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TWENTY-FOUR PAGES OF ILLUSTRATIONS IN FULL COLOR

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With 29 Illustrations.

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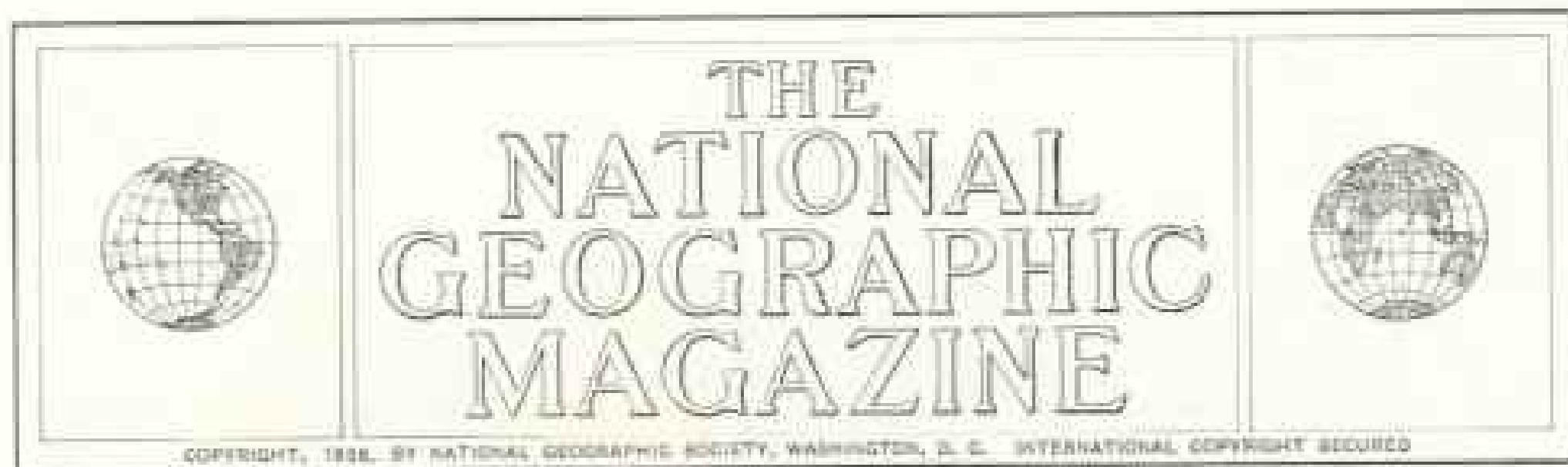
With 36 Illustrations

MAURICE P. DUNLAP

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FRIENDLY JOURNEYS IN JAPAN

A Young American Finds a Ready Welcome in the Homes of the Japanese During Leisurely Travels Through the Islands

BY JOHN PATRIC

"YOU speak English," I said, as an elderly Japanese boarded my liner at Quarantine in Yokohama. "I wonder if you could help me with these letters of introduction?"

The man glanced at the extended letters, one in English and two in Japanese. "They are all addressed to one man, Yozo Nomura," he said, smiling. "I am Yozo Nomura. Show my card to the customs; they may not even look at your baggage. Then come to my office."

This was the first of many kindnesses I received at the hands of this Japanese gentleman. He kept most of my slender funds in his safe and stowed my baggage in his godown, or warehouse. When I asked him why he was so kind he gave me an English copy of "The Training of a Zen Buddhist," now one of my most cherished possessions.

Yokohama, completely rebuilt since the earthquake, I found typical of westernized Japan. A visitor is impressed by modern structures, built and building. He is surprised to see only a few rickshas, pulled only by old men. Young men, two to a car, drive taxis for fees that make fares of even Washington, D. C., seem dear.

Here are almost as many bicycles as on the flat streets of Copenhagen, more small cars and motorcycle trucks than in Berlin—even small one-cylinder, air-cooled, but otherwise orthodox automobiles.

Kindly Yozo Nomura sent a former San Francisco Japanese to show me around and treat me to a luncheon of raw fish and cooked oysters, though I would have preferred the reverse. Once he took me to dinner, ordered elaborately for me, but ascetically chose cold rice and tea for himself. His son-in-law took me to a movie, gave me a letter to his golfing friend, Sessue Hayakawa, still a cinema star, in Kamakura.

COOL FUJISAN BECKONS

It was so hot and damp in Yokohama that water-front coolies often wore only a scant breechcloth. But sometimes through a rift in the clouds I could see far-off Fujisan (Fujiyama), reaching 12,395 feet into an arctic climate (Color Plate IV).

Fujisan appealed to me. No mountain climber, I had neither equipment nor proper clothing, and I started off in a light gray suit. I was appalled to see numbers of Japanese alight from the train at Gotemba, carrying stout sticks branded with travel records, huge packs, straw mats, wide-brimmed hats, and spare grass overshoes.

I was sure I wore my load limit, but when I entered an inn at Subashiri, its proprietor was delighted at my unburdened arrival. At dinner he came to me with a printed "List of Equipages Necessary for Fujiyama Climbing Up" and the smiling assurance that he had them.



Photograph by T. Enami

BOWING CAN BECOME A CEREMONY

Curt or elaborate may be the one or many obeisances that always accompany a farewell. This interior, characteristically spacious, may be made into one room or many by sliding latticed, paper-covered panels into position (page 451). One of these, partly closed, is visible in the background. Beside a polished leg column, an old dwarf pine lends a touch of nature to what, at night, will magically become a *nema*, or sleeping room.

He was hard to convince that I wanted nothing: no guide, no lunch, no lantern, no sandals, no hat, no mat, not even a stick.

"No one climb Fuji without stick," he said, sadly.

It is cooler at night, and by climbing rapidly one reaches the summit before day-break. Along the trail poor tea and poorer "cider" are served expensively in a dozen stone resthouses. For a yen or two one may sleep awhile on the earthen floor.

Japanese, heavy-laden, singing chantlike songs of Fujisan, were overtaking me all the way (page 446). On the sultry lower slopes I had stripped to the waist, wring-

ing out my shirt afterward. Before morning I longed for an overcoat.

Near the summit the air was clear, with moonlight on the trail and white clouds below. I toiled upward, resting frequently, although sub-freezing winds discouraged long stops. Not a ray of dawn appeared until I stood beneath a *torii* on the crater's crest.

A few fleecy clouds shone silvery, with lights of Tokyo, Yokohama, and lesser towns flickering between them.

The sky grew brighter, and golden; lights below winked out. From the ocean leaped the sun, and threw into sharp silhouette the

island volcano Oshima with its plume of smoke, a favorite dying-place (page 483).

Upon Fuji's summit in summer is a busy town. A score of temples are there; to Shintoists Fuji is almost what Mecca is to Islam. Charcoal glows in a dozen rest-houses. I curled thankfully upon a warm floor of hard-packed volcanic cinders. Sleeping, because of competition, was 14 cents, cheaper than along the trail.

American voices at last awakened me. I looked, sleepily surprised, at the brother of a man I had met in San Francisco. We went arduously around the wide crater, rocked first this way, then that, by a chill gale. Into the crater we descended. Thirsty, I looked for water below a snow-bank remaining in a sunless gully.

It took courage to drink. The summit and trail environs resemble a huge ash pile and rubbish dump. Scores of thousands of annual pilgrims discard rice boxes, sandals, broken pottery, paper, and other non-metallic refuse.

NATURE FURNISHES FOOD

Spurning a commercially operated slide, we descended afoot, our stride doubled, our cadence fast. But we paused all too frequently to pour ashes, perhaps those of the last eruption in 1707, from our shoes. Under the first rugged old tree my friends left me asleep. I had read of wild strawberries at Fuji's timberline, and, awakening, sought them. Far behind rubbish-strewn trails the woods were splendid. I shall never enjoy strawberries more.

Kamakura, with the Buddha "Daibutsu" (Color Plate I) and a guidebook full of "things to see," had a beach that attracted me most, a miniature Coney Island with all that an ingenious people can devise to catch the spare sen of gaily generous countrymen.

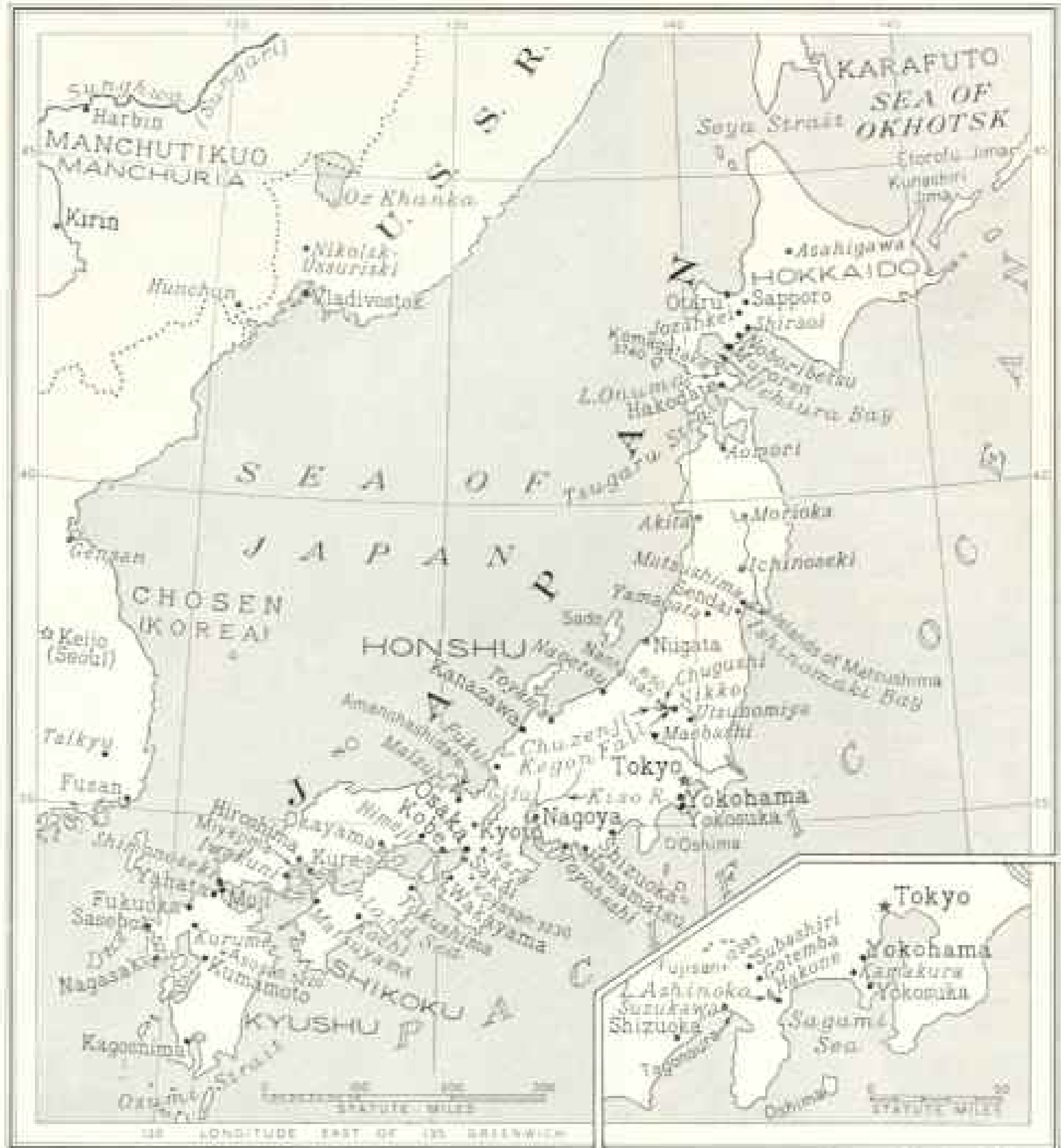
In a pottery shop, for a few cents, I bought "raw" porcelain, painted it myself and had it baked there. With simple humor I



Photograph by W. Robert Moore

THIS ROOSTER SEEMS PROUD OF HIS TAIL

An observer feels that there should be little chicks to carry the train, but actually it is wrapped carefully when chanticleer goes forth for his regal exercise. Longest feathers of this highly prized pet are eight feet; appendages of some are thrice that length.



Drawn by Arthur J. Haas

MOUNTAINOUS JAPAN IS SMALLER THAN CALIFORNIA, AND ONLY ONE-SEVENTH OF THE AREA IS HABITABLE FOR ITS 65,000,000 PEOPLE

Japan beckons the traveler who loves a train ride on the ocean's edge, for ever faithfully do main-line railways follow the sea. The author journeyed, sometimes on foot, along the Pacific side of the main island of Honshu, then circled Hokkaido in the north. Southward along the Sea of Japan he found the village and country folk especially hospitable and old-fashioned, their latch-strings always out to a stranger.

adorned ashtrays and teacups for American friends with legends such as "Specially Fabricated at Kamakura, Japan, by the Royal High Imperial Potter for Bill Jones."

A schoolboy watched, asked timidly in his best English if I would write for him. All afternoon I decorated pottery, inscribing quotations from Lincoln, Franklin, and other quotable Americans. Scores of boys and girls found a few sen to buy something

for me to paint. The pleased proprietor sent out for tea and cakes.

Tokyo is a half hour from Yokohama, with a train every eight minutes. Third-class coaches on the run have blue upholstery and are crowded. Second class, twice the price, upholstered in green, are nearly empty. For short journeys there is no first class except when the Emperor travels.



SKILLFUL ARTISTRY IS AMONG WOMANLY GRACES IN JAPAN

Wearing the most conservative of the kimonos here, the teacher instructs eight young ladies in the technique of the single brush stroke. If the work is poorly executed, it must be done over from the beginning, because no retouching is permitted. The instructor made the design in the foreground, and one of the pupils attempts to copy it while the others look on. When these girls become advanced, they will paint delicate scrolls, like the example hanging on the wall.



Photographs by Kiyoshi Sakamoto

THE COOKED FOOD IS CLEAN EVEN WHEN PURCHASED ON THE SIDEWALK

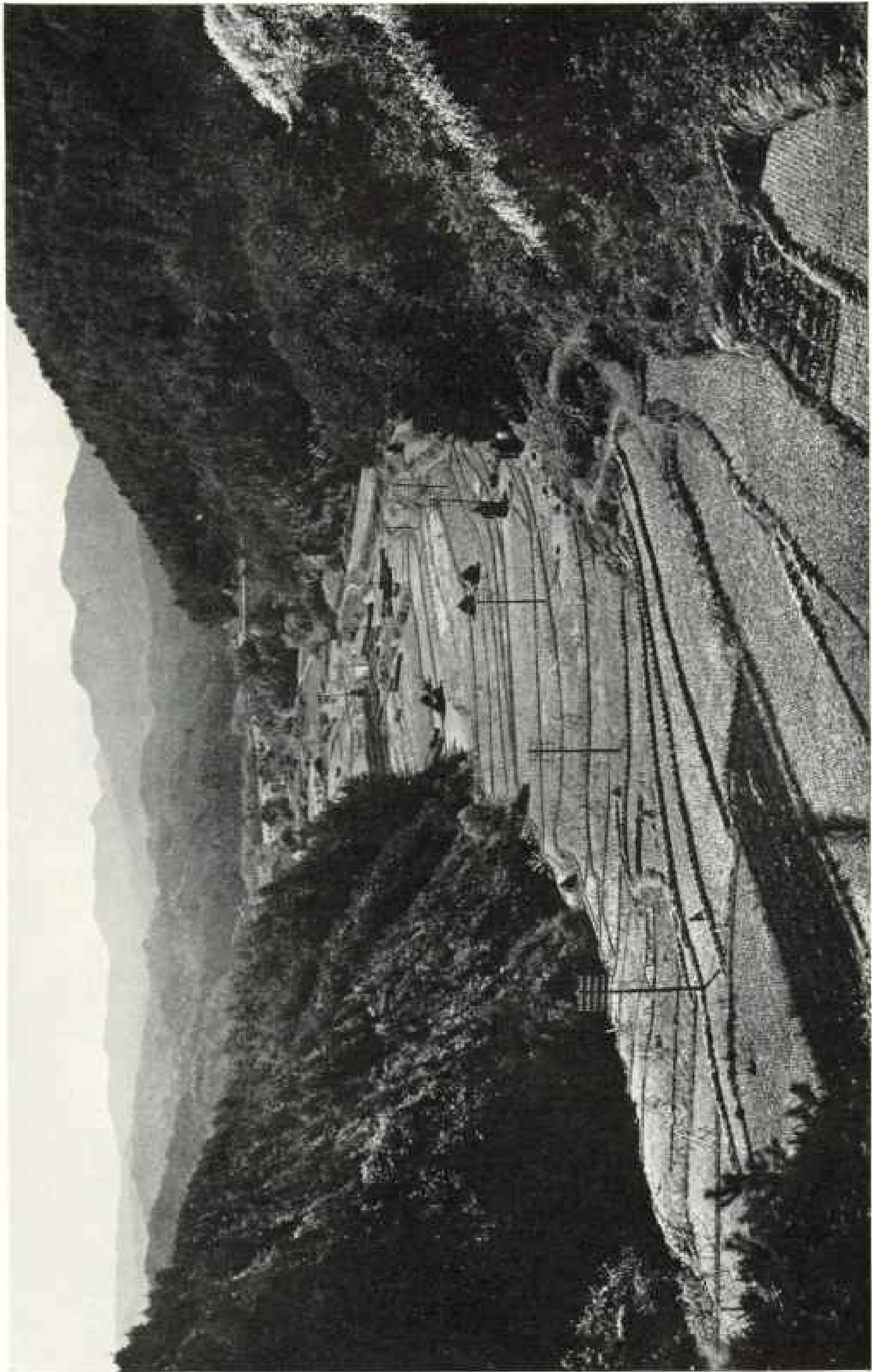
An Osaka housewife buys steamed sweet potatoes; cookery vapor escapes beneath the awning. While not even the least fastidious American dares eat at such a stand in many oriental countries, the author lunched frequently and well on Japanese streets. Chitterlings, liver, and octopus meat (page 465) are broiled over charcoal while the hungry customer stands and waits.



© Herbert G. Ponding

NOT ON EVERY SUMMER DAY DO DULL GRAY RAIN CLOUDS OR MIST FROM STEAMING ICELANDS SHROUD FUJI'S CREST

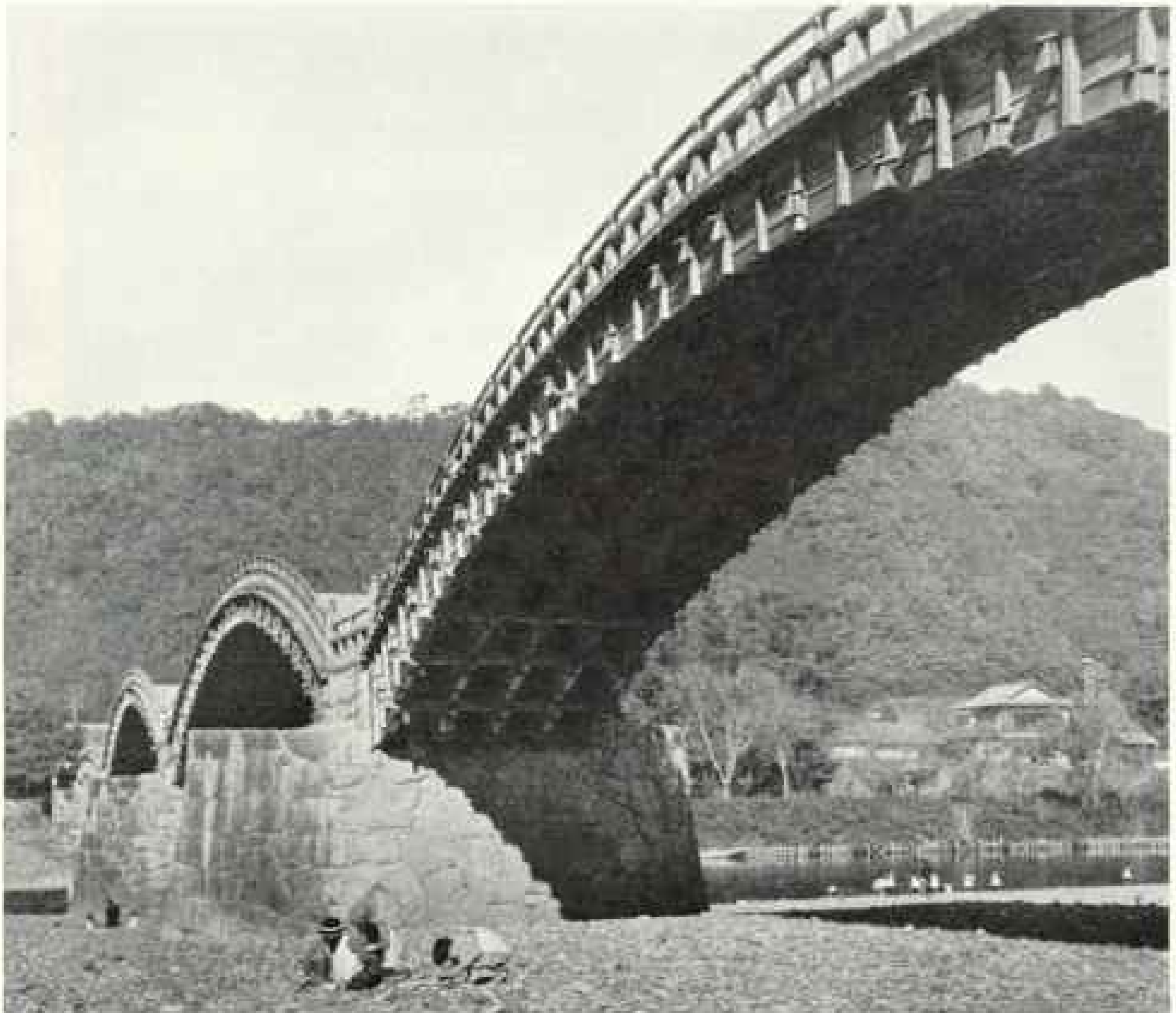
On such a morning as this the author's weariness vanished when he looked backward from the top (page 441). Climbers in the picture have possibly left packs in a resthouse, but carry cherished sticks. Brands have burned indelibly and recorded incontrovertibly on these staffs their visits to "famous places." Such a trophy is treasured by its owner and will be looked upon with awe by wide-eyed grandsons listening to old men's tales



Photograph by W. Robert Moore

MOUNTAIN VALLEYS ARE TERRACED FOR RICE AND BEANS

Paddy fields, necessarily flooded, must be level. Beans are planted along the risers, or fronts of the steps. Not unduly mountainous for Japan, this scene includes the far-penetrating power line, and, in the upper center, ricks of drying rice.



Photograph by W. Robert Moore

THE BRIDGE OF THE DAMASK GIRDLE ADORNS "BROCADE" RIVER

Built in 1673, when nails were scarce and dear, this structure across the Nishiki at Iwakuni, like Salt Lake City's Mormon Tabernacle, is a maze of wooden pegs and joints. The longest of its five great arches spans 133 feet. To cross such a bridge, one must climb up and down five hills, for there is no level roadway across the top of the arches. Formerly, one of the spans was repaired every five years; thus the whole bridge was overhauled every quarter of a century.

Sometimes I rested in the lobby of the Imperial Hotel, a favorite foreign rendezvous, built in earthquake-proof sections of porous native rock. There one day an aviator friend and I chatted awhile with Will Rogers. The American humorist was interested in the aviator's theory that foreign-born Japanese may be better flyers than native pilots, because the former have not in infancy been carried about strapped upon their mothers' backs, and therefore have not suffered disturbance of the inner ear, seat of sensitiveness to balance.

At another time I sat for hours listening to His Excellency Senhor S. Gurgel do Amaral, retired Brazilian ambassador, who threw many a sidelight on Japanese life.

"No one," said he one day, "is allowed to look down upon the Emperor. All upstairs

shutters are carefully closed before he passes. He reviews cavalry from a platform. Receiving the diplomatic corps, he stands upon a dais. Flying over the Imperial Palace is forbidden. But there is one man who looks down on him."

"Who's that?" I asked.

"The Swedish Ambassador," replied Senhor Amaral, "is extremely tall, and even from his dais the Emperor must look up to meet the eyes of this representative of a friendly king, while the Swede looks down!"

POLISHED WOOD PREFERRED TO PAINT

Despite centuries of culture, the Japanese seem near to Nature. They will not paint furniture or floors or anything else about their houses if it can be avoided, preferring polished natural wood.



Photograph by Brunson De Cou from Galloway

THREE SISTERS, OLDEST CARRYING THE YOUNGEST, POSE BESIDE A WATER WHEEL.

Although Japan's many swift rivers provide ample electricity, old-fashioned power units are still common (page 456). A man-pulled cart rests beside the two parked bicycles in this scene near ancient Kyoto.

Housebuilding beams are not always completely squared, particularly when exposed inside; one edge or two or three may be, but usually at least one side is the polished, irregular surface of a tree.

Even mud is used as an insulator. I thought of birds gathering clay, twigs, and grass and making of them comfortable nests. Japanese houses, their skeletons outside, have wood-and-earthen walls, paper doors, grass floors, roofs of straw thatch or clay tile, and, within even the humblest, a spaciousness unsurpassed in the Western world. This is partly because there is little bric-a-brac. Beds are rolled up and put away by day, so that a Japanese bedroom, in our use of the term, does not exist.

Housewives use, instead of clotheslines, bamboo poles of diameter sufficient to allow free passage of air between folds of gar-

ments thrown across them. Bed sheets, which hang there often, are smaller than ours because they are sewed to their mats each time they are changed.

Often on warmer days, women, some very pretty, work in their gardens with no clothing above their waists. This custom is more prevalent in the country and in such older cities as Niigata, where I have been waited on in stores by women so dressed. Nursing babies in public, however, is customary everywhere.

One day I observed a hedge fence around a neat house, blossoming in white like cherry trees in spring. Curious as to whether they had any fragrance, I approached and saw that cherry branches had apparently been left in the sea until covered with barnacles. These, dried and sun-bleached, made up the "flowery" hedge.



© Herbert G. Ponting

TREES LIKE THESE ARE TIMBER IN JAPAN

Even pine needles are gleaned and used. Forests are plentiful on Japan's hills and mountains, but the product of native mills is often small and knotty (page 456). Oregon and Washington lumbermen ship large numbers of huge clear timbers, known to the trade as "Japan squares," to supplement this material.

I was invited to a fine Japanese home because I had been something of an interpreter for a German girl, the guest of an eighty-year-old Japanese widow of the Meiji Emperor's German doctor.

A typical German dinner was followed by a complete Japanese meal. There was, of course, a wooden tub of rice, Japan's "bread." Lobster tails had been dipped in batter and fried in deep fat. In a thin red-lacquered wood bowl, tiny unshelled mussels reposed in clear, delicious broth. The custom is to drink from the bowl, pick out meat with chopsticks in one hand from

mussels held in the other. Thin, light, crisp white rice cakes came with green tea. In a chafing dish with a charcoal fire boiled soya sauce. Beside it were dishes of onion, egg, and lean meat bits. That is the famous *suki-yaki* (the first vowel slurred), and is cooked at the table.

All guests of polite hosts receive presents in Japan. Dolls, fans, handkerchiefs, and other things of the sort the departing visitor by custom takes home and stores to give away again, shopworn, perhaps, from many presentations.

I disliked accepting gifts after enjoying the dinner so hungrily. At my hostess' gate I removed a pearl-handled penknife from my watch chain and gave it to her. She took it, smiled, bade us wait, and returned with a fine nail clipper, greatly enlarging my debt.

"You cannot say 'magnificent' until you have seen Nikko," is axiomatic in Japan. Generations ago each feudal overlord contributed a temple to this mountain place of

shrines. One, poorer than the rest, tradition says, could give little—300,000 cryptomeria seedlings. Grown now to resemble the smaller of the California redwoods, their survivors line roads and trails.

ENGLISH WORDS ADOPTED BY JAPANESE

In Nikko are some of the best *yado ya*, or Japanese inns, in all the Empire, and for three yen daily (about 85¢ at the time of my visit), I engaged room and board in one I liked best.

Japan has two types of hostelry. From us is adopted the "hotel," lock, shower, and

bedstead. Even our name is used; but since Japan has no "l," this letter becomes "r," and for the final vowel "u" is added, making it "hoteru," as "beer" is "becru," "match" is "matchi," and the imported, outlawed "kiss" is "kissu," but only, as my conversation dictionary explains, "in the treaty ports."

Hoteru are much more expensive than yado ya, and many Japanese prefer them. But yado ya contribute much to a foreigner's understanding and enjoyment of Japan.

At the entrance, guests change shoes for soft slippers provided by the management. These, worn on hallway floors polished smooth as piano tops, are left outside the sliding, lockless, latchless paper panels that are the doors of each room.

Grass matting, as we know it in America, is sewed to a more roughly woven, "springy" grass mat about two inches thick. Completed mats, of standard size, are fringed with cloth tape. A room's area is known by the number of its mats, and, since shoes never touch them, they are a practical floor covering.

A typical room in an inn is like one in a private home. In a tub of sifted ashes a charcoal fire glows under a teapot. A table the size of a card table is but a foot off the floor. A diminutive dresser, not more than thirty inches tall, with drawers and a mirror, is useful enough when one sits before it, but seems at first glance fit only for a little girl's playhouse. At one end of the room an alcove with a raised floor is the "sacred place," where stand the tastefully arranged



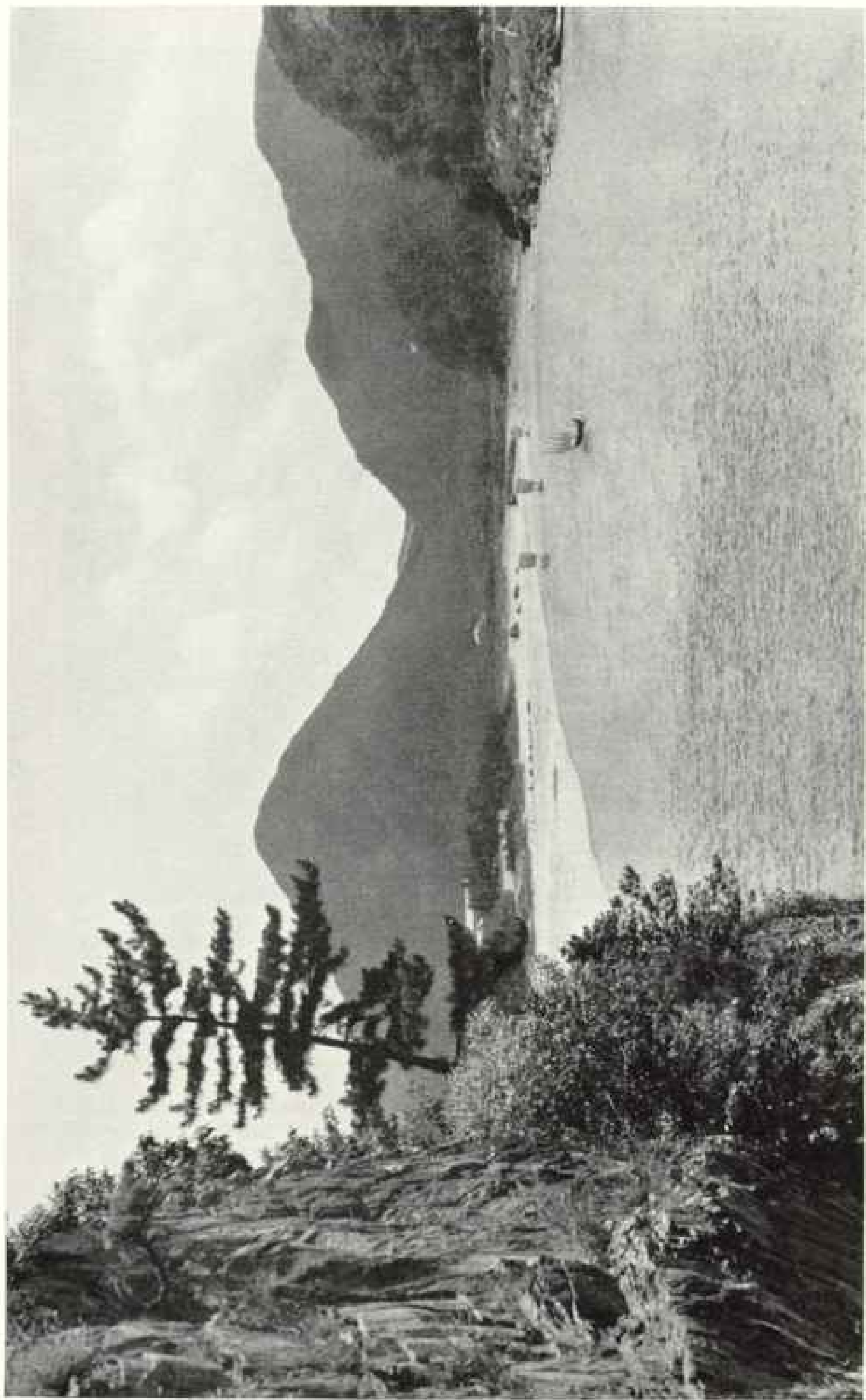
Photograph by W. Robert Moore

AGE CANNOT DIM THE DEVOTION OF A BUDDHIST PILGRIM

As Chaucer's characters journeyed to Thomas à Becket's shrine at Canterbury, so do Japan's pious wander far. This old woman carries her bedding and necessities, and toils wearily upward to the monasteries of Koyasan. She rings a bell and finds generous response. Lafcadio Hearn, 40 years ago, said one might travel, eat, and bathe daily for a year on ten dollars, or, lacking funds, go as a pilgrim.

flowers which are so much a part of Japan's formal life. There hangs a *kakemono*, or painted paper scroll, appropriate to the season. A Japanese may have dozens of these, but displays only one at a time on a wall (page 445).

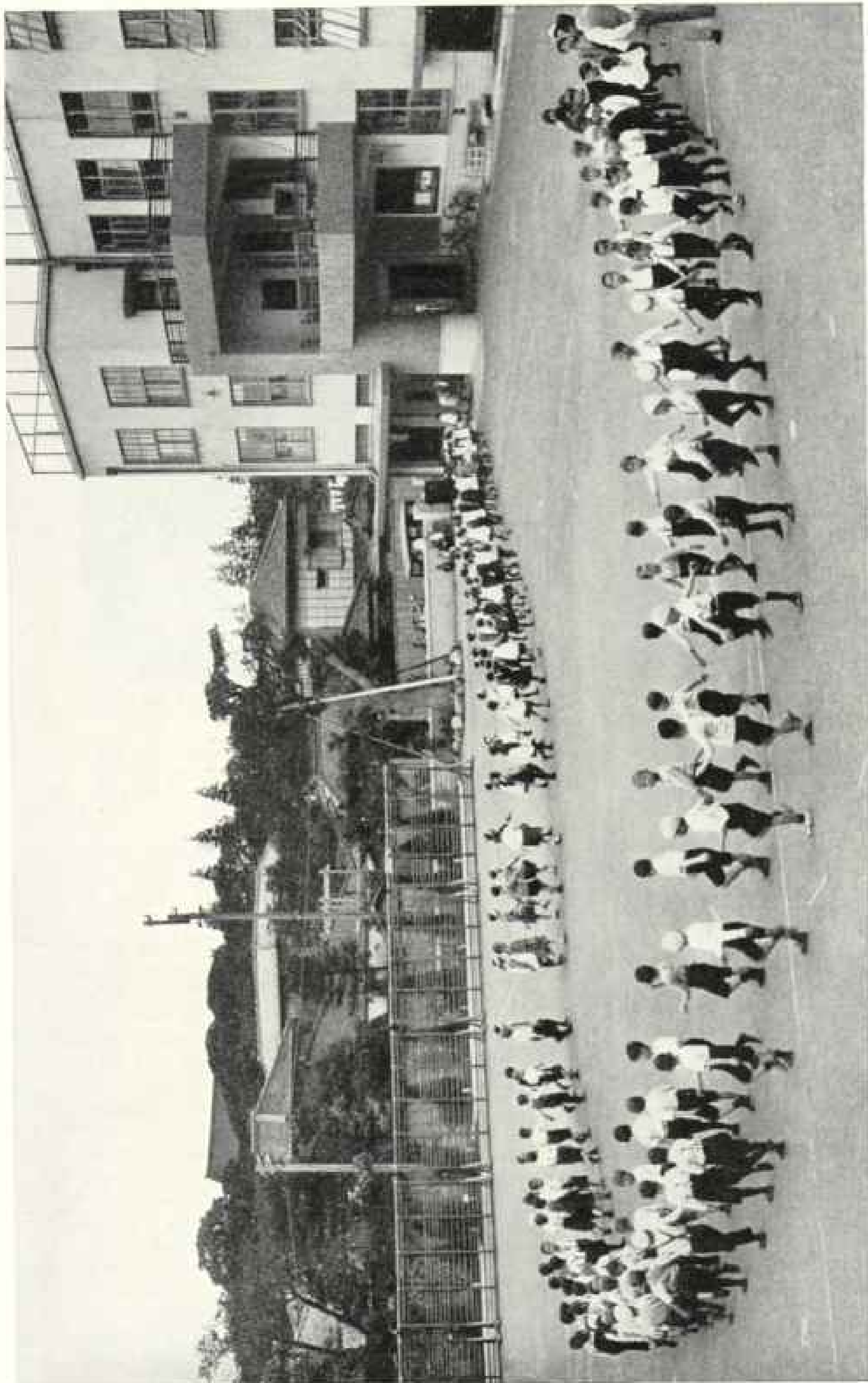
Soon after a guest's arrival his *jochu*, or maidservant, without even a tap on the door, enters to pour his tea. The girl who served me at my Nikko inn was pretty, graceful, and particularly thoughtful. She sat opposite me with helpful intentions as I ate; I had only to eat.



Photograph by W. Robert Moore

SHALLOW-DRAFT SAILBOATS, NO STEAMERS, NAVIGATE THE KISO, JAPAN'S RHINE

But no feudal castles cap the hills along this gorge. Japan's watercourses, silt and gravel-filled, are too shallow for the smallest ocean craft.



Photograph by W. Robert Moore

CLASSROOMS ARE FOR BOYS ONLY, OR FOR GIRLS, BUT PRIMARY CHILDREN PLAY TOGETHER

A loudspeaker on the lower balcony calls these youngsters back to work. Modern Japanese schools are modeled after American, but "character" courses are included in which students are taught reverence for their ancestors and love of country, as well as the three "R's." Recesses, for 15 minutes of free play, follow each study-and-recitation period. This modern, fireproof building in Tokyo contrasts strikingly with the native homes at the left.



Photograph by W. Robert Moore

PLAYGROUNDS PROVIDE VARIETY FOR BUSY CHILDREN

Although schools foster mass drills and work begins early in life, recreation fields are well equipped and heavily patronized. The gondolalike contraption is a seesaw; beyond are a swing standard and a slide. Kobe faces the Inland Sea, but the mountains behind it may be seen through the pines.

She ironed my clothes and darned my socks, and when I awakened I would find the green *kaya*, or tentlike mosquito net, had been removed as quietly as dawn had come. Sometimes, entering while I was in disarray, she did not leave, nor indicate that she found me unpresentable. From a Japanese point of view she hadn't.

BATH WATER ALMOST SCALDING

Always at evening she told me my bath was ready. A sunken tank of wood or tile is filled with water as hot as the vapor in a Finnish steam bath—110-115 degrees. One does not wash there, but scrubs and rinses first, entering only when thoroughly clean. The water is too hot for most foreigners, but the Japanese sit in it, submerged to their necks, for a long time. They dry with a common cotton washcloth, wrung out frequently. I saw not a Turkish towel in all Japan. Here, too, come servants, men and women, to scrub one's back.

"Privacy," says Arthur Rose-Innes in his conversation dictionary, "is not much observed in Japan; this word is difficult to translate."

Lafcadio Hearn wrote of waking in a strange Japanese inn, and described a meadow lake with an arched bridge to a wooded island he saw in the distance. It had been an illusion, miniature reality near at hand—a tiny garden outside his own window.

I persuaded four young American women, school teachers, to desert a twelve-yen *hoteru* and spend their last Nikko night at my *yado ya*. I asked them to promise not to "balk at the gate," for imposing entrances and false fronts have not been a Japanese contribution to civilization.

The inn faced not the street, but pine-clad, cloud-ringed mountains. Between its wings, and reaching a little distance to the mountain slope, was a garden somewhat larger than that Hearn described, with



Photograph by W. Robert Mott

JUNE 21 IS BEST FOR VIEWING NIKKO'S "SUNRISE-TILL-DARK" GATE

So, Japanese lovers of ornate lacquered wood carving call this structure the Yomei-Mon, because even the longest day of the year offers hardly enough daylight hours to permit one to examine every elaborate detail. Of Chinese design and one of the most magnificent in existence, this portal adorns the Ieyasu Mausoleum.

groves of dwarf pines, a teahouse, and a stone torii marking the entrance to a small shrine. There were a brook and a pond with an island bridge. The teachers were delighted.

Particularly amusing they found their new glassine-wrapped toothbrushes, each with its dab of toothpaste, but neither towels nor soap. I had to promise them a completely private bath by agreeing to stand anachronistic guard outside the door.

"Why, there isn't the hint of a catch!" exclaimed one.

"Nor need there be," I vainly protested. "There's nary lock nor latch in the place. This is Japan, and the bath man's interest is entirely impersonal."

I looked forward to dinner time, when I could translate pretty compliments into Japanese for my jochu, who blushed and ran away, returning with a timid smile when she realized her duty as a hostess.

Returning one day from Lake Chuzenji (Color Plates II, III, and VIII), I decided to give the girl something that would remind her, even as an old lady, of the queer foreigner she once had served.

Inspired, I bought for a low price, typical of highly literate Japan, a two-volume, leather-covered edition of "Lamb's Tales from Shakespeare" in Japanese, and inscribed elaborate English compliments on the flyleaves.

She returned with them, afraid, apparently, to trust anything I had written to English-speaking acquaintances, or perhaps she had none. I had to translate every word I had so blithely inscribed. I should have said just "Thank you, beautiful lady."

THE JAPANESE ARE FOND OF TRAVEL

From Nikko I decided to go "light," shipped my bag to Yozo Nomura, and bought a *juroshiki*, a huge handkerchief used to carry things. I had purchased two pairs of white linen trousers and two fine silk shirts, with my name in Japanese, for \$4. These, with socks, handkerchiefs, razor, map, and a time-table, were my baggage during the ensuing weeks (map, page 444).

I washed trousers and shirt at bath time, dried them at night, and carried them unironed until I could stop at a tailor shop or even a farmhouse, have them ironed, and change them on the spot. Queer-sounding, but I was in a land of travelers and poor pilgrims where privacy is unknown and personal cleanliness paramount.

The Japanese, even in Hearn's day, were "the greatest travelers in the world, in their own country." I often felt the common folk approved my way of wandering, even if officials sometimes were suspicious and caused me a little trouble on that account. But poor people seemed to believe I was as I said *bimbo na hito* like themselves, and from them came more genuinely disinterested service.

On the morning I left Nikko I walked across country to the next railway station, a delightful journey, for the most part down an avenue of cryptomeria. Here was none of Tokyo's oppressive heat, none of its fast tempo. Life seemed to go on just as it had for centuries.

Children played happily in the streams where their mothers washed clothes and vegetables and poured kitchen water, streams supplying tea and rice water to neighbors below, streams becoming at last the dirty Japanese rivers that pour into the sea (page 452).

On one tumbling rivulet were several waterwheels. One provided power for a sawmill. Small logs were brought manually to the carriage and pushed past the saw just slowly enough not to stop it. There was little waste. Most Japanese mills could run on the refuse, slabs, and slashings discarded in the American West.

Below was an overshot wheel operating an unattended gristmill. Ponderous millstones were at work on rice, slowly hopper-fed. This seemed an anachronism in a Japan which ranks high industrially and demands, as I write, modern naval parity.

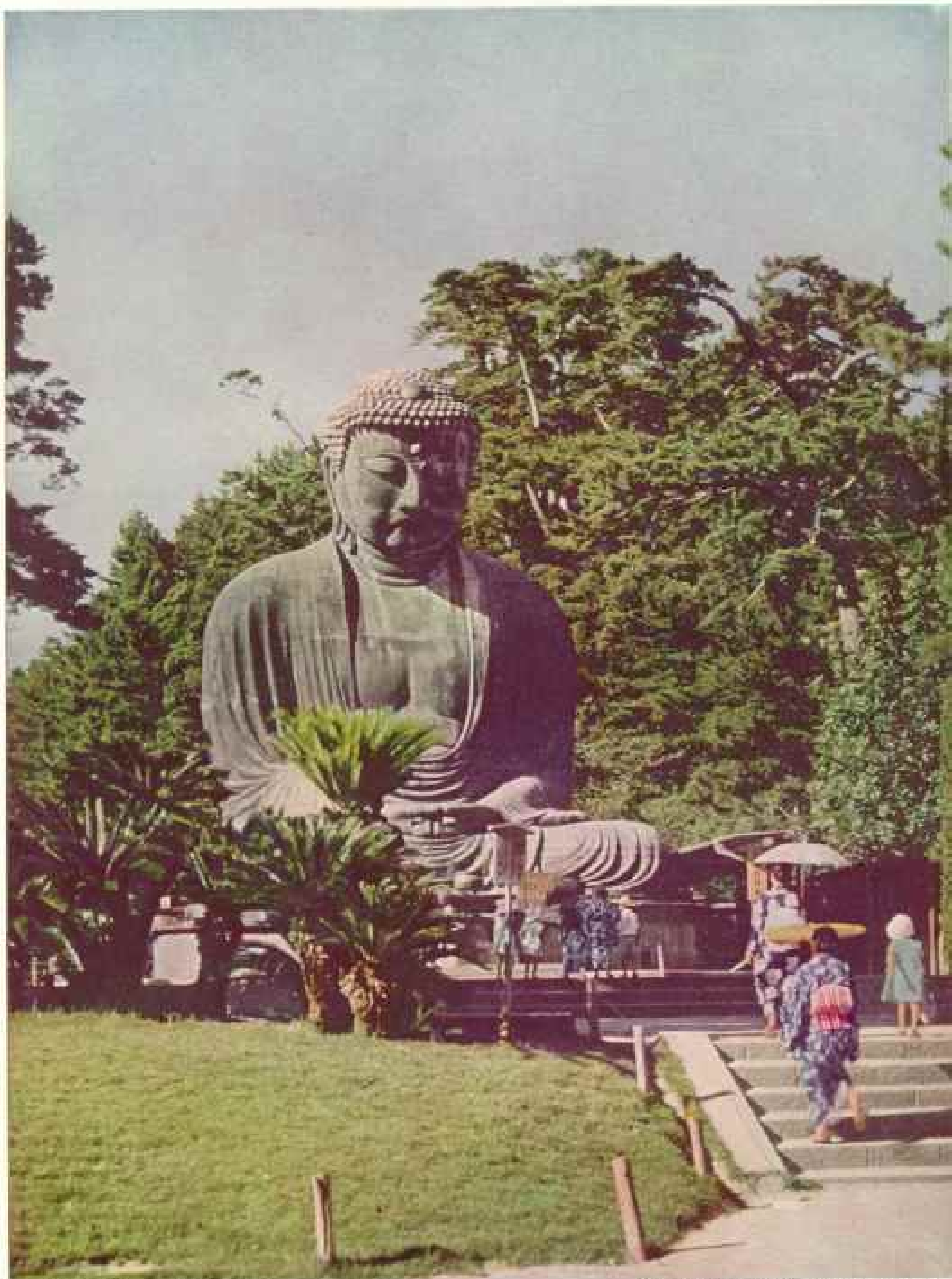
No iron was visible in this little mill, nothing but wood, stone, and leather. The waterwheel was on a foot-thick horizontal wooden shaft. At the other end of it, inside the mill, thick pegs of hardwood, like spokes of a heavy, rimless wagon wheel, meshed with similar "gear teeth" atop the vertical shaft that turned the upper millstone. Everything ran in leather bearings.

JAPAN'S SCHOOLS TEACH ENGLISH

Train rides were always refreshing. For the ostensible amusement of the nearest small boy I performed sleight-of-hand tricks with matches, coins, and handkerchiefs, entertainment good in any language. This usually attracted half the car's occupants, one of whom might ask:

"How made is this so puzzling thing?" I would then have something of a conversational companion.

CASTLES, SHRINES, AND PARKS OF JAPANESE PILGRIMAGE

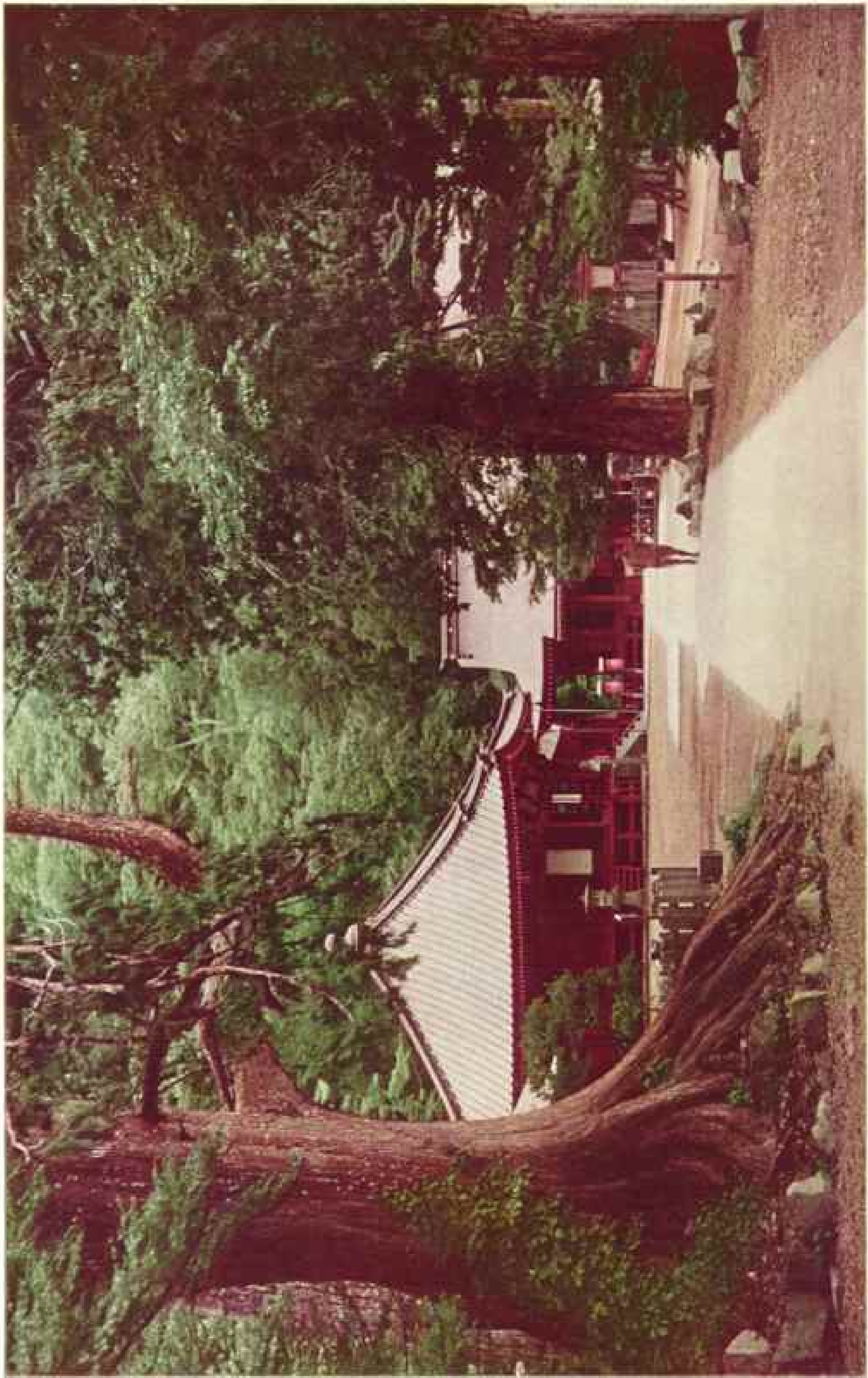


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Finlay Photograph by W. Robert Moore

IN A SEQUESTERED NOOK AT KAMAKURA THE GREAT BUDDHA MEDITATES

This mammoth statue of Amida is made of inch-thick plates of bronze cast nearly 700 years ago. When completed the image was housed, but a storm damaged the building in 1369 and a tidal wave swept it away a century later. Since then the figure, called Daibutsu, has stood uncovered. Visitors ascend a staircase inside to the shoulders. The silver boss on the forehead is more than a foot in diameter.

