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GEORGE ALDEN SANFORD

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# THROUGH JAVA IN PURSUIT OF COLOR

By W. ROBERT MOORE

"A CUP of Java and a couple of buns" was one of the first morning calls that I answered behind a restaurant counter on an odd-job venture in my early school days. But for the man who associates Java with a cup of good coffee alone, a visit to that Garden Isle is a delightful revelation.

Marching the length of Java in search of interesting subjects for my color camera, I found a long panorama of fascinating attractions. There were innumerable wide fields of waving sugar cane, with busy refineries in their midst, and everywhere rice fields were checkerboarding the valleys or stair-stepping in terraces up the volcanic hillsides. Into the market places came huge piles of cassava roots, from which evolve our tapioca puddings, and beyond the roads were cinchona plantations, destined to produce quinine to combat the world's malarial fevers.

It was a fast-moving procession of ancient Hindu temples, quiescent and erupting volcanoes, batik workers, *wayang* dancers, and *gamelan* orchestras; of olive-skinned Javanese in bright sarongs laughing on their way to market, plantations of rubber and coffee, and large hill areas, where Dutch planters were reading fortunes in cups of pekoe tea, but with far more accuracy than ever did my aged grandmother.

## THE START FROM SINGAPORE

But to begin: It was a starlit night, soft and caressing from a breeze after a tropical shower, when our ship lay at anchor in the open roadstead at Singapore harbor. Between us and the sparkling lights of the city rode ships from the far ports of the world, sailing under a score of different flags. Among them were brightly lighted steamers from London, bound for Sydney or Shanghai; from New York girdling the globe; from Kobe, Amsterdam, and Naples; and close ashore were hundreds of bobbing Chinese sampans and high-pooed junks lighted with smoky coconut-oil lamps.

Our anchor chains rattled, and with the steady throb of the engines we swung toward the Southern Cross and cleared for Batavia, leaving behind the cosmopolitan city of Raffles's dreams.\*

Across the Equator we traveled into the Southern Hemisphere, and, after 40 hours of cleaving the smooth, turquoise sea, our ship tied up alongside the wharf at the up-to-date Tandjoeng Priok harbor, 20 minutes by motor car or electric tram from Batavia.

## MOSQUITOES ARE RESPONSIBLE FOR BATAVIA'S MODERN SUBURB

Docking late in the day, in a heavy downpour of rain, we asked the captain if we might spend the night aboard instead of going to a hotel, as we had to be at the harbor again early the next morning to transship our goods.

"We make no provision for people while in port," explained the captain. "It's pretty noisy, the diet is simple, and sometimes the mosquitoes bother a little," he added. "However, if you fellows are willing to put up with the fare and promise not to write anything about the mosquitoes, you may stay on the ship. Keep your cabin door closed, and if you don't turn on the lights you'll be all right."

Of the onslaughts of the mos— (my silence is pledged). But mosquitoes, together with the swampy flats of that region, have loomed large in Batavia's history and they have built for her a new city.

Time was, in the early period of colonial development, when the Dutch came out to Batavia they brought their love of the lowlands with them, and there built closed houses on the canals, which ran through the low, swampy land. But, as trading men and soldiers died by thousands from malaria and other diseases induced or aggravated by the miasmatic vapors which surrounded them, they eventually learned that tropical Java was not a temperate Netherlands.

\* See "Singapore, Crossroads of the East," by Frederick Simpich, in the NATIONAL GEOGRAPHIC MAGAZINE for March, 1926.



When Capt. James Cook started homeward, in 1770, from his strange adventures of exploration and discovery in the South Pacific, he put in at Batavia to repair his weathered ship *Endeavour*, and there it was that poor Tupia, his little Tahitian friend and interpreter, "died of fever, caught from the deadly climate and uncleanness of the place." \*

Batavians have since moved their residences to the near-by suburb of Weltevreden, meaning "well content," which enjoys a far more healthful climate and has beautiful, wide avenues, the broad Koningsplein, and other well-tended parks. Most of the business offices and godowns still remain in old Batavia, although branch offices and new buildings are, more and more, being located in Weltevreden.

#### THE TWO-WHEELED "SADOS" ARE FEATURES OF BATAVIA'S TRAFFIC

Existing alongside the fine, large stone and stucco offices and bank buildings in the old city, one can also see the cluttered quarters of the Chinese population. Motor cars, many of which come from a large American assembling plant located in the city, whirl along the excellent streets, and a clanging steam tram closely resembling George Stephenson's historic *Rocket* connects the two sections of the city. *Sados* (or *dos-à-dos*), those little two-wheeled carts where one sits chummily back-to-back with the driver, are still a popular means of conveyance.

In spite of the fact that Batavia carries on a heavy world trade, most of its business comes to a drowsy standstill for a long siesta during the heat of the day.

