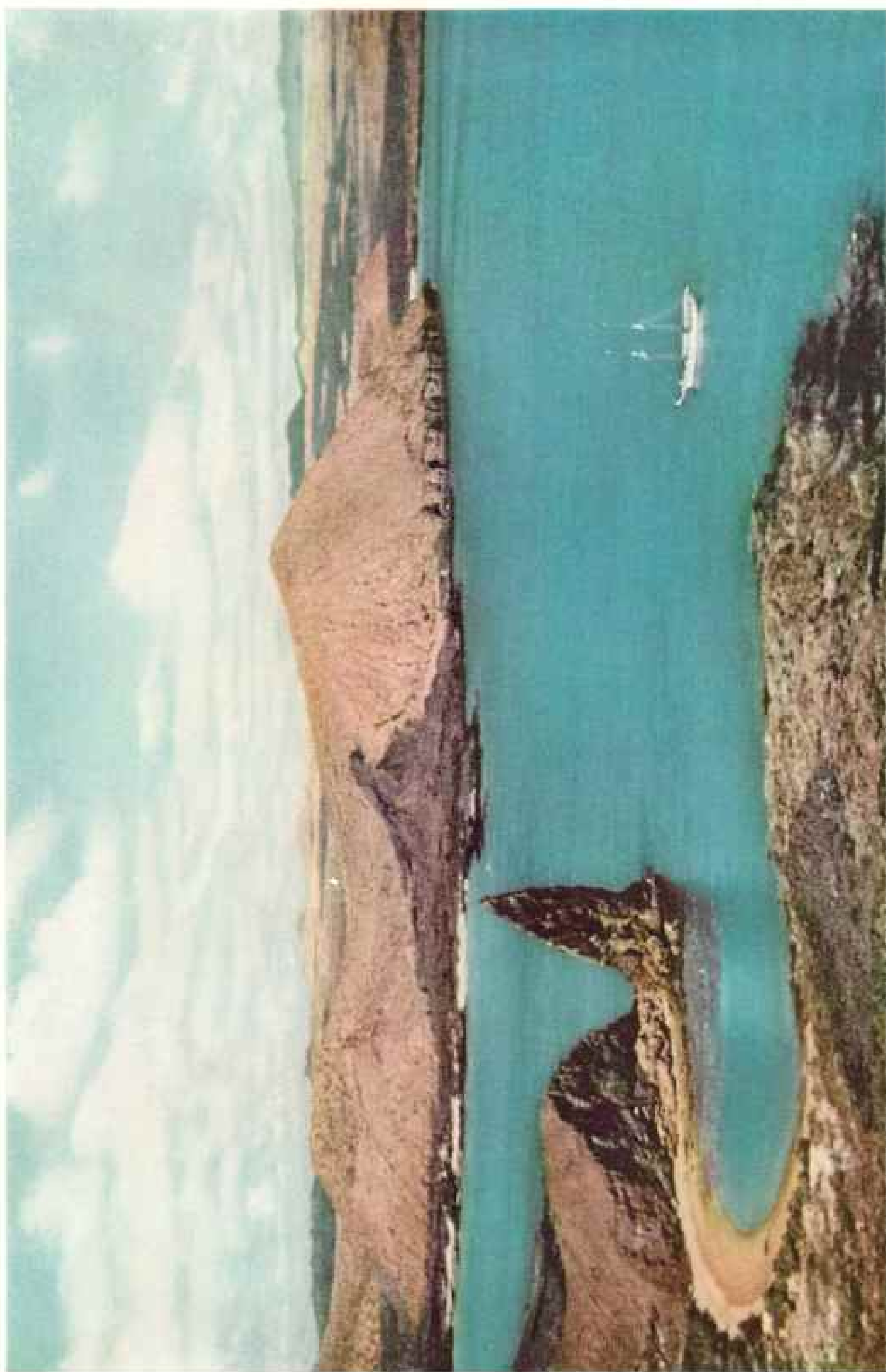
Arthur Johnson made pets of these sheep from Easter Island, but later they became fresh mutton. Poultry, turtles, and pigs also were carried.



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**Arthur Plays Possum in the Bow**

Perhaps a dash of Pacific spray will rouse him from his "quiet hour." He was only four years old, yet making his second voyage around the world!

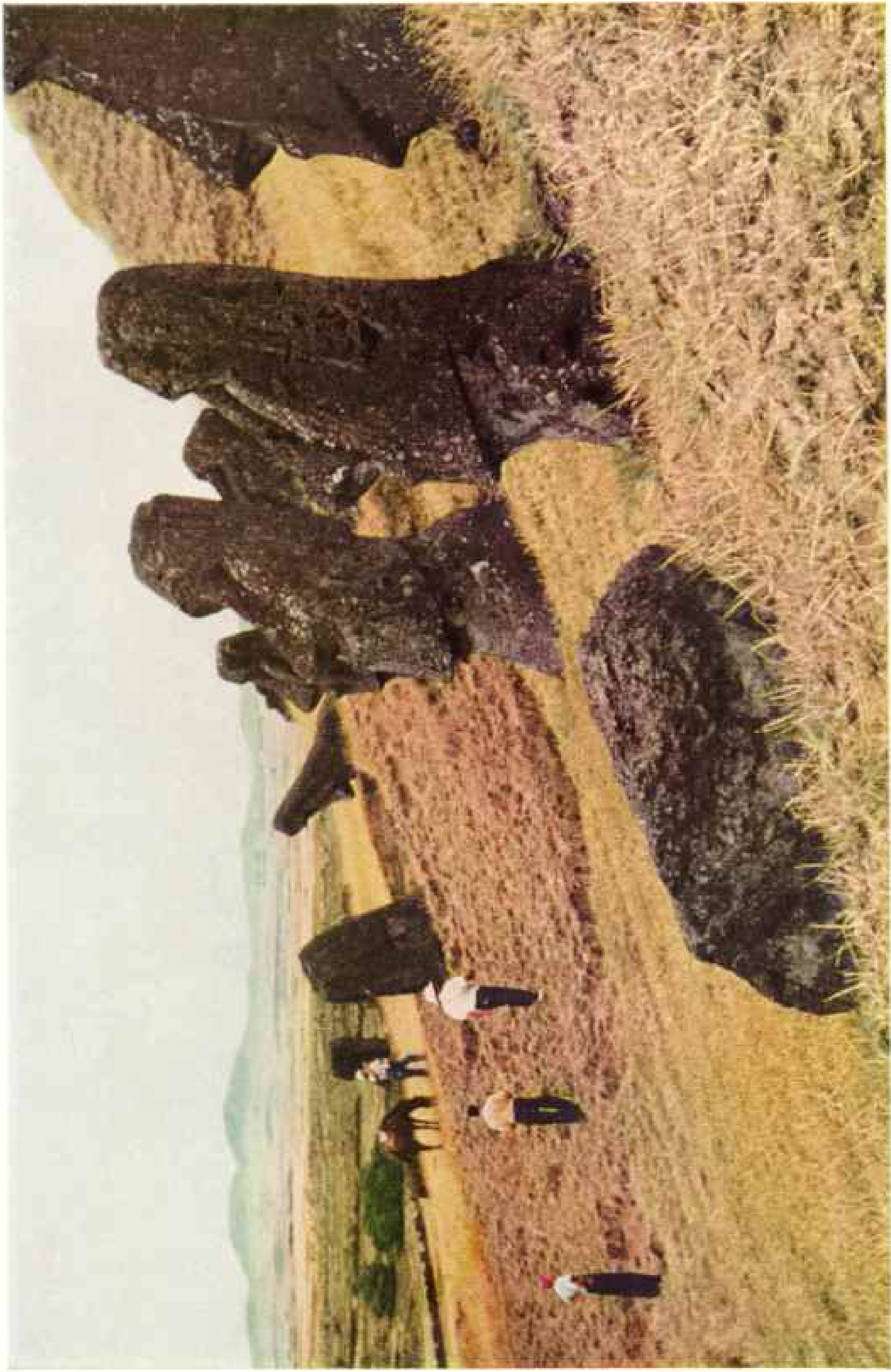


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**Dwarfed by Barren, Waterless, Volcanic Hills, the Yankee Rides at Anchor at "World's End"**

This name sometimes is applied to the Galápagos Islands, scorns of tragedy and mystery, and a mecca for scientists because of the teeming sea life in the surrounding waters. Sullivan Bay, with Bartolomeo Island in the foreground and San Salvador lying beyond.



© National Geographic Society

Photographs by Malcolm Jones

**If These Tightly Pursed Lips Could Speak, They Might Reveal the Secret of Easter Island.**

Even the natives have lost all knowledge of why these huge statues were carved from a volcanic crater and how they were moved as far as ten miles on an island that had no trees to supply wood for levers or skids. According to tradition, they were dragged to the sites by ropes with round pebbles for rollers.



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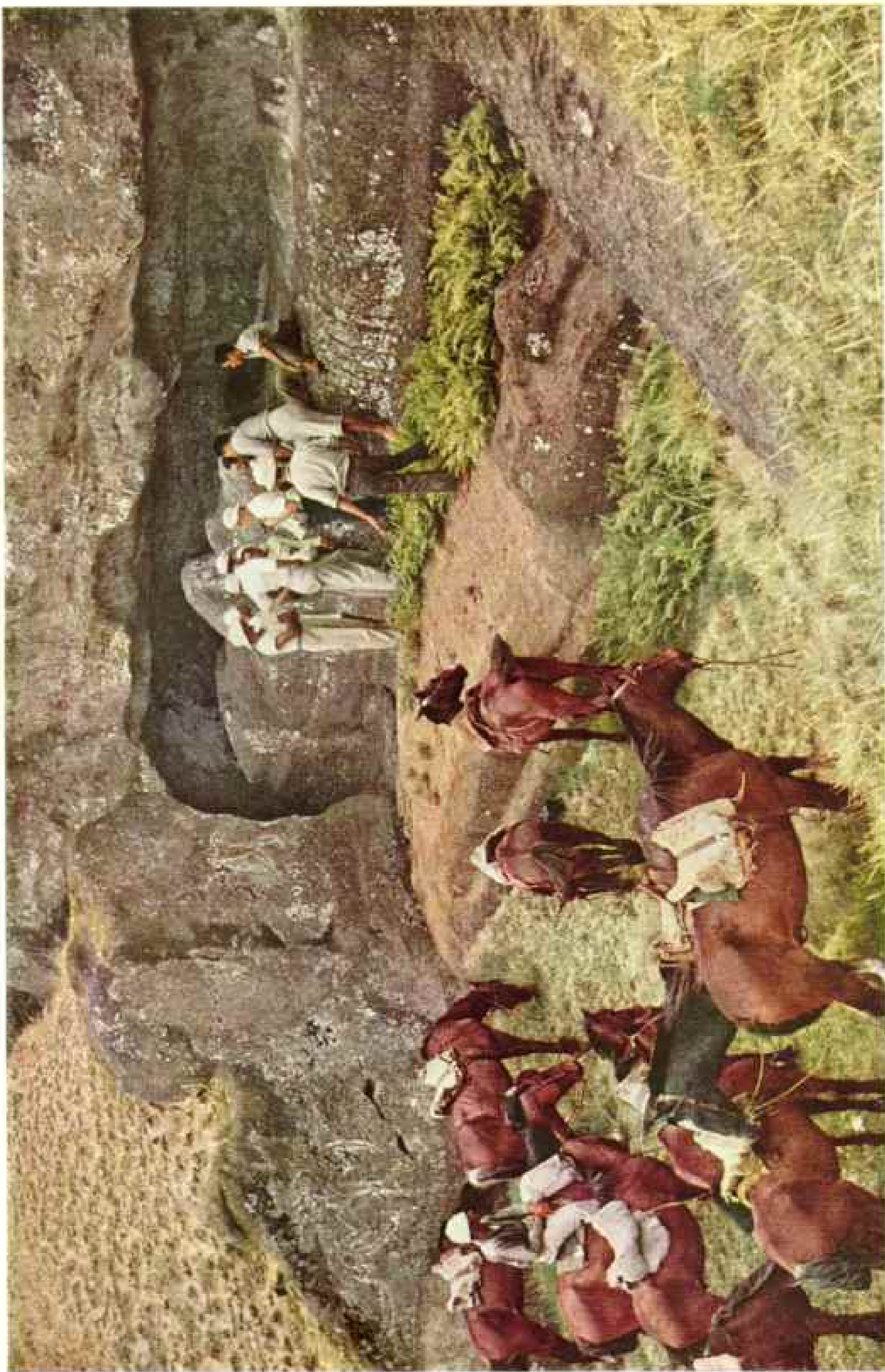
Reproduction by Jerrisa Johnson

**Red Bonnets Were Fashionable for Easter Island Statues**  
 Captain Cook saw images with the stone hats in 1774, but later they were toppled over during an island war. This hat was restored recently.



Reproduction by Malinda Beam

**His Weathered Face Once Had "A Skin You Love to Touch"**  
 Statues on Easter Island, though roughened by centuries of storms, probably once had polished surfaces, as shown by parts protected by the soil.



© National Geographic Society

Reproduction by Edgar Johnson

**Easter Island Statues Came from This Quarry: Why the Work Suddenly Stopped Is a Mystery**

Two partly finished recumbent figures can be seen. Above the larger image a hollow was cut in the rock to give workmen clearance over the nose. All statues were cut in the same style—torso, upturned face, and long ears. This soft rock of compressed volcanic ash is easily worked.





Kodachrome by Irving Johnson

**Two Young Members of the *Yankee* Crew Get the Feel of a Wind-filled Sail**

Arthur (left) and Robert, the captain's sons, show their mother how to balance on the foreboom. Both boys became nimble sailors. The lady seldom went ashore, but they didn't mind, because the ship was home and backyard to them.



© National Geographic Society

Kodachrome by Robert Low

**With a Bone in Her Teeth the *Yankee* Drives into a Head Sea**

So well did she ride the waves that the children often could play on deck when the ship was hove to in a gale.

us. Later the disappearance of the Baroness and Philipson and the discovery of Lorenz's body on a near-by island caused much speculation. Dr. Ritter also eventually died, and Frau Koerwin returned to Germany.\*

One beautiful night we sailed for San Salvador and anchored in Sullivan Bay. Everywhere are craters and rivers of lava, shading from deep velvety tones to reddish browns (Plate IV). We found here a little beach showing tracks of turtles. Tiny red crabs scuttled over the lava at the water's edge and a few families of sea lions were at home near by.

Our chief memory of Sullivan Bay, however, is of our little sea lion, Amy. She was a lovable creature with soft fur and big blue eyes. She was utterly trusting, flopping her way about the deck, enjoying all the petting she could get.

When it was time to sail, the skipper took her ashore to her home. Her mother immediately punished her. She picked Amy up like a kitten, thrashed her about ruthlessly, and finally carried her off into the water, continuing the violent shaking. At last Amy flopped her way up the beach to the skipper's feet, asking for a last bit of petting. He saw that she was unharmed and so left her with her family.

Isabela Island is a rendezvous for tuna fishermen from San Diego, California. We arrived there about 1:30 in the morning and asked some of the fishermen if we could go out with them the next day. They said, "Yes, and be ready about 5:30."

This didn't leave much time for sleep, but all hands except Fritz and the girls piled aboard before daylight.

Live sardines are thrown out as bait. When the tuna come swimming around, the fishermen get out on platforms close to the water and fish with barbless hooks and short lines, with a sardine or sometimes just a white rag as lure.†

The water is so clear that you can see the tuna, hundreds of them. When the going is lively, you swing the fish in over your head as fast as you can whip the pole back (Plate II). The hooks, being barbless, allow the tuna to jump clear as soon as they strike the deck. Then you cast the hook back into the water.

For a while the tuna would run 15 to 35 pounds. Then, with no warning, in would swoop 150- and 200-pounders. If you were lucky, you could notice the difference quickly enough to change your pole for different gear having one hook fastened to two or three poles; otherwise, it seemed like trying to stop a truck with a cane.

Even with two or three men to a single hook, if one of the big fish came up under the boat and was hooked going straight away, the poles would be jerked out of their hands or the men into the water!

#### Across the Open Pacific

From the Galápagos we headed southwestward for Easter Island, one of the most inaccessible and mysterious islands of the world.

It was a pleasant life on this long voyage of some 2,200 miles. The days never were oppressively hot. At four in the afternoon the temperature would begin to drop, so that every night we were wearing pea jackets on watch and sleeping in cool comfort. The proximity of the cold Humboldt Current from the Antarctic tempers the weather near the Equator.

We became familiar with the Pacific—its great long swells, sometimes 200 yards from crest to crest, rolling unceasingly up to us and off over the horizon. The four-to-eight watches came to breakfast with enthusiastic accounts of better sunrises than ever, and after supper in the evening almost everyone would gather on deck to see what the sunset would be like that night. Sometimes we had gorgeous shows of phosphorescence in the water alongside.

We all slipped easily into ship's routine, standing our watches day and night. By eight o'clock all except those on watch had turned in. Not one of us would have thought of going to bed at that hour ashore, but it became a perfectly natural part of life at sea.

There was very little sail handling to do, but the crew kept busy scraping and varnishing the teak, reconditioning all the spare blocks, doing necessary whippings and splicings of ropes and lines, sewing canvas covers of various kinds, and mending a bit of sail now and then.

#### Bouncing Turtle Eggs

Fritz was occupied with the greatest concern of our day-to-day life—meals. We were still using our provisions from Gloucester, but our turtles on the foredeck supplied us with fresh meat from time to time. In one Fritz found 149 eggs, which he was able to use in cooking, though he tried in vain to boil, scramble, or fry them. They were round and white and would bounce on the deck like tennis balls. The turtle steaks and stews were excellent, and turtle soup, particularly when prepared with curry, was delicious.

\* See "At Home on the Oceans," by Edith Bauer Strout, NATIONAL GEOGRAPHIC MAGAZINE, July, 1939.

† See "Tuna Harvest of the Sea," by John Degelman, NATIONAL GEOGRAPHIC MAGAZINE, September, 1940.



Edmund Zacher

### Whale Ships of 100 Years Ago Started This Mail Box in the Galápagos

Vessels outward bound on two- and three-year voyages left mail here on Santa Maria Island to be picked up by homeward-bound craft. The barrel has been renewed, but the service still functions, and the spot is named "Post Office Bay." Letters deposited here by the *Vankee* (background) were carried to the United States by a passing yacht (page 8).

The 2,000 hens' eggs from Gloucester with their thin wax coatings kept quite well. Our powdered milk was entirely satisfactory. The most popular dishes were muffins, johnnycake, corn-meal mush, baking-powder biscuits, gingerbread, fried onions, and baked beans.

We lived outdoors practically all the time. The hatches, skylights, and deckhouse portholes were always open. Most of the men wore only shorts. They gradually abandoned rubber-soled shoes, even for going aloft. The girls wore shorts or slacks and boy's shirts and stuck to some kind of footwear. If one got a bit hot at some job, all he had to do was to swing a bucket over the side and pour cool sea water over his head. The little bathroom tub below was scorned.

Life was never dull. One morning Lorita, the parrot, was moved aft as usual and set on top of some oil drums along the lee rail. Her cage was hand-built out of wooden boxes,

and painted a gaudy silver. Suddenly the ship took a quick jump, and Lorita, cage and all, went over the side.

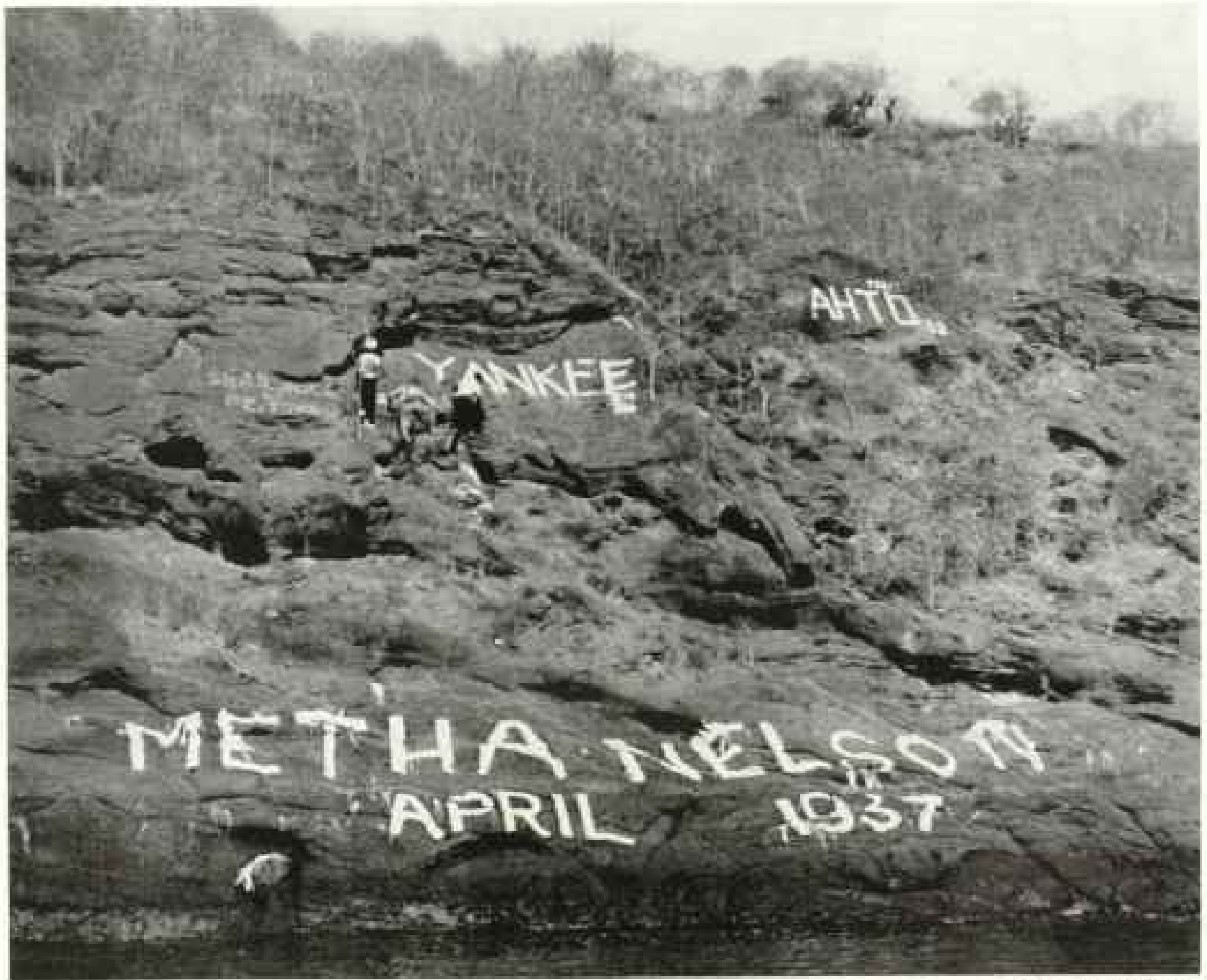
"Parrot overboard!" we yelled.

Looking astern, we could see Lorita, very distressed, perched in one corner of the box, bobbing up and down in mid-ocean.

"All hands on deck!" The ship must be put about to save Lorita. At top speed the crew took in the light sails. Her owner climbed aloft and directed the *Vankee* toward that small speck.

### The Mystery of Easter Island

As the ship rounded up, the tallest sailor, hanging from the bobstay under the bowsprit, reached down and scooped up the life-saving cage with a soaked parrot inside. Soon the ship was back on her course, and Lorita, screaming, but unharmed, was drying in the sun.



Dr. Raymond A. Dillin

### *Yankee* Registered Three Times in the Galápagos Islands "Guest Book"

Since the days of the whalers, visiting ships have painted their names and dates on the sheer, black walls of Tagus Cove on Isabela (Albemarle) Island. Under the *Yankee's* "signature" are painted the dates of her first two visits, "'34" and "'36." She came again in 1937. Famous yachts that have registered here include J. P. Morgan's *Corsair*, now in British service; Vincent Astor's *Nourmahal*, recently loaned to the U. S. Coast Guard; William Beebe's exploring ship *Noma*, and many others.

Our arrival at Easter Island was an event, for only three or four ships a year visit there.\*

This mysterious island is famous chiefly for its colossal statues hewn of compressed ash from a volcano's crater wall. Its people carved these images in an undated golden age, under some unexplained inspiration. Between 400 and 500 statues, varying in height from 3 to 36 feet, were cut from the quarry before the work came to a sudden end (Plates V, VI and VII). The images were sculptured in half-length human form, with cruel and scornful expressions.

Many statues were left standing about the slopes of the crater, but others were moved to all parts of the island to stand guard over massive burial platforms, or *ahus*. By what

possible ingenuity, on a virtually treeless island, were some of these statues, weighing from 10 to 30 tons, and more, moved several miles?

A few 18th-century navigators reached Easter Island. Their accounts do not tell of the making of the statues, but they do describe their presence and the native festivals associated with them. Sometime in the 19th century, during clan warfare, all the images on the *ahus* were overthrown.

In 1862 a slave raid was made here, and more than a thousand Easter Islanders were taken away to work on the guano islands of Peru. Among them were many of the leading men of the island: chiefs, priests, and scholars.

When protests finally availed, a hundred survivors were sent home, but smallpox broke out at sea. Only 15 reached the island, spreading the disease even further. With these

\* See "Mystery of Easter Island," by Mrs. Scoresby Routledge, NATIONAL GEOGRAPHIC MAGAZINE, December, 1971.



Dr. Raymond A. Diller

### Sea Lions Climb Trees in the Galápagos, If the Trunks Are Not Too Steep

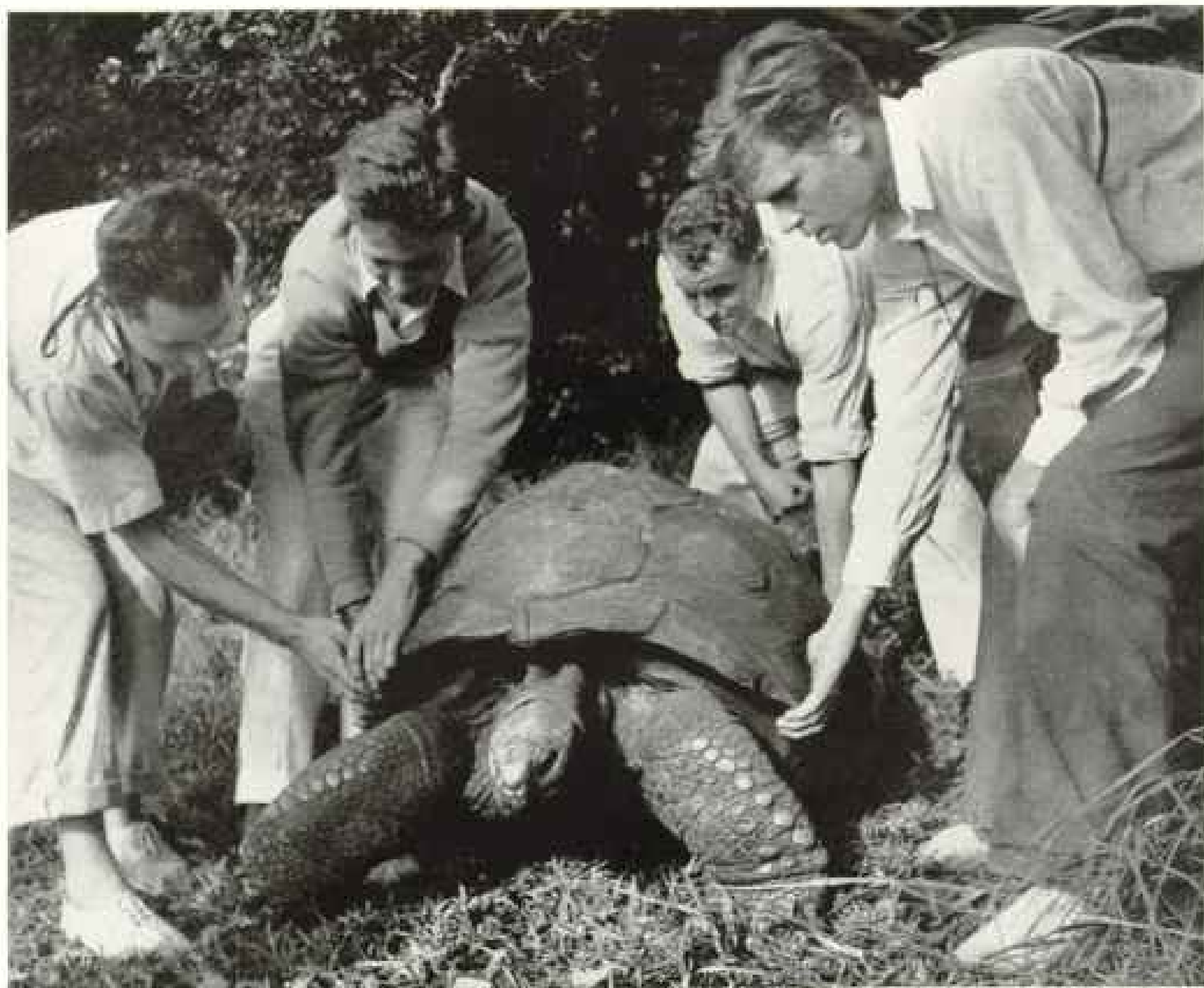
This animal has clambered onto a log near the muddy shore to sun itself, since there is no dry, sandy beach. Young are born in the shade of mangrove roots and branches.



Edmund Tschert

### "To Get Away from It All," the Wittmer Family Came to the Lonely Galápagos

Gradually they built a comfortable home on Santa Maria Island. Now they live contentedly with little help from the outside world (page 8). They raise their own vegetables and fruit, obtain water from a near-by spring, and shoot wild cattle for meat. From the hides they make their own shoes.



Dr. Raymond A. Diller

### *Yankee* Crew Captured Galápagos Turtles for Fresh Meat, as Did the Old Whalers

Huge land tortoises of the Galápagos (Spanish for turtle) can live months without food or water. Thousands were carried away alive by the old whale ships to provide fresh meat on long voyages (page 6). The sluggish reptiles may live to be a century old, and sometimes grow to weights of several hundred pounds. The *Yankee* crew saw one shell so large it was used as a child's bathtub.

catastrophes the population shrank, culture languished, knowledge of their ideographic script was lost, and the ahus crumbled.

Captain James Cook was probably one of the last white men to see one of the Easter Island statues with its red hat on. After his visit, the images were upset and their stone hats "doffed." Recently the Chilean Government got the natives to set one up near the landing place and restore its cap (Plate VI).

One day we searched an obsidian quarry on a mountainside for spearheads, of which we found great numbers. We crawled into dungeonlike burial places with skeletons hundreds of years old lying around. The doctor discovered one high up on the mountainside behind a half-bewn statue. If only that fellow could talk!

Soon we were off again, setting our course for Pitcairn Island, some 1,200 miles to the west. All hands by now were experienced

sailormen, none more so than our two youngsters.

### Children Learn to Walk at Sea

Many of our friends were skeptical of our plan to take the two small children on the cruise, but our experience has proved that a child can grow up as naturally on a sailing ship as on land. We were living on the *Yankee* in Gloucester when seven-weeks-old Arthur first moved aboard. He spent most of his days on deck in his wheelless baby carriage.

It is hard, slow work learning to walk on a rolling deck, so Arthur was 17 months old before he really stepped out for himself. When he did, he could not only walk but balance against the roll, too. It was a treat for us to see our tiny sailor swaying along the deck in any weather.

Arthur took to climbing everything as he grew up—the steep companionway, in and



Edmund Zacher

**"Haul Away on the Jib Topsail Sheet!" Landlubbers Once But Real Sailors Now, the Yankee Crew Trims a Headsail**

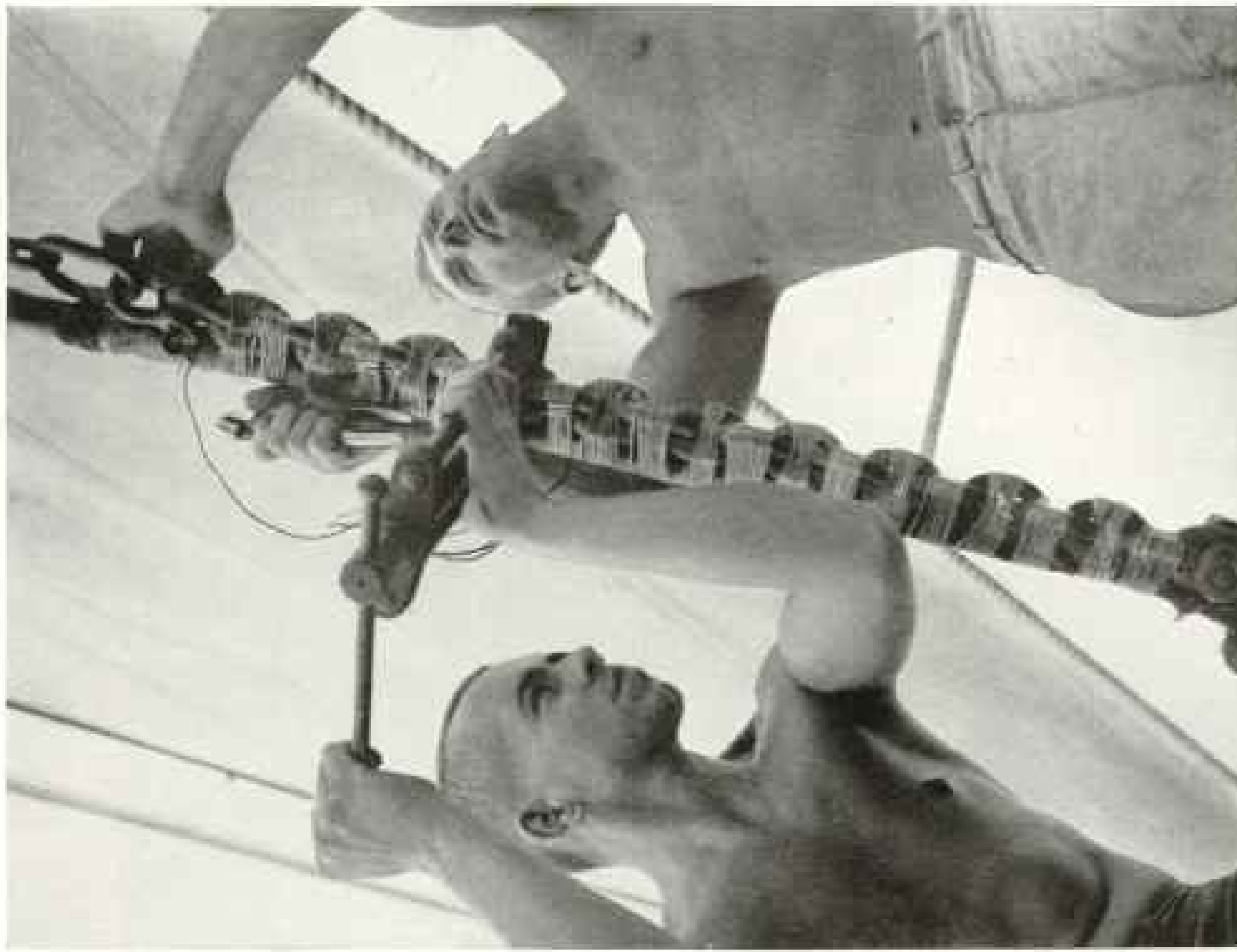
Captain Johnson lends a hand at right, and next to him is Sterling Hayden, who later became a motion picture actor (page 27). Men are standing in the Yankee's lifeboat. Hanging under the fore boom at left is the rain catcher. Rain would run down the sail into it, then flow through a hose to the water tank.



Captain Irving Johnson

### Parkin Christian with the *Bounty's* Original Vise

This vise was brought ashore from their ship by the mutineers and used in the Pitcairn blacksmith shop for nearly 150 years. Captain Johnson exchanged it for a new one, and took the old one to the Mariners' Museum, Newport News, Virginia. Christian's costume and bare feet are typical of Pitcairn men.

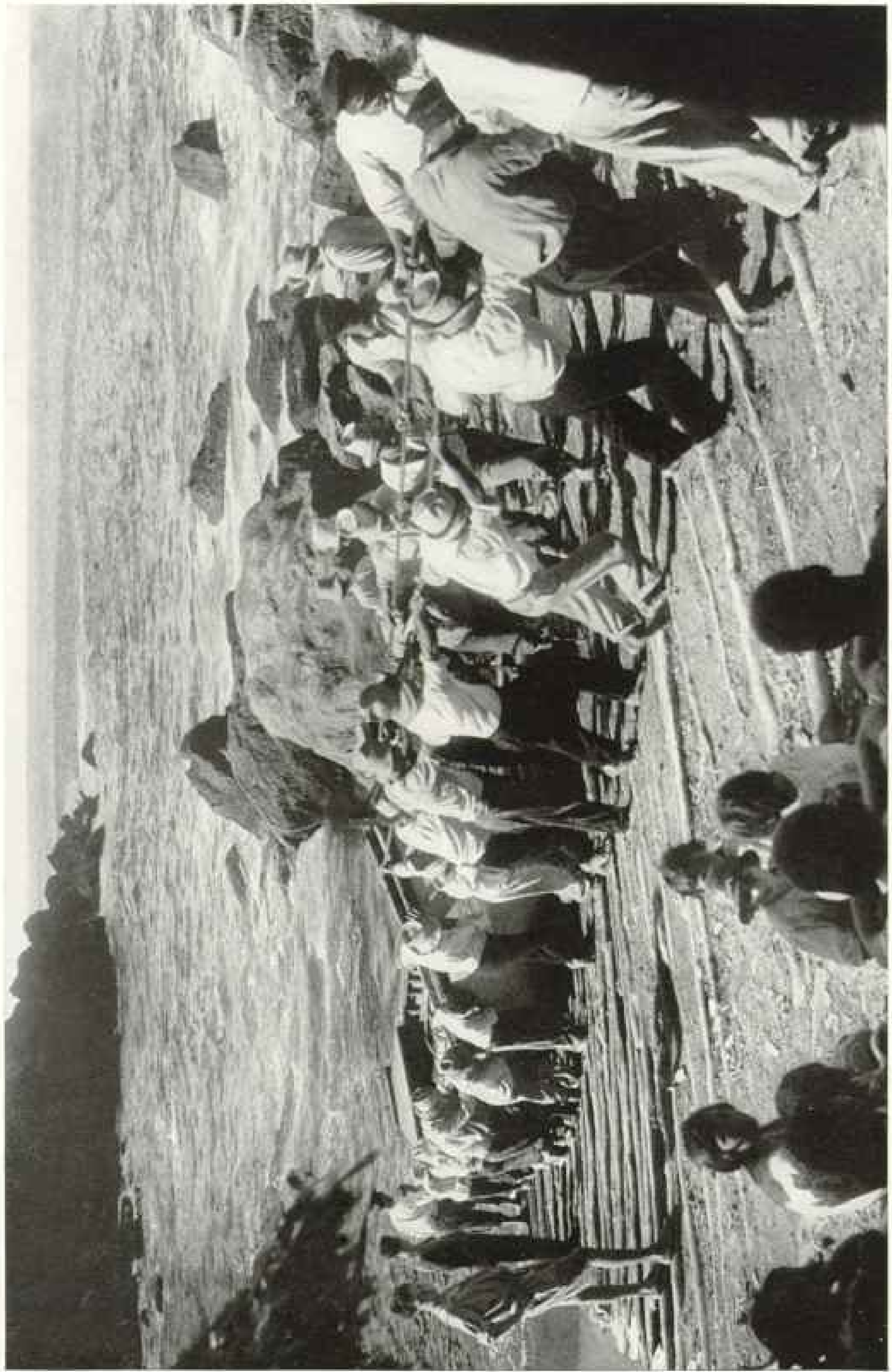


Edmund Fisher

### Making Temporary Repairs at Sea

One black night the forestay carried away and the jib was blown to bits. The thrashing wire was held by temporary tackle until daylight. Here the skipper, right, and David Donovan are seizing, or wrapping with wire, a length of chain to the broken stay. This rig held until the ship reached port.

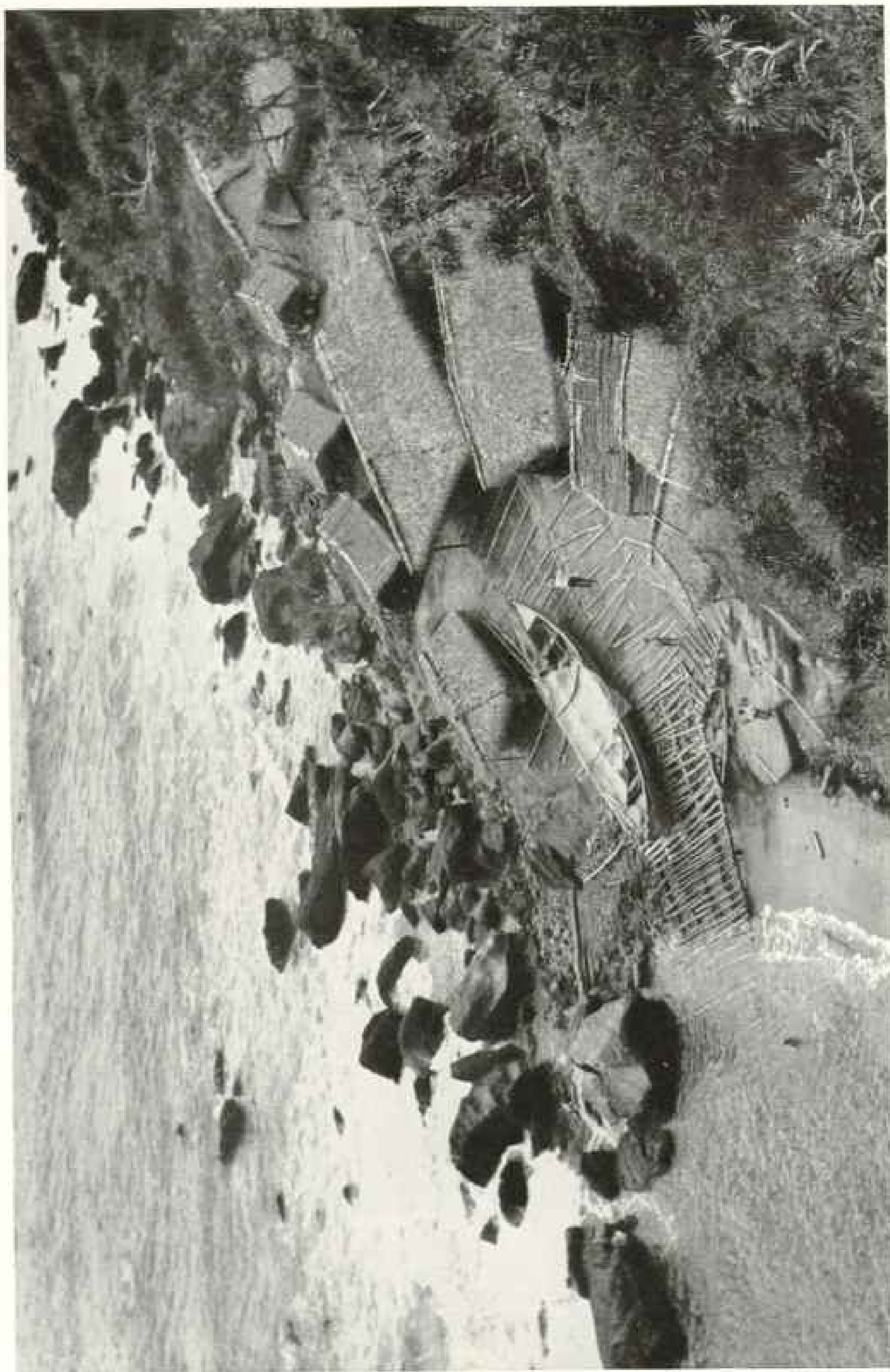




Edmund Taylor

**"Altogether Now! Pu-lease!"—Piteairners Drag a Surfboat Out of Reach of "Dat Ole Davil, Sea"**

The islanders let the word "please" express many different feelings. They never use profanity. (page 41). These boats, made by the islanders themselves, are modeled after the old New Bedford whaleboats and specially designed to ride through heavy surf. The sea was comparatively calm when this picture was made.



