

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, every-body 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.



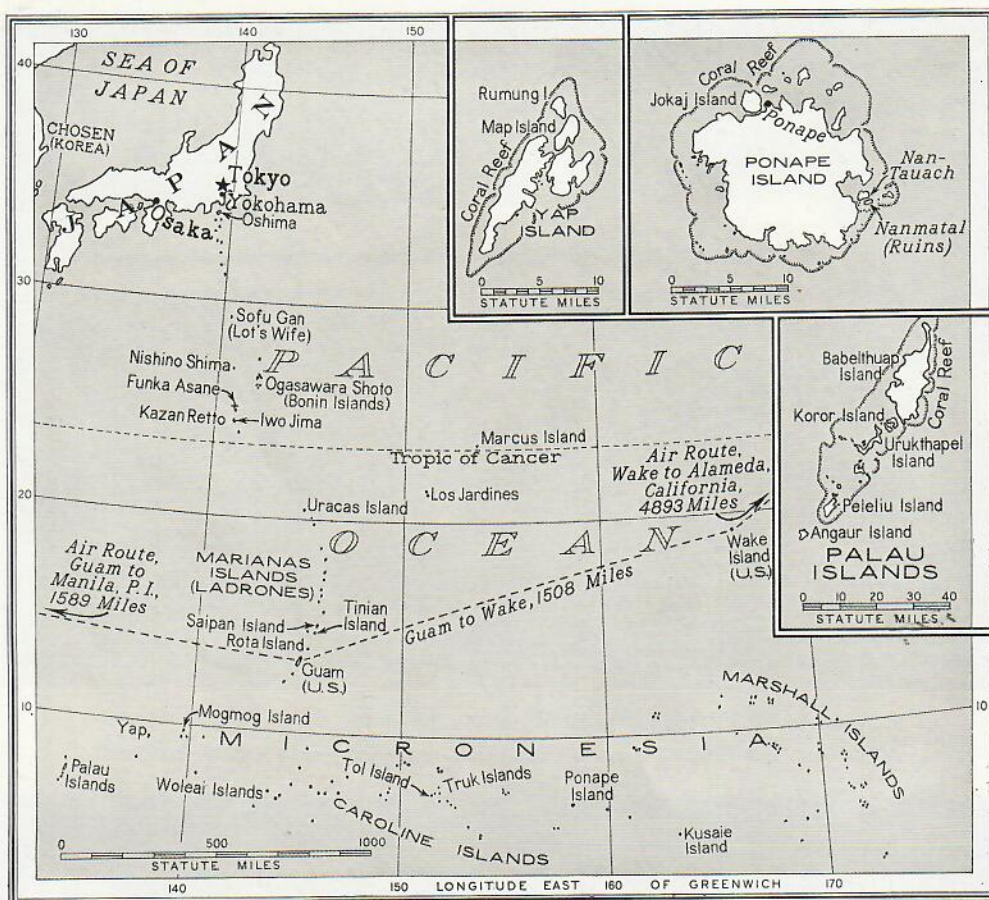
A GROWLING WATCHDOG IS URACAS, THAT GUARDS THE APPROACH TO MICRONESIA

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 float 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. Hazes

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 boathouse.



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).