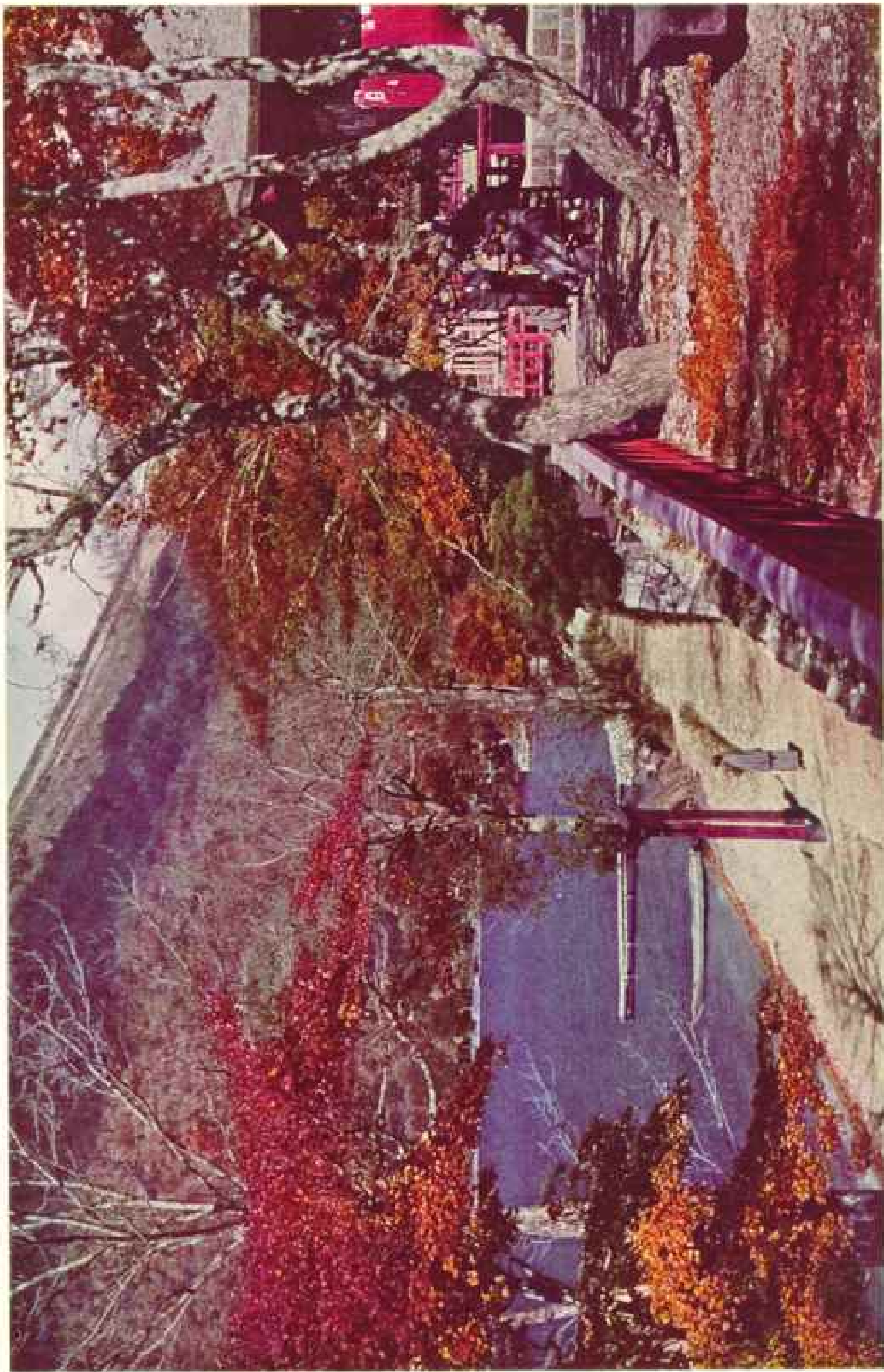


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HOARY CRYPTOMERIA AND BOLD HILLS PROVIDE A SYLVAN SETTING FOR THIS TEMPLE ON THE SHORES OF LAKE CHUZENJI.

Formerly Tachiki-Kwanron stood on the slopes of Mount Nantai on the northern side of the lake, but after its partial destruction by a flood in 1902, it was moved to this secluded spot on the eastern bank. One of the buildings is a museum, where is preserved a sacred iron ax. According to legend, this implement was used by the carver who, more than a thousand years ago, hewed the 1,000-banded statue enshrined in the sanctuary.

Finlay Photograph by W. Reuben Moore.



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IN OCTOBER THE FOLIAGE AT CHUZENJI VIES WITH THE VIVID BLUES AND REDS OF LAKE AND TEMPLE

Friday Photograph by W. Robert Moore

Chuzenji is the highest and one of the loveliest of the larger mountain lakes in Japan. Thousands of pilgrims annually ascend the wooded slopes of Mount Nantai, rising in the background, that they may gain peace at the Futara Shrine which stands on the summit of the volcano. Although until recently the lake had no fish, the Government has now stocked it with trout.



Autochrome Lumière by Kiyoshi Sakamoto

A "SAKASA" OR INVERTED FUJI APPEARS AT DAYBREAK IN THE BAY AT TAGONDURA. To artists and poets this cove is a favored point for contemplating the splendor of the sacred mountain. On windy days inrolling waves from the Pacific shatter the reflection.



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Finlay Photograph by W. Robert Moore

HERE TRAVELERS ON THE OLD TOKAIDO ROAD STRUGGLED WITH PASSPORTS

Until 65 years ago, the Hakone Barrier, near this monument on Lake Ashinoko, stood across the famous highway that linked Yedo (now Tokyo), seat of the military shogun, with the former capital, Kyoto. Lords and ladies were halted for questioning. Mount Fuji rears its symmetrical cone beyond.

CASTLES, SHRINES, AND PARKS OF JAPANESE PILGRIMAGE



WITH HER FROSTY BRUSH OF AUTUMN NATURE PAINTS THE MAPLES AT MIYAJIMA. Renowned for its Shinto shrine and its spectacular torii rising from the waves, the sacred island of the Inland Sea is a favored pilgrimage center for the Japanese.

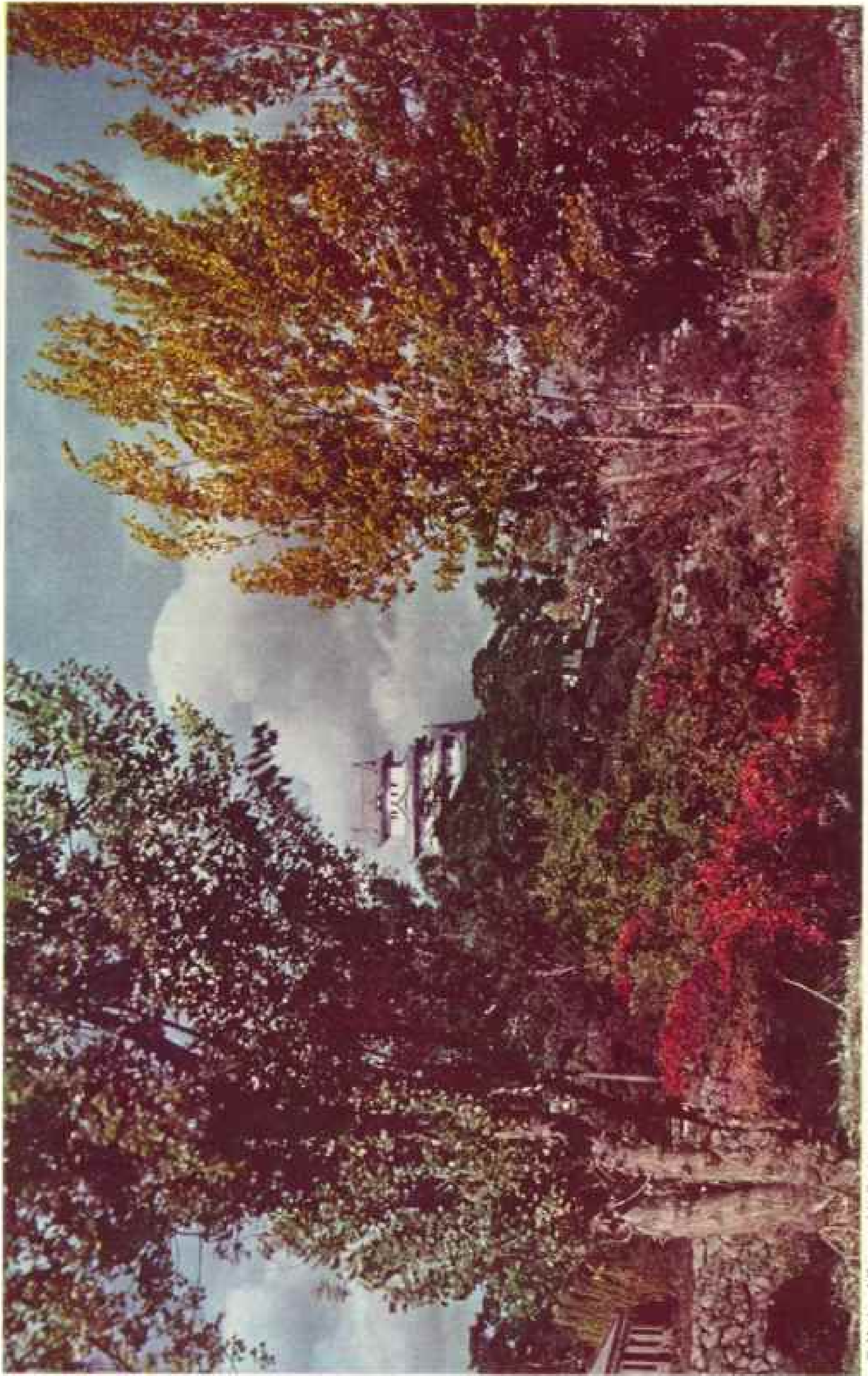


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Friday Photographs by W. Robert Moore

OLD AND YOUNG DELIGHT IN FEEDING PIGEONS IN ASAKUSA TEMPLE COURTYARD

The shrine is situated in the heart of one of the most thickly populated districts of Tokyo. Around it is a large amusement park thronged with cheap theaters, restaurants, and trinket stalls. The temple acquired added sanctity in 1923 when it was not destroyed by the earthquake and fire.



© National Geographic Society

Friday Photograph by W. Robert Moore

FEUDAL BOWMEN NO LONGER GUARD THE KEEP OF "SNOWY HERON CASTLE" AT HIMEJI

Within the shadow of its walls, however, trains a garrison of soldiers of the modern Japanese Army. A portion of the grounds has been converted into a park, and the courts and wooden halls now echo to the tread of visitors—no photography or sketching allowed!

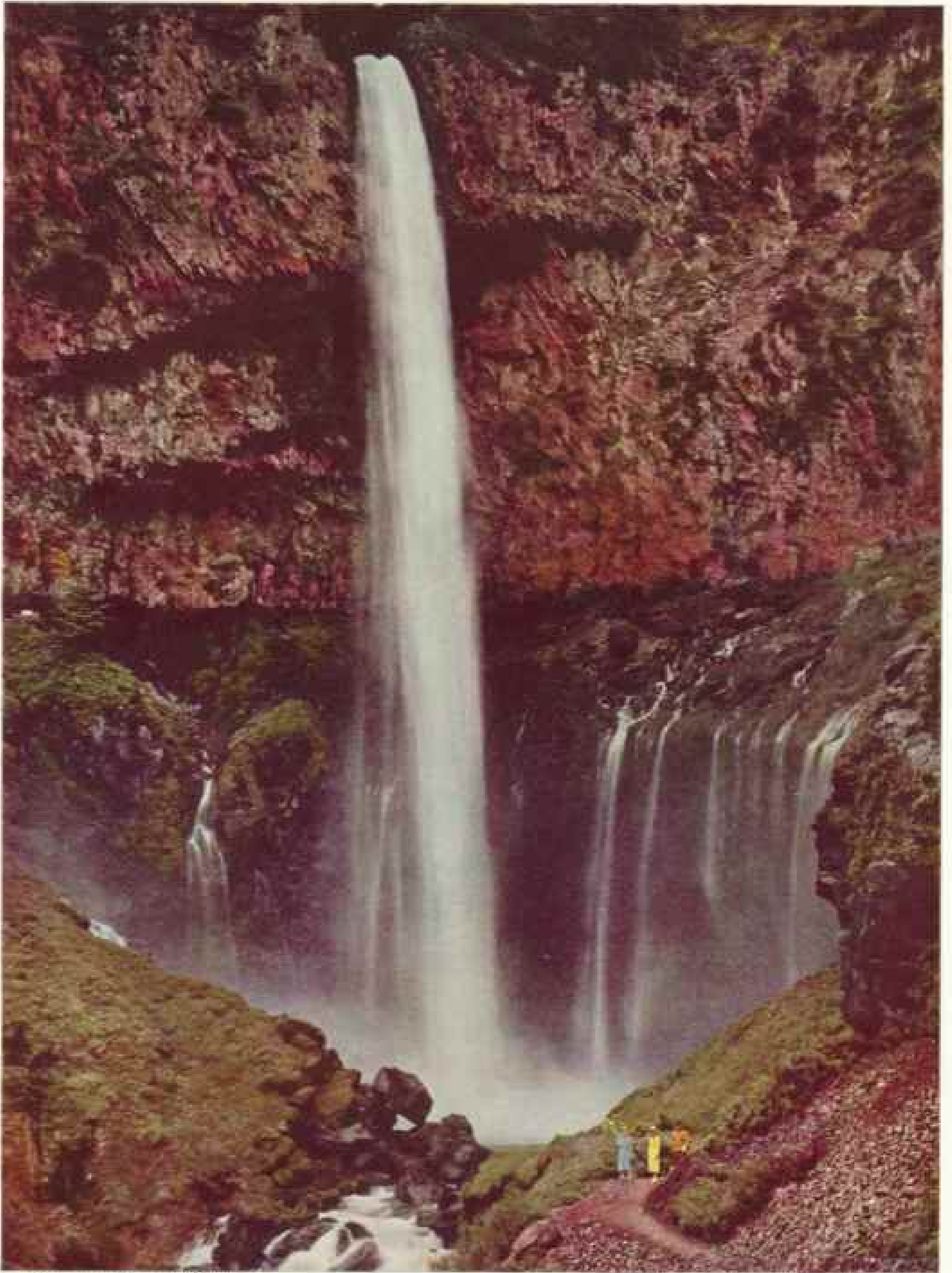


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IN SUMMER THE LOTUS LAND OF UENO PARK, TOKYO, BURSTS INTO BLOOM

The young ladies with their parasols are here to enjoy one of Japan's popular pleasures, a visit to the lotus ponds in early morning to hear the popping noise made by opening buds. Once an estate of a lord, the 240-acre park is now a well-kept playground for the capital.

Finlay Photograph by W. Rolland Moore



© National Geographic Society

Finlay Photograph by W. Robert Monroe

MISTY CASCADES FRAME THE BASIN INTO WHICH HURTTLES KEGON WATERFALL.

The stream issues from mountain-girt Lake Chuzenji only a short distance above the brink of the falls, where the water plunges in a spectacular 330-foot drop over a cliff of old lava. When the lake is low, the falls dwindle to a tiny ribboned spray; in winter they often become a fairyland of icicles. An elevator in a rock shaft allows easy access to the footpath in the chasm.

English is Japan's secondary language, used on signs, labels, postage stamps, cigarette packages, and other such things in greater or less degree. English is compulsory in all the middle schools, but the average ex-English student is about as fluent as American high school students are in Latin.

Nevertheless, simple questions brought simple answers. Observing miles of orchards with each apple, pear, or the delicious fruit obtained by crossing these, ripening within a paper sack tied around the stem, I asked why.

"For insects," came the answer.

Sendai, a city of 190,000, appears a village from the station, for, like most Japanese cities, it has no large buildings.

From Sendai the renowned daimyo, Date Masamune, sent Hasekura Rokuemon in 1613 on an ambassadorial voyage to Rome. Sailing in a small boat, he accomplished an exploit that ranks historically in Japan with the voyage of the *Mayflower* to Plymouth, seven years later.

Not far away are the fancifully named, rugged, pine-clad islands of Matsushima. Some are large, others merely grotesque pinnacles. A few are inhabited. On one is a temple familiar to lovers of Japanese prints.

Dozens of sampans lined Matsushima quay. I selected one whose weathered hull and colorfully patched sail bespoke poverty in its aged owner. From sitting in dejection, he came suddenly to life.

By pulling a rope attached to a pulley at the top of the mast, the old fellow hoisted his bamboo-ribbed sail and we were off before a brisk breeze. Ishinomaki Bay is shallow. Fish of many kinds darted through its seaweed, making clear to me why fish is Japan's "meat."

We paused here and there, and explored caves of ancient monks. Once we climbed to an island peak for tea in a summit tea-house. The view of the archipelago reminded me a little of the prospect from Portland, Maine, that inspired Longfellow to write of "the islands that were Hesperides of all my boyish dreams."

Returning by another route, we made slower progress. The breeze died away until finally came dead calm.

The sampan man began manipulating a limber oar-sweep astern, operated much like a fish's tail. I helped him with an oar amidships; he grinned at me with his two remaining teeth. But I was hungry, and,

looking woebegone, hopefully rubbed my stomach.

The old man beached his boat at the nearest island, motioned me to firewood, kicked off his clogs, shed his kimono, and made for the water. I saw him at times rising for air. Soon a fire burned briskly. I anticipated succulent oysters or unwary fish.

A SEAFOOD SURPRISE

With surprise and trepidation I saw him return, grinning proudly and dragging a small octopus. The pleasure I expressed was feigned. But it is unwise to scorn seafood of any kind in Japan. Cooked over the coals, fresh baby octopus is delicious (page 476).

Part way to Aomori I rode in the locomotive. I am sure rules forbade it, but I had found a friendly engineer. The locomotive was a hand-fed coal burner, small, squat, and powerful, with a simplicity reminiscent of American logging engines.

Japan's first railway, miniature, was brought by Perry in '54. It so pleased the ruler, as he rode round and round the palace courtyard behind the puffing locomotive, that railroad building received royal encouragement.

The first tracks were almost unbelievably narrow gauge. So are they now. During the typhoon of 1934 a train was toppled from a bridge near Osaka; its wheels were just too close together to stand.

Trains are frequent, punctual, and cheap. Long journeys may be made for about a quarter of a cent a mile. If Japan were the United States, New York-to-San Francisco fares might be as low as eight or nine dollars, with excursions cheaper still. School children travel for much less. Many, upon graduation, have seen all their Nation's shrines (see Color Plates).

WANTED: AN AMERICAN HUSBAND

Near Aomori we passed tobacco fields. So complete is the Government monopoly that no one may smoke one leaf of his crop. He must sell it all at a set price, and buy it back in packages.

Aomori is the gateway to Hokkaido, the "Alaska of Japan." Heavy shipping across Tsugaru Strait goes first to Hakodate, recovering with philosophic rapidity from its recent holocaust.

Most travelers cross at night. A thousand crowded the waiting room, and I stood



Photograph by John Patric

ONE SMALL MAN IN CLOGS HAULS A COMPLETE VARIETY STORE ON WHEELS

Kitchen and household utensils are pulled from door to door by this Sendai peddler, whose feet are visible at the lower left. Side curtains may be lowered against rain. Brooms swing astern; they are softer than the American kind, for use on matting floors. With the sprinkling cans, shopkeepers water dusty streets before their stores.

until a pleasant-appearing young woman gave me her seat, as they do frequently in Japan. Her English was unusually good, and we talked for a while. She asked, seriously, if a Japanese girl could get a husband in America. She had read how thoughtful, helpful, and gallant are American husbands. She knew their wives must live in earthly paradise.

That night I slept on the boat, stretched on the matting floor, Japanese so close-packed around me that I could not turn. But, as Lafcadio Hearn once quoted: "A Japanese crowd is the cleanest crowd in the world," and one does not mind.

Sapporo, seat of the territorial government and university, is more modern than comparable cities in the south, just as tractor-equipped Hokkaido farms are more up-to-date. One farmer, educated at an American agricultural college, had a pure-bred Holstein herd producing milk for a condensery. He told me he was prospering. I remarked I had seen no cows on Honshu, had noted the high price of milk. The Government, he said, encourages wider use of

dairy products as a health measure, and production is increasing rapidly in Hokkaido.

In Sapporo I met a youth I had talked with in Tokyo. Attaching himself to me as tenaciously as Sindbad's "Old Man of the Sea," he led me to his home. His English was the worst I had met, his stock reply "I see," although nine times in ten he did not "see" at all.

"Twas brillig," I quoted, in whimsical experiment, "and the slithy toves did gyre and gimble in the wabe."

He said, "I see."

His father ran a small drug store by sitting smilingly beside his charcoal fire in living quarters at the rear and directing his women folk. I thought of genial, bronze Daibutsu in Kamakura (Plate I), for during my visit the man scarcely stirred.

"Is your father crippled, or sick?" I asked, in Japanese.

"No. With pleasure he sits."

My young host seemed anxious for my comfort. Showing me a tub of boiled rice, the main course for the evening's dinner,



Photograph by W. Robert Moore

"MAIN STREET" OF A HONSHU VILLAGE TAKES TIME OUT FOR LUNCH

This thoroughfare, typical of a thousand rural towns in Japan, seems deserted during the noon hour. Low, two-story buildings, most of them open-front shops, the families living in back and upstairs; colorful signs; street lamps; and a maze of poles and wires clutter the narrow streets. Here the author counted 57 children at play.

he explained that other food could be obtained. I bought a number of canned delicacies, with breakfast and possibly the next day's lunch in mind. But the family liked them, too. We had a fine meal, with only a little rice left over.

That evening the lad suggested movies, brought with us his three brothers, explained that the best seats, in the balcony, were 1.50 yen, a total of 7.50 yen, enough to buy 25 shaves and haircuts, with shampoos thrown in. An orchestra seat, contrary to my own country's practice, was less costly—half a yen. I bought five.

A RED-LETTER DAY FOR MIYAKO

After a night in a room of sleeping children, my host recommended Jozankei's hot springs, with himself and brothers as companions. Although they averaged eighteen years, none seemed employed.

I consented, although I knew it would be expensive if he guided me. I refused, however, to take his brothers, and suggested instead his 12-year-old sister, Miyako.

"Miyako," I was told flatly, "must work."

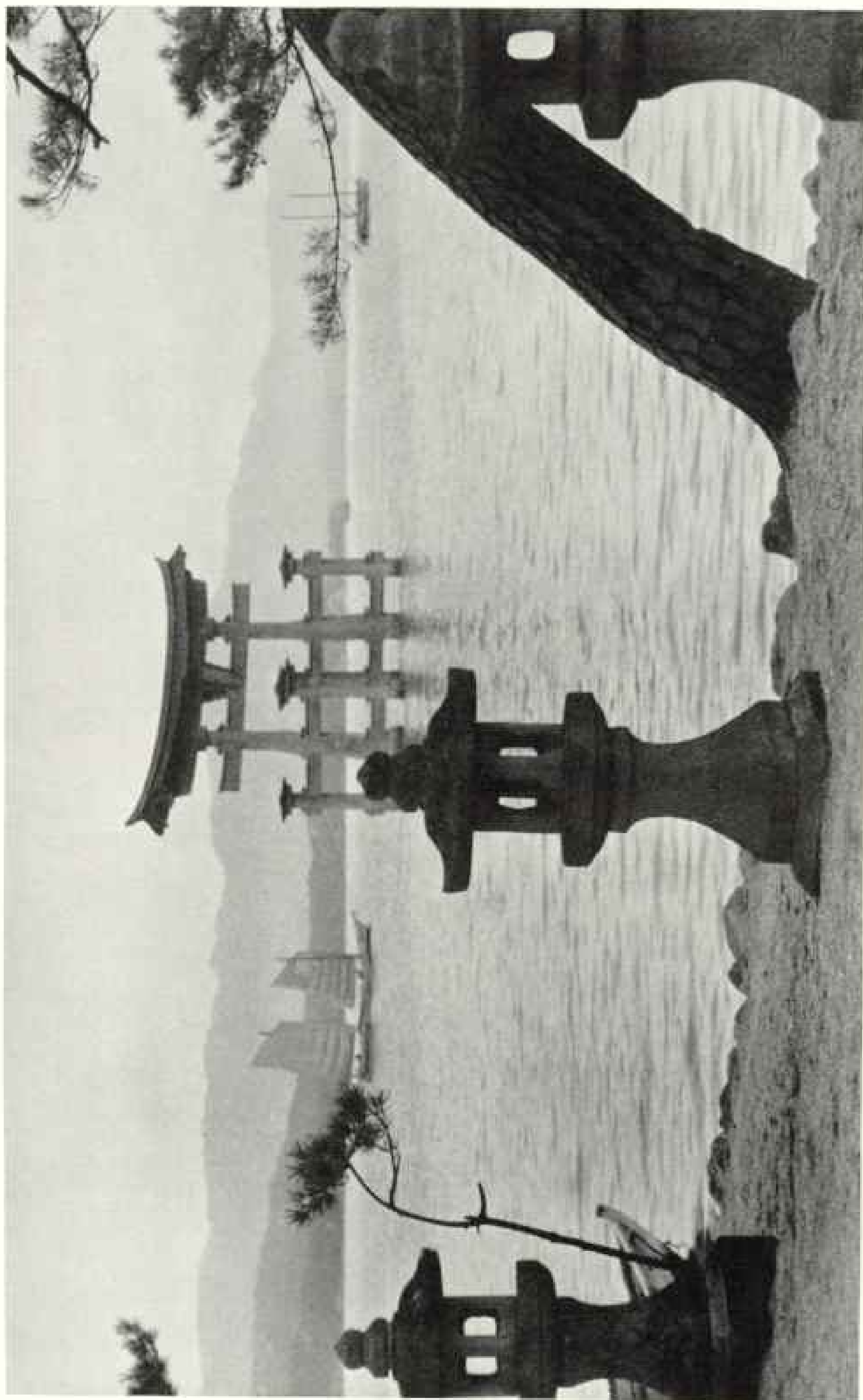
I replied that unless she went, I would not go. The child had seemed kindly, industrious, and helpful. She had even ironed my shirt.

We set off on an hour's journey to Jozankei by electric train, through a beautifully rugged gorge, and arrived at last in a valley of many resort inns and a peculiar, not unpleasant odor.

My young friend led me to a pretentious inn, and ordered an elaborate dinner, apparently the custom. But my chief pleasure was in watching little Miyako, for whom a red-letter day was beginning beautifully.

Given kimonos, we made our way through winding, polished corridors and down steep steps until we reached the river, where a large pool containing a fleet of dugout canoes steamed invitingly. Even summer days in Hokkaido are cool. A sudden down-pour was like a cold shower. Miyako liked to hang inside her canoe and be capsized.

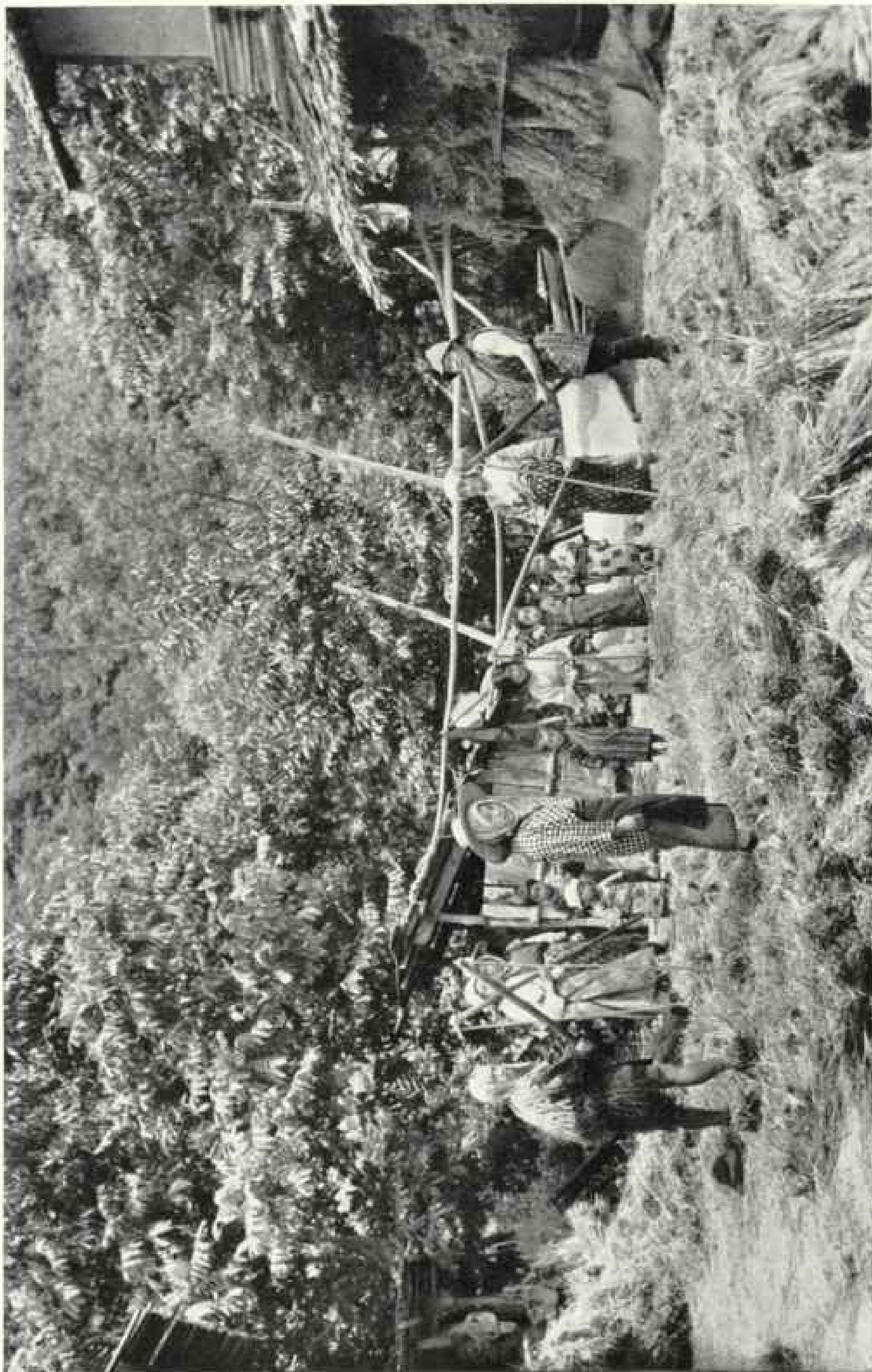
Since Japanese are not "modest" in our sense, no one who has observed factory girls changing clothes on the street is surprised at a spa.



Photograph by W. Robert Mouge

MIYAJIMA'S RED GATEWAY SEEMS TO FLOAT ON THE HALCYON INLAND SEA

As a steeple marks a church in Christian countries, so a torii always means a Shinto shrine is near. Prince Arisugawa Taruhito wrote the tablet for this one, built in 1875. It is 73 feet across the top. Although the photographer stands upon an island heavily fortified with modern armament, crude sampans and stone lanterns suggest the charm of an older Japan (page 479).



Photograph by W. Robert Moore

HAND LABOR, INSTEAD OF A JUGGERNAUT COMBINE, HARVESTS AND THRESHES THIS FARMER'S RICE CROP

Rice is grown in small terraced patches (page 447). Here peasants flail bundles of the ripe grain on an earthen threshing floor. A thatch cloak, reminiscent of Robinson Crusoe, is worn by the man at the left to keep off sun and rain. The author spent many nights in the homes of such simple and hospitable folk.

There are few foreigners in Hokkaido, and I was an object of much amused interest. Before we left the inn, I replied to a score of inevitable bows from the staff with "American Indian" handshakes, explained as "American custom." It was touching and pleasant, a little later, to look from the platform of the railway station across the river and see a dozen *jochu*, the cashier, the manager, and the cooks, standing on the veranda, laughing down at us, each shaking his own hands vigorously.

AMONG THE "HAIRY AINUS"

In Sapporo lives Dr. John Batchelor, an Englishman, who found the "hairy Ainus" a dying race when he came to them 55 years ago as a missionary. This shattered remnant of Japan's once proud and savage Caucasian aborigines had been driven to a remote corner of their native land by the progress of civilization.

Dr. Batchelor interested Japan and the world in these miserable people. Today, like our own Indians, they are protected wards of the Government. Their villages attract travelers from everywhere, as do those of the Pueblo Indians in our own Southwest.

I enjoyed a huge 5 o'clock breakfast with the energetic, early-rising old gentleman and his adopted, England-educated, Ainu daughter. He took considerable time to tell me of the people of whom he is so fond, he says, "because they're like us." He showed me books and dictionaries in Ainu, an unwritten language but for him.

My host went with me to the railway station to help change my ticket. I had been sold passage to a distant, showy Ainu village, although Shiraoi, close by, is a more natural one.

Between Sapporo and Shiraoi I changed trains at a military town. After long questioning by an army policeman I could not understand, I was rescued by the general manager of one of Japan's great steel and shipbuilding concerns, on tour with his wife, going likewise to Shiraoi. His own principal baggage was a granite wash basin tied in a handkerchief.

I went with my Good Samaritan friend. We talked of America, where he had lived as an observing young diplomatic attaché. Small, even for a Japanese, he joked about his size, and he was pleased when I told him Napoleon had been little.

From the standpoint of a well-informed

Japanese, he thought America's proudest possession her universities, her most shameful one the gangsters. He really believed, in his heart, he said, in the divinity of the Emperor. He thought at least fifty years would pass before Japan took the place in the world to which her people's intelligence entitled her. "We are backward in many things. We have much to learn," he said.

Fences of Shiraoi's small straw houses are decorated with bear skulls. Bearded, Santa Claus-like men still love bear meat and keep live bears in high backyard cages (page 473). They no longer beat the animals to death to make the meat more tender. Partly tattooed lips among the women indicate betrothal, and grotesque full lip tattooing a marriage.

SCHOOLBOYS ARE TAUGHT HEROISM

I bade goodbye to my friends at Noboribetsu and continued to a railway junction point at Muroran, a few houses beside the railway station. In one I found food and warmth for which it was hard to pay. My hosts understood why I was there, brought a clock to show my train time, three hours later, and made it clear I was to stay until then.

Neighbors dropped in, including uniformed boys from the middle school at Muroran. One brought his English reader. In it were tales of national heroes of other lands and times, of the Spartan lad who allowed a fox to gnaw at his vitals and would not cry out, of William Tell, of Robert Bruce, and of the Dutch boy who kept his cold hand stuffed into a leaking dike to save his town. Nathan Hale represented America.

A foreword, apparently a quotation from a speech of the Emperor, exhorted youthful readers to follow these brave examples. It works. Military leaders easily find volunteers for human torpedoes and bombs.

The boys sang for me, lilting chants quite unlike the "America Nation songs" they asked me to sing for them. Small children sat quietly in a corner—the room was crowded now—and drew crayon portraits of me. In all of them my dark brown hair was red, a trick of Japanese artists to indicate foreigners.

Six uniformed schoolboys escorted me, like a departing ambassador of good will, to my train. At 5 a. m. I arrived at Lake Onuma, called, because of its islands, "the



Photograph by W. Robert Moore

TOMORROW BRUIN WILL BECOME A MARTYR TO AINU TRADITION

Bearded patriarchs of Shiraoi prepare for their annual bear festival and dance. Tattooed lips and large earrings are striking adornments of the woman before the doorway. Identity of this racial remnant of the islands' original inhabitants is being lost through intermarriage with lower-caste Japanese (page 473).

Matsushima of Hokkaido." On its far side towers the active volcano Komagatake. Although only 3,740 feet high, it rises from near sea level and seems higher. Eruptions have been frequent during recent years, the last having threatened Hakodate, 17 miles away. That city was saved by a favorable wind that blew most of the red-hot ash harmlessly into Uchiura Bay.

PERILOUS FARMS ON, OR IN, VOLCANOES

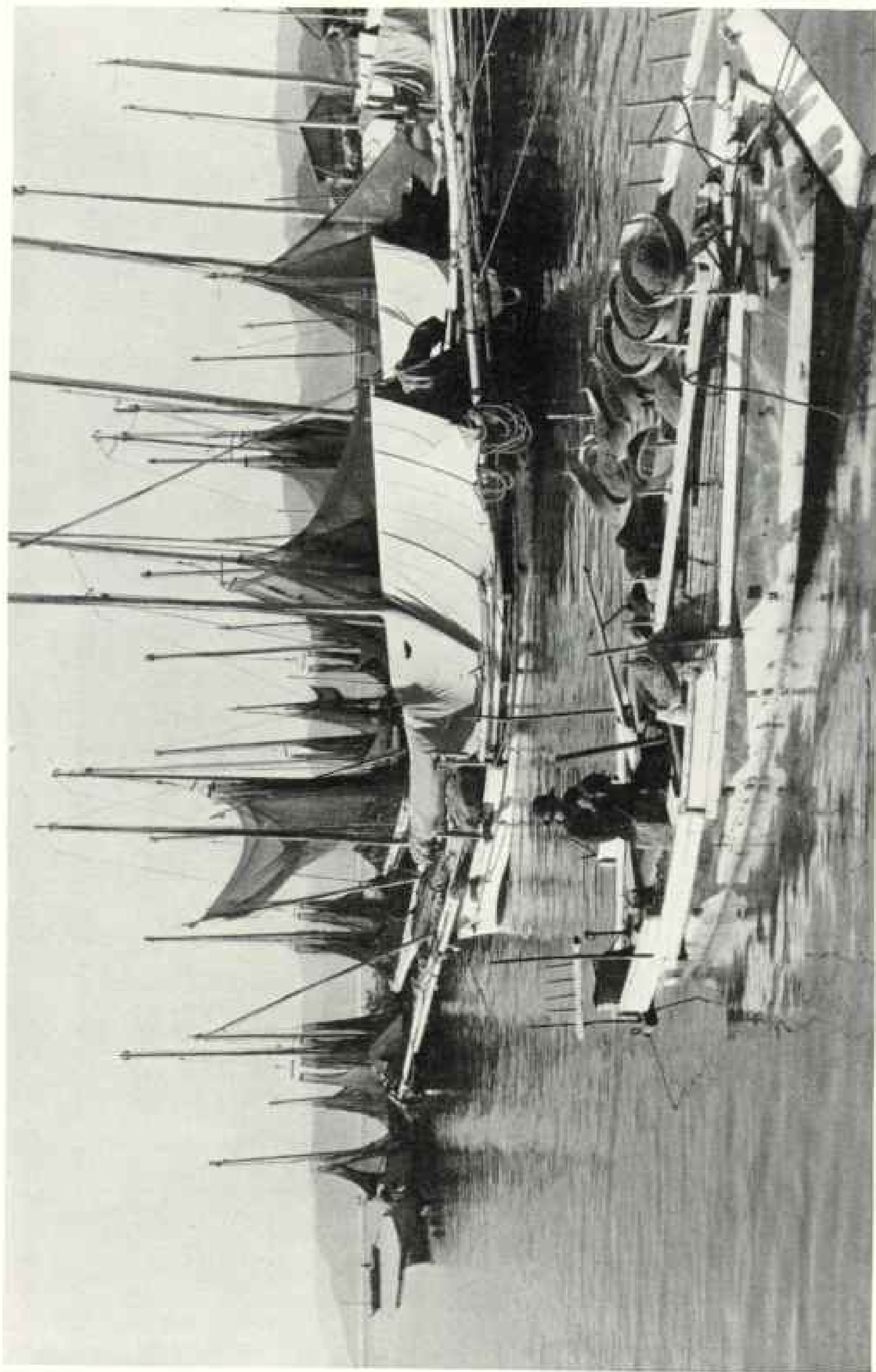
Deep canyons have been newly cut through the ash, in new locations. I climbed one of these with a young clerk who lacked English but did not lack understanding. On the steep canyon walls was mute evidence of past mountain misbehavior: thick layers of ash surmounting buried charcoal, indicating destruction of forests. Once I saw

a charred wagon wheel, then what seemed to be part of a house.

Japan's mountains prevent cultivation of six-sevenths of her fertile volcanic soil. Consequently, land-hungry Japanese farm dangerous lower slopes of many a volcano. Some, in the south, live entirely within the great outer crater of rumbling, smoking Asosan.

Komagatake was once much higher. During a prehistoric cataclysm its top blew off, leaving one side as a pinnacle. The new summit is rough table-land whose weird outcroppings and hot fumaroles would have delighted Doré and Dante.

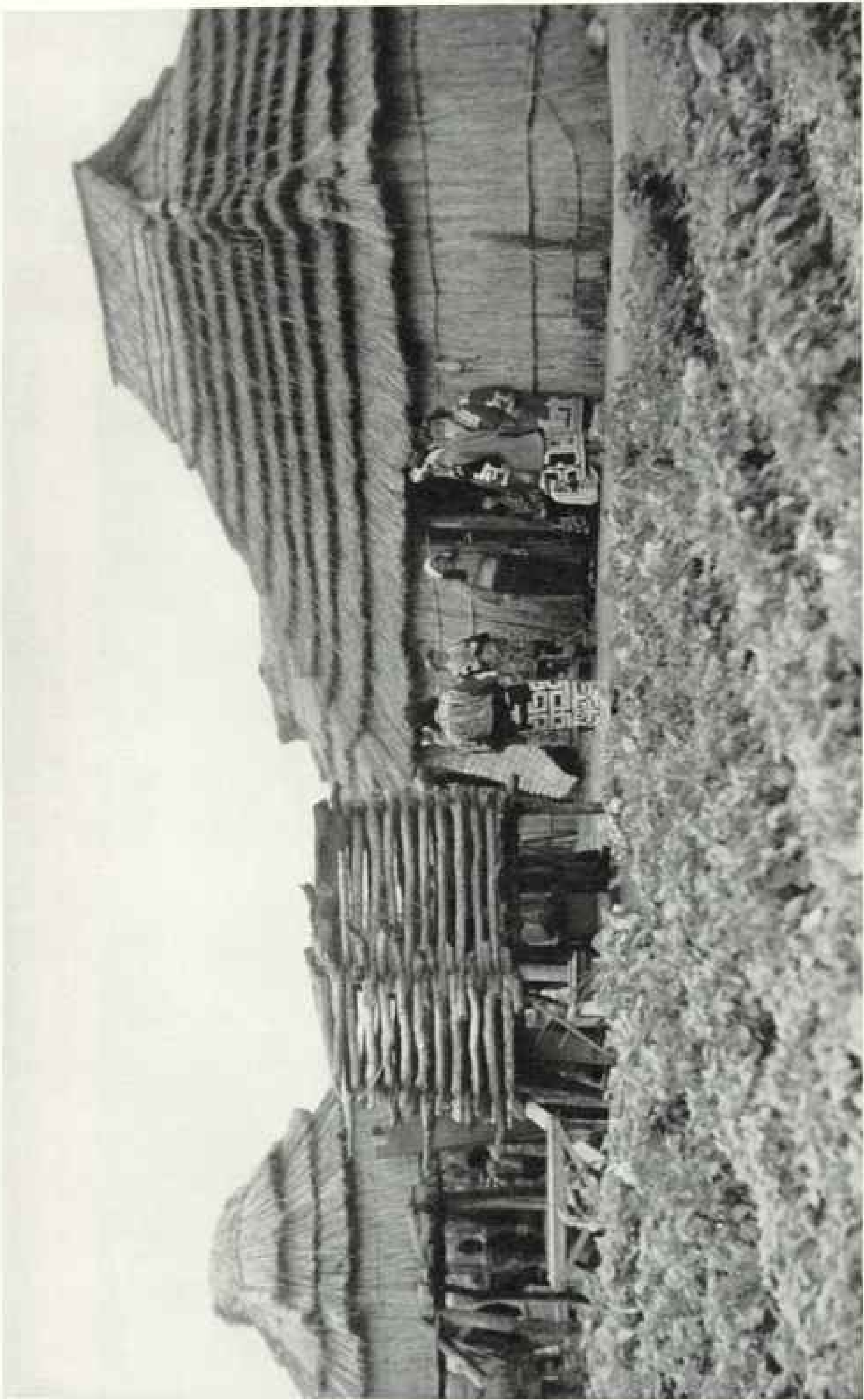
A sudden heavy rain, falling on the warm rock, formed immediately into a thick, sulphurous mist. Visibility lessened until we lost the trail, and passed three hours



Photograph by W. Robert Moore

“THERE IS A TIME TO FISH, AND A TIME TO DRY NETS”

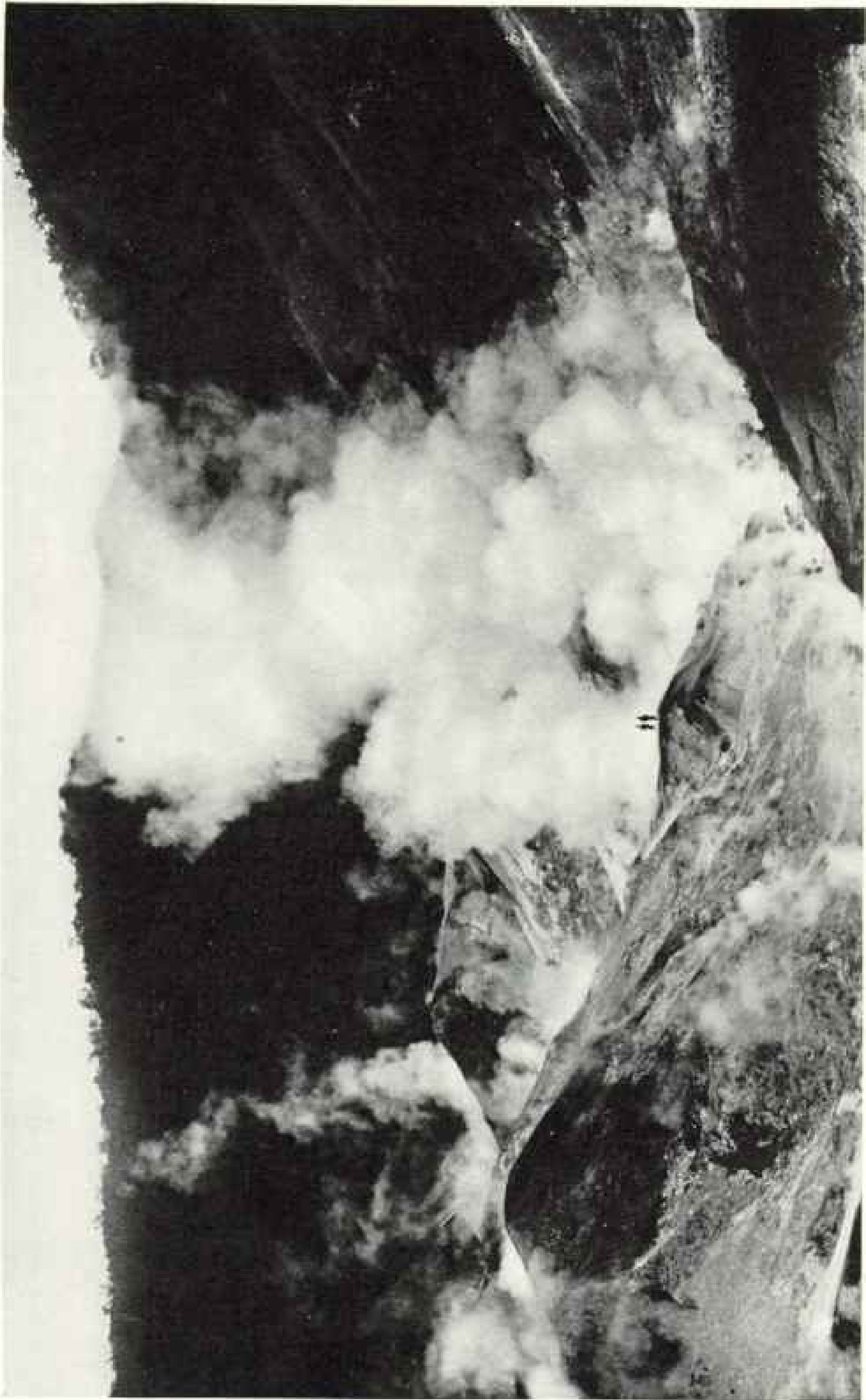
This proverb, attributed to China, is literally observed near Miyajima on the Inland Sea (page 479). Frugal families often live on their boats. The catch here is tremendous and varied, but ocean craft often seek other kinds of fish hundreds of miles offshore. Rough glass balls, used to float nets in Japanese waters, have been picked up on beaches of the American west coast, having drifted some 5,000 miles across the Pacific.