Copyright, 1914, J. J. Sullivan

### Here Pitcairners Have Housed Their Surfboats Since the Days of the *Bounty* Mutineers

On the ramp in Bounty Bay rests a 37-foot boat before its thatched shelter. These boats are rowed through the surf with 14 oars, but sails are hoisted in the open sea (Photo, XII). Smaller sheds are for canoe-like craft used by boys for fishing in calm weather. This spot and one other are the only places where boats can land.



Edmund Easton

### *Yankee's* Dining Table Stays Level, Even in Storms, While the Ship Rolls Under It

Weights beneath kept the table from tilting, so dishes did not slide and water in glasses did not spill. Little Arthur (left) had a seat attached to the table, keeping him level with it. During this Christmas party, the ship was heeling, so people at right found their food closer to their chins than those on the other side.

out of dinghies, up and down the galley ladder, and finally, his greatest triumph, up the rigging at 22 months. His father followed close behind while Arthur kept right on climbing till there were no more ratlines and the deck was sixty feet below.

There are advantages for small boys on a sailing ship. They can play in the water in the lee scuppers to their heart's content, and they love being tossed in sails. They get the same pleasure from jumping in a heap of canvas that country lads do in a haymow.

### On Time at Pitcairn, Home of the *Bounty* Mutineers

Our youngsters were not aware that they were traveling. The *Yankee* was their home and backyard, too. They became familiar with the wildest-looking natives, yet to them these visitors seemed as commonplace as the people American babies meet on Sunday afternoons.

We arrived at Pitcairn six years to the day after our first arrival, instead of 24 hours late, as we were on the second cruise, which caused the islanders to get after us for being tardy!

One of the most romantic stories of the sea, told so well in Nordhoff and Hall's *Mutiny on the "Bounty"* trilogy, attracted us here.

In 1787 His Majesty's armed transport, *Bounty*, sailed for the almost unknown South Sea under the command of Lieutenant William Bligh, to collect breadfruit plants in Tahiti for transplanting in the West Indies. In an age of hard seamen, Bligh apparently was an especially harsh master, and after leaving Tahiti several of the crew mutinied, led by Fletcher Christian, master's mate.

Bligh and the men who remained loyal to him were set adrift in the *Bounty's* small open launch, destined to make a heroic passage to the island of Timor, 4,166 miles away, against terrific difficulties.



Edmund Easton

### On Hot Nights Many Swung Their Rope Hammocks on Deck under the Moon and Stars

Usually, however, the crew slept below. Often a sudden rain squall would blow up and the pillows, mattresses, hammocks, and sleepy sailors would tumble down below. The movie actor, Sterling Hayden, who later played in *Virginia*, sleeps in the rope hammock (upper right). He signed on for the second cruise of the *Yankee*. One of the girls has chosen the skylight under the boom for her berth.

The mutineers returned to Tahiti, divided there, and a handful sailed away in the *Bounty* under Christian, taking with them Tahitian wives and a few other native men and women.

Christian's band settled finally on Pitcairn. They brought ashore from the *Bounty* everything they could use, and then ran the ship into shallow water and burned her, destroying in one act both evidence of the mutiny and all hope of leaving.

The first years on the island started in peace, but ended in bloodshed. Finally only one white man, John Adams (also known as Alexander Smith), remained with a group of women and small children. He guided the community and educated the children with a Bible saved from the *Bounty*.

In February, 1808, an American sealer, *Topaz*, found Pitcairn Island, and the world learned of the hiding place of the *Bounty's* mutineers. But no attempt was made to re-

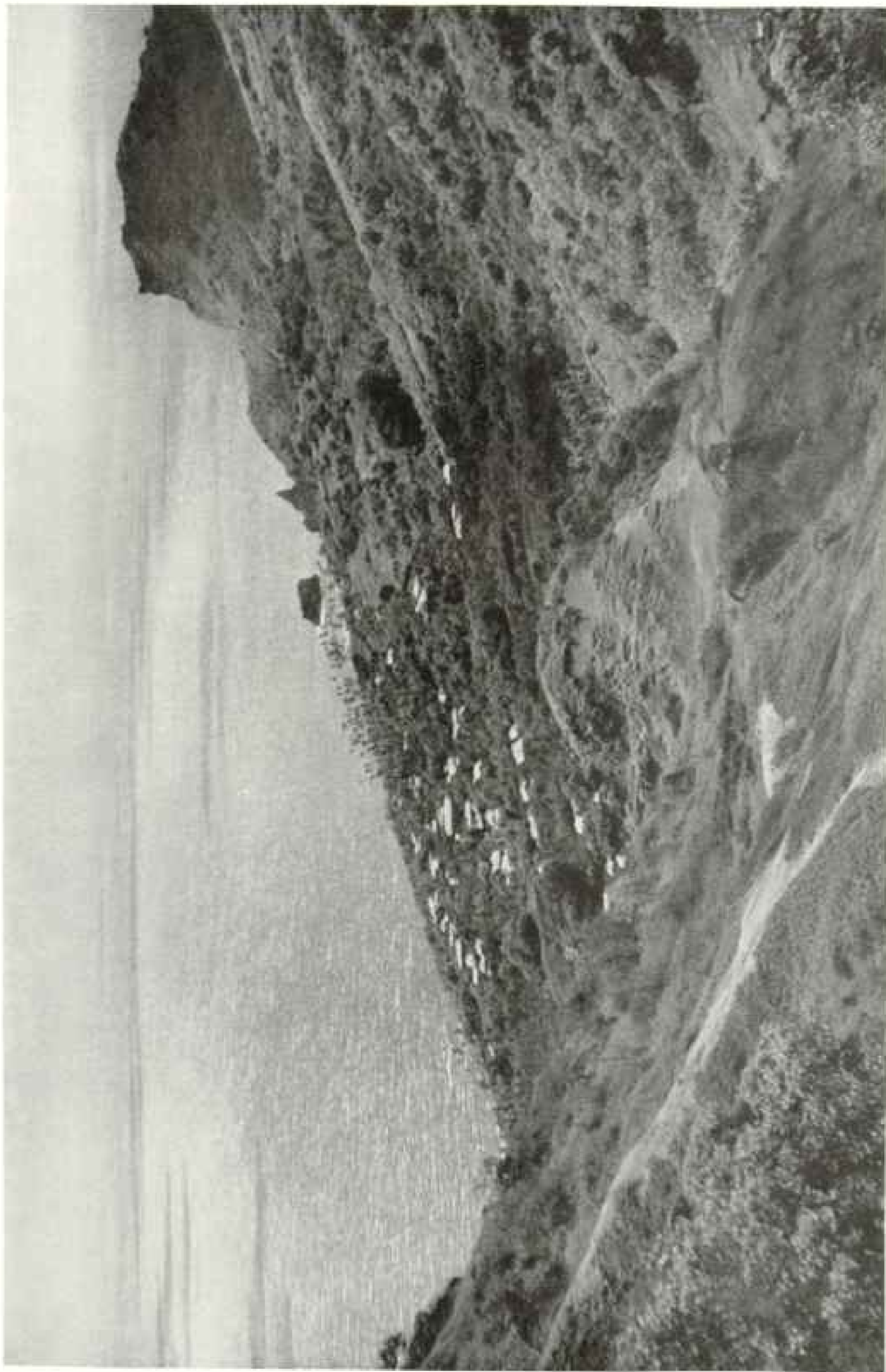
move John Adams from the community where he was obviously doing so much good. He lived to a ripe old age, dying in 1829.

Now the *Yankee* was standing off and on where the *Bounty* had been so many years before (Plate XIII).

As we stood out in the rain studying the lonely island, two specks of white suddenly appeared, seeming to pop right out of the rock wall a mile away. These proved to be tiny sails of Pitcairn boats.

As the two craft came alongside, we recognized familiar faces. Once we had been alarmed at the appearance of these same islanders: dark-skinned, strongly muscled men, attired in a motley of clothes. They had seemed to personify the original desperate mutineers. But now we knew they were friends; we recognized the kindness in the bearded faces.

"Only one boat alongside," the skipper called out. But before we could do anything



Dr. Harwood A. Dillan

**Adamstown, Only Village on Pitcairn Island, Stands at the Top of a 400-foot Cliff Overlooking Bounty Bay**

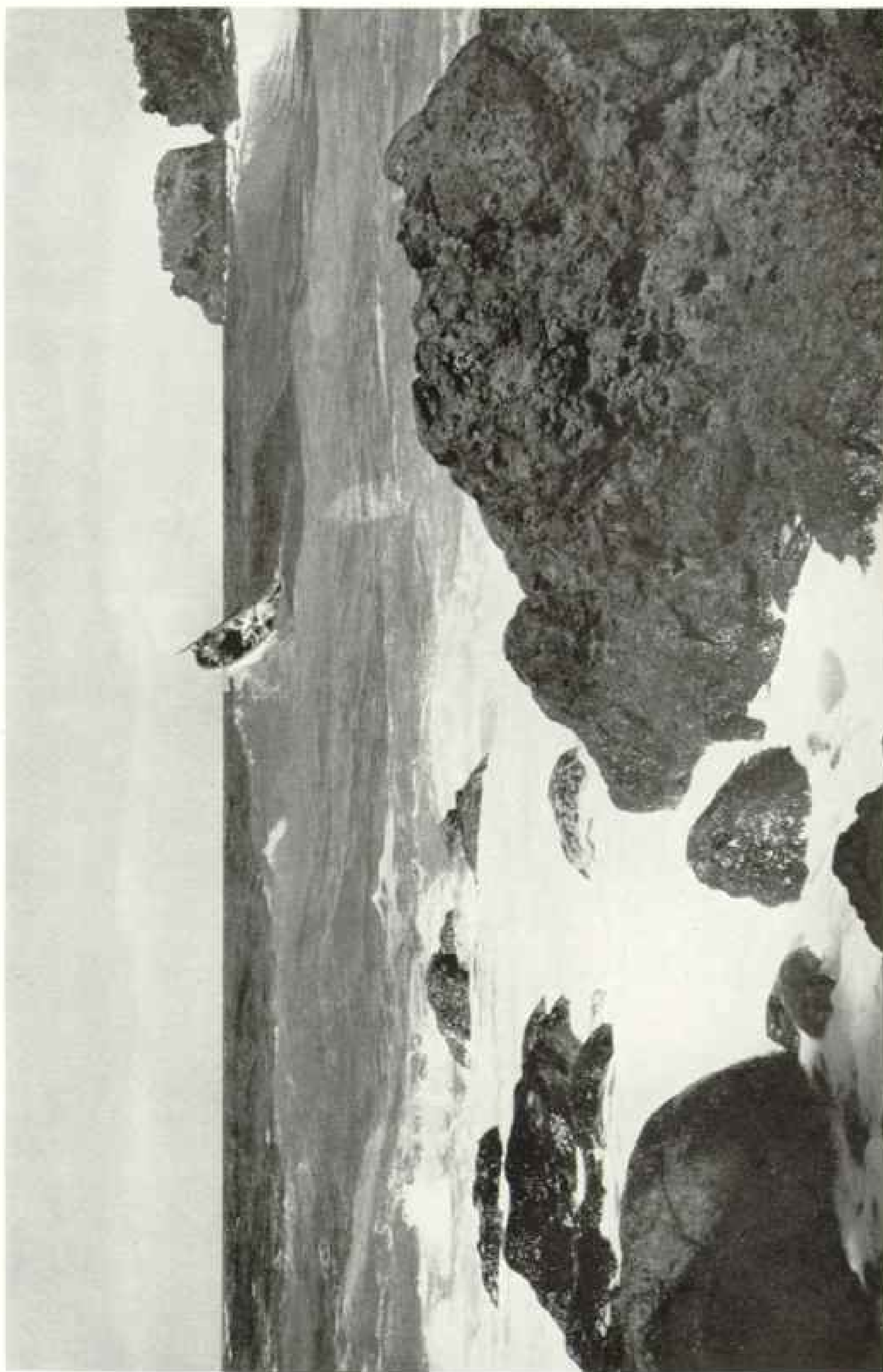
Scenes of bloodshed and terror were frequent in this tranquil landscape in the first years after the *Bounty* mutineers settled here, but today the island is happy and orderly. Houses are fashioned of wood frame with metal roofs. The island has no vehicles, and red-dirt paths are the only "streets."



Edmund Barber

**Parkin Christian, Great-great-grandson of Fletcher Christian, Leader of the *Bounty* Mutiny, Takes the Wheel**

He is a leader among his fellows today, as was his famous ancestor. Around him on the deck are sleeping Pitcairn men, descendants of the mutineers and their Tahitian wives. The *Pomare* is taking them to Henderson Island to get miro wood logs for boat building and souvenir making (page 41 and Plate X).



Dr. Raymond A. Fisher

**Boats Sometimes Almost Stand on End as They Are Rowed Through Pitcairn Surf**

The Yankee's longboat, manned expertly by Pitcairners, bucks a big sea on the way out from Bounty Bay. Lifelong training in this surf has made the islanders some of the world's best boatmen (page 44). Rocks on shore are lava. There is no sheltered harbor.



Edmund Fisher

**Farewell to Pitcairn, the Fauke Must Be on Her Way**

The islanders are crowding into their boats for the trip back to their lonely home. They have loaded the Fauke's dinghy (foreground) with the "finest fruit in the world" in gratitude for help in getting their year's supply of micro wood from Henderson Island, near by, and for bringing many needed supplies and staples. Each family donated a share of the watermelons, mangoes, papayas, batannas, pineapples, and squash. As they rowed off into the dark, these happy descendants of the Bounty mutineers sang hymns of farewell (page 44).



about it, two heaving lines came aboard and 50 or 60 jolly tars vaulted over the *Yankee's* bulwarks. It was a real homecoming.

We were welcomed first of all by Parkin Christian, who had been magistrate on our first visit (pages 23, 29, 45). This tall, distinguished-looking man would be outstanding in any group. He was as strong and active at fifty as any of the younger men. Perhaps Parkin's love of the sea and ships is inherited from his great-great-grandfather, Fletcher Christian, the leader of the mutineers.

#### Landing at Pitcairn Like Riding a Roller Coaster

Going ashore with the Pitcairners, we marveled that any boat could land on the island. Bounty Bay is a mere indentation of the coast. Surf breaks continuously on the reefs offshore. From the tops of the waves as we pulled in, we could see no opening, yet the boat was headed directly for a tall sentinel rock, foaming white.

Parkin was at the steering our scanning the passage ahead. Suddenly he rose to his feet and ordered, "Silence in the boat, please." We headed into the surf.

With a roar a big breaker shot us ahead and broke right under the boat, but 14 bending oars held her in place. Then a quick pull advanced her a little before the next breaker threw her high again. Each comber brought a new crisis, seeming to stand the craft on end.

Finally we felt the keel scrape, and the two bowmen leaped overside holding the boat steady for us to disembark. Quickly the islanders hauled the big boat up the rocky beach to a leaf-roofed shelter well out of reach of the waves, which at times dash many feet up the island's steep sides (page 25).

We were made to feel welcome as soon as we stepped ashore. There were many would-be hosts, so the *Yankee's* crew scattered into homes all over the island.

Visitors are extremely rare on Pitcairn. The steamers on the New Zealand-Panama run stop for mail, but no one ever comes ashore. Since the outbreak of war even these rare visits have been reduced. Island trading schooners seldom come this far south, as there is nothing to trade.

Exy and the skipper climbed the 400-foot hillside to "Big Fence," the home of Ada and Edgar Christian, whom they had visited before. Her father and brother had been magistrates through much of her lifetime.

Ada remembered how we long for fresh-water baths after many days at sea, so the bathhouse was waiting with pails of hot and cold water. Soon we were enjoying a Pitcairn "breakfast," one of the two daily meals served

at 10 a. m. and 4 p. m. We relished the good bean soup, the fried chicken, homemade bread, pumpkin pie, and fresh fruit.

Food is prepared on Pitcairn in little cook-houses, on open fires, and in stone ovens, apart from the main homes. These separate kitchens and the cooking methods are a heritage from the first Tahitian wives.

Then we started out on calls, first to Aunt Ann McCoy, an old lady of distinguished appearance with her high-arched nose and soft white hair. At the age of five Aunt Ann had been taken to Norfolk Island, 475 miles northwest of New Zealand, when the Pitcairn population moved to that spot in 1856.

Two and a half years later she had returned with the first of the homesick islanders. Aunt Ann is descended from William McCoy, one of the original mutineers. She is the last to bear the name.

With Ada Christian to guide us, we walked through the village along red-earth paths worn by many bare feet. At every house people came out to shake hands. It was a scene of contented, hard-working people; unpainted, weathered houses, and beautiful tropical flowers: frangipani, fragrant stephanotis, and Indian shot plant.

We continued along the shady road, passing gardenia bushes here and there. The farm land was red and rolling and cut up in patches. As we came to open places we could see white, breaking surf far below.

At last we came to a fork where the great banyan tree stands. "It probably looks today," Ada informed us, "much as it did to the mutineers on their first trip of exploration."

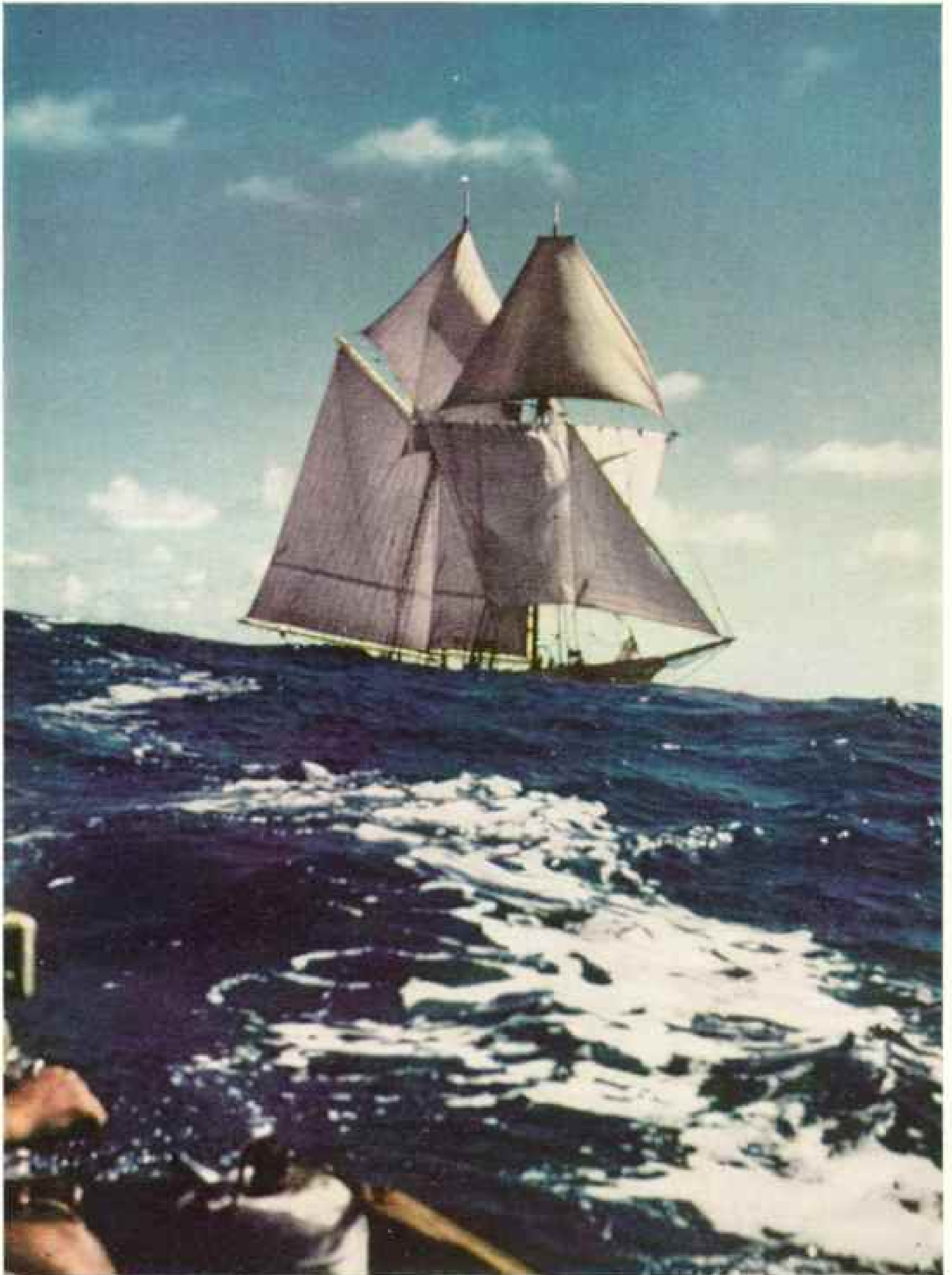
Pitcairn raises some of the finest fruit in the world, and all day long we sampled huge, juicy watermelons, peaches, bananas, coconuts, oranges, limes, muskmelons, mangoes, pineapples, and other tropical fruits. We visited the village center with the church and courthouse and the thatched shacks that house community property, the sugar press, and the sugar-boiling trench.

Down toward the sea is the cemetery, with its simple homemade stones of cement or weathered wooden crosses. One stone marks the resting place of a young captain's wife who died on Pitcairn. It bears this inscription:

She has left the bouncing billow  
To lay her head on Jesus' pillow.

Up the hill a way, we came to the solitary grave of John Adams (Alexander Smith), the only mutineer whose grave is known, the one who outlived all the rest. Adams, a seaman, learned to read in old age just before the death of his teacher, Midshipman Edward Young.

## Storied Islands of the South Sea



© National Geographic Society

Illustration by Warren Kay

### With a Fair Wind in the Trades the *Yankee* Is a Sailor's Dream Come True

Under 5,000 square feet of canvas, set and drawing, she glides westward day after day over the Pacific's long swells, running as much as two weeks without shifting sail between the Galápagos Islands and Pitcairn. One suit of canvas lasted her around the world.



© National Geographic Society

### Pitcairn Islanders Load Precious Miro Wood Logs in a Boat for a Dash Through the Surf

The men were brought by the *Fankee* here to Henderson Island, about 125 miles northwest of Pitcairn, to obtain the wood, which is used to repair boats and for carrying curios to sell. The supply of miro wood on Pitcairn has been exhausted. Several times the loaded boat narrowly escaped disaster in the surf.

Headquarters for Irving Johnson



Reproduction by Irving Jullison

**Descendants of the Mutineers of the *Bounty* Wait for a "Smoothly" and Then Row Madly Through the Surf**

Standing at the steering oar is Parkin Christian, a Pitcairn leader and great-great-grandson of Fletcher Christian, who led the mutiny on the *Bounty*. He is an expert surfboat handler. Since Henderson has no harbor, boats must go in and out across the breaking reefs.

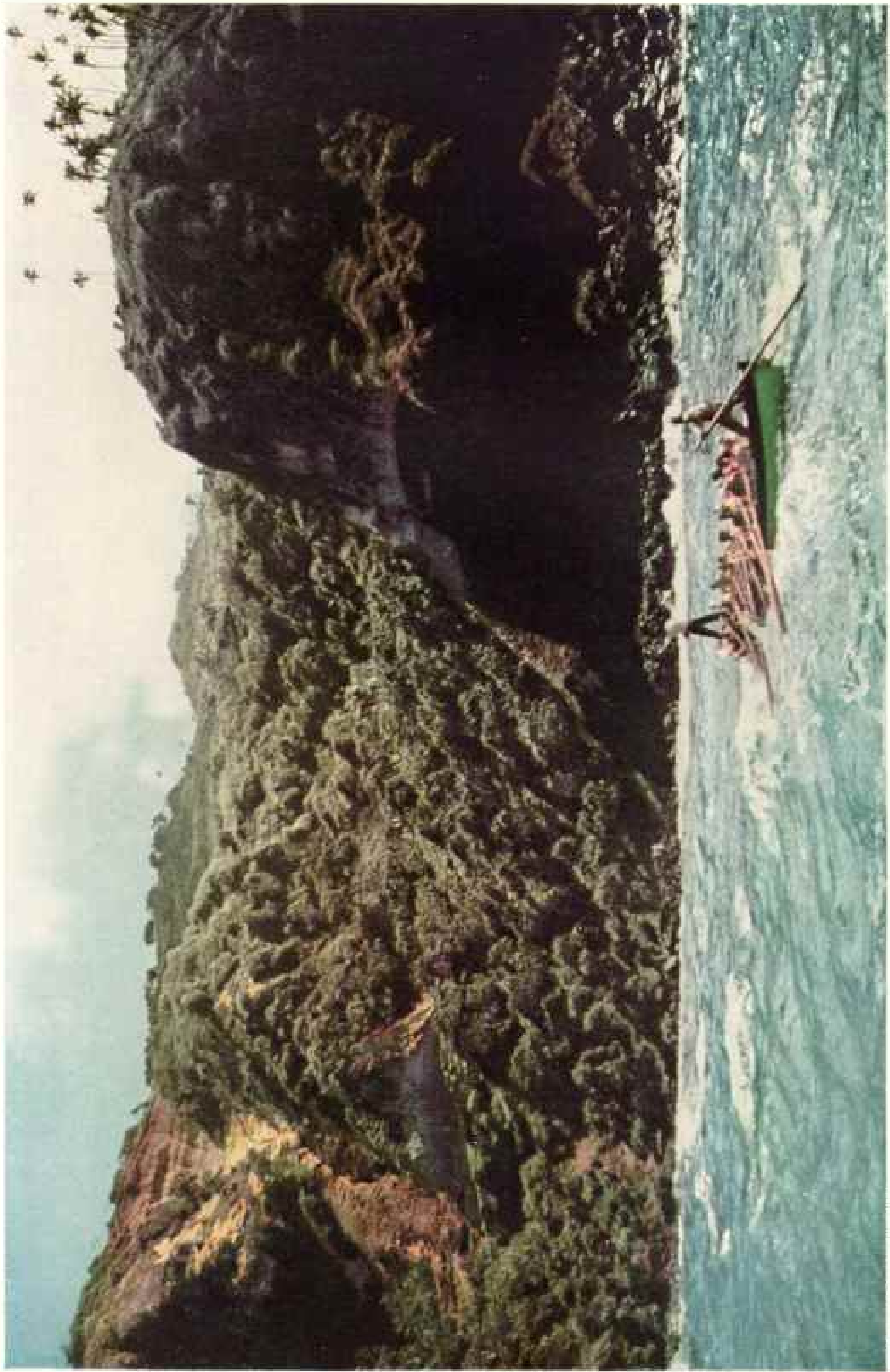


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Reproduction by Irving Johnson

**Under Sail, a Boatload of Pitcairn Islanders Hasten Out for the Rare Treat of Boarding a Visiting Ship**

Specially designed for the treacherous surf on the island's shores, the Pitcairn boats are 37 feet long, with 14 oars, and can carry 70 people. Despite skillful handling, boats often are damaged, and many Pitcairn men have been injured or killed in landing through the breakers.



© National Geographic Society

Recreation by Irving A. Baker

**A Pitcairn Island Boat Passes Almost over the Spot Where the Mutineers Burned the *Bounty* in 1790**

Her ribs and ballast iron still can be seen under water. The man in the bow of the boat is signaling to shore as the craft prepares to run through the surf of Bounty Bay. A path leads up the cliff to Adamstown, back of the hill at right.



© National Geographic Society

Keenan by Malcolm Evans

**Husky Samoan Natives, Enlisted in the U. S. Navy Mainly for Local Duty, Man a Boat in Pago Pago Harbor**

Known as the *Fita-Fita* Guard, their uniform includes regulation Navy undershirt, native loincloth and red cap. The *Fenker* is anchored astern of the U. S. S. *Lark*, a mine sweeper, in the mountain-girl port of this United States outpost in the South Pacific.



© National Geographic Society

Photographs by Irving Zabinov

At Pago Pago, Samoans Celebrate with Dancing the Anniversary of Their Coming Under Rule of the Stars and Stripes—April 17, 1900





**Jewelry Is Stylish for Yachting among Ladies of Santa Ana, Solomon Islands**

Electa Johnson and Nora Bailey play hostess on the *Yankee* to visitors dressed largely in beads. The native women became excited at color motion pictures of themselves, taken on a previous cruise. Several were dressed in strings of flying-fox tooth or clamshell beads and short cotton skirts, but many wore armbands only.



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Photographs by Irving Johnson

***Yankee's* Wastebasket Was Treasure-trove to Santa Cruz Islands Natives**

They took childlike delight in its contents, especially empty dried-beef jars and old Christmas cards.

Ada told us stories of the tragic years following the coming of the *Bounty* mutineers. "It was by the hand of Providence," she said, "that John Adams was spared and guided to teach the young people."

#### Storm Seas Uncover *Bounty's* Rudder

Interesting relic is the rudder of the *Bounty* (page 43). It was sighted under water not long ago and hauled out, after heavy seas had disturbed the covering sand. Thirteen feet long and thirty-two inches across, the rudder still holds together after all these years. The heavy bronze straps are almost as good as new. The British Government, which has jurisdiction over Pitcairn, has ordered that the rudder shall not be taken away from the island.

For 150 years the Pitcairners used the original vise and small anvil brought ashore from the *Bounty*. Now the vise is in the Mariners' Museum at Newport News, Virginia. The skipper, acting as the Museum's agent, exchanged a new vise for the old worn one, after the Pitcairners had voted in favor of the trade at a special meeting (page 23).

The little community of about two hundred is unique. The islanders are all related. They show many English characteristics, though their skins are mostly dark. They have few teeth, many front ones are missing, and their feet are unusually large. The men obtain their clothes in trade from the steamers that pass, but women's dresses are hard to get.

Pitcairners welcome anything they can obtain from civilization in the way of flour, soap, kerosene, dyes, ink, butter, milk, meat, glass, paint, and nails. The women make baskets and hats and the men whittle canes, boxes, and occasionally a ship model to sell to passing steamers. But money accumulates slowly, and Pitcairners must go without many things the rest of the world takes for granted. In the days of sailing ships, the young men could find berths on passing ships. Now it is a long time before anyone on Pitcairn can save enough for passage money on a steamer to New Zealand or a trading schooner to Tahiti.

The people are Seventh-Day Adventists. The straightforward simplicity of this faith seems to fit readily into the island community. The Sabbath is observed on Saturday.

Pitcairn women always wear sleeves and the men long trousers and shirts even in this warm climate. They use no seasoning in their food. They eat meat only from animals that "divide the hoof and chew the cud" and only the fish that have both fins and scales. Profanity is absolutely prohibited. The word "please" serves all purposes, though they can put strong feeling

into that one syllable! The people do not smoke or drink alcoholic liquors.

In the evening after supper, the bell rang for singing, and we went to the little church. Hilda, Ada Christian's married daughter, played the organ, pumping barefoot. The hymns rang out, old-fashioned ones with an understandable appeal: "Throw Out the Life-line," "Yield Not to Temptation," and others. These islanders could sing well, too.

#### "Sail Ho!"—A Steamer Calls

One day we heard shouting from the center of the village. "Sail ho!" many voices cried.

The radio operator had picked up a message that a New Zealand steamer was coming and would stop. This was welcome news, because for months ships had been passing out of sight.

In a few minutes, "all hands" had grabbed fruit, Pitcairn baskets, and curios for sale and were rushing down the steep path to Bounty Bay. Three boats quickly filled with excited men and women. Spirits were high, for here was a chance to earn a little money. We went along with them.

Once through the breakers sails were hoisted, and we tore out to the steamer two or three miles offshore, the Pitcairners singing all the while.

We climbed the rope ladder hanging from the ship's side. On board were four Pitcairn Islanders returning from New Zealand, bringing much-needed supplies, including flour, sugar, rice, butter, oil, kerosene, and gasoline for the radio generator.

Before starting for home, the Pitcairners sang a farewell song from their boats. All the way to shore they talked happily. Though they had not sold much, no one grumbled.

In the afternoon the bell rang four times for "dividing" at the courthouse. The steamer had paid for fruit with flour and ship's biscuits, and it was time for these supplies to be allocated. We found a representative from each of the 56 family units gathered on the porch with empty pails and basins. One man filled each of the containers evenly with flour, while another counted out biscuits, four to a family.

#### Pitcairners See Selves as Movie Stars

We arranged to show the Pitcairn people movies of our second world cruise in the *Yankee*, using for power the generating plant of the radio. These were the first most of them had seen. They liked particularly the shots of their sturdy boats fighting through the surf.

Once a year for three years before our coming, the Pitcairners had made a voyage in their open boats to Henderson Island, 125



Dr. Raymond A. Dillon

### Sunday School Meets on the Hard Benches of Pitcairn's Courthouse

Portraits of King George V and Queen Mary of England look down on the group. Lumber in this building was sawed and planed by hand on the island. Once there was a jail, but it long since has fallen into disuse. Current for electric lights is supplied by a gasoline-driven generator.

miles away, to get logs of miro wood from which they make furniture, canes, and inlaid boxes and build their boats. The wood has been exhausted on Pitcairn.

They took their lives in their hands for this task. The first voyage was successful. The second time they were becalmed fourteen days and nearly ran out of food. The third time they could not find the low island and ran into such a storm that the boats nearly foundered.

This year the skipper agreed to take them to Henderson and bring back a load of logs in the *Yankee*. All but five of our crew, including Fritz, stayed on Pitcairn, while 45 islanders piled aboard the *Yankee*. A longboat was towed astern.

We hoped to make the trip in a quick overnight run, load logs on Friday, and sail back on Saturday, their Sabbath. However, the wind came around ahead and prevented us from making it, so the skipper asked the

islanders if they would load the ship on Saturday. They answered that they would go back to Pitcairn with *no wood* rather than work on their Sabbath!

### Wild Rides through Henderson Surf

When we reached Henderson Island Saturday afternoon, 15-foot breakers were rolling in on the coral reef. Going ashore, the loaded longboat caught a sea wrong and smacked the reef. Twice again the heavy craft struck before the men could jump out and haul her up the beach.

That afternoon the islanders scouted around, but did no real work until their Sabbath ended at sundown. Sunday morning, an hour after daylight, the first boatload of wood headed out through the breakers. We hove to a couple of hundred yards off the island while they piled the logs on deck. The *Yankee* crew took turns going ashore in the longboat, and what wild rides they had!



From Derit Demoran.

**Rudder of the *Bounty*, Recovered from the Sea After a Century and a Half**

Leaning on the railing behind the historic relic is Parkin Christian (pages 32 and 41). The rudder was salvaged recently after storms had disturbed the sand which had covered it for generations.



From Derit Demoran.

**Tending the *Yankee's* Poultry Was the Job of the "Barnyard Watch"**

This was the title given the men on duty from four to eight in the morning, since they had the task of cleaning the foredeck where the livestock was kept (Plate III).



Dr. Raymond A. Dillan

### High on the Foreyard the Crew Furls the Huge Square Sail

Here the canvas has been clewed up (corners hauled up) from the deck and the men are gathering it in. Standing on the footrope, they lean over the yard and pull in the sail, holding to the handrail on top, for the motto of a good sailor is "One hand for the ship and one for yourself."

No wonder the Pitcairners are considered some of the world's finest boatmen. The Australian Navy often challenges them to a rowing race when there happen to be a few in New Zealand. The Pitcairners, with just a pick-up crew, always win in the Navy's own boats.

With logs loaded by midafternoon, we sailed around to the lee side of the island. Here the Pitcairners brought aboard thousands of coconuts from palms planted years ago.

That night we sailed back for Pitcairn. The men, worn and tired, sang hymns all the way.

#### Pitcairners Stage Farewell "Show"

When the day came for us to leave Pitcairn, there was half a gale blowing. All of the *Yankee's* boats were ashore. We didn't see how they could be brought out through the surf. But the Pitcairn men figured differently.

With three men to a boat, two with oars

and one steering, they took our small craft right through the breakers. One dinghy came near standing on end. It looked as if the oarsmen would be thrown right over the stern.

The *Yankee's* cabins and decks were crowded with Pitcairners, all good friends come to say good-bye. Every one brought a farewell gift. Each family had given a share of sugar, a cupful of peas. Some even donated cans of syrup and English jam. It was heart-breaking to accept such things when we knew how hard they came, but we could not refuse Pitcairn gifts (page 31).

Several young men passed us their dollars, hard-earned and often-counted, with the request to buy pants in Tahiti. "Khaki, please."

As a sailor's parting gesture, the Pitcairners manned our windlass and brought our anchor up in record time. Then they sang a farewell song, climbed into their boats and were lost in the night.

We set a course for the Samoa Islands,

# San Diego Can't Believe It

BY FREDERICK SIMPICH

**D**OWN in the southwest nook of the United States there hums, hammers, booms, and whistles one of the world's most crowded, most astonished cities. I mean San Diego, "where California began." Today her once quiet, sunshiny air is full of dust, smoke, steam, zooming planes, and the roar of gunfire.

Without taking thought she sees cubits added to her stature. Transformed, she is, by the fury of men making ready to fight.

From beach palisades great guns belch their growling hog-sized projectiles at red targets riding Pacific swells miles out at sea. Torrents of bullets, fired at bull's-eyes on thousand-acre ranges, dig neat rows of caves in red-earth mounds behind rifle butts, while woodpeckerlike rat-tat-tats of machine-gun spurts echo against bluish back-country hills.

Every day more, and yet more, Army and Navy recruits pour from incoming trains and buses (page 46).

High up in the morning skies training planes roll, loop, and dive, or flock in wild-goose V-formation to fade behind fleecy cloud banks.

Still more planes, brand-new and fresh from finishing lines, roll in ever-growing fleets from gigantic shops—shops so vast, and still building feverishly vaster, that in themselves they are veritable cities. Out they roll, these new planes, a complete trainer or giant bomber every few hours. Up they go, one after another, for rough-and-tumble testing.

Then, on a day not known even to the crew itself—for all departures are secret—word comes to "go." Away they speed, to England, Australia, Canada, the Netherlands Indies—or to some American Army or Navy base "somewhere in the Western Hemisphere," or over the wide Pacific to Honolulu, Manila, China, or Singapore.

## People Flock Here from All the U. S. A.

Workers by thousands, and yet more thousands, swarm steadily in. More than four times as many are busy here now as there were soldiers in our regular Army when the Spanish-American war began.

"Where does your help come from?" I asked of the Marston Store and the U. S. Grant Hotel. After a nose-counting, they told me that 482 were born in 51 States and Territories of the United States, and 105 in 25 foreign countries. That shows how people have flocked here from all directions.

"I vacation here from Arizona every sum-

mer," said one sunburnt visitor. "All I want is to sit in this cool plaza and watch the crowds. But every five minutes some stranger wants to hire me to do some kind of work. . . . Got a place to sleep? If not, you might as well take to the treetops—every rooming house in town is full."

To shelter this ever-growing industrial army, Government scrapes down hills, lays miles of streets and water pipes, installs big sewage disposal plants, and builds not only rows and rows of houses, but whole new suburbs, complete with markets, movie houses, playgrounds, grassy lawns, and shrubbery.

Because houses couldn't be built fast enough, Uncle Sam even bought about 650 trailers, hooked them up with San Diego light and water lines, and moved workers' families into these. For some odd reason it was the Department of Agriculture which did this, a body usually thought of as pondering only plants and animals!

Old residents, pausing from golf or gardening, rub their eyes in sheer astonishment at all this colossal confusion.

"For its new graving dock," said one old-timer, "the Navy is digging a hole like the Grand Canyon. . . . Into a hole like that you could have dumped most of this town—when I first saw it 70 years ago."

Vanished now is that calm, horseshoe-pitching, park-sitting, hymn-singing, concert-and-lecture life of yesterday. Tourists still come, but they're lost in the shuffle, struggling against milling soldiers and sailors. You have to push to get a seat in any lower-priced eating place. Then try, if you can, to win the eye of a waitress, when it's already beaming on a handsome marine!

"Look what nightmares this boom has dumped on our laps," say city officials. "Before it all started, we had ample water, street-car and bus service, plenty of police—and schoolhouses enough for all our children. Now in a flash come maybe 100,000 more people—a lot of 'em haven't even got a place to change their minds, much less their socks."

"We used to go to bed by 10, or anyway by 11," said an old bookseller. "Now some theaters and cafes never close! I remember it was like that in the Klondike. Now when boatloads of sailors hurry ashore, and all these soldiers from Fort Rosecrans and Camp Callan swarm in on payday, this town goes crazy. In one day they eat 50,000 hot dogs! Even shoeshine boys get the jitters. Sher-



Fritz Martini

### Rookie Marines Arrive and Will Soon "Have the Situation Well In Hand"

Old leathernecks meet fresh contingents pouring from a Santa Fe streamliner, and march them off to San Diego's big Marine Training Base. Duffel bag on his shoulder, a sailor takes off to right, on a mission of his own. Palms shade the mission-style station.

man's Cafe has ten bars, and a floor so big that 5,000 can dance at once.

"These madmen with dredges and steam shovels not only added 2,000 acres to airports and parade grounds by filling in the sea, they pulled up big palm trees from everywhere, and planted them along our Bay till now it looks like some South Sea water front."

#### The Sea Shaped San Diego's Destiny

Coastal shipping has vanished, it's true; even the huge log rafts from the Northwest, rafts that contain enough lumber to build three to four hundred houses each and are brought here to be sawed in San Diego mills, arrive less and less frequently.

"Labor agitators have driven our ships practically out of business," said the Port Director. "Today's goods move between Seattle, Portland, San Francisco, Los Angeles, and San Diego mainly by truck and rail."

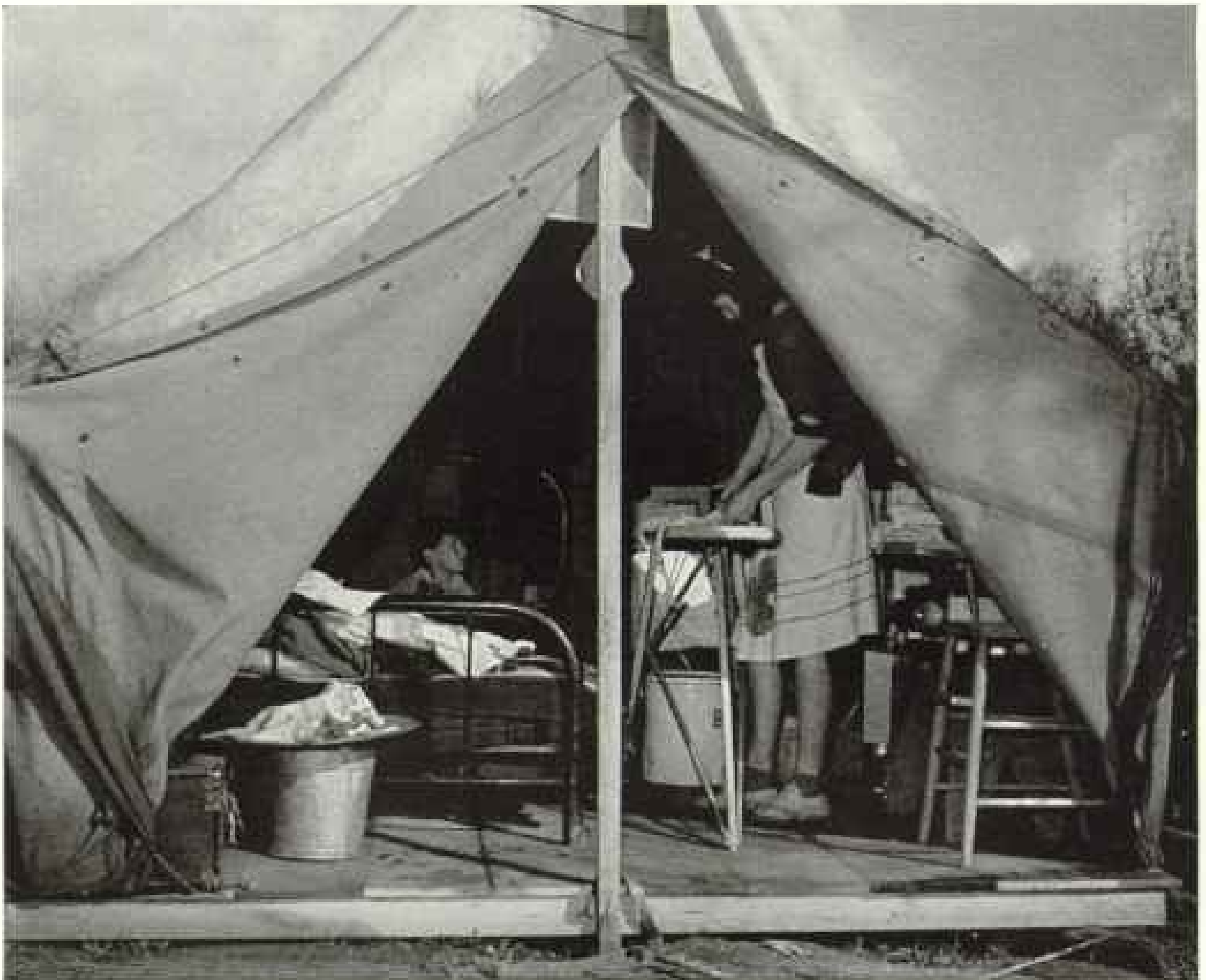
But it's still the sea that makes today's

great San Diego boom, because the Navy bases here. The Army is here, too, but its biggest southwestern activity is at March Field, tucked safely behind the mountains near Riverside.