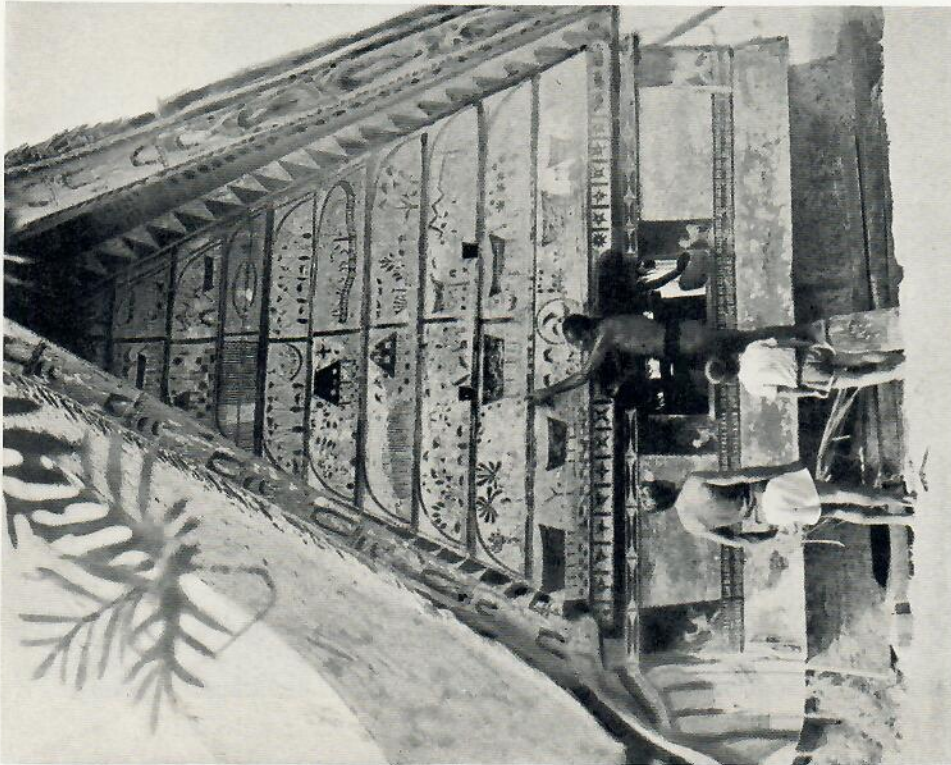


"BLESSED ARE THE POOR IN SPIRIT" SHE WRITES NEATLY IN PONAPE
While most of the people on the island are Christians, some still adhere to ancient beliefs.



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 BECAME 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 Koror 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.



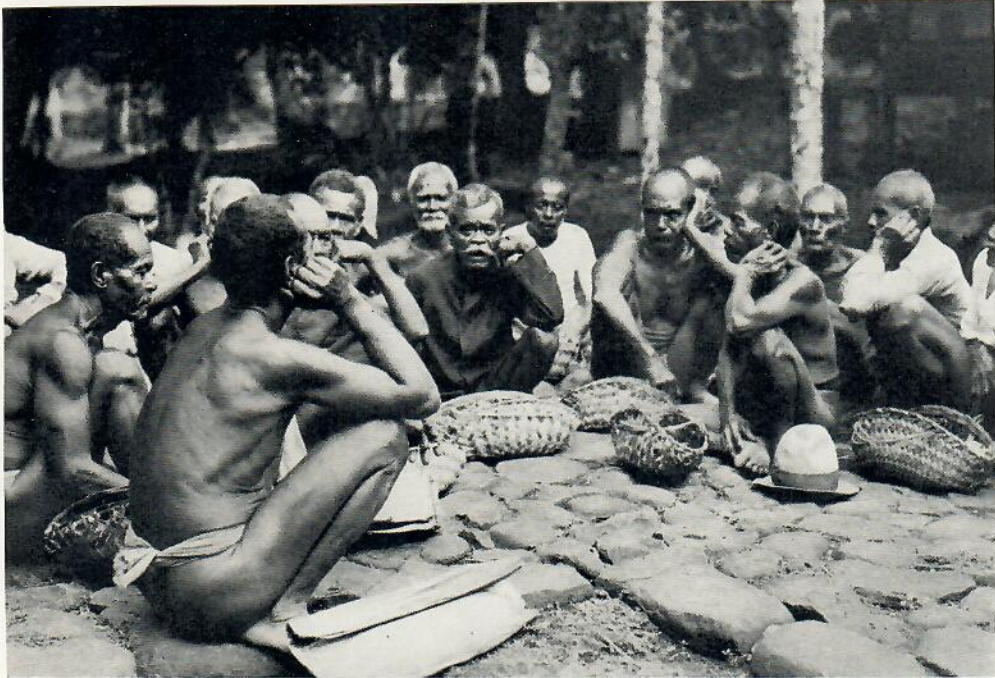
YOUNG MEN OF TOL CELEBRATE THE OPENING OF AN ATHLETIC FIELD

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.