Photograph by W. Robert Moore

THATCH HOUSES, GARDENS, AND BEAR QUARTERS ARE INSEPARABLE IN AINU VILLAGES

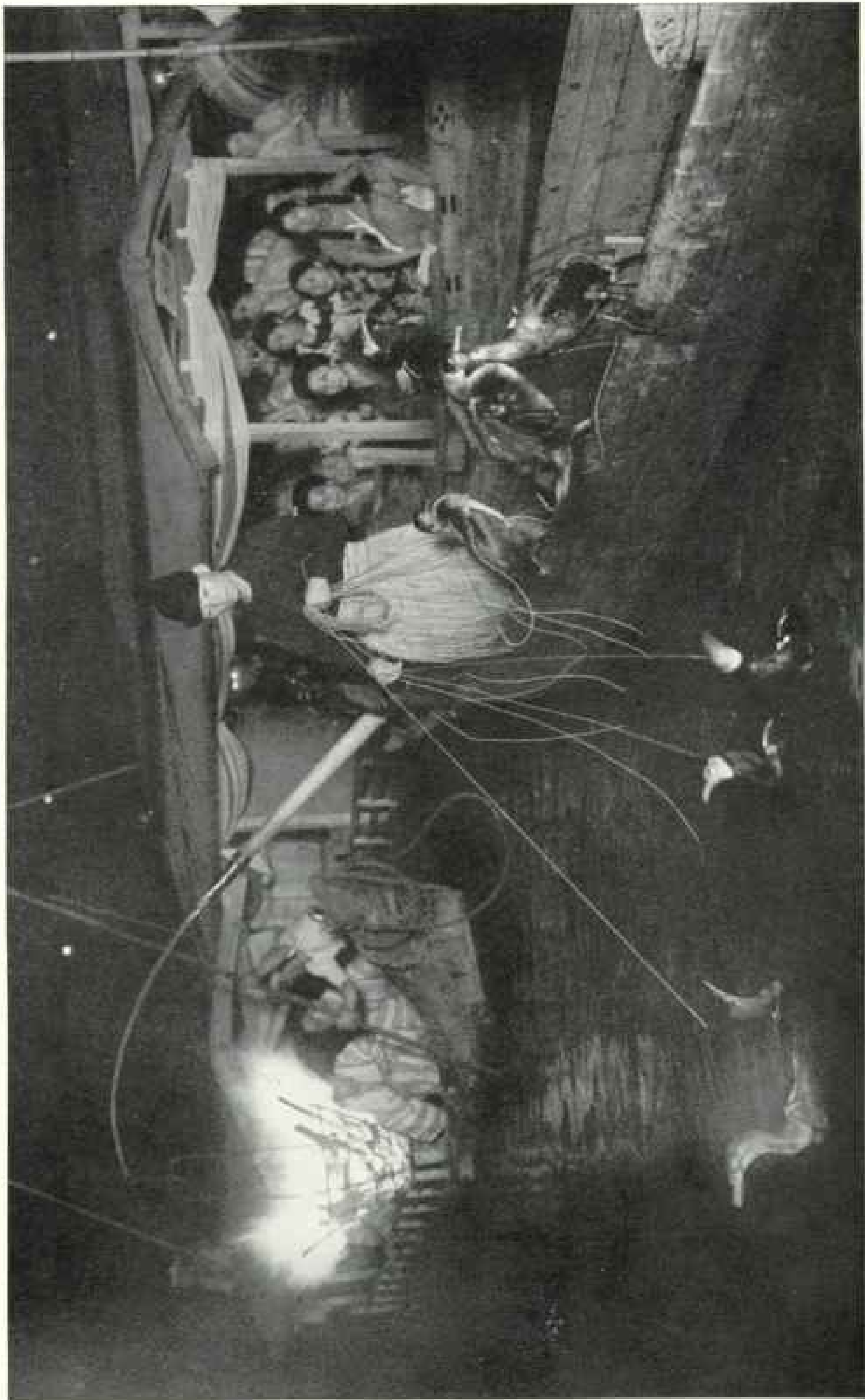
Like the least fearful of the "three little pigs," an Ainu householder builds of straw over a frame of poles. The "big bad wolf" is fire; in a stiff wind the whole town may burn in a trice. A bear in this raised cage of poles is being fattened for ceremonial food (pages 470 and 471).



Photograph by W. Robert Moore

THE "VALLEY OF HELL," ONCE AN ANGRY VOLCANO, IS NOW A CRATER OF FUMARoles, BUT IT AWES TWO LILLIPUTIAN OBSERVERS

This scene at Noboribetsu on Hokkaido is one of many in a land where subterranean fires smolder near the earth's surface. Water from natural hot springs is piped down to the village and used, as in one part of Boise, Idaho, for heating and for baths.



Photograph by W. Robert Moore

BLAZING PITCH PINE ATTRACTS THE FISH; CORMORANTS DO THE REST

Medievally garbed, the master manipulates his birds by thin fiber reins. When one has made a catch, he hauls it aboard the canoe to discharge the fish. A ring or collar around the cormorant's neck keeps it from swallowing the prey. Note the faint line at the left, indicating a diver. Among the spectators in the boats are geisha girls who entertain the passengers before operations begin (pages 476-7 and page 480).



Photograph from E. Gertrude Beasley

THROUGH THE GLASS-BOTTOMED PAIL HE SPIED HIS PREY

Color changes continue to surge along the slimy tentacles of the writhing pop-eyed creature for a while after it is removed from the water. The octopus' flesh is firm and "chewy" like that of a western razor clam. The author found broiled octopus delicious in taste (page 465).



Photograph by W. Robert Moore

CHANGING STYLES DO NOT TROUBLE THE HEAD FISHERMAN

The master of this avian fishing establishment poses with the dean of his diving corps. The petted and pampered cormorant is the last to enter the water, but the first to be removed and fed. The bird wrangles comically with its cloven fellows, to retain its rank.



Photograph by W. Robert Moore

CAGED FISHING CORMORANTS NEED FREQUENT EXERCISE

The ungainly looking birds, whose foster mothers are often barnyard sitting hens, must be freed from their baskets for a morning swim and a chance to flap their little-used wings in the sunshine. Particularly is this necessary when moonlight nights or high water prevents work. In the background a sight-saving boat is poled into position by a Japanese counterpart of a Venetian gondolier.



Photograph by Cabot Caville

HE DOES NOT WHIRL A GRINDSTONE, BUT CUTS SOYBEAN CAKE FOR FERTILIZER

Comparable to sugar cane fiber made into wallboard, this residue, from which eatable products have been extracted, is valuable plant food. It looks like cork, but is rather the texture of dry old cheese. By pressing the lever, the dealer forces the disk down against a sharp knife in the base of the stand, slicing off bits of the cake each time. Absolutely nothing that may enrich the overworked soil is wasted in Japan.

sheltered by an overhanging rock, conveying occasional ideas to one another without a common tongue.

My friend had in his pack a tin canister of tea and—of all things—some doughnuts. The tea we warmed at the mouth of a hissing fumarole near by.

After the rain we descended into the crater, found the currently active vent to be a deep and narrow fissure. From it roared vapor too hot to see until it had been ejected for some distance.

Remembering Fuji's strawberries, I looked for similar fruit here, and found instead a berry much like a raspberry, the vanguard of a new vegetation creeping up gray, desolated Komagatake. In the canyons stood the farthest outposts, six feet from the tops of the walls, where seeds buried deeply and safely in damp leaf mold had become bushes peering over the ramparts.

From Aomori to Akita, on the Sea of Japan, farm and village homes change. While city houses are roofed with fireproof

tile, those in the country are usually thatched. The problem of the thatch-roof ridge is solved here by what seem to be boxes of earth across it. In these often grow graceful tiger lilies.

In the interior and on lee coasts, roofs are frequently the melon patches of little farms. Along the Sea of Japan, houses seem more strongly built. Thatch gives way to flat roofs of tile, weighted with rocks against unchecked winds.

Faithfully Japanese railroads follow the sea. Except in the northeast corner, Honshu is completely ringed by steel rails, save where short cuts cross peninsula necks.

"YEAH" MEANS "NO"

In Venicelike Niigata, where families live on canal boats, bicycles haul trailers, and a man and a dog are often cart-pulling companions, I asked my innkeeper in Japanese: "Are there any foreigners in Niigata?" But he waved his hand, palm sidewise, across his face, replied "*ie*," which sounds a bit like "yeah" but means "no."

A military exhibit, housed within its own pretentious building, is all I shall describe of a fascinating Niigata fair. There was a bewildering array of modern armament, mostly of mobile type. A model of a city was defended against night air attack, and a tiny war fleet fought and won upon a painted ocean.

In several waxen tableaux, clean-cut soldiers fought overwhelming odds of leering enemies, one usually skulking in the background, an upraised knife aimed at the back of a brave, hard-pressed Japanese.

On a side wall a huge map of the world carried figures of soldiers, sailors, and ships, drawn to a scale indicative of relative armaments.

At the exit a glass case sheltered a cabinet photo of a uniformed boy. Beside it were the clothes of the subject of the photograph, now dirty, torn, and bloodstained. Before the case a pyre of incense burned, growing higher as simple, kindly country folk, almost without exception, sadly took incense from one bowl and dropped coins into another.

EVERYWHERE A FRIENDLY WELCOME

Down the coast I went, pausing at Naoetsu, Toyama, Kanazawa, Fukui, and villages between, sometimes walking a few miles between stations, buying meals at fishermen's houses, staying the night at inns, seeing never a foreigner, and finding kindness and consideration always.

From Maizuru a local train took me to Amanohashidate. This "Heavenly Bridge of Japan," tradition says, enabled the first Son of Heaven to descend to earth. A narrow, pine-clad peninsula extends into a tributary of the Sea of Japan. To an observer on a promontory, bending forward until he can look between his knees, the "bridge" actually does appear to be reaching skyward.

An elderly man who had studied English forty years before had bought fruit and a cigar on the train for me. At first he was interesting, for his teacher had been Lafcadio Hearn. But then he bought two large bottles of *sake*. I declined them; he drank them both himself, and soon became hilariously friendly and unbearably affectionate.

As tactfully as possible in a foreign tongue, I told him so. When at last he understood, he slunk away like a punished dog, and I felt cruel. Later he looked at me reproachfully, but did not come near.

A walk down the peninsula was interrupted by a sudden downpour, whereupon I followed the example of two Japanese, stowed my clothes in a stone lantern, and swam until the rain was over.

An island in the Inland Sea, across Honshu, is Miyajima (Color Plate V and page 468), whose famed red torii, built in the sea, appears at high tide to be floating on the water. Like Nara, Miyajima has its tame deer. Here they roam the streets, making gardening or fruit-stand management a difficult task. They subsist on tidbits supplied by tourists, who are none too gently butted if they venture out without deer food.

One of Miyajima's attractions, and a great revenue producer, is a "sacred white horse" in a stable behind a stone altar. Offerings of grain, purchased expensively from a stand near by, will cause the fat, sad-looking animal to turn completely around before he eats it. Horses' tongues have worn a deep hollow in the stone.

I followed a creek into the hills, in danger of arrest perhaps, since Miyajima is a heavily fortified island. But this was virgin country, otherwise. Multi-colored land crabs scurried about, and birds fished in shallows where I saw no living thing. But close inspection revealed fish so nearly transparent that they were almost invisible.

Shimonoseki, separated by the narrowest of ship channels from Moji, its sister city on Kyushu, lies at the main island's southwestern tip. This point of entry, because of heavy protective armaments, may be called a Gibraltar of the Inland Sea. Shimonoseki is overnight from Fusan, southern seaport of Chosen (Korea). Both are booming on account of heavy commerce with Manchutikuo.

AMERICAN PRODUCTS IMITATED

Here I stocked with provisions, learning they were more expensive to the north. Canned mussels and octopus I found especially cheap. Often I saw cans and packages whose shape, color, and familiar American labels made me think of home. But always, though almost identical with an American product in appearance, it turned out to be an imitation.

From Kobe, I went to Nagoya's castle on a bright morning, when the gold dolphins on the roof, one of which had even spent some time at the bottom of the sea, glistened in the sun.



Photograph by W. Robert Minne

WORSHIPERS' SONS PARADE WITH A REPLICA OF A NEIGHBORHOOD TEMPLE

To Ichinoseki, as to all Japan, comes annually the *Hana matsuri*, or flower festival. On the boys' jackets ideographs identify the model and name the street upon which the original stands. A tiny *torii* frames the entrance of the shrine. The hooded Shinto priest stands at the left.

Japan's feudal system seems to have been little different from that of Europe in the Middle Ages, and the castle, although of Japanese architecture, possessed most characteristics of those of other lands—a deep moat and a steep wall, a drawbridge, barracks, great kitchens, and a donjon keep. It would have been impregnable to ancient enemies.

That evening at Gifu I watched cormorant fishing. Here again Japan preserves an ancient custom abandoned by the Western world (pages 475-7). The master of the cormorants was once an officer of the royal English household.

Boatmen, clad as they were hundreds of years ago, direct a score of birds whose underwater activity is almost incredible. Their way is illumined by fire baskets hung from hooklike prows of flatboats. By bands around their throats, the birds are prevented from swallowing their catch. They readily disgorge for their keepers, and seem more like domestic animals than the "fierce cormorant" Longfellow once described.

The river is clear and shallow. Boats festooned with paper lanterns, carrying geisha girls in formal, old-fashioned dress to entertain the passengers before fishing begins, are poled along the wake of the fishing craft. It is a gala, friendly crowd.

That night I rode toward Yokohama and my ship with a British Indian who sold English machinery in Japan. Our car was filled with young and homesick girls, in charge of a crisp Japanese business man.

The Indian, a kindly, generous fellow, bought dainties for his neighbors. Although the girls, still in their teens and shy in the presence of strangers, talked little, he learned they were going to Tokyo. Their services had been bought for several years from impecunious fathers on the silk farms, fathers knowing hard times because of slack demand for silk in a depressed, somewhat rayon-clad world outside.

None, probably, had been away from home before, and most of them, whatever lay ahead, were this night filled with sad nostalgia for their peaceful, friendly villages and laughing little brothers.

MYSTERIOUS MICRONESIA

Yap, Map, and Other Islands Under Japanese Mandate are Museums of Primitive Man

BY WILLARD PRICE

With Illustrations from Photographs by the Author

OUR savage visitor sat on his heels and stared at us.

"I don't want to go home," he said to our native host. "I want to stay and look at them. I never saw the like!"

"Tell him to stay," I said. "We never saw the like, either."

The visitor seemed puzzled. Why should we think *him* strange—comb a foot long projecting from his bushy hair; coal-black teeth; vermilion lips dripping with betel juice; naked body, liberally tattooed; scarlet loincloth? He laughed. "Why, everybody looks like me!"

If the natives of this South Sea isle of Rumung were astonished to see us, we were just as surprised to find ourselves there. It had seemed for a while impossible to get Tokyo's permission to visit the South Sea islands which Japan holds under mandate from the League of Nations.*

ISLANDS RARELY VISITED

Other gems of the Pacific have been placed on tour routes. Tahiti and Samoa are becoming as well known to the diligent traveler as Hawaii. But Japan's Micronesia remains a world apart.

Japanese officials rarely forbid the would-be visitor, but they offer him scant encouragement. He is warned that there are no conveniences for travelers. Hotels are nonexistent. The officials cannot suggest where he might find food and shelter. His brash ideas that he and his wife might obtain lodging with the natives, or set up a tent under a palm tree, they smile upon with tolerant disfavor. No, if he must go, he is advised to make a through passage, living on the ship and viewing each island only so long as the ship is in port.

Our contention that we could not secure the necessary facts and photographs for the NATIONAL GEOGRAPHIC MAGAZINE by making only a flying visit to each island was

* See "Yap and Other Pacific Islands under Japanese Mandate," by Junius B. Wood, NATIONAL GEOGRAPHIC MAGAZINE, December, 1921.

recognized; and, as a courtesy to THE GEOGRAPHIC, permission was accorded us to sojourn for four months in Micronesia.

True to its name, Micronesia is made up of small islands—yet it covers no small area. A line drawn around the part under Japanese mandate would enclose an expanse of land-dotted ocean about two and a half million square miles in extent, or nearly five-sixths the size of the United States. These widely scattered islands are bounded on the south by the Equator and are spread over most of the vast sea stretch between the Philippines and the 180th meridian. The chief groups are the Marianas, Carolines, and Marshalls. The total number of islands large enough to be of some importance is about 1,400 (see map, page 483).

This vast and beautiful island world belonged to Spain in the days of her glory. But Spain lost interest in her Pacific empire when the United States deprived her of the Philippines. To relieve her financial difficulties following the Spanish-American War, she sold her Micronesian islands to Germany in 1899 for about \$4,500,000.

The first guns of the World War had hardly been fired in Europe when Japanese warships sailed south and occupied Micronesia. At the Peace Conference in 1919 the islands were entrusted to Japan as a mandate from the League of Nations. So it is from Yokohama today, not from Barcelona or Hamburg, that you take off for this South Sea adventure.

LIKE STEPPING OFF EDGE OF WORLD

If it were possible to step off the edge of the world, I believe the sensation would be something like that of embarking for little-known Micronesia. As soon as the ship has pulled away from the dock you are a month from Japan. That is, if you should change your mind about the lure of potluck with the natives, it would take you one month to get back to that wharf—by the first return steamer at the nearest port of call.



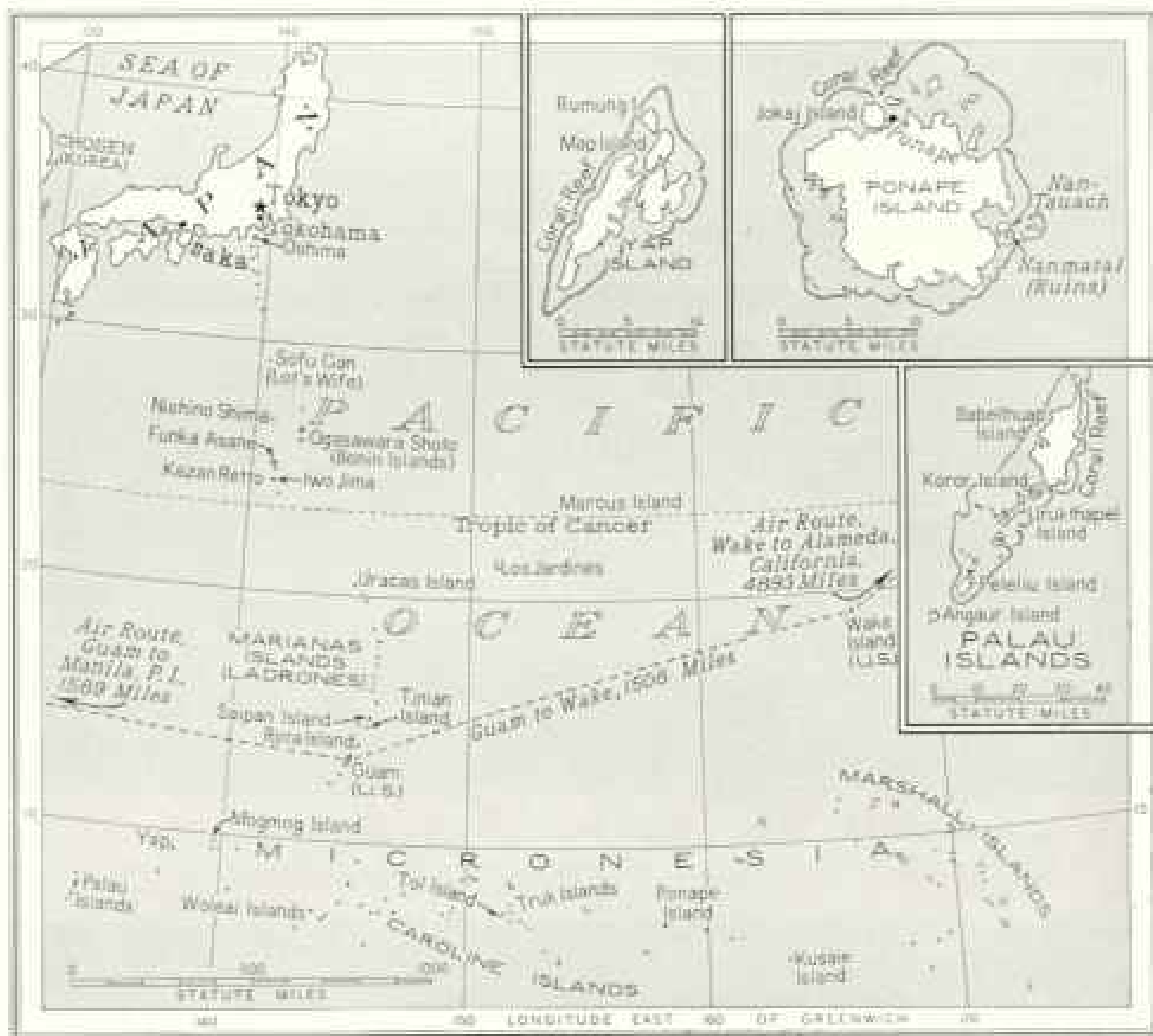
A GROWLING WATCHDOG IS URACAS, THAT GUARDS THE APPROACH TO MICRONESIA

Often a cloud by day and pillar of fire by night hangs over this active volcano, nearest of the Marianas to Japan. It frequently erupts to spew lava down barren slopes or to shower ashes on passing ships (see text, page 490).



A CANOE TEARS HOME WITH A BONE IN HER TEETH!

With sail bellying in the breeze, the outrigger skims across the lagoon at Yap. Such a craft is kept upright and stable by a small boat or log placed at the end of a framework. Some South Sea canoes are among the fastest sailboats known. The long comb, worn by a chief, slants at a rakish angle from the silhouetted head of the skipper (see text, page 499, and illustration, page 496).



Drawn by Arthur J. Hase

LIKE A HUGE FLEET SCATTERED OVER THE WESTERN PACIFIC APPEAR THE 1,400 VOLCANIC AND CORAL-BUILT ISLANDS OF JAPANESE MICRONESIA

In the midst of the mandate lies the isolated American island of Guam, long an important cable center and United States Naval Station. Recently this tiny dot on the map and Wake have been in the public eye because of their importance as bases on the trans-Pacific air mail route. Japanese population of the mandated islands has increased rapidly during the last decade, but the native figure is standing still or decreasing (see text, pages 505-8).

We sailed southward through one of the most dangerous steamship routes in the world—dangerous because of coral reefs and the sudden squalls and typhoons that are likely to drive the ship on the reefs. We steamed past the suicide island, Oshima, in whose volcano many hundreds of the disillusioned have sought sulphurous oblivion, past Lot's Wife (Sofu Gan), and on through the "blue-eyed Bonins" (Ogasawara Shoto), where may be found Japanese-speaking descendants of British and American sailors who settled here with their South Sea wives.

Our course lay over a sea where volcanic islands come and go. On the captain's chart we saw the legend, "An island (Lind-

say) reported hereabouts unsuccessfully searched for by U.S.S. *Alert* 1881." Names on old charts suggest the ominous forces at work beneath: "Disappointment Island," "Submarine Volcano," "Sulphur Island," "Volcano Islands." *

RED FLANNEL BENEATH A WHITE CUFF

Two days out, although there still was a December chill in the air, the ship's officers all appeared in white. It is a rule of the company: white two days out. But

* These islands now are known, respectively, as Nishino Shima, Funka Asane, Iwo Jima, and Kazan Retto. The last mentioned is a group of volcanic islands to which belong Sulphur and Submarine Volcano Island.



A NEW CONCRETE SCHOOLHOUSE OPENS IN A PALAU JUNGLE VILLAGE
Students are busy carrying desks and benches from the old one in a native bathhouse.



A CHAMORRO ACCEPTS SHELL MONEY FROM A GRASS-SKIRTED WOMAN FOR PETROLEUM

The string, worth about 20 cents, is used for small purchases. Behind the woman is a large disk of Yap money. A few of the older Chamorros recall the days when Spain ruled the isles. Half Spanish in blood and language, they are proud of their guitars, mantillas, and early masses (see text, page 504).

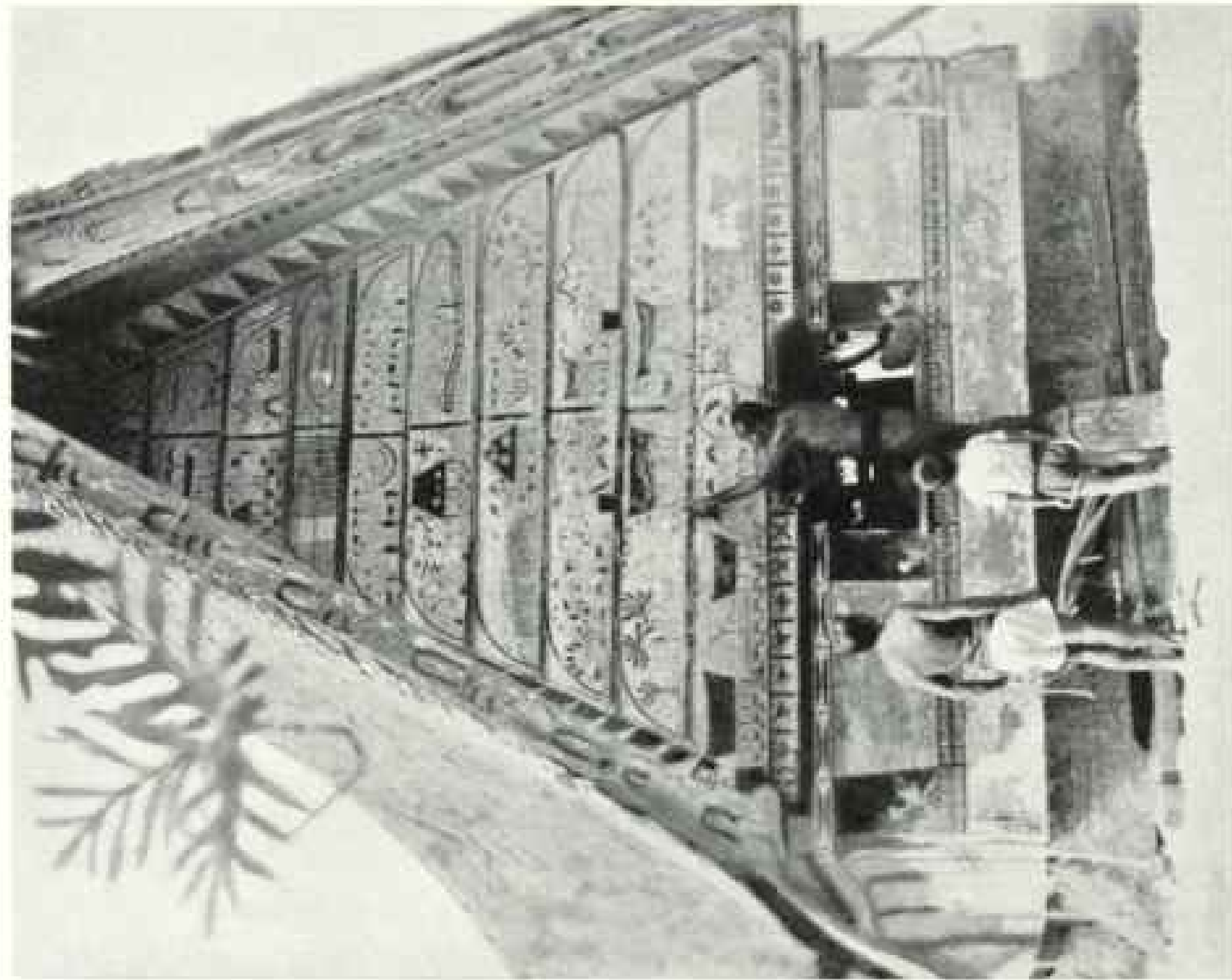


"BLESSSED ARE THE POOR IN SPIRIT" SHE WRITES NEATLY IN PONAPE. While most of the people on the island are Christians, some still adhere to ancient beliefs.



TOL GOES SHOPPING WITH A YAP "COIN" ON HIS SHOULDER!

Money seldom changes hands, for most native needs are supplied by gardens. Aboard ship, this genial host wore clothes, but as soon as he boarded his dugout he changed to a crimson loincloth, a red-coral necklace, and a long mangrove-wood comb in his mop of hair (see text, page 494).



GABLES OF THE COUNCIL HOUSE BECOME AN ARTIST'S CANVAS

In these colorful illustrations at Peleliu are told the ancient legends of the island.
A chief explains to the young man and boy the meaning of the pictures.



A YOUTH UNLOCKS A BOOK FOR HIS ILLITERATE FATHER

This man will assume the rule of the island of Kotor as soon as the aged king dies. The rising generation is learning the three R's in modern schools.



NO TROUSER GUARDS ARE NECESSARY!

Elders reprimand Yap youngsters who wear clothes. To do so is considered indecent, boastful aping of foreign ways, and an offense to the tribal gods (see page 491).



THE LAGOON IS THE BATHTUB FOR YAP MAIDS

This girl has just completed her plunge and again donned her grass skirt. Although the skirts appear light and airy, some of them weigh 30 pounds. Scorpions and centipedes find them favorite haunts.



YOUNG MEN OF TOL CELEBRATE THE OPENING OF AN ATHLETIC FIELD

From the poles is suspended a huge bowl containing breadfruit, wrapped in taro leaves, to be served at the feast. The Japanese have introduced their love of athletics into these South Sea islands.



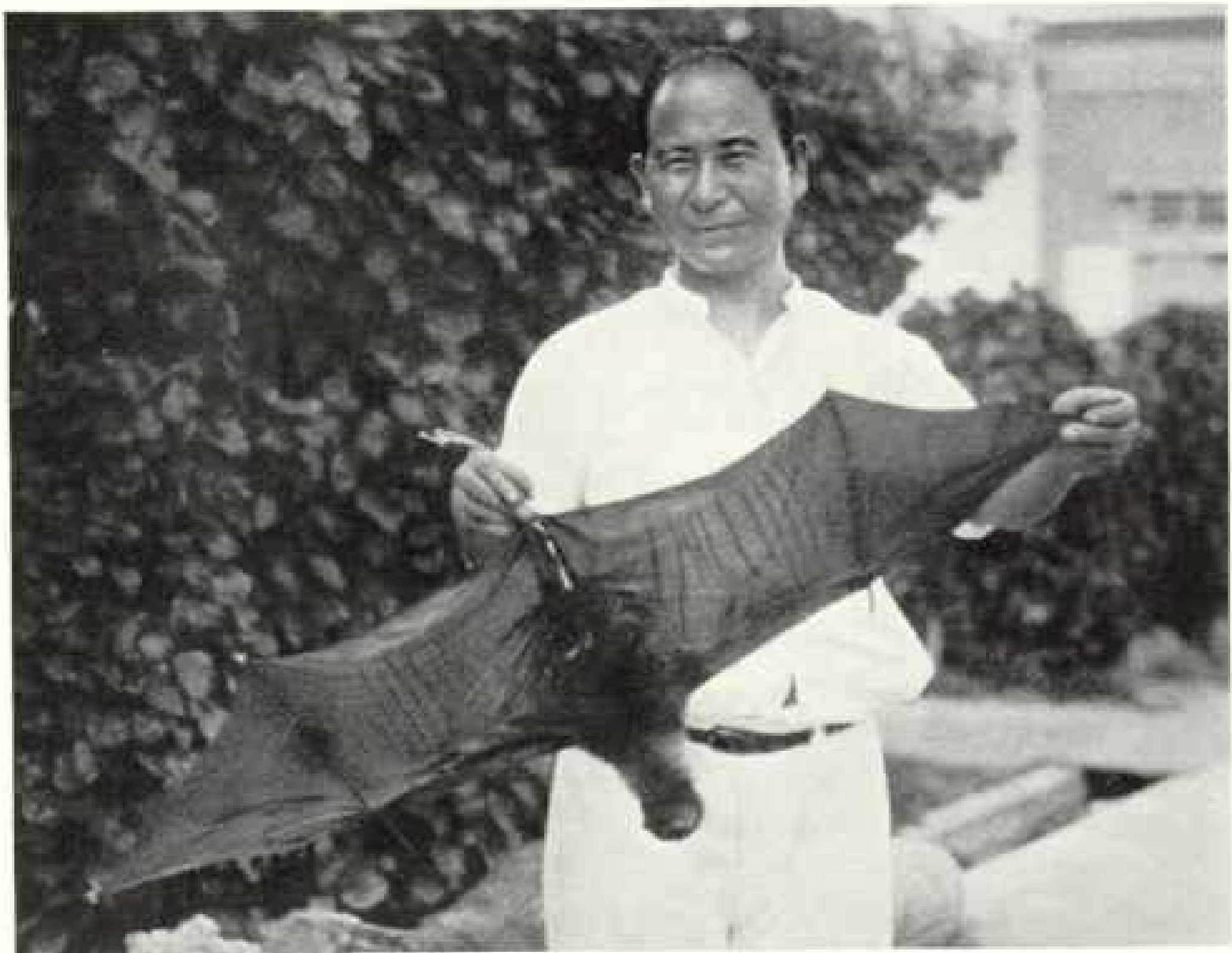
ON SEVERAL SUCH SIMPLE STOVES A FAMILY'S MEAL IS PREPARED IN PALAU

Each member, except mother and daughter, has his food cooked in a separate fireplace (see text, page 505). The bamboo floor is broken by an earthen space upon which the cooking is done. Chimneys are unnecessary, since smoke quickly disappears through the bamboo-slatted walls.



KANAKAS AT PALAU SING A DEATH CHANT TO THEIR DEAD CHIEF

Afterward they will carry his body to the cemetery. Formerly he would have been buried beneath these flagstones in front of his house, but the Japanese have now ruled against the practice.



IMAGINE SUCH A BAT IN YOUR HAIR!

Fruit bats in Micronesia attain a span of three feet or more. Although many stories are told of their blood-sucking habits, the bats here seem to be vegetarian and have a special fondness for young coconuts (p. 496). Huge robber crabs, that climb trees, and rats also feast in the groves.



UNTIL THIS KANAKA BELLE SMILED SHE WAS PRETTY

But her teeth are blackened with herbs and stained with constant chewing of betel. The neck cord indicates she is of marriageable age (see text, pages 494, 496, and 501).

heavy red flannel underwear could be seen peeping from under the captain's white cuff!

Then we entered mysterious Micronesia through a portal guarded by a fire-breathing Cerberus. The flaming island-volcano, Uracas, is the counterpart of Stromboli, off northern Sicily. It erupts frequently and violently, its white-hot coat of flowing lava illuminating the night, its reverberations shaking the passing ship, and its ashes strewing the decks.

"We pass it at two in the morning," said the captain. "Do you wish to be awakened?"

"If it erupts," was the cautious answer. It was Uracas' night off. We were not

awakened. But on the return voyage we were to see and photograph it by daylight—a truly imposing cinder-black cone 1,047 feet high, with perfect toboggan-slopes kept smooth and straight by the frequent flows of lava and ashes. It is crowned with white sulphur, deceptively like snow. Dense clouds of yellowish smoke belch from its crater. Forever it grumbles under its sulphurous breath. Of course not a sprig of green has the temerity to grow on this savage island (see page 482).

A REMOTE PATCH OF AMERICAN SOIL

We sailed by the necklace string of the Marianas, then passed a bit of American soil, Guam, oddly out-of-place in this oriental archipelago. Guam's guns have long since been dismantled, in obedience to the Washington Treaty. The island, slumbering far out in the Pacific and visited only once in 90 days by regular steamer, is stirring now

with the establishment there of one of the stops on the trans-Pacific air route.

Then one morning we looked out to see a painted ship upon a painted ocean. It seemed to be earnestly bound for somewhere, but it did not move. For the *Shizuka Maru* was grounded high on the coral reef that skirts the lovely, palm-fringed shore of Rumung, northernmost island of the Yap group. Canoes swarmed about the abandoned ship, for the natives, as we found when we got to shore, were embellishing their thatched houses with stateroom doors, portholes, bunks, deck floors, ship's rails, and even wash cabinets, the latter, however, being installed for ornament rather than for use.

After nine days as the only foreign passengers on the *Yokohama Maru*, we were graduated from the mysteries of Japanese food to the even greater mysteries of native domestic economy on the islands of Yap.

"THE CENTER OF THE WORLD"

He who wishes to see the South Sea islands of a hundred years ago, before the tide of modernity washed a litter of tin cans up onto their beaches, should visit Yap. Here time has stood still. Perhaps it has even gone backward a little. Some of the old arts are lost and the population has dwindled to half its former size. Today some of the natives know even less of the outside world than in the days when their warrior-sailors ranged far and wide through Micronesia.

"Yap" means "The Land." To the Yap native it is the only land, the center of the world.

He rejects with high scorn the tomfooleries of civilization. Exception must be made for some of the young people; one may occasionally see a brown lad (amply clothed in a string of red beads) riding a bicycle or playing tennis. Today there is a school, and it insists that its students must come clothed. The only way it can enforce this requirement is to furnish the clothes. But as soon as the children are out of the schoolroom they whip off their garments, roll them into tight wads, and run home with them under their arms (page 487).

I have seen little girls, even before leaving the classroom, strip off their little Osaka-made cotton print dresses, tuck them



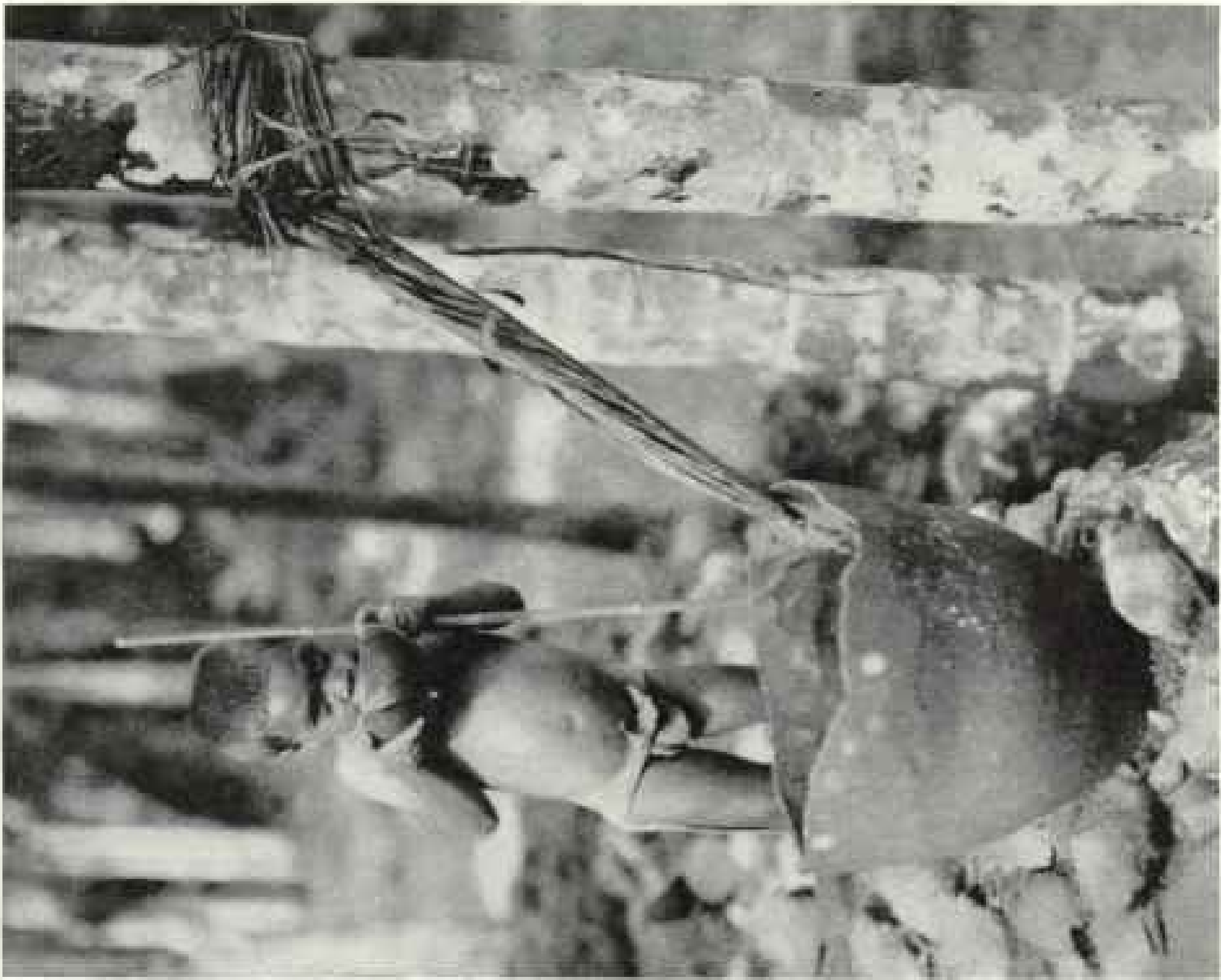
A CAPTIVE DOVE SERVES AS A HUNTER'S DECOY

Wild birds from the jungles, attracted by its cries, are shot by Palau natives who lie in wait for them with deadly blowguns.

into their desks, and fly out like brown streaks into the tropic sunlight. The elders of the villages severely reprimand young people who wear clothes in the village; it is considered indecent, boastful, an aping of European ways and an offense to the tribal gods.

For it is firmly believed that any copying of alien customs will anger the deities of Yap and bring disease or death to the culprit. Perhaps this is in part a heritage from early times when too close association with malady-bringing foreign sailors did mean just that—disease and death. So the Yap native has, as firmly as his overlords will let him, withdrawn from all contact with the outside world.

In a canoe like those of a century ago,



A PALM-LEAF CONDUIT ACTS AS A USEFUL RAIN GUTTER

As water streams down the tree trunk it is diverted to the crude pottery jar, where it is collected for drinking purposes. Most of the modern iron-roofed houses have cement storage tanks to conserve the rain water, for the sea-surrounded islands have no wells.



MAKING A BIRD TRAP OUT OF STICKY GUM

The youngster, held aloft by his dad, is wrapping an adhesive, made by chewing the dried juice or sap of the breadfruit tree, around a stick. Birds, attracted by the bait, papaya fruit, alight on the pole and become entangled. Then Yap children kill them or take them for pets (see text, page 497).



A SEVENTY "PIECE" ORCHESTRA PROVIDES THE CADENCE FOR A NATIVE DANCE IN PONAPE

Girls make a clicking rhythm with drumsticks on the long board which they hold on their laps. Men keep time with their hands. The women wear clothes of foreign pattern, indicating missionary influence. American Board members, German Catholics, and Spanish Jesuits have successively worked in Ponape.



TO THE CLIMBER, "COTTON" TREES PRESENT MANY THORNY PROBLEMS

Pods found on this spiny kapok tree of the Palau Islands contain a soft white material, used extensively as a substitute for cotton in stuffing mattresses, quilts, and pillows. Some varieties have smooth barks.

hewn out of a single log, stabilized by an outrigger, and fitted with a sail made of pandanus leaves, we skimmed over the lagoon toward the island of Rumung. With us was a Kanaka lad we had luckily met on the ship. His home was on Rumung, and, learning of our desperate determination to stop over, he had volunteered to look after us (see pages 482 and 485).

Tol had worn clothes on shipboard. Now they were neatly stowed away in his palm-leaf basket. His bare feet clutched the gunwales as, pole in hand, he poised himself on the stern, towering bronze against the blue sky. A crimson loincloth, a red-coral necklace, some blue tattooing, a hunting knife, and a long comb projecting from his thick mop, comprised his make-up.

BLACK TEETH A MODISH TOUCH

He was a cheerful soul. His smile would have been flashing if his teeth had been white. But, as he was a young man of fashion, his teeth were a gleaming ebony.

This effect had been achieved not merely by the stains of betel-chewing, but by a special blackening process in which a paste of groundsel and other herbs is applied to the teeth every day for five days.

"Too bad," said Tol. "Makes very sick. But it gives good black, yes?" And he displayed his teeth from ear to ear.

He spoke a little English, for he had lived in Guam. He had successfully avoided any other contamination of civilization.

"Your things good for you," he philosophized. "Our things good for us. Mix—no good!"

Truly the Kanaka seems so different a man from the white westerner that he can perhaps justly lay claim to a different mode of life. To describe this reddish-brown race, black-haired, deep-eyed, wide-nosed and large-mouthed, "Kanaka" is an indefinite word, but we have no better one.

According to the dictionary, "Kanaka" means "loosely, any South Sea islander." Therefore the significance of the word dif-



SAIPAN'S JAPANESE-BUILT HOSPITAL IS UP-TO-DATE IN EVERY WAY

Some natives of Micronesia resent and resist civilization, but new schools demand their children, efficient hospitals cure their illnesses, and industries have begun to interrupt their perennial leisure.

fers in different parts of the Pacific. In Micronesia "Kanaka" is a convenient nickname for one who would be more accurately but too burdensomely called "a man of Polynesian-Melanesian-Papuan blood, coming in the main from a Malay race which probably had Dravidian antecedents."

Although the Kanaka is a kaleidoscope of all racial colors—black, brown, red, yellow, and even white—he blends into a brown and has the characteristics of the brown peoples. That is, he is a sea rover, a bold navigator, a fisherman, not given to grubbing in the soil nor to the ways of trade and business. In school, arithmetic is his hardest subject. But he can always tell you where the fish are biting. And Tol was so much at home in a boat that he seemed a part of it.

Yap consists of the main island with the islands of Map and Rumung and a scattering of islets; all are set like gems in a lovely lagoon nineteen miles long and seven and a half wide, girdled by a coral reef. One

must pass Map to get to Rumung. But, since Map is too attractive to be skipped, it seemed a better idea to land and walk the length of the island while a Kanaka boy took the canoe around.

UP GOES THE KANAKA ELEVATOR

No sooner had we stepped ashore than Tol had his eye on some betel nuts. They hung in a cluster, thirty feet up, just under the leaves of a betel, or areca, palm, which has a trunk too large to climb hand over hand and too small to grip with the legs. How was he to reach those nuts? Tol knew. He would use the Kanaka elevator.

Beside the path was a large shrub, the bark of which is the native's substitute for cord. Tol stripped off about five feet of bark and tied it in a loop big enough to fit over his ankles. Thus hobbled, he could tightly grip the trunk of the areca between his insteps. A series of quick jumps and grips and he was up among the nuts. He cut loose a cluster, then slid down almost as fast as it fell.



A WOOD COMB IS THE PRIDE OF EVERY FIKEMAN

This Kanaka is one of the twelve "kings" of Yap. The realm is small, but his title is hereditary and his power over the nobles and people is absolute. Slaves are not allowed to wear these hair ornaments (see text, page 499).

He cut one of the nuts in halves, laid one half on a leaf of *Piper methysticum*, of which there was an abundance at hand, dusted in a little lime from a bamboo tube which is part of the equipment of every Kanaka, folded up the quid, and popped it into his mouth. His jaws began to revolve. Presently a vivid carmine juice stained his lips and a look of perfect contentment overspread his features.

We tried the ingredients, not in combination, fearing the effect might be too much like a bolt from the blue, but seriatim. The nut caused an astringent, persimmonlike pucker. The leaf was as hot and spicy as cinnamon. And the lime lifted the roof of

the mouth clear off and removed it to another country. Our first lesson ended in complete failure. There was never a second.

A BAT GUARDS A COCONUT TREE

The coconuts were more to our liking. Tol sped up a coconut palm, scorning the hobble, for the trunk was large enough to be gripped by arms and legs. My wife, not to be outdone, went up another, and I up a third, but I descended precipitately when an enormous fruit bat, three feet from tip to tip, swooped down from the fronds and circled within a few inches of my head.

At such a moment one does not take time to analyze coolly the stories one has heard about the blood-sucking propensities of some of these evil-looking winged beasts. Although there are many suspicious and superstitions, this Yap bat seems to be vegetarian and has a special fondness for the young coconut (see page 489).

He has two rivals. The huge robber crab, with claws a foot or more in length, tears off the husks and shells of ripe coconuts and devours the kernel. The natives fear him, for he can tear open a skull as easily as a coconut; but he will not attack unless cornered. One, caught and confined in a stout box made of three-quarter-inch boards, broke his way out and escaped.

RATS GROW TO CAT SIZE

The other rival is the rat, with which South Sea life appears to agree, for he grows to cat size. Some islands are overrun with these voracious rodents. They do

great damage to the coconut crop by eating the buds and flowering stems. On one of the small islands of the Woleai group, dominated by huge rats, some one had the brilliant idea of landing a shipload of cats. When the ship called again, it was found that the rats had killed all the cats!

On our way up the beautiful palm-shaded shore path of Map, we came upon another example of the contest between man and the animals for possession of the fruits of the forest. We saw a small boy chewing gum as if his life depended upon it. Now and then he would draw it out in a long white ribbon, then flip it back into his mouth and chew more vigorously.

"Where does he get the gum?" I asked, scenting the trail of the trader. But I was mistaken.

"From the bread-fruit tree," said Tol.

He drew his knife and slashed the trunk of a near-by bread-fruit. Out trickled a white juice. This juice, he explained, is allowed to ooze for a day and solidify. Then it must be chewed to make it soft and adhesive. While we waited, the boy completed this important operation. Then he clambered up onto his father's shoulders, fixed a stick horizontally like a perch just below some luscious papaya, and wrapped the gum around the stick (see page 492).

"Birds come for fruit," said Tol. "Light on stick. Can't quite reach papaya. Can't get away from stick. Boy come—kill. Or take for pet."

We were ferried to Rumung and passed presently through a slave village. Slavery in Yap is a most curious institution. It is utterly unlike former slavery in our own



BLASTS FROM A TRITON HORN CALL THE MEN TO COUNCIL.

Using the same kind of conch-shell trumpet with which the sea demi-god of legend was supposed to raise or calm the waves, this old Palau chief announces a meeting. A native mattock hangs over his shoulder.

South. The slaves cannot be bought or sold nor do they belong to any individual. They are the slaves of all freemen in common, but no freeman may order them to do this or that. Such a prerogative belongs to the king only.

SLAVES IN SEPARATE VILLAGES

The slaves all live in their own villages. They may be called to work at any free village by order of the king. If a private individual wishes to secure the help of the slaves on his plantation, he may perhaps get the permission of the king by presenting that worthy with a quid of tobacco or something equally persuasive.

It is assumed that the slaves are the



THE AUTHOR AND HIS WIFE RECEIVE A REFRESHING DRINK FROM A COCONUT

Thus they were welcomed to the All Men House, the village club in Rummung, ordinarily reserved for men only. The openings in the side walls serve as either doors or windows, and the hard bamboo floor is the only bed (see text, page 505, and illustrations, pages 500 and 501).



AN OX IS THE MOTIVE POWER FOR A COCONUT-OIL MILL

With this primitive machine the natives of Saipan extract the oil from copra, the dried meat of the coconut. While copra has long been the chief export of the Marianas, the Japanese have introduced sugar cane, which has become a thriving agricultural industry (see text, page 508).



THIS PIECE OF STONE MONEY COULD BUY MANY VILLAGES

The smaller rock coins were transported to Yap in hazardous voyages from other islands in native canoes. The large ones were brought on a schooner operated by the Irish freebooter-trader, Captain O'Keefe, who gained the concession to exploit the islands of Palau. They were traded to the natives for coconuts (see text, page 501, and illustrations, pages 484, 485, and 502).

descendants of defeated tribes, brought captive to Yap and confined originally in bush villages away from the coast so that they could not seize canoes and escape.

Slaves may not eat the food of freemen. The flesh of the hated shark and the despised eel, also the great banana that is too tough to eat without a thorough boiling, are reserved for them.

They are not allowed to wear combs in their hair. That is the distinction of the freeman; and the higher his rank the longer his comb (see page 496).

These combs are made of white mangrove wood. They are about three inches wide, from six inches to two feet long, and

toothed at both ends. They are worn on dress occasions by all freemen, except immigrants from the island of Mognog, where the fashion does not hold, and recent jail-birds whose hair is too short to hold a comb.

ISLANDS OF TWELVE KINGS

Those who break the strict rules against drinking do not mind spending a few days in jail, for a Japanese jail is fully as comfortable as a Kanaka home. Their real punishment consists in the close prison haircut, which means that they must go about for a month or more after their release in a state of complete and contemptible comblessness. They are derided as



FROM THE VILLAGE "ALL MEN HOUSE" WOMEN ARE BARRED

But an exception was made for the wife of the author (see text, page 505). The building serves as a club and council hall. One of the ceremonies performed here is the lizard dance, when, to the accompaniment of weird chants and piercing yells, the men writhe and twist in imitation of Yap's native reptile.

"slaves." This is the chief reason for the unpopularity of the convivial cup on Yap.

My mention of "kings" may have been confusing to those who think of Yap as being governed by the Japanese. So it is, but the Japanese have found it convenient to make use of the old tribal organization. There are twelve kings on the Yap islands. Although the domain of each is small, he is properly called a king, since his succession is hereditary and his rule is even more absolute than that of the world's constitutional monarchs. Under each king is a group of chiefs or nobles who see that his orders are carried out.

The people are accustomed to this authority. Therefore the Japanese Governor of the islands has found it practical to transmit his orders to the natives, not directly, but through their own recognized rulers. And most matters of local concern are left entirely to the jurisdiction of the native royalty.

"My home!" announced Tol. Before us stood a small house with reed walls and pandanus-leaf roof in a mouth-watering grove of banana, papaya, orange, coconut, and breadfruit trees.