Army used to share North Island, on San Diego Bay, with the Navy. Flying "orange crates" bucked the air here as early as 1912 and 1913. I flew here myself in those days when we sat out front, in open air, faced the wind, and felt like buggy-riding in the sky—except no lap robe or buggy whip! Lahm, Culver, Foulois, Dargue, Macauley, Mitchell, Arnold—they were all here then, and young. Now some are gone; some are generals; some are retired from active service.

Today in San Diego the Navy is supreme. When the Fleet is in, sleek cruisers crowd the bay, carriers and destroyers swarm, and submarines rest side by side like sleeping pigs.

Army is here, too. Fort Rosecrans, on Point Loma, is an old post with fat mortars, big



Lee from P. B. A.

### Again Some Must Live in Tents, as During Gold Rush Days

So many defense workers crowd into San Diego now that it's hard to find a place to sleep. This housewife in Mission Valley washes and irons, while her husband helps build homes. Maybe they'll get a house, by-and-by. No room here for sonny to play, except on the bed.

coast-defense guns, and plans for many, many more new ones to be tucked away in good firing positions all along this ancient coast.

Camp Callan has yet more coast artillery. I went out with its commanding officer, General Francis P. Hardaway, to see a monster cannon spit miles out into the Pacific. We watched a young rookie, who had never fired a gun before, as he nervously pulled the lanyard—a big adventure. Though you stand on your toes, cotton in your ears, and open your mouth wide, you still get a big wallop, like a kick right in the belly.

Far out at sea, we saw the great shells slam square into the red target. "Good shooting!" complimented the General as the gun crew swabbed out the smoking barrel, and observing officers lowered their field glasses and smiled approval.

Camp Callan, however, despite its now elaborate plant will probably pass away. It's built only "for the emergency." It now covers

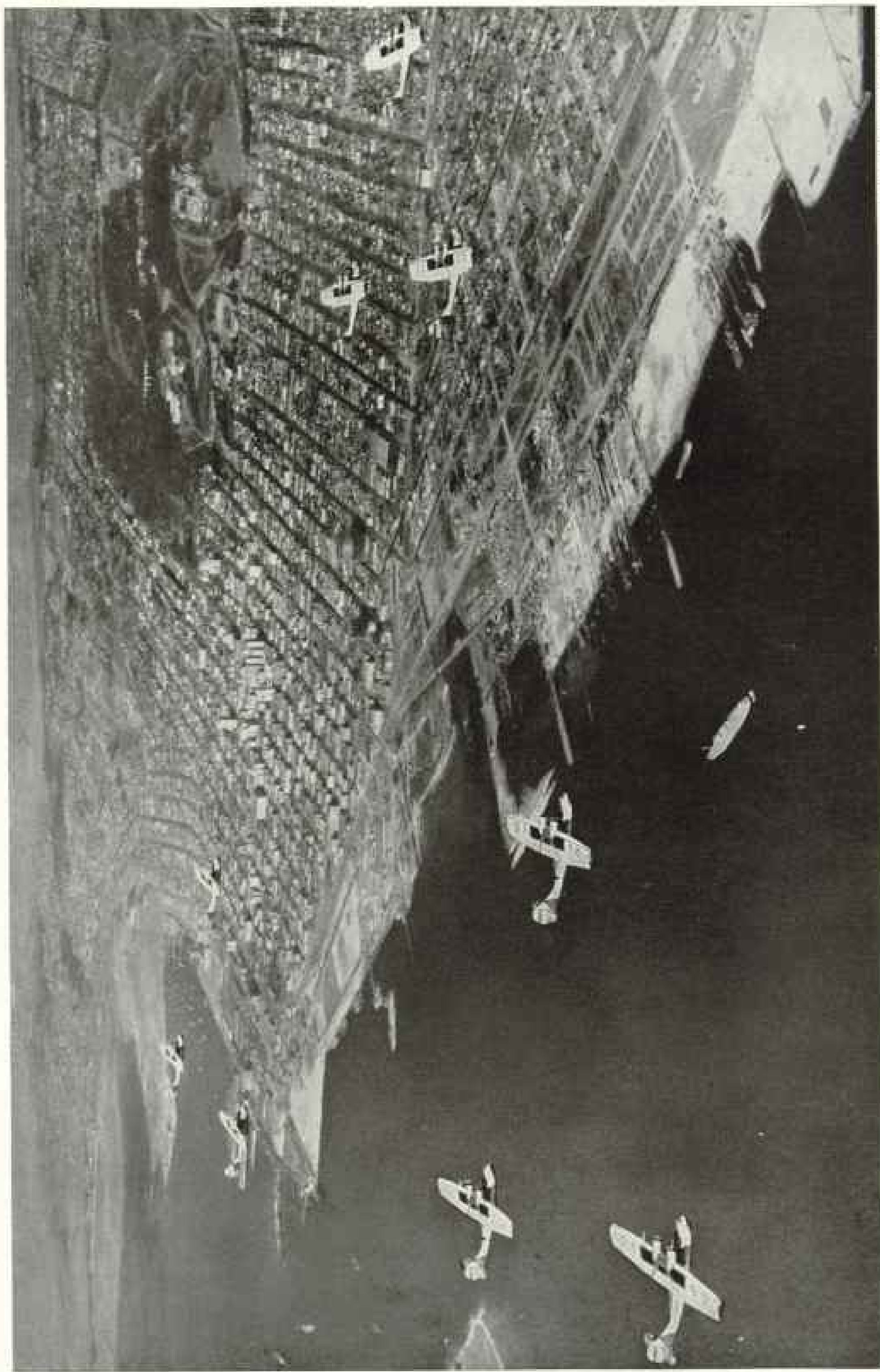
so much ground, however, that not even the most leather-lunged bugler could make himself heard all over it, so mess, taps, etc., are sounded mechanically over a public-address system. Incidentally, land for miles up this beach belongs to the city of San Diego. It is "old Pueblo Lands," dating from Spanish times—a sort of commons; so, when war threats arose, Uncle Sam was quickly granted camp sites.

### Navy Here to Stay

But it's the Navy that's here to stay. Its vast base is permanent. So is that of the Marines, in their sumptuous quarters at the approach to Point Loma. You feel that, when you see the fine shops, hospitals, school, and quarters for officers, set amid a semitropical garden where quail and pheasants frisk, safe from grim-faced shotgunners.

On North Island are Navy's shops, where it repairs planes from the Pacific Fleet, and





Official Photograph U. S. Navy

### Shiny New Catalinas, Built in San Diego, Fly over That City on Their Maiden Voyages

Scores of Consolidated flying boats skim over the Atlantic and Pacific, on patrol duty with the United States Navy. Others, bought by the Allies, are on duty overseas. One Catalina, with a British crew, sighted the *Bismarck*, attempting to escape after sinking H.M.S. *Hood*. The patrol boat radioed the ship's position to attacking forces, which closed in and destroyed the German. Consolidated Aircraft plant can be seen over the leader's tail, upper formation.



Frank Stultens

**"On With the Dance! Let Joy Be Unconfined; No Sleep Till Morn"**

Camp Callan soldiers "chase the glowing hours with flying feet," entertaining 700 volunteer dancing partners from near-by State College. San Diego furnishes free buses, and all girl groups are chaperoned; yet eyes speak to eyes that speak again!



Lee from F. B. A.

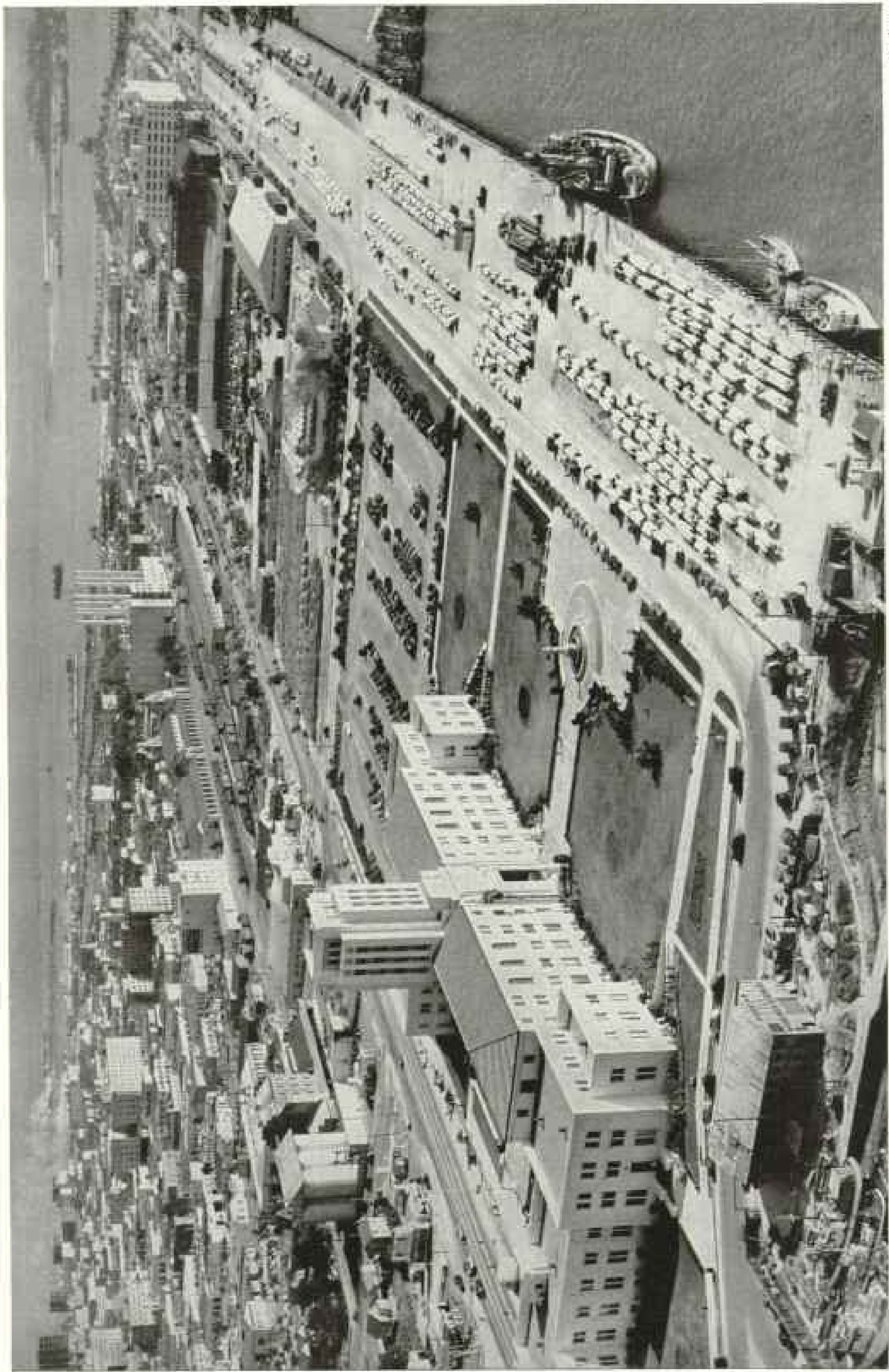
**New Suburbs, to Shelter Industrial Workers, Spread over the Hills North of San Diego**

Similar projects mushroom now about other plane- and munitions-making centers all over the United States, since this housing shortage is Nation-wide.



Lee from F. B. A.

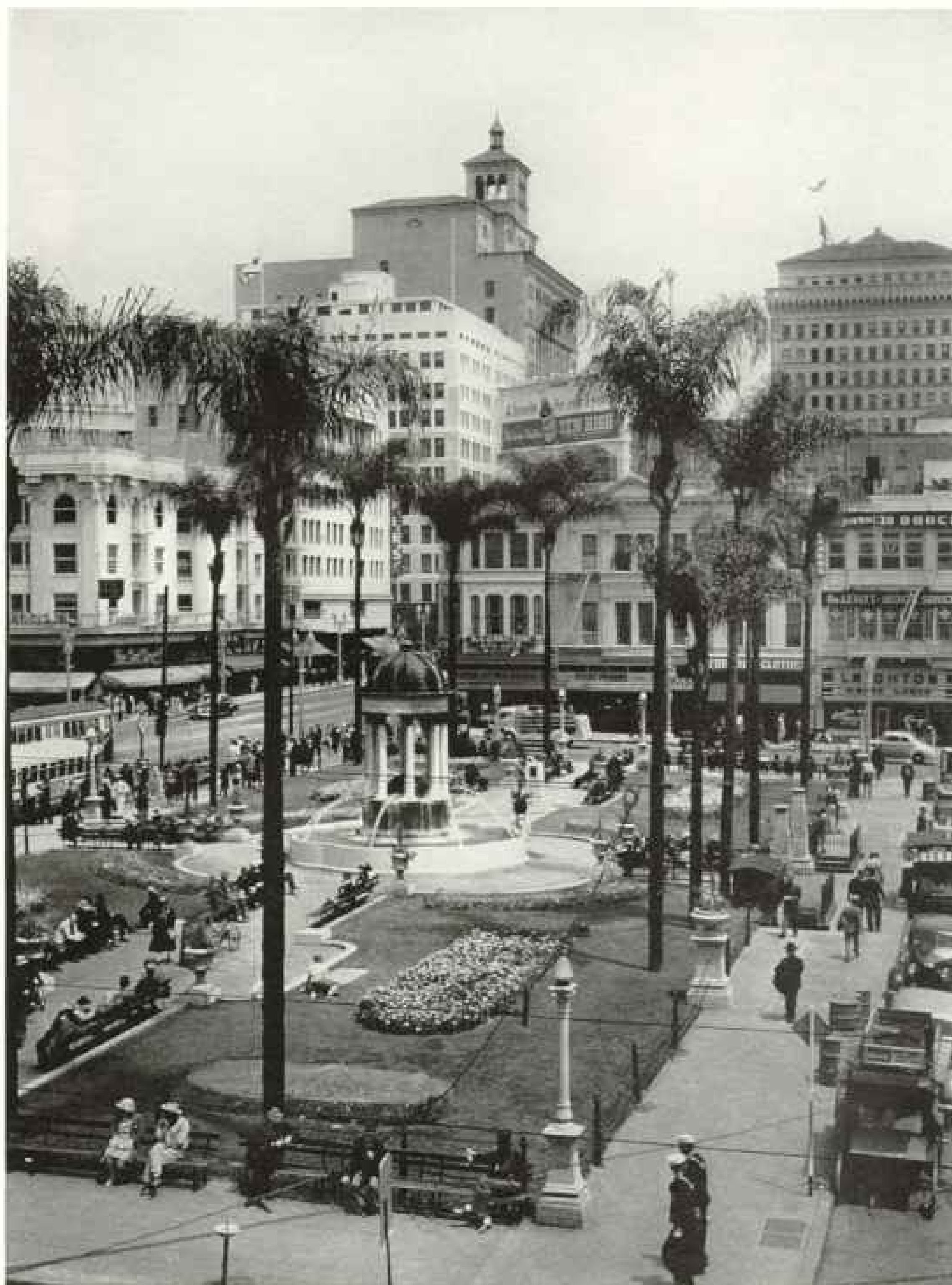
**Emergency Homes, Rushing to Completion for Swarming Defense Workers, Call for Prodigious Piles of Fresh Lumber**



Brickman

**San Diego's Civic Center Faces the Embarcadero, Where Lumber Is Piled Now for Use in New Housing Projects.**

The five-story structure in the upper right is the headquarters of the 11th Naval District. To the left is seen the western edge of the city's main business district. The United States Navy's vast new graving dock lies on the harbor shore, in upper background.



Staff Photographer E. Anthony Stewart

### Transeontinental Highways from Washington, D. C., End in San Diego's Plaza

Beyond the fountain stands the square Pacific milestone, marking trails' ends. Madame Ernestine Schumann-Heink, who once lived in San Diego, sang in this tropical park on Christmas Eve, 1917. Beside the fountain many a romantic sailor has kept his moonlight tryst.



Los from T. S. A.

### Where Workers Once Hunted Jobs, Jobs Are Now Hunting Workers

Ten years ago only six men worked in San Diego on civilian airplane jobs; now there are 50,000. Every morning union headquarters dispatch fresh squads of workmen—and more during the day, as called for.

its carriers. Here, too, is a school for advanced flight training. From here pilots start on long transcontinental trips, delivering new planes built in San Diego shops to such far-away bases as Jacksonville, Norfolk, and beyond.

Should enemies ever make it too hot for Navy's seaplanes to base here, a most unlikely prospect, they can fall back on any number of inland lakes hereabouts, such as Salton Sea—that calm, Dead Sea-like body of shallow water that lies in the Imperial Valley of California, just over the mountains east of San Diego.

"Why did Uncle Sam pick this place as a naval operating base?" I asked of Rear Admiral Charles A. Blakely, who commands the 11th Naval District, with headquarters here.

"Because it's our first Pacific port of call north of the Panama Canal," said the Admiral. "Also, its fine climate and ample hinterland make it an ideal area for a naval operating base. Particularly, the harbor is well suited for all-year experimental operation of air, surface, and undersea craft."

"How does this base compare in size and importance with others in the United States?"

"It ranks as one of the most important naval centers in the world. Here is a base hospital

and supply depot for the Fleet. Here also are a destroyer, submarine, and light cruiser operating base, an advanced training base, U. S. Marine Corps headquarters, and one of the largest naval bases for aircraft of all types."

"San Pedro and Long Beach are also in your district. What goes on there?" I asked.

"That's where we base our battleships, heavy cruisers, and auxiliary craft for the trained forces."

"How many young sailors can be handled in your training station here?"

"About 17,000 can be given instruction during one course of activity. Each year we train about 82,500 recruits."

"Has our Navy ever done any fighting in these waters?"

"No. There was an exchange of shots between the Spanish guns on Point Loma and an American merchant ship, the *Lelia Byrd*, in 1803, in an argument over some otter skins; but no blood was shed.

"In December, 1846, however, during the war with Mexico, Commodore Stockton sent a relief expedition to help out General S. W. Kearny, whose small command, on its way west to cooperate with the Navy, had just been badly cut up by some California lancers at the Battle of San Pasqual."

**WILL BE  
EXHIBITED  
FOR ONE DAY ONLY!  
AT THE STOCKTON HOUSE!  
THIS SAT. A.M. 10. FROM 8 A. M. UNTIL 4 P. M.**

**THE HEAD  
Of the renowned Bandit!  
JOAQUIN!  
AND THE  
HAND OF THREE FINGERED JACK!  
THE NOTORIOUS ROBIN AND NUMBER.**

"JOAQUIN" and "THREE-FINGERED JACK" were captured by the State Rangers, under the command of Capt. Harry Love, at the Arroyo Cañon, July 24th. No responsible doubt can be entertained as to the identification of the head now on exhibition, as being that of the notorious robber, Joaquín Murietta, as it has been recognized by hundreds of persons who have formerly seen him.

*Poster of 1871 advertising the grand display of the HEAD and HAND of two notorious bandits of early California*

Fred Marston

### California Headlines of 85 Years Ago

This poster is in the San Diego Historical Society collection. Joaquín Murietta, transformed by fiction and romance into a California Robin Hood, and one of his chief lieutenants, "Three-fingered Jack," headed a band of notorious desperadoes. When they were captured by Captain Harry Love and a small company of rangers, Murietta's head and one hand of his companion were pickled in alcohol for identification. Later the gruesome evidence was auctioned off at a sheriff's sale for \$36.

On July 7, 1846, Commodore John D. Sloat had raised the American flag at Monterey, and the Mexican forces in California soon afterwards yielded to United States supremacy; that is, they all yielded except a few isolated bands of native Californians (Mexicans). One of these, the mounted lancer band of one General Andrés Pico, slipped south from Los Angeles and clashed with Kearny's hungry, tattered, and trail-worn outfit at San Pasqual, in what is now San Diego County.

Today's school histories say little of this fight, but early California annals are full of it, including writings by Mexicans. One Captain

Johnston and other Americans were slain, because their sabers were too short to reach their Mexican opponents, who were sticking at them with long lances.

### He Saw San Diego Grow from a Tiny Village

Behind the dust and roar of frantic work on war machines, civilian San Diego tries to live its normal life.

Merchant of the old school is George W. Marston, a Marshall Field of San Diego. His great store is a landmark; the interesting Serra Museum, with all its historical manuscripts and documents, he built and gave to the city. Though past 90, he still goes ice skating at the municipal rinks, along with sailors and soldiers.

"I came here in 1870," he said. "My first job was as a clerk in the old Horton House. It stood on the present site of the U. S. Grant Hotel.

"When the stage-coach pulled in from Yuma, I met the passengers with a feather duster. . . . I've dusted off many a captain and colonel.

"Later I went into business with a small store. My only clerk was a 16-year-old boy. When I went out to play baseball, he ran the store alone."

"How many clerks has the Marston Company today?" I asked.

"About 500 or 600; say 700 on special sales days. That's almost as many people as there were in San Diego when Joe Nash opened his pioneer store in 1868. He sold out to me and my partner in 1873."

"Was this a Mexican town when you came?"

"No, it never had as big a share of Mexican population as you still find in other border

towns—such as Nogales; Yuma, El Paso, and Laredo. About 75 percent of the early settlers were from the South and from New England; the Middle Westerners didn't come in large numbers till years later. In early days, too, we drew a very colorful and adventurous class—gold miners, English sheep men, cowboys, miners, ex-sailors, soldiers, and men off the whalers."

"What did you sell in those days?"

"Sugar, coffee, flour, bacon, tobacco, boots, shoes, tools, clothing, wild-animal traps—everything settlers wanted. We got butter in big rolls, packed in 4-foot boxes.

"Canned goods were then almost unheard of and so, of course, was cold storage. Boats brought our goods from San Francisco because for years we had no railroad. Some early traders here bought wool, hides, gold dust, and bullion, and shipped them to San Francisco."

"How about early-day rents?"

"I paid \$35 a month for my store—and later saw the same site renting for \$2,000 a month."

"Did you advertise?"

"In a crude way, yes. I think my first year's bills were about \$200. Now the Marston store may spend \$100,000 a year. On one good day, our sales may be three or four times what I used to take in during a whole year."

"How is San Diego affected by the advent of this huge naval base, and all these growing army camps?"

"Well, any city that suddenly finds its population increased by, say, 33 percent, is bound to face new problems. But we've weathered other booms, and panics, too.



Major L. J. Cooley, C. A. C.

### "Yes, Son, It's a Lot Bigger Than Your Air Gun!"

At Camp Callan, Coast Artillery Replacement Center, Commanding General Francis P. Hardaway explains to a fellow officer's son just how a 155 mm. gun is loaded and fired.

"I've seen the town grow steadily, despite bad setbacks, for 72 years; I think it will keep on growing. South of us lies the vast, and as yet almost empty, peninsula of Baja California.

"It's the same kind of dry, undeveloped country this used to be. Some day it may suddenly gain population—and that will react on us."

### "Zoo Lady" Bosses 3,000 Birds, Beasts, Reptiles

Noah could fill another ark at San Diego's zoo. Jungles, turned upside down, have fairly dumped their grunting, growling, and sometimes dangerous denizens into this one big but happy family.



With us to Balboa Park, on a zoo picture-making trip, we took some of Admiral Blakeley's boys. These sailors took this special zoological hitch as a Roman holiday.

"I never even dreamed," said an Iowa rookie, "that life in the Navy could also mean helping feed tapirs and riding herd on a flock of penguins!"

Led by Belle Benchley, woman zoo director and author of that good book, *My Life in a Man-made Jungle*, we snapped a cockatoo or two, a kangaroo, then went to the tapir.

"His name's Mickey," said Mrs. Benchley. "Come on in. I'll feed him apples while you interview him. He likes being photographed."

"Now bring out that big elephant," she ordered a keeper. "Make him kneel; then throw some straw trash on his back and get some brooms. We'll make a picture showing Uncle Sam's naval heroes sweeping off an elephant; that picture will roll in more recruits. Join the Navy and sweep off elephants!" (Page 74.)

Growing crowds followed us now. All San Diego knows Mrs. Benchley. On the streets, any day, children cry out, "Hello, zoo lady!" It was odd, too, that sailors in uniform should be inside the pens, stuffing green fodder down the great gullet of a hippopotamus. But there they were, and the ponderous amphibian grunted with gastronomic gusto as one sailor slyly tossed in a chocolate bar!

In the pen with some young elephants, I met two Calcutta boys who had just nursed their grunting, grouchy charges across the Pacific. To one Hindu I offered a cigar. "No!" he said. "I smoke one on ship. American cheroot make elephant boy sick."

Looking a bit bored, the Indians shoved their own elephants boldly about, scolding them and asking them intimate questions, as a negro with a mule.

With its rich, world-wide collection of beasts, birds, and reptiles, this zoo is set amid magnificent trees, artificial pools filled with giant lilies and tropical fish, amid flowerbeds, open-air concert bowls, Spanish architecture—all the scenic wonders of Balboa Park.

What a zoo! Animals walk about in the open, restrained by ditches instead of bars.

Casually, I mentioned a wild-animal dealer on the Amazon, one at Singapore, and one in Europe. To Mrs. Benchley they were as next-door neighbors.

"Is there any circus man or porcupine peddler you don't know?" I asked. "Or is there any animal here you can't chuck under the chin?"

"Well," she said thoughtfully, "I never go into the gorilla cage."

Most popular animals in the zoo, these gorillas are. Everybody who comes, thousands of people, go first to see the big beasts—two males which the zoo purchased from the Martin Johnsons.

"What a busy, yet serene, satisfying life you must lead!" I ventured.

"Serene?" countered Mrs. Benchley. "What if some excited person telephoned you after midnight and said there was a strange seal flapping against his front door! That happens, not just once, but over and over. My seals are like the Marines—they want to see the world."

#### Looking into the Depths of the Sea

Everybody likes to know what's happening way down in the ocean's mysterious depths.

San Diego is finding out at the Scripps Institution of Oceanography on La Jolla Beach.

"To those of us who study the sea," said Dr. H. U. Sverdrup, Director of the Institution, "oceanography is as fascinating as astronomy is to the students of the heavens. Here we work on the edge of the world's greatest ocean—yet one less charted than the surface of the moon. Its currents are still less known than the orbits of stray comets."

"What do you study, exactly?" I asked.

"Different men on our staff study different things. Some work on the physics of the ocean, such as types of currents or the interaction between the atmosphere and the ocean. Others work on sea-water chemistry. You know that besides table salt, bromine and magnesium are now extracted commercially from the sea."

"What about gold?"

"It's there, but you'd have to treat a cubic mile of ocean water to get enough gold to fill a tooth."

"Do you study fish?"

"Of course, and all classes of marine organisms from bacteria to whales. To marine life, sea bacteria are as important as soil bacteria are to life on land. The physiology of fish, and their food, is right up our street."

"What do fish eat, besides each other?"

"Some feed on smaller animals, which again consume the microscopic floating marine plants. Other fish feed directly on small plants."

"We see cows and sheep eating grass; do you mean fish graze in the same way, on kelp, or eelgrass?"

"Yes, some may eat kelp and eelgrass, but these marine plants are of slight importance as fish food compared to small floating plants."

## The Sun Shines on San Diego



© National Geographic Society

Reproduction by E. Arthur Stewart

### Hats Off! the Colors Are Passing By

From farm, city, and factory, from colleges and country clubs, American youth is flocking to the Flag in the national emergency. At San Diego's U. S. Naval Training School, some 82,500 recruits a year are drilled for duty with the Fleet. This base serves as home port for aircraft carriers, destroyers, and submarines.

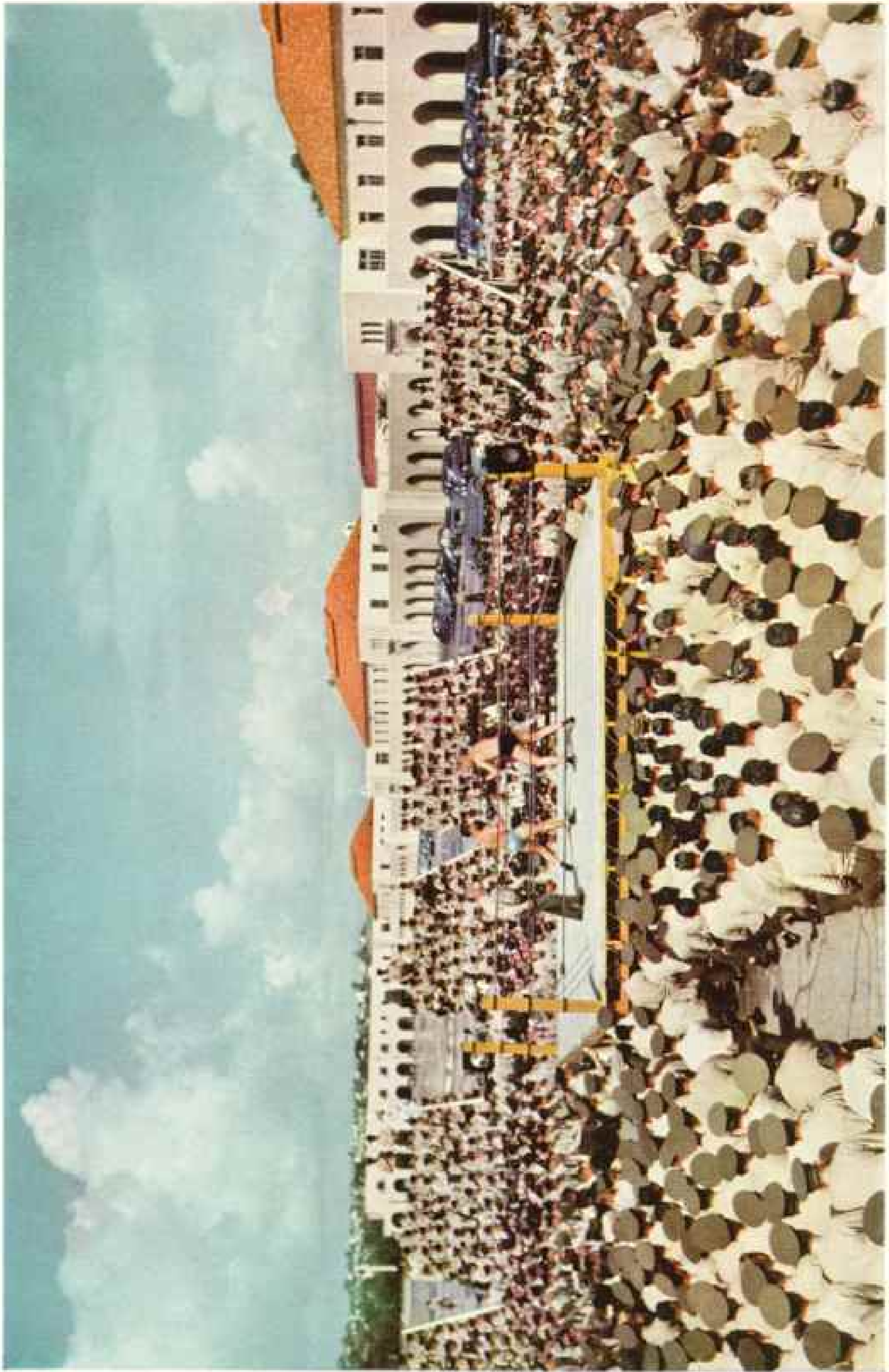


© National Geographic Society

Collected by B. Aubrey Stewart.

**Their Band Playing "From the Halls of Montezuma to the Shores of Tripoli," U. S. Marines Swing by on Parade**

In the reviewing stand ready to take the salute is Major General Clayton B. Vogel, commanding officer of these Marines who "fight our country's battles on the land as on the sea." Some of the Second Division's motorized equipment is drawn up before the fine buildings of the San Diego Marine Base (background).



© National Geographic Society

Reproduction by H. Aulicuz Street

**"In This Corner!" Then the Bell Sounds, the Boys "Put Up Their Dukes," and Start Dancing**

Boxing is the Marine Corps' favorite sport. To keep in the pink is leatherneck tradition. Baseball, football, swimming—along with dally drills, setting-up exercises and work on the target ranges—all help keep Uncle Sam's Devil Dogs in fine physical form. The Marines produced a heavyweight world champion.



**Consolidated Patrol Planes, Eyes of the Fleet, Come Home to Roost at North Island**

In the shops of this big naval base ocean-cruising seaplanes are serviced and repaired. Fat wheels are slipped under this plane by the men in waders, and then the tractor hauls it ashore.



© National Geographic Society

Photographs by H. Anthony Stewart

**Camp Callan Recruits Learn How to Shoot Coast Artillery Guns**

These 155-mm. guns have recently been scraped and red-leaded. Soon they will be olive drab again.

## The Sun Shines on San Diego

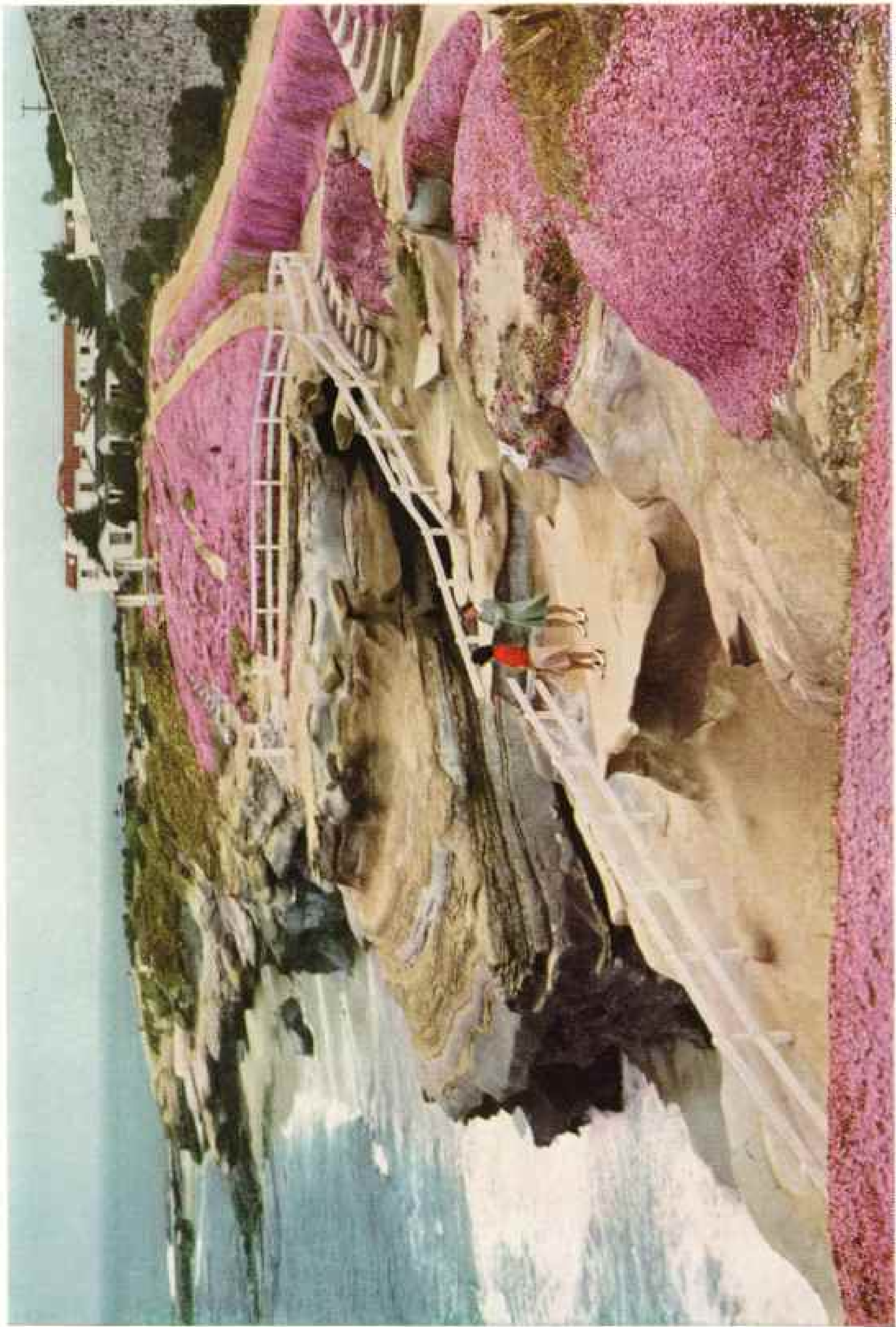


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### Long Tresses on La Jolla's Palms Hang Like Hula Skirts

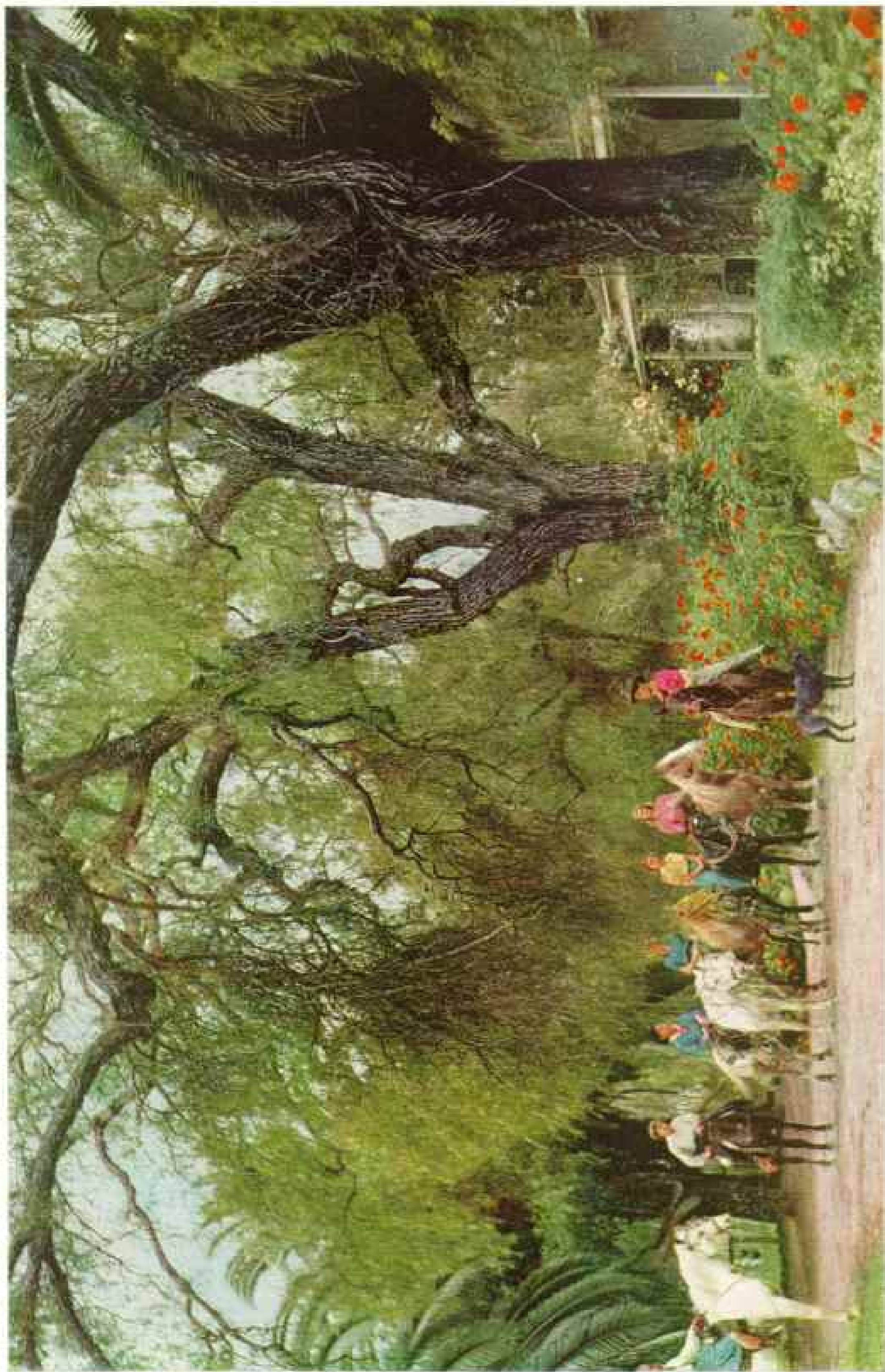
Fashionable San Diego suburb, La Jolla is famed as the seat of the Scripps Institution of Oceanography. On San Diego's water front so many palms are being planted that it begins to look like the coast of Ceylon. Many artists and writers live in this quiet seaside resort.



Photograph by B. Anthony Horvath

Wind and Waves Carve Fantastic Forms in La Jolla's Cliffs—Pink Flowers Are Fig Marigolds

© National Geographic Society



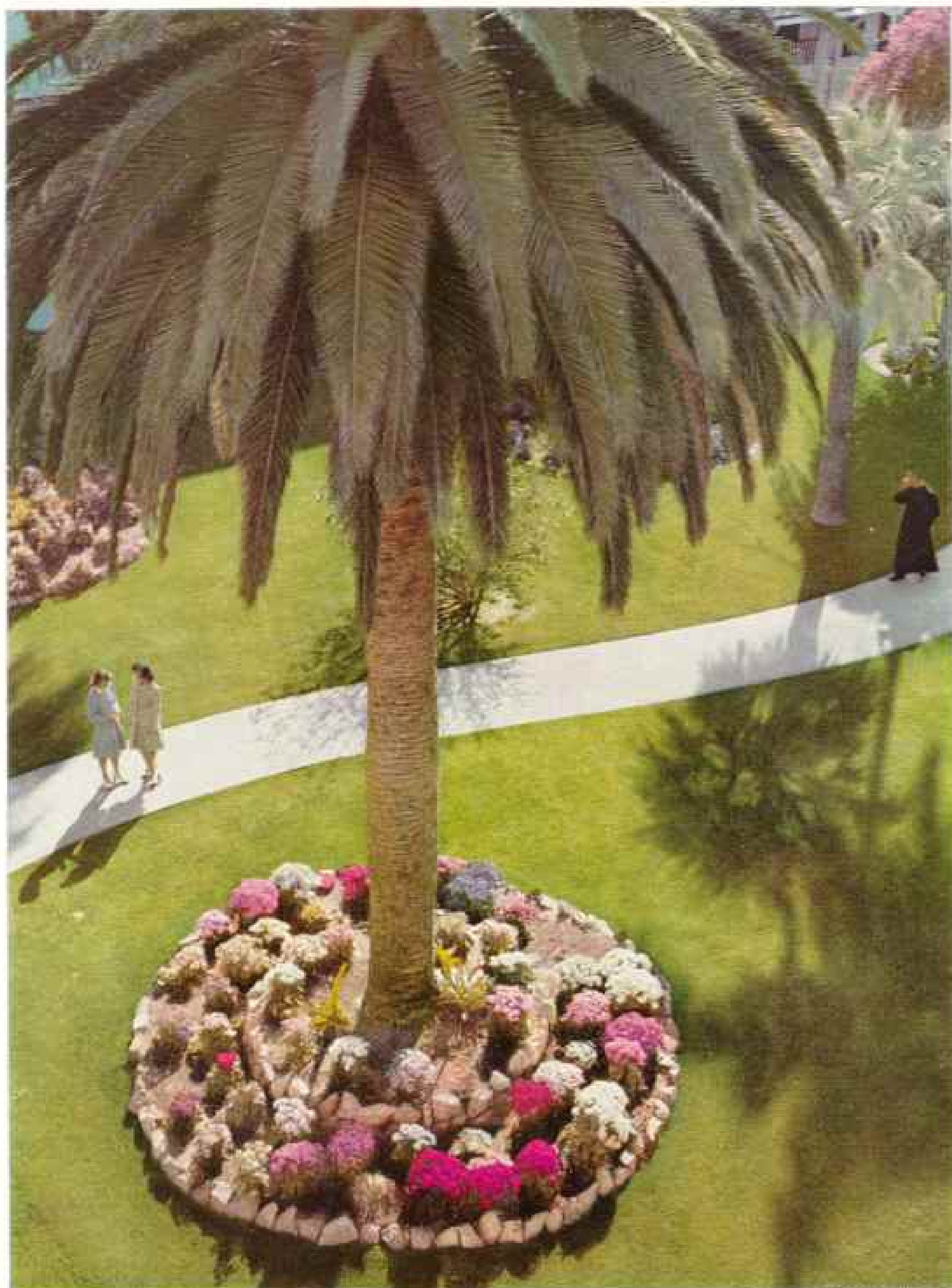
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### Ready for a Morning Gallop along the Ancient Trails of Rancho Santa Fe

Engraving by H. Arthur Stewart.