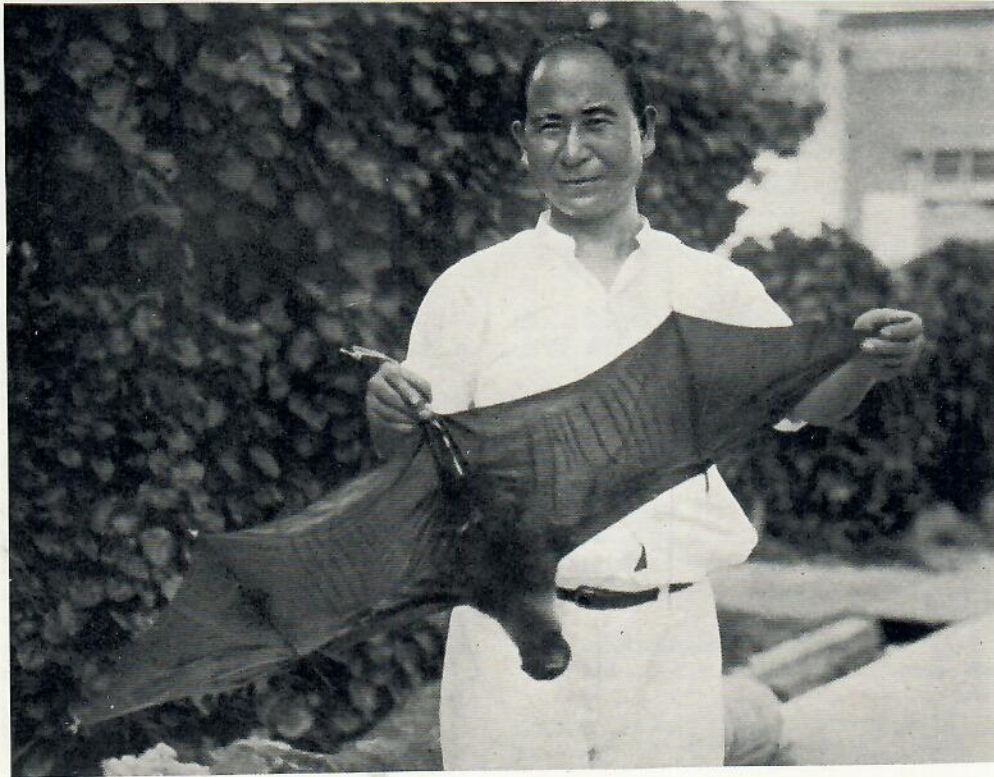
ON SEVERAL SUCH SIMPLE STOVES A FAMILY'S MEAL IS PREPARED IN PALAU

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



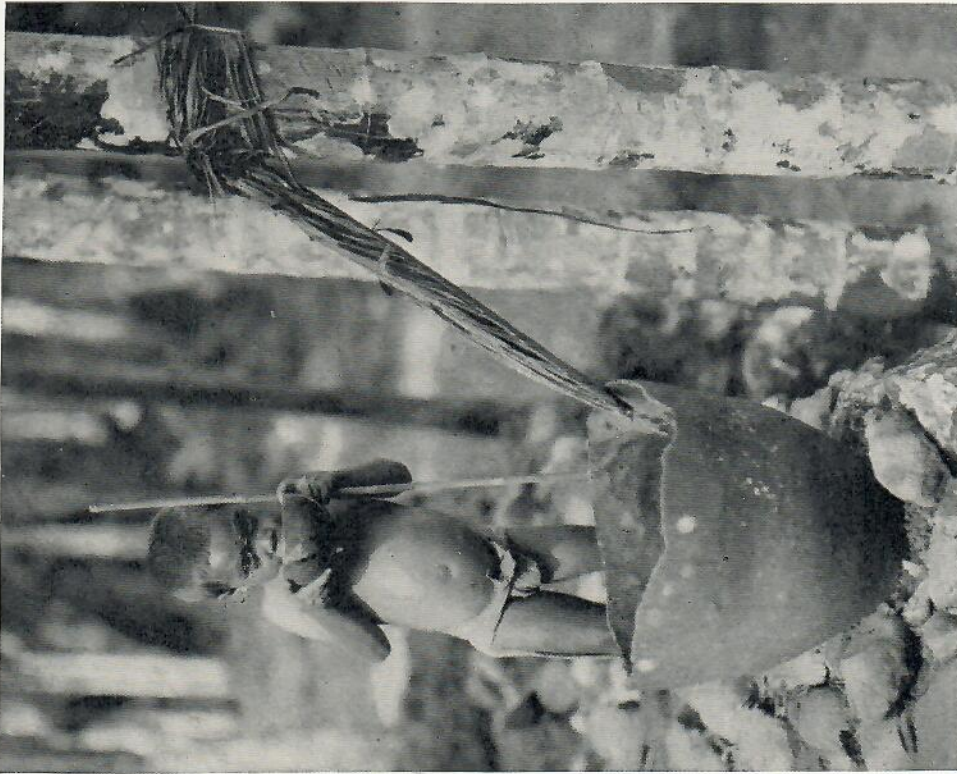
A CAPTIVE DOVE SERVES AS A HUNTER'S DECOY

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.