Out ran Tol's mother to welcome him, her grass skirt swishing. These skirts, for all their light and airy appearance, sometimes weigh thirty pounds. They are favorite haunts of scorpions and centipedes.

Tol's mother was a kindly soul and accepted us immediately, as if the entertainment of American guests were a common occurrence in her household. But she told us later that she had never before even seen an American.

CLIPPED EARS TOKEN OF MOURNING

Her ears were clipped as a token that she was in mourning for her husband who had died a week before. Her new husband—the merry widows of Yap see no incongruity in telescoping mourning and



IN THIS CLUBHOUSE, MEMBERS MUST COOK THEIR OWN MEALS

Each man builds a fire on a little cleared space in the floor. When they eat, backs are turned, as though they were not on speaking terms. Such an "All Men House" is constructed without nails. Old palm pillars and bamboo walls are strongly lashed together with coconut-husk cords.

matrimony—was having a treatment. Afflicted by a slight cold, he sat on the stone platform before the house while a medicine man conjured the devils from his chest by waving two wands made of the barbed spines of the sting ray.

Tol's sister came out with a pink pig in her arms, the favorite pet of Kanaka maidens. So long as she kept her mouth closed so that her betel-black teeth and scarlet tongue were not visible, she was pretty. She wore the neck cord which indicates that the bearer is of marriageable age and ready to listen (see page 490).

Hungry and thirsty, we looked expectantly at the fruit which drooped above us. But we were to have none of it. When a member of a Kanaka family dies, none of the food on his property may be eaten for a year. It must be permitted to drop and rot. Eat of it, say the natives, and you will turn sick and die. With food in profusion around us, Tol went forth to the village trader to buy.

On his shoulder he carried a piece of money—a disk of stone two feet in diameter with a hole in the center through which a carrying pole was thrust (page 485).

Stone money still goes as currency on Yap. The wheels range from six inches to twelve feet in diameter. Some are so large that a person may easily curl up in the hole. They are displayed outside the house, as a constant reminder to the passer-by of the affluence of the householder. One large wheel is considered better than many small ones because it is less easily stolen. The owner of a coin memorizes all its peculiarities so that if it is purloined he can usually find and reclaim it.

STONE MONEY HARD TO COUNTERFEIT

One would think that the counterfeiter would work overtime, making bogus coins. But this is difficult, since the stone is not native to Yap. The calcite coins were "minted" chiefly on the rocky islands of Palau and brought at great peril in small



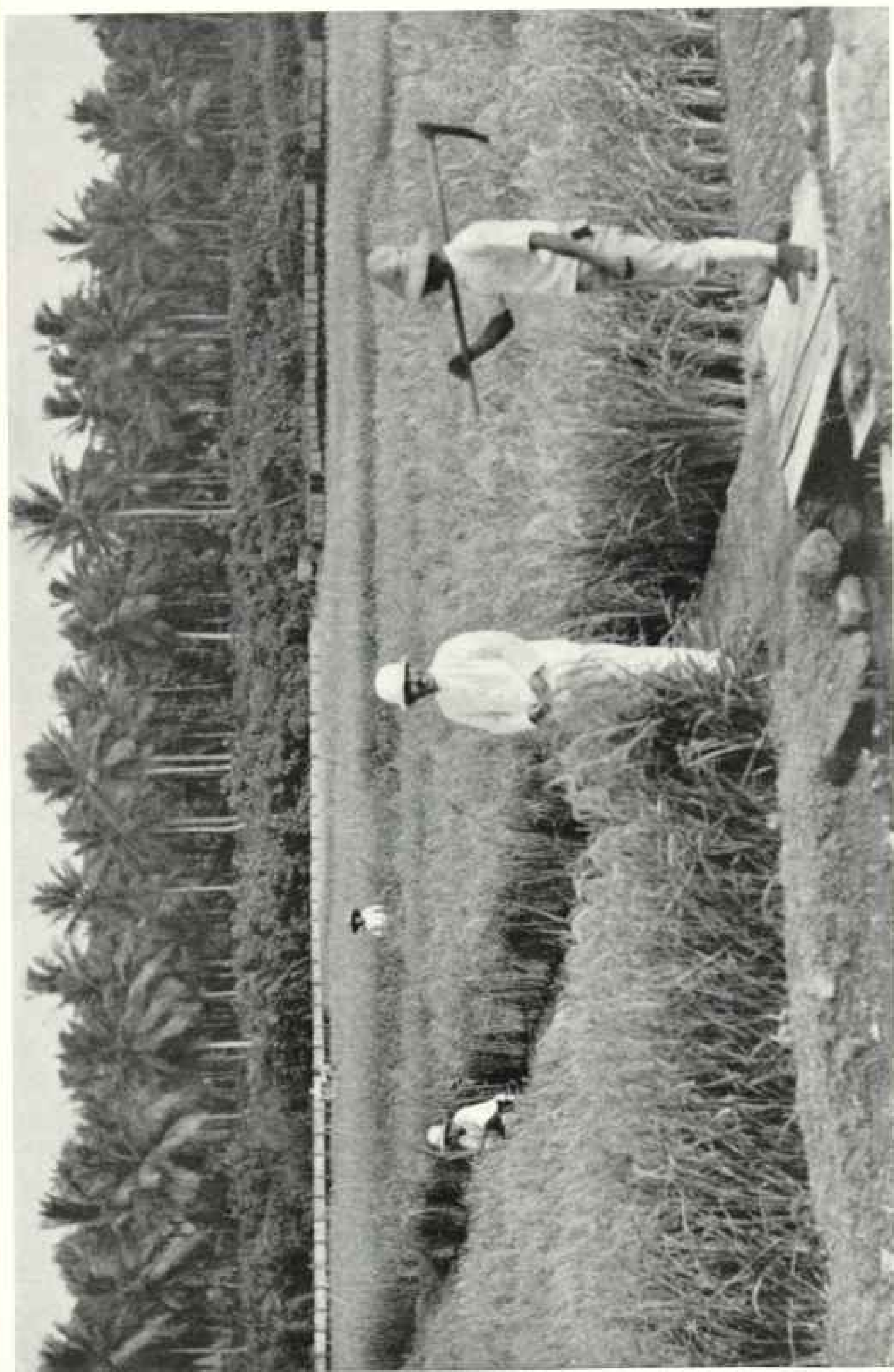
YAP HAS INFLATED CURRENCY, BUT NO COUNTERFEITING!

These disks of rock "money" vary from six inches to twelve feet in diameter. They are displayed outside native homes to impress passers-by with the affluence of the owners. One big piece is preferred to several smaller ones, since it is less easily stolen.



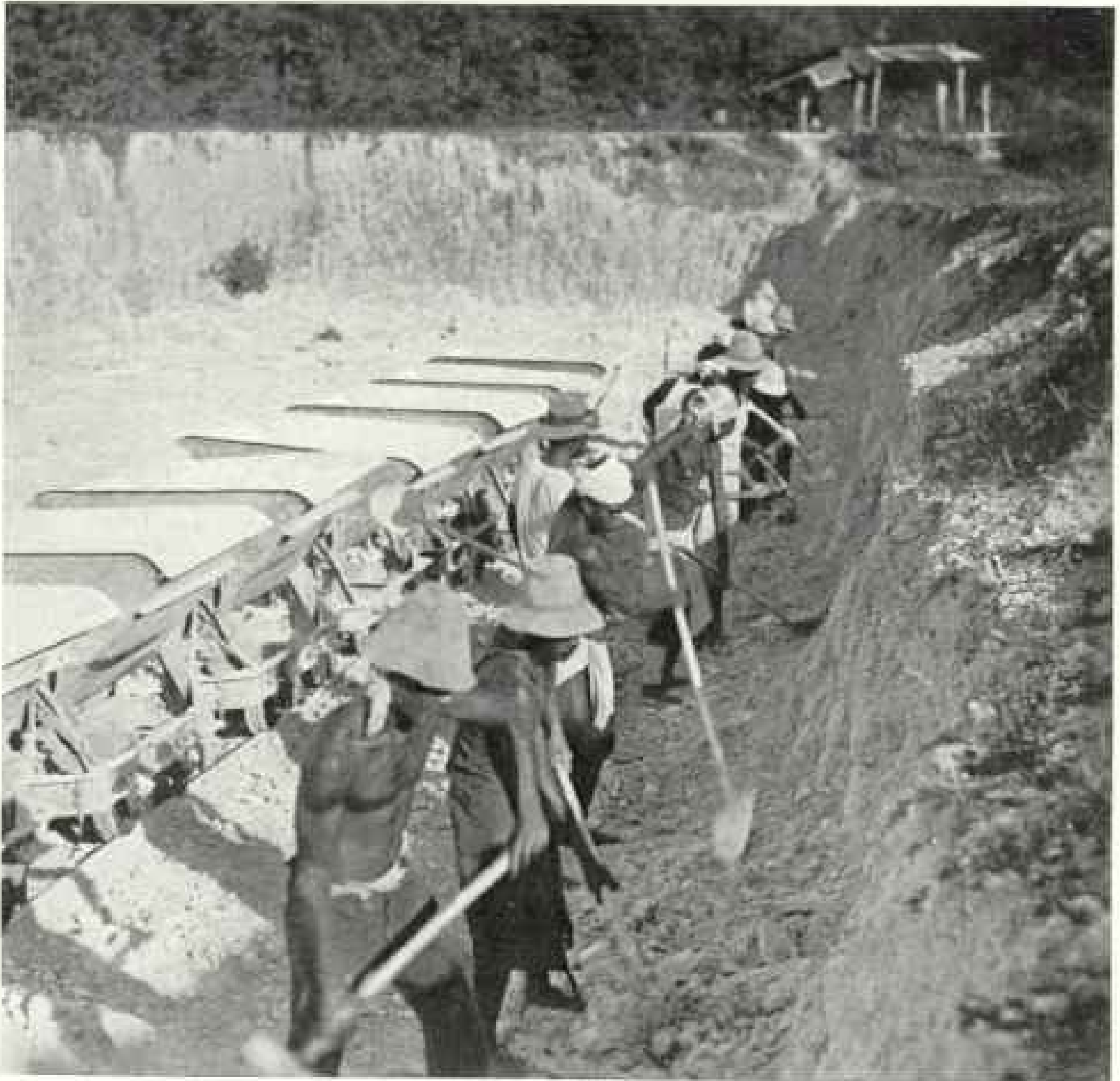
BUILDING A HOME IS A FAMILY ENTERPRISE

Women of the Trok Islands are handing up roofing sections made of the leaves of the ivory nut palm. These are overlapped and fastened to the rafters with fiber cords to form a waterproof covering. Walls and floor are made of bamboo.



RICE FLOURISHES UNDER THE SKILLED HANDS OF A JAPANESE SCIENTIST-FARMER

By crossing Indian rice with the Japanese variety, the director of this agricultural experiment station, standing in the center, has obtained a grain which will thrive in the almost daily rain of Pettape. The sheet iron fence surrounding the entire plantation keeps out bugs and rats which overrun the island.



JAPANESE MINE PHOSPHATE TO FERTILIZE HOMELAND FARMS

These rich deposits on Angaur Island, in some places 40 feet deep, were formed by the chemical action of the excrement of prehistoric birds on the underlying rocks. Discovered about 1905, by a German explorer, they were worked by a Bremen company until Japan assumed control of the islands during the World War.

canoes nearly three hundred miles over the sea to Yap. It was not uncommon for twenty canoes to set out and only one to return.

The largest coins were brought by schooner by an Irish buccaneer-trader, Capt. David D. O'Keefe. He got for a song the concession to exploit certain Palau islets on which nothing could be raised except money, and made a small fortune by mining the money and selling it to Yap natives in exchange for coconuts. Since the present supply of currency more than meets the demand of a decreasing population, little new money is being mined today.

While Tol was making his purchases, we

saw another financial transaction, conducted by the use of shell money. A string of large shells was given by the lady of the house to a Chamorro trader in exchange for two bottles of petroleum (page 484).

The Chamorros, few in number, wear European dress, are half Spanish in blood and language, and take pride in their guitars, mantillas, and early masses. They are a reminder of the days when the long arm of Spain reached halfway around the world to these small Pacific islands. Their names seem oddly out of place on this barbaric isle. We spent many interesting days later in the home of Jesús Untalan, whose wife was Micalla and whose twelve children

were Maria, Juanito, Manolo, Vicéntico, Marcos, Teresa, Tomasa, José, Filomena, Ursula, Joaquina, and Felicida!

The Chamorros, of course, are quick to adopt new ways, and Japanese money. The Kanakas continue to use stone or shell money, or none at all. That is, many of their negotiations are conducted without the use of any currency, by primitive methods of barter. But even in barter there are fixed prices. One coconut costs one cigarette. One match will buy two nuts. A roll of bread is worth ten nuts. Chickens, eggs, or pigs are sold in the same way, for bread, tobacco, petroleum, or canned goods, not for money.

A fresh surprise was in store for us when dinner was prepared. Tol quickly set up two new fireplaces in the yard. There were already three. Since the trader had been out of matches, fire was made by friction in one fireplace, then carried to the others. A pot was placed on each. Soon five dinners were boiling. Tol's mother was running frantically across the yard from pot to pot.

TABU ON EATING FROM WOMAN'S POT

I asked Tol why five fires instead of one? Why five big pots when one would contain all the stew of taro, yam, and pork that was being cooked?

"Tabu," he said. "Each person, one pot. Girl no matter, she can eat from mother's pot. Man cannot eat from woman's pot."

"What would happen if he did?"

"No longer be head of house. Be slave of woman."

So by this odd superstition the work of the woman is multiplied many times. I have seen in the grounds of one dwelling as many as seven fireplaces, each covered by a thatch roof—seven kitchens to one house—and all tended by one woman!

We ate separately, back half turned, as if angry at all the others, each man crouching protectively over his pot, guarding it against the baleful influence of the women. Only the mother and daughter dipped their fingers into the same pot.

Sunset colors were beginning to play across the lagoon.

Perhaps Tol sensed the apprehensive question that was asking itself in our minds.

"Sleep my house no good. Too small. Sleep in All Men House."

The All Men House is the clubhouse and council hall of the village. A large thatched building, it extends out into the lagoon on a

stone platform. It is for all men and for men only. Exception was made in the case of a foreign woman (pp. 498, 500, 501).

That evening a lizard dance was staged for our benefit in the vast, black hall. Brown bodies writhed and squirmed in imitation of Yap's big lizard, the whole sinuous mass lit only by the red flicker of torches. There arose weird chants, unearthly yells.

At last came the words of parting: "Good is the night: sleep!" Some men went home. Others lay down on the merciless hard floor made of round bamboo poles. And so did we. Weariness softened the bed.

MEN'S CLUB FOR THE LIVING AND DEAD

Tol stayed, for it is the custom of all unmarried young men to sleep in the clubhouse. We sympathized with Tol on this, his first night home since his father's death, for his father's corpse lay in state in a corner of this great spectral chamber. But the Kanaka sees much of death—the death of his dear ones, the death of his race. In the melancholy words of a Tahitian poet,

"The leaves are falling on the sand,
The sea shall swallow coral strand,
Our folk shall vanish from the land."

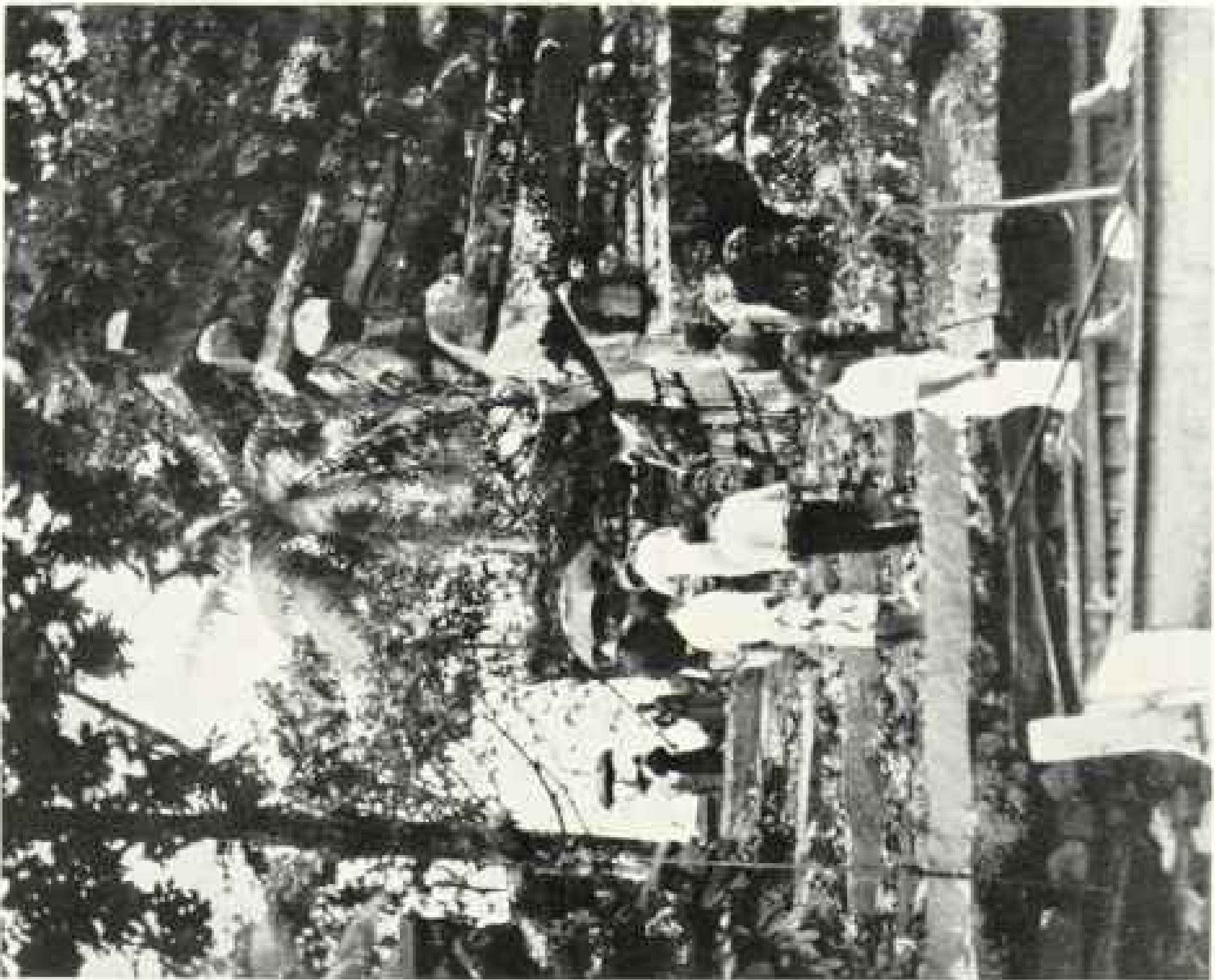
After nearly a month in Yap we voyaged on to spend three months in the other fairy islands of Micronesia. They were all variations of the theme of which Yap was the keynote. In no other island was primitive Kanaka life so clearly revealed as on Yap. Elsewhere it was modified, glossed over, clothed (literally) by the activities of officials and missionaries.

And yet each island in its own way was of surpassing interest.

RADIO TOWERS AND SCHOOLS ALONG JUNGLE TRAILS

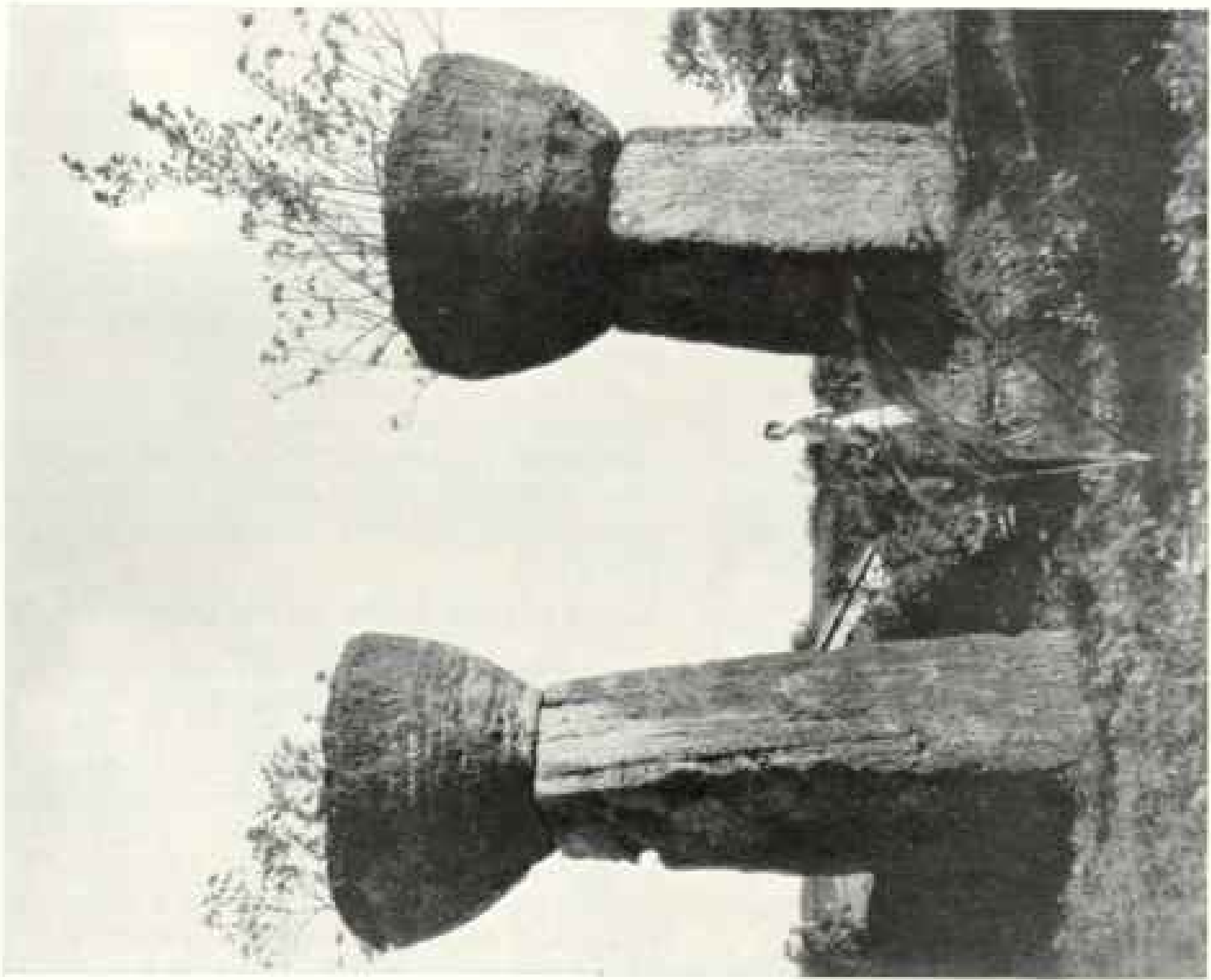
In the Palau group is the headquarters of the Japanese South Sea Government. A Japanese town of 5,000 people, clattering busily about on Japanese clogs, has sprung up where only a few years ago bare feet followed jungle trails. Radio towers, stores, hospitals, and schools have appeared. An airport is being constructed for the airline to connect the islands of Palau with Tokyo. A five-year plan is being launched for more intensive development of the islands and encouragement of Japanese immigration.

As I write, there are 40,000 Japanese in the mandate, and 50,000 natives. But the



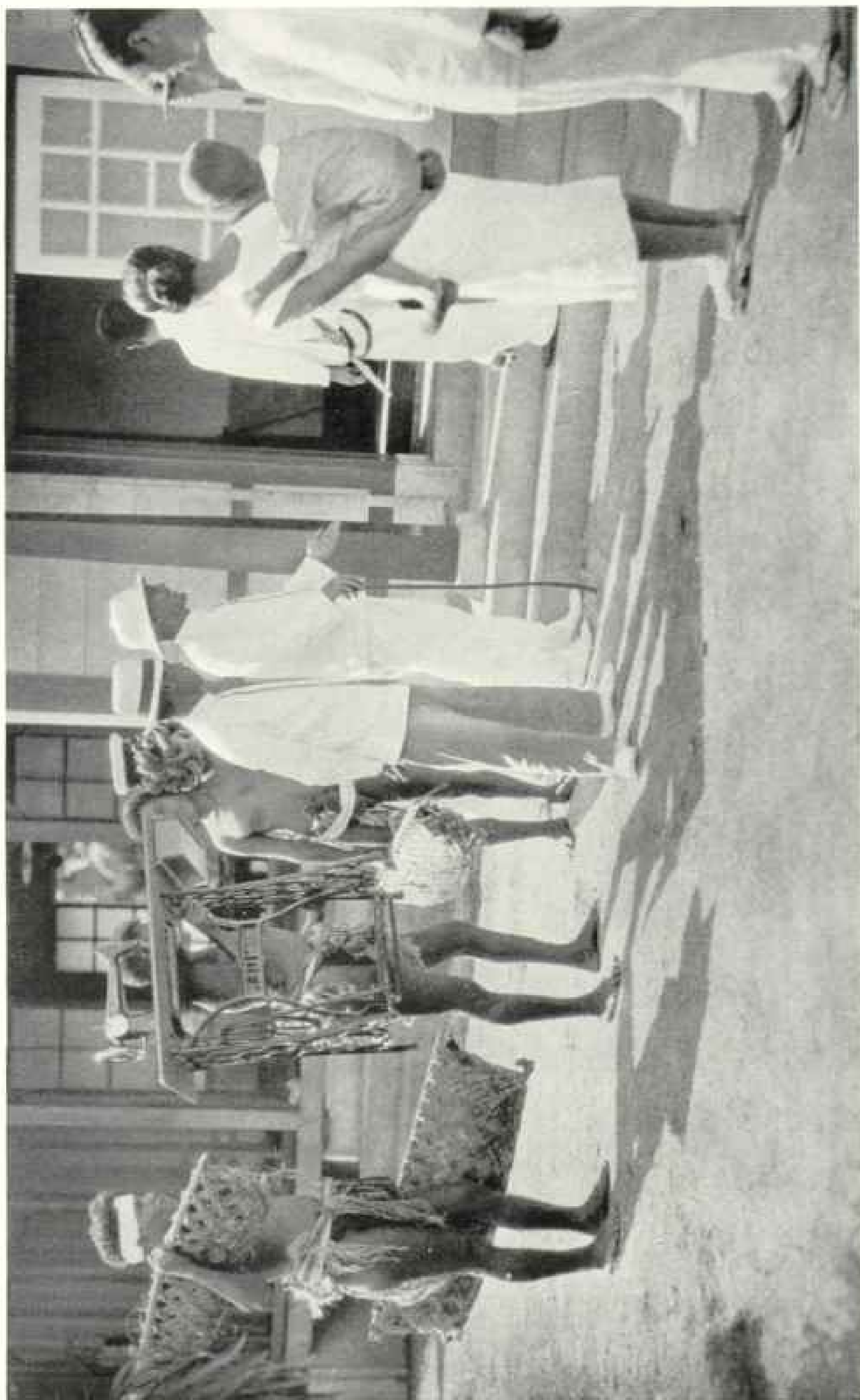
"THE PLACE OF LOFTY WALLS," ONCE A FORTRESS.

Nan-Tausch is the most elaborate of the massive stone structures of Nan-matal, seldom-visited city of the dead. With mighty rocks, brought from a quarry 15 or more miles away, early builders erected a fortified town, called "Place of the Waterways," because of its Venetianlike canals (see text, page 509).



ON TINIAN ISLAND STAND THESE ANCIENT COLUMNS

These square cut monuments of coral, with flower-pot capitals, may have supported floors of temples or marked the graves of a vanished race. Burial remains have been found in the capitals and around the bases of the shafts. The stones appear in parallel rows.



A JAPANESE POLICEMAN MOVES INTO HIS NEW HOME—SEWING MACHINE AND ALL!

The Government has built for him a homeland-style house far away in the jungle of Yap. Officers being few, this public servant, immaculately clad in white, will also serve as teacher of agriculture, and doctor to the natives of the Caroline Islands. His Japanese servants and his wife, carrying a child who seems big enough to walk, wear cloes.

native population is standing still, except in Yap, where it is decreasing. The Japanese population, on the contrary, has doubled in four years and bids fair to double again in the next four. Micronesia is rapidly becoming an equatorial Japan.

The antlike activity of the Japanese puts the native in a daze. Intensive cultivation of the soil, which the Japanese know so well, is performing miracles. Barren uplands, supposed to be useless, are yielding rich harvests of pineapple and tapioca.

In the quiet lagoons, oysters are trained to produce pearls in great numbers. In the stormy waters outside the reef a fleet of large motorized fishing boats makes wholesale catches of bonito, to be dried to board-like consistency and sent to fish-hungry Japan.

Phosphate which the birds deposited more than a million years ago on Angaur is being transported for use as fertilizer on Japan's pocket-handkerchief farms (page 504).

SUGAR NOW IN "THE ISLES OF LITTLE ACCOUNT"

In the Marianas, once called islands "of little account," the sugar cane has been made to feel at home. On Saipan, Tinian, and Rota, sugar to the value of ten million yen is being produced annually.

Not content with the present large plant population of Micronesia, the Japanese have brought plant immigrants from all parts of the world. Some of these newcomers grow homesick, languish, and die; others are made comfortable by the skill of scientific horticulturists and become permanent settlers in Micronesia.

A stalwart, burly scientist-farmer in rubber boots took us about the governmental experiment farm on Ponape. He pointed out the strangers that he has brought to Ponape. There were the chestnut from Polynesia, the sapodilla plum and the Coromandel gooseberry from Java, the cashew nut from India, nutmeg, cloves, mangosteen, and pomegranate from Celebes, alligator pears from Hawaii, jack fruit from Malaya, aloes from Africa, coffee from Arabia, lichee nuts from China, Brazil nuts from Brazil, and oranges from California!

These are only a few of them. In all, 238 kinds of fruits, grains, vegetables, and trees have been imported and acclimatized in Ponape.

"No skill needed," said Mr. Hoshino gruffly in response to our compliments.

"Anything will grow here. We have rain every day all the year through. You can grow a tree from a walking stick. Look at those telegraph poles, sprouting branches!"

The Micronesian islands are of two kinds, volcanic and coral. The volcanic islands are mountainous and fertile. From them, rich soil is being actually transported by the shipload to the low, sandy coral atolls so that these "deserts of the Pacific" may also be made to blossom.

WORDS ARE RELICS OF AMERICAN WHALERS

The old-time whalers would scarcely know the islands today.

One is frequently reminded of the past visits of American ships. On Truk, contact with English-speaking people is evident from the presence in the native language of such words as "masis" (matches), "rouses" (trousers), "sop" (soap), "Paipel" (Bible), "Sonte skul" (Sunday school), "Setin" (Satan). On the Marshalls and Kusaie most of the older people speak some English.

Kusaie was discovered by Americans in 1804 and was formerly named Strong Island for a Governor of Massachusetts. In later years American whalers made its beautiful harbor a rendezvous.

"I can remember seeing 22 whaling ships in this harbor at one time," says fine old King John of Kusaie.

The newcomers left a legacy of foreign diseases here as in other islands. "Peeling skin" the Ponape people called smallpox, which carried off half their population. "The lady who shrivels men up" was tuberculosis. In Kusaie the population dwindled from about 2,000 when first discovered to 400 in late Spanish times.

WHERE CRIME IS UNKNOWN

But the "morning stars," huge square-rigged sailing ships built by the dimes of American Sunday-school children, brought missionaries. They transformed Kusaie into an island paradise where going to church and smiling seem to be the chief industries. There is no jail, crimes are unknown, disease practically nonexistent, and the whole population, now 1,200, goes about in trailing white robes, radiating propriety and beneficence.

And so moves this South Sea pageant of Kanaka and Chamorro, whaler and trader, missionary and official. A colorful pageant



THE CRUCIAL MOMENT OF A MULLET-FISHING EXPEDITION DRAWS NEAR

Kusaie islanders pick out a likely spot in the lagoon and encircle it with their nets. Then they gradually close in on the fish, which when entrapped often jump six feet in the air in an attempt to get free.

it is, against a black backdrop. For the ancient background of South Sea history is dark and mysterious. Gradually a few of the secrets are being revealed.

"I wish to dig in the ruins of Nanmatal," said a young Japanese to us on shipboard. And it came about that we were invited to accompany him on his expedition. He was Prince Saionji, explorer and gentleman, graduate of Oxford, grandson of the last remaining member of the Genro, or Elder Statesmen of Japan.

AN ARCHEOLOGICAL EXPEDITION IN CANOES

In open canoes, in a pouring rain quite characteristic of Ponape, we entered the seldom-visited city of the dead. We traveled by canoe through streets of water, for Nanmatal is an island Venice. Canals were, and still are, the thoroughfares.

Abruptly from the water's edge rise beetling castle walls made up of huge prisms of basalt. The mighty building blocks which compose these barbaric structures make the English castles or those of the Rhine seem

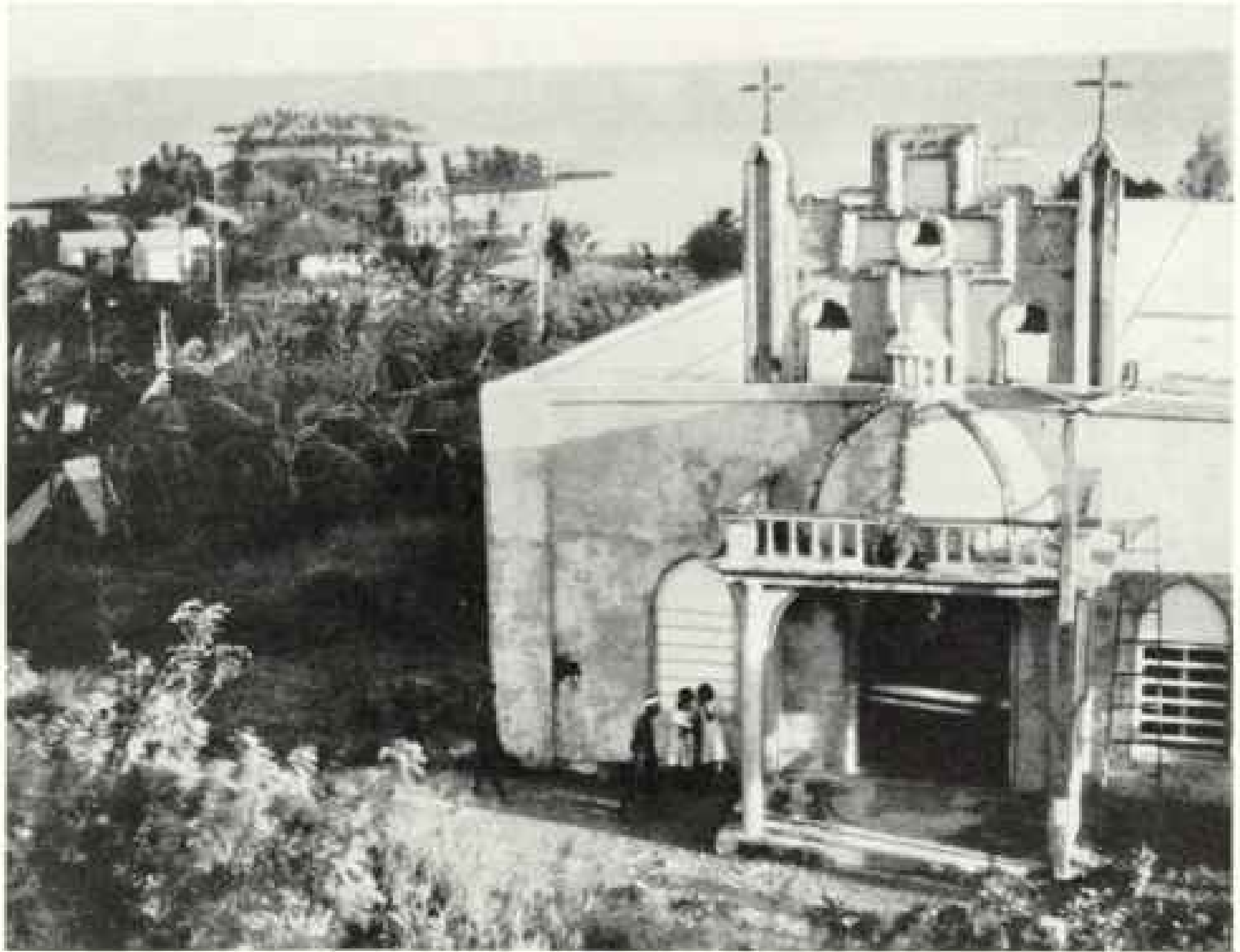
delicate and ladylike in comparison. The quarries where these mammoth hexagons and octagons were obtained are 15 or more miles away, some of them in the neighborhood of the great cliff of Jokaj Island.

To transport the stones must have required craft very different from the present native canoe, and to raise them to their positions must have been a herculean task, even with the aid of an inclined plane and unlimited manpower.

And this was no isolated fort, nor even a walled village. It was a city, made up of about 50 fortified islets extending over eleven square miles. Most of it is now hidden by the advancing jungle.

How the past speaks here! So evident is the hand of man that one expects to see men appear around any corner. The natives have an unholy dread of coming near the place. Even our Japanese companions were awed and silent.

We landed at Nan-Tauach, The Place of Lofty Walls, and entered a court through a gateway flanked by two cliffs built of monster stones that looked as if they had come



SPANISH MISSION BELLS STILL RING IN YAP

After the Spanish-American War, Spain sold her Micronesian islands to Germany for about \$4,500,000. But the mission remains; a priest from Columbia now officiates. Japan acquired a mandate over the islands after the World War.

from the Giant's Causeway (see page 506).

The Prince saw a hole and, against the protests of his associates who were under the eerie spell of the place, dropped down into it.

"What did you find?" we asked when he returned to the surface.

"Ghosts!" he replied.

A VENICE OF LONG AGO

But more than ghosts were dug up in some of the larger vaults. In the soil beneath these sturdy ruins are imbedded ornaments and implements—shell axes, necklaces, bracelets, shell needles—as well as human bones and skulls. The objects found and measurements and observations taken by the Saionji group, together with past studies by J. S. Kubary, F. W. Christian, and others, make certain facts increasingly evident.

It seems clear that this city was built up out of the lagoon as a Venice, and is not a

land city that has sunk. It was constructed by a black race of superior civilization, very different from the present brown folk who live in thatched huts and make no use of the mammoth basaltic prisms in any of their buildings.

According to tradition, a dynasty of kings by the name of Chau-te-Leur reigned in the city, but was finally overthrown by a savage invader, Idzikolkol, who stamped out the old civilization, abandoned the island metropolis, and established his brown race in the jungles of Ponape, there to remain practically unchanged to this day.

The jungle dwellers still resent and resist civilization. In time, they must bow to the inevitable. Schools demand their children, hospitals insist upon curing their illnesses, industries interrupt their perennial leisure.

For good or ill, these isolated South Sea isles are being swept into the world current of change.

INFORMAL SALUTE TO THE ENGLISH LAKES

BY MAYNARD OWEN WILLIAMS

THE English Lakes take a bit of wooing. A rumble seat is better than a closed car, but a light knapsack, shorts, and a gay heart bring "ecstasy and deep delight" in a walkers' paradise visited by many and dreamed of by all.

Wordsworth and Ruskin, Coleridge, Southey, and Sir Walter Scott retain that immortal quality of still being able to speak for themselves and the lakes they loved. But even between the showers of a single day the English Lakes can cast a haunting spell, and in autumn the "trippers" attracted by Wordsworth have departed, leaving the solitude he loved and defeated. "These tourists, heaven preserve us! needs must live a profitable life," he wrote, before the age of steam. What would he say of the char-à-bancs loaded down with Lancashire and Yorkshire laborers on a summer Bank Holiday nowadays?

Although I breakfasted in Carlisle and dined mid Blackpool's Coney Island mob, Keswick and Buttermere, Friar's Crag and Bowness stand out with clear-cut beauty among my memories.

BEAUTY SHROUDED IN RAIN

October had colored the Highland woods, and the lovely hills of Cumberland, so mountainlike in charm, would soon show golden slopes about a dozen lakes. But the squeak of my windshield wiper down the arrow-straight Roman road to Wordsworth's native town of Cockermouth had become travel's tiresome theme song. Rain worthy of Seathwaite, the wettest inhabited place in England, with an average of nearly a foot a month, shrouded beauty instead of enhancing it, not a gossamer veil but a wet blanket.

Spring, with its daffodils

"Beside the lake, beneath the trees,
Fluttering and dancing in the breeze"

had passed, but so too had the holiday-makers, whose music is not of poets but of concertinas.

In Skye I had admired the photographs made by that mountaineer-artist, Mr. Abraham. As I retreated from Scotch mist toward Welsh downpours I came to Keswick—call it Kezzick—and sought the pictures I had coveted while on the stormy isle of Skye, not knowing that Dr. Grosve-

nor, who had reached America since we had visited the Braemar Games together, was seeking for a color series on the English Lakes from the same artist.

As Mr. Abraham lifted an experimental color plate against the light for my inspection, the sun came out and rosy dreams replaced the dullness of morning. A pretty girl in green shorts like those of a Tyrolean yodeler passed by this most English of windows. It wasn't so dull a world after all.

LURE OF RED-GOLD HILLS

"In the next fortnight the color of the Lakes will be at its best," said my host, while temptation tugged at my sleeve.

"Two weeks in the land of Wordsworth and Ruskin," it whispered. "Two weeks of red and gold, of quiet hotels with emerald lawns, and delightful inns where the whine of a windshield wiper has never been known." How well I know such lures as that, even in less beautiful lands.

Then a cloud passed over the sun. Keswick seemed no more a Paradise. And who was I, to seek out the overhanging branch, the distant view, which my ardent rival had sought with such success through all seasons? His tripod has marked, but not marred, every vantage spot from Skiddaw and Saddleback to the Old Man of Conistone above Ruskin's home.

A cablegram asking authority to assign to him the coveted task of making a series of color photographs for the NATIONAL GEOGRAPHIC seemed the logical solution.

BESIDE LIMPID DERWENT WATER

Then, smug with virtue at a temptation routed and a duty done, I took that matchless stroll beside Derwent Water, past the irregular block of stone on which is carved the face of Ruskin, who, mid the stones of Venice, never forgot the first memorable event of his life—a trip with his nurse to Friar's Crag (see Color Plate VIII).

Rowboats were tied near at hand. An island like a stage setting reflected the fleeting smile of the sun and then hid in mystery as a racing cloud obscured the sky.

Each lake—like an Arab street—has its shady side, morning or afternoon, so that one can escape or welcome the warmth of the sun, according to his own desire.

Now Keswick, as every lakist knows, is a monument to indecision. It lies in the center of so much beauty that one cannot decide what to see next. A score of falls and fells confuse the judgment (Plate I).

Argue that Keswick is Lakeland's best center and the Thirlmerians, Grasmarians, and Windermarians will bay like hounds—with ample reason. But I was in Keswick.

Except to Alpinists and fanatics, a perfect peak is one to be conquered between breakfast and supper, with a leisurely lunch beyond the sight and sounds of the town. The Lake District is relief-mapped with just such satisfactory training spots for the "Excelsior" spirit and there is enough rock work to train men for the Matterhorn or Everest. Like tennis, climbing in Lakeland can be easy or hard, according to one's taste.

MOUNTAIN CLIMBING BY MOTOR

Scafell Pike, the highest summit in England, is a mere 3,210 feet and all of it above 2,000 feet belongs to the National Trust, which, though privately supported, acts as trustee of properties acquired by the Nation for the use of future generations. From savage Wast Water (see Color Plate I), shadowed by the steep-talused Screes, this premier peak is a two-hour struggle or a four-hour stroll. "Early for lunch and late for tea, you can climb the Pike and descend the Scree." But with rowboats at hand and a car parked in a limited zone, the very thought of mountain climbing was out of the question.

Down Derwent Water the V of Borrowdale, half blocked by Castle Crag, invited closer acquaintance and a sentence in the guidebook changed "maybe" to "yes." Speaking of the route from Keswick to Buttermere it said: "This is, perhaps, the finest drive in the Kingdom and should on no account be omitted." Only a fool would be stopped by a superfluous "perhaps."

"In parts closed to motors" seemed more ominous, but motors have a way of outspeeding books and who with a spark of adventure wants a guarantee of safe delivery? Without waiting for lunch, my agreeable little car and I set out for Honister Hause.

Here was enough slate for all the roofs of Christendom, but roofs of a similar steepness have a smoother slope. A rough trail came down through the trees and I

was certain the sure-footed little car could make the grade. But the keeper of a toll-gate frowned discouragement and beamed past his barrier toward the road beyond, so "bang went saxepe" and in we went and up the sides of Honister Crag to a height which would make a liar of any altimeter.

The descent toward Buttermere looked like the runway for a ski jump, but its surface was rough and the climbers in front seemed not only able to escape my wheels but to get both car and driver to repair shops if necessary.

Buttermere has never been adequately pictured, much less described. It must, in part at least, be a state of mind. Wisps of clammy mist swept the tops of the hills, but cows placidly grazed and silver rivulets gracefully cut the slopes, barren except for compact clumps of trees.

The picture lies before me, but where is that potent charm of adventure and nostalgia that fell with the lengthening shadows across that lovely scene?

Along Crummock Water the road enticed me and Scale Force, set in its dark glen, would surely be a mass of shining silver on a day like this. But a trans-Atlantic ticket bulged my coat, and vagabondage, like all bondage, has its bounds. So we left Buttermere, climbed steeply to Newlands Hause, and slowly rolled down wide-spread Keskadale, already brown with bracken, through Portinscale to Derwent Water.

A GATHERING OF THE GREAT AT WINDERMERE

Back in Keswick, gorged by the scenic richness of the present, I turned my thoughts to the past. The homes of famous men are hollow shells from which genius has spread like friendly jinn from confinement. But who among the English Lakes could fail to visit Dove Cottage at Grasmere or go to Rydal Mount, not to see dead relics of an immortal poet but to tread the same paths Wordsworth trod? Wordsworth had done some of his finest work before he came, at the age of 43, to live at Rydal Water. But day by day until his death this disciple of beauty found content and inspiration in this fair scene (see Color Plate VII).*

* See "Through the Lake District Afoot and Awheel," by Ralph A. Graves, NATIONAL GEOGRAPHIC MAGAZINE, May, 1929.

ENGLAND'S LAKE DISTRICT, FOUNTAINHEAD OF POETRY



WEST WATER, WILD AND SOMBER, IS THE DEEPEST LAKE IN ENGLAND

Its still waters, 258 feet in depth, are flanked by the steep-sided Yewbarrow and the rocky bastions of the Screes, whose boulder-strewn slopes are stained red with iron ore. The mist-capped pyramid in the center is Great Gable, a favorite of rock-climbers.



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Fisley Photographs by G. P. Abraham, Ltd.

MANY AMERICANS COME TO KESWICK AND STROLL IN THE HOTEL GARDENS

The late Presidents Theodore Roosevelt and Woodrow Wilson have visited here. By the shores of gleaming Derwent Water, Keswick is a center for the northern Lake District. The pilgrim to literary shrines finds here associations with Wordsworth, Coleridge, Southey, Shelley, Gray, and Ruskin.

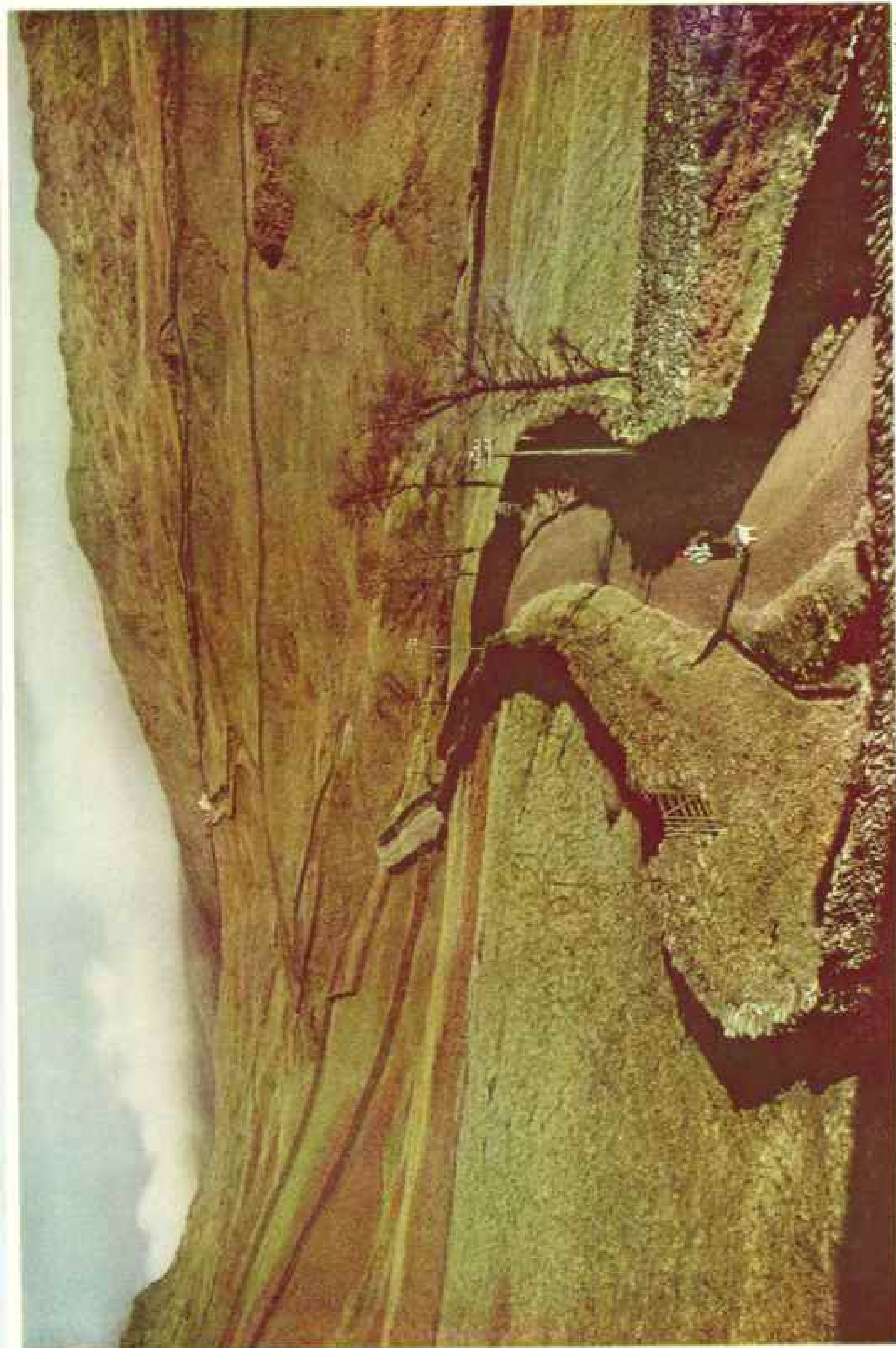


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Fobby Photograph by G. F. Abstam, Ltd.