Southern California still goes horseback—not only on cow ranches, but on bridle paths remote from highways. Blooded horses are bred now, where once roamed wild herds. In the great drought of 1863 horses were driven over sea cliffs and drowned to save them from death by thirst.





© National Geographic Society

Kodachrome by H. Anthony Brown

**Graceful Palm Shadows Fall Across Coronado's Green Lawns and Formal Gardens**

Coronado, long famed as a seaside resort, adjoins North Island, which, with Point Loma and the Silver Strand, helps form San Diego's excellent harbor. Gradually the Navy is taking more and more of North Island for its shops, yards, and airdromes.

"One hears there are 'deserts' on sea floors, where no plant life grows. Is that true?"

"Yes, only where light reaches down can sea vegetation grow. In the open sea, where water is clear, light penetrates to a depth of 300 feet; near the coast, where waters are more turbid, light reaches a depth of only about 100 feet. Plants are therefore not found attached to the bottom where coastal depths exceed 100 feet; but floating microscopic plants are found all over the ocean surface, in what we call the 'surface layers.'"

#### Plant Harvests of the Sea

"You speak of the 'harvest of the sea,' and of our increasing dependence on the sea for food; of 'aquiculture' as compared with agriculture. Do you mean that, besides fish, we might also learn to eat plants from the sea?"

"Why not! Hawaii eats 26 kinds of sea plants, and Japan gathers 70 different species of edible marine plants."

"Dr. Sverdrup, I have heard that Nature plows the sea, just as farmers plow their fields, to keep the surface water fertile. I think you call that process 'upwelling'; just what goes on, when that happens?"

"Without upwelling marine life would soon perish. To live, sea plants, on which fish feed, must extract such nutrient salts as phosphates and nitrates directly from sea water. You hear a lot now about growing tomatoes, cucumbers, etc., without soil, simply by planting them in water impregnated with the right chemicals. Sea plants have grown without soil as far back as the geological history of the earth goes.

"But, were sea water motionless, its surface plants would soon exhaust all chemicals needed for their growth. So nature 'plows,' or upwells the water. This occurs as prevailing winds carry the warmer surface water away from the coast, and colder water rises from depths of 500 to 600 feet, to take its place. This cold water coming up brings with it fresh fertilizing salts, just as deep land plowing brings up fresh nutrient salts. Good fishing, then, is found only where this overturn of water masses occurs."

"Then the Institution's research must be useful to commercial fisheries?"

"Yes, we are working now with the United States Fish and Wildlife Service. In our special boat we make systematic cruises to study ocean currents, the intensity of upwelling, sea-water chemistry, distribution of microscopic organisms, etc. All this information is very useful to the Service in its studies of sardine spawning and fish food plants in general."

"One hears that the sea is a kind of air conditioner which helps give southern Califor-

nia its fine climate. How does that work?"

"The sea acts as a thermostatic control. Ocean temperature remains low in summer, high in winter. Down the California coast flows a current of cold water from the regions south of the Aleutian Islands; hence water temperatures here are low as compared with those along other coasts in similar latitudes."

"Do you also study the ocean floor at great depths?"

"Yes, but not at the greatest depths. As you know, off Japan the U.S.S. *Ramapo* found a depth of 34,626 feet; there's a hole off the Philippines that's 35,400 feet deep.

"Wherever we've gone, our geologists have studied the topography of the ocean floor, the types of sediment which are being laid down, and they've also brought up interesting fossils, including the bones of a big extinct sea cow."

#### Kelp Gathered from the Waves

Dense beds of kelp cover an area of almost 150 square miles in shallow waters off this coast. With its odd-looking, bladderlike floaters, this big seaweed is of much commercial value (page 76).

Many varieties exist, but the rockweed, or "giant kelp," which San Diego cuts and treats is known as *Macrocystis pyrifera*. It is valuable for its content of algin, solvents, and minerals; also it has food properties useful to men and beasts.

Algin, a nutritious element, is widely used not only in the chemical and textile industries, but also in the manufacture of foods as a stabilizing agent. Algin goes into ice cream to make it smooth and of a more pleasing consistency. It also contains a vitamin useful in poultry feeds, and men who raise foxes on fur farms feed algin to their animals to increase the litter.

Several products obtained from kelp are used in munitions. During the first World War, San Diego cut enormous tonnages of kelp, used in making potash, iodine, and acetone.

Big seagoing lawn mowers steam out from San Diego to cut off the top stipes, or stems, of the kelp, which is a tremendously long plant growing upright in the sea.

These stems are then hauled in like fresh-cut alfalfa and processed in a mystery factory which stands behind "keep out" signs in the south of town.

Wide attention is focused now on San Diego County's great Palomar Observatory, which stands 5,568 feet high on the mountain of that name 75 miles by road northeast of the city (page 67).



#### Here the Spanish Bandini Family Settled Years Before Americans Took California

This Gualjome ranch house plainly tells the story of colonial life. Chapel, outdoor oven, windowless wall for Indian defense, blacksmith and harness shops, cowboy quarters—all are here. Lieut. Cave Johnson Coats, West Pointer, married a Bandini, and his wife got the ranch as a wedding present (page 80).

Though the great 200-inch reflecting mirror is still in the process of polishing, the observatory plant is complete. It includes not only the main structure, whose silvery dome is 135 feet in diameter, but also two smaller observatories, a powerhouse, quarters for the staff, and a 1,000,000-gallon reservoir.

In years to come, astronomers and other scientists, as well as lay visitors from world's end, will visit this colossal telescope. With it men will explore hitherto unsolved mysteries of the heavens.

This site on Palomar Mountain was chosen because nights here are usually clear, upper air strata have minimum turbulence, and city lights are miles removed.

Costing \$6,000,000, the grant for the observatory was made by the General Education Board of the Rockefeller Foundation to the California Institute of Technology.

Engineers invited us to stand in the gallery of the great dome while they rotated it. One

is struck by the smooth action of this enormously heavy dome. It turns with almost no vibration. The temperature inside is controlled for more effective work with the instruments.

Up the south slope of Palomar Mountain the State has just finished a magnificent highway. After leaving the main route, which runs east from Oceanside, past Indian reservations and old Missions along the San Luis Rey River, the new road climbs through wild, heavily wooded country up to the new observatory site.

"Highway to the Stars," people call this spectacular drive.

#### Padres Still Sing Gregorian Chants

A long day's mule ride north of San Diego stands the historic Mission of San Luis Rey. Architects call it the finest example of builder's art among all California's old Spanish churches.



© J. H. H. H.

**From Palomar Observatory, Near San Diego, Astronomers Will Probe the Universe  
With a New 200-inch Mirror, Most Powerful in Existence**

These great reflecting telescopes are really giant cameras. Their huge mirrors act as funnels for light, concentrating a large quantity of starlight on one spot. Then, by exposing a sensitive plate for several hours, or even for several nights, stars and galaxies of stars are revealed that the astronomer could never see through the same telescope if he looked a lifetime (pages 65-66).

Spend a day with the friendly padres there, pore over ancient tomes, yellowed account books, and church records, and you learn how life was lived here when California belonged to Spain.

Like others that stretched along El Camino Real a day's march apart from San Diego north to San Francisco, this mission involved a vast farm and factory enterprise. Friars managed the fields and shops, wherein worked the Indian neophytes; they raised their own cattle, made their own wine and olive oil. They introduced horses, mules, cattle, and sheep, and European fruits and vegetables into California.

Indians, trained in these missions as blacksmiths, carpenters, shoemakers, masons, etc., proved most useful in later years when white settlers began to multiply.

"Since it was founded in 1798," said a

Franciscan, Brother Louis, O. F. M., "thousands of Indians have been baptized, trained, married, and buried here. At one time we had at least 60,000 head of livestock, and we traded hides and tallow to sailing ships that took them around the Horn to Boston, getting in return many New England products from boots and shoes to tinware and calico.

"But that was when Spain owned California. After Mexico gained her independence, these missions were secularized, and San Luis Rey fell into ruin. Priests departed, the Indians scattered, and when General Kearny and Kit Carson came in the war between the United States and Mexico they found the mission buildings utterly uninhabited. In fact, for a time the Mormon Battalion was quartered here.

"It brought the first four-wheeled wagons seen in California, and to this day, in a box



Wide World

### Skilled Mechanics Put Last Touches on Four-motored Army Bombers

This is the final assembly line at Consolidated Aircraft's plant, which builds planes for many lands, from England and Australia to Canada and Java (pages 45, 48). After testing, "some fly east and some fly west, and some fly over the cuckoo's nest." Month by month, production is steadily increasing. Consolidated flying boats are now being constructed in Soviet Russia under supervision of American engineers. In the fall of 1941, a Russian-built plane flew to Puget Sound and returned via Alaska and Siberia a week later.

canyon, you can see the steps cut in rocky hillsides where the Mormons let their wagons down on ropes.

#### Mission Deeded Back by Lincoln

"After the Americans took over, they appointed an Indian agent, who lived here and protected the property."

"Brother Louis, what do you mean by secularization?"

"Well, in today's plain English, confiscation."

"Then how did you get the mission back again?"

"Look behind you. See that deed, framed under glass, and hanging on the wall? It's dated 1865, and signed by Abraham Lincoln. He gave the mission back to us."

"Did you get back your Indians?"

"Some of them. The church is full now at mass. Come any Sunday at ten, and you'll hear the padre choristers singing the old Gregorian chants, some of which we taught the Indians over 100 years ago."

Then Brother Louis opened a cabinet and showed us ancient hand-lettered tomes, including a hymnbook with notes so big that the whole choir read them from 30 feet away.

"Before printing was common, hymnbooks were scarce, and one had to serve many singers."

"In hearing confessions now, what language is used?"

"Spanish and English. Early priests, however, had to learn Indian dialects. We still preserve the *Pater Noster*, or Lord's Prayer, written in the local Dieguino language, as romanized by the padres."

Walking through the cloisters and gardens, Brother Louis showed us beautiful golden pheasants, parakeets, and green lovebirds, which are his particular charge, as well as rare plants and flowers from many lands.

"The story goes that this pepper tree," said the Brother, "is the first one planted in California. It was supposedly brought from Peru by a sailor more than a century ago."

Smelling fresh cakes baking, we followed our noses into the great monastery kitchen and found a huge oil-heated oven equipped with thermometers and all modern gadgets. On the table stood seven big chocolate cakes, hot and savory, ready for the padres' evening repast. He cut us generous slices, and we were hugely regaled, just as were the pioneer padres in Spanish times when they roasted a beef whole, and made their own wine and olive oil.

"Brother, who cooks this good food?"

"We do."

"Can you cook?"

"Well, turn me loose in a kitchen like this, and I wouldn't starve!"

These Franciscans practically ruled California for 50 years or more. From the first mission which he founded, San Diego de Alcalá, at San Diego, Father Junípero Serra rode north to build missions at Monterey and elsewhere. By 1823, some 21 such missions were strung north from San Diego to San Francisco.

#### On Point Loma California's History Began

Most important tip of land in southern California is this Point Loma—which runs south, from the mainland, to help form San Diego's harbor.

First American flag ever flown over what is now California was hoisted on this point. It was a "shirt-tail" flag, made by sailors from colored calico scraps (page 77).

On Point Loma, too, were heard the first Christian prayers ever offered in California.

This year San Diego celebrates the 400th anniversary of the arrival of its first white man. He was Juan Rodriguez Cabrillo, who came September 28, 1542, on that persistent quest for a northwest passage to China.

On this high tip Cabrillo prayed and dedicated it to the glory of God and the Spanish king. San Diego still keeps his memory green. Proof of this you see in the lavish way his musical Portuguese name is tacked to cafes, card clubs, theaters, bridges, and real estate subdivisions. Historians especially like to relate how Cabrillo "put shirts on two naked Indian boys, who promptly fled, their new shirt tails cracking!"

But it was Sebastián Viscaíno, landing on the Point in 1602, who gave San Diego Bay its name.

From Viscaíno's diary we learn that he thought this "the best harbour in all the South Seas." Where Uncle Sam's ships of war now crowd the bay, Viscaíno scoured and cleaned his caravels, which Indians mistook for "whales with wings."

"A hundred Indians appeared, with bows and arrows, and with many feathers on their heads," says Viscaíno's journal. "Of these, two men and two women came down to the beach, the latter weeping."

One woman looked to be more than 150 years old. She the general "cajoled," and gave some beads. . . . "She had wrinkles on her belly which looked like a blacksmith's bellows, and her navel protruded bigger than a gourd". . . . "This port was given the name of San Diego." . . . It "is large and good, sheltered on all sides."



Let from F. R. A.

Workers Crowd through Guarded Gates of Consolidated Aircraft, Now Building Eight More Plants in San Diego



Let from F. R. A.

Lack of Houses Compels Hundreds of Inrushing Workers to Live in Trailer Villages

U. S. Farm Security Administration books these trailers up with city lights, water, etc., and rents them to small families at about \$1 a day.

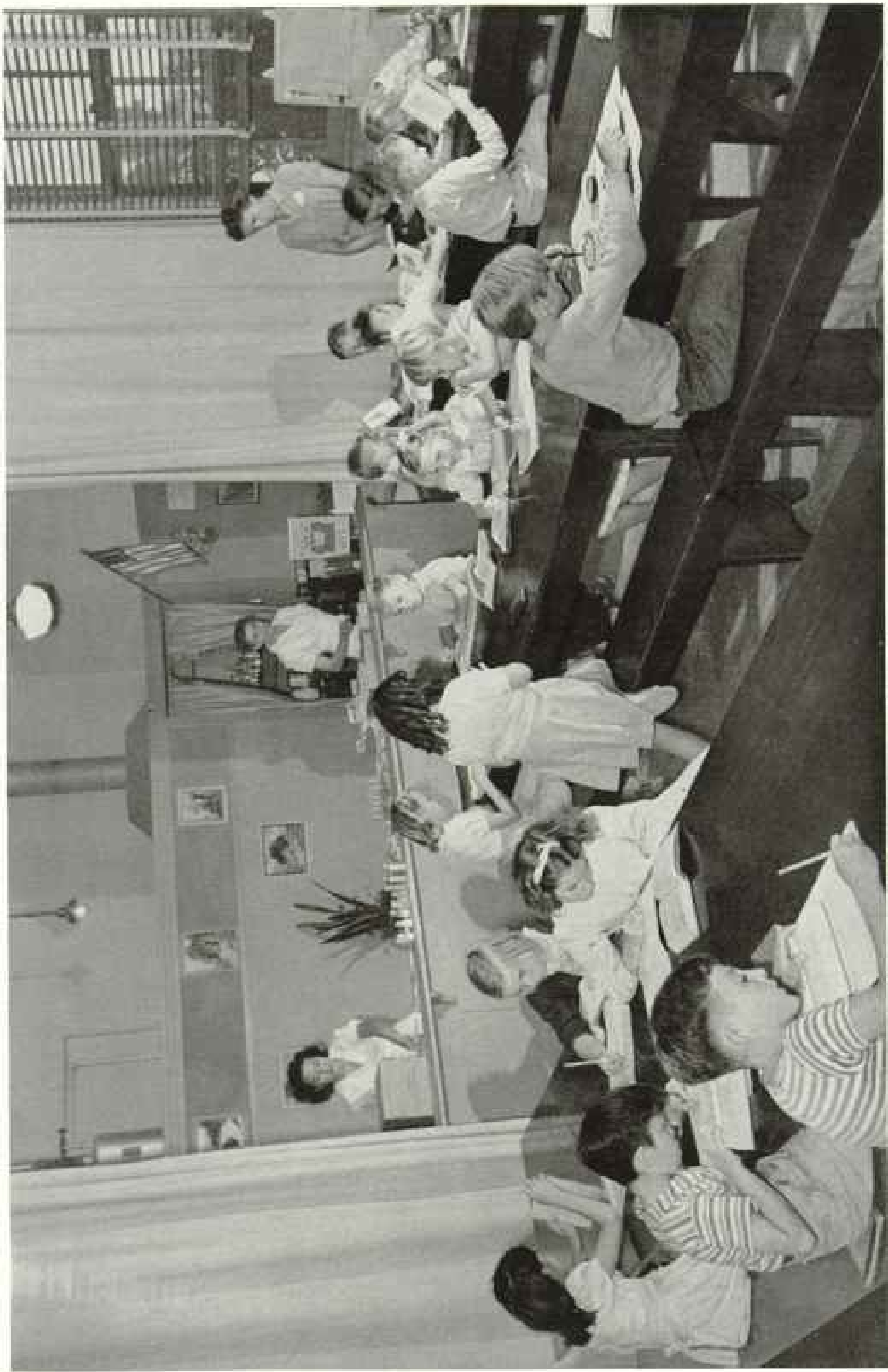


APR 1935

**Sprawling in the Heart of San Diego, Balboa Park Is a Vast Playground for Its Residents and Defense Workers**

Ford Bowl, a popular exhibit in the 1935 Exposition, is seen at left center. Just above it is majestic Cabrillo Bridge. At right is the vast U. S. Naval Hospital and, lower center, San Diego High School and its capacious stadium.

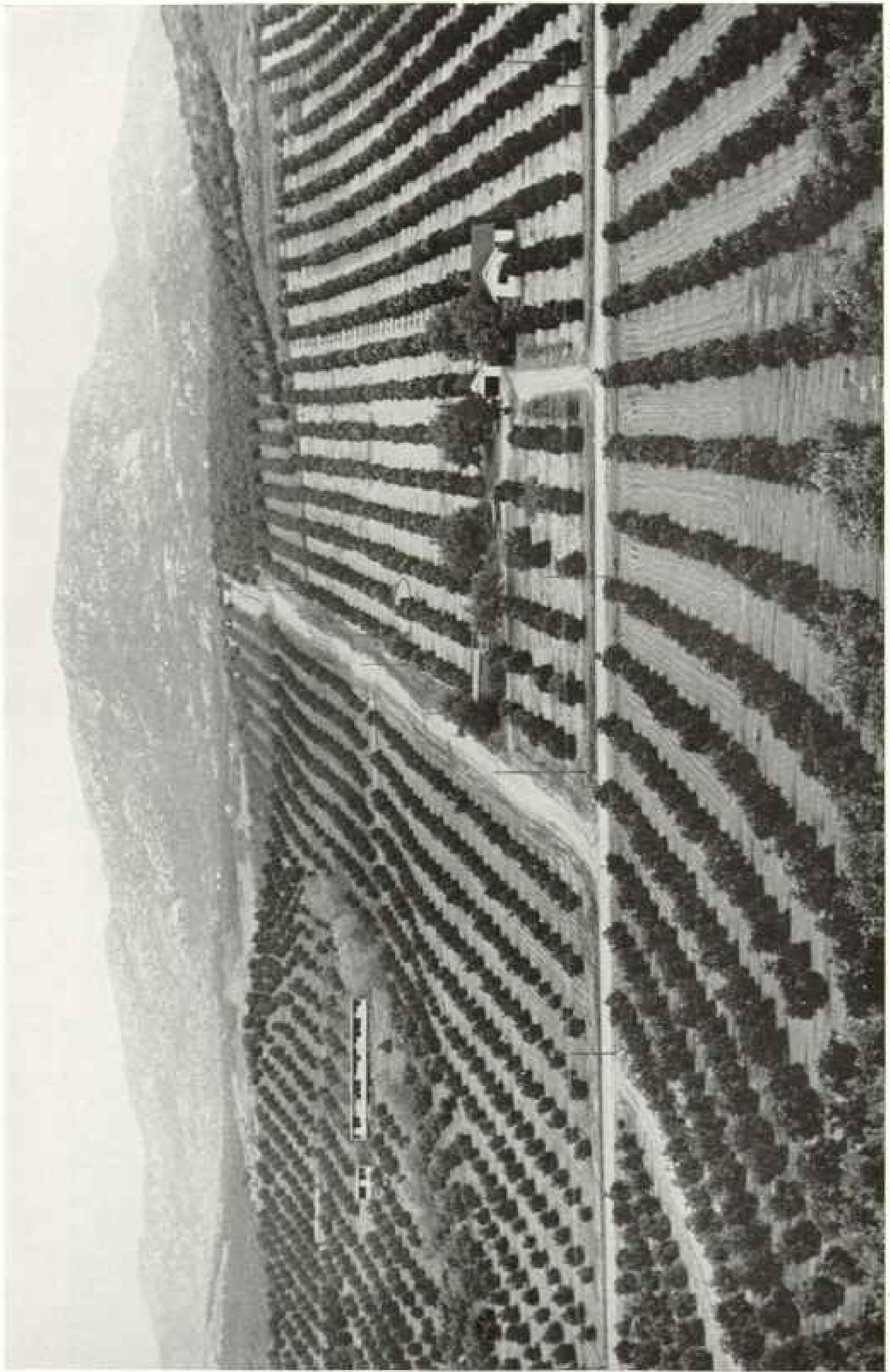




Lee Ann P. H. A.

**San Diego Schools Are So Crowded That These Pupils Must Work in the Students' Cafeteria**

Inrush of Army and Navy recruits, plus hordes of new workers coming for war-bum jobs in the airplane factories, has also brought thousands of new families. Despite crowding, all the 17 pupils seen here in the Balboa School are hard at work.



Phil Mathier

**Long Rows of Green Orange Trees Climb the Gentle Escondido Slopes in Northern San Diego County**

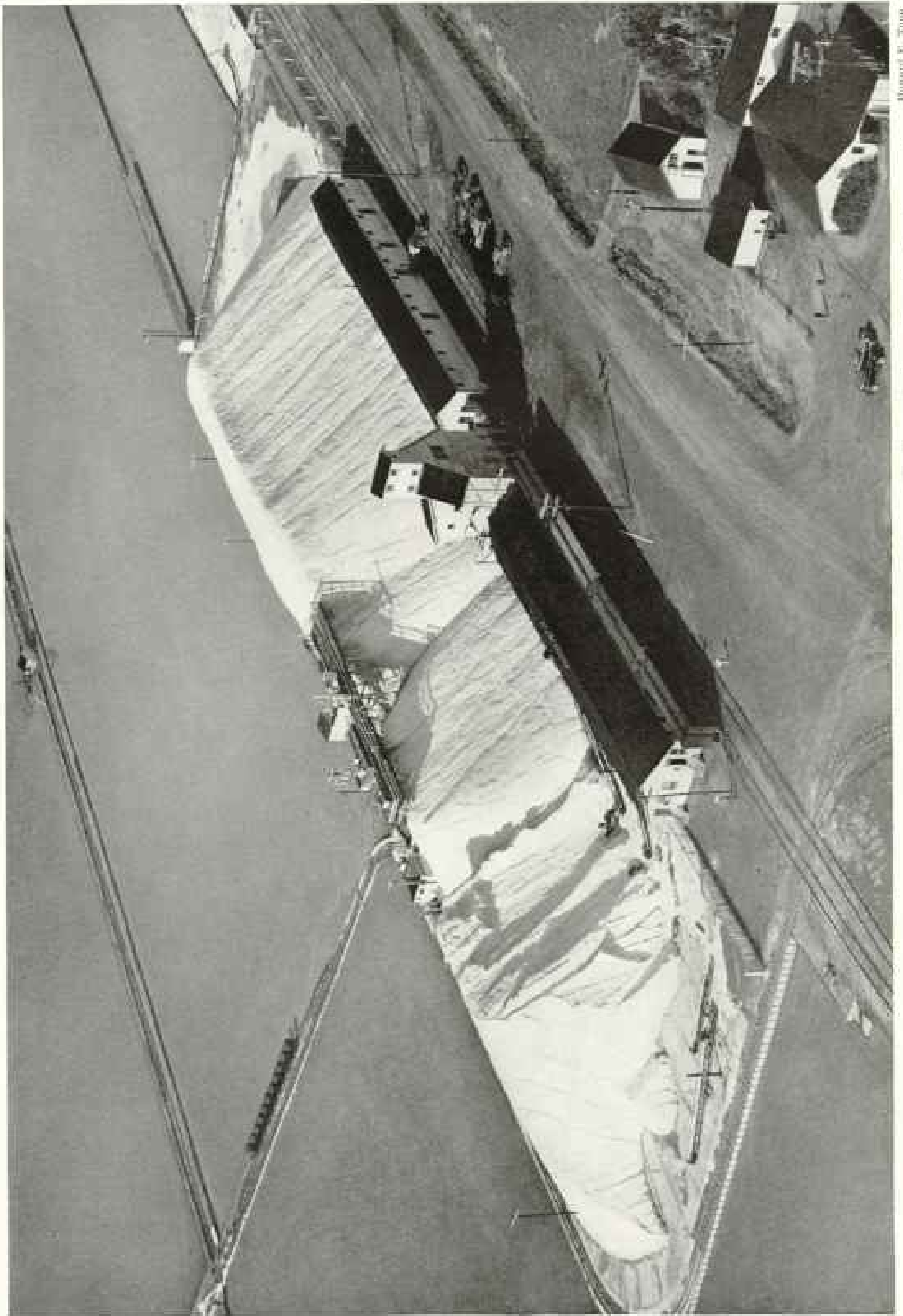
Pioneer Spanish priests first proved the fertility of these once-bare-looking hills. Now, wherever water can be had, gardens and orchards color the landscape. Poultry farms and cattle ranches also flourish in this region.



Fred Maguire

**"Join the Navy and Sweep off Elephants!"**

Keep the home neat! Sailors do their bit, as Jumbo enjoys having his pachydermatous back scratched in San Diego's friendly zoo.



Howard E. Tipp

This Big "Pinch of Salt" Was Made by Evaporating Sea Water in Vast Shallow Basins, Seen in Background



Fried Maass

### Unloading and Chopping Kelp, Which Makes Ice Cream Easier to Swallow!

From about 150 square miles of kelp beds offshore near San Diego, big seagoing lawn mowers cut the weed (page 65). It yields not only solvents and minerals, but algin, used in making ice cream; also certain vitamins in poultry foods and in fox food served on some fur farms. Potash and iodine are recoverable from kelp, and so is agar, known to Malays as *agar-agar*.



Fred Masters

Here on Point Loma, American Sailors Hoisted Their "Shirt-tail Flag," the First Old Glory to Fly in California

Covering only one-half of an acre, this National Monument honors the memory of Juan Rodriguez Cabrillo, who in 1542 was the first white man to see San Diego harbor (page 69). Now the Coast Artillery uses the abandoned lighthouse as a lookout station. This site commands a remarkable view. From here you can see, spreading far, San Diego and its splendid harbor, North Island, Coronado Islands, and the mountains down in Mexico.

Then Viscaino upped his mud hooks, and sailed out of history.

Whites didn't reappear for 167 years. They came again in 1769 only because King Carlos of Spain was jealous of English and Russian seamen creeping down the Pacific coast from Alaska.

To halt these explorers and fur trappers from the north, Spain ordered San Diego and Monterey to be occupied and fortified.

On this "sacred expedition," sent by José de Gálvez, came Gaspar de Portolá, along with Father Junípero Serra, sent to Christianize the Indians. Reaching San Diego in 1769, these Spaniards brought with them tools, skilled

workers, cattle, sheep, goats, horses, mules—and mission bells.

These bells were symbolic of a new way of life, strange and unknown to the Indians. Their ringing was a sound they had never heard, musical and yet authoritative. In so great awe did the superstitious savages hold the mission bells that they are thought to have buried them during the despoiling of the missions to escape their reproachful tones.

Junípero Serra, pioneer priest, took his place among the conquerors of the coast. He's better known than any other ecclesiastic in California history; today the devout kneel to pray beside his sculptured tomb near Carmel.



**Like Chinese Checker Players, Women Sort Rivets in the Consolidated Aircraft Plant**  
 Preferment is given to relatives of male employees; wage-and-hour standards for both sexes are the same.  
 Women are engaged for light mechanical duties. They wear a uniform of blue-slack suits.



Staff Photographer H. Anthony Stewart

**"Another Crack About Washwomen, and I'll Smack You with a Wet Shirt Tail!"**

Take warning when a leatherneck shuts his port eye like that—it can mean either frolic or fight! This is one day in a Marine's life not featured in those fancy recruiting posters about "seeing the world."



Fred Masters

### Salt-water Baths Cure Jaded Race Horses of That Tired Feeling

At Imperial Beach Farm, near San Diego, a trainer runs his equine sanitarium. He believes soft beach sand rests horses' feet and eases their tendons. Surf splashing gives mild exercise.

You think, always, when you sit alone and ponder these historic sites of early California, that this land was Spain's when Virginia and New England were still fighting Indians.

Captain George Vancouver, British explorer, sailed his *Discovery* to San Diego in 1793. Though Vancouver came "for scientific research and exploration," the Spaniards worried. They wanted California for themselves. Trade with foreign ships was forbidden.

#### Otter Skins for China

Yet after 1800 "Boston ships" came to San Diego in increasing numbers. Some loaded otter skins, which they traded to the fur-loving Chinese in Canton for silk and tea.

On Point Loma, so well known to Dana of *Two Years Before the Mast*, Yankee skip-pers built crude "hide houses," where cow skins were soaked in salt water, scraped, and then shipped to shoe and leather firms in New England.

For hides the Boston ships traded tea, coffee, sugar, cutlery, clothing, boots, and shoes from Lynn, calicoes and cotton from Lowell, jewelry and combs for the ladies . . . everything from Chinese fireworks to English cartwheels . . . "A jack-knife for a cowhide, a string of beads for an otter skin."

Long thought almost extinct, a colony of these big sea otters is gathering again now—under game warden protection—up the coast north of Santa Barbara. From the new San Simeon coastal highway you can look out and see them through a telescope rented by a thrifty native at ten cents a look. They float dozing, feet up, in the excellent camouflage of the kelp beds.

Nantucket and New Bedford whalers anchored off Point Loma. In those days when Lieut. Matthew Fontaine Maury of the U. S. Navy drew his now famous "Whale Chart," these sea monsters moved south past Point Loma kelp beds in December, and back north in the spring.



If you look hard—and use your imagination—you may find in the sands around Point Loma's base a few black spots, where the old-time whaling men heated their try-pots. Today whales still frequent these waters.

Most of Point Loma, today, is given over to Army and Navy uses. Without a permit and an eagle-eyed escort you can't even go out to the "Old Spanish Lighthouse," much less have a look at the great coast-defense guns or the fat, hog-shaped mortars that seem to lie sleepy and sluggish in their hidden, camouflaged pits.

Today Army and Navy wives play golf on a neat 9-hole course at the Naval Training Station. New shirts are issued by thousands to Army and Navy recruits, perhaps on the very spot where Cabrillo put new shirts on those Indian boys.

Unique link with the Spanish past in San Diego County is Señor Cave J. Coutts. His West Point father, Lieut. Cave Johnson Coutts, marched here with the 1st Dragoons in 1848, mapped the line of march, and married into the Spanish Bandini family, which had built the rambling Guajome ranch house, best surviving example of a hacienda home from the days of the dons (page 66).

With its own saddle and blacksmith shops, shearing shed, private chapel, and outdoor oven that can bake 100 loaves at once, this house also has a semitropical patio choked with fruits and flowers, and musical with singing fountains.

Built for Indian defense, its thick adobe walls have high "airholes" instead of windows, and its ancient tiles were made long, long ago at near-by mission San Luis Rey.

#### First Iron Safe from Peru

Still in use here is the first iron safe ever seen in California. Made by hand, and locked with a giant key, it was brought here from Peru by José Bandini, once Spanish admiral at Lima. His son Juan founded the California Bandini family.

Fiction and the theater paint only the more idle, romantic aspects of this old-time ranch life. They exalt palatial ranch homes, horse races, bear baiting, *bailes*, fiestas, beautiful guitar-playing señoritas, and the gallant caballeros with silver-mounted saddles, gold-braided costumes, and wide sombreros.

But romance writers say little of flies and fleas, of woman's work with cooking, sewing, soap, and candle-making, or the rough, dangerous lives of the cowmen. Roping and skinning thousands of half-wild animals, dry-

ing the stinking hides, packing them to the beach for loading on Boston windjammers—all as described in *Two Years Before the Mast*—was bone-breaking work.

"In the great drought of 1863," said Señor Coutts, "we drove both cattle and half-wild horses into the sea and drowned them—rather than see them die of thirst. . . . Hunting in my youth was our best fun. . . . We roped wild horses and shot everything from geese to mountain lions. . . ."

"Look at that big scar on my left hand. A lion did that. When I was hunting, as a boy of ten, a lion grabbed my dog. I shot the big yellow cat. As he rolled over, I tried to pull my dying dog away from him—and he grabbed my hand."

#### Baja California, San Diego's Neighbor

Wild horses and burros long plagued the ranchers here, eating up grass needed by cattle; in Baja California both still abound. I once joined in a hunt for them.

Indians, riding a day ahead of Roy Benton and me, set signal fires beyond Benton's Ojos Negros Ranch to indicate they had located the herd. We chased them two days, wearing them down, then roped five worth keeping and breaking.

Scrawny runts, too light for use, were roped by the Indians, just for the fun of it. Hair of their manes and tails was cut off for braiding *riatas*, or hair ropes; then the wild, frightened creatures were turned loose.

Stretching across San Diego's back country are many fruit and farm communities whose present titles derive from historic Spanish land grants. Wealth in that prodigal era was measured in land and cattle.

Early ranches gave their musical names to many places, such as Peñasquitas, Cuyama, Santa María, Valle de San José, Santa Margarita, Buena Vista, Santa Ysabel, Rincón del Diablo (Devil's Corner), and Guajome (Place of the Frogs).

Few such vast ranches now remain at all intact. One is the great Santa Margarita; another is the old Valle de San José, now called Warner's Ranch.

To those pioneer carefree cattle days, somewhat like the ante-bellum days of the South, modern San Diego owes a debt. From the audacious, adventurous, yet polite and aristocratic dons, she inherited a certain poise and dignity, a calm and serene way of life that still rests gently on her inner self, despite the strange, unexpected thousands who have surged suddenly upon her long-peaceful bosom.



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Illustration by B. Anthony Stewart

### Flying Fishes Play off Santa Catalina Island

A foot to a foot and a half from nose to tail and with gossamerlike fin "wings" spreading 12 to 18 inches, they leap from the sea and glide sometimes a hundred yards. They may soar as high as 30 feet. Near Avalon at night myriads of them flash above the water, attracted by an excursion steamer's searchlight.



© National Geographic Society

Redaction: Bill Arthur Stewart

### To Lovely Avalon Come Thousands of Yachts from Southern California

The little town, named for the happy island valley of Tennyson's *Idylls of the King*, is on the lee side of Santa Catalina. "Where falls not hail, or rain, or any snow; Nor ever wind blows loudly." Pleasure craft, daily steamers, and amphibian planes cross the 22-mile channel from the mainland, bringing 350,000 visitors annually.



© National Geographic Society

**Sight-seeing Buses Recall Stagecoach Days**

Wearing the traditional garb of early California, the drivers take visitors around winding mountain roads in the romantic manner of the Golden West.



Illustration by E. Anthony Ferrara

**Even the Savage King Vulture Responds to Kindness**

At the bird sanctuary in Avalon it takes bits of meat from the lips of Superintendent D. L. Mobby. The stunt, however, is not recommended for visitors.



© National Geographic Society

Costumiers by H. Anthony Stewart

#### Avalon Residents Preserve Traditions of the Days of the Dons

At Christmas time they observe the festa of Las Posadas, and at Easter give nine days to that of Las Pascuas. Costumes reminiscent of early California are worn for these and other celebrations. From the mainland palm trees have been barged over to give the island its tropical atmosphere.

Santa Catalina—400 Years a Lure to California Travelers



Catalina Visitors Step from the Excursion Boats into a Bit of Old Spain

Everywhere the Spanish influence is followed in buildings, halls, bell towers, tiled walks, and palm-shaded streets.

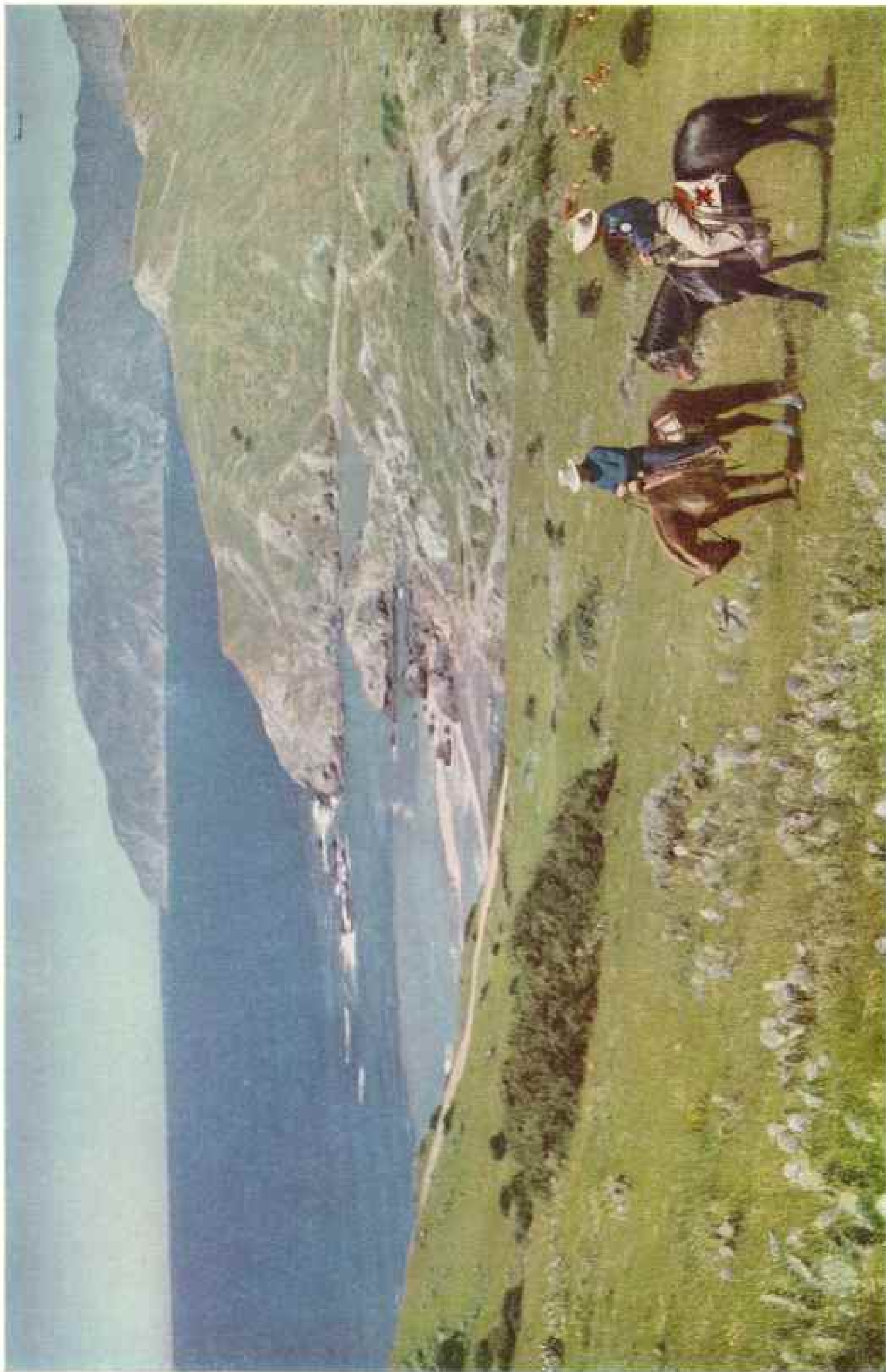


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Illustrations by H. Arthur Stewart

In This Isle of Song and Laughter There Is Music Day and Night

Strolling troubadours clad in dashing costumes charm audiences along the streets with Spanish melodies. Like a "movie" stage set, exotic Avalon has been built on what was once barren ground.



© National Geographic Society

Illustration by H. Ashbourn Stewart

**On the Seaward Side of Santa Catalina Horsemen Ride in Wild West Setting**

About 1,500 Hereford cattle roam rich grazing land in a region little touched by civilization. Though known best to visitors for its seaside resorts, the island, 22 miles long and from a half mile to seven miles wide, has stretches of mountainous land that is still wilderness.



© National Geographic Society

**Santa Catalina Calls Its 18-Hole Golf Course "the Sportiest in the West"**

Ketchikan by B. Anthony Street

Scene of the annual Bobby Jones Trophy Tournament each spring. It attracts players from all over the world. It crosses canyons and gullies, goes up steep hills and down deep vales. Low dams to catch the sparse winter rainfall, storage reservoirs, and pipelines have ended 75 years of disastrous drought.





**For Three Centuries the Wild Goat Has Been Monarch of Catalina**

Spanish explorers left behind a small band of these animals which they had carried alive as-butchering stock. Today the number of descendants of the herd is estimated at 30,000.



© National Geographic Society

Kidushimusi by B. Anthony Stewart

**Philip K. Wrigley's "Kaaba" Is a Sire of Some 200 Bluebloods**

On a sequestered ranch, this Arabian stallion heads a fine herd. Beyond looms Mount Orizaba (2,107 feet), highest point in the island. The rugged terrain is excellent for developing hardy stock.

# Java Assignment

BY DEE BREDIN

*National Broadcasting Company Correspondent in Batavia*

*With Illustrations from Photographs by the Author*

I FLEW to Singapore last spring, on the first passenger flight to Malaya. On that ten-thousand-mile flight the only overnight hop is from San Francisco to Honolulu.\*

The next jump is to Midway Islands—the last stop before crossing the International Date Line. Here, you skip a day going west and repeat a day coming east. This causes no end of confusion. It makes it seem that you can fly in four days from Singapore to Honolulu, and the same distance in the opposite direction takes six days. But, of course, it's all done with calendars!

Because weather conditions were ideal, the captain practiced instrument flying around Wake, and we all had a jolly good look at this barren little island between Midway and Guam—a tiny dot in the Pacific, 1,500 miles from either base.

The clipper curtains were carefully drawn before approaching Wake. The United States was not sharing its new military secrets with clipper passengers. On arrival at Wake, passengers were quickly herded into the little hotel and not allowed to leave the premises. Uncle Sam lets no strangers count his troops and defense equipment! (Page 92.)

The next stop is Guam. It is a pretty island, covered with palm trees and other tropical vegetation, which bravely bears the brunt of the severe Pacific typhoons. It is populated by American subjects called Chamorros—pleasant, light-brown natives, with fine Spanish features, many of whom speak English as well as their own garbled dialect.

Manila, our fifth stop, is, of course, much more modern, and living conditions show the benefit of many years of American influence. There are excellent hotels, with air-cooled rooms, good food, and fine service. I spent only one night there this trip, and went to the popular jai alai games at the luxurious casino, where we also dined and danced.

Flying from Manila to Singapore in the comparatively peaceful days of last spring,

\* See, in the NATIONAL GEOGRAPHIC MAGAZINE, "Flying the Pacific," by William Burke Miller, December, 1936, and "Guam—Perch of the China Clippers," by Margaret M. Higgins, July, 1938.