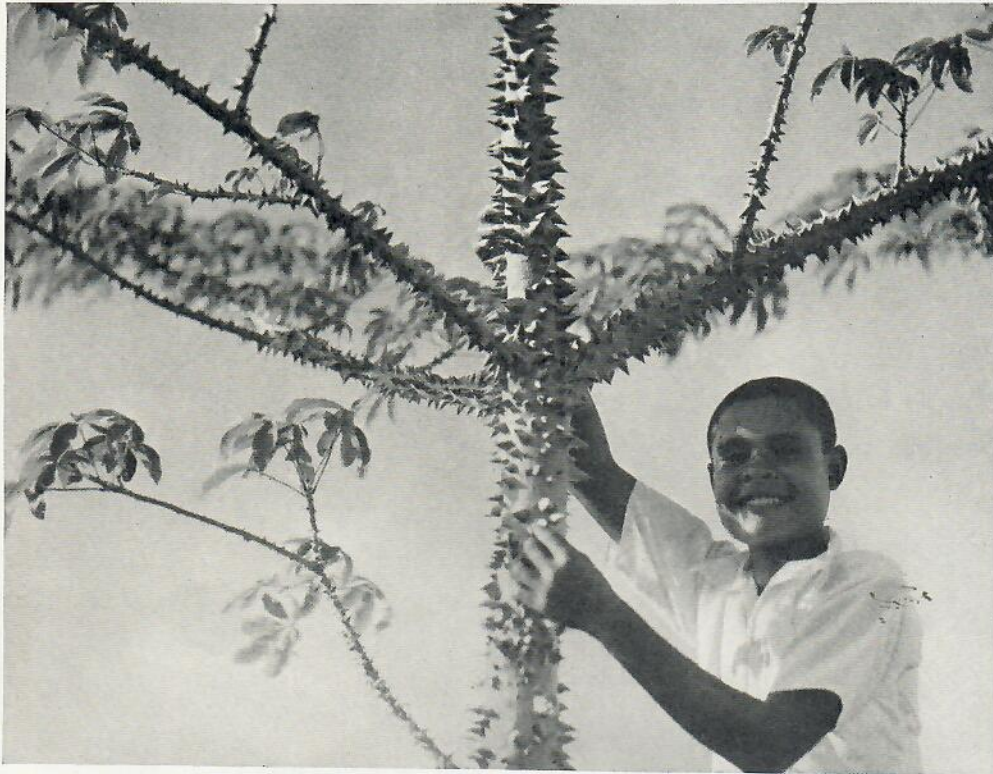


MAKING A BIRD TRAP OUT OF STICKY GUM

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 FREEMAN

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 suspicions 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.

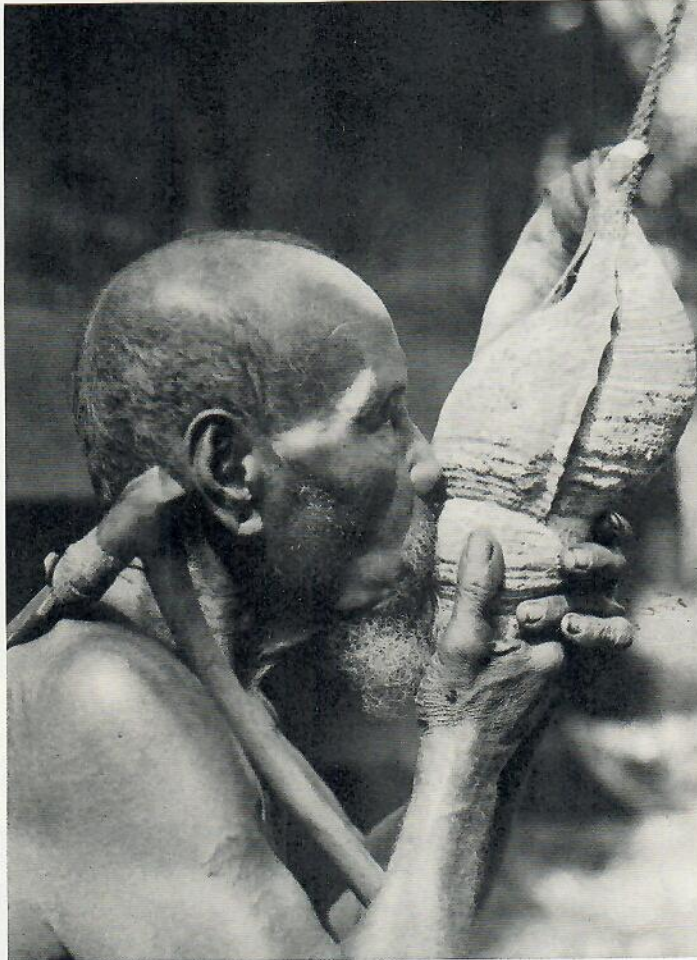
"Where does he get the gum?" I asked, scenting the trail of the trader. But I was mistaken.