THE PEACEFUL-LOOKING SHEET OF WATER IN THE DISTANCE RECALLS A TRAGEDY OF LONG AGO

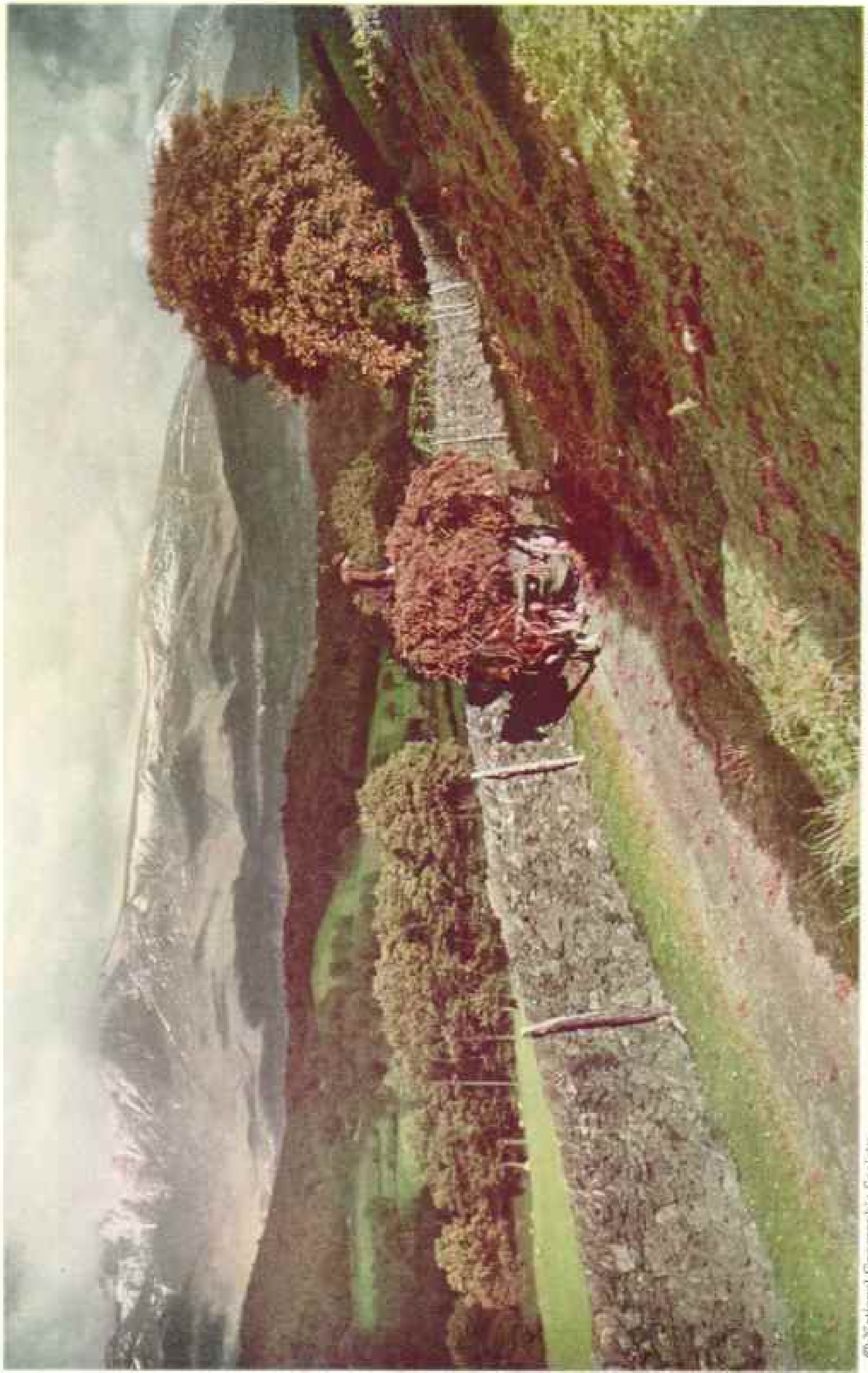
The story goes that Brothers Water, at the foot of the slope, is named for two brothers who fell through the ice one New Year's Day and were drowned. Here lambent autumn sunlight slants down Kirkstone Pass. The rocky hill in the distance, Place Fell, hides the head of Ullswater, second largest of the lakes. The abundant springy turf beside the road bears witness to the heavy rainfall of the Lake District.



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A Tired Wayfarer, who had climbed the "struggle" to Kirkestone Pass and was welcomed at its white inn, wrote thus:

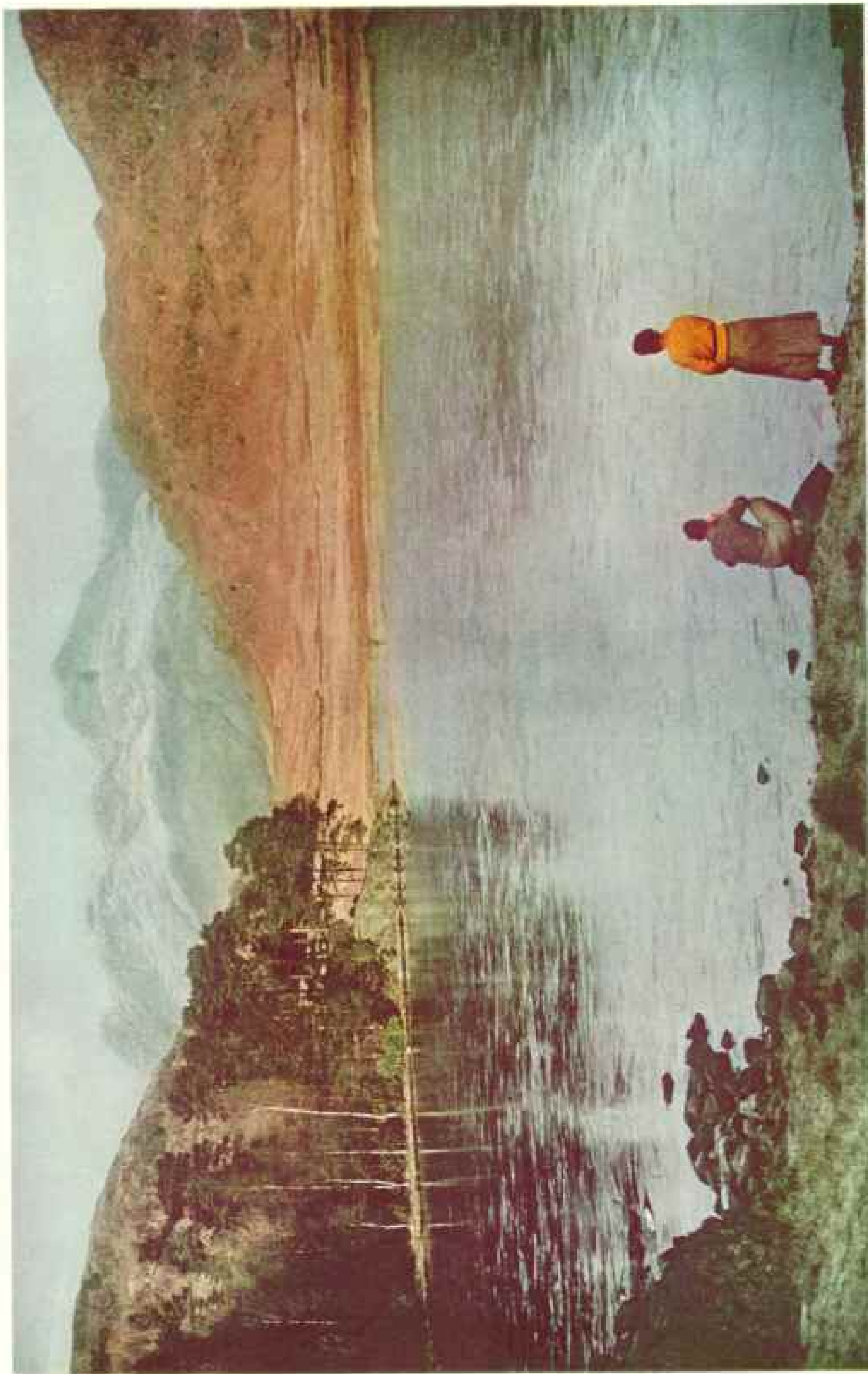
"If I were a lover and loved a lass,
Who lived at the top of Kirkestone Pass
I'd swear by all that's true and tried
To love and cherish her ever and ever
While I abode at Ambleside,
But go up and visit her never, no never!"



Fliday Photograph by G. P. Altrabum, Libb.

DALISMEN GATHER LOADS OF BUSSET BRACKEN IN THE FALL.—NEWLANDS VALE, NEAR DERWENT WATER

The big ferns, flourishing on the mountainsides, warm the autumn landscape with their color. Farmers use them for bedding their cattle and sheep.

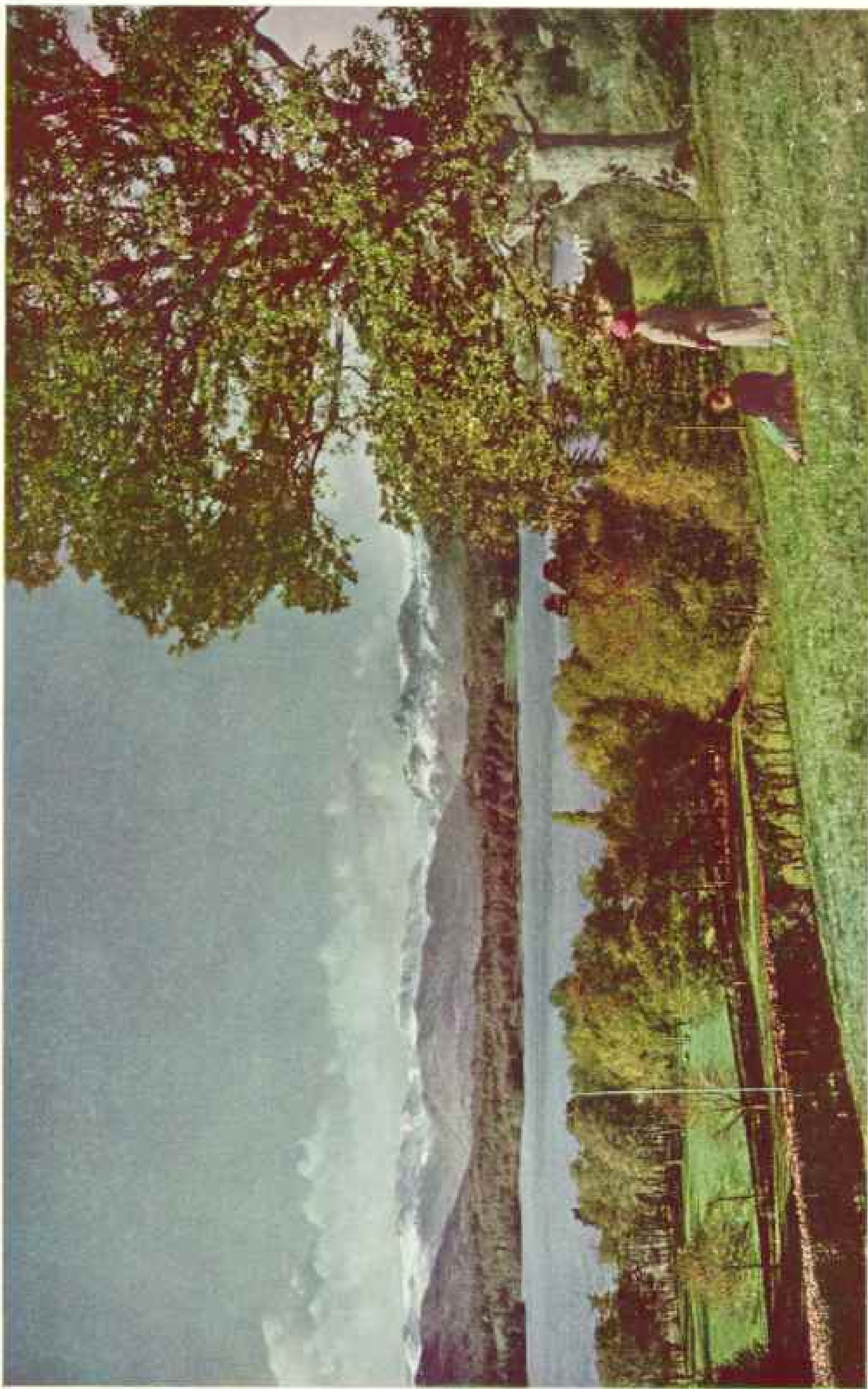


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A COLD NIGHT SKIMS BLEA TARN WITH ICE AND POWDERS THE LANGDALE FELS WITH SNOW

Wordsworth described the solitary mountain lake in "The Excursion" as "shut out from all the world . . . a liquid pool that glittered in the sun."
Like many place names in Cumberland, Blea Tarn recalls the Viking invasion. It derives from the Old Norse *Blá Tjörn*, meaning "blue lake."

Friday Photograph by G. P. Abraham, Ltd.



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Fielder Photograph by G. P. Abraham, Ltd.

THE ROAD TO KIRKSTONE PASS COMMANDS A SWEEPING VIEW OVER THE "WINDING LAKE," WINDERMERE

Ten and a half miles long, the largest lake in England is at no point a mile wide. From Storrs Hall Hotel on its shore, Sir Walter Scott, accompanied by Wordsworth and Southey, watched a regatta given in honor of Scott's 54th birthday. Langdale Pikes, in the distance, are tinged with the first snows of autumn (see Color Plates III and V).



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WORDSWORTH PACED RYDAL'S LAKES, COMPOSING POETRY ALDUB AS HE WALKED

Frilley Photograph by G. P. Alabham, Ltd.

The honest country folk round about thought the poet was mad. Rydal Mount, the home of his later and more prosperous days, stands on a hill behind the church, and has a view to the south as far as Windermere. In spring this corner of the Lake District is a riot of gold. Dora's Field, where the poet and his daughter planted daffodils, is a place of national pilgrimage about Easter.



THIS VIEW OF CRYSTAL-PURE DERWENT WATER WAS MUSKIN'S EARLIEST MEMORY.

A rough-hewn memorial bears the critic's words: "The first thing which I remember as an event in life was being taken by my nurse to the brow of Friar's Crag on Derwentwater." Derwent Isle, one of four wooded islands in the lake, mirrors itself at the left.



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Friday Photographs by G. P. Abraham, Ltd.

STEEPLY SHELIVING RED BANK OVERLOOKS PEACEFUL GRASMERE VALLEY

Across the lake in Grasmere village is Dove Cottage, now a museum, where Wordsworth spent some of his most productive years. The gap in the hills, Dunmail Raise, bears the name of the last King of Cumbria, who, legend holds, was slain there by Edmund, the Saxon king, in 945.

From this spot hallowed by beauty-worship, we rolled on through Ambleside toward Windermere (see Color Plate VI).

In a land that prides itself on *little* valleys and rivers, villages and towns, shops and motor cars, Windermere, largest of the English lakes, retains hordes of admirers.

A good swimmer could stroke his way from end to end and never be out of sound of shore.

Here, more than a century ago, was held a regatta in honor of Sir Walter Scott, on his 54th birthday.

It was mid-August, 1825. "Rob Roy," "The Heart of Midlothian," "The Bride of Lammermoor," "Ivanhoe," "Kenilworth," "Quentin Durward," "Redgauntlet," and many another had been finished in the time it takes a college freshman to get his Ph.D. Sir Walter, at 54, seemed to have solved his financial difficulties. Not till that winter did the burden of debt which killed him finally settle itself upon his proud spirit.

Beside the greatest public relations counsel Scotland ever had were George Canning and Wordsworth, fifty-five; Southey, three days over fifty-one; and John Wilson, the "Christopher North" of Blackwood's Magazine, a mere lad of forty, a talented protégé of Sir Walter, enjoying with the gay old boys this holiday within sight of his estate above Windermere, where adversity overtook and made a man of him.

SEEING CENTURY-OLD GHOSTS OF GENIUS

During tea at the Old England, with the milky lake misty beyond a flawless lawn, I thought of that gay party of poet, politician, romancer, humanitarian, and essayist. What glamour these century-old ghosts gave to the rainy scene!

Canning, an actress' son turned foreign minister; Wilson, an amateur wrestler, become stimulating teacher; Southey, a despotic relative's ward, whose works reached forty volumes of prose and ten of verse; and Wordsworth, lawyer's son, turned supreme poet of Nature—what a galaxy of genius finding time for a Windermere regatta in honor of their distinguished friend of Abbotsford!

Verily, there must have been something

in the climate of the English Lakes to work miracles like that. Yet I, a product of the age of hustle, sat idly at tea and dreamed while other idlers talked.

In a land where the summer sun sets late and winter nights begin early, sitting at tea is not entirely an idle occupation or a waste of time. At tea one is informally admitted to an atmosphere of British cordiality and charm. Even the foreign guest need not consider which side up he must hold his fork, or whether to grasp a knife like a sword or a scalpel. Afternoon tea is a sort of flowering of English social genius.

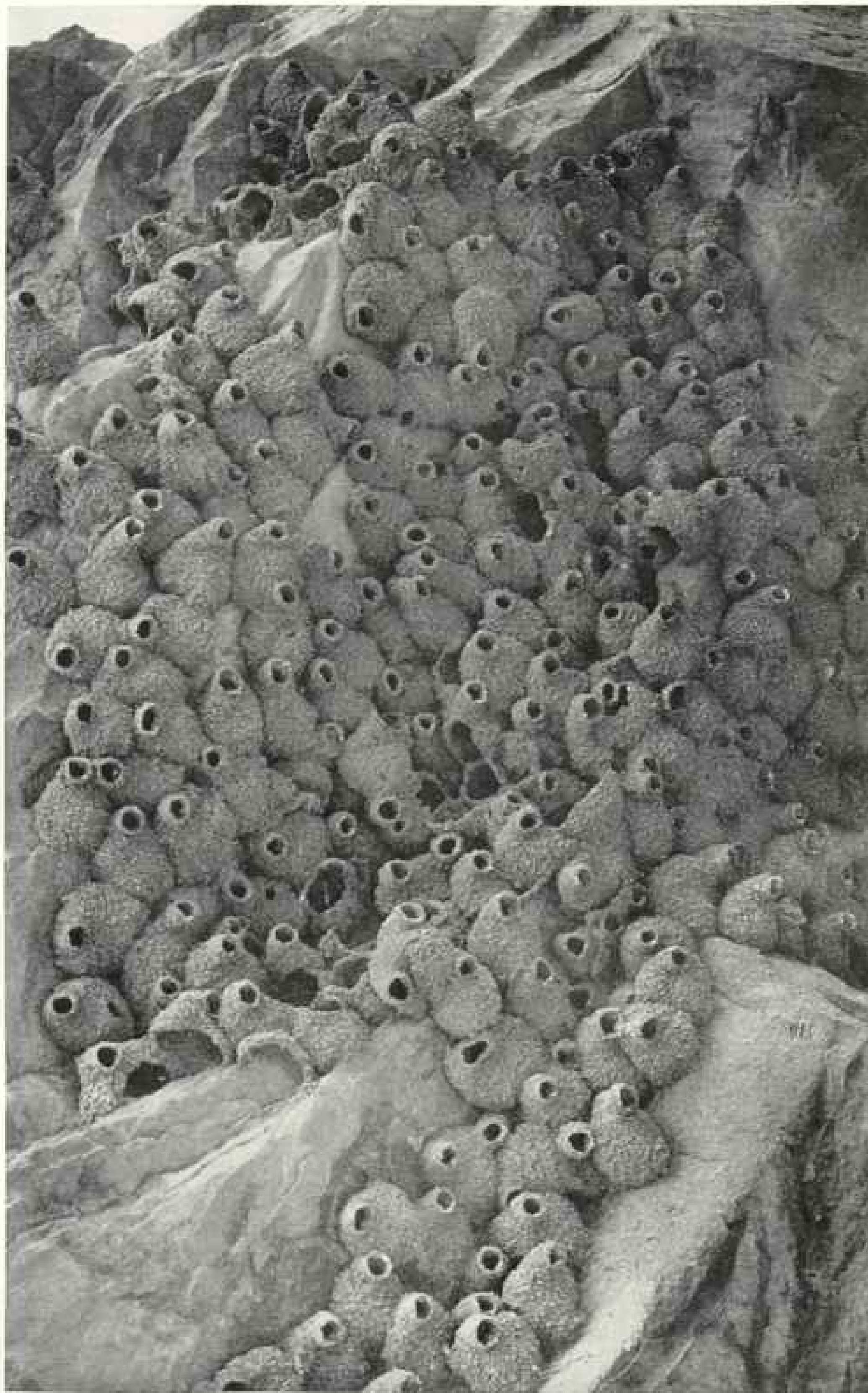
BESIDE LAKE WINDERMERE IS THE PLACE FOR TEA

France has its "committee of a hundred" to prescribe a recipe for crêpes Suzette or a worthy sauce for the noble snail, but England has a committee of millions who make afternoon tea, even to an onlooker, the most delightful of repasts. Simple food and drink are mixed with an air of leisure, gayety, and joy of comradeship around a quilted cozy. "Cozy" is the very word for tea, and beside Lake Windermere the very place for it.

That night at Blackpool I thought of the surging crowds along the noisy shore, the dance halls, big enough for a political convention, with thousands of couples going round and round, of the evil-smelling menagerie which children love, of Lancashire lasses on a holiday singing "I Like Mountain Music" in a dialect no hillbilly could master.

Tomorrow I would motor south to Chester and revisit Carnarvon where I had seen Edward VIII, as a mere lad, pass to his Investiture. Later I would stop at Tintern Abbey, roam the storied halls of Warwick Castle, and watch Southampton give place to the blinking lights of Cowes—then home.

Here I live again those few bright hours beside the English Lakes and by some miracle those lakes and fells so many school-ma'ams know fall into line. Soft shores peer through the mist without a single false note and I can feel the tug of my tires as I skid toward Buttermere. One day in a lifetime. But what a day!



Photograph by Myra Kern

WITH TINY MUD PELLETS, CARRIED ONE AT A TIME, CLIFF SWALLOWS BUILT THESE COZY, JUG-SHAPED NESTS

Some of the occupants are pecking out of their homes. The small white spot visible in the lower of two adjacent openings near the top center of the picture is the marking on a bird's forehead. Clever architects, cliff swallows make the entrances only large enough to admit the owners, and point the holes downward to keep out rain. This colony has utilized a shallow cave made by an overhanging rock near Colorado Springs. In the eastern part of North America, the birds often settle under the eaves of a building, a habit which earns for them the name cave swallows (see Color Plate VI, and text, page 542).

THRUSHES, THRASHERS, AND SWALLOWS*

Robins and Bluebirds are Familiar Members of a Famous Musical Family Which Includes the Hermit Thrush and European Nightingale

BY T. GILBERT PEARSON

President Emeritus of the National Association of Audubon Societies

With Paintings from Life by Maj. Allan Brooks

AT four o'clock one afternoon in January, 1931, a group of men stood on a low hillside in the southern United States and watched robins as they came in countless flocks to roost in a far-stretching titi thicket below them.

It was a stimulating sight, for as the day waned the numbers of birds increased to amazing proportions. In every direction the sky was filled with streaming clouds of robins, all converging toward the swamp. Tens of thousands were arriving every minute, and the flight continued until dark.

"A noise very much like the sound of the surf was made by the birds' wings when they settled down to roost," wrote one observer.

The men on the hillside were joined by others until, when darkness fell, about two hundred were assembled. The company now moved from its point of observation and surrounded a large area of trees and low bushes where myriads of sleepy robins were crowded on limbs and twigs.

With torches and flashlights, the men pushed their way into the thicket, and, with sticks and stout clublike branches of trees, began to beat from their perches the light-blinded and bewildered birds. Many were killed, others injured, and still others captured unhurt to be put to death by the pressure of a ruthless thumb and consigned to the sacks which all the men carried.

GAME WARDENS FIND OUT WHO KILLED COCK ROBIN

Such massacres had been going on at this Alabama winter roost for robins for some time, undisturbed. But suddenly a cry arose, a cry taken up and passed from man to man throughout the fifty-acre swamp. It

* This is the thirteenth article, with color plates from paintings by Maj. Allan Brooks, in the important GEOGRAPHIC series describing the bird families of the United States and Canada. The fourteenth article, with paintings by Major Brooks, will appear in an early number.

was a new sound; it had never before been heard in a Crenshaw County robin roost: "Game wardens!"

Guiltily the men worked their way out of the titi bushes and began to hurry away in all directions. There were only two wardens, but they succeeded in stopping 42 of the robin killers. The majority of those arrested had thrown away their sacks of birds, but from the few captured the wardens dumped 375 dead robins, which were confiscated and given to the local poorhouses and to a hospital, to be cooked for the inmates.

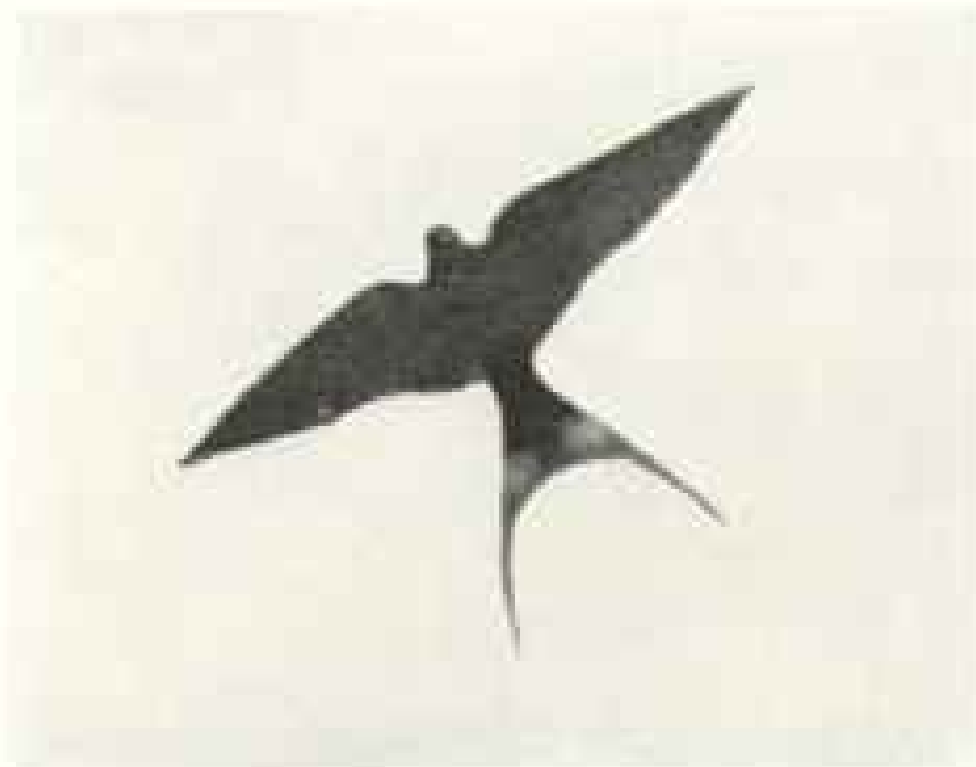
It has not been very many years since there were no robin protection laws in the Southern States. In fact, for a long time after the settlement of what is now the United States the robin was regarded as a game bird that might be killed at any time of year and in any manner.

The first State to pass a law for the protection of the robin was Massachusetts, which in 1818 made it a misdemeanor to kill robins during a period of four months and four days each year. After July 4, however, and until March 1 of the following year, this early law provided, they might be taken at any time.

Virginia was the first State south of the Potomac River to prohibit the killing of robins. After two years of strenuous effort by the Audubon Association, a petition with 10,000 signatures was presented to the State Legislature and a law was passed on March 1, 1912.

Widely in the United States and Canada, the robin is the best-known and most popular of all wild birds, and its arrival in spring is hailed with joy (see Color Plate I and text, page 531). Its song at dawn is the first note of the day to millions of ears.

But over vast areas of the Southland robins are known only as winter residents. They neither probe the lawns for worms



Photograph by A. A. Allen

A FAMILIAR SILHOUETTE

The barn swallow is well known to many farmers, for it likes to nest inside barns and other farm buildings (see Color Plate VI, and text, page 545).

nor sing in the gardens. In scattered flocks they frequent the open pine woods or run about on the ground where the wire grass has been recently burned. They come about plantation houses and negro cabins, and feed on the half-dried berries hanging in clusters from the China trees.

At this season robins grow fat and are easy to secure, so to many a southern boy comes the temptation to shoot a string of them to take home for his mother to cook in a stew or robin pie.

It may surprise some old friends of the robin to learn that the redbreast belongs to the family of thrushes. But students of anatomy, who have a gift for studying feathers, dissecting muscles, and measuring bones, long ago agreed that in many cases birds of quite different sizes and colors may in reality be very closely related.

Furthermore, if it is true that from the embryo to the adult stage an animal recapitulates the history of its race, we may feel ourselves to be witnesses of one stage in the robin's evolution when we see the young ones just out of the nest with their breasts spotted in true thrush fashion (see Color Plate I).

COLONISTS FOUND A "BLUE ROBIN"

This characteristic of the young is shared by another cherished bird companion—the bluebird—which also is a member of the illustrious and musical family of thrushes.

The English people who first settled in Massachusetts found coming about their gardens a little bird which in size, form, and movements reminded them of the

"Cock Robin" that the sparrow claimed to have killed with his bow and arrow.

There was one very noticeable difference, however. Whereas the English robin has an olive-brown back, this bird wore a mantle of blue. So the newcomers named it "blue robin." Today we call it bluebird.

We have three distinct species in North America—the eastern, the mountain, and the western bluebirds (see Color Plate III and text, page 535). The eastern, or common, bluebird occupies most of the country from the Rocky Mountains to Labrador and Florida. Like our robin, it inhabits cities and open farmland country, orchards and woodlots, and keeps away, generally, from dense forests.

Its song is pleasing, its demeanor gentle, and its coloring so attractive that almost everyone enjoys having it near. Hundreds of thousands of nesting boxes have been erected for its accommodation and that of its friends.

THREE WIVES IN A SINGLE SEASON

The first box I put up for bluebirds, nailed to a white-oak tree in the yard, soon contained four blue eggs, and incubation began promptly. But one night calamity came in the form of a neighbor's cat, which crept into the yard, climbed the tree, and thrust a long arm into the box entrance. Dawn disclosed the feathers of the female bluebird scattered about the lawn.

When the male discovered that his mate was not in the box, he began to call loudly for her return, and his anxiety increased with the passing hours. He was very unhappy; in fact, the whole day was ruined for him.

But the very next morning another female came to console him. Evidently the two reached an understanding, for about 11 o'clock we saw her go into the nesting box to look things over.

As a precaution, this time I suspended the box from the limb with a foot of wire, after first removing the ill-fated first wife's eggs and the nesting material.

A new nest was at once begun; eggs were laid and the female began to sit. But once again trouble came. The cat climbed the tree, got onto that swinging box somehow, and pulled the bird from the eggs. Fresh bluebird feathers with chewed wing tips were found in the grass the next morning.

Now the male had still greater cause for

lamentation than before, if we may judge by the fact that 11 days elapsed before he could find a third mate. Two things remain to be told: first, that the cat suddenly died and, second, that five young bluebirds were raised in the yard that spring.

The nest is always made in a cavity—in a bird box if there is one handy; if not, a hole in an old apple tree or in a fence post appears to be just as acceptable. Last spring, while on a motor trip, I found at least a dozen bluebird nests in mail boxes fastened to posts along the country roads.

Nesting cavities made by woodpeckers are generally abandoned after one season's occupancy, and these attract bluebirds. Holes made by red-headed woodpeckers I have found to be particularly to their liking. The entrances are sufficiently large to admit a bluebird's body, but are small enough to keep out a sparrow hawk or a screech owl, and this is an important consideration in localities where these birds of prey are numerous. The flicker's nesting hole is accessible to either of these enemies, and this may be the reason it is rarely used by bluebirds.

COUSINS OF THE NIGHTINGALE

Woodpeckers lay their eggs on fine chips of wood which are left in the hole when it is being constructed, but such a simple arrangement does not suit the bluebirds. Before laying their eggs, they line the bottom of the cavity with an ample supply of dry grasses.

In North America there are 17 species



Photograph by S. A. Grimes

GROCERIES FOR THE FAMILY DINNER

Grasshoppers are a favorite "course" on the eastern bluebird's menu. The nest cavity is a "used" one. A hairy woodpecker built it in Florida, then moved on, leaving an apartment for other dwellers. Imitation woodpecker's holes, drilled in logs by bird lovers, often attract bluebirds and other feathered guests (see Color Plate III, and text, page 535).

and exactly the same number of subspecies of the family of thrushes (*Turdidae*) to which the robin and the bluebird belong. All of them are singing birds, and the exquisite flutelike notes of the thrushes are the most beautiful of all the sounds that come from the avian chorus. The European nightingale, immortalized by poets, is a thrush, and, on this side of the Atlantic, Nature offers few if any sweeter songs than the vesper music of the hermit thrush (see Color Plate II and text, page 534).

Along the north rim of the Grand Canyon in Arizona stretches for many miles a high plateau known as the Kaibab. It is



Photograph Courtesy National Association of Audubon Societies

PURPLE MARTINS TAKE TO A VILLAGE OF HOLLOW GOURDS

These birds like to nest in cavities, which they line with weeds, straw, rags, or any other material at hand. In the West, where gourds or man-made boxes are not often available, they find homes in hollows of trees, in cliffs, or even between rocks (see text, page 542).

clothed with a coniferous forest and is inhabited by perhaps the most famous wild deer herd in America. The region is a Government game preserve, and, when overbrowsing threatened to bring starvation to the tens of thousands of deer roaming the forest, some two dozen men representing conservation organizations, natural history societies, and Federal agencies were assembled to see what could be done about it.

One day these men were clustered about some shrubbery which they were examining.

"Listen!" said one of them suddenly.

The clarion notes of a hermit thrush were quivering in the air.

Until the song was finished everyone stood gazing toward the unseen singer, while its liquid notes were repeated over and over again. These men in their daily lives deal with the problems of wild life and forest preservation in their most practical aspects. No one could call them sentimentalists, yet for a few minutes they seemed completely under the spell of those enchanting notes.

One summer my tent stood in a white-pine grove beside a lake in the Adirondacks. One evening, after we had cooked and eaten our supper, we sat on the lake shore and listened to the song of a hermit thrush, coming with great clearness across the water from the farther shore, a quarter of a mile away.

The little boys from the city, exasperatingly indifferent to many of the sights and sounds of the forest, seemed really interested in the song of this bird. I fondly dreamed that this, the most gifted

of all our sylvan musicians, might awaken in them some interest which would in time lead them to become students of ornithology. But maybe they were only tired and sleepy when they sat so still during the vesper service of that wonderful songster of the wilderness.

WOODLANDS RING WITH FLUTELIKE MUSIC

Only the favored few may hear the hermit, a true dweller of the deep woods. But far more familiar is the song of the wood thrush (see Color Plate II and text, page 534). In spring the groves and woodlands

from South Dakota to the Atlantic coast ring with its unhurried musical *ee-o-lee*. At dawn its call brings cheer to the new day. In the evening it soothes like a benediction.

In the strains of the wood thrush some bird lovers have noted resemblances to a part of Faust's appeal to Marguerite in Gounod's opera. Others have found suggestions of musical phrases from Weber and Handel.

Along watercourses, where trees are tall and where ferns and skunk cabbages grow, the wood thrush loves to sing. "Swamp robin" is one of the names by which it is known. While much more shy and retiring than the robin, the wood thrush, like it, nevertheless comes to well-shaded parks and to the outskirts of towns and cities where large trees have been left standing. It is an inhabitant of deciduous woods, usually stopping short at the edge of evergreen forests.

The nest is often made in a three-forked upright shoot of a sturdy sapling. Again, it may be saddled on some horizontal bough, with its sides supported by two or more twigs, or may rest in grapevines growing thickly over some stalwart bush. A little mud or vegetable mold of decayed forest trees usually gives form to the interior of the nest and, when dried, adds to its firmness. Large dead leaves are much used and, now and then, scraps of paper are employed.

Once I saw a photograph of a wood thrush's nest from which plainly protruded the end of a five-dollar bank note.

The wood thrush is not one of the earliest birds to engage in nest-building.



Photograph by A. A. Allen

BANK SWALLOWS MANEUVER LIKE TINY COMBAT PLANES

They eat their dinners on the wing, swooping and diving to catch flying insects. Bank swallows are so called because they excavate tunnel-like homes by burrowing two or three feet into the side of a sand bank or gravel bed (see Color Plate VII, and text, page 545).

In New York City studies were made of the time when birds begin to nest in that region. They showed that the first bird to begin egg-laying was the great horned owl, on February 28, and the last was the goldfinch, on June 20. The wood thrush, fifty-second on the list, was ready to begin the incubation of its eggs on May 17, or 27 days later than the first robins.

THE MOCKINGBIRD IS A WORLD-FAMOUS VOCALIST

Since the incubation of robins' eggs is complete in 13 days, and since the young remain in the nest only two weeks, it may

very well be that on the day a wood thrush begins to incubate she will hear the anxious call notes of her robin neighbor, whose young have just left the nest.

Like the thrushes, the members of the family Mimidae, or thrashers and mockingbirds, are gifted singers. This distinctly American group is composed of more than 60 species, of which 11 species and three subspecies are found in the United States. They include such favorite vocalists as the catbird, the brown thrasher, and the world-famous mockingbird (see Color Plates III and IV, and text, pages 538 and 539).

The rollicksome outpouring of the mockingbird's song constitutes one of the most amazing vocal performances in the bird world. In my opinion, it and the hermit thrush are unquestionably the two outstanding songbirds of the Western Hemisphere.

Mockingbirds are especially abundant in the South Atlantic States, where at times one may hear the voices of half a dozen singing at once.

When the hermit thrush feels the impulse to sing, it mounts to some limb, and, as a rule, remains stationary while it devotes its entire attention to the business in hand. The mockingbird takes its singing much less seriously. It may begin its song on the top of a tree, a fence post, or a chimney, but is easily diverted if it notices something of interest on the lawn or if a neighboring mockingbird invades the particular area to which it has laid claim. After inspecting the object which had looked palatable or chasing its rival a short distance, it returns to its perch, often resuming its song while still on the wing.

There is infinite variety in the mockingbird's singing. The long-tailed black-white-and-gray minstrel produces an astonishing series of notes, some of these but rarely, others repeated over and over again, and all coming with such easy abandon that at times one may wonder if the bird is actually conscious that it is singing.

Sometimes it rises for many feet, and with dangling legs drops again to its perch without interrupting the song that flows forth unceasingly. At times it will sing in tree or bush, hopping from limb to limb.

The mockingbird's scientific name, *Mimus polyglottos*, meaning "mimic of many tongues," is a correct characterization of numerous individuals. I have

heard them give with precision the mewing cry of a catbird and the plaintive, staccato nesting call of a sparrow hawk. Almost any bird of the neighborhood may be mimicked in such a way as to deceive the unaccustomed ear.

Especially famous is the singing of these birds on quiet, moonlight nights, when they utter tones which, it would seem, could come only from the spirit land. What would a Florida orange grove be, even in full blossom, without the roundelay of a mockingbird?

Brown thrashers sing much as do the mockingbirds, although the music comes less spontaneously and lacks a certain power of appeal. In a land where the mockingbird was not found, the brown thrasher might well assume the role of the Caruso of the region, but not otherwise.

SWALLOWS OF A FEATHER FLOCK TOGETHER

Swallows are useful and gentle little birds that twitter rather than sing, and many of them prefer to spend much of their time flying about near the homes of men. They are gregarious in habits, large numbers often being found associated together. They feed wholly upon insects which they capture while on the wing.

Thirteen species of the swallow family (Hirundinidae), with five additional subspecies, have been recorded in our country.

The purple martin (Color Plate VI, and text, page 542) is the largest member of the group, and, although it is eight inches in length and has a wingspread of almost 16 inches, it would take nearly a dozen of them to weigh one pound!

In spring and summer purple martins inhabit much of North America and are abundant especially in the Southeastern States. They may be attracted easily by erecting a pole hung with a number of gourds or topped by a many-roomed bird box (see illustration, page 526).

Any farmer will tell you that martins will keep hawks away from the chickens. This belief is entirely accurate, for martins defend their homes courageously and will drive hawks or crows from the neighborhood.

Before the coming of the white man purple martins must have used hollow trees as nesting places, a habit to which they still revert on occasion. In a wooded park at Devils Lake, North Dakota, and again

SOME SONGSTERS AND FLYERS OF WIDE REPUTE



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PERKY BUSYBODY OF OUR LAWNS IS THE ROBIN

Millions know the note of the sociable redbreast (lower, young right), a true thrush, whose bright waistcoat is a cheerful contrast to the first green buds of the year. This beloved harbinger of spring, now generally protected, formerly was killed by the thousands as a game bird. The eastern variety is pictured here. A highland dweller is the sweet-voiced Townsend's solitaire (upper left), distinguished by white eye rings and light markings on wings and tail feathers. Misty woodlands are the haunts of the varied thrush (upper right, with young), another western relative of the robin.

near a railway station in eastern Texas, I found small colonies using a large, partially dead tree, the decayed wood of which had been tunneled in a haphazard manner by woodpeckers.

In the pine and palmetto woods twenty miles south of Fort Myers, Florida, I dismounted from my horse at noon one day for lunch. While the guide fried the bacon I examined six pine trees which appeared to have been killed by a single stroke of lightning. Five of them contained holes originally made by flickers. One of these was occupied by a Florida grackle's nest and three others were inhabited by purple martins. Two martins were carrying straw up to the fifth hole, but as often as they came they were met at the entrance by an array of daggerlike bills. In a few days the young flickers would depart, so in the end the hole may have become the abode of the persistent home-seeking martins.

In Bismarck, North Dakota, I found martins nesting under the eaves of a building on the busiest corner of the town, and in Seattle I watched them carrying nest material to holes left in the side of a recently constructed warehouse. Once I discovered a pair feeding their young in the hood of one of the electric arc lamps at that time lighting the thoroughfares of Plant City, Florida.

Immediately after the close of the nesting season martins assemble in flocks and often establish their roosts in towns, where their numbers, increasing daily, grow into huge proportions. Many people living in Atlanta can recall the great martin roost in the trees bordering one of the residential streets. For several weeks every summer they were a decided annoyance to inhabitants of the neighborhood and to those who had occasion to pass along the street at night. In 1926 two policemen one evening shot into the roosting birds and killed more than four hundred.

WHAT'S IN A NAME?

For some years there was such a roost in a grove in Greensboro, North Carolina. One evening I went to the top of a tall building and watched the great hosts arriving for more than an hour. My estimate was 200,000 birds and this I believe to be conservative. They did not leave the neighborhood until late summer, but by the time the trees in the grove had lost their leaves, I knew the martins were in

their winter home somewhere in the wilds of Brazil.

Several of the swallow family apparently have been named because of the particular nesting environment which is supposed to be peculiar to each; for example, bank swallows nest in sand banks. But the name of the bird is not always descriptive of the place where its nest is found and this fact sometimes causes confusion.

Once I went for a bird walk with Mrs. Pearson in a region that was new to us. As we passed an unused summer cottage some swallows flew from the wide veranda. I pointed out two nests on a joist and said that they were made by barn swallows.

"But this is a house, not a barn," she objected.

"Well," I said, "that's what they are—barn swallows' nests."

A little later we stood watching a row of mud nests stuck to the weatherboarding under the eaves of a barn.

"This is a colony of cliff swallows," I told her.

"Cliff swallows?" she repeated doubtfully.

It so happened that the next day we visited an island in the near-by lake. Along the cliffs on one side there were many cracks and clefts in and out of which birds were passing.

"What kind are they?" she asked.

"Tree swallows," I replied.

"Oh," she said hopelessly, "so barn swallows nest in houses, cliff swallows nest in barns, and tree swallows nest in cliffs!"

Townsend's Solitaire

(*Myadestes townsendi*)

A tuneful resident of the Far West is this gray bird with its white eye rings and white outer tail feathers that flash when it darts about (see Color Plate I). As its name indicates, it is a shy lover of lonely places. It makes its home along steep mountain slopes and gorges from Alaska to Mexico and eastward to the Black Hills.

The solitaire is eight or more inches long, about the size of the catbird which it somewhat resembles. It weighs about one and a half ounces.

Although undoubtedly allied to the thrushes and possessing some of their habits, particularly that of running on the ground and stopping suddenly like a robin, the solitaire also reminds one of a fly-

catcher. When it darts after a passing insect and promptly returns to its lookout perch, its movements suggest kinship to the phoebe.

A gifted singer, it pours forth its notes in the clear mountain air with a gushing spontaneity that suggests the famous songster of the South—the mockingbird.

Its food, during the warm part of the year, consists mainly of insects. In winter it resorts to wild berries growing on vines or on deciduous and coniferous trees.

Some naturalists speak of seeing solitaires in flocks of considerable numbers, but when observed by the writer, chiefly in Wyoming and New Mexico, never more than two were seen together.

Many of these birds winter south of their summer range, although some remain as far north as British Columbia.

Varied Thrush

(*Ixoreus naevius*)

In the Puget Sound region of Washington one may hear the banded robin, known as the varied thrush, singing in the autumn when other birds have lapsed into silence (see Color Plate I).

Mr. Fuertes, after listening to its song in the forests of Alaska, wrote:

"It is a single, long-drawn note, uttered in several different keys, some of the higher pitched ones with a strong, vibrant trill. Each note grows out of nothing, swells to a full tone, and then fades away to nothing, until one is carried away by the mysterious song."

In summer the varied thrush inhabits chiefly heavily forested regions where fogs are frequent and the foliage is often dripping wet. It breeds in the Pacific coast area from northern Alaska to northern California, and winters from southern Alaska to southern California.

The nest, built in sturdy saplings or trees of medium height, is composed of twigs, grasses, and moss. The greenish eggs, three and sometimes four, are sparingly decorated with spots or small blotches of varying shades of brown.

The birds feed upon insects, worms, berries, and various forms of mast, all of which are generally gathered from the ground.

In winter they may gather in flocks, sometimes numbering many thousand individuals, as robins do in the South.

Robin

(*Turdus migratorius*)

This red-breasted, handsome member of the thrush family is in many respects America's outstanding bird citizen (see Color Plate I). Its numbers are impressive, its personality more so. To the North it comes as a herald of spring and its cheery song is familiar to millions.

Deep woods are not to the robin's liking, so the clearing of forests which formerly covered much of eastern North America has been to its advantage. Throughout the years this native bird has greatly increased in numbers (see text, page 523).

To be sure, cherry raisers in New Jersey and strawberry growers in Florida cry out against the robin's love for fruit, and secure State and Federal permits to shoot the marauders. Yet among Americans as a whole the robin is a cherished friend and its popularity has never waned.

The robin's song is often heard before a rain, in the early morning and evening, and during the nesting season at almost any hour of the day. A cheerful warble made up of ascending and descending phrases, it sounds as if the singer were breathlessly repeating *cheerily cheerily cheerily cheerily*, with the syllables rather badly slurred. Other familiar utterances include loud calls of distress and alarm raised when a prowling cat threatens the young, a fighting cry, and a *tut-tut* note delivered with a bob of the tail as the robin flies up into a tree.

Soon after their early morning concert robins are seen on the lawn, busily hunting earthworms. Brisk and businesslike, they stop suddenly, erect and motionless, then pounce upon their slippery prey. They also eat quantities of noxious insects.

A good home-maker, the robin builds a workmanlike nest which may be found at almost any distance from the ground about houses or in trees. It is a thick bowl of mud held together with blades of grass, reinforced with leaves and weed stalks, and lined with soft grasses. In shaping the mud shell the mother bird uses her breast, turning around and around. The eggs are so striking and unusual in hue that they have given their name to a color.

The robin has many natural enemies—snakes, jays, crows, hawks, owls, and others. In an aspen grove on a sagebrush-covered mountainside in Utah, I found a robin's nest about three feet from the



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THEIR SONG REPERTOIRE IS AS VARIED AS THEIR DRESS IS DRAB

With drop-shaped spots of brownish-black, the discreet wood thrush (center) is the handsomest of the clan. Its delightful trill suggests certain reitrains of classic composers. One student estimated that an olive-backed thrush (upper left) sang 4,360 times daily during its spring concert. The somber, gray-checked thrush (upper right) sings endlessly in the short far-northern summer. The ascending song of the elusive hermit thrush (lower left) is heard in northern or mountain forests. In eastern woodlands the shy veery, carrying a grub for its young beside it, whistles a resonant note.

SOME SONGSTERS AND FLYERS OF WIDE REPUTE



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BRILLIANTLY ATTIRED BLUEBIRDS ANNOUNCE SPRING'S ARRIVAL

In gay costume the eastern bluebird (upper group, male, young, and female) follows the robin north to "pipe in" warm weather. Devoted "family man," the bluebird often lodges in a box placed among fruit trees by the wise orchardist who knows his feathered guests will feed on injurious insects. The western bluebird perched outside its home, with the female about to carry in grass for the nest, is marked by reddish back as well as breast. The striking cerulean blue of the mountain bluebird (center right, female right) is seen in the West. The slinking of the drab catbird (below) through thickets is even more feline than its "mew."

ground. In it a wren was busying itself making small punctures in the blue eggs.

Robins make their nests and rear their young as far north as the tree limits of Alaska and Labrador. In winter the more northern birds move southward to the Central and especially the Southern States. Robins sometimes safely winter in the North, even in cold, snowy, central and western New York State, living in swamps, thickets, or gullies and feeding on wild berries.

Five varieties are recognized—the eastern robin (*T. m. migratorius*); southern robin (*T. m. achrosterus*); northwestern robin (*T. m. caurinus*); western robin (*T. m. propinquus*); and San Lucas robin (*T. m. confinis*). Their songs are very similar and their food and nesting habits vary only to the extent that might naturally be expected of a species inhabiting such a wide variety of regions.

American robins have been introduced into England and have become locally established there.

Olive-backed Thrush

(*Hylocichla ustulata swainsoni*)

This little traveler is one of the few species whose journeys twice a year extend over much of the length of the two Americas (Color Plate II). In the extremity of its range it makes a round-trip pilgrimage of more than 17,000 miles.

The majority of people who look for the olive-backed thrush see it only as a migrant. In spring in the New York region we expect it to appear during the second week of May and to depart by the last of the month. At that time it is returning from its winter sojourn in southern Mexico or perhaps even as far south as Patagonia.

Some of these long-distance flyers stop to breed in northern New York State or in New England. Others continue northward to Newfoundland, to the Mackenzie River, or even to the coast of Alaska that looks out over the icy waters of Bering Sea.

In autumn I look again for the migrating olive-backs near my home and usually find some of them between the middle of September and the fifteenth of October.

In the Pacific coast country this form is replaced by a subspecies called the russet-backed thrush (*H. u. ustulata*).

Gray-cheeked Thrush

(*Hylocichla minima aliciae*)

So closely does this species resemble the olive-backed thrush that only a most experienced observer may be expected to tell them apart, when perchance they both appear in the shrubbery of the lawn or garden during their seasonal visits. The slightly more pronounced eye-ring of the olive-back is the most distinctive mark (Color Plate II).

The breeding range of the gray-cheeked thrush is a narrow strip of country just below the northern tree limit, extending from Labrador westward to Alaska and northeastern Siberia.

Wood Thrush

(*Hylocichla mustelina*)

Some of the thrushes are difficult for the bird student to name with certainty, but the wood thrush stands out as a conspicuous exception (Color Plate II). Its breast and sides are thickly sprinkled with round black spots, whereas the similar markings on the underparts of the other thrushes are not so noticeable and are more in the nature of short bars or stripes.

Furthermore, this is a large thrush, although smaller than a robin. It is a little more than eight inches long and has a wingspread of 13 inches, being thus about two inches shorter than a robin and three inches smaller as measured from tip to tip of the wings.