† See, in the NATIONAL GEOGRAPHIC MAGAZINE, "Life Grows Grim in Singapore," by H. Gordon Minnigerode, November, 1941; and "Behind the News in Singapore," by Frederick Simpich, July, 1940.

we soon sensed that we were entering a war zone. We saw a Japanese airplane carrier on the calm Pacific, and one of the pilots reported that we had passed seven Japanese reconnaissance planes off the China coast. And we learned that in the thoroughly mined harbor of Singapore explosions had occurred when merchant ships struck mines.

## Singapore Hot Spot of Vital Area

Today Singapore is no longer just part of the Pacific war zone; it is the hot spot of the entire region.† Military restrictions are taut; troops are grim and eager; the "ever-ready" Australians stationed there are praying for action!

From Singapore to Batavia, the capital of Java, is only four hours by plane. The one stop en route is Palembang near the southeast coast of Sumatra, where the Standard Oil and Dutch Shell refineries are located.

I was looking forward to the Netherlands Indies with keen anticipation. My father owned a tobacco plantation outside Medan, in Sumatra, and that was my birthplace. When I was quite young, we moved back to The Hague. Once before, in 1924, I had visited the Indies and met my many relatives there.

As we got out of the plane at the miniature airport of Palembang, I thought the long-threatened invasion had already come to the Netherlands Indies, for green-clad soldiers with fixed bayonets immediately surrounded us. We were quickly herded into a fenced-off section of the waiting room while the plane was being refueled.

After the take-off, the little red-roofed town revealed itself comfortably occupying the river bank. Across the stream the chimneys of the refineries were belching smoke, disclosing that production was going full speed ahead.

At Batavia armed guards escorted us to the immigration offices, where each passenger's identity was thoroughly looked into. My passport, return ticket, and photographic equipment were taken from me. My express checks were recorded, and every letter of introduction, including those to the Governor General and other officials, was scrutinized.

All around the airport were pillboxes, machine-gun nests, tank traps, and antiaircraft guns. Java was prepared for invasion (pages 95, 99, 112).



#### Honolulu Stopover Ends—Back to the Clipper Marches the Crew

"San Francisco, 2,404 miles; Midway, 1,304 miles," says the sign over the airport waiting room. Hawaii was the first port of call for the Pan-American flying boat which carried the author to Singapore, on her way to the Netherlands Indies. Stops were made also at Midway, Wake, Guam, and Manila. For the four-hour trip from Singapore to Batavia, Mrs. Bredin took a Dutch flying boat.

As I came into central Batavia, the sirens began to wail their warning of approaching air attack, and I deplored the temporary loss of my camera. The populace, however, pursued its languid course, apparently unperturbed by impending catastrophe. Thousands of saronged natives pedaled about on shining bicycles, and horse-drawn buggies were leisurely taking Javanese beauties to and from the bazaars.

Later I learned that these alarms had been going off every Friday night at six for so long that people had ceased paying attention to them.

#### Batavia Makes Merry Despite Threats

That evening I dined with Netherlands friends at the Harmonie, the century-old town

club of Batavia. For more than a hundred years this club, never closed, has maintained its perfect service and cuisine day and night. Sitting there under the trees beside the canal, we seemed very far removed from war worries.

The menu offered a wide selection, and the food was well prepared. The women around us were smartly dressed, and not a man was in uniform. All officers change into mufti when the day's military activities are over.

People who paused at our table talked of week-end plans; some would be sailing at the Priok Yacht Club, and others would go to the mountains.

Early next morning I went riding through native villages with Major General Schilling, a horseman who has represented the Nether-



### Athwart the Path of Japanese Expansion Lie the Bristling Netherlands Indies

The 3,600-mile chain of islands holds rich stores of oil, rubber, tin, sugar, and quinine. Since the occupation of the motherland in May, 1940, preparations for defense of the islands against Japan have been feverish. Batavia, capital of the Indies, is 560 miles southeast of the British naval base of Singapore and 3,600 miles southwest of Tokyo.

lands in the Olympic games. Riding through these *kampongs* provided an insight to real native life. Everyone raises something on the property surrounding his hut—chickens, pigs, and many kinds of vegetables.

We came to a clearing where a secret airport and hangars were under construction. The General told me there are auxiliary landing fields all over Java.

#### All Java Is Defense Minded

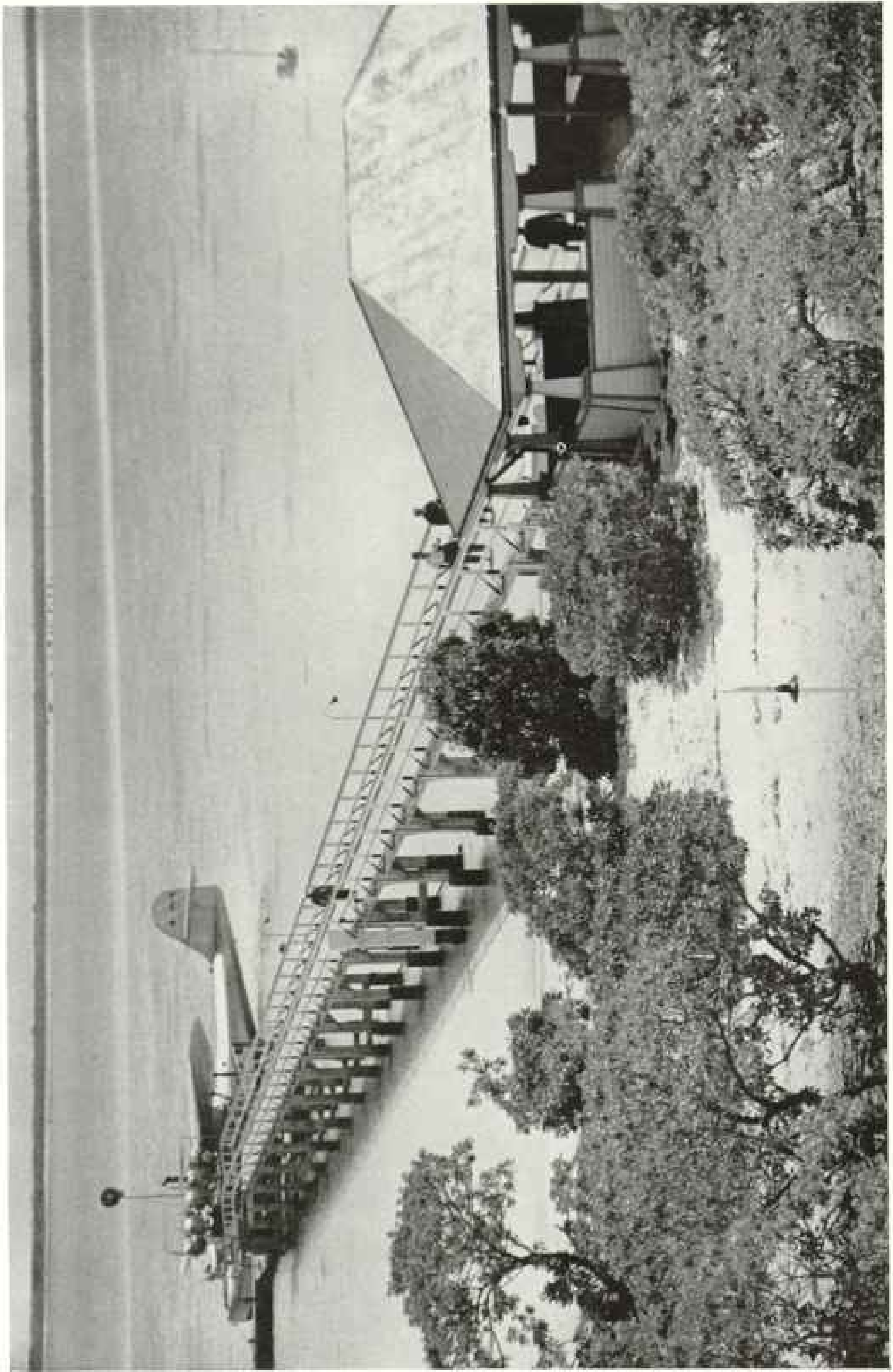
Later in the morning I made the rounds of government offices, all barricaded now with barbed wire and patrolled by armed

guards. These beautiful buildings, originally pure white, are covered with drab-green paint to camouflage them against air raids. They look squatty and depressing.

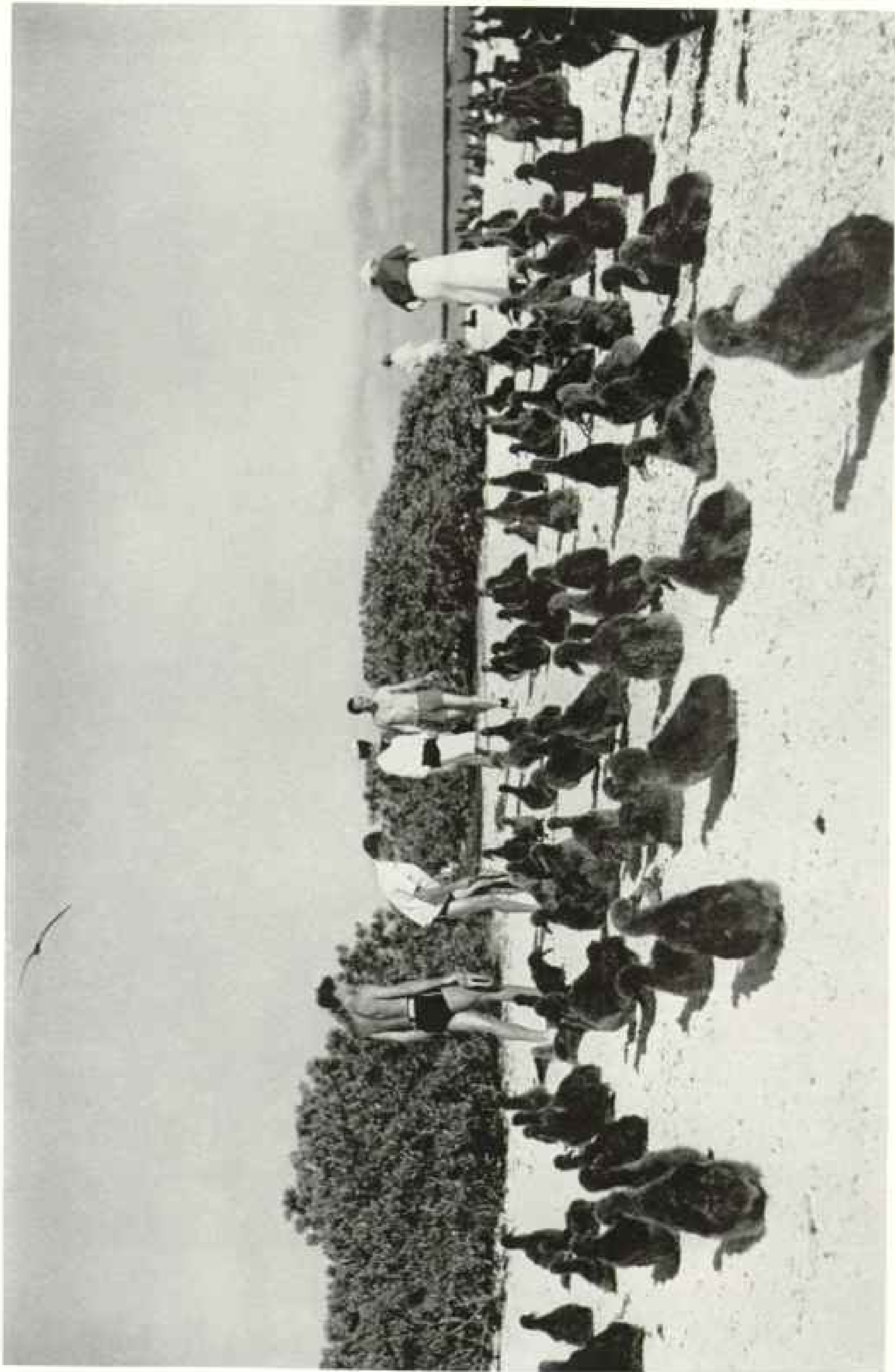
Familiar scenes have taken on a military aspect. The coolie with his baskets of flowers still squats under a tree, but back of him is a little grass hill with a metal door leading to a gasproof air-raid shelter.

There is a line-up of native boys in front of the park pavilion. Others come in steady procession out through a side door, each carrying a new green uniform, army boots, and hat.

Native men, women, and children are still



Unerringly, the Pan-American Clipper Picks Out and Lands at Wake Island, Pin Point in the Vast Pacific



**Baby Black-footed Albatrosses, Better Known as Goonies, Patiently Await Their Far-flying Parents**

Adults pass most of the year on the open sea, venturing as far as the California coast and return on schedule each year to Midway. They perform an amusing courtship dance, bowing and scraping, rubbing noses, and making weird noises. Clipper passengers and cable company staff find the albatrosses pugnacious when nesting.



#### In the Indies, the Bridegroom Foots the Wedding Bill

This Sumatran couple wears costly batik and brocades for the marriage ceremony. Nearly everyone in their home town of Palembang participated in the festivities, for a wedding means a community celebration in the islands.

washing clothing, bathing, brushing their teeth, and shampooing their hair in the much photographed canal that winds through Batavia (pages 98, 101), but not far from them armored cars roll on to warfare maneuvers.

At the receiving hospital of Batavia, there is a queue of natives who have come to have their blood tested. They wish to donate a pint each for the Allied troops in the Far East. The fact that a large proportion are acceptable as donors speaks well for the health of the population.

I had a long chat with the Governor General about the news of the day. Scheduled to broadcast to the United States the following day, I thought I would base my script on this

interview. The Governor General is a determined and proud Hollander who faces difficulties without wincing.

His charming wife is American-born, the daughter of the former United States Minister to Belgium, Theodore Marburg, of Baltimore, Maryland. Mrs. van Starckenborgh Stachouwer, first lady of the Indies, has taken complete charge of the many branches of the women's defense corps. She has organized Red Cross units, first-aid classes, a motor corps, outdoor kitchens (page 95), canteens, etc., and freely gives her time to raise funds to buy Spitfires for the R. A. F.

I visited the Chinese quarters of Batavia with Mrs. van Starckenborgh Stachouwer during women's defense practices. The Governor General's wife showed me some large outdoor kitchens she had established. There volunteers are trained to cook nourishing meals for distribution in "stricken areas"—if that much-talked-about air attack comes. The VAC, *Vrouwelijk Automobiel Corps*, or Women's Automobile Corps, works in cooperation with these kitchens, and will take charge of distribution (page 99).

"A substantial increase in troops and war material is the most important news of the moment," His Excellency told me, "now that the Japanese trade negotiations have reached their futile finale. For the moment, the war clouds—which have hung over these islands for more than a year—have drifted away, but we are fully prepared for their return. In the past the Indies' armies consisted of professional soldiers, and European and Eurasian troops; but now a native militia is being organized and trained. It will augment the regular army fifty percent."

#### Britain Commands Merchant Ships

More than half of the Netherlands merchant marine—still one of the largest in the world—had been placed under command of Great Britain, he said. In addition, the Dutch Navy was doing everything in its power to help



**Henry Quade, General Motors Head in Java, Inspects an Air Raid Shelter**

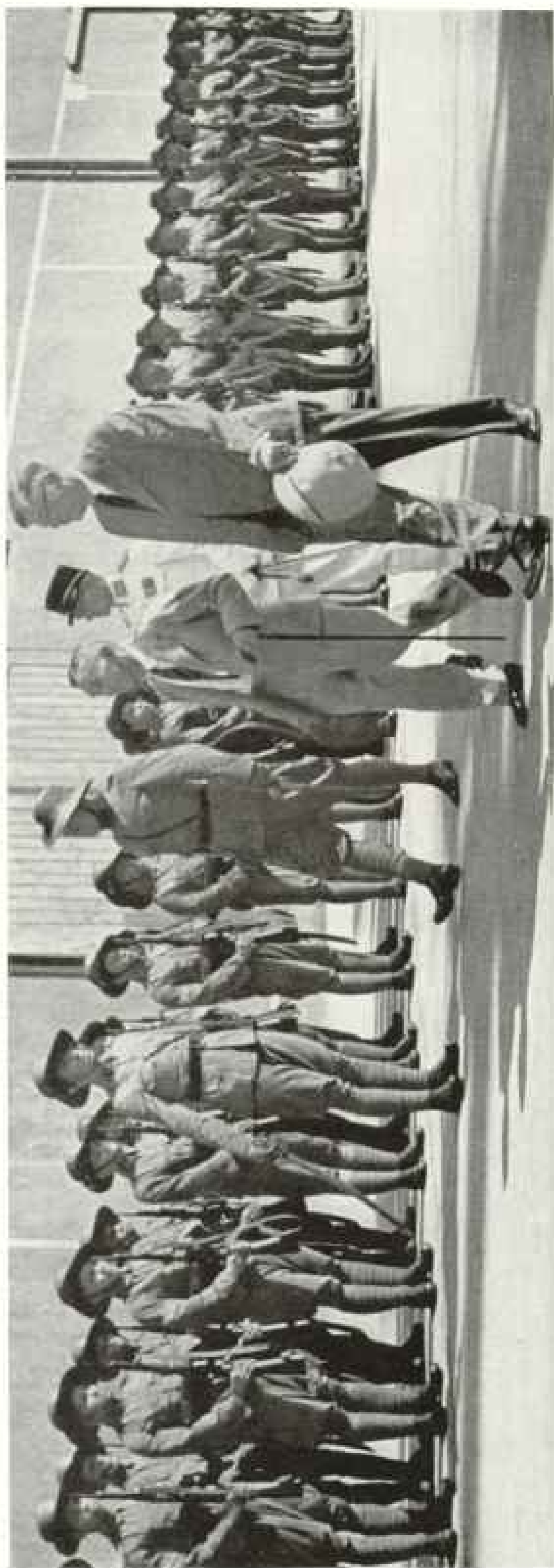
The dugout is one of a series at the large assembly plant at Tandjoengpriok (page 105). Elaborate precautions against air raids have been taken throughout the Netherlands Indies. Miles of shelters have been built.



**Dutch and Javanese Women Work Side by Side in an Outdoor Defense Kitchen**

If war comes, they will know how to prepare emergency rations to alleviate suffering during air raids. In Java women from the Netherlands and their Malayan neighbors, all members of the defense corps, join forces in cooking, rolling bandages, serving in canteens, and censoring mail (page 99 and opposite).





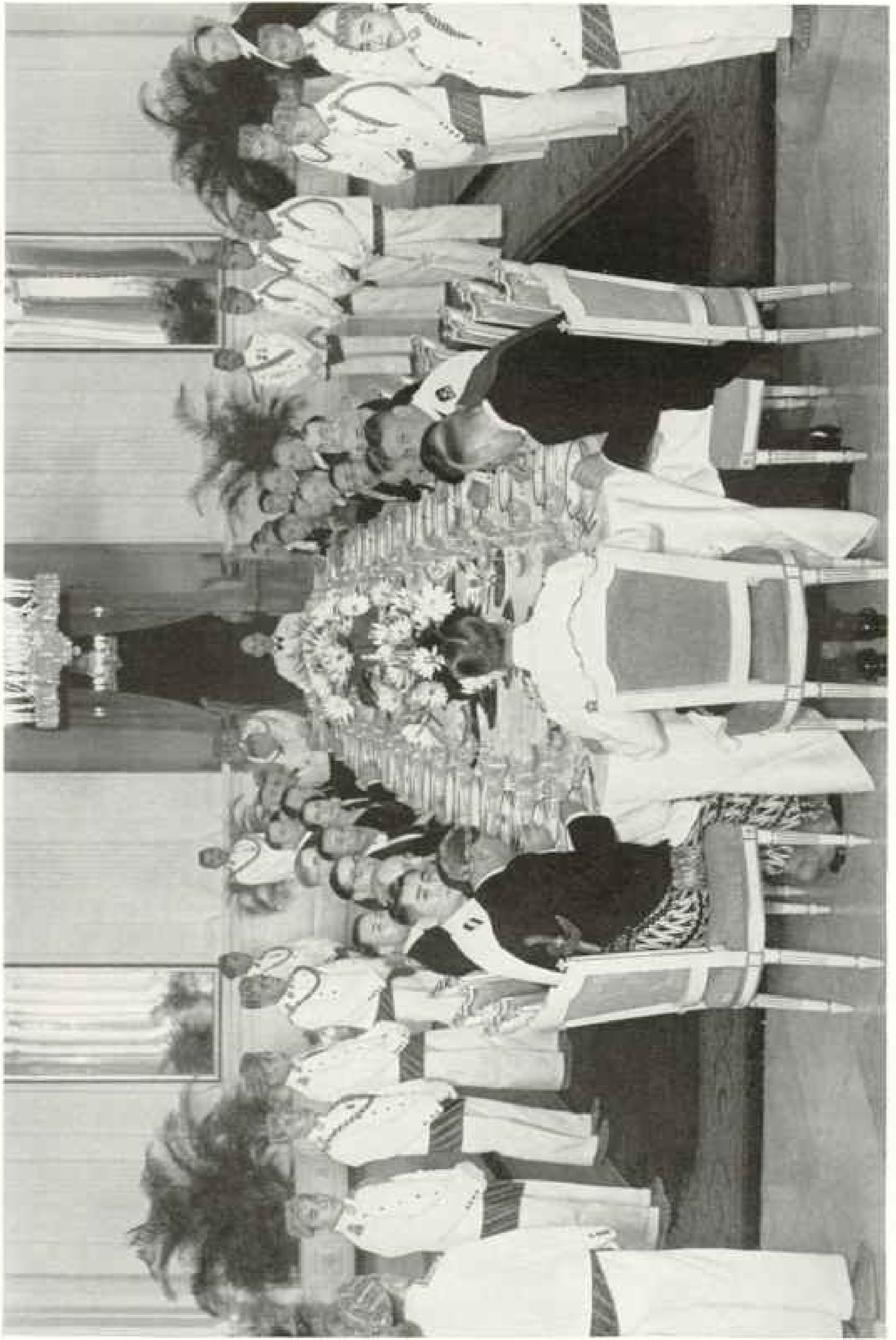
**A Javanese Honor Guard Turns Out for Kenkichi Yoshizawa, Japan's Trade Negotiator, as He Departs for Tokyo**

Escorting him through the streets of Tandjoengpriok is Dr. Hubertus J. van Mook, Director of Economic Affairs, who refused the Japanese demands (pages 94, 102).



*© Green Traveler, from Capricorn*

**Honk! Honk! Honk! Motorists Yield Right of Way as Three Geese Solemnly Cross a Downtown Bandung Street**



**Netherlands Indies Officials Honor Kenkichi Yoshizawa, Head of the Japanese Trade Mission, at a Farewell Banquet.**  
Only woman at the table is Mrs. van Starckenborgh Stachouwer, American-born wife of the Governor General.



Hout Photographer Marnoud Ooms, Wiltama.

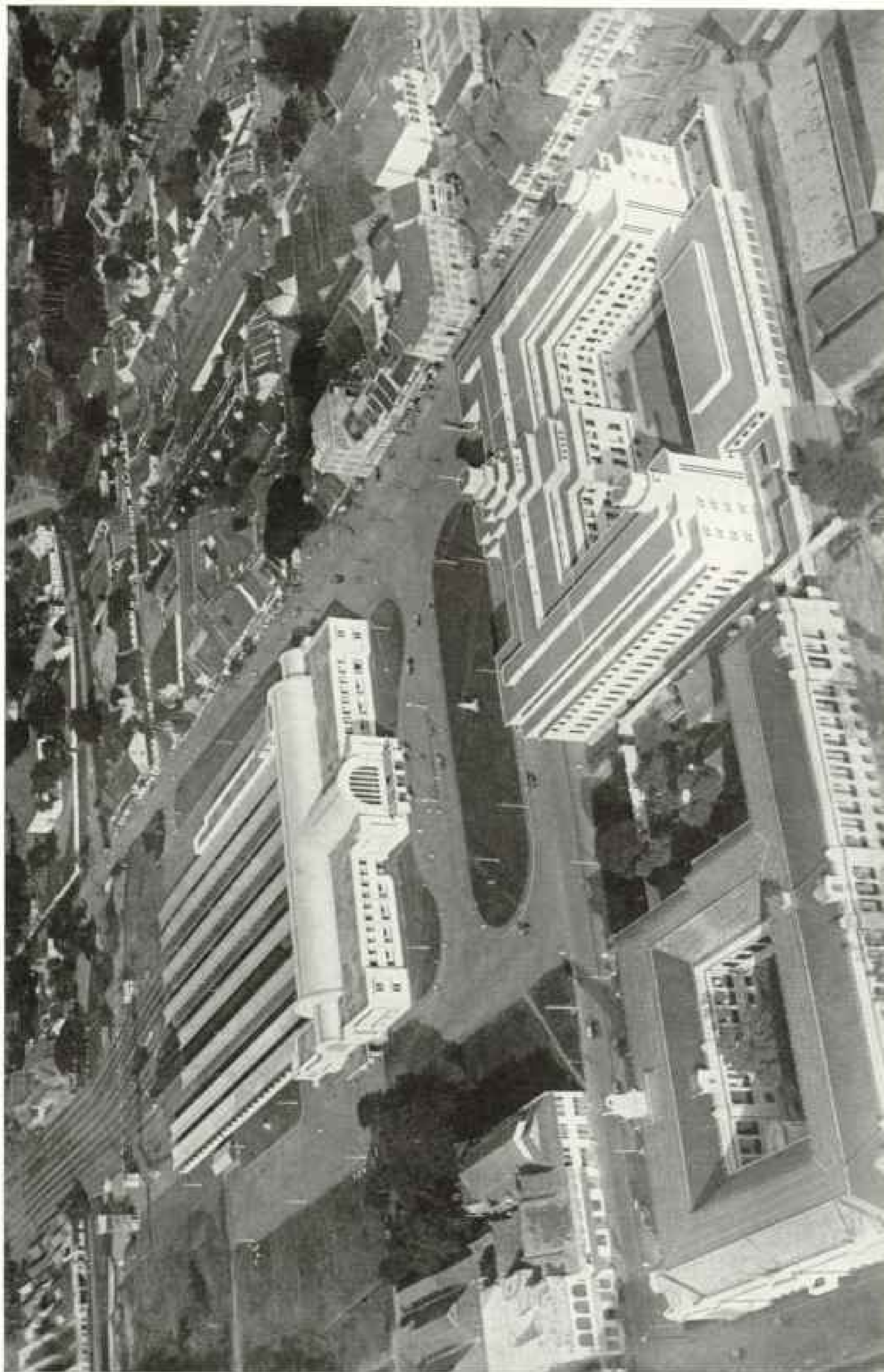
### Every Day Is Washday for Sarongs in Batavia's Old Canals

Dutch settlers founded their city on this low-lying land early in the 17th century. They dug canals and built typical Dutch homes. Malaria and other tropical diseases drove them to higher ground. Warehouses, mercantile offices, and Malayan and Chinese homes now line the old waterways. Most Europeans live in suburban Weltevreden, with modern shops, hotels, clubs, theaters, and government buildings.



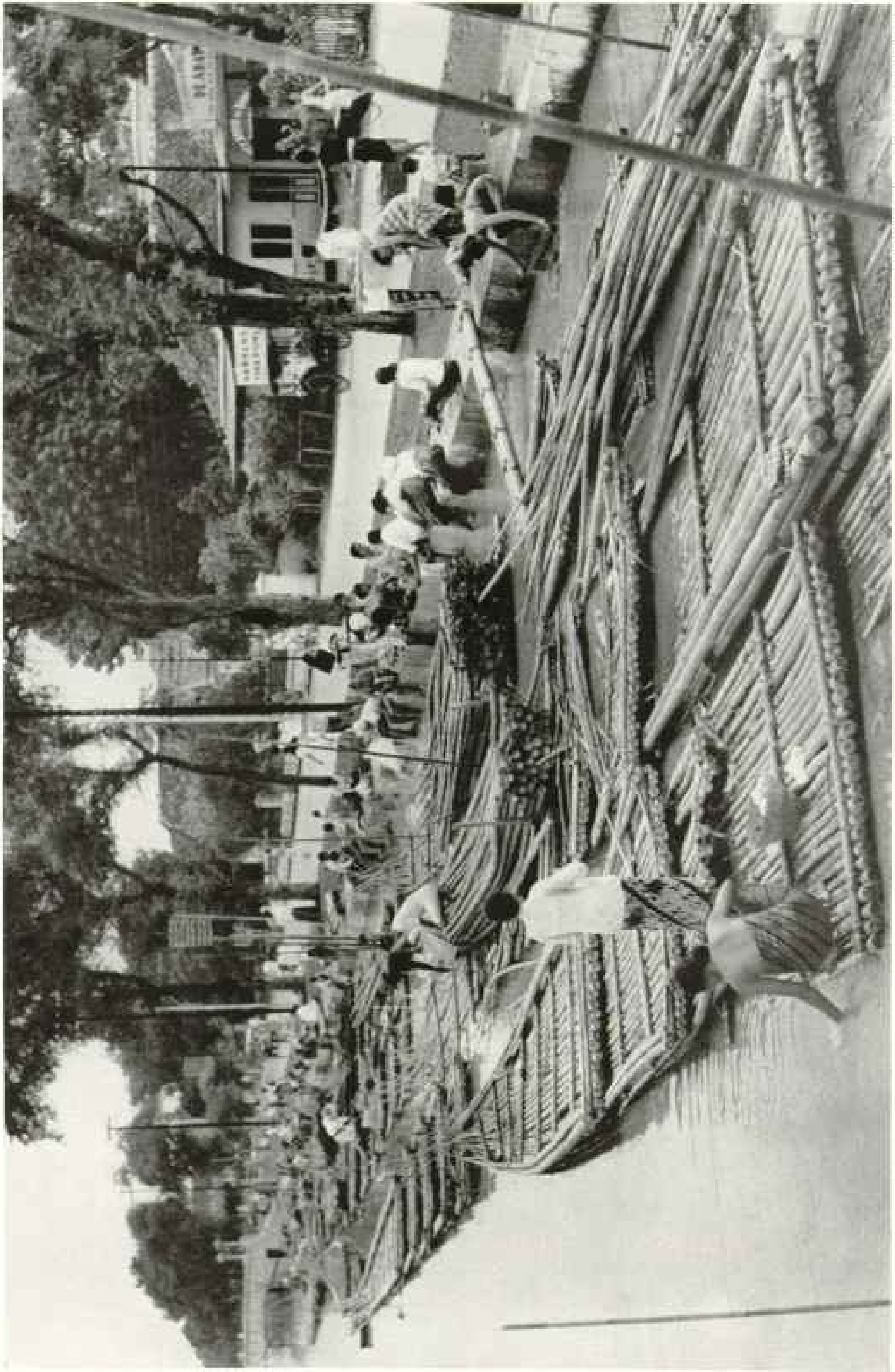
**VACS Distribute Food to "Stricken Areas" During a Mock Air Raid in Batavia**

If bombers some day release their loads over thickly populated areas in Java, food-laden trucks, driven by volunteer women, will set out for the scene from the nearest defense kitchens (pages 94, 95). They will be met by women defense corps workers, learning here to take charge of the food.



© F. N. I. L. M.

Not the Big White Buildings of Washington, D. C., But Offices of Dutch Companies Now Transferred to Batavia Netherlands Trading Society (left) and Java Bank (right) assumed new importance after the Nazi invasion of the mother country. Railroad station, background.



Our Photographer Mohamed Ousef Williams

**Through the Heart of Old Batavia Runs the Molenvliet Canal, Dug by Dutch Settlers More Than Three Centuries Ago**

On bamboo rafts Javanese merchants move their stocks of rice and merchandise slowly, but cheaply. The canal stretches from the Chinese quarter, with its banks and export houses, at one end of the city, to the palace of the Governor General at the other.



### Hungry? Let the *Rystafel* Army Advance at Batavia's Hotel des Indes

Twenty-one boys march to the table with 40 different dishes in this famous Netherlands Indies dining rite. Coveted places in the line of serving boys are handed down from father to son (page 104).

Great Britain keep her trade routes open.

The newest and finest Dutch liner—the 20,017-ton *Oranje*—had just been remodeled into a modern hospital ship and put into service for Australian troops in the Near East. The *Oranje* is completely equipped with a model operating room and wards for the wounded. It even has condensers to provide unlimited fresh water, as well as soda water. Trained Dutch doctors and nurses are taking care of the patients.

That afternoon I had tea at the Batavia Golf Club with the Director of Economics for the Netherlands Indies. Dr. van Mook's firm handling of the trade negotiations with Japan earned for him the title of the "strong man of the Indies."

#### Independence Has Roused The Indies

He said, "When peace comes, the status of the Indies will be considerably changed. Queen Wilhelmina, now in London, has agreed to an imperial conference when victory brings

an end to the horrors of war and liberation comes to the Netherlands.

"The Indies archipelago is aware of its new responsibilities. We have performed miracles here this last year in industrial achievement, from the manufacturing of high explosives and chemicals to ship building.

"More than a thousand firms, including banks and insurance companies, whose headquarters were formerly in the Netherlands, now manage their affairs in the Indies. All their funds were transferred here when the Lowlands were invaded."

"However," Dr. van Mook emphasized, "the Netherlands will continue to benefit by production here, because Dutch capital and executives are sorely needed. Formerly, men in the Indies retired at the age of 45. This age limit now has been raised to 55, because of the shortage of experienced personnel."

I made my first broadcast at 7:45 A. M. the following day. Because Batavia is 12½ hours ahead of New York, my voice came over



#### Skillfully a Javanese Welder Repairs a Big Pulley

Expert native machinists and mechanics keep even German Dornier and Fokker planes, bought before the war, in excellent condition. Worn-out parts are replaced by new ones made in Soerabaya's shops.



#### Dutch Nurses Sail for the Middle East to Care for Wounded Anzacs

These girls are aboard the *Oranje*, 20,017-ton Netherlands luxury liner converted to a modern hospital ship in the Indies. Equipment includes a model operating room, wards for the wounded, and condensers for supplying fresh water. The vessel now is serving with the Australian Expeditionary Force.



NBC's round-the-world news program at 7:15 the night before!

I drove in a little horse-drawn buggy to NIROM, the government-owned radio station. When I tried to enter the station without showing my pass, the uniformed guards outside the camouflaged building at once halted me. A large government seal with ribbons on it got me in!

The broadcasting station has large reception rooms with comfortable blue leather chairs and modern offices. The personnel is Malay, and the executives are Dutch. They are most cooperative.

In a large, air-cooled studio I was left alone. However, an officer sat outside a heavy windowpane with a copy of my script in one hand and a switch in the other. If I deviated from my manuscript previously approved by the censors, he could cut me off the air.

The 100-kilowatt transmitter is in Bandoeng—about sixty miles southeast of Batavia. It is the most powerful station in the Far East. Broadcasts from Chungking and Singapore are also received at this station, and I could hear the commentators who preceded me.

#### A Babel of Tongues Disconcerting

Although I had perfect equipment to work with and a clear connection with the States, I felt a nervous tension, which wasn't at all alleviated by a number of people shouting instructions at me in Malay, Chinese, Hindustani, and Japanese over the loudspeaker in the corner. They wondered how anyone who couldn't understand any of those languages could be qualified to be a news commentator!

Finally I heard, "Go ahead, Batavia!"

Talk about a thrill that comes once in a lifetime! A voice from home was telling me America was listening!

I swallowed hard and said painfully, slowly, and distinctly, "Hello, NBC, this is Dee Bredin, speaking in Batavia!"

From then on it was easy. A little local color, a little news, my interviews with the Governor General and Doctor van Mook; and my seven minutes were up all too soon. There seemed much more to tell about this paradise of the Tropics.

I went for the week end to Tjisalak, the tea plantation of Baron van Tuyll, a couple of hours out of Batavia.

As soon as we left the city, rice fields, sugar and tea plantations, rubber and kapok forests spread to left and right. The road was crowded with bicycles and oxcarts. Out of inundated *sawahs* (flooded rice fields) came herds of carabaos with naked little boys sprawling on their backs. Behind them hundreds

of women in colorful sarongs were harvesting the all-important crop.

In the background rose the Gede and other well-known volcanoes. At intervals, mechanized troops, or half-hidden machine-gun nests and tank traps, grimly challenged the peaceful scene.

We stopped at Buitenzorg and had luncheon at the Governor General's palace, which, like his town residence, has been camouflaged. The adjoining lily pond covered with large pink blossoms only accentuated the defacement of the edifice. In front of the palace is a huge park with frisky deer. On the other side, where the grounds are open to the public, native soldiers strolled happily, holding hands with their saronged sweethearts.

We arrived at Tjisalak in time to wander around the tea plantation, where young Javanese girls were picking the leaves. As soon as their baskets were full, they balanced them on their heads and carried them into the sheds. There the leaves were put into the drying room, and yesterday's crop was sorted into nine different grades.

Walking back to the house past rows of workers' huts, I saw pictures of Queen Wilhelmina and Winston Churchill, side by side, above each door.

#### Waistline, Beware of Rystafel!

Two fellow Americans took me to luncheon in Batavia a day or two after my return there and of course ordered *rystafel* (rice table), famous specialty of the country.

We sat under the gaily striped awning of the verandah of the Hotel des Indes, and watched with trepidation the advance of the "rystafel army." Twenty-one boys served us forty different dishes at one sitting (page 102).

Number one boy brought a capacious bowl heaped with fluffy white rice. Number two served a curried soup containing little meat balls. Next came the boy with the chicken loaf. On and on they came in a steady procession, offering tempting dishes. They served three kinds of meats, three kinds of fish, three kinds of fowl, and several dishes of game, including wild boar. There were at least seven spicy sauces and a wonderful array of condiments. There were bamboo roots, and nuts, and shredded coconut.

Besides good food, there is real tradition in this rystafel line-up. Places are "willed" from father to son. The little old man at the end of the line, who serves *krœpaek* (a kind of dried fish), has been in the line-up for 30 years. He used to be number one boy, but the solid silver bowl is now too heavy for him! Two of his sons are also rystafel boys,



#### Both in Sarong and Kabaja, After New York and Java Schooling

Miss Herawata Latip (right) came to Columbia University for her college education. Her sister, Sattarita, went to an island college. They are daughters of a prominent Batavia physician and both are ardent members of the women's defense corps (page 109).

but one recently went into the navy. The hotel has promised to keep his position—number 8—open for him until he is demobilized.

I devoted most of the week to gathering data on how the war had affected American business in the Indies, where American firms have about 70 million dollars invested. Because of curtailment of imports, the Goodyear Tire & Rubber Company holds a dominant position in the bicycle-, automobile-, and truck-tire trade of these islands. The Goodyear people have a large manufacturing plant. They are in the throes of expanding their manufacturing facilities 60 percent at their factory in Buitenzorg.

The managing director showed me around the plant. Young native boys were vulcanizing motorcycle tires for the army. Others were turning out truck tires on individual machines. With one hand they shaped the fabric, and with the other wielded sharp knives to trim the edges.\*

At Tandjoengpriok, only half an hour from

\* See "Our Most Versatile Vegetable Product" (Rubber), NATIONAL GEOGRAPHIC MAGAZINE, February, 1940.

Batavia, is the assembly plant of General Motors of Java (page 95). The road follows the Priok canal, cluttered with obstructions to prevent enemy planes from landing there; but quaint junks sail lazily among the hazards with their insignificant cargo.

On the other side of the road are anti-aircraft guns, pillboxes, and fortifications. Monkeys sit in groups on telegraph wires and look down in disdain on these man-made war preparations. At the plant some eighty young Dutch women, neatly dressed in khaki, were being trained to drive trucks. These attractive volunteers have joined the VAC, one of the women's defense corps units of Java.

The managing director told me that demand for American cars has about doubled.

"The fly in our ointment," he said, "is the present shipping tie-up. Unfilled orders are piling up. Nevertheless, we have many more workers than a year ago."

I talked also with executives of the Koloniale, as the Standard Oil of New Jersey is called in the Indies. They said the Koloniale was going right ahead with large-scale drilling operations in New Guinea and Sumatra.



### They Strip Bark from Cinchona Trees So the World May Have Quinine

Plantation woodcutters fell 10-year-old trees, then pile the dismembered branches before the Javanese women, who sit cross-legged at their tasks. Later the bark is pulverized in near-by sheds. The war has enormously increased demand in Java for this cure for malaria.

American business is showing marked confidence in the future of the Netherlands Indies—war or no war.

#### Quinine Production a Vital Industry

The following week, I flew to Bandoeng to visit a government-owned quinine plantation and took a taxi from the airport to Pengalengan.

As the car wound for hours about the mountain, the quinine forest became denser and the road darker. The trees were so close together that some of them grew almost horizontally from the mountainside as if trying to find a little breathing space. Most of them are too old to strip of their quinine-producing bark; they are leftovers from a period when quinine was not in such demand.

At Tjinjirocan, the plantation, I slept that night under several blankets. Even in the middle of summer the air on the mountains of Java is really cool.

Delicate lavender, yellow, and white quinine blossoms were being gathered as I made the rounds of the plantation next morning. From them comes the precious seed that produces the trees, the bark of which contains the preventive and cure for malaria.

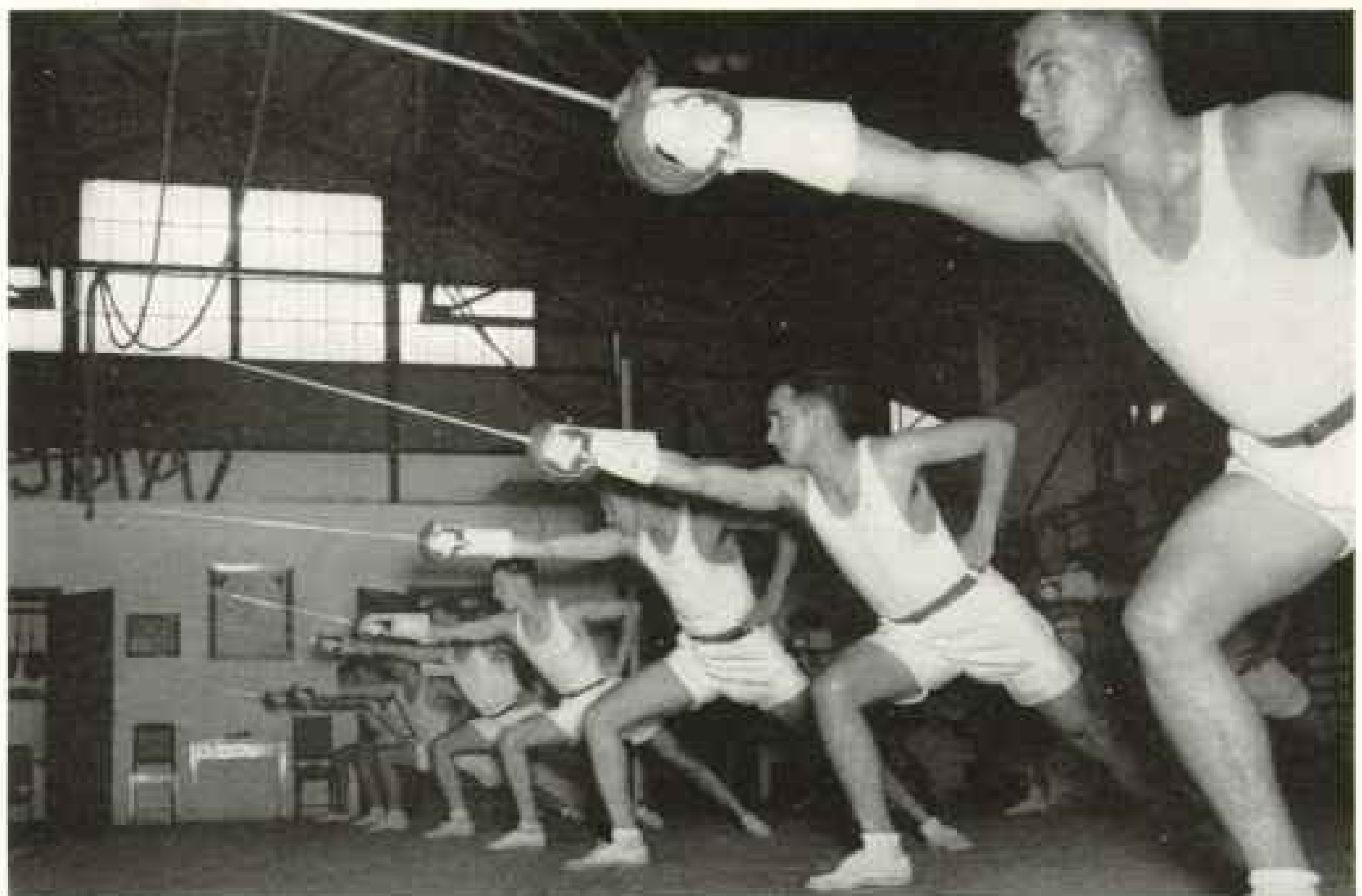
Men were chopping down forest trees. As soon as a tree was felled, other men would cut off the bark in one-foot strips. Dozens of Javanese women sat cross-legged on the ground and carefully took the bark off the dismembered branches. In sheds near by I saw the bark pulverized and packed into large sacks to be shipped to England and the United States.