"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

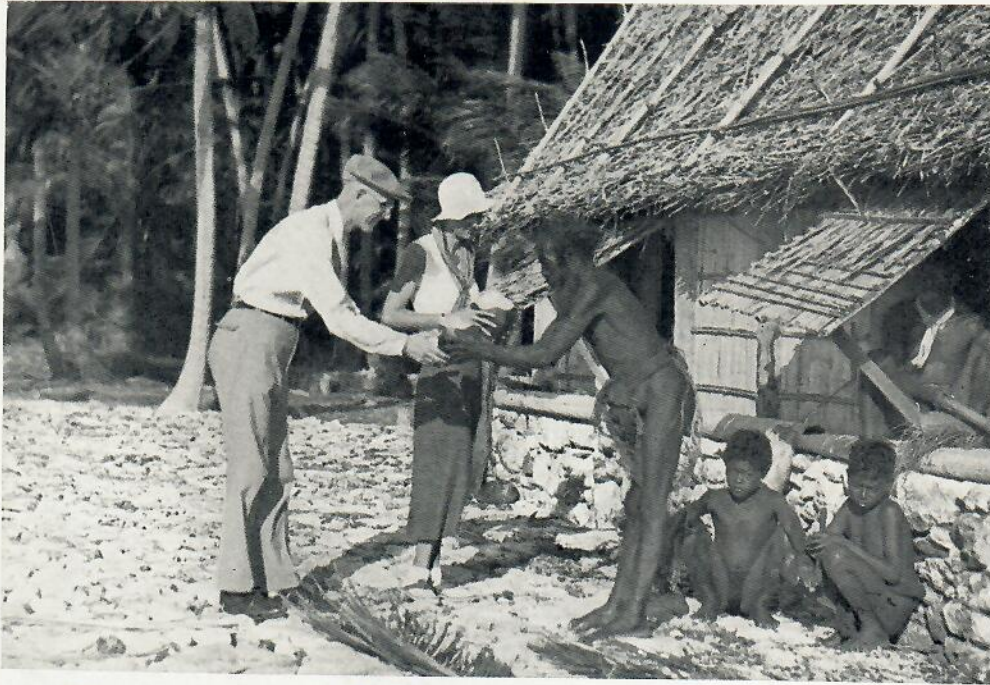
Using the same kind of conch-shell trumpet with which the sea demigod of legend was supposed to raise or calm the waves, this old Palau chief announces a meeting. A native mattock hangs over his shoulder.

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 Rumung, 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 Mogmog, where the fashion does not hold, and recent jailbirds 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