These birds pass the winter from southern Mexico to Costa Rica. In the District of Columbia they appear shortly after the middle of April, filling the parks with their music (see text, page 526). After rearing their young they depart southward about the second week in October.

Hermit Thrush

(*Hylocichla guttata*)

If you come upon a thrush which has a tail noticeably browner than the rest of its plumage, mark it well, for you have seen the famous hermit thrush (see Color Plate II, and text, page 525).

A true hermit, the sweetest singer among all the thrushes dwells in deep and somewhat swampy woods and seems eager to elude the notice of humans who may, perchance, invade its solitudes. Because of the marvelous quality of its music it has been called "American nightingale."

In summer the hermit thrush inhabits much of North America from central Alaska to California and in the East from southern Quebec to the mountains of Virginia. It is divided into seven subspecies.

Veery

(*Hyllocichla fuscescens fuscescens*)

There is great charm in the silvery notes of the veery (see Color Plate II). The song begins strongly and diminishes in volume as it proceeds. It has the peculiar effect of a continuous flow of melody, whirling rapidly downward along some invisible spiral cord. This song is given at all times of day, but it is especially noticeable in the early morning and late evening.

One summer, finding myself in a region where veeries were singing all about the camp, I determined to find a nest. After three days of fruitless search, I wired a friend who knew the bird well, and asked for help.

"Nest on or near the ground," he replied.

I already knew this much from the bird books. What I wanted to know was in what kind of places I should look.

After two weeks of daily search I found a nest with four young, but not entirely through my own efforts. It was pointed out to me by an excited bird of another species, a red-eyed vireo. She led me to it by her querulous notes as she sat on a low limb overhead, shouting anathemas at the four youthful heads that were raised repeatedly in the hope of being fed. The nest was on the ground among the stubs left where a bush had been cut down.

The veery breeds in eastern North America, south to North Carolina and the mountains of northern Georgia. When it leaves us in autumn it goes to Colombia, British Guiana, or Brazil, where it spends the winter. The western subspecies is the willow thrush (*H. f. salicicola*).

Eastern Bluebird

(*Sialia sialis sialis*)

Perhaps no other feathered resident has a firmer hold upon human affections than the gentle, lovable bluebird (see Color Plate III, and text, page 524).

Its arrival from the South is made known by a delicate, purling warble with a wistful refrain that seems to say, "Dear, dear, think of it, think of it." Soft and low comes the two-syllabled answer of the female.

They are even better prophets of spring than the robins, for far fewer bluebirds winter in the North. After passing the summer in the Northern States and the south-central and eastern provinces of Canada, most of them spend the winter in the States below the Potomac and the Ohio Rivers. At this season they are scattered all over the region and are readily seen. One cold day last year I counted 22 of them at one time.

When a bitter cold storm sweeps the country several bluebirds may seek shelter for the night in the same cavity of a tree. In 1895, when sleet covered much of the South for many days and greatly reduced the bluebird population of our country, I knew of eight dead ones that were removed from a single woodpecker's nesting hole.

In their conjugal relations bluebirds are devoted, as befits a bird which has come to be a symbol of happiness.

From a purely practical standpoint it is highly desirable to attract bluebirds to the garden and orchard. Throughout the summer they may be seen killing cutworms whenever they can find them. Caterpillars of many varieties also are in danger when the gentle bluebird is in the neighborhood. It helps, too, when outbreaks of cankerworms occur. During the year a fourth of the bluebird's food consists of grasshoppers. In autumn and winter various wild berries are eaten. A subspecies, the azure bluebird (*S. s. fulva*) is found from southern Arizona to Veracruz, Mexico.

Western Bluebird

(*Sialia mexicana*)

Unlike the eastern bluebird, this beautiful species (see Color Plate III) is no singer. Its few twitterings are in no way comparable to the sweet warble of its relative.

Like the eastern species, however, the western form often raises two or more broods in a season. There is an authentic record of a pair building six nests one year, in each of which six eggs were laid. This unusual happening, however, was brought about by the egg-collecting habits of an oölogist who systematically robbed the birds as each clutch was deposited.

In the United States there are two varieties of this bluebird. The better-known type (*S. m. occidentalis*) breeds from British Columbia to western Montana and south through California. It winters in the south-



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A VERSATILE MIMIC IS THE MOCKINGBIRD

The wheelbarrow's squeak, the rooster's crow, the postman's whistle—all are within the vocal range of the mocker (upper right and flying). No less brave than talented, it attacks other birds, cats, dogs, and even men who molest its nest. The sage thrasher (upper left), songster of western mesas and plains, also is gifted in song but is heard less often than its mimicking cousin. In the Southwest lives the curve-billed thrasher (lower left). Often incorrectly called a thrush is the brown thrasher (lower right), an accomplished singer.

SOME SONGSTERS AND FLYERS OF WIDE REPUTE



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PLUMAGE OF WESTERN THRASHERS IS PALE, AS IF FADED BY HOT SUNS

Dwellers of valleys and deserts, these sweet-voiced birds live close to the ground. In fact, Leconte's thrasher (lower right) trusts as much to its strong, long legs as to its wings to escape danger. It can easily keep ahead of a trotting horse. The under-tail coverts, or crissal region, conspicuous with a dab of chestnut, gave the crissal thrasher (lower left) its name. Shy Bendire's, singing above, builds its nest in brush or cactus. The California thrasher (upper right) is an expert at probing in the earth with its long, curved bill to capture insects.

ern parts of its range and in Baja California. The other variety is the chestnut-backed bluebird (*S. m. bairdi*), which is known to occur in summer from Utah and central Texas southward to Durango and Zacatecas.

Mountain Bluebird

(*Sialia currucoides*)

Late one afternoon a number of us gladly dismounted from our horses by the side of the Snake River where it goes rushing on its way through western Wyoming. The unstrapping of saddle- and pack-horses had begun when, looking up along the rough trail by which we had descended from Two Ocean Pass, I caught sight of a bird that flew to the side of a dead tree and disappeared.

With blankets scattered about and my tepee not yet erected, I deserted camp and soon found a pair of mountain bluebirds carrying food into an old woodpecker hole. I stayed and watched that nest until sundown. The plumage of the male was a most exquisite cerulean and reminiscent of certain shades seen in the waters of the bay of Nassau, or in the Blue Grotto of Capri (see Color Plate III).

As I watched him flying about, I found myself pitying certain eastern bird lovers who were not there to thrill at the sight of the gentle and amazingly colored bird of this far-away wilderness. The mountain bluebird breeds from southern Yukon Territory and North Dakota southward to the Mexican border.

Catbird

(*Dumetella carolinensis*)

The catbird is one of the most common and best-known feathered inhabitants of southern Canada and the United States. Except for a black crown and chestnut under-tail coverts, it is slate-colored both above and below (see Color Plate III).

Because of its inconspicuous coloring and slinking habits, the catbird is far more often heard than seen. Its plaintive *mew* is uttered in the shrubbery of the lawn, the vines in the gardens, and the thickets in fields and along fence rows. Its song is rich, varied, and prolonged, and usually is produced when the performer is well hidden in thick foliage.

Besides being a very entertaining bird to have about the premises, the catbird is also a valuable one, destroying numbers of in-

jurious insects. Its taste for domestic fruit is pronounced, as strawberry raisers frequently attest.

The catbird's bulky nest is concealed in vines or thick bushes. It is composed of twigs, leaves, rootlets, and often fragments of soft bark stripped from cedar trees. The eggs, usually four in number, are dark green.

Sage Thrasher

(*Oreoscoptes montanus*)

It has been my good fortune to meet the sage thrasher now and then in its summer home in the sagebrush country of the West, and one December day I found it in the chaparral of south Texas.

Several miles north of the Enchanted Mesa of New Mexico the pueblo of Laguna has basked in the sunshine for centuries. From the adobe buildings a path worn deep in the rock leads to a water hole of uncertain attractiveness. It was here, where moccasined feet have long trodden, that I first saw the sage thrasher (see Color Plate IV).

With elevated tail it ran along the ground, pausing at intervals to raise its wings in mockingbird fashion. But for its spotted breast it might have passed for a mockingbird, so closely did its form and movements resemble those of that famous songster. It is a gifted musician and its impassioned singing is heard in spring over vast expanses of the elevated regions of the Far West.

For food the sage thrasher depends chiefly on insects, but it does not hesitate to visit the ranchman's garden in search of berries or grapes.

The nest is placed in low bushes and the four or five green eggs are covered with large brown blotches.

The summer home of the sage thrasher extends from British Columbia to central California and eastward to the border of Nebraska. It winters from southern California and central Texas southward through northern Mexico.

Mockingbird

(*Mimus polyglottos*)

Few birds spend as much of their time in song as does the mockingbird (see Color Plate IV). I have noted individuals which, it seemed to me, would literally have sung all day had they not deemed it necessary to pause frequently to chase away other

birds that came too near to suit them. Relatively little time was employed in hunting food.

Furthermore, they sang for half the night, especially when the moon was shining. They had tales of love to tell, and, like the Ancient Mariner, they had to speak right on. Mockingbirds sing not only in spring but in summer and even on pleasant winter days. No other bird pours forth such a torrent of notes.

If asked to choose my favorite bird, I would name offhand the mockingbird, for I hold many memories of his glorious song at Chevy Chase, Atlanta, New Orleans, Pasadena, and in a thousand rural districts.

Mockingbirds are not migratory; any wanderings by individuals are of short duration and, of course, are made in quest of a more readily acquired food supply.

The eastern mockingbird (*M. p. polyglottos*) ranges from southern Iowa and Maryland southward to the Gulf of Mexico and eastern Texas. Western mockingbirds (*M. p. leucopterus*) inhabit the country from central California and western Kansas to Veracruz and Cape San Lucas.

Curve-billed Thrasher

(*Toxostoma curvirostre*)

The curve-billed thrasher (*T. c. curvirostre*) and its two associated subspecies, Palmer's thrasher (*T. c. palmeri*) and the Brownsville thrasher (*T. c. oberholseri*), inhabit the warmer arid regions of southern Texas, New Mexico, Arizona, and northern Mexico. They are all birds of the sagebrush, cactus, and mesquite countries (see Color Plate IV).

Brown Thrasher

(*Toxostoma rufum*)

This is the "merry brown thrush" of our childhood books. But it is not a thrush. It is too brown; its tail is too long; and its eyes are bright yellow and not dark brown (see Color Plate IV). It is a famous singer and by many is regarded as a close second to the mockingbird.

Wherever trees are intermingled with shrubbery, especially if vines or briar tangles are present, there is a good chance of finding the brown thrasher. It prefers dry uplands to swamps or the borders of ponds and streams.

The brown thrasher usually appears in

the Northern States and southern Canada from the sixth to the fifteenth of April and departs in October for its winter home in the Southern States and Texas. Throughout much of its range it is an abundant bird, and, since it has a voracious appetite and provides well for its brood, the insects it destroys are countless. It consumes ants, thousand-legs, beetles, grasshoppers, and no end of caterpillars. It also feeds to an extent on grain, fruit, and berries. The bulky nest with its spotted eggs is hidden in thick vines or bushes.

Bendire's Thrasher

(*Toxostoma bendirei*)

The various long-billed thrashers of the semi-arid deserts of the Southwestern States are very much alike in color. All are pale brownish-gray or drab as if bleached by the rays of the sun beating so pitilessly upon the rocky mesas and the cactus reaches of the sandy flats.

In deserts from southeastern California to southwestern New Mexico, one discovers the summer home of Bendire's thrasher (see Color Plate V). It also ranges across the border into northern Sonora.

California Thrasher

(*Toxostoma redivivum redivivum*)

This bird's song resembles in many respects that of the mockingbird. It is delivered from the topmost bough of some tree or tall bush. Such a position when singing seems a little odd, since at all other times the bird keeps close to the earth and is usually well hidden from view in the chaparral. It likes to run along the ground and when alarmed will often seek safety by this means rather than by flying (see Color Plate V).

It ventures from cover now and then in search of food, often spading up the ground with its bill as it looks for worms or grubs. There is much food also to its liking on many bushes, both wild varieties and those grown in gardens. Seeds and insects of many kinds are taken. Its three or four spotted eggs are laid in a nest of interlaced sticks and twigs, lined with grass, rootlets, and strips of bark. Usually it is well hidden in a bush or thicket.

The range of the California thrasher is west of the Sierra Nevada from Monterey southward into Baja California.

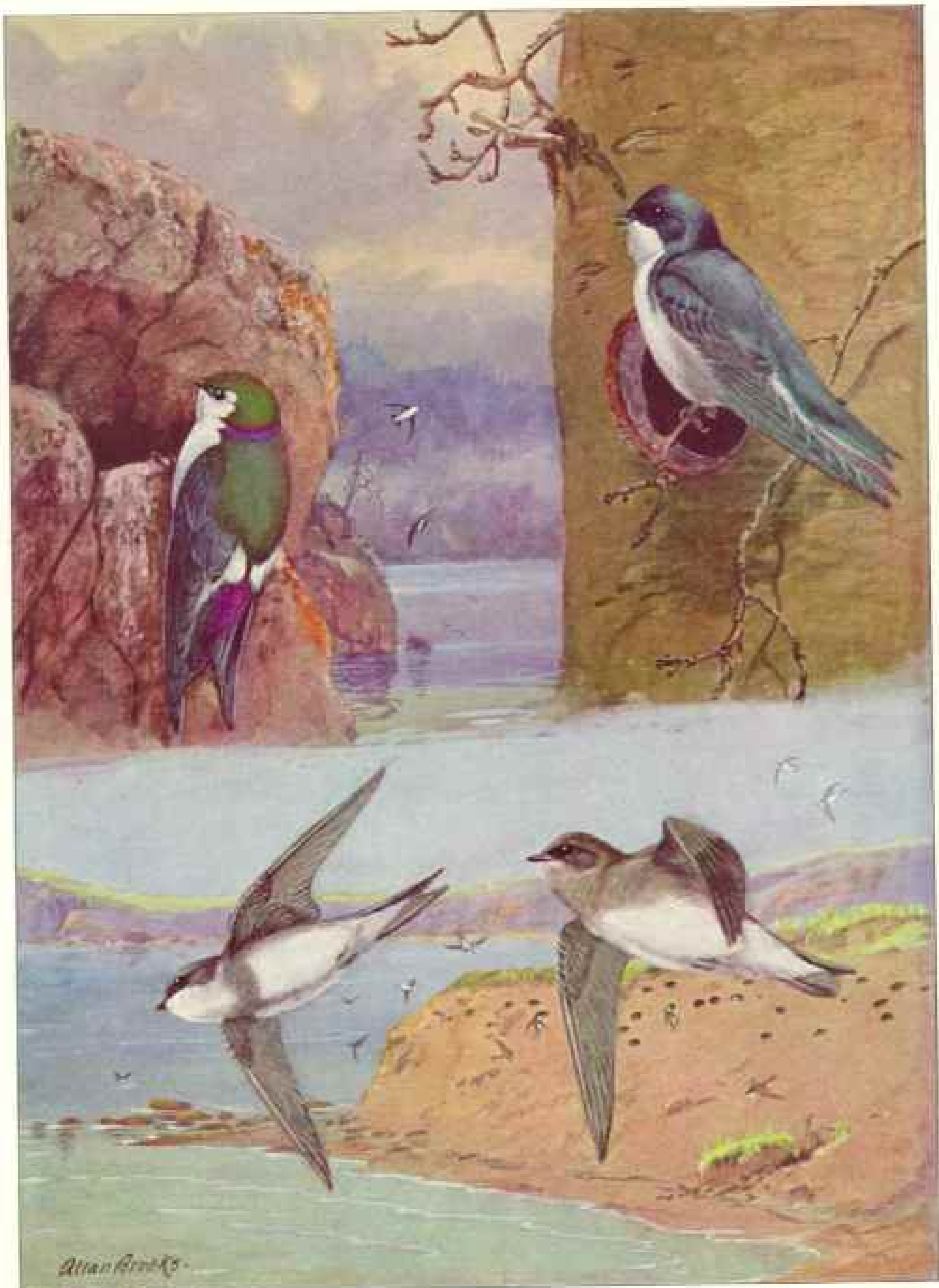


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STRONG-WINGED SWALLOWS SNATCH THEIR MEALS FROM A TABLE OF AIR

Wasps, flies, and beetles, many of them crop destroyers, are targets of the swooping, triangular-billed purple martins (upper group, male left, female right, young male flying). Largest of the swallow tribe, these aerial acrobats, which often drive off crows and hawks, are always welcomed by farmers, who erect for them many-roomed apartment boxes in poultry yards. The cliff swallow (flying below) is a cliff dweller in the West, but in the East it builds mud nests under barn eaves. The barn swallow (right) nests inside on the rafters.

SOME SONGSTERS AND FLYERS OF WIDE REPUTE



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MEMBERS OF THE SWALLOW FAMILY DIFFER WIDELY IN HOME TASTES

On the wing are bank and rough-winged swallows, often confused, but readily distinguished by the dark band across the white breast of the former. Both nest in river banks or other earth walls where they may be neighbors of the phoebe and kingfisher. Dead stumps and rotted trees are the usual homes of the tree swallow (upper right). In western North America the trim violet-green swallow (upper left) has been known to occupy a man-made house, padding it with feathers snatched in flight from a bird-lover's fingers.

Crissal Thrasher

(*Taxostoma dorsale dorsale*)

From Utah to Baja California and from southeastern California to western Texas is the homeland of the crissal thrasher (see Color Plate V).

This is an exceedingly shy bird. Field observers often have great difficulty in seeing one while it is singing, for if the songster glimpses an approaching intruder it dives instantly to cover and is not readily found again. If, by good fortune, one finds a crissal at close range, it may be identified by the light-yellow eyes, which are not possessed by any of the other thrashers of the same locality.

The crissal should be sought in the mesquite thickets bordering streams and arroyos. The nest is made of thorny twigs and lined with grasses, and is usually placed in a thorn bush. The three or four eggs are light green without spots or markings.

Leconte's Thrasher

(*Toxostoma lecontei lecontei*)

This bird and its subspecies, the desert thrasher (*T. l. arenicola*), are very light gray and their colors blend so perfectly with the sands over which they race that when quiet for a moment they are practically invisible (see Color Plate V).

They are past masters in the art of skulking through the cactus and creosote bushes and avoiding detection. When flying they usually rise only a few inches from the ground. Men on horseback, trying to run them down, have found it difficult to get them to rise in the air and fly away like other birds. In their efforts to escape, the thrashers prefer the speed of their legs and their ability to dodge behind bushes.

The nest is often placed in the cholla cactus, the long spines and easily detached joints of which provide a most effective defense against marauding animals.

Leconte's thrasher may be found in desert growths of southeastern California, southern Nevada, and Utah, also in Arizona and northern Baja California.

Purple Martin

(*Progne subis*)

Purple martins are sociable birds with a fondness for the company of their own kind, and where nesting sites for several pairs are available a colony is soon established. They prefer to live about the homes of man, and in most communities

gladly accept the hospitality of those who will put up nesting boxes for them (see Color Plate VI and text, page 528).

Sometimes boxes with 100 or 200 apartments are erected for their use. They will accept also hollowed-out gourds suspended from crossbars nailed to a pole (see illustration, page 526). In unsettled regions they will nest in cliffs or in hollows of trees. Not long ago more than 300 were estimated to be breeding among the boulder piles on Spirit Lake, Minnesota.

Although breeding as far north as the southern tier of Canadian Provinces and even Alaska, they are most abundant in the Southern States. In the construction of nests, weeds and straw are used, as well as other vegetation, feathers, and even rags. Often mud is employed.

I have examined nests, the linings of which were composed wholly of the dead, smooth leaves of the live oak, which sometimes covered the eggs when the gourds containing them were tossed about in the summer wind. In some sections two or more broods are raised in a year.

The birds are very noisy about their nests, and the sweet twittering carol adds much to the avian chorus about the homes of planters and innumerable negro cabins in the pine-woods country.

Martins winter in Brazil.

Northern Cliff Swallow

(*Petrochelidon albifrons albifrons*)

Cliff swallows arrive in the District of Columbia about April 10, in Minnesota between April 13 and May 6, and at the northern limits along the edge of the Arctic at a still later date.

Typically swallowlike, they breed in colonies. Their nests are made of little mud pellets, carried one at a time. Many of the nests are walled about in such a way that an opening only large enough to admit the bird is left. Sometimes a bottle-like neck forms the doorway (see page 522).

The side of a building, well up under the edge of an overhanging roof, is a favorite nesting place. For this reason the birds are often known as "cave swallows" (see Color Plate VI).

Although found locally all over most of North America, except Florida and the Rio Grande Valley, they are much more numerous in some regions. In the Central States, for some obscure reason, their numbers have much diminished during the last

20 years. In Maine they are very common, especially along the coast. There I once observed a building beneath whose eaves were just 100 nests, all apparently occupied.

In the summer of 1930, I took an extensive motor trip on Cape Breton Island, Nova Scotia. The young of both cliff and barn swallows were out of the nests, and in great numbers were perching on the telephone wires by nearly every farmhouse we passed. In 1927 I counted more than 200 of their nests under an overhanging cliff in an unsettled section of Utah. Such nesting sites are common in the Western States.

In early September the birds begin their migration, passing through Florida and Central America to Brazil and Argentina, in which countries they are believed to spend the winter.

Barn Swallow

(*Hirundo erythrogaster*)

Late in April, 1934, as a steamer on which I was a passenger pushed its way northward through the purple waters of the Strait of Yucatan, a large flock of barn swallows appeared (see Color Plate VI). For perhaps an hour they circled about the ship, alighting on the rigging and twittering in small, cheerful voices. They were northward bound from their winter home in the Tropics, and did not seem at all disturbed by the fact that they were far out of sight of land.

These little flyers, like many other birds, possess an amazing endurance that enables them to seek their summer abodes somewhere in all that vast area of the earth's surface between Alabama and the Arctic shores of northwestern Alaska (see illustration, page 524).

The nest is made of mud with grass or straw and is lined with feathers and fine grasses. Beams or the vertical walls of barns and other buildings are now almost exclusively used as nesting sites.

Violet-green Swallow

(*Tachycineta thalassina lepida*)

One of the many charming birds inhabiting the greater part of western North America is the dainty violet-green swallow (see Color Plate VII).

It is happy in the wilderness, but also finds safety and contentment about human habitations. I have watched it in wild

regions of Alaska, darting about cliffs in the mountains of California, skimming over Lake Washington at Seattle, and fluttering about gardens in the outskirts of Oregon cities. Its varied colors, its sprightliness of movement, and its cheerful twitterings make it one of the most welcome of bird neighbors.

Its nest of feathers, and sometimes grasses, is built in hollows. Cracks and small openings of various shapes along the faces of cliffs are often utilized, although more often the birds may be found occupying holes in trees, especially the abandoned nests of woodpeckers. The eggs are white, and as a rule number four or five.

Being insectivorous, like our other swallows, this bird must retire southward before frost has cleared the air of those multitudes of insects upon which it lives. Thus the violet-greens, after passing the summer in their favorite localities between the Yukon River on the north, South Dakota and Nebraska on the east, and the Mexican border on the south, all fly away to Mexico and Central America for their annual sojourn under tropical skies.

Tree Swallow

(*Iridoprocne bicolor*)

One day last winter while I was driving with a native Georgian through the pine-lands of the southern part of his State, he pointed to a flock of fifty or more birds circling and fluttering over a shallow woodland pond.

"We call them 'cold weather birds,'" he told me, "because they come about such places in winter when a cold day comes."

The birds were tree swallows (see Color Plate VII). Bodies of water retain their heat longer than the land does; consequently, on a cool day more flying insects are to be found at such places, a fact of which the swallows were well aware.

In summer this species inhabits almost the whole of northern and central North America. It breeds from Virginia, Arkansas, Colorado, and central California northward almost to the tree limits on the borders of the Arctic regions. In winter it may be found from North Carolina, Texas, and central California over much of Mexico, as well as in Cuba and Honduras.

On the outer sand banks of the Cape Hatteras region, and northward along the coast, are many dead trees that have been left standing after being killed by the big



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LARKS AND PIPITS FIND THEIR FEET AS USEFUL AS THEIR WINGS

The only pipit types north of the Rio Grande are Sprague's (upper left, male) and the American (upper pair, fall phase left, spring right), which run in fields and meadows in search of food. Soaring skyward, Sprague's pipit sings a sustained melody. Then, breaking off suddenly, it folds its wings and plunges headlong downward. Just before striking the ground, it spreads its wings and alights like a leather. The pallid or Arctic horned lark (male left) and the prairie horned lark (lower group, female and young left, male right), also dwellers on open land, bear distinguishing tufts of black feathers on the head.

sand dunes which bury the timber for a time and then pass onward. Here, in April, I have watched tree swallows alighting, peering into holes, and giving every manifestation of seeking nesting cavities. Yet it was too early for them to breed, and not one of their nests has ever been reported from that part of the country.

The natural places for tree swallows to nest are cavities in rocky cliffs and in trees, but many are now accustomed to the use of bird boxes erected by kindly human hands. My friend, the late William Brewster, once showed me the nest of a pair of these swallows, built in a tin can erected on a pole in the yard of his farm on the Concord River in Massachusetts. The birds had suffered misfortune, for the summer sun had so heated the tin that the young were thereby killed.

Bank Swallow

(*Riparia riparia riparia*)

Like most of the swallows, this one seems to feel that it must have a cavity in which to build its nests, and since usually there is none available to suit its needs, it proceeds to make its own. With bill and feet it excavates a horizontal burrow two or three feet long in the side of a sand bank or gravel bed. The extremity of the hole is enlarged and lined with dead grasses. The birds breed in colonies, and often the entrances to their burrows are only a foot or two apart (see Color Plate VII).

Few birds have such a wide and varied geographical range as does the bank swallow. It is found in many countries of Europe, Asia, and northern Africa. In England I photographed one breeding place in the side of a sand pit that contained more than 140 nests. In America breeding communities of these birds are to be found from Alaska to southern California on the west, and to northern Quebec and central Alabama on the east.

American Pipit

(*Anthus spinoletta rubescens*)

The family of wagtails and pipits (Motacillidae) includes one hundred or more species distributed widely in five continents. They are small gray birds, rather nondescript in general appearance (see Color Plate VIII). Over much of the United States they are seen as migrants, or, in the South, as winter visitors.

Sometimes three or four may be seen

together, but as a rule they come in flocks often numbering many scores of individuals. They feed on the ground and walk instead of hopping.

Not long ago, by the Cooper River in South Carolina, I watched several running about on the damp ground of a rice field from which the water had just been withdrawn. Again I saw them feeding like sandpipers on a sandy shore of Shackleford Banks near Cape Lookout.

Late in winter, when plowing begins in the fields of Virginia, Georgia, Tennessee, or elsewhere south of the Potomac and Ohio Rivers, you may expect to see flocks of these birds descend to the newly broken ground. In flight they undulate through the air, but at times have a drifting, uncertain, butterfly manner of movement different from that of other birds. They breed from the Arctic Zone throughout northern and central Canada, and along the higher mountains to New Mexico.

While I was serving as a member of President Hoover's Yellowstone Boundary Commission, our party one day made the long climb from the upper Yellowstone River onto the high ranges to the westward. Where the trail crossed the Continental Divide a wide undulating plain lay before us. Here, well above timber-line, I suddenly realized that I was looking at a pipit flying with food in its mouth. My obligations to the President were temporarily but completely forgotten, for I turned my horse in pursuit.

It is amazing how exasperating a bird can be sometimes. It simply would not go to its nest, and after watching it walking about and alighting on nearly all the boulders over two or three acres of ground, I was forced to give up the best chance that I may ever have to find the cradle and young of this little bird of the high altitudes. Many have said that the nest is built on the ground. I did not doubt this, but I wanted to prove the fact for myself.

In the song season the pipit soars high in the air, like the famous skylark of Europe, and when its music has been poured forth the singer descends with direct flight.

Sprague's Pipit

(*Anthus spraguei*)

Sprague's pipit is partial to the Great Plains, from the Saskatchewan River to



Photograph Courtesy National Association of Audubon Societies

TRAFFIC CONGESTION IN A MARTIN COMMUNITY

Purple martins are fond of nesting near human habitations, and readily occupy apartment-house boxes set up in chicken yards or on spacious lawns. Their coppery purple wings gleam in the sunshine as they dart and swoop, catching insects or driving birds of prey away (see Color Plate VI).

western Montana and North Dakota. It winters from southern Louisiana and Texas to central Mexico (see Color Plate VIII).

Horned Lark (*Otocoris alpestris*)

The larks (Alaudidae) constitute a very numerous family, 225 species and subspecies being recognized in the science of ornithology. Two species are found in North America. One is the skylark of Europe, which has been introduced and is now breeding on Vancouver Island, British Columbia. Our other member of this family is the horned lark, which is divided into no less than 16 subspecies (see Color Plate VIII).

The meadowlark, easily distinguished by its much larger size, distinctly yellow breast, and the absence of the black, horn-like tufts of feathers, belongs to an entirely different family.*

* See "Blackbirds and Orioles," by Arthur A. Allen, in the NATIONAL GEOGRAPHIC MAGAZINE, July, 1934.

The horned lark breeds in suitable places throughout Canada and the United States, except the South Atlantic and Gulf States. Aside from the fact that the male prairie horned lark has a yellow throat, there is such little difference in the plumage of these numerous birds that only by comparison of them in the hand can their characteristics be distinguished.

Horned larks begin to breed in February or March as soon as patches of bare ground appear through the melting snow. Many eggs are frozen every year and new sets must be laid.

A little later the young may be seen crouching in the nest with bills pointed toward the cold wind sweeping across the prairie or barren field. The nest is a slight hollow of dried cow manure. The three or four eggs are finely speckled.

The males begin singing in February or sometimes even in January. Often they mount in circling flight until out of view. At this altitude they sing several times, then, with folded wings, dart again earthward.

LOW ROAD, HIGH ROAD, AROUND DUNDEE

BY MAURICE P. DUNLAP

AUTHOR OF "OUTWITTING THE WATER DEMONS OF KASHIIR," IN THE NATIONAL GEOGRAPHIC MAGAZINE

*"O ye'll tak the high road and I'll tak the low road,
And I'll be in Scotland afore ye."*

IN Scotland there are always a "low road" and a "high road," each quite different from the other, each with its peculiar interest or charm. This I discovered when I first came to live in Dundee, "gateway to the Highlands."

Dundee folk speak modestly of their town.

"Oh, no, this is not the Highlands," they disclaim.

Yet the town itself stretches over the first range of "high lands" north of the Firth of Tay, whence numberless roads wind away—to Gleneagles, or to Glamis in the land of Macbeth, to Loch Ness, or over the Devil's Elbow to Braemar (see map, page 551). Those are among the "high roads."

Meanwhile there are "low roads" along the Firth of Tay where fishers cast for salmon, or over the Carse of Gowrie, with manors and castles gleaming among the trees, or, crossing the Firth, they may lead you through quaint Leuchars to St. Andrews, where golfers play to the booming of the sea (see illustrations, pages 566-8, and text, page 565).

IN THE GLOOM OF NOVEMBER

My first glimpse of Dundee was not propitious. From the train I saw it in a November twilight as we rumbled over the long bridge; it stretches over the landscape like a dragon belching smoke from a hundred mouths. The station seemed dark and confusing. In a murk of rain and blow we threaded dingy streets.

The hotel, chosen because of advertised "steam heat," *had* steam heat—in the halls but none in my bedroom. The large china pitcher, the ponderous wash bowl on marble-topped washstand—where had I seen it all before? Shades of my childhood in the Middle West!

But in the morning I wakened to new sensations. Something, definitely, was going to happen. Something *was* happening. Tramp, tramp, tramp, I heard the sound of feet. I gazed around. A cheery fire was burning on the hearth. Then a weird sound reached my ears; I had never heard anything like it before; at least, not so much of it. Bagpipes!

I reached the window just in time to get a glimpse of kilted Highlanders swinging by. This was not old Toledo, Ohio, but Dundee, and the Black Watch was holding an Armistice Day parade.

WALKING TO WORK IN "JUTE-OPOLIS"

Walking to work and from work—these I found enjoyable pastimes in Dundee, especially after I took up my abode at Almayex. It was, indeed, November, but November haze softens the grimness of factories and curtains with mystery an age-old countryside. There is charm and rest in a misty meadow sloping to the stream. There is a spirit of sturdy youth in holly tree and yew. The lawns of old "jute mansions" shine with the heavy dews of November.

Those jute mansions along the low road, substantial, dignified, with gardens ever green, bear witness to a strange tale, the story of how Dundee became "jute-opolis" of the British Isles. The prosperity of the town hangs on a thread of jute and contributors to this prosperity have been India and the United States (see illustration, page 552).

Following the low road toward town, and the office, I sometimes find my way to the harbor where the first clippers landed that fateful jute from India, to reshape the life of a community formerly devoted to the weaving of flax into linen.

The jute might also be woven into cloth, suggested a hopeful few. Factory owners demurred. But there were the cargoes of this new fiber from a far-off land—a fiber stronger than flax and cheaper. A trial could do no harm. But the trial did do harm; the coarse jute made havoc with machinery and the product was an unsightly fabric. So the manufacturers went back to their linens.

CINDERELLA OF THE FABRICS

A few did not lose hope. The linen competition was keen; a new product might have a better chance. The jute made a coarser thread than flax, but it was longer and stronger. They altered the machinery to the need and produced a stuff unsuitable as a tablecloth but practical as a bag. An order for coffee bags was placed



Photograph by Maynard Owen Williams

SENTIMENT LEAVES A BARRIER TO THE JUTE CARTS OF DUNDEE

Within East Port, during the plague of 1544, terror-stricken people listened for comfort to the preachings of George Wishart (see text, opposite page). Outside lay those touched with disease, hearkening for some word that would help them meet death. Dundee, now a bustling city, has kept this gate as a memorial to Wishart, who survived the plague but died a martyr at St. Andrews.

for the West Indian trade. The hopeful few took courage; more cargoes arrived from India.

Then came the American Civil War and a clamorous demand for rough cloth burlap. The hopeful became jubilant; they could make cheaper, better, and more burlap than anybody else. One by one the linen factories scrapped their machinery and took up jute. The harbor was filled with ships, bearing cargoes of raw jute from India, cargoes of finished jute for the United States.

Records of the American Consulate show the rising importance of the Dundee trade for our United States. The first vessel listed is the British barque *Herald*, which sailed for Charleston on September 14, 1834, with a cargo of linen goods.

Jute does not appear as a staple until the time of the Civil War. As this war went on, the demand for burlap grew. And other uses were found for the new product, in calking, in carpets, suit paddings, automobile seats.

Jute has been called the Cinderella of the fabrics. With the wave of a wand, Cinderella became a "dollar princess." And she has kept her glory.

Back from the harbor, on the "low road," one enters a maze of somber streets; the vision of the river, the bonnie hills of Fife, fade from view. Factories cast shadows; a jute-heavy haze hangs over the roofs.

No romance can be expected here. But what is this blocking a busy street—this portal where big jute wagons can pass only



Photograph by Maynard Owen Williams

SCOTTISH PURSE STRINGS LOOSEN TO THE SKIRL OF THE PIPES

"If the picture is bad because of the poor weather, next time you need gi' me no present," said this Highland youth as his sister passed the hat in return for music which conjured up the very spirit of old Scotland. Youths still have a fondness for the pipes and their brisk melodies often echo over the heather and the hills.

with care? On a moldering stone is this tablet:

"During the Plague of 1544
George Wishart preached from the parapet of
this port
The people standing within the gate
And the plague-stricken lying without in
Booths."

Stones crumble and factories threaten old landmarks, but the memory of George Wishart does not crumble in Dundee. Tradition says that here once stood an eager young preacher who felt for his fellow citizens. So dreaded was the scourge that the clean must be separated from the unclean, yet Wishart not only spoke words of comfort; he went down among the stricken to help them.

It is a strange tale, how this man of the people incurred the jealousy of the great.

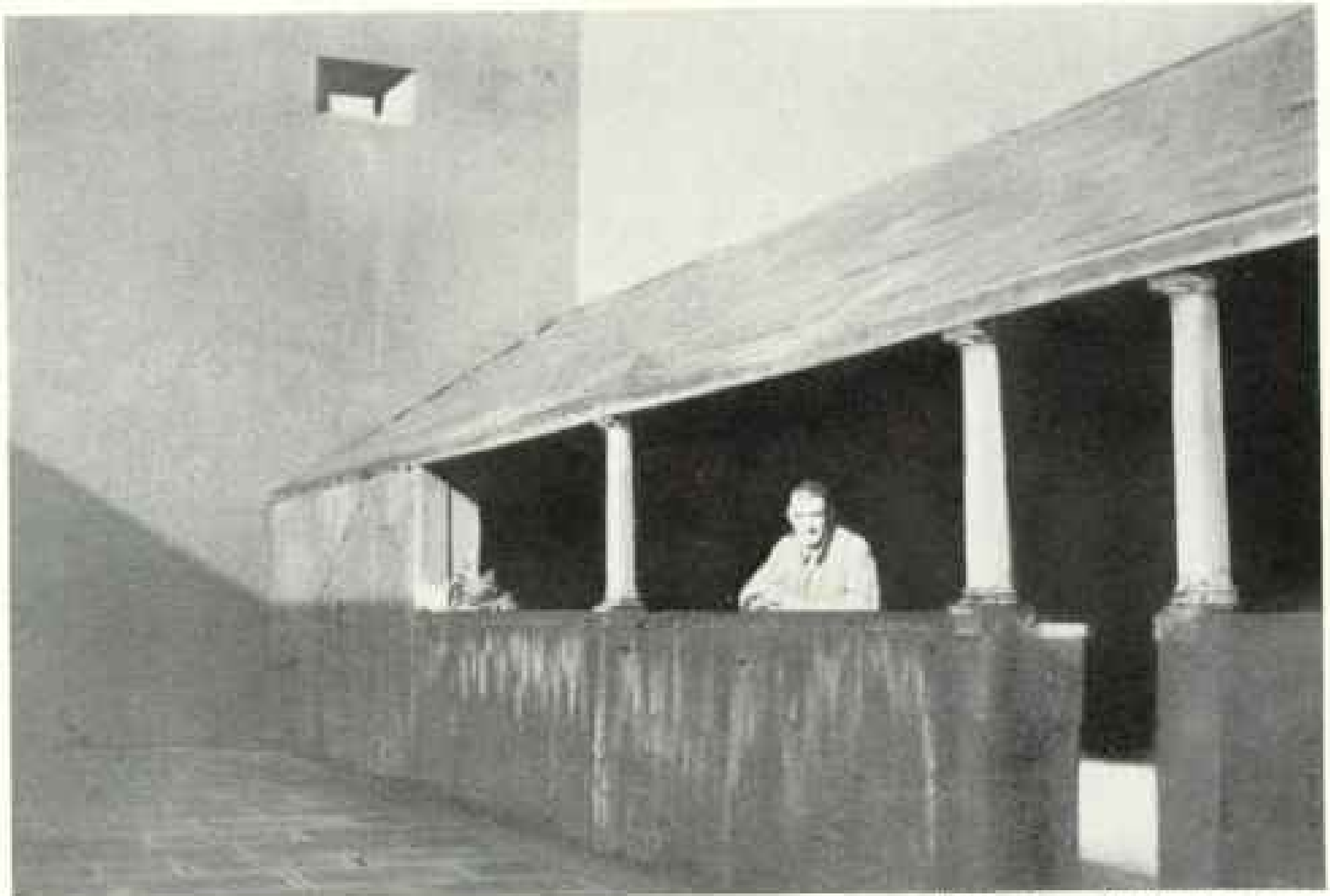
A queen of foreign birth took ill to his activities; in her anger, Mary of Guise helped plan the abduction of Wishart. In her eyes he was a dangerous man. And so he was taken to St. Andrews and burned at the stake.

The gate is frankly a nuisance to the jute carts, but I admire the City Fathers who have let it stand.

THE RUMBLING JUTE CARTS

No sooner do I reach the low road, be-times of a morning, than I must watch my step, or a jute cart from a side street is rumbling by my side. The bales, piled high, cut off the view, and the clatter of hoofs and wheels makes even thinking impossible. Hurry a bit and the horse pulls faster; dally and the load slows up,

The jute horse may belong to a vanishing



Photograph from Maurice P. Dunlop

HERE LADIES ONCE WATCHED TENNIS—A MAN'S GAME THEN

At Falkland Palace only gentlemen played the "Game of Palms" whose present name, known to Shakespeare, may be derived from the French "Tenez." But Mary of Guise and her tragic daughter, Mary Queen of Scots, probably sat in this "ladies' gallery" while French courtiers pioneered the way that led to the center court at Wimbledon.



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"CARRY ON" IS A SLOGAN OF THE BRAW SCOT

Reminiscent of the days of London's general strike of 1926, when aristocratic youngsters took over the toil of a threatened Nation, is this jolly scene of gay young men in kilt and sporan hauling a cart through the streets of a Scottish city.



Drawn by Arthur J. Hazes

DUNDEE—"JUTE-OPOLIS" AND MARMALADE FACTORY—LIES IN A SETTING RICH IN BEAUTY AND HISTORY

One-time whaling port and second industrial city of Scotland, Dundee rises beside the Firth of Tay and around Dundee Law. Called "the Scottish Geneva" for its part in the Reformation, Dundee won a place in the world of communications because there James Chalmers, bookseller, invented the modern adhesive stamp that is licked to make it stick.

race, but individually he is not vanishing at all. He wears a high halter with brass and nickel trimmings; his harness glistens; an ornament of woven jute swings under his chin. As he tramps along with big, hairy hoofs, he is an awe-inspiring animal. The nearest I have seen to his like is a royal elephant taking his morning stroll in Bangkok.

Jute is, indeed, a thread, slender but strong, binding Dundee tradition to Eastern lands. This connection seems very close when one partakes of a real curry at the

Eastern Club (started by jute folk returning from the East), or when one passes a wooden oriental figure advertising tobacco or tea, or when one meets turbaned strangers in the streets—swarthy folk from a newly arrived ship.

THE CITY SQUARE AND THE HOWFF

All "low roads" lead to the City Square. Fine office buildings and smart shops give no hint that close by is the Howff, one of the strangest burial grounds in the world (see illustration, page 557). Howff means



Photograph by Maynard Owen Williams

CALCUTTA JUTE BUILT THIS PALATIAL DWELLING

Few visit its delightful garden on the high hill overlooking the Firth of Tay. These student nurses from a Dundee hospital stopped to pose, and on finding they would be late for duty, were rushed to town by the photographer.

"meeting place." Scandinavian scholars connect the word with an old Norse term meaning "temple."

In Iceland such places are sites of temples to the god Thor, where the people met, not only to worship, but to visit and to trade. Dundee's Howff may have served a similar purpose before it became a monastery site, then a burying ground.

At all events it has kept its tradition of "meeting place" through the ages, as its by-

laws, posted near the entrance, show. Here we read:

"No person shall lounge or lie upon any of the monuments.

No person shall play cards or engage in other gambling.

No public meetings, lectures or preachings.

No person shall enter in a state of intoxication."

May the dead rest the better in their grand and curious tombs, even Grissel Jaffray, the witch, whose grave is marked by a rude stone!

It was Mary Queen of Scots, they say, who gave the monastery site to the town for a burial ground. I was much interested, nay, delighted, to hear of this seemingly gracious act. Mary, according to my Toledo education, was one of the wronged heroines of history. How different one's opinion after a sojourn in Dundee!

AT A CEILIDH WITH THE GAELS

Here they know a lot about Mary. It seems that Dundee was one of the towns that found her presence most objectionable. The Queen's marriage with Bothwell, her husband's murderer, did not im-

prove matters. Her gift of land was made to placate an old and dangerous enemy.

It was at a *ceilidh* that I learned more about Mary. A *ceilidh* is a meeting of the Gaelic Society, citizens who wish to keep alive the fine traditions of earlier days. A chieftain of the clan MacGillivray presided. In public life this gentleman is an eye specialist, but on *ceilidh* night he appears in kilt and sporran, with dirk in stocking—a commanding figure of a truly romantic age.



Photograph by Maurice P. Dunlap

SCOTTISH MILK TRAVELS ON FOOT, BY BIKE, AND IN A JOLTING CART

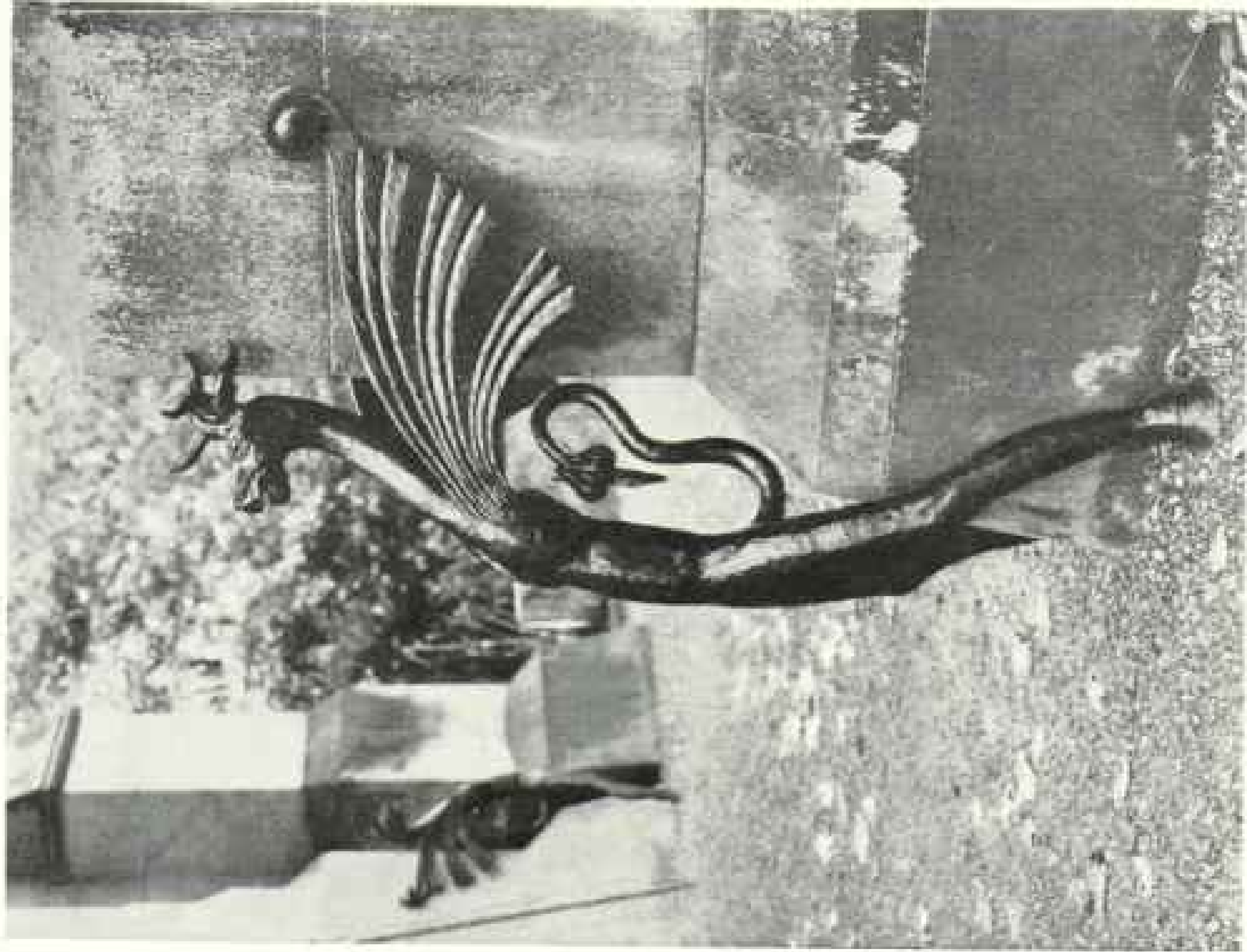
Refrigeration of dairy products is little emphasized in Dundee. Wholesome milk is often transported in large cans, behind a doblin, and delivered into the pails of the customers. Even in summer the milk can is unprotected from sun or dust.



Photograph by Maynard Owen Williams

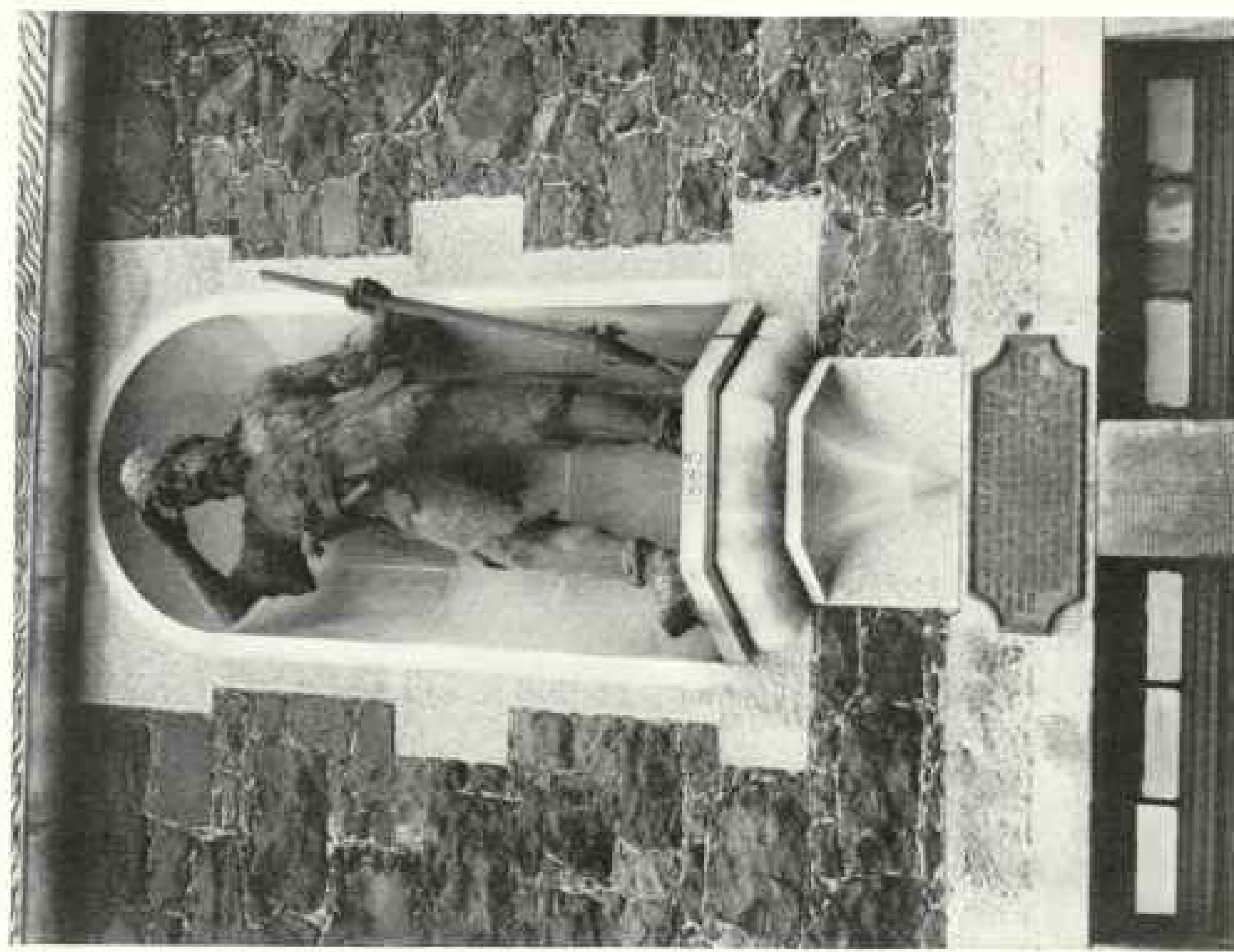
DRUIDS AND DRAGONS SHARE AN OBSCURE MONUMENT NEAR DUNDEE

Indistinct in the twilight of Dundee's early history stand these old figures, like bearded, stone-cold seraphs, whose feet even the two fire-breathing dragons below cannot warm. This carving is set into the wall of a crumbling ruin not far from Dundee.