About half of the quinine produced on Tjinjirocan goes to the government-owned factory at Bandoeng. Here the white medicine is taken from the bark by pouring benzol on it over large sieves. A small percentage of the quinine grains is used for eau de quinine hair tonic and the tonic water one mixes with gin; the rest is for medicinal purposes.



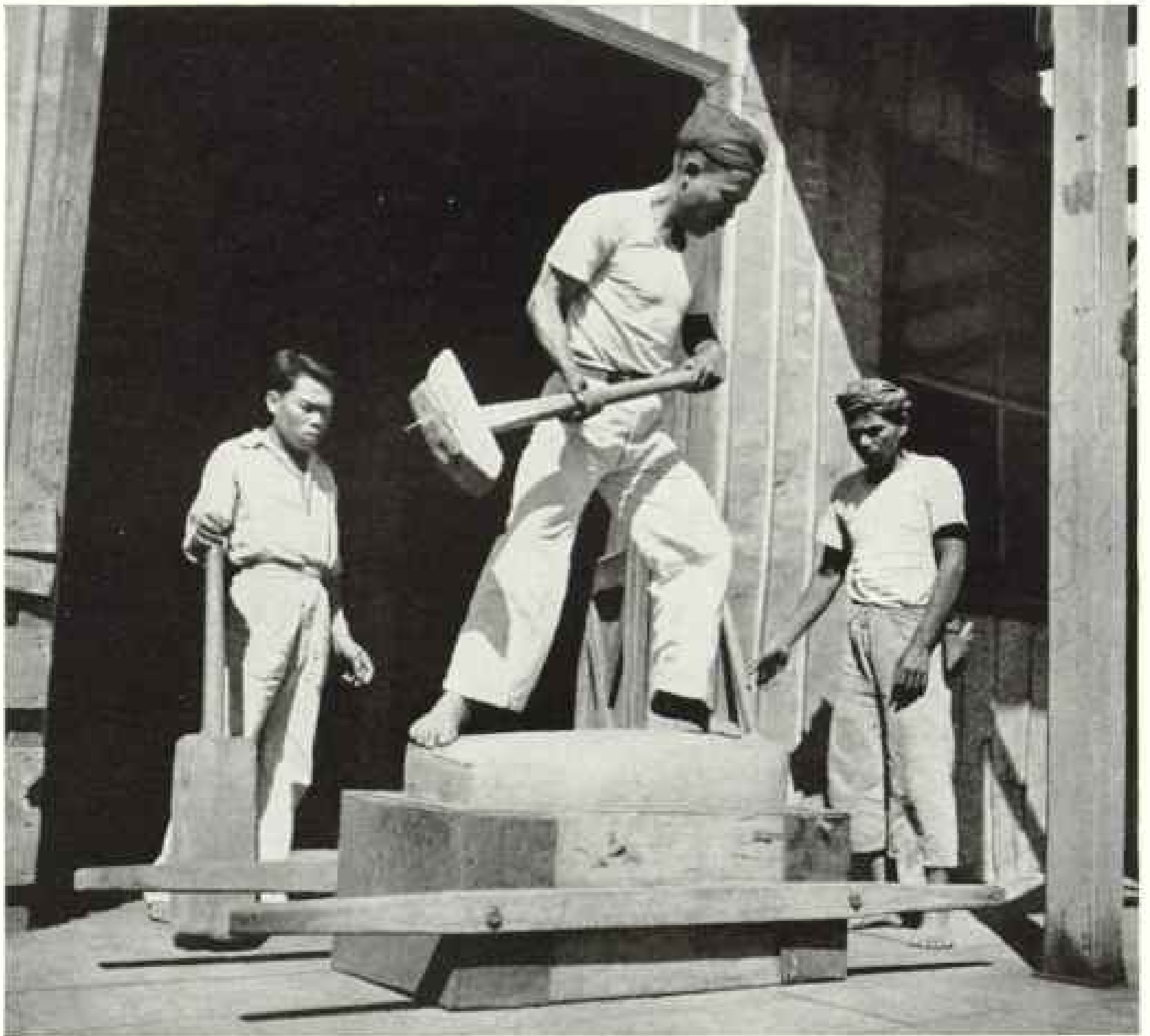
#### Future Pilots to Guard the Netherlands Indies—Dutch Air Cadets at Soerabaja

When they complete their courses, they will fly modern airplanes. Exact size of the air force is carefully guarded, but there are more than 400 Curtiss fighters, Ryan trainers, Lockheed Hudson and Glenn Martin bombers, and a score of pre-war German Dorniers and Fokkers. In September, 1941, the Netherlands placed a \$34,000,000 order for bombers with North American. These will be flown across the Pacific.



#### Lunge! Dutch Naval Cadets Learn the Classic Fencing Postures

Although fencing no longer is a vital subject, training is required to develop poise and agility.



#### Sledge, Tamper, and Footwork Mold Cinchona Bark into a Tight Ball

Large shipments of the pulverized bark, containing quinine, go to the United States and England. Until 88 years ago, there were no cinchona trees in the East Indies. Then some were transplanted from South America. Today Java is chief source of the world's supply. Careful growing has increased quinine sulphate content to an average of 6 or 7 percent.

Since the war, there has been a tremendous demand for quinine, as millions of troops are stationed in the tropics and exposed to malaria.

The history of quinine is fascinating. More than three hundred years ago the Spanish corregidor of Loxa, Ecuador, sent some powdered bark from certain trees in his Province to the Countess of Chinchón, wife of the viceroy of Peru, who was very ill of an intermittent fever. The bark had been given earlier to Jesuit priests by the Indians, who had proven that it had medicinal properties. In the language of the Inca tribe, the bark was called *quina-quina*. They always duplicated the name of a plant if it proved to have healing power.

After the Countess was cured of her fever, an expedition was sent to procure a large quantity of the bark, which the Count and

Countess of Chinchón later introduced to Europe. Spain, France, England, and the Netherlands were instrumental in promoting the cultivation of quinquina trees, but for the past fifty years the Netherlands East Indies have gradually acquired world control and now produce over ninety percent of the world's supply.

There are two main kinds of quinine trees hereabouts, the *Cinchona succirubra* and the *Cinchona ledgeriana*, both named for that same Countess of Chinchón.

#### Bandoeng, Army Headquarters

I went back to Bandoeng where the Netherlands Indies Army headquarters are located. Major van Dyken of the General Staff took me on an inspection tour.

At the barracks I saw blissful domesticity

instead of the feverish war activities I had expected.

The wives and children of the native militia live in the same barracks with their soldier husbands. Wives do the cooking in huge outdoor kitchens, while their small babies hang in baskets suspended from the bamboo roofs.

Sleeping quarters are curtained off like berths on a Pullman. If a soldier and his wife have two children, the entire family gets only one section; but if they have three the youngsters are given a separate section. Native soldiers therefore aspire to large families.

In ammunition and arms factories the natives, who are past masters of metal craft, were turning out by hand shells, hand grenades, bombs, and precision instruments. A few Netherlanders—not more than a dozen all told—supervise the work of thousands of natives.

We went also to the military airport. There I met a few American instructors who were teaching Dutch pilots to fly Curtiss pursuit planes and Lockheed Hudson bombers. On the field I saw ingenious military devices designed to deceive enemy reconnaissance flyers.

Batavia is still the seat of the government, but plans are under way for immediate removal of government offices to the mountains around Bandoeng, if and when that anticipated invasion comes. Bandoeng is sheltered by unusual topography, including dense woodlands and volcanoes that touch the clouds.

#### A Remarkable Naval Base at Soerabaja

Later in the week, I went to Soerabaja, the great naval base of the Indies.

The flight was thrilling. On our left was the Java Sea, and on our right a beautiful volcano range that mingled with the clouds. We stopped at Semarang and as the plane came down, it seemed we must land in one of the inundated rice fields, with which the whole airport is surrounded.

All airports in Java are patrolled by armed guards, and passengers are closely watched. The military and passenger planes both use the same landing fields, and despite my resolutions not to "spy" I was always being caught staring at a military objective.

In Semarang, however, I was merely looking for someone who could direct me to the Indonesian women's congress, to which 800 native women from all over the Indies had flocked.

I found them talking about rights for women in marriage; they thought that one wife is enough, even for a Mohammedan. They also wished to be able to divorce their husbands, and were trying to promote a fixed wage scale for women workers.

The meeting went along very peacefully, and I met some charming native girls. Six had law degrees, and eleven were physicians. Many spoke excellent English.

A Javanese girl who had attended an American college headed the delegates from Batavia. She is Herawata Latip, the daughter of an outstanding doctor. After three years in Columbia University she is back in her native land, once more wearing the becoming sarong and *kabaya* and working hard for national defense (page 105).

At Soerabaja next day I dined at "Modderlust," the naval officers' club. New canteens have sprung up all over town. Here Dutch sailors get free sandwiches and beer and can see American movies.

The following morning, while it was still dark, I drove out to the sea base, where the officers had lined up Ryan training planes for me to photograph. The young Dutch cadets looked keen and sunburned, and the native ground crew seemed efficient (page 107). There were six American instructors busy as bees. Later they told me that the Dutch made marvelous flyers, daring and skillful.

These Americans liked living in the Indies. They had adjoining houses near the country club, with a golf course, tennis courts, and a swimming pool at their disposal.

Little American home life is left in the Indies, however, except at the residence of Dr. and Mrs. Walter Foote. The popular consul-general and his charming wife are the guardian angels of Americans here. If we are sick, Mrs. Foote brings the doctor. If we get excited about war rumors, Doctor Foote calms us. He has listened to invasion stories for so long now that he accepts only facts.

The Footes have been in the Netherlands Indies off and on for 14 years and know the islands thoroughly. Sunday mornings they have open house for Netherlanders and Americans.

Some months ago wives of American business men returned to the United States. These business men now band together in their loneliness. They share the large, company-owned houses, and have organized a joint mess.

About the only American women left in Batavia are the wives of the consular staff. If American evacuation is ordered, there will be no confusion.

Americans seem confident that nothing will happen, but I know of one who keeps a thick kapok mattress in his garage. If bombs start dropping, he will drag it to his garden and get under. The idea is ingenious; but the mattress would be so hot that little more than a grease spot would be left to indicate where the body lay!



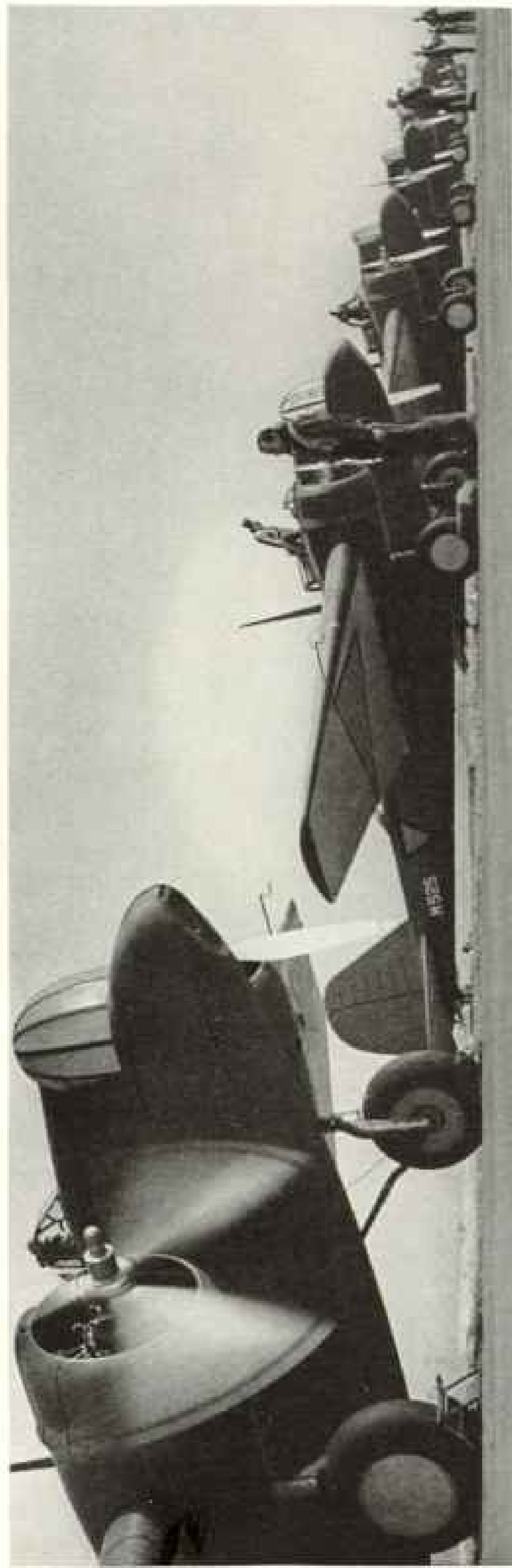
Staff Photographer Maynard from Williams

**Excepting for Flags, Dutch Names, and Left-hand Drive, This Might Be Lincoln Road in Miami Beach**

Automobile salerooms, radio shops, and department stores of the latest design line the wide downtown streets of Soerabaja, Java's chief commercial city. Buildings are all light-colored to help insulate them from the tropical sun.

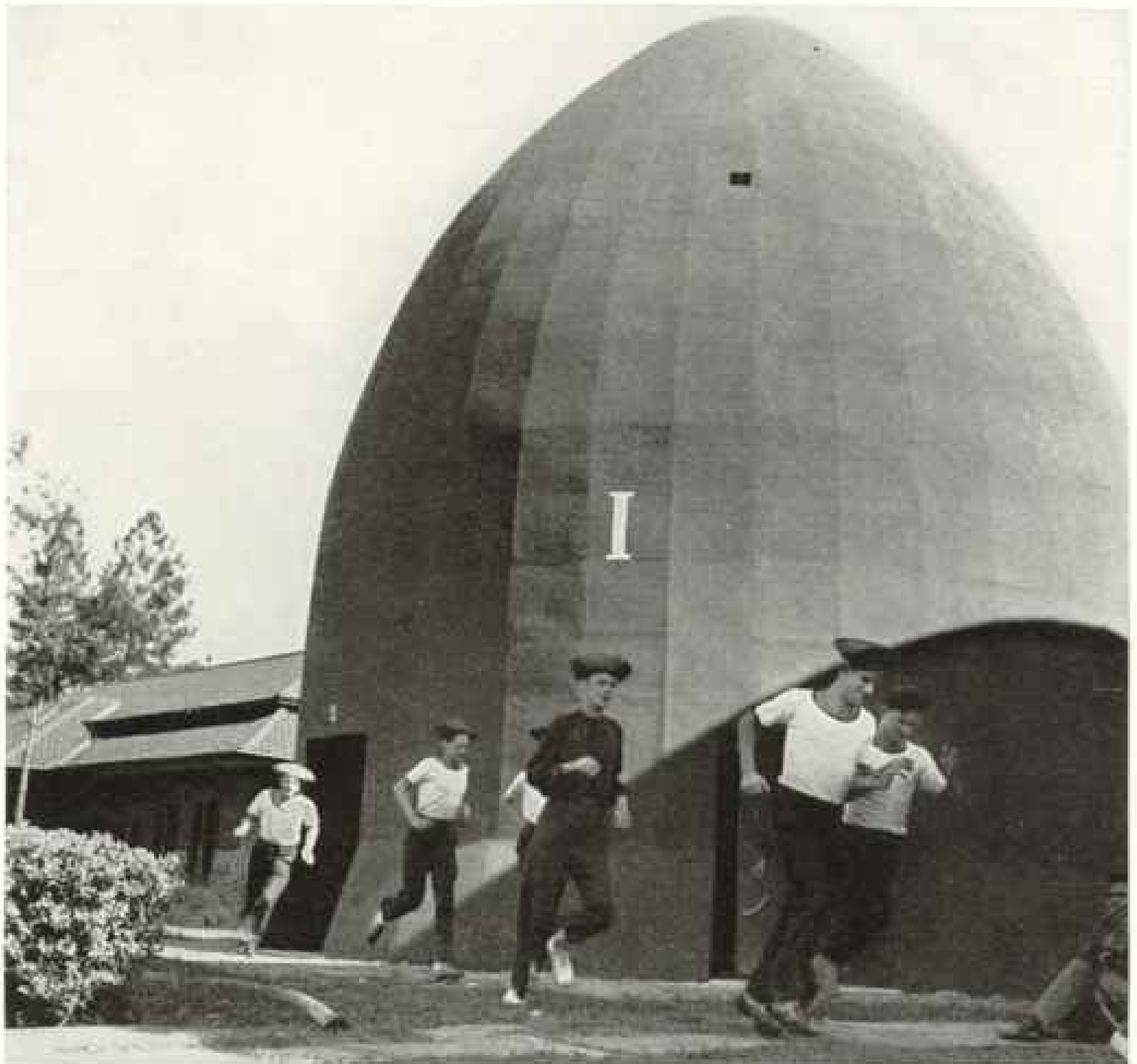


Daily, 20,000 Workers Throng to Jobs in the Repair Shops and Factories of Soerabaja, Java's Sea Base



First Line of Defense for the Indies—Martin Bombers from Baltimore Warm Up for a Practice Raid





When the "All Clear" Sounds After a Moek Air Raid, Factory Workers Pour from a Beehive Bomb Shelter.

Built of steel and concrete, it is one of a group erected in Soerabaja, naval base of the Netherlands Indies. Each is provided with seats for 150 persons, and a modern kitchen and lavatory.

At the sea base, almost two miles of covered gangways connect the buildings and work shops. Each building has three solid sides and one lightweight wall. In case of explosion, the light wall would fall outward, and no irreparable damage would result. In one factory replacement parts were being made so successfully that Dorniers and Fokkers brought to the Indies before the war were still in excellent condition.

At the naval base near by I went aboard one of the all-steel torpedo motorboats manufactured in Soerabaja with American steel. A number of submarines and mine layers were under construction, and four of the Netherlands' finest warships were starting out for unknown destinations. Some of the nineteen

German vessels interned when the Netherlands was invaded were still tied to the dock, but most of them have been added to the Netherlands merchant marine.

#### New Naval Base Planned

Vice-Admiral Helfrich, commander-in-chief of the Royal Dutch Navy in the Far East, told me that some of the surrounding islands have secret auxiliary landing fields and sea-bases, and large caches of arms and munitions. He showed me the plans for a new naval base three times the size of the present one.

"This one," he said, "will accommodate the biggest warships of Allied nations. A whole river is being diverted in the construction, but that is no problem for a Dutch engineer."



#### Modern Batavia Can't Quite Discard Horse-and-Buggy Days

This Javanese mother and her children are on their way to church. Only up-to-date touch to their equipage is a license plate. In Java's cities carriages and carts mingle in traffic with automobiles from the United States. General Motors has an assembly plant at Tandjoengpriok, Batavia's port (page 105).

"At present a fleet of submarines is our most potent weapon, and our all-steel torpedo motor-boats are peerless for coastal defense. Because this archipelago covers some 3,600 miles, the Navy and Navy air arm must be mighty!"

Soerabaja is an attractive city, with wide streets, good shops, and excellent restaurants (page 110). The heat is almost unbearable, however, and on the whole, my three-day visit there was exhausting.

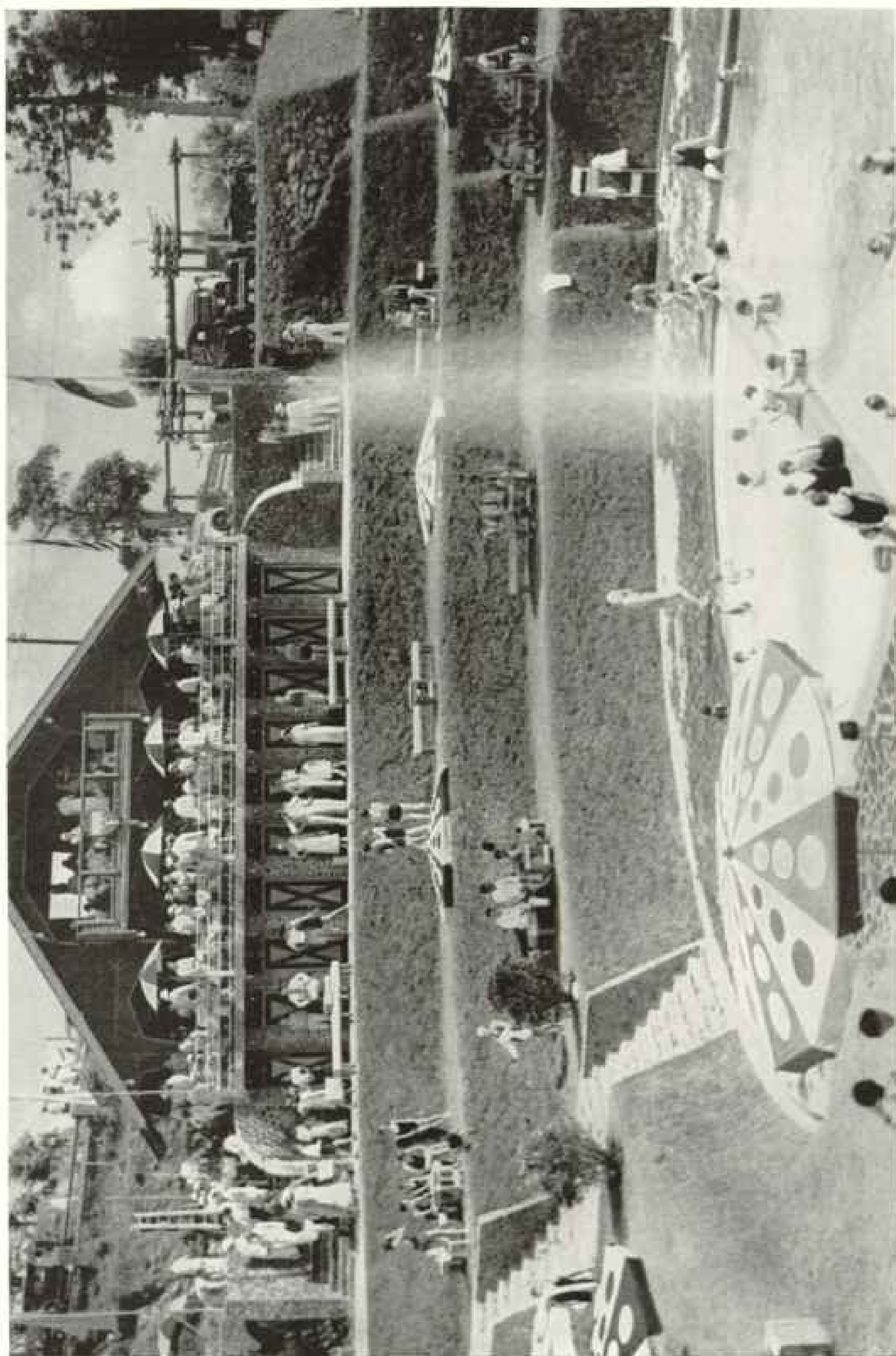
#### Java, Key to Defense of the Indies

To get an accurate picture of the Indies now, it is necessary to visit Soerabaja, Bandoeng, and Batavia—the three important military cities of Java. Java can be strongly defended, and it is home to some 65 percent of

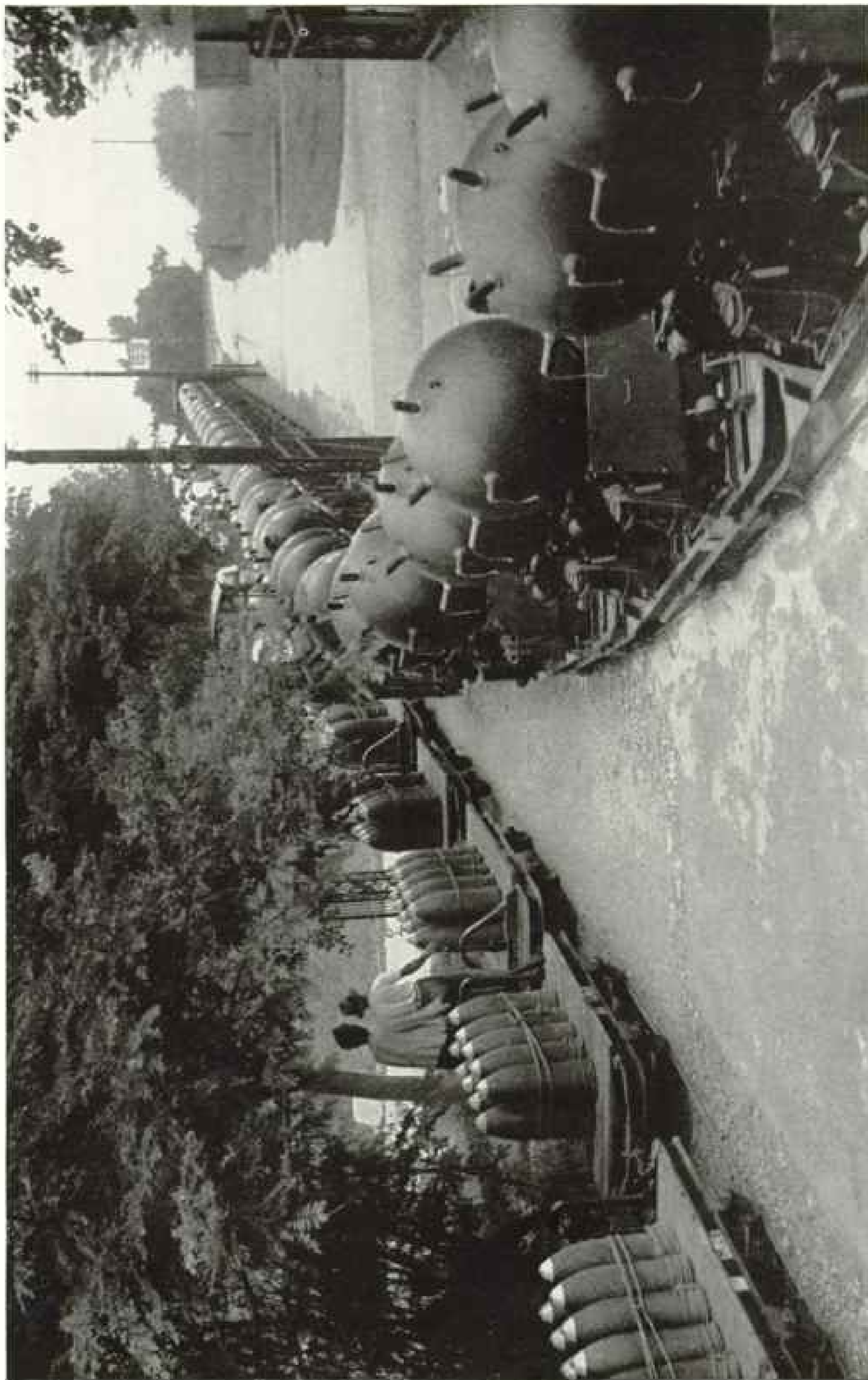
the 70 million inhabitants of the Indies. Military men are confident that Java can be held against any foe, and even hold out hopes for defending Borneo, Sumatra, and the Celebes against attack by air or sea.

They say that in case Borneo cannot be held against invasion, troops stationed there will destroy the coveted oil fields. Invaders would find the wells filled with sand and sea water, and therefore completely useless. Standard Oil and Dutch Shell refineries at Palembang, on the east coast of Sumatra, would be blown to bits before an enemy could enter. But Java will be held at all cost by every man and weapon available.

The entire population of Java seems keen to do its bit. There are innumerable native

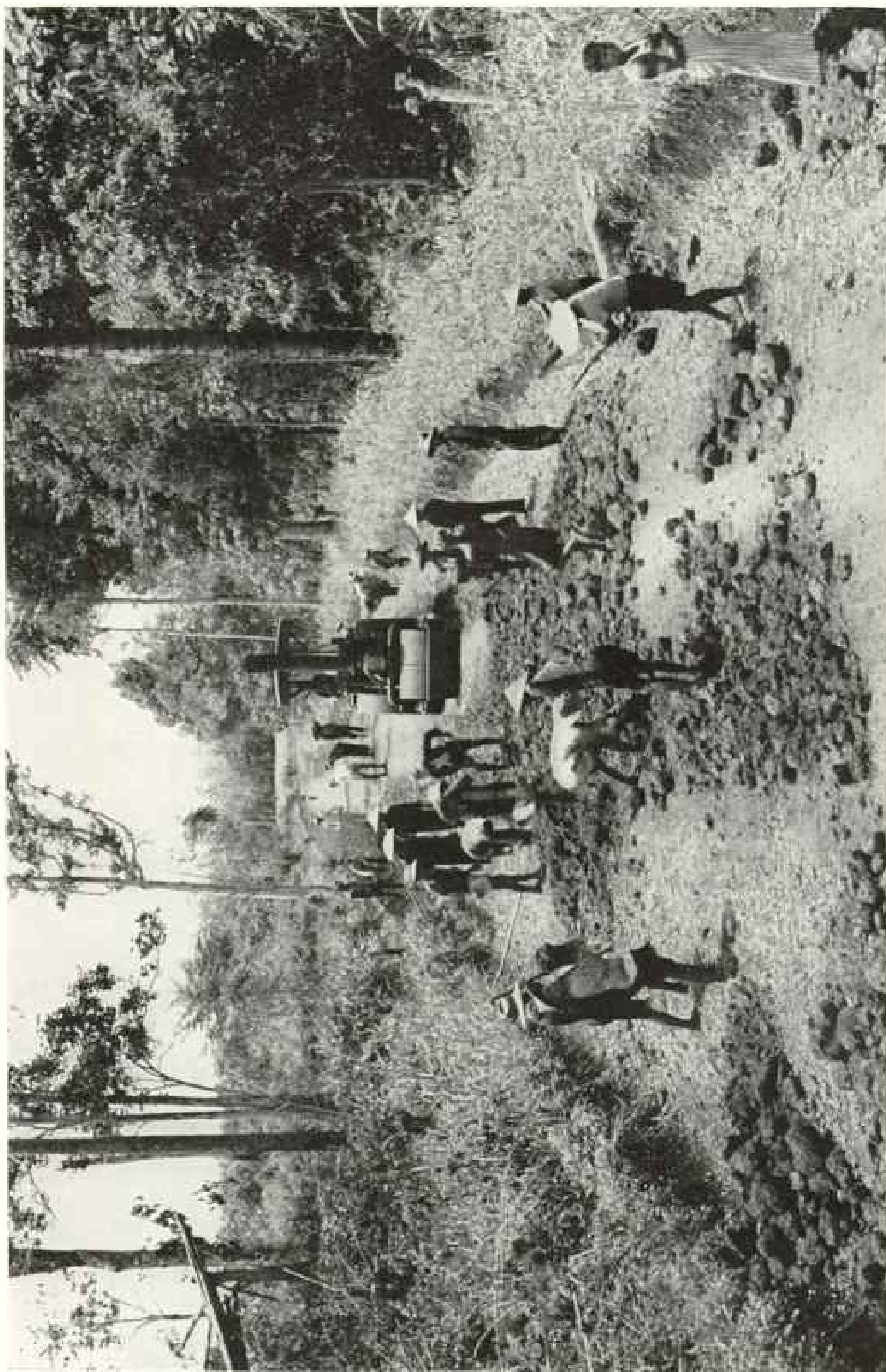


U. S. Aviation Instructors Are Guests at Soerabaja's Country Club, Rendezvous of Dutch Officers and Their Families



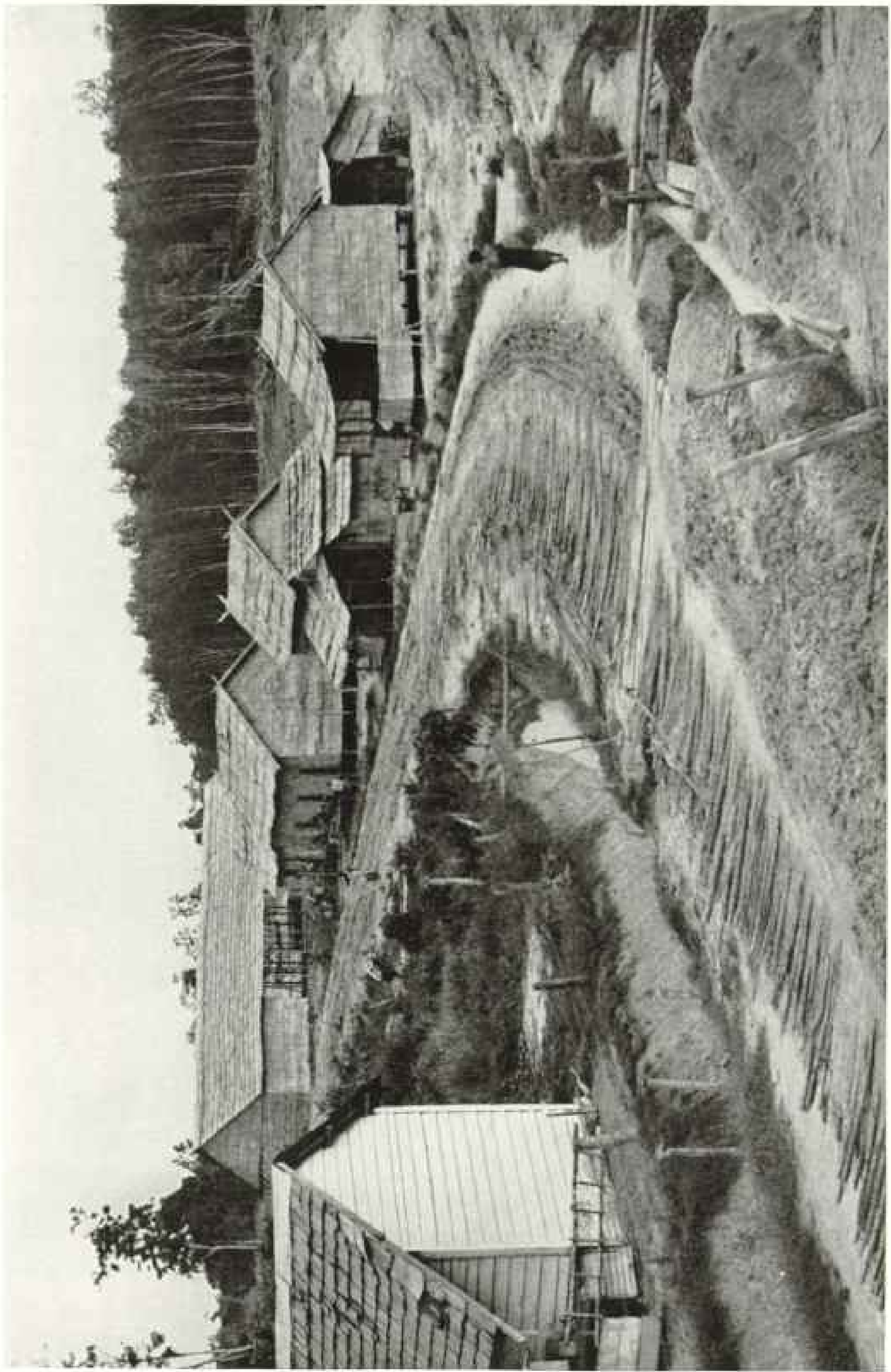
### Shells and Mines from Soerabaja's Shops Go Down to the Sea to Strengthen Indies Defenses

Numerous small craft are being added to the Netherlands Indies Navy each month. With steel from the United States, a swarm of torpedo mosquito boats is being built (page 117). Many of these are sent to hideaways in little straits around Borneo and Celebes. The navy yards also are turning out patrol boats, mine sweepers, mine layers, and other vessels up to 2,000 tons.



Javanese Workers Cut a Modern Defense Highway through the Jungle.

Java's new roads are built to improve defenses, for its present system is adequate in normal times. Carefully camouflaged pillboxes and antitank guns flank the new highways, which link supply bases throughout the island.



Sumatra "Pioneers" Clear Away Tropic Growth, Then Build Their Homes Along a New Corduroy Road Deep in the Jungle

Though Java covers about the same area as New York State, population is three times as large. To relieve this congestion, the Netherlands Indies Government has under way a vast colonization project. Thousands of Javanese are being moved to Sumatra, where a home- and road-building boom is at its peak.



#### Javanese and Dutch "Royal Marines" Learn to Pull Together

When their training course is completed, they may serve in the mosquito fleet, or on modern cruisers and destroyers. The Netherlands Indies has also many first-line submarines on constant duty. Some of these were rescued when the Nazis invaded the Netherlands, and were sent to the Pacific by way of the Panama Canal.



### Striking a Coral Reef in Port Apru Delays the *Honolulu Clipper* at Guam

Speedboats carried the author and other passengers ashore. Here the giant flying boat is undergoing repairs. Shipshape nine days later, it continued the voyage home.

first-aid stations in all the cities. They use the same methods employed by the American Red Cross, and their bandages and splints are works of art.

To date more than two hundred Spitfires have been given to the R. A. F. by the population of Java. Plantation workers gave pennies out of their small daily pay, and rich sultans were proportionately generous. The wife of the British consul-general organized a canteen for Australian troops coming through Batavia on their way to Malaya.

#### Unity in the Indies

Hard-working, able Netherlanders have made the Indies the richest islands in the world. These industrious Dutchmen have lived harmoniously among the natives for nearly 400 years. Because of their superior living conditions the Indies are incomparable with any other place in the Far East.

To me, the most impressive sight in the Indies today is the complete cooperation be-

tween Netherlanders and natives. The women work side by side, cooking, rolling bandages, serving in canteens, or censoring mail. In the Air Corps Netherlanders are the pilots, and the natives are the ground crew. In the Navy Dutch and Javanese sailors train together in complete cooperation. All this has been accomplished in one year!

When the first blackouts were staged a year ago, the Javanese ran away to the hills. Even the native militia dropped guns and went into hiding. Not a servant was left in any Batavia home.

Time has taught them a lot. When the recent three-day blackouts were held, everyone stayed at his post. All the planes in the Indies roared over Java's crowded cities in night maneuvers, while the sirens shrieked their ominous warning, but the population remained calm. The natives are now cultivating a taste for war games, and authorities feel confident they will fight like tigers to defend their homeland.

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*Notice of change of address for your NATIONAL GEOGRAPHIC MAGAZINE should be received in the offices of the National Geographic Society by the first of the month to affect the following month's issue. For instance, if you desire the address changed for your March number, The Society should be notified of your new address not later than February first.*

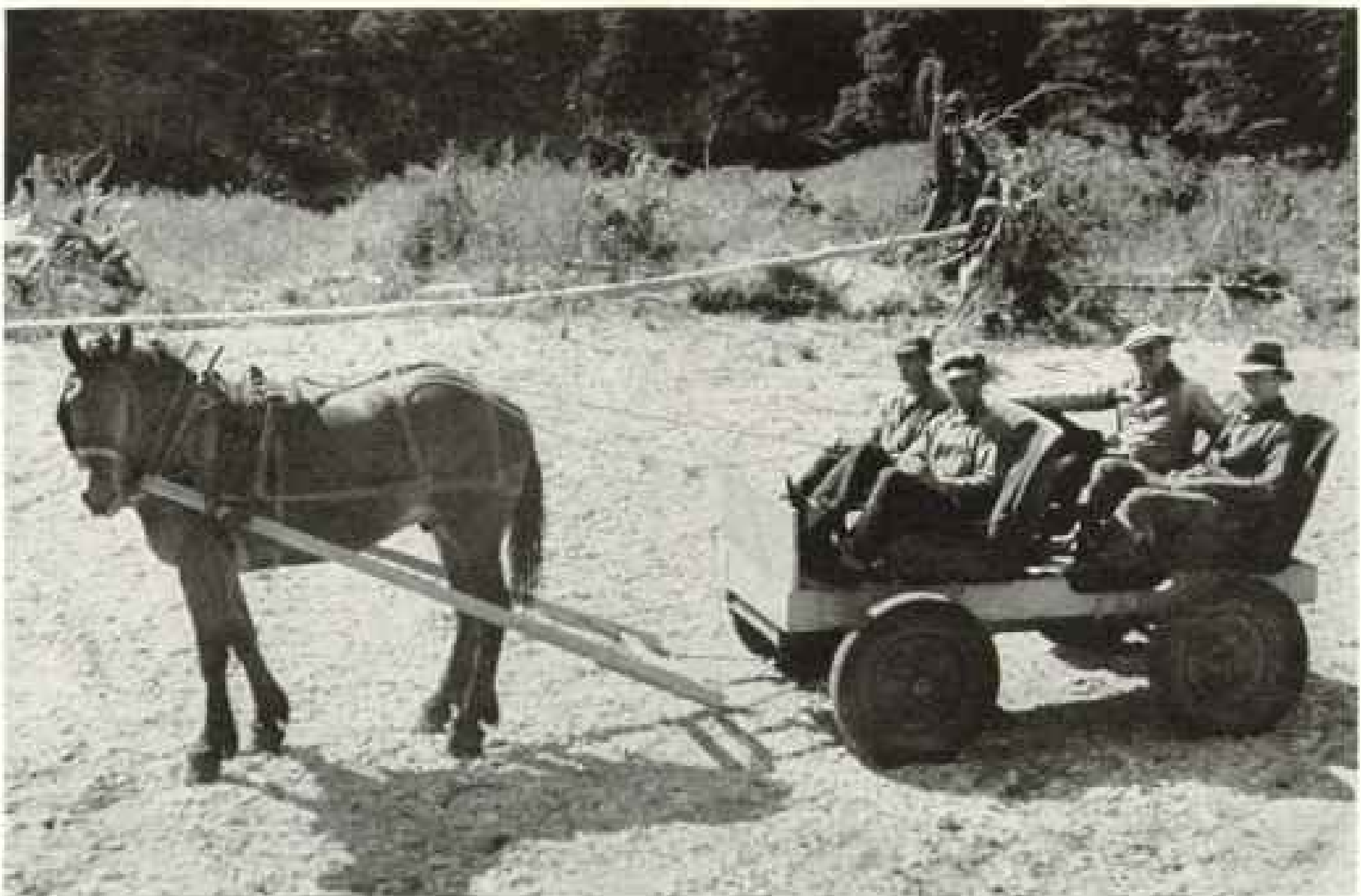




Francis Faure

**A Giant Fleur-de-Lis of Leaded Glass Lights the Great Hall Where M. Menier  
Entertained His Guests (Page 126)**

From the bay window, far right, the French millionaire surveyed his domain through a powerful telescope.



Elmer Roberts

**An Anticosti "Convertible" Has Auto Seats and One Horsepower**

In winter the St. Mary River warden replaces the vehicle's wheels with runners to take his family across the ice and snow to Port Menier.

# Anticosti Island, Nugget of the North

BY EUGENE E. WILSON

**W** E'VE found our dream island. Sparkling, cool northern waves pound its shores, instead of the languorous South Sea. Trim spruce trees stand along its white shore cliffs, in place of waving palms.

Picture a Canadian island nearly twice as large as Long Island that has been privately owned almost since the dawn of its history; an island lying athwart the sea lanes between Montreal and beleaguered Britain, but served by a single small steamer. Anticosti is its name.

Anticosti's location is so strategic that German interests tried to buy it outright (page 128). It has served, in succession, as an explorer's reward, a pirate's stronghold, a rich man's social experiment, a pulpwood empire, and a sportsman's paradise.

Strewn with flashing lakes, floodlighted at night by the wavering aurora, it is nevertheless virtually free from the usual subarctic plague of mosquitoes and black flies. Deer are more ubiquitous than bears in Yellowstone, and in the island streams you can catch salmon and sea trout from horseback.