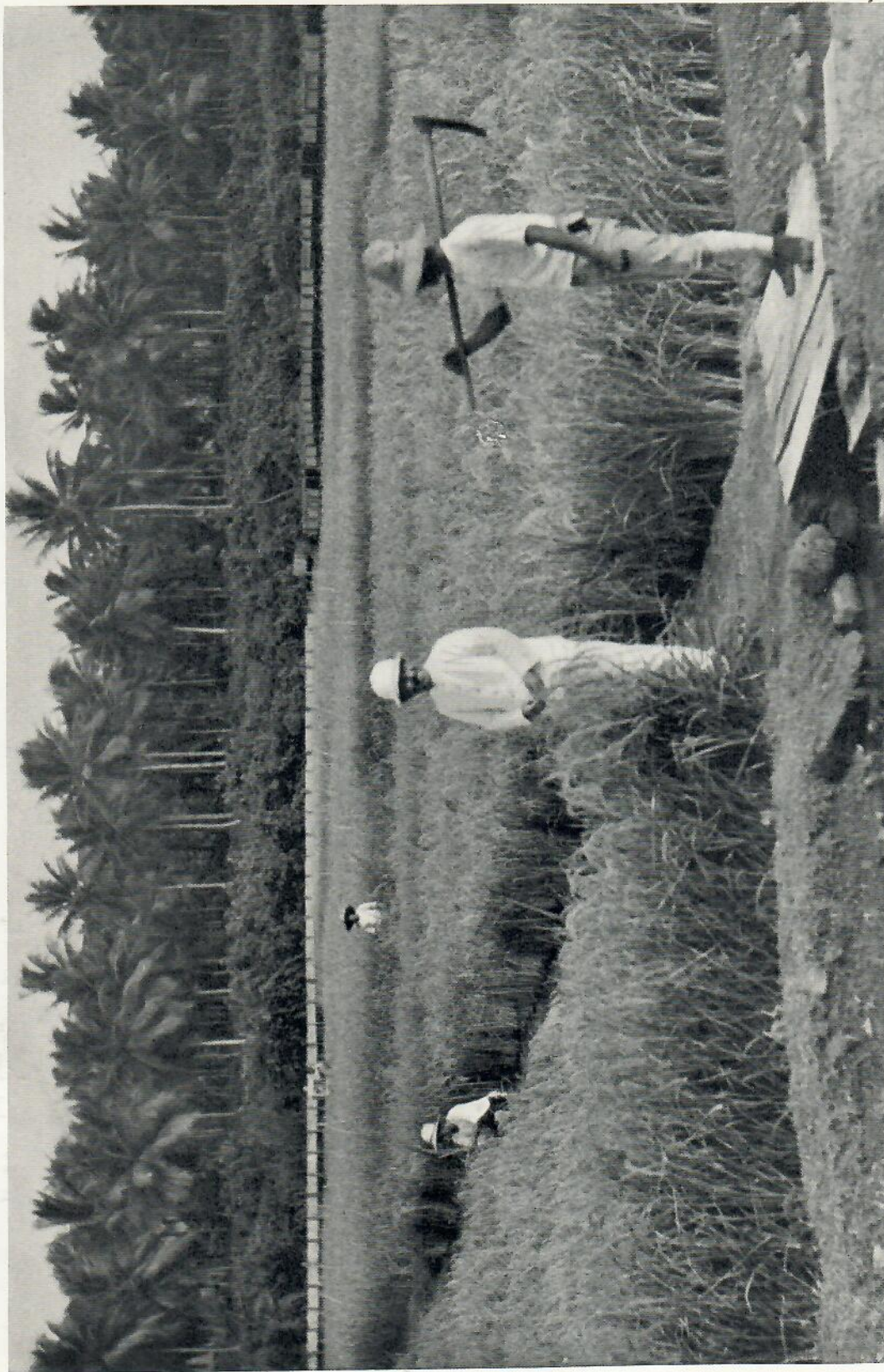
YAP HAS INFLATED CURRENCY, BUT NO COUNTERFEITING!

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.