WROUGHT-IRON DRAGONS PROTECT ONCE PROUD PILLARS

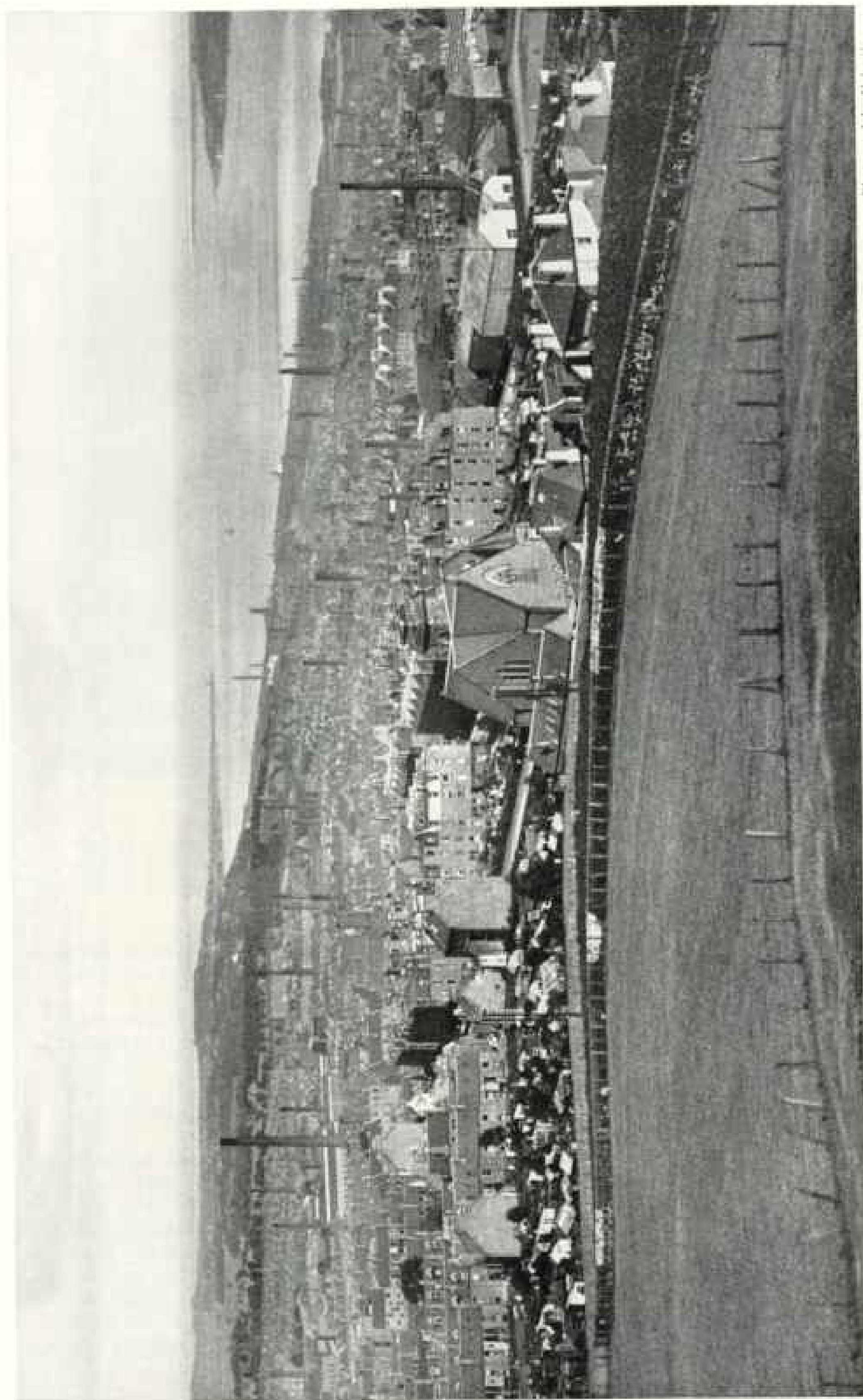
The family that erected the palatial residence at whose entrance these grotesque figures stand has passed on, and the grounds now belong to Dundee. Visitors rarely tour the splendid residence today, but the gardens and plens serve the citizens, and public functions occasionally bring back life to the echoing halls.



Photographs by Maynard Owen Williams

ALEXANDER SELKIRK—ROBINSON CRUSOE TO YOU!

At Largo, between St. Andrews and Kirkcaldy, is this memorial to the Scottish sailor, born here 43 years before Defoe's immortal classic was published in 1719. Following a dispute with his captain, Selkirk asked to be put ashore on Juan Fernández, where he lived like Defoe's hero more than four years.



Photograph by Valentine

FROM DUNDEE LAW, "JUTE-OPOLIS" SEEMS COBBLED WITH ROOFS

Directly above the busy industrial city beside the Firth of Tay rises a central hill, or "law," Smokestacks outnumber steeples, but in the distance wooded gardens show where the jute kings built their homes (see page 552). In mid-left, tenement dwellers grow vegetables under glass, and behind the hill are homes with neat gardens owned by former residents in the slums near the harbor.



© D. C. Thomson and Co., Ltd.

HOME COME DUNDEE'S TOILERS FROM A MODERN JUTE MILL

Back from the harbor on the low road one enters a maze of somber streets. Factories cast shadows and a jute-heavy haze hangs over the roofs. After a day's work, the toilers, most of them women, crowd the narrow way. Machinery exported to Calcutta now enables Indian textile workers to compete with those of Dundee.

Among other entertainment, a lady sang quaint ballads to the harp and one of these had this refrain:

"Last night there were four Marys,
Tonight there'll be but three—
Mary Beaton, Mary Seton,
Mary Carmichael—and me."

"Me," it seems, was a Mary Hamilton, one of the four Marys chosen to be ladies-in-waiting to the Queen. And a lovely lady she must have been, for, according to the tradition on which the ballad is based, she attracted the attention of Mary's husband, and so the Queen had her executed!

"KATE KENNEDY" IS A YOUNG MAN

One February morning I followed the low road over to St. Andrews to see Wishart as he walked those gray streets, bearing fuel

for the flame to burn him. He walks once a year through this ancient university town (see text, page 549).

It is the students who have resurrected Wishart, along with other historical figures, for their "Kate Kennedy Day." This is a very old festival; some say it is a relic of an even older one, the pagan welcome to spring.

The blast was anything but springlike and the waiting time seemed longer than it was. But at last the pipers' notes were heard and out they came—William Wallace, Robert Bruce, resplendent in armor, Mary Queen of Scots, with veils blowing but handling her charger with masterly hand, even Wishart with other martyrs of the time, carrying sticks for their own burning (see illustrations, pages 560 and 562).



Photograph by Maurice P. Dunlap

LIKE A MOSLEM CEMETERY, THE HOWFF IS GRAVEYARD AND MEETING PLACE

Situated in the center of Dundee's business-district, the Howff was once the site of a monastery (see text, page 551). A city ordinance forbids loungers to pillow their heads on a skull and crossbones or a cherub, but the unemployed and laborers at lunch time throng this city of the dead.

Last, and most important of all, came Kate. It is nearly 500 years since the first Lady Katherine was hostess for her uncle the Bishop, but her fame still endures. A bell still hangs in a tower, inscribed with her name, the "Katherine Bell," and every year she sits in the coach by her uncle's side and is driven to pay her respects to the Lord Mayor.

All the participants in the parade are young men and there is always much guessing as to who "Kate" will be. Tradition says that Kate must be a "beardless freshman," but the students' choice is kept secret until "she" actually steps forth before the public eye.

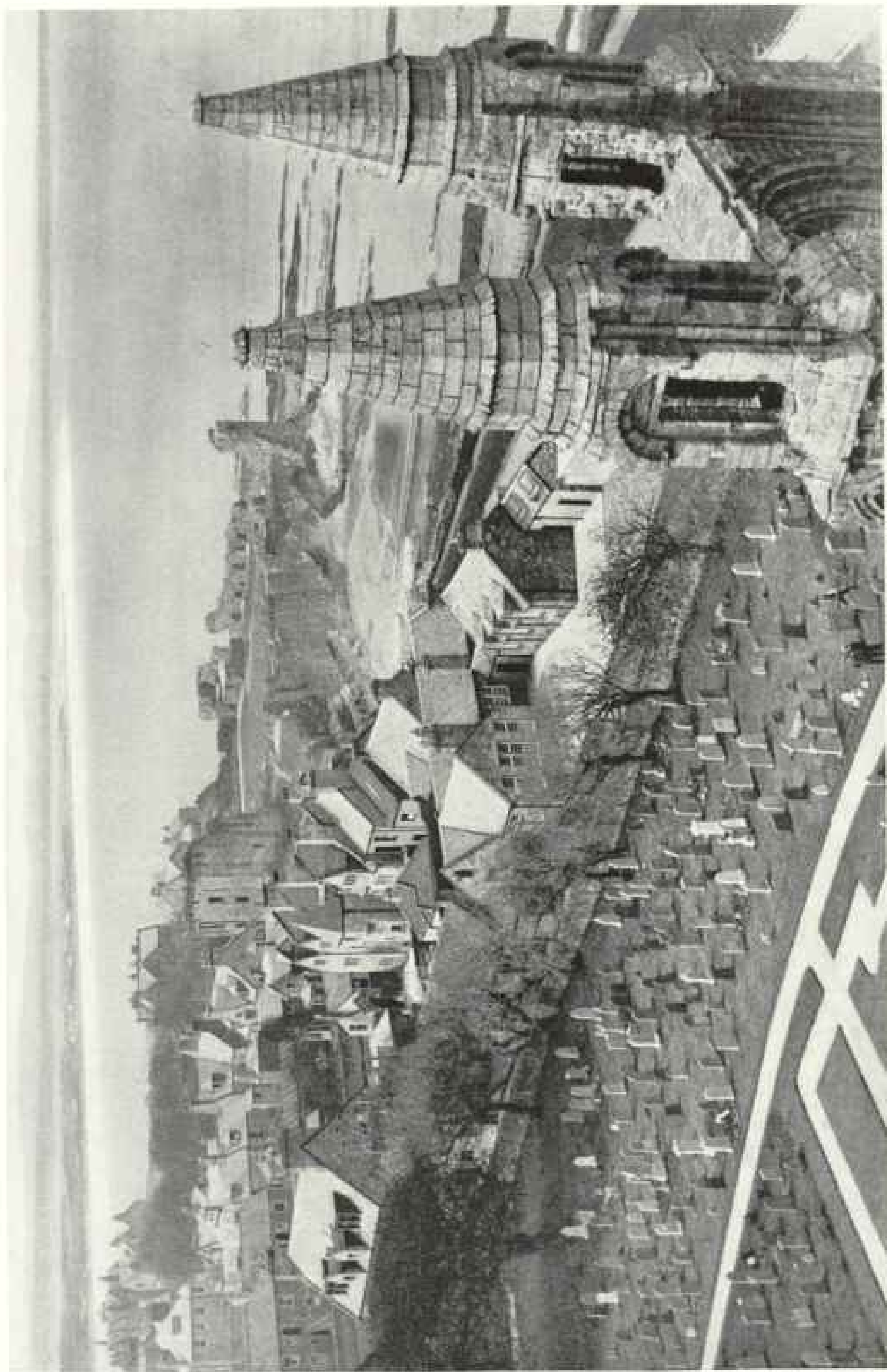
I followed the coach and the crowd to the Town Hall where Kate was received by the Council in robes of scarlet and ermine, then out along the cliffs. Here the parade passed

over the spot where Wishart was martyred, into the castle just beyond.

As each character crossed the moat a spotlight was fixed on him, for it was twilight now, and an announcer called the name.

They tell that once when the procession reached the cliffs, the marchers saw a terrible sight. A gale was sweeping the coast and two ships were being driven up to their doom on the rocks below. They had probably been deceived by the torchlight flare! The students rushed down to the lower ledges to give help, but in vain. The keels were crushed to splinters, the lifeboats capsized, the struggling sailors drowned, every one. A stone in the churchyard tells the date, March 5, 1881.

Even the castle has succumbed to the lashing of those mighty waves. There is an



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FROM THE ST. REGULUS TOWER, ST. ANDREWS IS A RELIEF MAP OF LIFE AND HISTORY

Here, two towers of the 14th-century Cathedral rise above the old cemetery. Crumbling walls of Bishop Roger's castle face the sea, and farther inland are the buildings of the University, the oldest in Scotland. Behind the distant shore line runs the world-famous Old Course of the Royal and Ancient Club.



Photograph by Cecil Meredith

WINTER AND SUMMER THE HIGHLAND MOTORIST PASSES THIS BIRCH HEDGE, OLDER THAN THE DECLARATION OF INDEPENDENCE
 Nearly a hundred feet high, and three-quarters of a mile long, the fence of towering trees is one of the famous sights to those who motor north from Perth, on the River Tay, to Braemar, on the Dee. The thick tapestry of beech leaves shelters many a feathered songster.



Photograph by Maynard Owen Williams

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IN COEDUCATIONAL ST. ANDREWS, EVEN MARY QUEEN OF SCOTS IS PORTRAYED BY A MAN

Once a year, through the ancient university town, historical figures pass in pageantry. This is a very old festival, possibly a relic of an even older one, the pagan welcome to spring. The unhappy queen here handles "her" charger with masterly hand. All the participants in the parade are men, although a large proportion of the students are women.



© Courier and Advertiser

FOR NEARLY HALF A CENTURY GIRL STUDENTS HAVE ATTENDED THE UNIVERSITY OF ST. ANDREWS

Wearing school ties, mortar boards, and the famous scarlet gowns of the University, these coeds are on their way to a "Capping" Ceremony at Younger Graduation Hall. An ancient "capping stone" is one of the town's relics. On Sunday such happy groups may be seen returning from the services in College Church or St. Salvator's Chapel. This fine edifice was founded 486 years ago by Bishop Kennedy, whose elaborate Gothic tomb survived destruction when the stone roof fell to the floor. (See illustration, page 562).



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ST. SALVATOR'S FOUNDER AND HIS "NIECE" STAR IN THE KATE KENNEDY
PAGEANT AT ST. ANDREWS

The "heartless freshman" who plays the part of Kate is led through the streets lined with cheering schoolmates on the arm of "her uncle," Bishop Kennedy founded St. Salvator's Chapel, and his body lies in an elaborate tomb beside a treasure room of massive silver relics, including his mace (see page 561).

erie spell over that ruin. It tempts to poetic flights—and here is mine:

ST. ANDREWS

The breakers boom on a broken wall,
Yet knights and ladies once trod this hall;
Where laughter echoed and beauty shone,
The night winds whistle and mermaids
moan—
And shadows, hurrying, pair by pair,
Mount up a mystical, misty stair. . . .
Oh, beautiful ghost of Things-that-Were,
Do deeds of the dead—like you—endure?

Look from the window of the ladies' bower out over that lashing sea. That coast has been famed for its terrors from the dawn of time. The Vikings knew its dangers, as did our John Paul Jones; to the northeast is the Bell Rock (Inchcape) with its bell; to the southeast, in the Farne group, is the Long-

stone Island lighthouse of Grace Darling.

From that lighthouse, the keeper's daughter rowed herself into fame when she helped to rescue a shipwrecked crew. I remember seeing a colored picture of this event as a child. It was on the inside cover of my mother's trunk; it showed a young girl with streaming locks rowing in a stormy sea. I did not know then that this brave lassie was known as "Dundee's first heroine" (see illustration, page 564).

DUNDEE'S DARLING

In the height of the Scottish season, ninety-eight years ago, the *Forfarshire* left Hull for Dundee. On board were tourists and Scots returning home. Early in the morning of September 8 the engines failed



Photograph by Maynard Owen Williams

UNDERGRADUATES, WEARING RED GOWNS, STUDY NEW YEAR'S BULLETINS

In St. Andrews cloister, now open to girl students, priests and monks once gathered. St. Andrews' students borrowed from the Italian universities the practice of electing their own Lord Rectors. John Stuart Mill, English economist; James Anthony Froude, the historian; and Sir James M. Barrie, creator of "Peter Pan," have all served as Lord Rector. Andrew Carnegie, the Pittsburgh ironmaster, held this honorary post for six years (two terms). St. Andrews has only about 500 students, but its rectorial addresses, including Barrie's immortal "Courage," have been masterpieces.

to work and a strong tide swept the boat along. On, on, drifted the craft—toward that terrible rocky shore.

It was still early, a quarter to five, when Grace Darling looked from the lighthouse window and saw, only 300 yards away, the half of a ship; on it were no signs of human life. Then, close by, on a reef, she spied human forms. These, it seems, were steerage passengers and sailors; the other half of the boat, with first-class cabin, had disappeared.

In spite of the weather, Grace and her father launched a rowboat. To keep from being crushed on the reef they were compelled to row a mile. It was when the keeper leaped to the reef that the girl's

bravery was most shown. In that sea, she rowed the heavy boat back and forth until five of the survivors could be rescued. These they rowed back to the lighthouse; then her father and two of the sailors returned to the wreck and brought off the four who remained.

Now you know why, every year, a local "Grace Darling," rather than a "beauty queen," is fêted in Dundee. The occasion is the lifeboat parade, when collections are made for those who still risk their lives on that rocky coast.

A piece of the fated ship is in the Dundee museum; various paintings of the event hang in the Art Gallery, and Britain's shipping laws have been reformed. It was



Photograph by Maynard Owen Williams

OLD DOVE COTES, CALLED "DOO-CUTS," REMAIN FROM A DAY OF LARGE ESTATES

Such stone "cages" are a feature of the landscape around Dundee. They recall the days when the laird of the manor kept pigeons for his hunting parties. This one, near St. Andrews, belongs to the owner of Rusack's Marine Hotel fronting on the ancient links which became royal when William IV became patron of golf in 1834.



© G. M. Cowie

AROUND DUNDEE, A GIRL WHO CAN ROW IS A "GRACE DARLING"

Daughter of the lighthouse keeper at Longstone, one of the Farne Islands, the original Grace Darling helped rescue the shipwrecked passengers of the *Forfarshire*, Dundee-bound from Hull (see text, page 562). This pair might well represent the heroes of a century ago.

the daughter's part in the rescue that appealed to that Victorian age and brought practical results. But the simple girl, overwhelmed by adulation, sickened and died when she was only 26.

GOLFERS ON TOMBSTONES

Well, we've been standing some time looking at that gray sea. Now let us face about and view the town (see illustration, page 558). One may become very foot-weary if one tries to see everything in St. Andrews. The Cathedral, dominating all with its hollow shell—one cannot help seeing that. It is the unusual, out-of-the-way things that take "seeing"—the tombstones with golf balls on them, or a golfer hitting the ball (see illustration, page 567). Then there is a house where Mary Queen of Scots spent week-ends. Judging from the number of such houses, Mary must have been a restless queen.

Artists love the fishing village; they fasten an easel in a cleft and try to capture sea tints. Swimmers seek the rock pools or the smooth beach which sweeps away toward Dundee.

Americans may note with interest that the endowments of a fellow-citizen, Edward Stephen Harkness (Yale man and native of Ohio), help maintain the stately magnificence of the fine old University. As I had luncheon with professors and students under the Harkness window, the sonorous Latin grace, sung by the students, seemed to bind a dramatic present to a dramatic past.

The famous golf course at St. Andrews is an international Mecca of the game and attracts numbers of Americans, who manage to win their share of honors in the British championship tournaments. The "Royal and Ancient" is a club of real sportsmen and extends unfailing hospitality to the "cousins from the other side." The rivalry is ever friendly. The countryside assembles to view these tests of skill. Even the Prince of Wales (now King Edward VIII), who favors this course, has suddenly appeared. St. Andrews is only a night's ride from London (see illustration, page 566).

My interest became personal when I heard of the arrival of our golf star Dunlap. I followed the golfer and his gallery, applauding, as did the crowd, his brilliant play—but with a secret pleasure in my heart. Here was an American, with a Scot-



Photograph by Maurice P. Dunlap

"LADIES FROM HADES" THEIR ENEMIES CALLED 'EM!

This lance corporal of the Argyll and Sutherland Highlanders wears a heavy cold weather costume, practical in spite of bare knees. The sporran in front with the white tassels is not merely ornamental. It keeps the kilt in its place.

tish family tree like my own, and spelling his *Dunlap* with an "a." Everyone here spells it with an "o," because "that is the way to spell it!"

"So your name is Dunlop?"

"No, Dunlap."

"But in Scotland, we spell it with an 'o.' The town is Dunlop, not Dunlap."

One must always be explaining that "a" in the name. There seems to be the suspicion that perhaps the ones who went to America couldn't spell! But anyway, they haven't forgotten their golf.



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BRITAIN'S KING, THEN THE PRINCE OF WALES, PUTTS A LONG ONE AT
ST. ANDREWS

Beyond the eighteenth green, the Royal and Ancient Clubhouse stands between the North Sea and its own historic links, while royalty faces the task of sinking a putt. The course looks easy, but all who have played it fear its cross winds and sand-dune bunkers, as do canny local Scots.

After the tournament, I spent a pleasant evening with American Dunlaps—the young player, his wife, and his father—all typically American, all delightful. But somehow our family trees didn't "click" and none of us can explain the embarrassing "a."

NOW FOR THE "HIGH ROAD"

When I leave Almayex for a real walk, I usually take the "high road." But first, I must tell you about Almayex, the pretty cottage in the West End where I came to live.

The stately mansions of "Jute-opolis" have stately names. There is a Highland heather tang in Craigard, Inver-avon, Kingarth, Taymount, Duncraggan. I have friends living in all these homes. Morven, Seathwood, Fernbrae, Ardmore—we have

such names in America, too. Thousands of our forefathers brought these reminders of home to a new homeland. Dundee itself has many American namesakes; at least 26 of the 48 States have a Dundee. But Almayex? It sounded neither Scottish nor familiar.

"By the way, what does it mean?" I asked Auntie one day.

"Weel," she explained, "Alex and I had friends with a hoose called Davnellid. It sounded a bonnie name an' suitable, bein' a mixin' of their names, Nell and David. And so we called our new home Almayex, we bein' Alex and May."

It was along the high road from Almayex that I first came to Symbister and decided that after all I would rather live there. Now Symbister isn't a mixing of anybody's names,



Photograph by Maynard Owen Williams

GOLF HOLDS AN HONORED PLACE ON THE TOMBSTONES OF ST. ANDREWS

The graves of Thomas Morris and his son Tommy, two of Scotland's most famous golfers, are in the cemetery surrounding the Cathedral. The father was champion four years (see illustration, page 568), but his son was awarded the championship belt because he won three times in succession, in 1868, '69, and '70. His low score at Prestwick was 149 strokes for 36 holes, though clubs and balls were far cruder than they are today.

but means in Gaelic (or old Norse) "House with-a-View." And it *had* a view, far out over the smokestacks, from the North Sea into the Highlands.

There were pleasant neighbors on the high road—folk we might drop in on for a cup of tea. One hostess excited our admiration and wonder. She was an active little lady with pink cheeks and a youthful smile. We thought she must be about sixty; then learned she was seventy-nine.

"After sixty," commented a friend, "people here seem just to live on and on. And they keep their looks, too. I wonder why?"

"Scottish lassies," suggested a neighbor, "keep their looks; but not a lipstick."

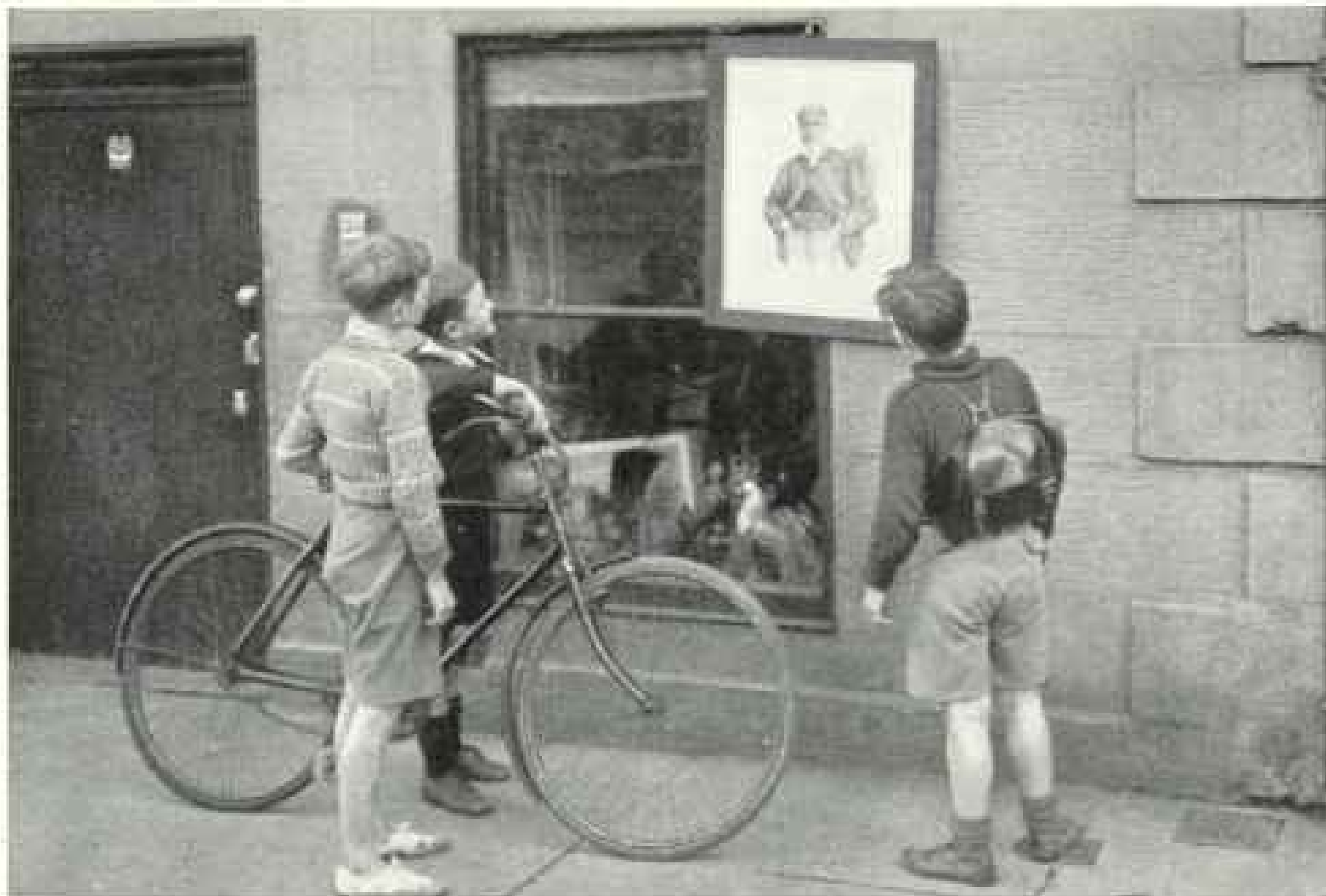
Automobiles have not spoiled the Dundee Sunday promenade. High roads and low

roads are crowded as morning chimes echo over the hills. After service, groups linger by the door.

SUNDAY PROMENADE

On Sunday afternoons the whole town goes promenading. Beyond factory chimneys and church spires is an ever-green countryside of romance. There is a steady stream of young people along the lanes, sometimes groups of them. Girl Guides in uniform or Boy Scouts in kilts. Even those who have lingered too long over dinner can take a 20-minute tour up Dundee Law.

On my very first day in town, the lure of the high road led me to the Law. It rises right in the middle of Dundee and streets turn and twist to make room for it,



Photograph by Maynard Owen Williams

FUTURE PLAYERS ADMIRE AN OLD PRINT OF TOM MORRIS, SENIOR, FOUR TIMES CHAMPION AT PRESTWICK

He won the open championship in 1861, '62, '64, and '67 (see illustration, page 567). The picture was discovered by the photographer in a second-hand shop in the city of the Royal and Ancient Club. The Dutch played golf on skates, but an illuminated "Book of Hours" more than four centuries old shows them putting at a hole in the turf, as millions whose Mecca is St. Andrews do today.

or turn into stairs to climb it. From its top one can see the Firth, spanned by the snake-like bridge, and, to the north, the Highlands, each ridge a different shade of gray or blue.

Along the water front are the crowded quarters of a factory town, but away toward the hills are attractive new quarters, low-built houses with red roofs where a new generation may expand and forget the confinement of factory walls (see illustration, page 555).

STONES LIKE DRUID RUINS

The first Christian monks appear to have made their own derivation for the name, "Dundee"—"Dei donum—gift of God." How nice! And it looks well on the coat of arms. But the stern Dundee Law gives the lie to their theory. On its top are still relics of the *dun*, or fort, that overlooked the Tay in prehistoric days. "Dun-Tay," through the ages, became "Dundee."

Follow with me beyond Dundee Law and we shall see other witnesses to the antiquity of this countryside. We pass manor house, village church, and castle—each older than the last. Centuries roll from our shoulders and now we are back in the age of druid circles and sculptured stones. Near Liff a strange stone beckons above a field of waving grain. We must tread carefully to approach it, but it is worth the trouble (see illustration, page 572).

There revealed is a perfect circle of great boulders, all fallen except one, but united in telling their story. The stones were erected on rising ground overlooking a majestic sweep of the river, just as similar stones in Norway and Sweden overlook the fords. In other northlands, these circles are called "doom rings." They were the first courts of justice as well as the first churches of Viking forbears. This Scotland, too, has many roots in similar soil.

Not far from this circle other stones have been found that hint at a northern pre-



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RED-GOWNED CYCLISTS CAMPAIGN TO MAKE GENERAL SMUTS LORD RECTOR OF ST. ANDREWS

Cycling is popular in the university town. Here, in a combined demonstration, cape-clad students on bike and truck demonstrate in favor of the South African statesman, who received the honorary title of Lord Rector of the University in 1931.

Christian culture; one shows a warrior on horseback, drinking from a fine horn; another shows three bearded men in druidlike robes over two dragons intertwined (see illustration, page 553). At Rossie Priory is a slab covered with representations of hunters and hounds. The work, showing highly bred animals, is finely done.

THE TOMB OF GUINEVERE?

At Meigle, where a whole gallery of these stones may be seen, is the so-called tomb of Guinevere. How this lady wandered so far from King Arthur's court, I cannot explain. Perhaps, like Mary Queen of Scots, she enjoyed spending week-ends in quaint places. Anyway, according to the tale, she was captured by bandits, imprisoned in a hill fort, torn to pieces by wild beasts, then honored with a beautiful tombstone.

The blurred outline of the poor queen and the animals has no doubt thrilled many a

visitor's heart. But, alas, heartless antiquarians find that the carving represents Daniel in the lions' den!

Strolling along the high road, one frequently passes a gate through which a glimpse is had of hedgerows and gardens. No house is visible, but one knows that far down the path is a manor or castle with traditions of cavaliers and clans. Weird figures on the gate at Glamis hint at mysteries beyond; Malcolm and Macbeth lurk in those shadows (see p. 574). Through the gates at Panmure, one sees a woodland—but through that portal one may not pass. That family championed the Pretender who met defeat—and ever since the entrance has been closed. Mains Castle, a seat of the Earl called "Bonnie Dundee," is a ruin.

It is in such homes that traditions live again. Scions of old houses are proud to wear the bonnet and tartan. One may see them at a lawn fête during the "garden



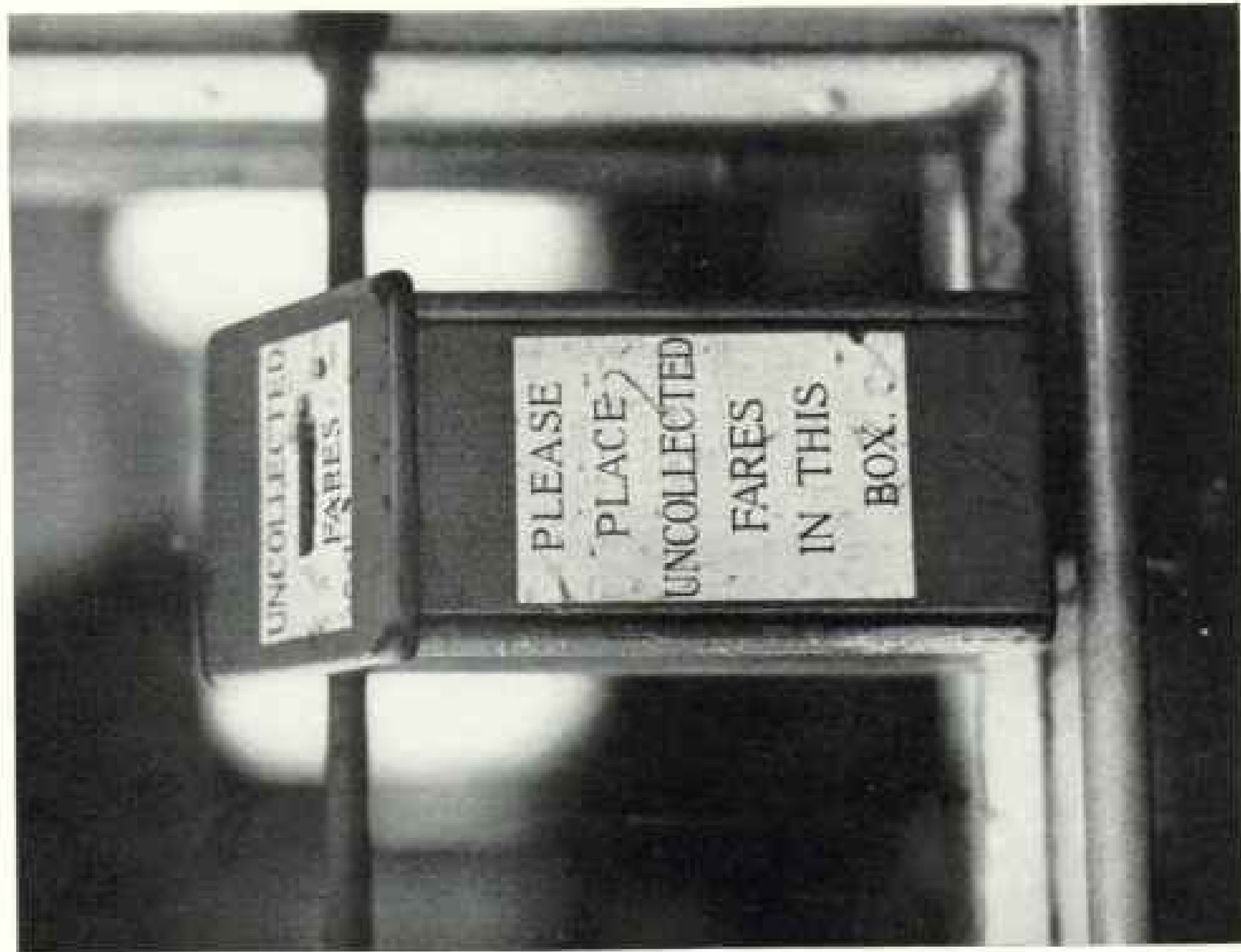
FROM PLOTTING PAGAN STARS THIS BLOCK TURNS TO MARKING
A "SCOTTISH MILE"
Photograph by Cecil Merrifield

A student of archeology here chalks the cup-marks on an old milestone near Callander to aid the photographer. Probably used by the Picts in pagan sacrifices, the carvings resemble, though closely spaced, stars in the Great Dipper.



NOT HANDWRITING ON THE WALL, BUT SIGNS OF THE TIMES
IN DUNDEE
Photograph by Maynard Owen Williams

Swarthy Bengalis now weave much of the jute on which Dundee's early fortunes were founded. For as little as \$1.90, one can ride anywhere in this restricted area of bonnie Scotland.



Photograph by Maynard Owen Williams

TO CATCH THE COINS OF THIRTY, BUT HONEST, SCOTS

If the conductor on this Aberdeen street car misses a passenger, the traveler is supposed to have a conscience—and put the proper coin in the box.



Photograph by Maurice F. Dunlap

EIGHTY YEARS LOOK BACK A THOUSAND

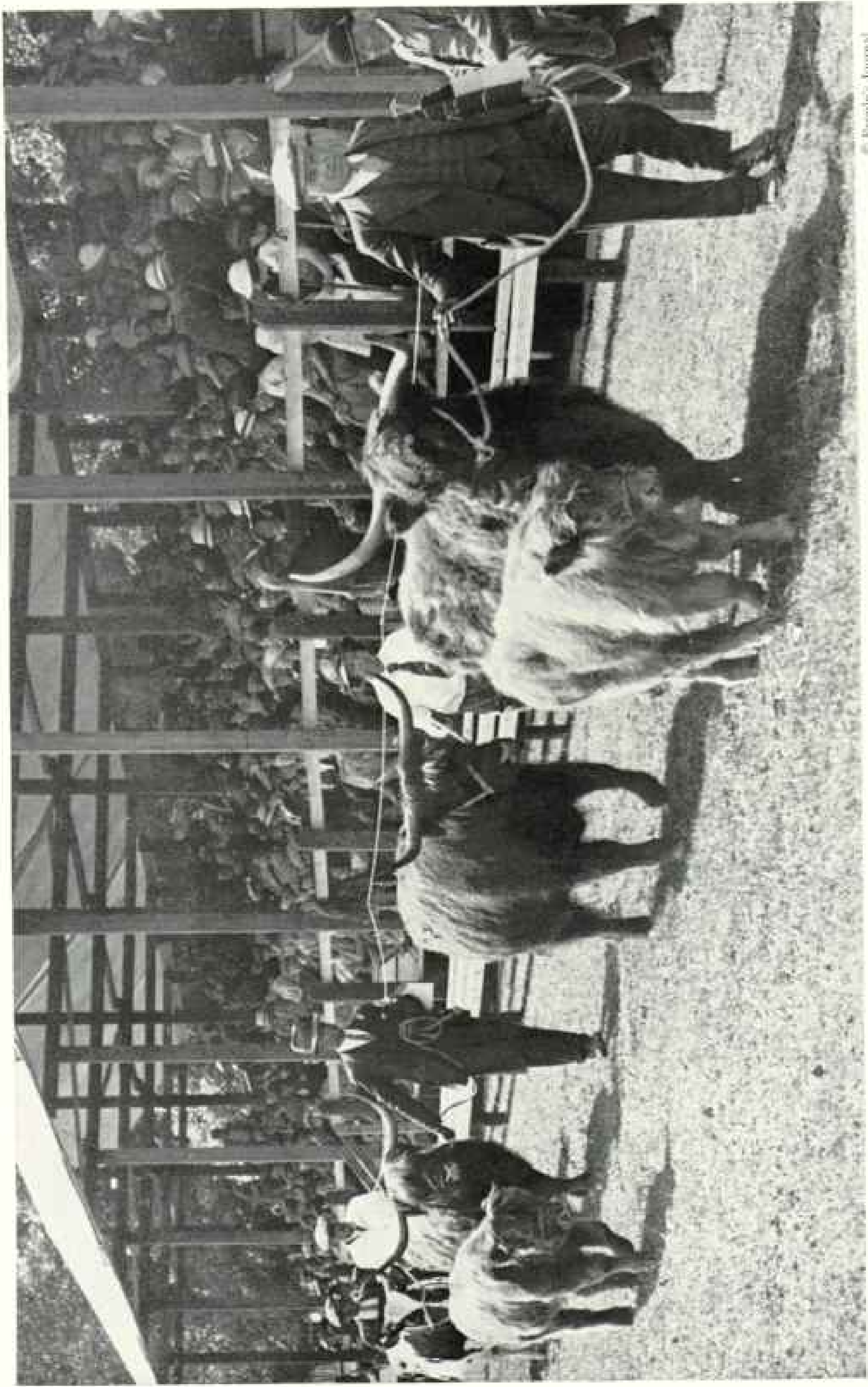
A Dundee lady contemplates the Aberlemno Cross, striking witness to the artistic skill of her forbears. It stands in a churchyard in the city's environs.



Photograph by Cecil Meredith

LIKE HOODED DRUIDS BOWED IN PRAYER THESE MOSSY RELICS KNEEL

"Follow with me and we shall see other witnesses to the antiquity of this countryside. Centuries roll from our shoulders and now we are back in the age of druid circles" (see text, page 568). "This circle overlooks Loch Tay, just as similar stones brood over Scandinavian fords. The Norsemen called them "doom rings."



© People's Journal

WELL-BRED CATTLE PARADE BEFORE PEOPLE OF BREEDING

A horse or stock show in Great Britain enjoys the patronage of everyone from royalty down. Grazing on heathered slopes, West Highland cattle, with their wide-spread horns and shaggy coats, figure in much Scottish art. Highland beef is ranked of prime quality, fine grain, and unsurpassed flavor in the London market.



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AT GLAMIS, WHERE TRADITION SAYS MACBETH SLEW MALCOLM, AN IDOL OF TODAY'S ENGLAND WAS BORN

The castle, home of the Duke and Duchess of York, is celebrated as the birthplace of the first royal baby born in Scotland for 300 years, the charming Princess Margaret Rose. Only her father and older sister, little Princess Elizabeth, now stand between her and the British throne.



Photograph by Cecil Meredith

HIGH ABOVE THE NORTH SEA, DUNNOTTAR FACES THE LANDS OF THE VIKINGS

On the bleak coast northeast of Dundee, this castle dates from prehistoric days when the Picts built forts by the North Sea. Like Calcutta, Dunnottar had its Black Hole in which, in mid-summer of 1685, 167 Covenanter men, women, and children were imprisoned for months.



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SCOTTISH BUTCHERS SHOT THREE GOALS PAST THIS STURDY TEAM OF DUNDEE DIVINES

Challenged at soccer during Great Britain's Silver Jubilee, a football team composed of butchers drove the ball through a ministers' team to win three to two. The husky preacher goalkeeper here leads his mates onto the field.

months," or at a dinner dance during the "season." It was at such an affair that I learned the popular Highland dances—"The Dashing White Sergeant," which one does with two partners; the "Petronella" and "Strip the Willow," similar to our Virginia reels.

SCOTS PROUD OF THEIR TARTANS

The men in kilt with dirk in stocking are the swagger members of the gathering. It is amusing to note how styles are made. I used to wonder why Dundee schoolboys carry pencil and ruler in their stockings. Now I know. It is interesting to see the pride in clan and custom that obtains.

"How can it be that Scotland keeps its old-time dress when so many countries are giving it up?" I asked.

"In continental countries," explained a

kilted host, "the man who is up-to-date scorns his forefathers' garb; he does not want to be thought a peasant. But in Scotland the tartan does not indicate rank; all members of a clan may wear it. And they take pride in it."

But if you would see the kilt in its glory, you must follow the high road to one of the Highland games. Almost every week during the autumn a contest of this kind is held, with sports, including the tossing of the caber, musical contests (bagpipes!), and dancing.*

It was on one of these occasions that I noticed standing near me a man wearing, in addition to his Highland garb, several medals and a tiger skin. I ventured to inquire

* See "Great Britain on Parade," by Maynard Owen Williams, NATIONAL GEOGRAPHIC MAGAZINE, August, 1935.

about the nature of the costume. The kilt was "Royal Stewart"; the tiger skin was part of the equipment of a drummer. He was more reticent about the medals.

Here was a "story," I felt sure.

"You were in the war?"

"Aye."

"Perhaps you'll tell me about those medals."

"JOCK" WITH AN IRON CROSS

It was not until we adjourned to a nearby inn that I heard. The medals were for "distinguished service," "length of service," and the like—nothing spectacular at all. "Jock," as the Scots' "Tommy" is termed, was a brawny man, a seasoned soldier. I was disappointed at his reticence.

"But I've got another medal," he commented shyly after another "drappie." "Will ye see it?"

From his pocket he took a small box, then dangled before my eyes a cross. It was an Iron Cross. Again I looked; I wanted to be sure—a *German* Iron Cross.

"I suppose you found that?" I suggested.

"Nay. I won it!"

"But this is a German honor; how could *you* win it?"

"I won it!" persisted the kilted drummer. "It was this way. We were a small party, about thirty of us, in a field, when there was a cry, 'The Uhlans, the Uhlans!' Sure enough, they were coming. Such horsemen ye never saw, all ridin' wild and with drawn swords. We were told to make a formation. I was in the front row, kneeling with fixed bayonet.

"So they came, like God's wrath. One horse cleared my bayonet and the rider, an officer, leaned to slash me with his sword. I met him eye to eye—and somehow he changed his mind. Perhaps he thought I was too young (I had enlisted under age);

anyway, he struck—but with the *flat* of his sword, and when I came to, I was among the dead. All my comrades were dead or wounded. He had spared my life.

"Years later, I lay in a trench. We were on the borders of No Man's Land. My pal and I heard groans close by. Creeping into the next ditch we found a young German officer. He begged us to kill him, to end his pain. Then I remembered the other officer who spared my life. Somehow I felt I had a debt to pay and here was the chance to pay it. I gave him some water.

"'I'll take ye back,' says I. My pal protested. 'He is the enemy. Ye'll both be killed.'

"'I'll be takin' him back,' I repeated. 'I've a debt to pay.'

"I heaved the man onto my shoulders and started. It wasna far, but it was a way o' death. Yet nobody fired on us; not one shot. I brought him safe across.

"The captain, who spoke English, thanked me for bringin' in his friend. 'What's your name?' he asked, 'an' your home address?' I'm not askin' what division,' he added; 'that wouldn't be fair.'

"I told him.

"That night I managed to crawl back O. K.; they wouldn't let me go before dark. I reported what I'd done.

"'This may mean trouble for ye,' I was warned.

"But nothin' was done about it; we all had other things to think of.

"Then the war ended an' we came home. Sometimes I thought of that German officer, wondered if he was livin', but never expected to hear more of it.

"One day I was called to headquarters. Was I So-and-So? asks the commander of So-and-So.—'Aye.'—'Here's somethin' for ye,' he told me, 'a present from the enemy.' And he handed me *this!*"

Notice of change of address of 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 June number, The Society should be notified of your new address not later than May first.

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To carry out the purposes for which it was founded forty-eight years ago, the National Geographic Society publishes this Magazine monthly. All receipts are invested in The Magazine itself or expended directly to promote geographic knowledge.

Articles and photographs are desired. For material which The Magazine can use, generous remuneration is made. Contributions should be accompanied by addressed return envelope and postage.

Immediately after the terrific eruption of the world's largest crater, Mt. Katmai, in Alaska, a National Geographic Society expedition was sent to make observations of this remarkable phenomenon. Four expeditions have followed and the extraordinary scientific data resulting given to the world. In this vicinity an eighth wonder of the world was discovered and explored—"The Valley of Ten Thousand Smokes," a vast area of steaming, spouting fissures. As a result of The Society's discoveries this area has been created a National Monument by proclamation of the President of the United States.

The Society cooperated with Dr. William Beebe in a deep-sea exploration of undersea life off Bermuda, during which a world record depth of 3,028 feet was attained August 13, 1934, enabling observations of hitherto unknown submarine creatures.

The Society also had the honor of subscribing a substantial sum to the expedition of Admiral Peary, who discovered the North Pole, and contributed \$100,000 to Admiral Byrd's Antarctic Expeditions.

The Society granted \$25,000, and in addition \$75,000 was given by individual members, to the Government when the congressional appropriation for the purpose was insufficient, and the finest of the giant sequoia trees of California were thereby saved for the American people.

The Society's notable expeditions to New Mexico have pushed back the historic horizon of the northwestern United States to a period nearly eight centuries before Columbus crossed the Atlantic. By dating the ruins of the vast communal dwellings in that region, The Society's researches have solved secrets that have puzzled historians for three hundred years. The Society is sponsoring an ornithological survey of Venezuela.

On November 11, 1935, in a flight sponsored jointly by the National Geographic Society and the U. S. Army Air Corps, the world's largest balloon, *Explorer II*, ascended to an officially recognized altitude record of 71,395 feet. Capt. Albert W. Stevens and Capt. Orvil A. Anderson took aloft in the gondola nearly a ton of scientific instruments, which obtained results of extraordinary value.



With these motion picture "machine guns," the Navy's marksmen shoot down "enemy" planes in sham battles. Shown below is the reporting of an air duel as taken by one of these Fairchild cameras. With each "shot," a photograph of a Hamilton records the exact time to the second.

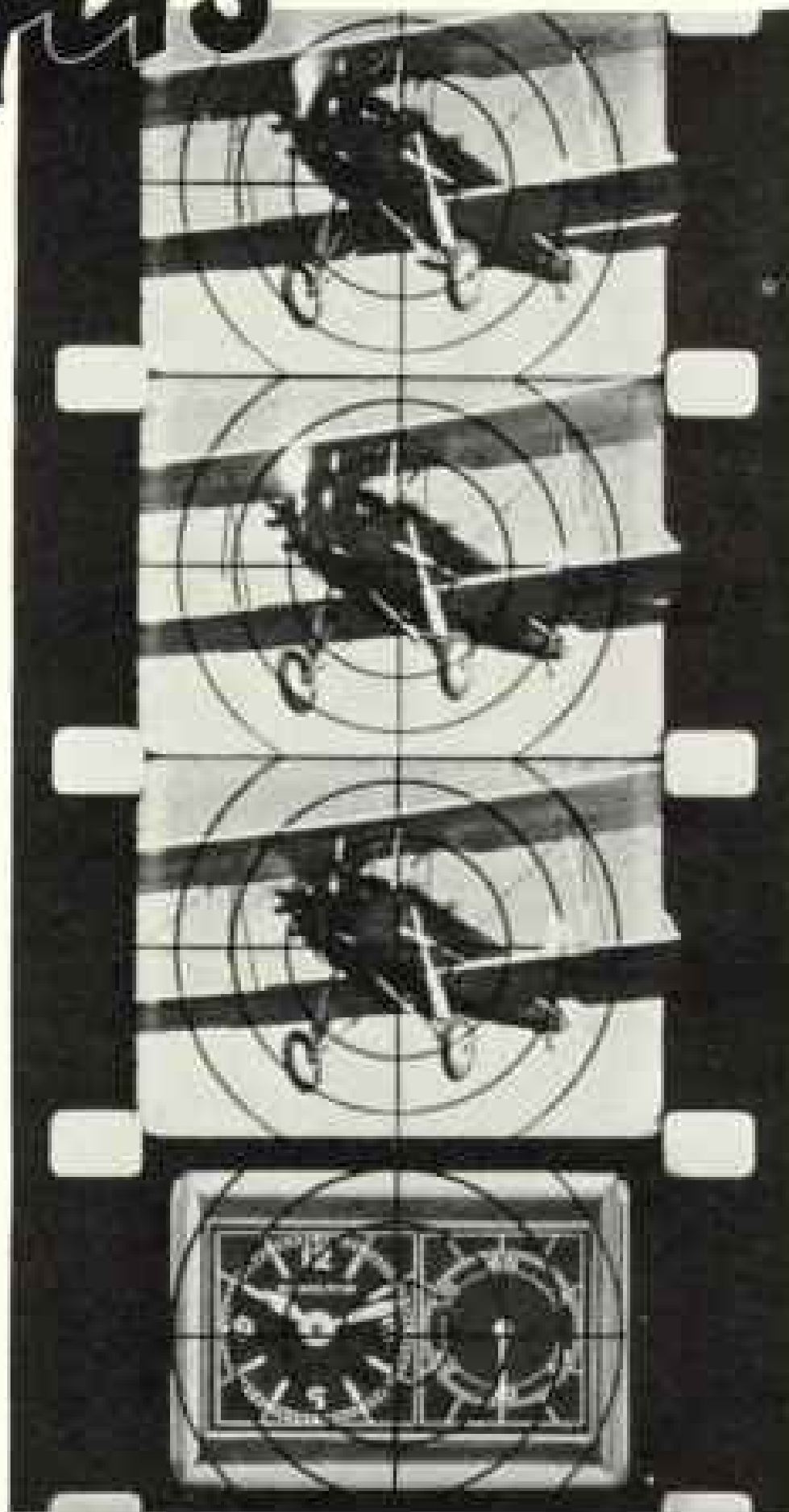
Perfect Hits

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OCEAN"



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"As Sheriff, I Needed A Tough Car!"