## A Château for a Lumber Camp

This island was once owned by a French millionaire, who built here an elaborate summer château. He poured out his fortune on titanic lumbering and fur-farming projects, and imported thousands of colonists—a vast industrial and social experiment on a fabulous scale.

Look at the map and see how Anticosti resembles a huge ship sailing into the mouth of the St. Lawrence River (page 122). The North Shore of Quebec Province, of which the island is politically a part, lies to the north, 20 miles away at the closest point; to the southward the Gaspé Peninsula is 45 miles distant.

One calm day last June, Mrs. Wilson and I were at the rail of the S. S. *Fleurus* when Anticosti first emerged above the horizon. Seven consecutive summers had found us yearning for the first glimpse of "our island." The *Fleurus*, sailing from Montreal and Quebec, provides Anticosti's only regular link with the world outside, and in winter ice blocks even this service (pages 124 and 139).

We watched alluring Anticosti grow distinct in the afternoon light. Close at hand, lazy swells sloshed over flat reefs. Soon we could make out trees and rocks of the low shore as we slid around Cape Henry into Ellis Bay. At the head of the harbor lay our first destina-

tion, Port Menier, capital and chief town (population about 300) of the island.

The *Fleurus* glided in toward the long pier. Gulls screamed over the glistening bay; ducks and shore birds protested from a rocky point. On the tide flats lay huge boulders, brought by ancient glaciers from the mainland. Hair seals, sunning themselves on the rocks, slipped into the water and peered at the ship as she steamed in.

Port Menier's rows of small wooden houses, dormer-windowed buildings, boxlike general store, steepled church, and tall radio masts added up to an unpretentious picture. But from old acquaintance we knew what excitement lay back of that austere front.

At the quay end were the bases of the old-time steel pulpwood loaders, long since removed for scrap. Old cribs, rotted pilings, and rusty mooring bitts recalled Anticosti's brief lumbering boom.

At the edge of the "bush" loomed the angular bulk of Anticosti's most remarkable landmark, the great gabled frame structure of the fabled Villa Menier, built by the French chocolate king (opposite page).

Willing hands moored the *Fleurus* to the dock. Old friends, grinning with pleasure, were waiting to greet us. There was Mr. H. E. Graham, capable manager of the island under the present ownership of the Consolidated Paper Corporation. Behind him stood Charlie McCormick, warden of Anticosti's north shore—"M'sieu Charlie" wherever he goes. A goodly portion of the population of Port Menier was on hand. Most of them are French Canadians, dating from the Menier regime.

And there was the tiny train of one car pulled by a little gasoline locomotive that runs from the pier to the shore (page 125). We piled in and chugged the few hundred yards to the end of the line; then we transferred to an old-fashioned horse-drawn carriage which bounced us merrily along to the Villa Menier.

## No License Plates in Tax-free Eden

As we turned the corner out of Port Menier's graveled main street, both of Anticosti's automobiles passed us.

The island's two automobiles bear no number plates. There is no automobile registration or taxation. Because the island is private property, no islander is taxed.

There are only about 12 miles of good dirt road, all at the west end of the island around Port Menier. The rest of Anticosti is wilder-



Drawn by Richard L. Bitch

### Little-known Anticosti Island Is a "Doorstep" to Canada

Twice as large as Long Island, but with a population totaling only 350, Anticosti lies athwart the shipping lanes between Montreal and Britain. Low and forest-covered, the island has only one good harbor—at Port Menier, near the western tip. Anticosti is owned by the Consolidated Paper Corporation, Limited, which for the present has abandoned pulpwood logging. Now the island is operated as a sportsmen's preserve, famous for salmon angling and deer, bear, and bird shooting.

ness, densely wooded with spruce, balsam, pine, birch, and poplar.

#### Sea and Streams Serve as Highways

Most of the 3,100 square miles of the low, rolling island are as lonely and remote as when Basque fishermen first put in to Anticosti's exposed bays in the early 16th century. Now, as then, the sea is the highway to the few human footholds scattered around the shores. To the island's interior, streams are the usual routes. Numerous sizable lakes, which already provide landing areas for planes on fire patrol,

may come into greater use by visitors who arrive by air.

Our taxi-carriage delivered us at the Villa Menier (pages 120, 126).

How incongruous in this wilderness is Henri Menier's sumptuous château—an elaborate old mansion, with heavy squared timbers, big leaded glass windows, steep gables, and overhanging eaves!

Jacques Cartier, seeking that mythical short-cut to the East, first officially recorded Anticosti in 1534 and called it *Ile de l'Assomption*, claiming it for the King of France. Already, however, some historians tell us that Basque fishermen had described it as *Antecosta*, or island "before the coast." This name still sticks, with two vowels altered by usage.

Louis XIV of France, in gratitude to Louis Joliet, who had explored the Great Lakes and, with Father Marquette, had floated down the Mississippi, presented Anticosti to the explorer-trader in 1680. For a decade Joliet enjoyed fur and fish trade with near-by Indians. Then he and

his wife were made prisoners by Sir William Phips' raiding party in the French-English conflict.

Tradition says that Joliet was eventually freed in an exchange of prisoners and that he returned to his island home, where he died and was buried. (He first took time out, however, to visit Hudson Bay.) During the next century the family heirs ignored the island, abandoning it to squatters and visiting fishermen.

After the middle of the 19th century two companies were formed to bring settlers to

Anticosti. Both failed so completely that only the help of the Canadian Government prevented starvation from wiping out the colonists.

One reason for the failure of colonization is indicated by this list of supplies sent to a group of settlers: six quarts of violin strings, files of all sizes, many coffin handles, harness buckles, iron boot heels, anvils, carriage steps, English saddles, a printing outfit!

#### Wanted: An Island with Salmon

But the end of the 19th century found Anticosti at the threshold of unexpected prosperity.

Henri Menier, French chocolate manufacturer, dispatched agents to find him an island abounding in salmon and which he could stock with game. In 1895 Menier bought Anticosti, which, he was told, fulfilled all his conditions.

Interested in social experiment, as well as in establishing a fishing and shooting preserve, Menier built the luxurious chateau and imported deer, beaver, rabbits, moose, elk, and caribou. He also developed farming communities, lobster factories, seal fisheries, fur farms, and a village equipped with hospital, school, and church. He even built a short railroad line and a canal.

Purchase of the island made Menier one of the world's largest landowners. Paris called him "Le Roi d'Anticosti"—"the king of Anticosti." The island enjoyed its "Golden Age."

Later, wishing to make profitable use of the vast forests of his domain, Menier embarked on large-scale wood-pulp production, which, however, proved uneconomic and was finally abandoned.

In 1926 the Anticosti Corporation, which



EDWARD E. WILSON

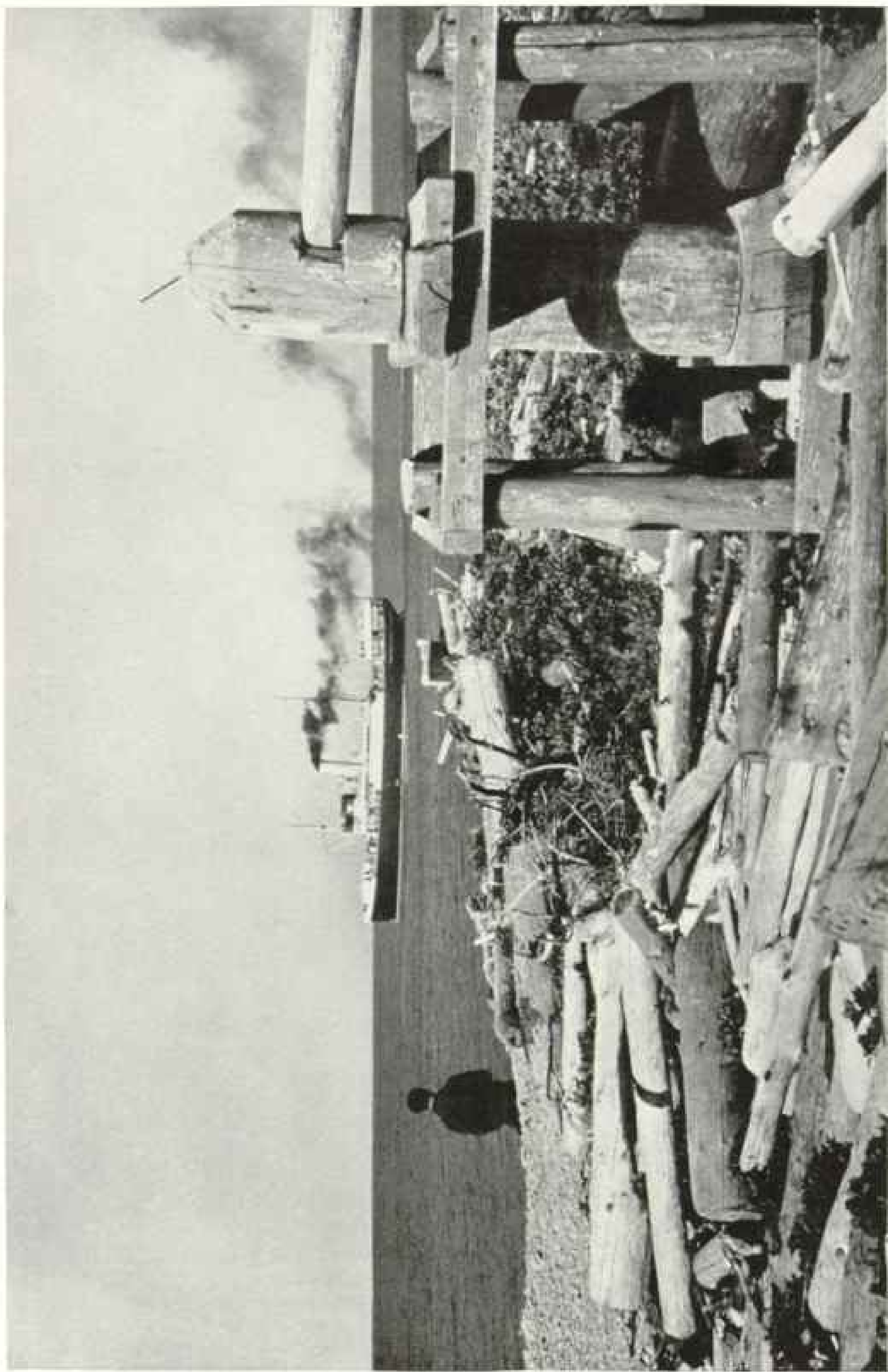
#### Mrs. Wilson Makes Sure the Men Don't Get All the Glory

The guide holds up her catch—an Atlantic salmon, fresh and shining from the sea. Anglers take these fish as they run upstream to their spawning beds on gravelly shoals. Mrs. Wilson wears hip-length boots, fashionable dress when fishing Anticosti rivers.

later merged into the Consolidated Paper Corporation, purchased the island from the Menier heirs. Modern methods of cutting and shipping pulpwood brought brief prosperity. The population rose to more than 4,000.

But harsh climate, lack of harbors, and transportation difficulties made lumbering so costly that operations were halted. For the present the island is being administered as a recreational area where sportsmen may enjoy salmon and trout fishing, deer and bear hunting, and bird shooting.

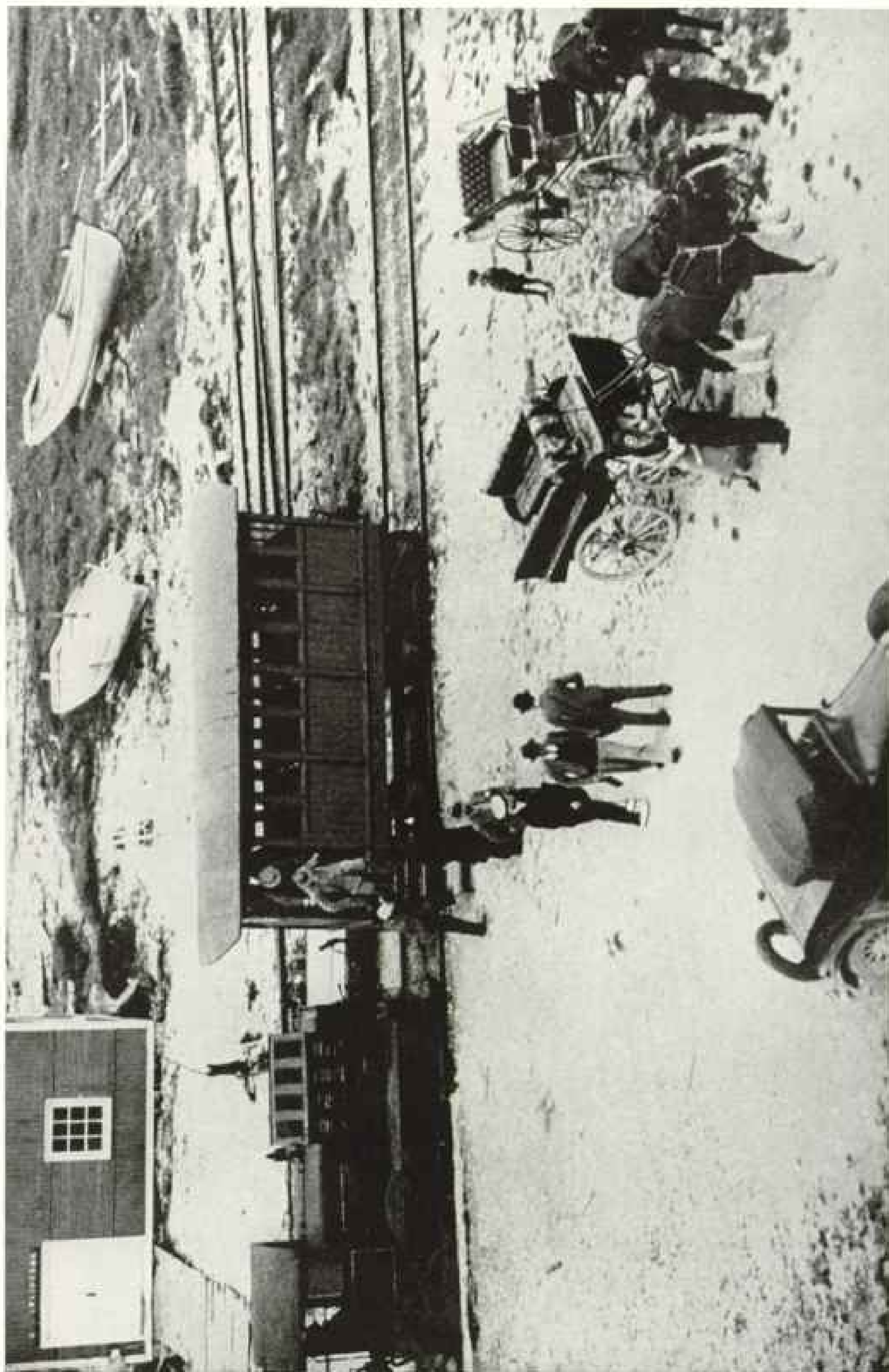
Of the large game animals which Menier introduced, elk and caribou failed to "take hold," but white-tailed deer have multiplied rapidly. Moose are found in fair numbers,



Augustus E. W. Wood

**The Faithful *Fleurbaey* Calls Only During Open-water Season; No Ship Can Buck Anticosti's Midwinter Barrier of Ice**

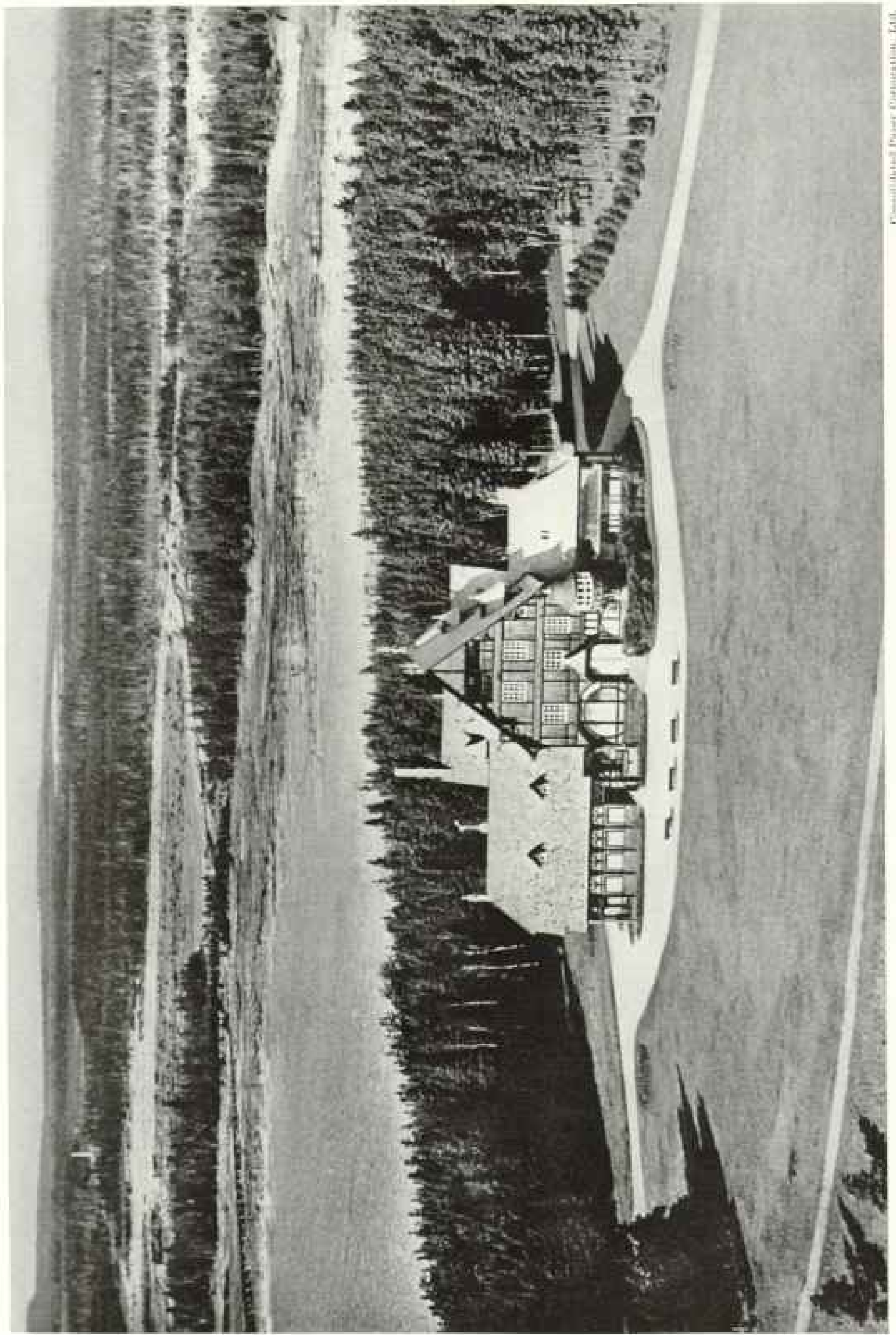
During the late spring, summer, and fall, this steamer, the island's only outside link, sails every week or two from Montreal to Port Menier. Then she circumnavigates Anticosti, stopping at the river mouths to discharge and take on freight and passengers. The capstan in foreground was used for handling pulpwood.



A. O. Anderson

**The Chocolate Baron of Anticosti Built This Half-mile Railway to Carry His Guests from Ship to Shore**

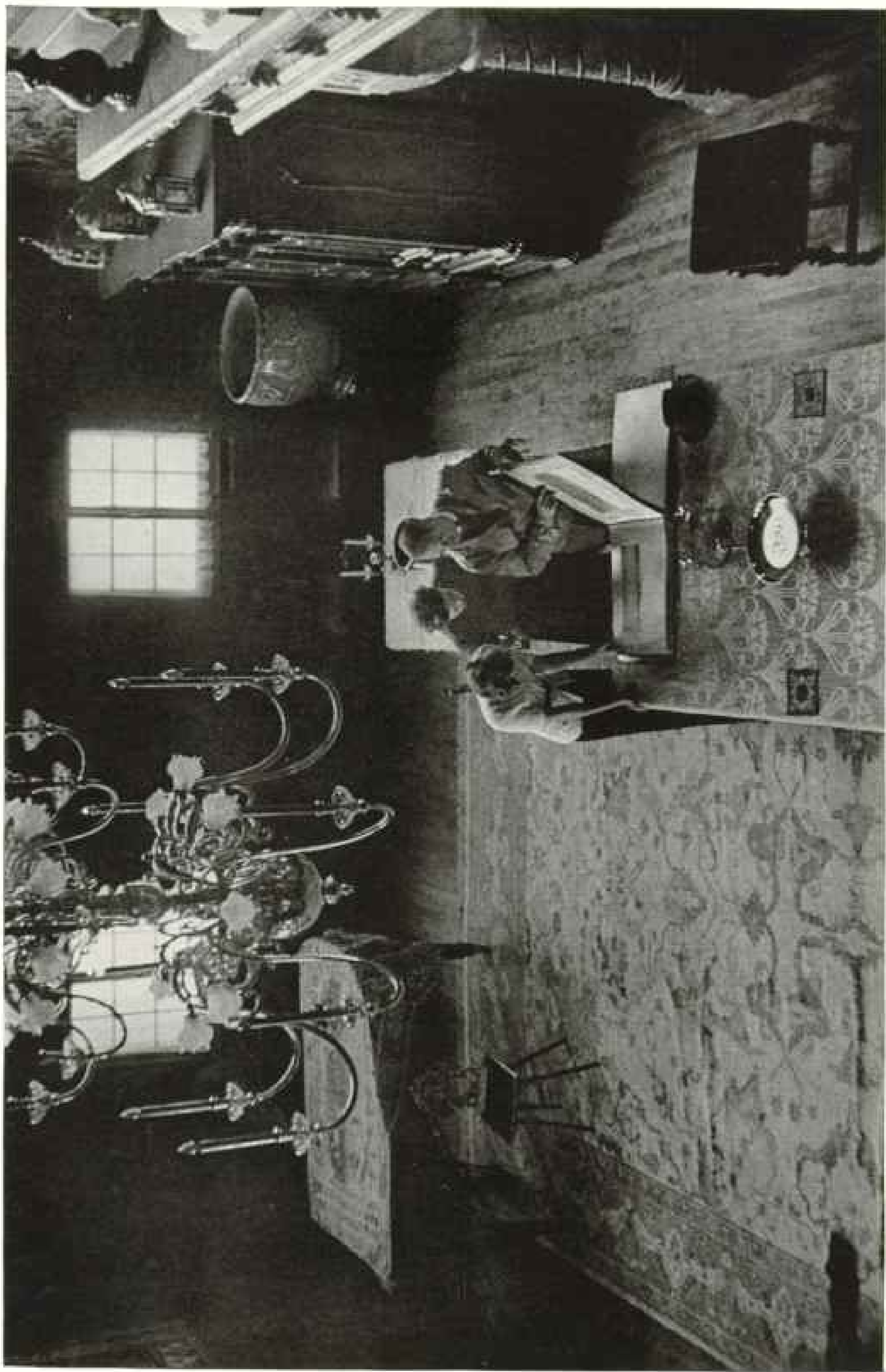
Steamer passengers still use the one-car train, pulled by a gasoline motor, for the trip ashore on the long pier jutting far out into shallow Ellis Bay at Port Meller, Carriages meet the train and carry the visitors along gravel roads to the chateau (page 121). There are only two automobiles on the island.



Embraced by a Forest Wilderness, the Big Villa Stands on a Bluff Overlooking Port Menier

The French chocolate manufacturer, Henri Menier, purchased Anticosti in 1895 for an angling and shooting preserve. His château is now a summer hotel.

Consolidated Paper Corporation, Ltd.



Painted H. Kautzmann

**In the Great Hall, Visitors Examine an Album of Photographs Taken by Henri Menier**

The big book is a treasured pictorial record of the first few years of Menier's regime on Anticosti. Ornate chandeliers, oriental rugs, massive furniture—all came from France. Even the materials used in building the Villa Menier were brought largely from the homeland (page 128).





Eugene E. Wilson

### "Lunch Is Served!"—on the Bottom of a Canoe

The main course for this stream-side meal was broiled salmon, freshly caught in the Jupiter River. For long-distance travel on the river, sportsmen ride in "Cleopatra's barges," like the one in the background. Mr. and Mrs. Wilson are nearest the camera.

Fur farms have been abandoned, but foxes and black bears are native to the forests.

In 1937 a delegation of German forestry and scientific experts, including harbor engineering and community-planning specialists, surveyed the island. When the German expedition departed, they left their outfit, which was offered at auction. In this remote region the finely made equipment was a windfall.

Visitors saw the natives using German equipment, whereupon Prime Minister Mackenzie King found it necessary to assure the Canadian House of Commons that no foreign power would be allowed to control Anticosti.

#### Ghosts of a Gilded Age

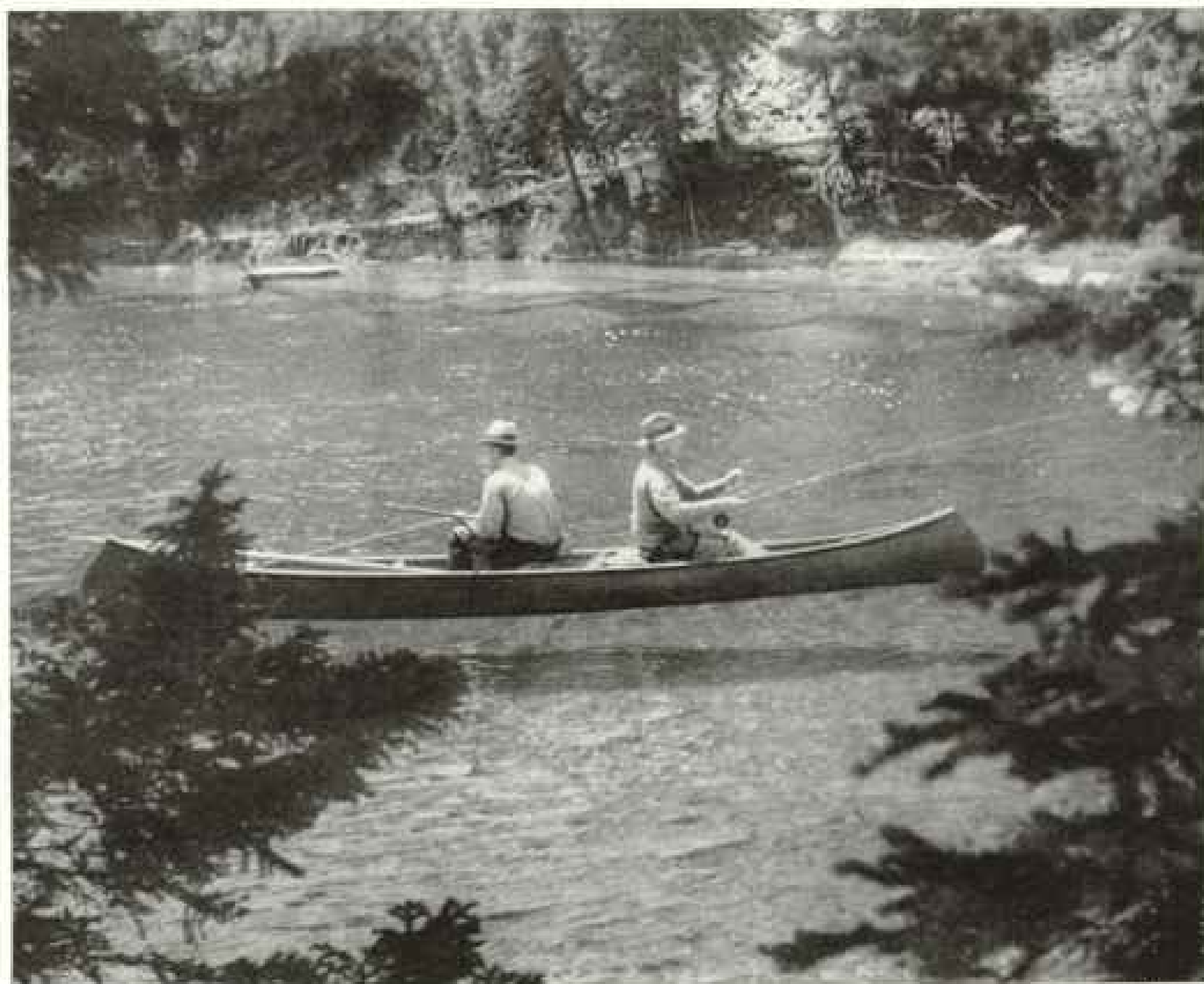
Before stepping ashore at Port Menier, Mrs. Wilson and I had put on the rough woods clothes we always wear in the Anticosti back country. The *Fleurus* would carry us away from the island capital and drop us off at the mouth of the Jupiter River early the follow-

ing morning. With our friends, Mr. and Mrs. Irvin Day, we planned to cross Anticosti, south to north, from coast to coast.

Clad in gabardine breeches, woolen shirts, fishing jackets, and heavy boots, we were a little self-conscious as we stepped up to the main door of the Villa Menier. My mind turned back to the regal days when aristocratic guests who had come out from France with Menier on his yacht *Bacchante* had passed those portals. I could imagine the cartloads of wines and other Gallic delicacies, the parade of servants and musicians, brought over to cater to the whims of the distinguished company!

Now the Villa is run in summer as a hotel. As we clumped along, we were engrossed in the faded but still extravagant elegance of the mansion.

A huge cut-glass chandelier glittered in the entrance alcove. The great hall, braced and buttressed with enormous beams, arched up-



Eugene E. Wilson

### So Clear Is the Water, the Canoe Appears to be Suspended in Air

Every pebble and stone, even the canoe's shadow, are clearly visible on the bottom of Thirty-five Mile Pool on Jupiter River. Despite the transparency of the water, salmon are not disturbed by the quiet casting of the fishermen. The angler is Mr. Irvin Day (page 128).

ward for three stories. In one gabled end was an enormous leaded glass window in the shape of a *fleur-de-lis* (pages 120 and 127). Costly tapestries draped the walls. A sort of throne stood out toward the center of the room, and rows of matched European stagheads gazed glassily down upon it. At the second-story level hung a balcony where an orchestra once played lively French songs and dances.

Vases and bric-a-brac were still scattered everywhere. In the corners were built-in settees; one end held a carved mantelpiece. The furniture was heavy and thickly upholstered.

Our hostess led us up the grand staircase to a suite where we could freshen up for supper. Here were airy French hangings, brass bedsteads with snowy linen, a bathroom with shining fixtures and huge marble tubs.

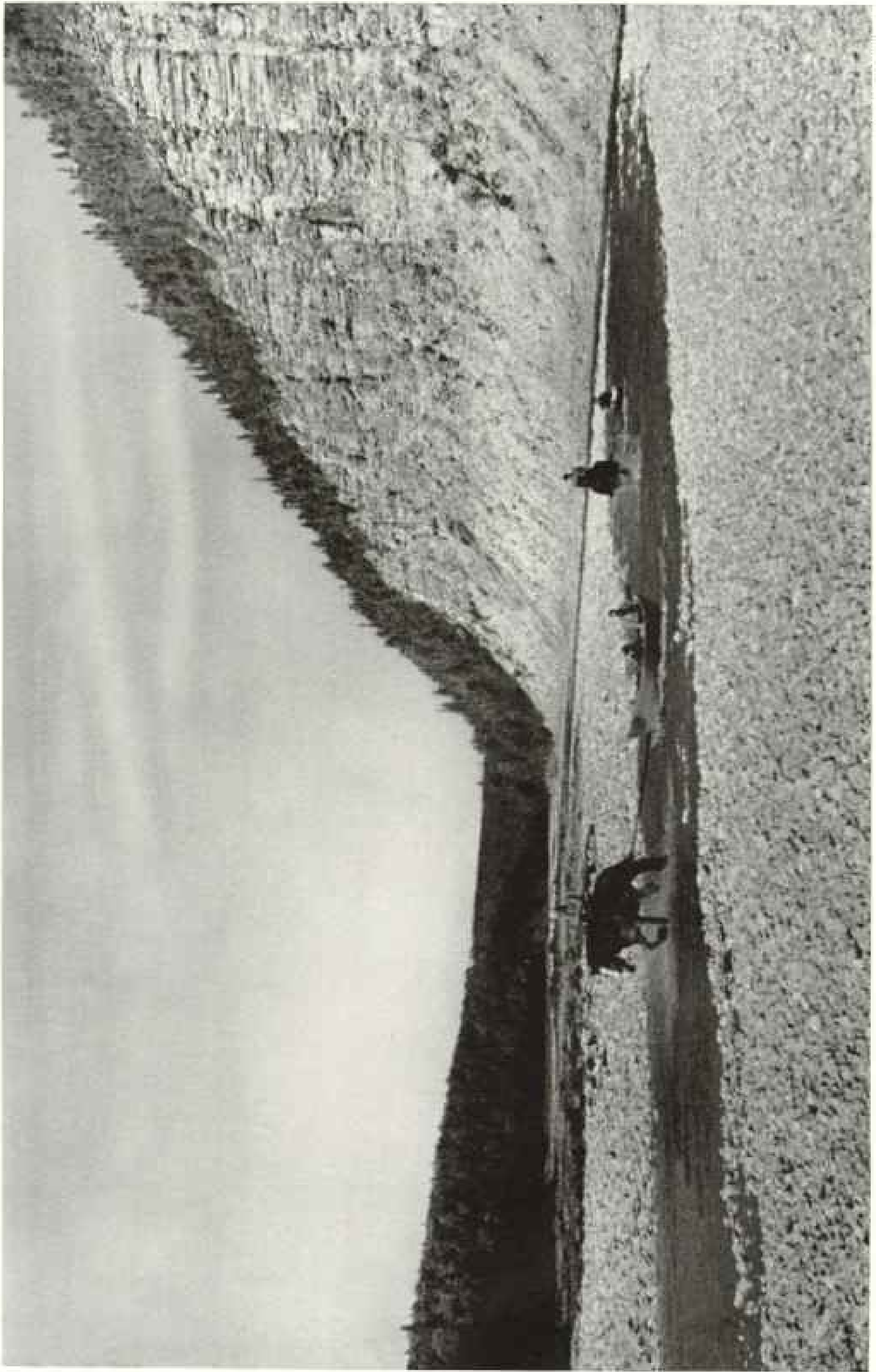
Presently we went down to the small lounge, which, upholstered in leather, might have been in any metropolitan club. We found a large stereoscopic machine and viewed pictures of

Monsieur Menier and his activities. Ladies in leg-of-mutton sleeves and long skirts welcomed their host on his return from a bear hunt. There was a picture of Monsieur standing beside a dead bear—the portly, black-bearded gentleman almost as large as his trophy.

From the lounge, a staircase led to a small observatory where a long brass telescope pointed out over the town. Through it the master used to survey his feudal realm.

For dinner we entered a small Norwegian room. Another huge chandelier flooded the white tablecloth with light. The chateau silver gleamed. At each plate stood a half dozen gold-rimmed wineglasses, graduated in size from champagne to liqueur. An exquisitely garnished fish was borne in on an enormous oval silver tray. It was easy to imagine ourselves a part of that bygone gilded era.

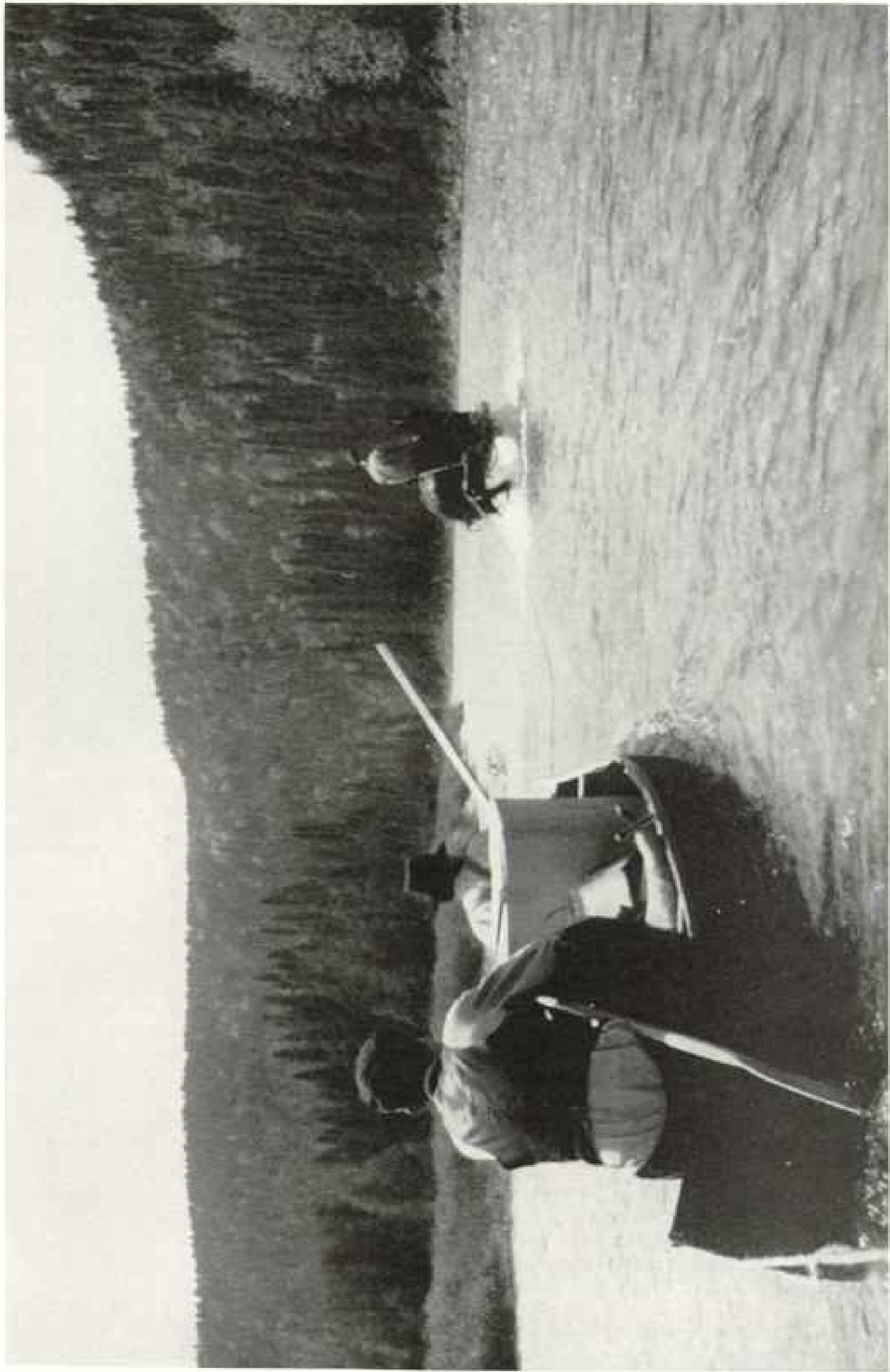
After dinner, Madame showed us the spacious kitchen. Burnished copper pans hung



August H. Kautzmann

### Up the Salmon River, Past Spectacular Cliffs, Move the Horse-powered Boats to Favorite Fishing Holes

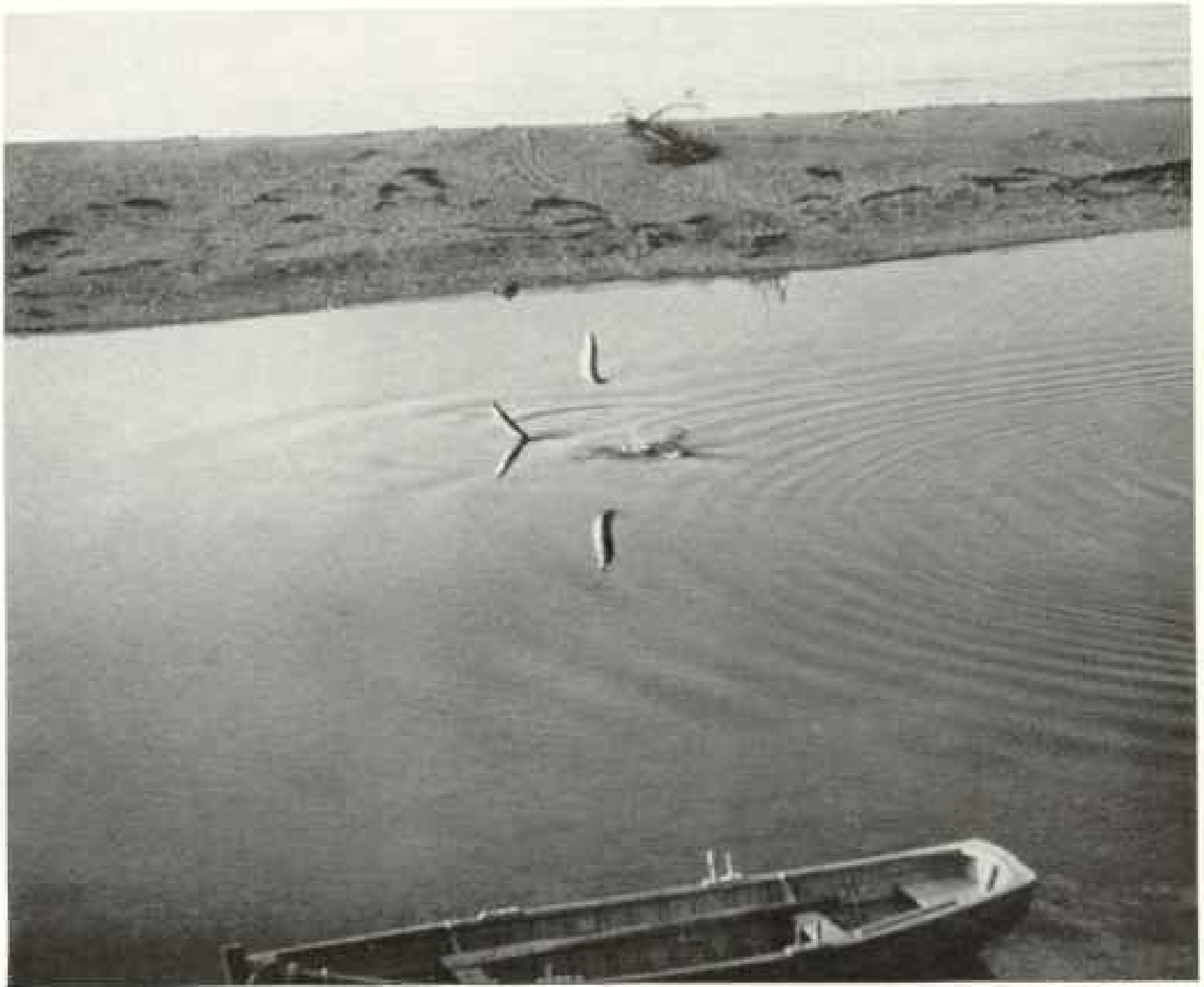
Often after such a trip, bumping and scraping over the stony river bed, the rowboats must be replanked. Sometimes they are even pulled across the dry, rocky shores to by-pass a fisherman "in action." A complete shoeing outfit is carried, as horses quickly wear out their iron shoes. Descent to the sea is great sport, the boats running the rapids quickly and the horses galloping happily ahead on the homestretch.



Ernest E. Wilson

**Horses Towed the Heavily Laden Canoes Up Swift Rapids to the Headwaters of the Jupiter**

On the journey across Anticosti, the going got tougher as the author's party approached the watershed between the Jupiter and Vauclair Rivers. After the horses were sent back, the men poled and paddled the canoes. Across the height of land everything had to be portaged.



EUGENE R. WILSON

### When a Pair of Salmon Jump in Calm Water—Two Plus Two Equals *Two!*

Only two salmon are jumping here in a river sea-pool, but lifelike reflections make them appear as a quartet. The acrobatic salmon often leap again and again in the estuaries where the salt tide and the sweet water mix. They pass a short period of adjustment in the river mouths before heading upstream to spawn.

on the walls or stood in orderly rows on shelves. We descended to a wine cellar—cool, dark, and musty—which once contained choice vintages.

The master's bedroom was on the ground floor. Its motley collections of decorative oddments suggested souvenirs of a round-the-world cruise. From this chamber a secret staircase led upstairs to a small alcovelike room. Was this just a retreat, or a hide-out of M. Menier? Or was it occupied by some favored guest?