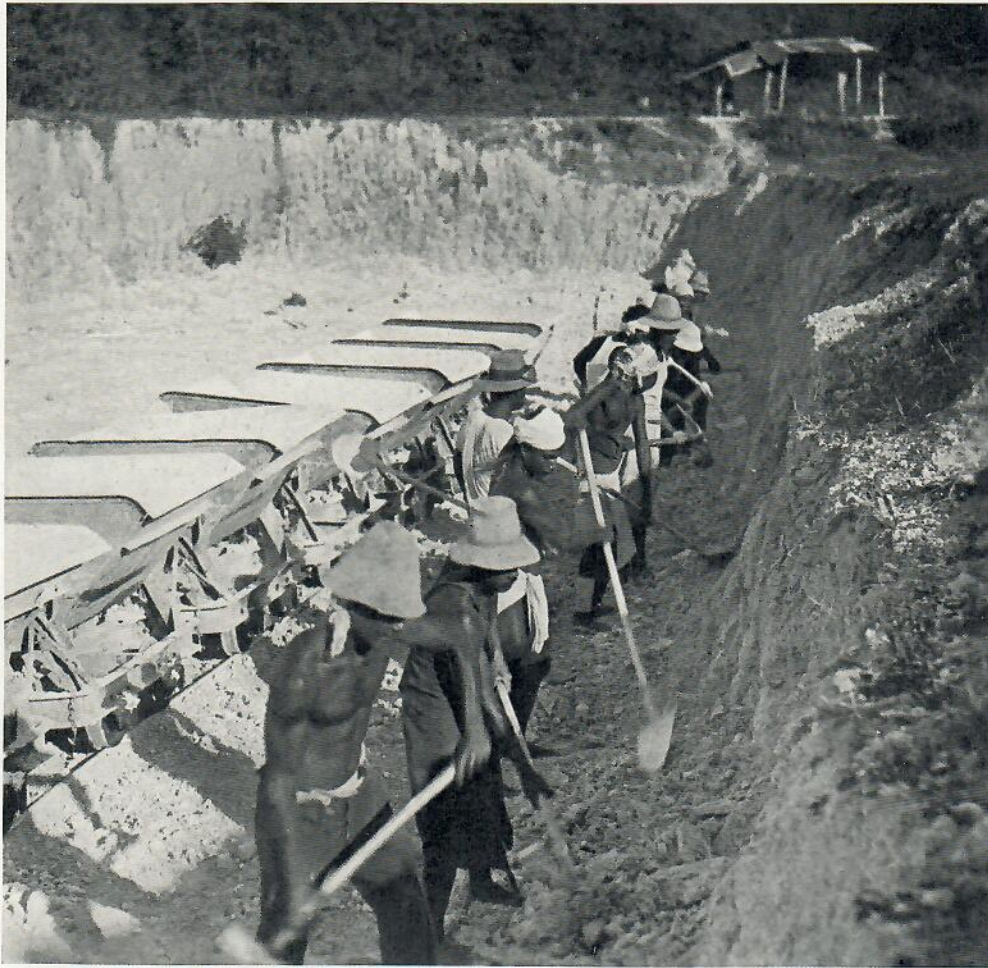
BUILDING A HOME IS A FAMILY ENTERPRISE

Women of the Truk 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 Ponape. The sheet iron fence surrounding the entire plantation keeps out huge 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 Untalán, whose wife was Micaila and whose twelve children

were María, Juanito, Manolo, Vicentico, 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."

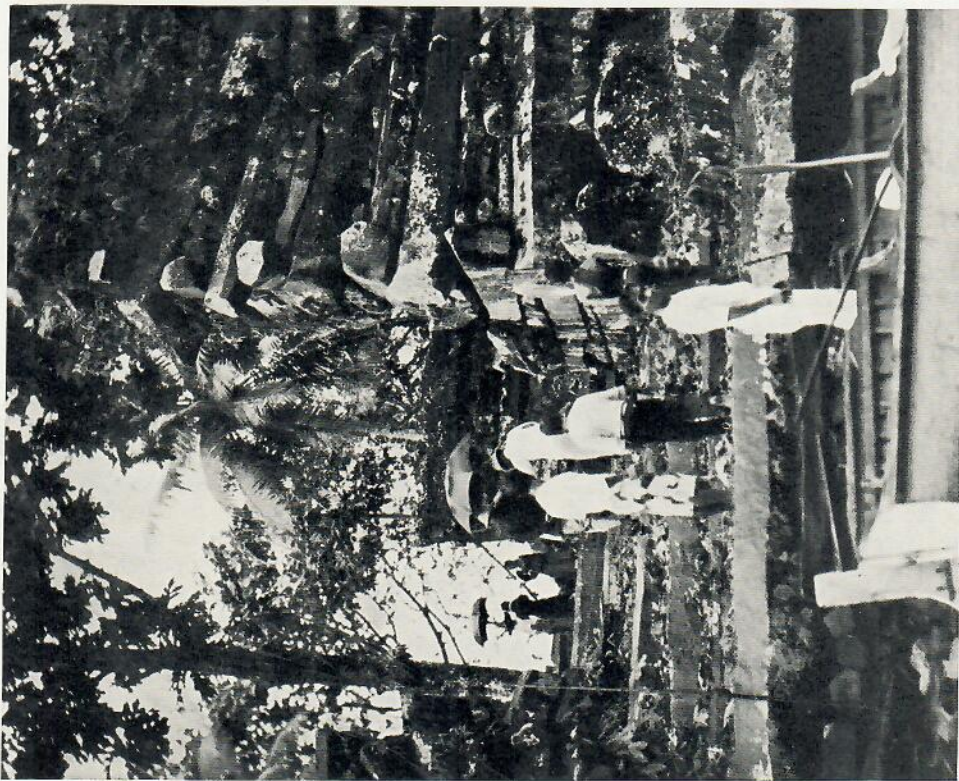
After nearly a month in Yap we voyaged on to spend three months in the other fairy islands of Micronesia. They were all variations of the theme of which Yap was the keynote. In no other island was primitive Kanaka life so clearly revealed as on Yap. Elsewhere it was modified, glossed over, clothed (literally)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