MY 3 BROTHERS SOLD ME ON PLYMOUTH"



A CERTIFIED INTERVIEW WITH DEPUTY SHERIFF PAT ENOS, OAKLAND, CALIFORNIA

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HE: "No more oil for me that won't start with the starter."

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YOUR engine goes through a critical five minutes, every time you start it. It must have the protection of full lubrication from the very instant of "go."

That's why many a motor wears, loses power. The oil can't start, can't flow freely, when cold. And in these first five minutes of running, your engine gets more wear—a lot more wear than that which comes from the next 100 miles of hard, fast driving.

An oil that flows freely

Havoline is that oil. It starts flowing the instant you step on the starter and banishes the danger of excessive wear those critical first five minutes of running.



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Havoline is refined by the patented Furfural Process. Due to this Process it has the ability to be fluid—to flow freely in zero weather, as well as resist the highest operating temperatures.

Insist on Havoline next time you need a fill and avoid that dangerous first five minutes of wear. That's a sure way to keep your engine equal in every respect to new-car performance.

• • •

Next time you need oil that starts with the engine—go to your neighborhood dealer and ask for Havoline. He has the correct S.A.E. grade for your car—the grade number stamped plainly on each can.

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Safer ... and More Beautiful!

Safety, and strength and sparkling modern beauty are plainly part of the picture in the sweet and thrifty new Chevrolat with its one-piece solid steel "Turret Top" Body by Fisher. If you buy in the lowest-priced field, see and ride in "the only complete low-priced car!"

To this curly-headed young lady, the solid steel "Turret Top" may be merely a new and more exciting place from which to view the world. But to her parents, it's the crowning glory of a car chosen for style, for safety, for sturdiness, for comfort. They like the clean and flowing grace of these arched and sphere-like contours. They appreciate the added security in "Turret Top's" shock-proof, weave-proof strength. As a safety measure, one-piece seamless steel is the ideal protection to put over the heads of passengers. And the solid steel "Turret Top" Body by Fisher is always accompanied by that notable aid to health and riding comfort, No Draft Ventilation. People like these want the safest, strongest, smartest, most comfortable body they can get—so their choice is naturally a General Motors car with Body by Fisher.

THE MARK OF THE MODERN CAR

ONE-PIECE SOLID STEEL "TURRET TOP" BODY BY



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For information or reservations apply to any office or agent of Raymond-Whitcomb or the French Line

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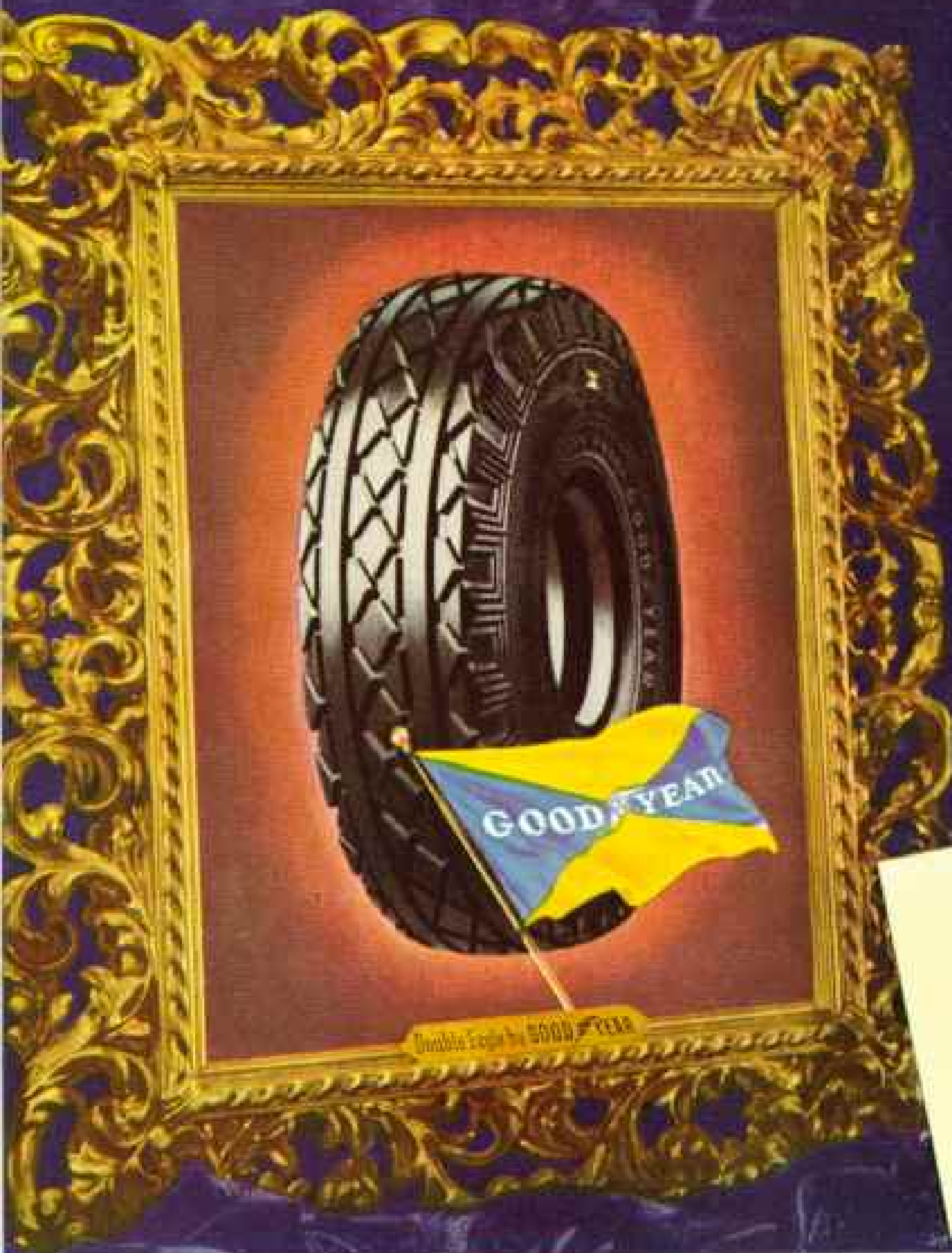
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This, the new Goodyear Double Eagle Airwheel,* is to the average tire what towering Mt. Everest is to its foothills — it is the peak product of the largest rubber manufacturer in the world.

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These better-than-necessary products bid for the favor of those who can afford them on grounds of peerless quality only — their mission being not to save money but to save life. * Registered

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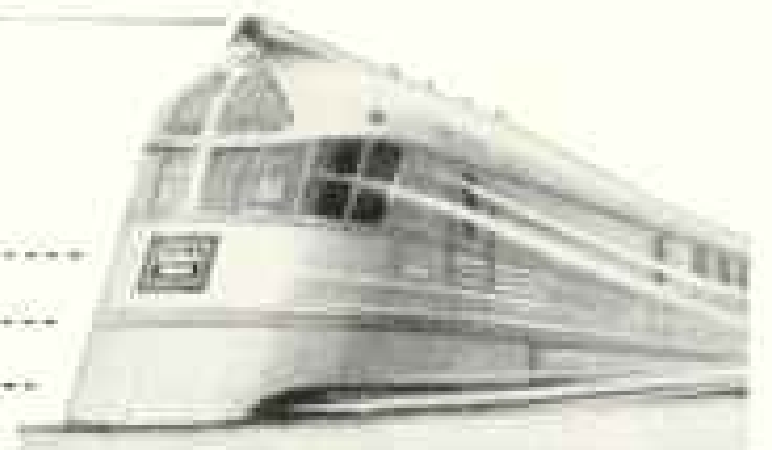
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Painting by Rockwell Kent of his home at Ausable Forks, New York

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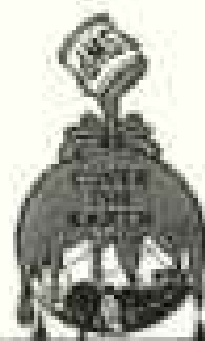
SWP is the best known and most widely used house paint in America. Years of research . . . years of testing . . . years of work . . . have established its preeminence. And those years have brought pleasure to countless Americans . . . brought beauty and protection to their homes.

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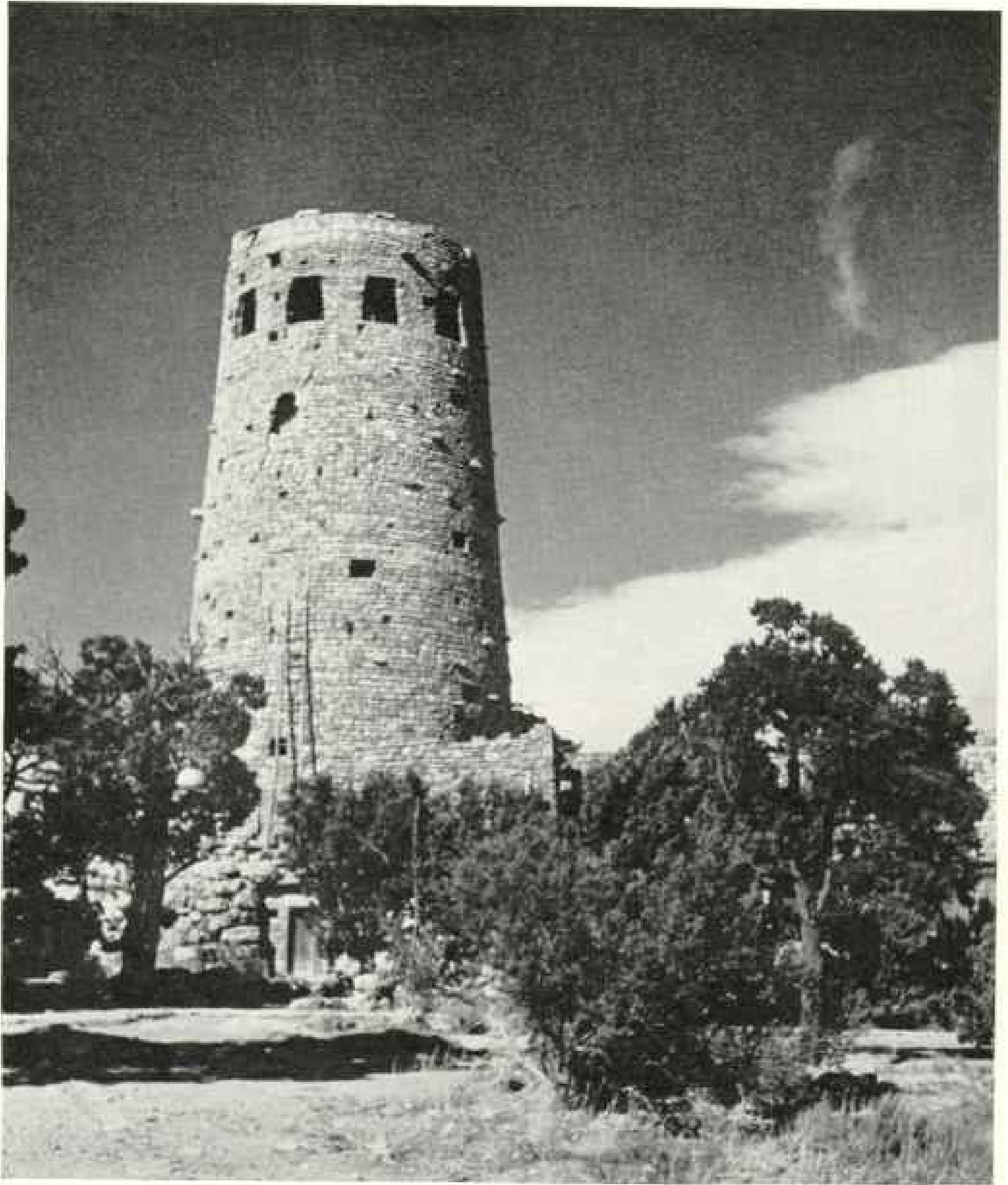
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Buick 8

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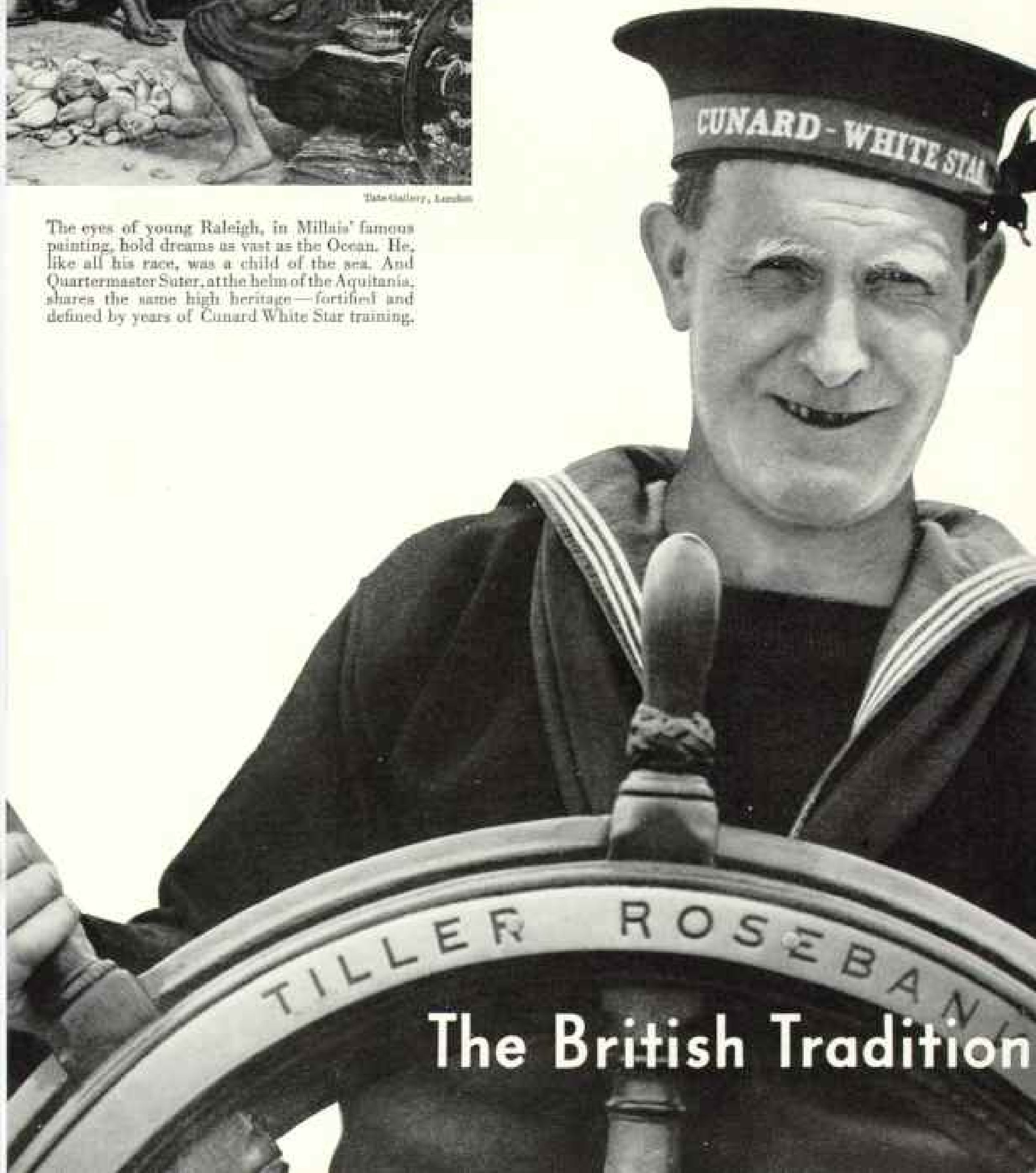
\$765 to \$1045 are list prices of the new Buicks at Flint, Mich. Standard and special accessories groups at extra cost

C hildren



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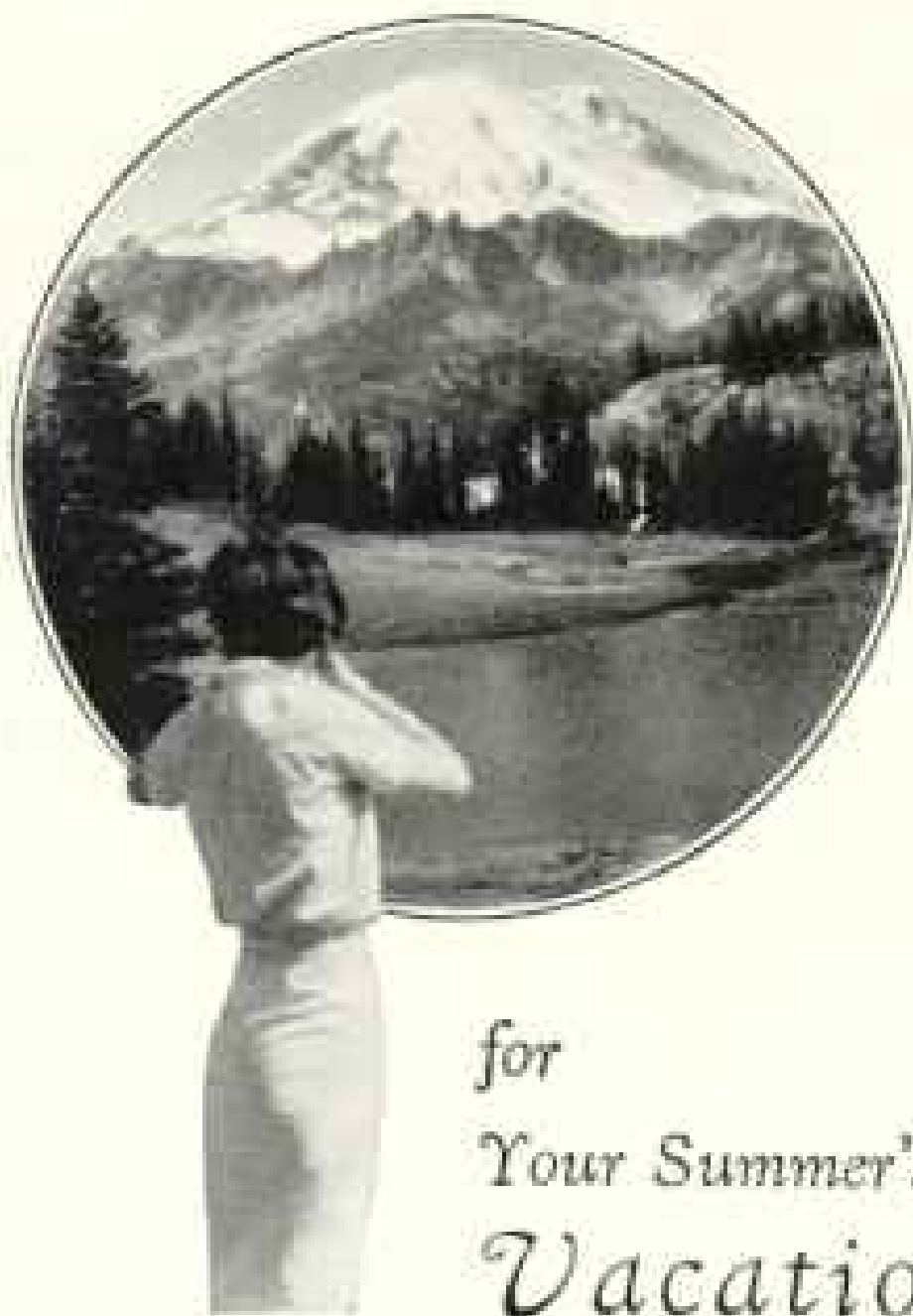
FROM BRIDGE TO ENGINE ROOM . . . CHILDREN OF THE SEA

Left to right: Commodore Sir Edgar T. Britten, R. D., R. N. R., appointed to command the "Queen Mary". • Pursuer James W. Lawler, of the Aquitania. • Chief Steward E. B. Pimbley, of the Berengaria. • Chief Engineer W. Booth, of the Carinthia.

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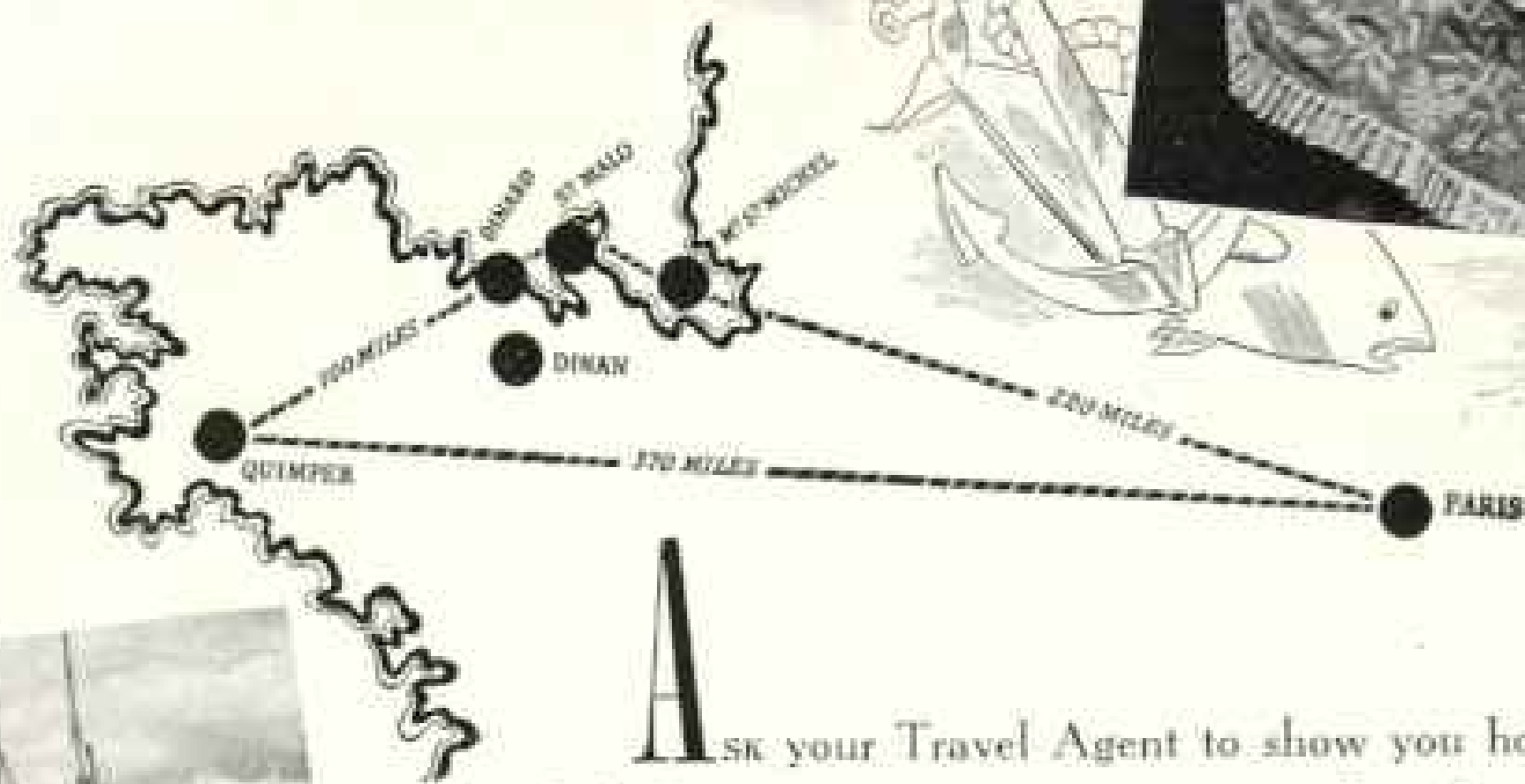
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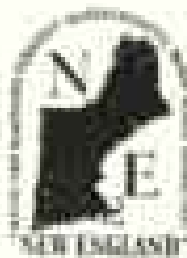
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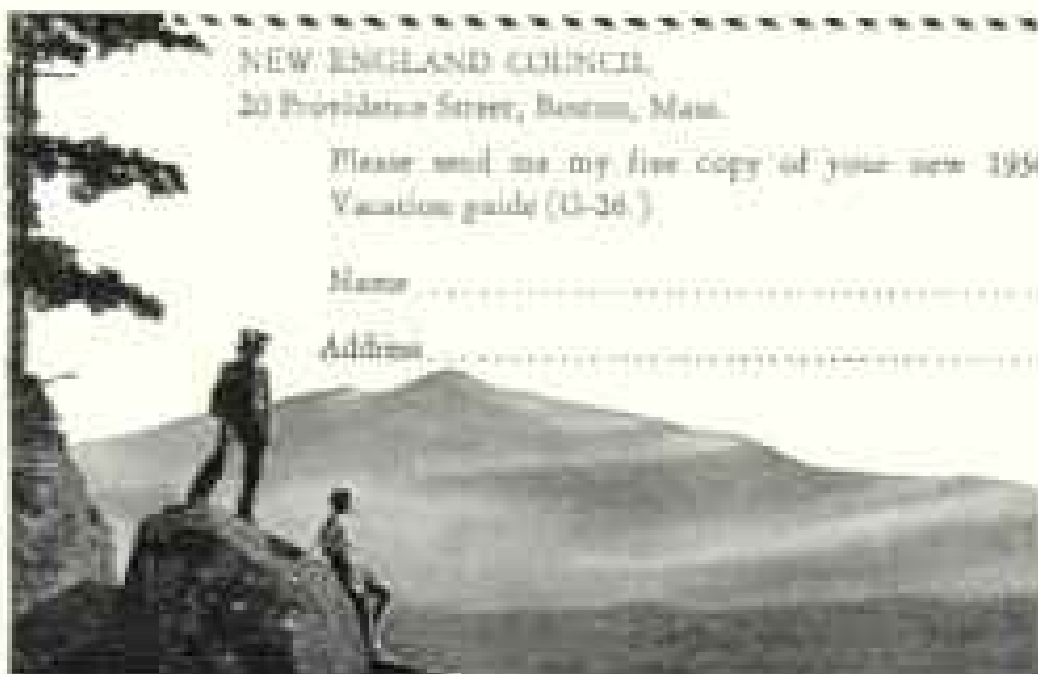
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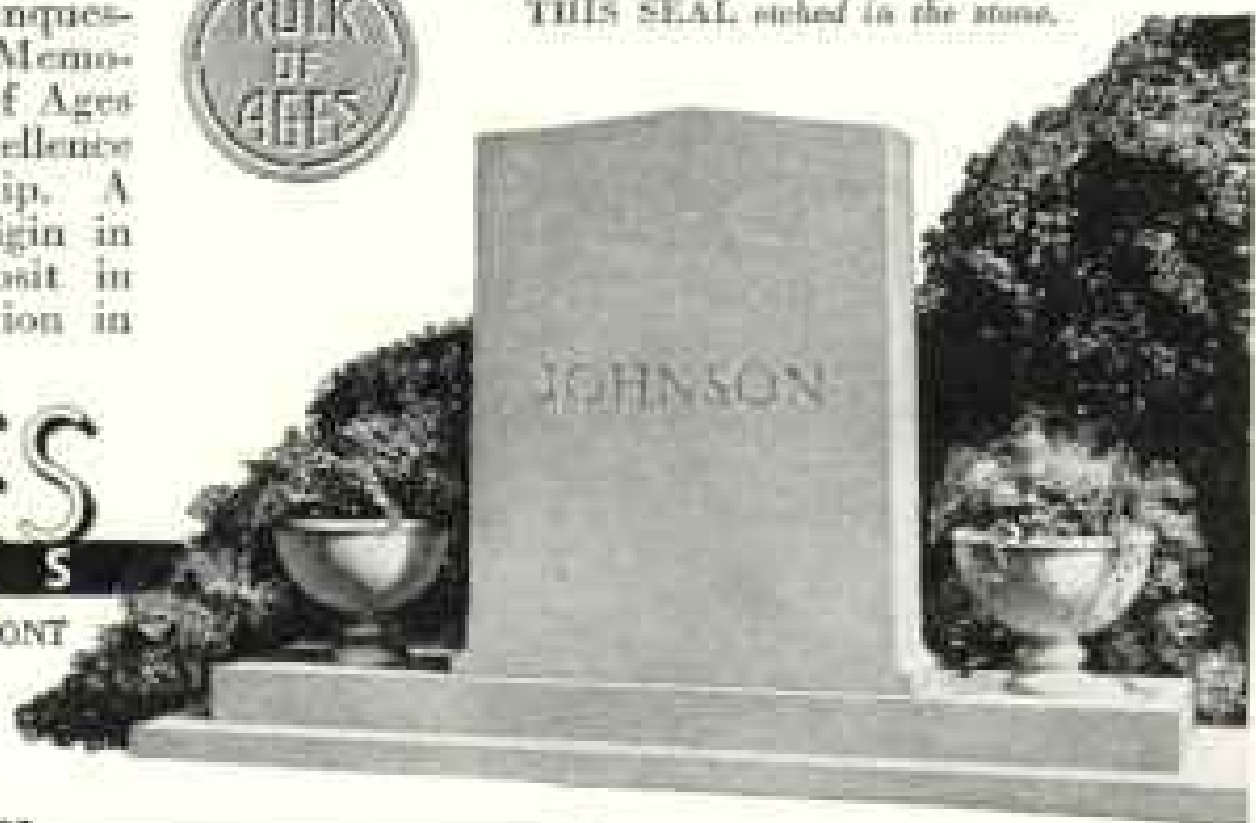
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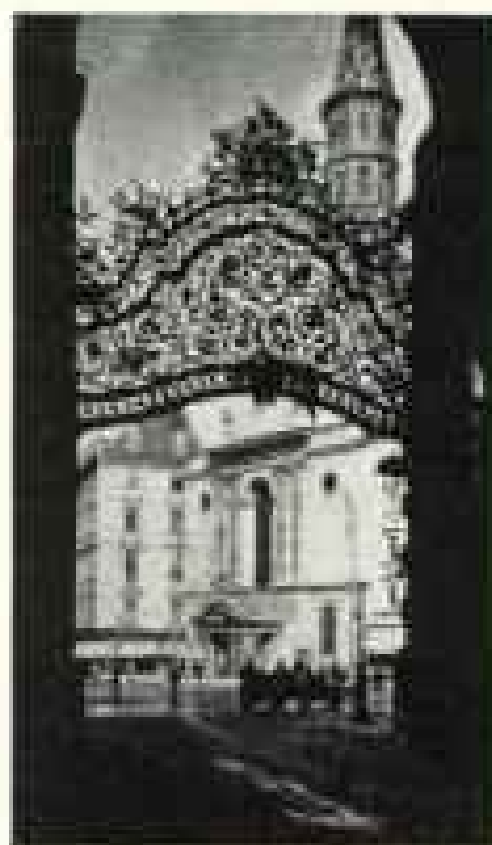
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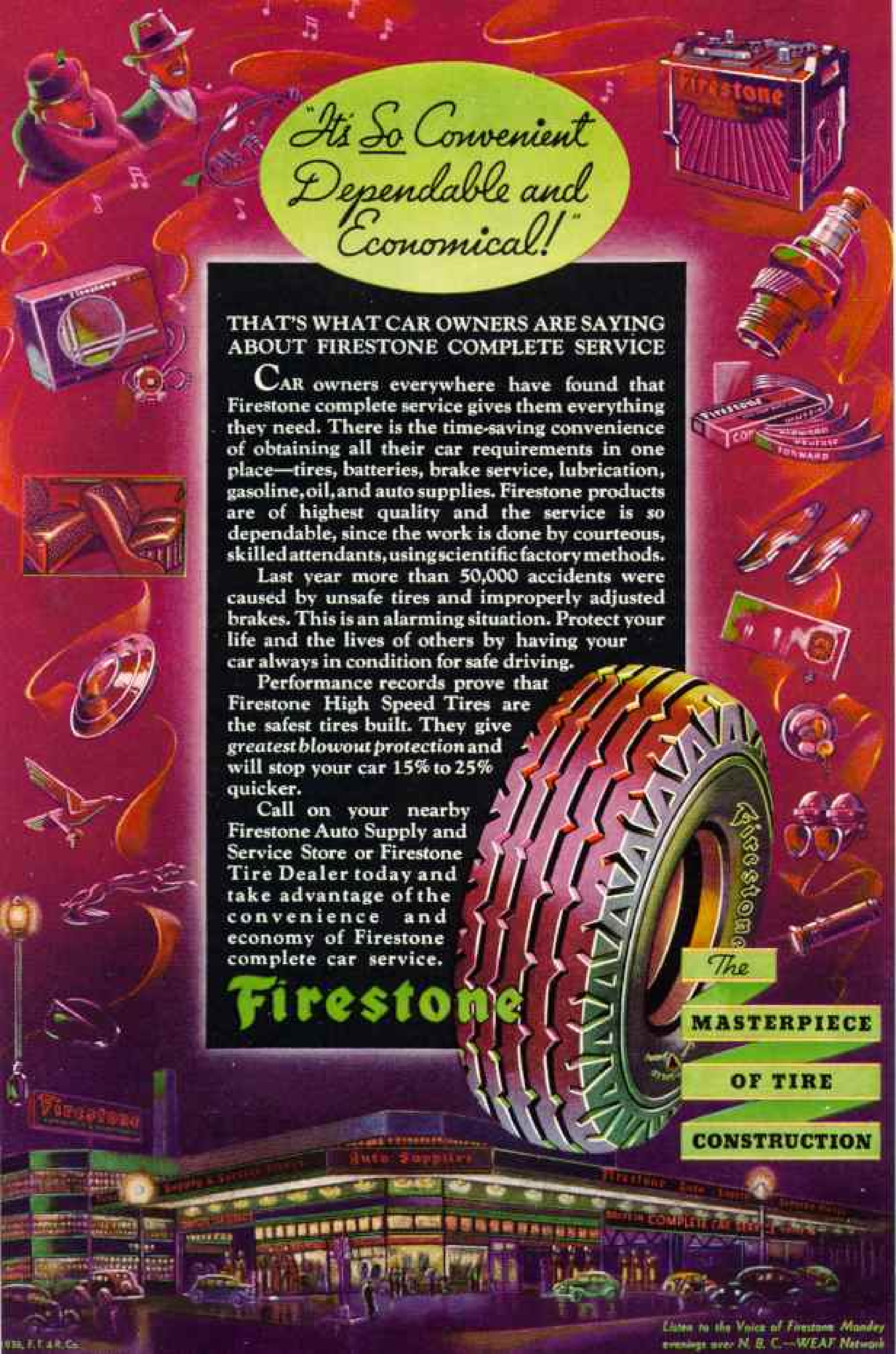
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Perhaps the mother should be on a special diet or restricted exercise—because of underweight or overweight or some difficulty with her blood pressure, kidneys or heart. It is important to know and observe these conditions long before the baby arrives.

After the baby is born, he should when



possible have the food that is best for him—his own mother's milk. But if conditions prevent, the doctor will order the best substitute. Into baby's diet must go all the elements needed to build sound teeth, sturdy bones, strong muscles. His food must contain the vitamins needed to help him grow into vigorous childhood and to build up resistance to help him fight off disease.

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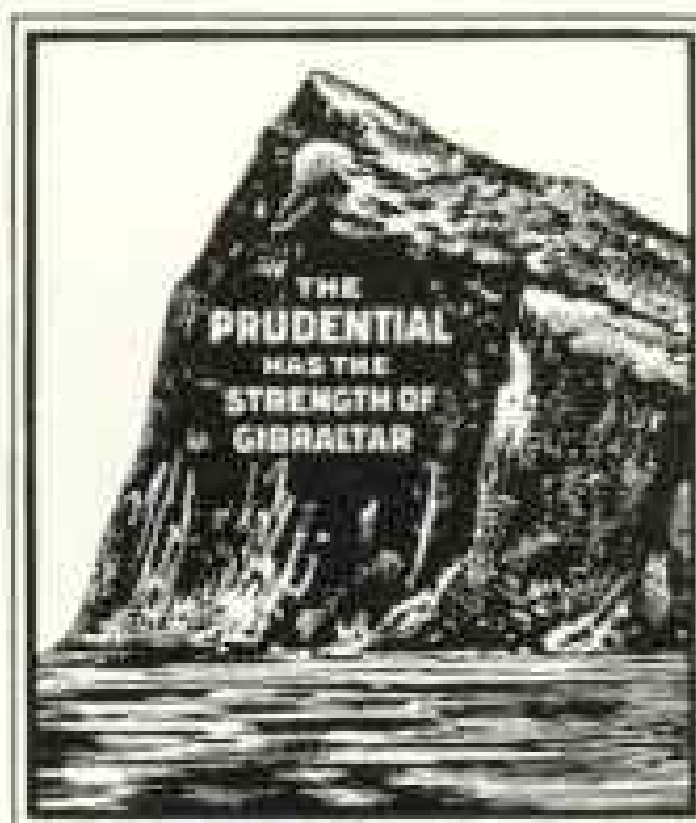
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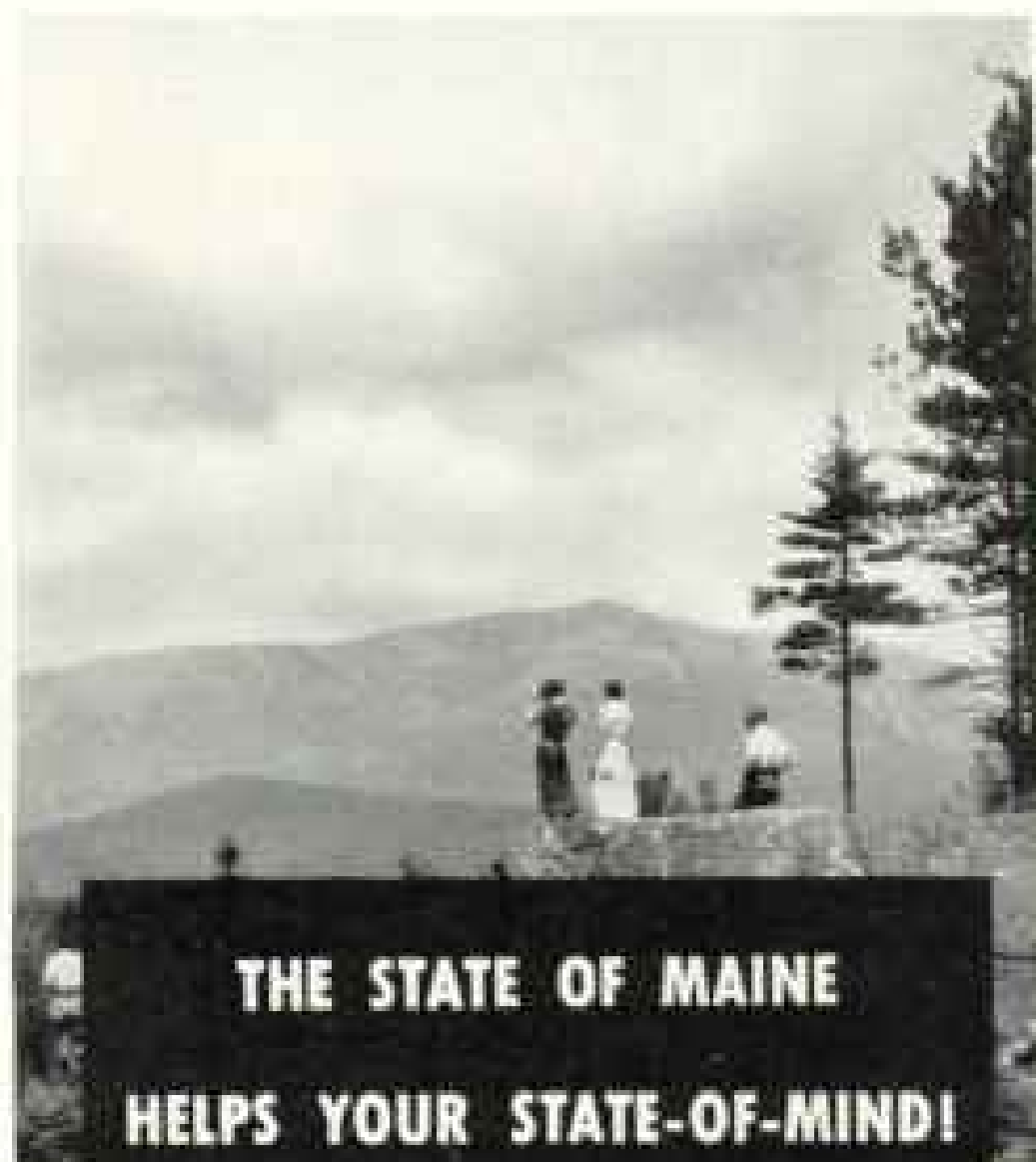
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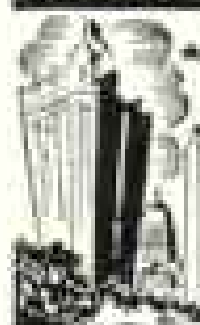
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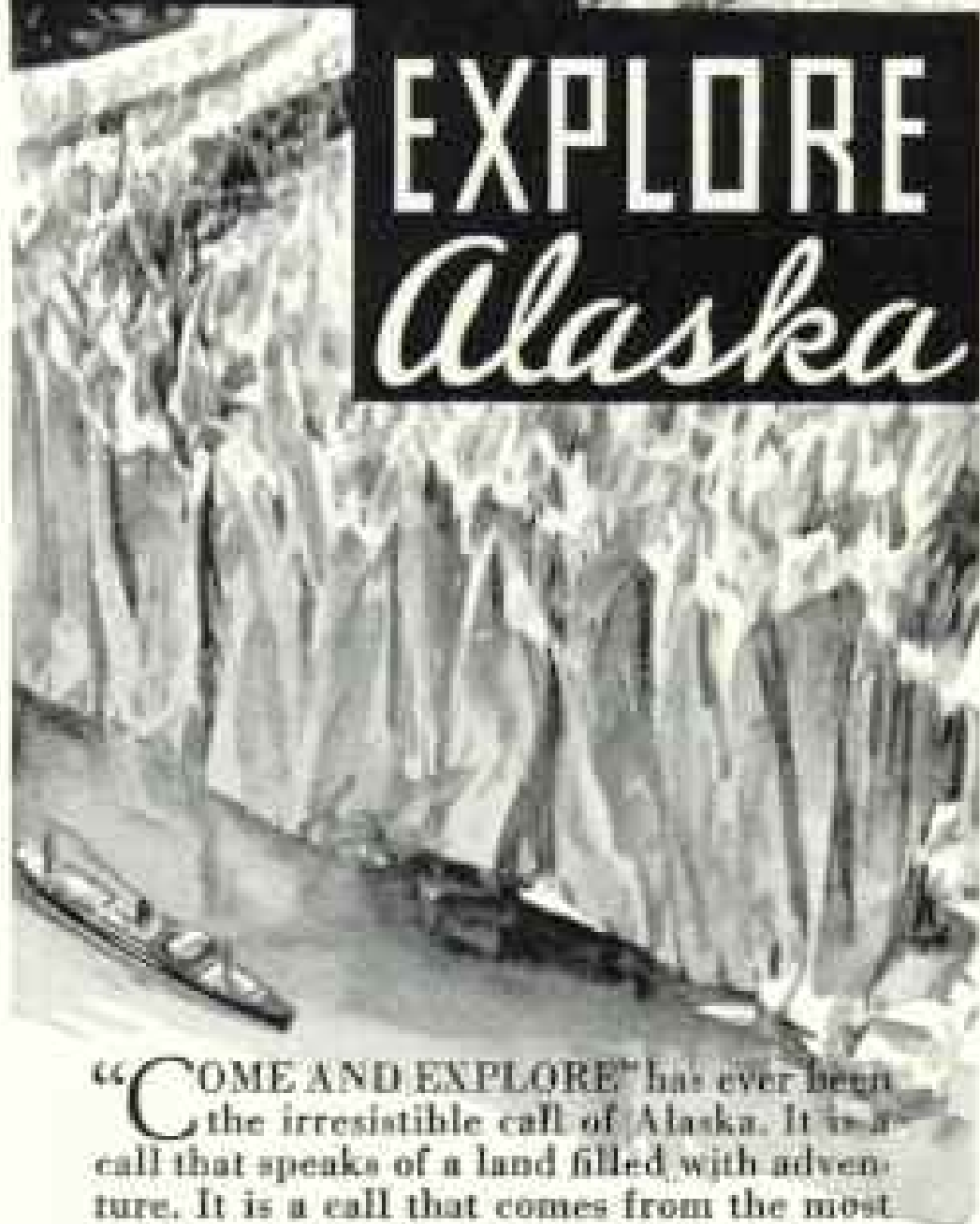
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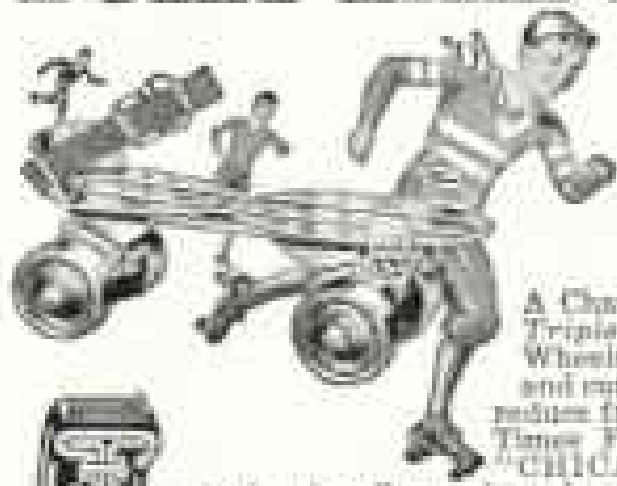
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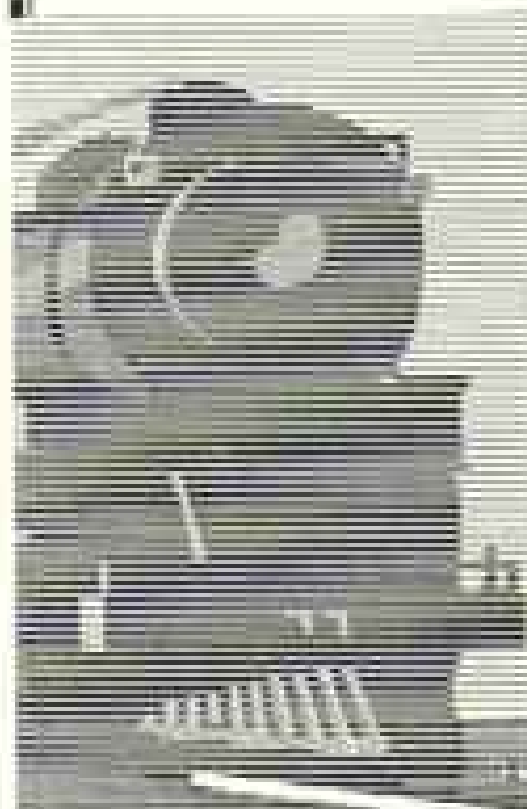
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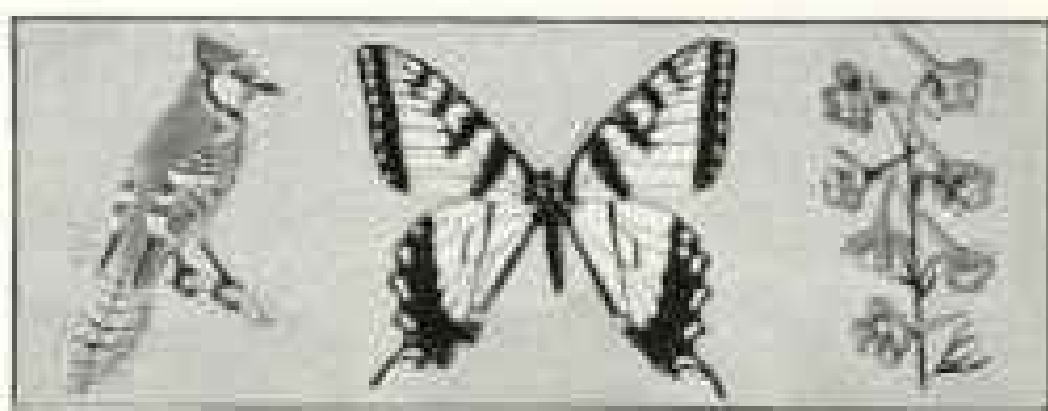
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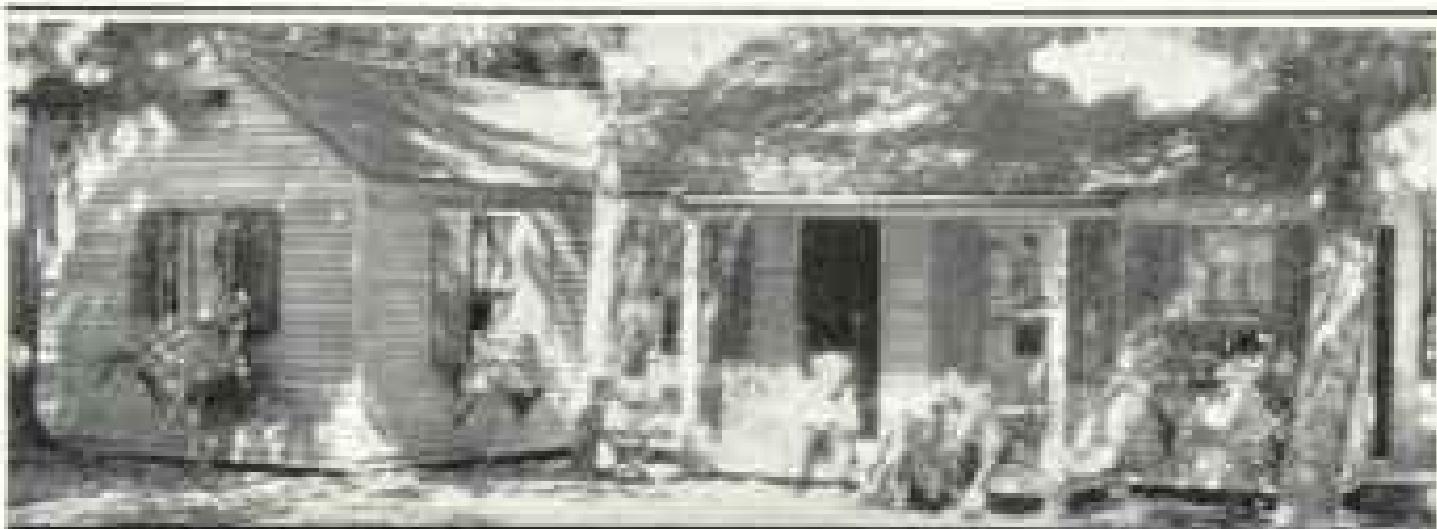
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