#### The One-man Police Force

Later in the evening we returned to the ship. At the pier was one of our oldest Anticosti friends, Noël, Port Menier's handsome one-man police force. While we chatted, he stood straight and splendid in the blue uniform of his office.

We told Noël we still remembered him best as the rough-and-ready woodsman. That was the day he laid aside his uniform to guide us

on a jaunt out into the "bush" on the speeder which ran on the old lumber railroad until the track was pulled up for scrap.

That had been a wild ride! The "train" consisted of a topless small flatcar propelled by a gasoline engine. Noël opened the throttle wide and settled back with us to enjoy the trip. Cut-over land unrolled on either hand.

Along the right of way at curves and trail crossings, posts bore the letters "S" and "W" for *Sifflez* and *Whistle*. Although the track ran level through a flat country, our rushing "chariot" swayed and tossed.

Noël had been looking ahead intently for a while. Suddenly he jumped for the throttle, cut off the engine, and braked the galloping vehicle to a jarring stop.

"What's wrong?" we asked.

"Nothing, I don' theenk," came the reply. "But right here wan day we lose de wheel, so now I stop ev'ry tam an' look to see eef any-ting ees bust."



Eugene E. Wilson

#### No Pale Parlor Brew, but Scalding Woods Tea, Boiled Black as Molasses

Joseph Apestiguy, warden of the Otter (La Loutre) River, ladles himself a "cup that cheers" from a sooty kettle. Two discarded horseshoes, joined by iron bars, serve as an efficient grill.

Reassured, he took the helm again and we went clicking off deeper into the wilderness.

Port Menier is local headquarters of the paper company that owns and administers the island.

Anticosti is under the laws of Quebec Province, but the owners operate the school and support the church. They enforce special regulations, some of them inherited from the Menier days.

For instance, dogs are forbidden on the island, but cats are welcome. Only the corporation can post notices. No one, except in case of shipwreck, can land on Anticosti without permission. Nobody can recover damages for any injury done by any wild animal. No broken glass may be thrown about.

Except for lighthouse keepers and radio operators, everybody who works is employed by the owner company. Fire, game, and fish wardens are stationed at the mouths of the principal streams. Many of them make their homes in the red angling pavilions erected by

Henri Menier. In summer the men guide the anglers who come for the salmon fishing. Their wives and children raise vegetables, chickens, and rabbits to supplement the supplies provided by the company farm. Young men now are going away for war service.

#### Apologies for Only Six Children

Large families are the rule. Mothers apologize for as few as six children. Families of a dozen or fifteen children are common.

One mother lined up her offspring according to age for our inspection. From the eldest down, they were stepped regularly, about a year apart in age and a couple of inches in height. But there was a gap in the middle of the orderly descent.

"That was de place of de third boy," madame explained.

"He was 'unting in de woods w'en—bang!—de gun go off an' keel heem."

On an almost completely forested island, fire is the dread enemy. An airplane on floats,



Eugene F. Wilson

### Joe Martin, One of Anticosti's Light-hearted French Guides

The author, who has fished for seven consecutive summers with French-Canadian guides and wardens of Anticosti, describes them as "courteous and skillful," with "the pride and dignity of true gentlemen." When not guiding, Joe is the one-man crew of an Anticosti warden's patrol boat (page 136).

based on a lake near Port Menier, maintains fire patrols in summer, but the wardens around the shores form the principal fire-warning and fire-fighting force. The company can transport pumps close to the scene of a blaze, and there is almost always a lake or stream at hand which provides water. The tradition of care has been built up so seriously that big fires are very rare.

Although the drop in fur prices has made trapping unprofitable, the Anticosti men still take some foxes in winter. They send their fur to Port Menier and get credit at the store there against future purchases.

Poachers from the North Shore of Quebec and from the Gaspé have been a plague. The

wardens keep a constant vigil against these invaders, who have found the island, because of strict game and fish laws, a rich storehouse of salmon, furs, birds' eggs, seals, bears, and deer (p. 137).

Salmon angling now provides the bulk of the island revenue. To ensure excellent sport, no commercial salmon netting is allowed near Anticosti.

At dusk, about ten o'clock in this northern latitude, we climbed back aboard the *Fleurus*. Cautiously the ship steamed away from Port Menier. Heading eastward, the vessel began the round of the island's river mouths. At each of them angling parties would be dropped off.

Someone mentioned shipwrecks—a subject always close to reality on reef-girded Anticosti, which long had the title "Graveyard of the Gulf." Now there are seven lighthouses at strategic locations. Modern fog signals, range stations, and radio direction finders guide ships past the island's hazards.

The captain told us about the British steamer, *Incemore*, which stranded on the eastern tip of Anticosti in 1940. Fishermen from the mainland North Shore of Quebec rushed to the scene, and were on hand to help the insurance company with salvage operations. These alert Quebeckers shared in the ship's cargo.

### Derby Hat Part of Work Costume

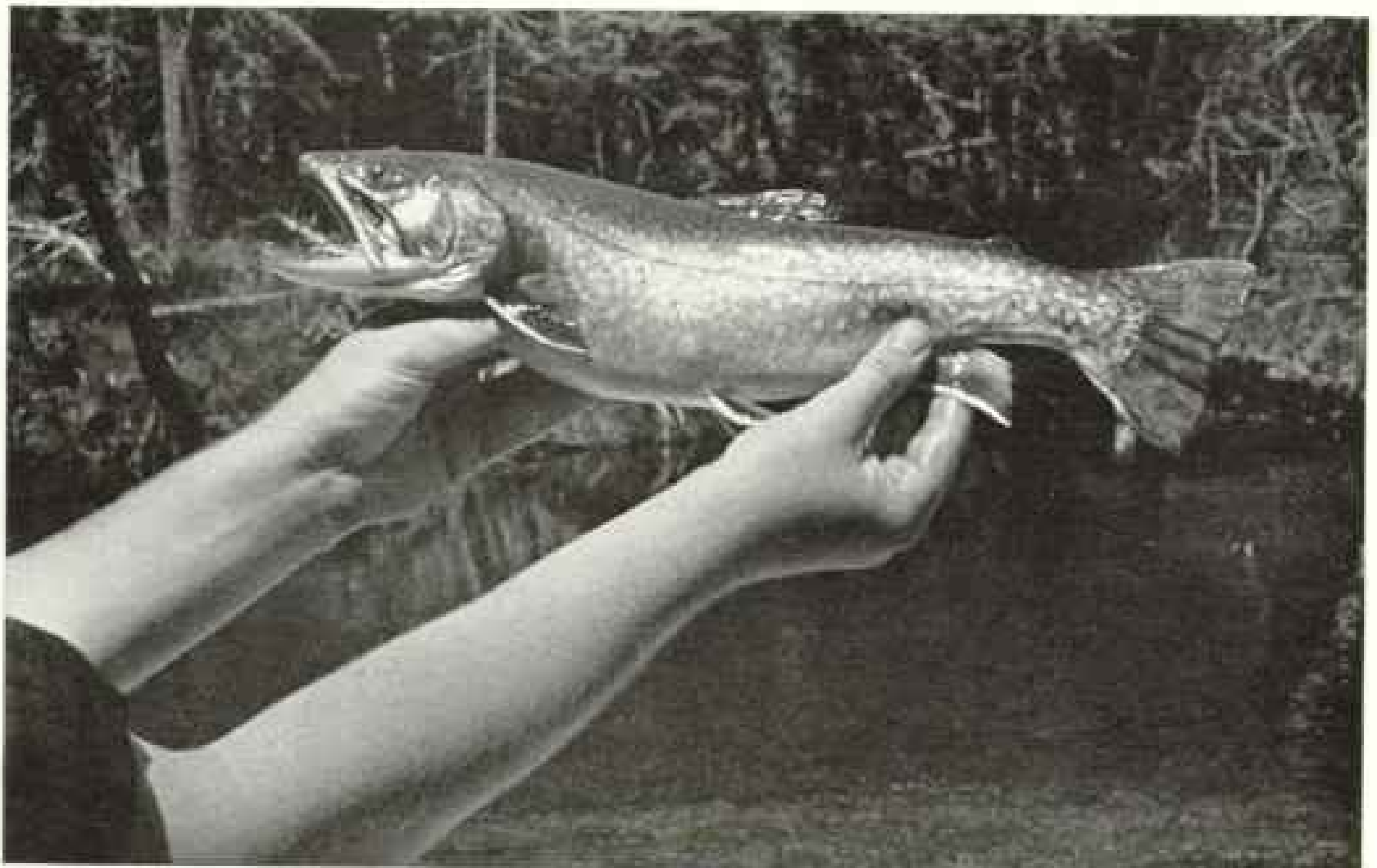
A London derby hat now is an accepted part of the work costume of the North Shore halibut fisherman. His dining room is adorned with fine linens originally destined for a Montreal hotel, and beautiful china stands on his shelves. Since the cups, saucers, and plates were all in separate barrels, the fishermen



Eugene K. Wilson

Like Egypt's Queen of Old, Ladies Ride at Ease in a Modern "Cleopatra's Barge"

On the Jupiter River horse-drawn boats even have canopies to shelter the passengers. A team of horses, plodding along in the shallow stream, pulls the boat up through rapids and still water, while a guide steers with an oar. Coming downstream, the current carries the "barge" at a good clip.



George E. Hamilton, Jr.

Otter River Yields a Speckled Prize

A fly cast for a salmon caught this plump two-pound sea trout. In Anticosti rivers the trout run in from the sea like salmon and lie close to them in the pools.



have conducted a lively trade among themselves to complete their sets! Children wear home-made clothes of green Grenfell cloth retrieved from the oil-filled hold.

#### Shipwreck Shoes All Left Footers

Boxes of salvaged shoes proved a disappointment, since their contents were found to be samples—all for the left foot!

Some of our fellow passengers had never heard of Louis Olivier Gamache. The remarkable history of Anticosti's oddest character was promptly told.

Soon after the beginning of the 19th century, Louis Olivier Gamache built his house on the site where the Villa Menier now stands. For 44 years he supported his family by fishing, sealing, whaling, and trapping, and was virtually the self-appointed prince of Anticosti.

Called a sorcerer and a pirate, Gamache was also a Frenchman with a sense of humor. Natives believed that demons helped him rob passing craft, and told tales of brimstone smells and blue flames that followed his ship over the water.

One windless day on the Gulf, in his sail-boat among a small fleet of vessels, he was seen to stand up and order the Devil to bring him a good breeze. Instantly the sails of his boat filled, and he drew swiftly away, leaving the other ships completely becalmed on a glassy sea.

More credible is the story of a sea captain who was forced to accept Gamache's hospitality. After a dinner enlivened by accounts of his own blood-curdling deeds, Gamache escorted his guest to his room and locked him in. A little later he flung open the door and, pointing a brace of pistols at the trembling captain, announced he had come to give him "the last shot."

Laughing uproariously at his joke, he then produced the "shot"—from a flask of brandy!

As the *Fleurus* pushed steadily eastward, we pulled on rubber hip boots and prepared our duffel for going ashore. There are no harbors or landing piers on Anticosti, except at Port Menier.

We watched parties rowed away in small boats toward the twinkling lights of Becscie and Otter. In rough weather these gravel bar landings can be exciting.

When the anchorage for the Jupiter River was reported close at hand, we gathered on deck with our equipment.

Gently heaving, the *Fleurus* slid through a thin fog which framed each deck light with a luminous halo. The broad Gulf of St. Lawrence was glassy, but there was a strong ground swell.

All at once we made out to port first one dim white light and then another. When these two range lights came into line, the captain swung the ship inshore. The salt sea air suddenly was sweetened with the warm perfume of spruce. Above the sheer veil of fog we saw the earliest pale hint of dawn.

Then we saw the land. At first only a dark line to the north, Anticosti was gradually unshrouded by the lifting mist. Spike-topped evergreens fringed bold cliffs. White foaming surf lashed at the rocky bar across the mouth of the Jupiter River. Off to starboard blinked the light at Southwest Point.

The Jupiter was to be our highway and blazed trail for much of the route of our exploratory crossing of the island.

"Amenez!" ("Lower away!") rang out the command from the bridge, and the launch splashed into its element.

The Days and my wife and I went down the gangway into one of the rowboats which had come out from shore and was already half-filled with our outfit. We were then taken in tow by the launch and our little flotilla drew away from the *Fleurus* amid cheerful *au revoirs*.

The crew headed our boat straight for the steep beach. Just short of the breaking surf the launch cast us off and we lay to, while one of the sailors, with a mighty heave, flung the towline ashore.

In the half-light we could make out on the beach the shapes of a dozen men and a number of horses. One of those ashore picked up the line and quickly threw a hitch around the hook on the doubletree behind a team of horses.

Shouting, the men on shore whipped up the horses. Our boat surged forward through the roaring surf. Spray stung our faces. Almost before we could draw breath, our boat was hauled high and dry on the bar.

There were the smiling men, familiar from visits of other years: Isidore Lelièvre, warden of the upper Jupiter, a dapper young Frenchman whose every move is grace; Césaire Martin, powerful with pole or paddle—the perfect river man; his brother Jean, a rugged blond youth. We lived for weeks on intimate terms with these boys. Courteous and skillful, they have the pride and dignity of true gentlemen (page 134).

#### "Cleopatra's Barges" on the Jupiter

Horsemen and horses at once started to skid our duffel on sleds across the bar to the estuary, where lay the canopied Jupiter River flatboats known as "Cleopatra's barges" (page 128). The early-morning air was heavy with the sulphurous scent of kelp. After breakfast, at



H. E. Geston

Wardens in Small Boats Keep Watch for Poachers Slipping Through Night and Fog Protected by Anticosti's strict game and fish laws, salmon, furs, nesting birds, seals, and deer are abundant (page 134).

sunrise, the horses were hitched to the barges—and we were on our way up the Jupiter.

Anticosti rivers are small, shallow, gin-cleat (page 129). They have beds mostly of gravel and boulders. Henri Menier's men discovered that the way to navigate them was in small boats pulled by horses which plod along in the current.

On the full-flowing Jupiter River, travel is by the larger "Cleopatra's barges," each drawn by two horses.

We pushed steadily upriver to reach Thirty-mile Pool by the second night. Swift and clear the cold waters rushed from pool to pool. The Jupiter has cut a spectacular 200-foot-deep gorge through the level white layers of sandstone. Along some reaches the palisades of soft rock have crumbled. Serried ranks of conifers are relieved here and there by the twinkling light-green leaves of birch and poplar.

Grassy banks were tapestried with beds of bunchberries and clumps of violets, with patches of blue iris, yellow cowslips and buttercups, white starflowers, wild strawberries, and golden lady's-slippers.

For several days we made our headquarters at Thirty-mile Pool in old log cabins in a grove of lacy hemlock and shapely spruce.

Rounded battlements and detached spires towered above.

Cheerful robins bustled about the camp. Kingfishers perched on twigs beside the stream. Sandpipers teetered along the shore, and Canada jays joined us at the lunch table. When twilight closed in, we heard a thrush from the highest rim of the cliffs.

Hour after hour we angled for the salmon that lay by the score in the clear pools. Sometimes we saw them only as vague shadows and silvery gleams, but when one rose and was well hooked, how he leaped and twisted and thrashed the stream!

#### Wrestling Match with a Fish

Many fish were landed, and many more set free. One day I crept upstream early in the morning, before the others were awake, to a glassy pool that gave up its biggest prizes before the sun appeared.

I soon hooked a fine fish and had almost tired him out, when I remembered that I had come away without a net. There was nothing for it but to try "tailing" the salmon. By this method you grasp the fish at the base of the tail between your thumb and fingers and fling him ashore.

Carefully drawing the prize to my feet, I



Eugene E. Wilson

### Few Travelers See Snowy Vauréal Falls, Higher Than Niagara

No trail by-passes this cascade, which drops about 180 feet into a canyon with vertical walls. The Wilson-Day party pioneered a portage around it through spruce thickets, swamps, and a maze of fallen trees (page 140).

leaned over and grabbed for his tail. As I swung all 15 pounds of him up the beach, I saw the hook drop out of his mouth. Fearful lest my prize flop down the steep bank to freedom, I scrambled up and threw myself on him bodily, like a halfback falling on a loose ball.

Covered with slime, I was triumphantly hefting my trophy when a dry cackle came from the edge of the woods. There stood my guide, net in hand.

"Césaire," I bellowed, "were you here all the time I played that fish?"

"Oui, monsieur," he replied with perfect politeness.

"Then why didn't you come down with the net?"

"Monsieur has caught so manee feesh! An' eet was good to see you pull de saumon out by de tail." Césaire chuckled again. "An' 'ow you fall on heem! Ah, monsieur—I beg your pardon—but eet was perfect!"

Each Anticosti river lodge is a station on

the island's single-wire telephone line, which provides news and gossip free of charge. To hear the latest, you pick up the earpiece and listen in.

I had to talk on the phone one day to Mr. Graham at Port Menier. Before hanging up, I had a sudden hunch.

"Madame Apestiguy!" I shouted into the mouthpiece, "are you there?"

"Yes, Monsieur Wilson, I am here!" and there was a click as the redoubtable madame hung up.

### The Germans Have Landed!

Another day, while we were loading the canoe for a day's fishing, I heard the phone ringing. One of the boys answered it. A moment later, Jean rushed out shouting, "De Germans—de Germans 'ave landed on de island!"

I realized that the people were more than a little German-conscious since the German "scientific" expedition to Anticosti (page 128).



Eugene E. Wilson

### Over the Horizon Comes the *Fleurus* to Pick Up the Sportsmen

Only transportation to Anticosti is by the small company steamer, which makes calls along the coast picking up visitors who come out in small boats. Here the Wilson-Day party embarks by launch. Near their mouths some island rivers flow parallel to the shore, separated from the sea by narrow sand bars.

"Ernest Poulin jus' call from de Saumon Rivière. He say airplane come down dere on de watait. De men, dey speak only leetle French and some foreign language. He tink eet ees German."

Because the people knew of my connection with airplane manufacture,\* I was supposed to solve the mystery of the unknown plane—and at a distance of 50 miles.

"Call Ernest back," I said, "and ask him to find out how the tail of the plane is painted, and what numbers or letters appear on the hull."

#### Mystery Solved

A little later a somewhat embarrassed Jean returned.

"Ernest say red, w'ite, an' blue stripes on de plane tail, an' eet ees marked PBV-5 an' U. S. Navy."

I laughed.

"That's a United States Navy patrol

bomber, and the 'foreign' language the men spoke is English."

Later, in Washington, I mentioned the incident of the flying boat to Admiral J. H. Towers.

"Oh, were you there then? The weather closed in on one of our patrolling PBV's and she came down at Anticosti to get her bearings."

All too soon it was time to set out upstream to complete our traverse of Anticosti.

Our equipment was reduced to a minimum—two balloon-silk tents, four sleeping bags, and a small personal bag for each of us. Joseph Lelièvre provided a flatboat, a horse, and guides.

At break of day we pushed off, towing three canoes. Each bend of the stream revealed new interest. A creek gurgled into the river here, an odd rock formation frowned down

\* The author is President of the United Aircraft Corporation.

upon us there. Waterfalls pitched over the steep banks. There was plenty of water from recent rains, a particular blessing when we reached the shrunken headwaters.

The high cliffs gradually subsided, giving way to low, spruce-clad banks. We had the feeling of getting on top of the island. Lunch was served on the bottom of a turned-up canoe at 50 miles from the Jupiter's mouth.

Old Joe soon turned back downstream with the horse and flatboat. We took to the canoes. The boys poled in the swift waters and paddled in the smooth.

It was restful, after a hard day's travel, to sit by the crackling campfire, watching the flaming sunset reflected in calm waters and breathing the mingled scent of wood smoke and balsam. Down sleeping bags were none too warm at night.

The Jupiter narrowed to a creek and flowed from a succession of lakes: Louise, Felix, and Joan, all alive with trout. Alternately poling, paddling, and portaging around old beaver dams, we finally tracked the river to a point where it was a tiny brook, four inches wide, gurgling through deep grass.

#### The Thrill That Balboa Knew

Our sketchy map showed the source in Joan Lake, but we followed the flowing water up to an uncharted pond in an open meadow. Later it was named Genevieve Lake, for Mrs. Wilson. We did not compare our accomplishment with the discovery of Balboa from his peak in Darién, but I'm sure we felt the same kind of thrill he knew.

To reach the Vauréal River, we struck out into the pathless swamps of Anticosti's height of land. The boys carried the canoes and bulging duffel bags. We brought up the rear with rods and cameras.

After slogging through sodden marsh grass, we stumbled on a northward-flowing brook, the Vauréal, and were cheered by our rapid progress.

Because stream markings on the bank showed that the river level was dropping rapidly, we pushed downstream at once. For a while there was deep water and easy going between low wooded banks. But soon the stream tilted, spread out thin, and became so shallow that we frequently had to drag the canoes over the gravel bars.

After 18 miles of alternately rough and smooth going, we arrived at the chute above the great falls of the Vauréal. Here we set up our last camp in the interior.

Next morning, while the guides were breaking camp, we pushed down through the dense spruce woods to the brink of the fall. At our feet the whole Vauréal River pitched nearly 180 feet—a drop greater than Niagara's—into a dark chasm. In the spray a rainbow gleamed.

To by-pass the cliffs, we scrambled over one of the toughest portages I have ever seen. There was no trail. The way led through dense spruce and oozing swamps. Gales had blown down much of the timber. Our legs grew numb from picking our steps over, under, around, and through the tree trunks that lay at all angles, as if some giant had just dropped jackstraws all over the land.

The day was hot and windless, and we often had to stop and gasp for breath.

We reached the rim of the gorge at last, and stumbled, slipped, and fell down a steep slide to the river bank. Sprawled on the shale, we took long pulls at the clear water.

Although nearly exhausted, I knew that I would never forgive myself if I did not photograph the Vauréal Falls from the canyon below. So I trudged wearily up the river bed for two miles.

When at last I rounded a buttress of the canyon wall and came face to face with the roaring white plume, the sight more than repaid all my effort (page 138).

From the seething caldron at the foot of the cascade, a great column of spray boiled up and drifted through the tall spruces on the opposite slope. The noonday sun glittered on the shallows at my feet.

I used up the last of my still and motion picture films, and then reluctantly turned back downstream.

#### Down to the Sea

After a refreshing cup of strong tea, we started on the last swift lap of our trip. The four canoes danced along, now in bright sunlight and now in cool shadow, slipping smoothly down the rapids.

Late in the afternoon, through the canyon notch, we caught sight of the calm, blue Gulf of St. Lawrence. The pitch of the rushing river was so steep it seemed like a toboggan slide.

Suddenly we burst from behind a point to glide out on the placid surface of the sea pool. We were back on salt water. Along the far horizon the rocky islands of the North Shore hung in a mirage. Our traverse of Anticosti had reached its happy ending.

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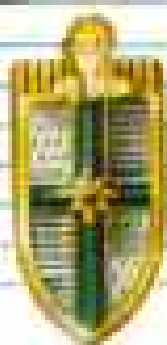
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# Man deflates brother-in-law

by  
*Al Pianè*



**1.** Arriving home for family reunion at Christmas, he notes particularly smug look on brother-in-law's face.



**2.** Brother-in-law immediately launches into bragfest on how he and family made trip home by *Pullman*.



**3.** Expounds at length on delicious steak dinner which he, wife, and Junior had immediately on boarding train.



**4.** Tells next how they left Junior tucked in bed and in care of porter as they went back for evening in club car.



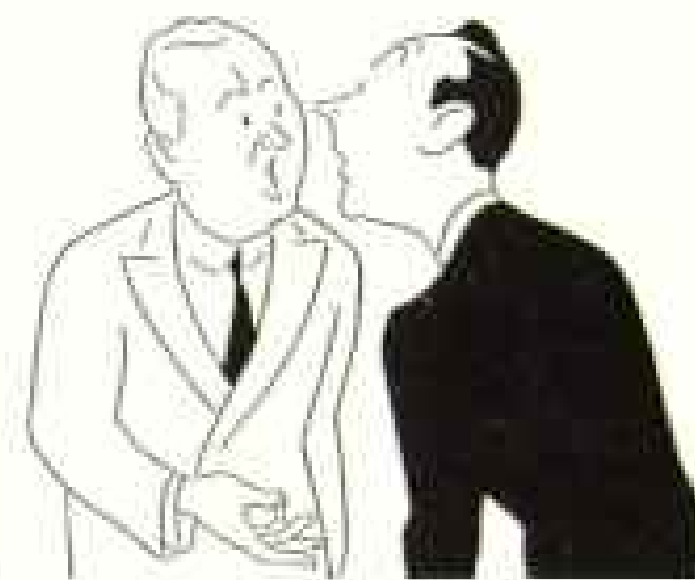
**5.** Paints glowing picture of refreshments in club car, and general refined air of people gathered there to enjoy pleasant evening.



**6.** Gets practically poetical telling how wonderful a sleep he had, claiming *Pullman* beds are best beds in entire world.



**7.** Winds up oration by explaining how rail and *Pullman* fare is less than 4c a mile—whereas it costs 5c a mile to run your own car.



**8.** After hearing out b-in-law to end, our hero says quietly, "I know; I came *Pullman* myself like I always do. Nice, isn't it?"

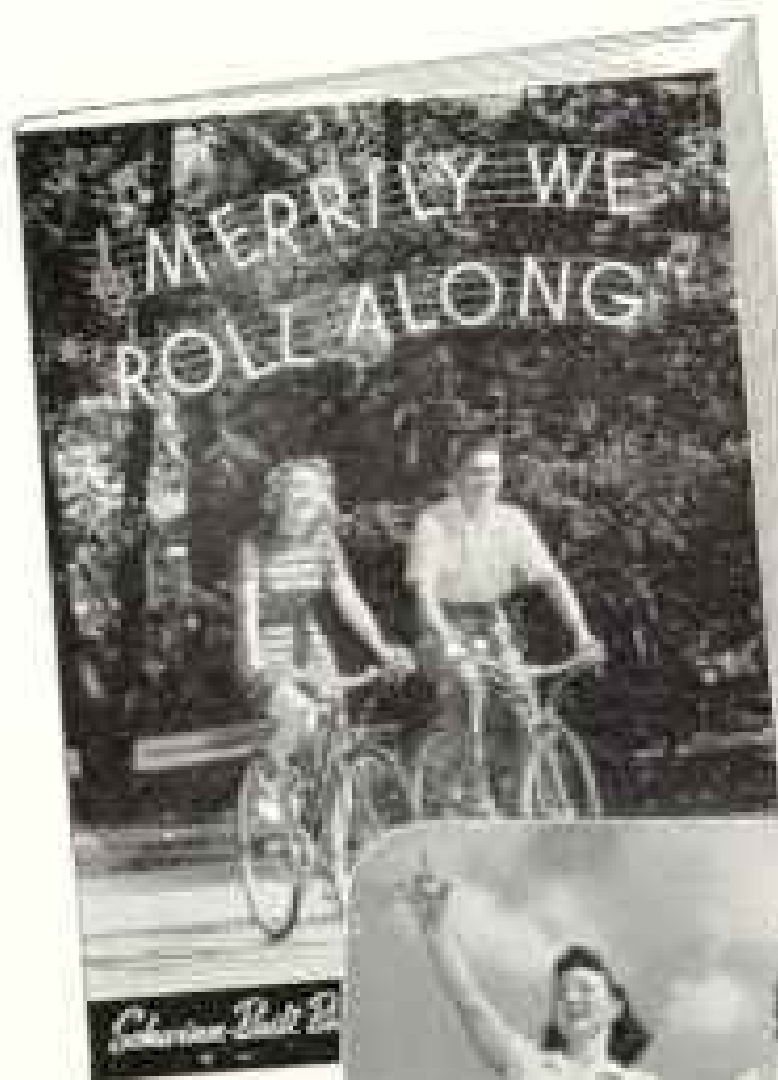


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(Right) Miss Rose Sanders and Miss Lestina Stanley of Atlanta with their Schwinn-Built Bicycles

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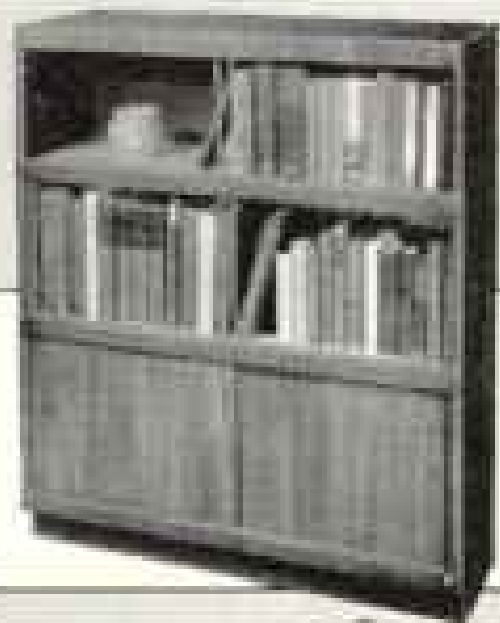
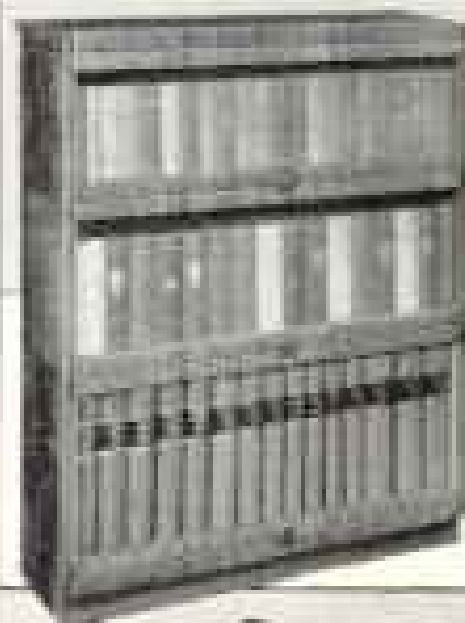
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## LIMITS OF PORTABLE RADIO LISTENING RANGE NOW REMOVED

The first and only portable radio guaranteed to receive Europe, South America or the Orient—every day, even on planes, trains and ships—or your money back. *This guarantee has been made possible by the new Shortwavemagnet.*



*Never Before Offered to the General Public*

## NEW SUPER-DISTANCE... SHORT-WAVE AND BROADCAST DE LUXE PORTABLE RADIO

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**FIRST TIME!** A portable radio that gives domestic short-wave reception in locations where broadcast does not penetrate in the daytime.

**FIRST TIME!** The miraculous time and band buttons. Pre-set the pointer—"Press a button . . . there's Berlin!"

**FIRST TIME!** On conveyances—on land—sea—air—choice of portable radio reception with built-in movable broadcast and short Wave-magnets.

**FIRST TIME!** Band Spread makes foreign station tuning on a portable radio as easy and simple as ordinary radio broadcast tuning.

**FIRST TIME!** Logged at the factory on short wave broadcasts . . . A convenient logging chart on inside lid of cover is pre-logged by factory experts. Shows exactly what stations are found on each wave band and at what number on the dial.

**FIRST TIME!** Zenith Famous Radiorgan Tone Device on a portable radio.

**RESULTS**—In test air flights, train trips and cruises, have amazed even the country's best radio research brains.

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**POWER**—From self-contained battery and standard lighting current ingeniously interchangeable at a second's notice. Also, Telescope whip aerial for use in getting *extra* distance.

**COMING**—In a week or two. Watch your Zenith dealer's window. Or better leave your name and address so he may telephone you—Don't miss this NEW ONE!

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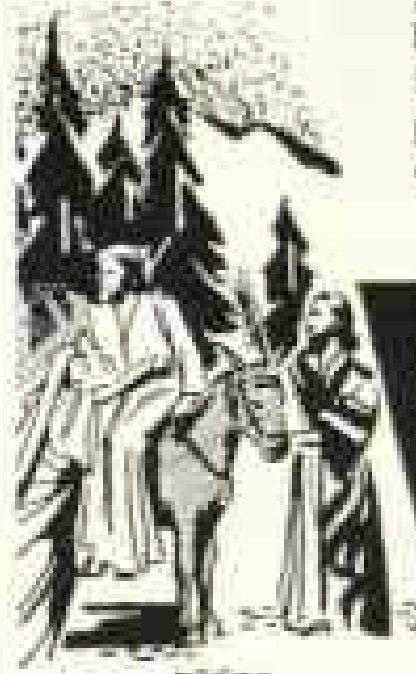
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Right now San Diego is especially beautiful and especially exciting, right now you particularly need to get away - right now you are able to do it. So come!

**T**hink of all the fascinating sights and scenes you'll discover... the many recreations and activities, both new and familiar, that you'll enjoy here as nowhere else!

**O**ur rugged, beautiful shores, set in a tropic sea, furnish ever-varied pleasure opportunities. Come bathe in sun and sea, and forget all about winter. Fish from a boat or a wave-splashed cliff -- watch surf-riders, and maybe take a board out yourself -- thrill to the beauties of the underwater world!

You'll gather desert flowers, almost in the shadow of white-capped peaks. You'll even ski and swim the same day, if the spirit moves you! Mountains, beach or desert -- afoot, in the saddle or rolling down the highways -- you'll spend long, golden, unforgettable hours, here in our sun-filled, health-filled, wonderful world!

**EXTRA DIVIDEND:** This is San Diego's historic year! Our 400th Anniversary (celebrated Aug. 29 -- Sept. 9) finds us famed the country over as Defense City No. 1. Dark-painted men of war slip in and out of the harbor, cruising air squadrons cross the sky, anti-aircraft searchlights sweep the night. You'll have a ring-side seat for the greatest drama of our time! Come!

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**The World:** 41x22 inches; an ideal map to determine quickly the "lay of the land" wherever news happens. Drawn in two hemispheres.

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**Atlantic Ocean:** 25x31 inches; includes large part of the four continents bordering the Atlantic; shows naval bases, ship routes.

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## NATIONAL GEOGRAPHIC SOCIETY

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# FALSE TEETH

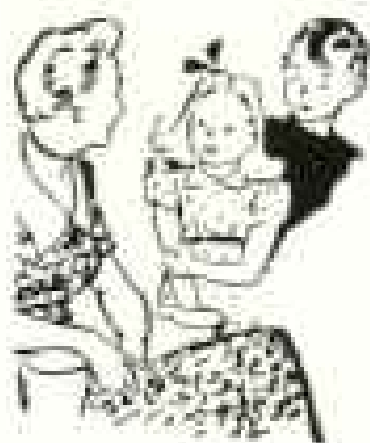
*were Untrue to  
Grandma Gray*

**BUT THE KIDS ALL LOVE HER NOW!**

*The kindness of Grandma Gray  
Made kiddies all adore her.  
No wonder she was hurt when they  
Decided to ignore her.*



*The truth was that they rather banned  
The "aroma" and the sight  
Of Granny's FALSE TEETH;  
though by hand  
She scrubbed them day and night.*



"Use POLIDENT," her dentist said,  
"Its action can't be beat.  
You neither scrub nor rub; instead  
You *soak* plates *clean* and *sweet!*"

Since Granny has, the kiddies make  
Her life serene and nice.  
If *you* wear PLATES, you too should take  
This POLIDENT advice.



Cleans, Purifies Without Brushing  
Do this every day: Add a  
little POLIDENT Pow-  
der to half a glass of wa-  
ter. Stir. Put in plate or  
bridge 10 to 15 minutes.  
Rinse, and it's ready to  
use.



## POLIDENT

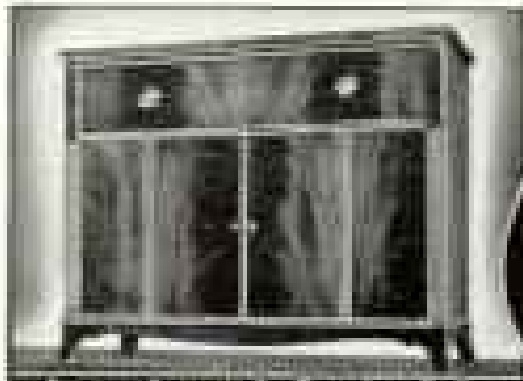
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USE  
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When Epidemics  
Threaten

Give the mouth and throat extra care

"Mention the Geographic—It identifies you."





*Avoid exposure to chilling and fatigue*



*Dress the children warmly*



*If a cold hangs on, go to bed . . . and have the doctor call!*

# A defense program against Pneumonia

**P**NEUMONIA often attacks without warning. Usually, however, it is preceded by a common cold, influenza, or other infection of the breathing passages. So, it is wise to take good care of yourself whenever you have a common cold. Catch these infections early, and do not let them drag along until they become serious.

When a cold hangs on, and you feel generally miserable and feverish, be especially cautious. Avoid exposure to chilling, and particularly fatigue, late hours, and overeating. The two safest and sanest steps to take are: 1. *Go to bed*; 2. *Call your doctor*.

The first sign of pneumonia is generally a severe chill followed by fever. Even more definite symptoms are coughing, pain in side, thick, rust-colored sputum, and heavy breathing. Usually these signs are not just forerunners. Generally they indicate actual pneumonia.

The pneumonia death rate has been reduced over fifty percent in the past three years. Nevertheless, the first essential for successful treatment still is early diagnosis. This permits the prompt use of the powerful new sulfa drugs when the physician (and

only the physician) prescribes them; it makes possible early determination of the type of pneumonia, and use of serums if advisable.

The difference between a quick cure and a long, serious, perhaps fatal, illness depends upon getting a doctor—not tomorrow, but *immediately*. Given the chance to treat more pneumonia cases early, America's doctors and nurses can still further reduce pneumonia fatalities. By calling the doctor early and getting nursing care, you can help him to use more successfully the weapons of modern science.

Write for Metropolitan's free booklet, 12-N, "Respiratory Diseases," containing many practical suggestions to help you ward off trouble.

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**ANGRY TLALOC.** This is a copy of a sacred manuscript, recorded by a priest of Ancient Mexico before Columbus turned westward across the sea.

It depicts Tlaloc, the angry rain-god. Tlaloc could be terrifyingly cruel. When the rains swelled rivers, or drought scorched crops, people knew disaster lay ahead.

The only one who, in their belief, could keep them from disaster was Tlaloc. And he had his price. So to win his favor, they held an elaborate and exacting ceremony to dedicate the beginning of the rainy season. The prone figure represents a priest who failed to fulfill his part in this ceremony and, as punishment, was

thrown into the raging river—a sacrifice as it were—to insure an abundant crop.

The priest's tobacco pouch, made from a jaguar's foot, is there to indicate to the god that a good tobacco crop, a full pouch, is sought from him. The double-ended serpent, symbol of the rain-god, hovers overhead.

As far back as we know anything about man, he has sought security against disaster. In primitive times, it was the uncertain method of sacrifice. Today, it is the certain method of insurance.

In a sense, insurance is sacrifice, a small sacrifice to be paid regularly out of your income. But a more ac-

curate term for it is security, peace of mind, defense against the accidents, catastrophes, reverses that may await you on an unpredictable tomorrow.

It is a good, an almost essential, provision to make. The best way to make it is to seek the advice of a Travelers agent or your own insurance broker on the kinds of insurance you need, and the amount of each you should have.

Moral: Insure in The Travelers. All forms of insurance. The Travelers Insurance Company, The Travelers Indemnity Company, The Travelers Fire Insurance Company, Hartford, Connecticut.

COLD OR HOT...

# SPAM

HITS THE SPOT!



## SPAM WICHES

It's fun to make a big platter of 'em—and so easy! All you need is bread, butter and a can of SPAM. If you like, add chili sauce, pickle, or relish.



## SPAM 'N' EGGS

A wonderful new idea for breakfast! Simply cut SPAM in slices a quarter of an inch thick. Brown quickly in hot frying pan. Serve with fried eggs.



## SPAM BAKE

Pop a clove-studded SPAM into the oven . . . baste three times with the succulent sauce described on the label . . . and there's your baked SPAM!



## SPAM 'N' PANCAKES

Practically guaranteed to get your family up on coldest mornings! Just do this. Brown several thick slices of SPAM . . . let 'em surround a stack of pancakes.

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DINTY MOORE PRODUCTS

SPAM cans need no refrigeration so keep plenty on your pantry shelf. SPAM is made by Geo. A. Hormel & Company, Austin, Minnesota.



All of us are working at top speed during these times. But no one expects you to overdo it. You owe it to yourself (and your country) to keep in top shape—mentally and physically. Get away for a while. Relax. Play. And then come back with renewed enthusiasm for the kind of job these times demand.

COME ON OUT—HAVE SOME FUN

# Southern California

AND THE ALL-WINTER

## SUN FESTIVAL



Get a complete change... a glamorous pageant of entertainment... Southern California's All-Winter Sun Festival! 300 joyous events, plus the ocean, mountains, flowering desert and a climate as mild as spring. See exciting foreign colonies, Old Missions, horse-racing, the mighty industries of Los Angeles County—oil, oranges, movies, national defense. And the night time fun is gayer, brighter than ever! You're invited! Come early!

**FASTER TRAVEL! Lower costs!** Even from New York, Southern California and the "Sun Festival" are just overnight by plane, as little as two business days by fastest train, four to seven by auto or bus. Because Southern California is a year 'round' playground, costs average 18.5% under those of 20 other leading U. S. resorts. Accommodations for every taste and budget in Los Angeles, Beverly Hills, Glendale, Pomona, Pasadena, Hollywood, Santa Monica, Long Beach, and other cities of Los Angeles County and its neighbors.

**FREE: New Book Plans Your Trip**

For your Southern California trip: new unique book answers all your questions about what to see and do, how to get here and time required, weather, what to wear, detailed cost schedules,



etc. Lavishly illustrated. Crammed with impartial facts available only through this non-profit community organization. Use this valuable coupon now, and get your free copy by return mail.

**When you arrive,** take advantage of the unique and helpful services offered by our free Visitors' Bureau in downtown Los Angeles (505 West Sixth Street). Information, literature, 26 services—all free. Nothing else like it in the country.

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*Come to California for a glorious vacation. Advise anyone not to come seeking employment, lest he be disappointed; but for tourists, the attractions are unlimited.*

*This advertisement sponsored by Los Angeles County Board of Supervisors.*

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 Los Angeles, Calif.

Send me free book with complete details (including costs) of a Southern California vacation. Also send free routing by  auto,  rail,  plane,  bus. Also send free booklets about counties checked:  Los Angeles,  Orange,  Riverside,  Santa Barbara,  San Diego,  Ventura,  Kern,  San Bernardino,  San Festival Events Folder.

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# "Where shall we stay?"

NATIONAL GEOGRAPHIC MAGAZINE'S HOTEL SECTION

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**Pioneer Hotel**, Southern Arizona's Finest. 200 Rooms with bath, Europ. Coffee Shop, Dining Room, Roof Garden. Sun Deck. Sensible Rates. Booklet.

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## COLORADO

### Colorado Springs

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**Wardman Park Hotel**, Washington's Largest, 198 outside rooms. Ample parking. A road traffic to all highways. Write for maps. Rates from \$5.00.

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**Fort Harrison Hotel**, Overlooks Clearwater Bay, Golf of Mexico. Golf, bathing, boating, fishing. A or E. plan. 222 rms., moderate rates. L. G. Davis, Mgr.

### Fort Lauderdale

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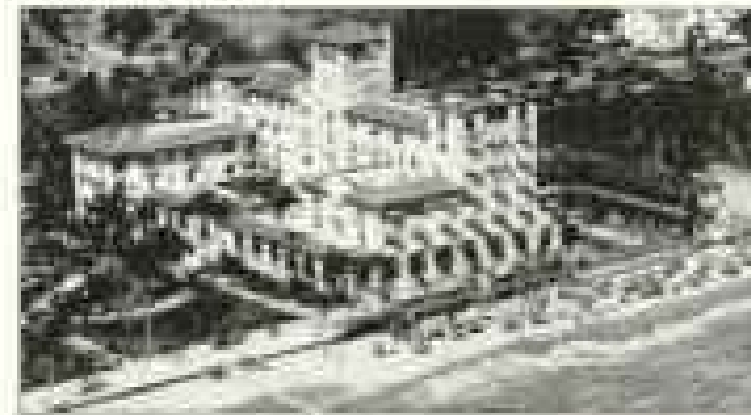
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