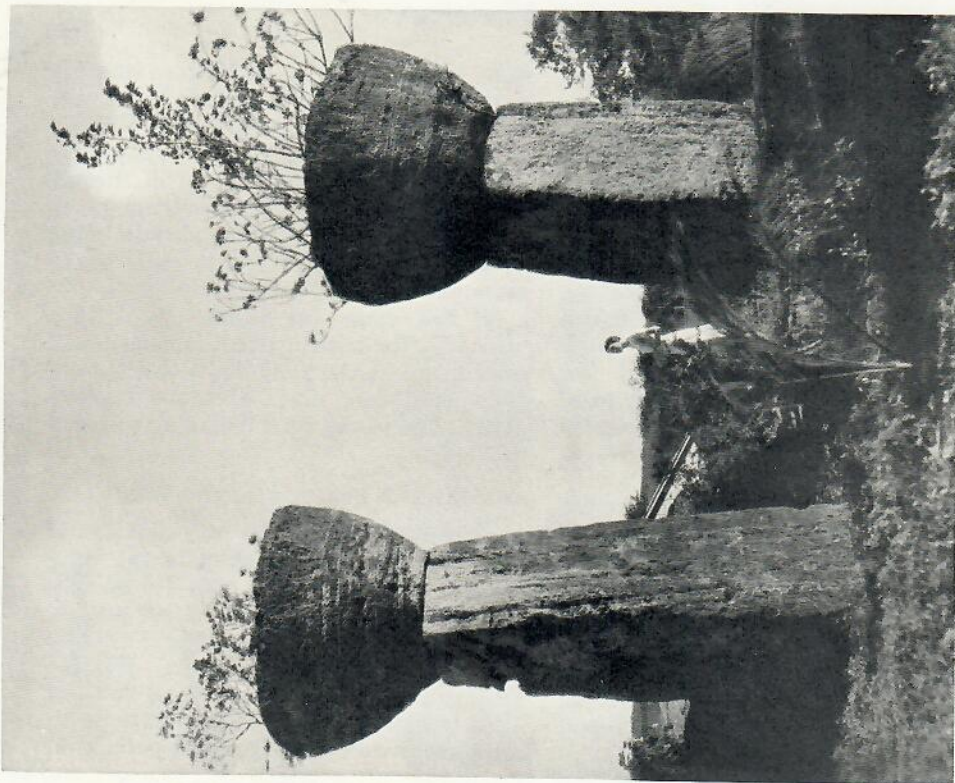
In the Palau group is the headquarters of the Japanese South Sea Government. A Japanese town of 5,000 people, clattering busily about on Japanese clogs, has sprung up where only a few years ago bare feet followed jungle trails. Radio towers, stores, hospitals, and schools have appeared. An airport is 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-Tauach 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 Venicelike 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. Offenses 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 clogs.

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 Colombia 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.

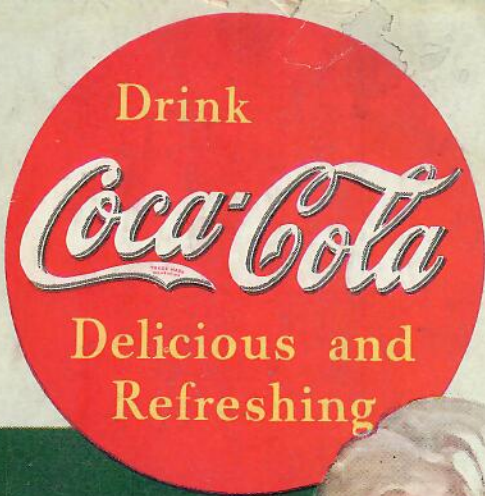
It seems clear that this city was built up out of the lagoon as a Venice, and is not a

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.



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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 15, 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 horizons of the southwestern 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 72,395 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.