Leaving Batavia, we shipped for Soerabaja, along the northern coast of the island, dropping in at Semarang on the way long enough to load a dozen lighters of freight and exchange a few passengers. Although Semarang proudly asserts that it is the third city in Java, Batavia and Soerabaja each greatly outdistance it in population and shipping figures. The business district is the usual odd mixture of buildings common to Eastern ports, but the color of the market day in the

native *passar* lured me beyond sane reason to try many snapshots of the comely, olive-cheeked maidens and wrinkled matrons. The results, however, were largely hopeless blurs, as the women dodged about in their stalls of vegetables or hid their faces from my camera lens.

At the approach to Soerabaja, in the bright sunlight of early morning, we saw the beautiful smoky-blue masses of the Tengger Mountains, with the volcanic cones of Ardjoeno and active, mist-capped Semeroe notching the sky to the south. The ship crept up the river mouth past the huge dry docks and the expanding harbor works to the wharf. With the exception of Singapore, Soerabaja can accommodate ships for repair better than any other place in the East Indies.

But big, modern Soerabaja, with its up-to-date automobile salesrooms, radio shops, department stores, and palatial residences along its shady boulevards, is a poor place for a person seeking camera studies of native Java. So we sat in a hotel one afternoon, where Dutch people lounged about the verandas clad in gay, starched pajamas and flowery kimonos, discussing whether or not our itinerary should include Tosari hill station and the erupting Bromo Volcano.

"I've never been there, but I doubt if it's worth it. Anyway, it's uncertain weather," volunteered an American business man.

"But it is recommended by the tourist bureau," I said.

"Yes; so did an overenthusiastic Dutchman once walk me for a whole morning to see a waterfall not ten feet in height," he complained.

#### UP TO CLOUD-ENGULFED TOSARI

Yet we went. An hour on the morning express to Pasoeroean and 24 miles by motor road, which zigzagged in dizzy hairpin curves up the steep 6,000-foot mountain side, through tall casuarina woods, and we reached cloud-engulfed Tosari.

When the fog turned to rain, as the afternoon wore on, and I shivered all through the long dinner hour in spite of my top coat, I went to bed under all of the blankets I could find and heartily agreed with the American in Soerabaja—

\* See, also, "The Columbus of the Pacific," by J. R. Hildebrand, in the NATIONAL GEOGRAPHIC MAGAZINE for January, 1927.



JAVA, QUEEN OF THE EAST INDIES



© National Geographic Society

Autochrome by W. Robert Moore

A VENERABLE GUARDIAN OF THE SACRED TEMPLE OF A THOUSAND BUDDHAS

Many centuries ago, before the Mohammedan conquest, Boroboedoer's magnificent monument was raised. As a structural achievement it rivals the Great Pyramid and its sculptures record the artistic and cultural development of Java's golden age. The timeworn gentleman with "sunshade" hat at his feet guards the precious ruin against desecrations of vandals and souvenir hunters.





CLOUD-CAPPED SALAK LOOMS ABOVE A SEA OF VERDURE

An excellent climate has made Buitenzorg the island's country capital, where the Governor General, and such other officials as can, seek surcease from the heat of Batavia. Coconut palms border the muddy river which flows through the city, and on the near-by slopes of Mount Salak, tea and coffee plantations flourish.



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Autochromes by W. Robert Moore

A LOTUS POND ADJOINS THE GOVERNOR GENERAL'S PALACE

Queen Wilhelmina's representative in the East Indies governs more than 50,000,000 subjects. His magnificent residence at Buitenzorg is in the midst of a botanical garden which Dutch horticultural genius, a tropical sun, fertile soil and a daily shower have combined to make one of the finest in the world.



## JAVA, QUEEN OF THE EAST INDIES



PLAYING NURSEMAID TO A FIELD OF YOUNG RICE

Modern methods have made little impression on the Javanese rice farmers, who still cling to their age-old methods. The seed is sown in well-watered nursery beds, and after the plants have obtained a start they are gathered in small bunches and transplanted to larger fields, where they are set out about a foot apart.



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Autochromes by W. Robert Moore

ZEBU CATTLE AND A COVERED WAGON CARRY SUGAR CANE TO THE MILLS

Java is one of the world's chief producers and exporters of sugar and the cane has been grown there for centuries. The driver of this equipage, regarding the camera as possessed of an "evil eye," stubbornly refused to be photographed and hid himself far back in the cart. At the left is a field of growing cane.





FISH MAY ALMOST BE RECKONED A FARM CROP IN PARTS OF JAVA

Along the north coast there are miles of artificial fishponds, and many a house has one in the back yard. Several varieties of carp are raised, including large goldfish which are prized both for their appearance and for their flavor. The Government encourages this back-yard fish industry.



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SULTANS OF OLD BUILT THE WATER CASTLE AT DJOKJA

Despite ravages of earthquakes and tropical vegetation, some of the magic grandeur of this old playhouse and sanctuary built in the middle of an artificial lake remains. A secret passage under the water led to it.



## JAVA, QUEEN OF THE EAST INDIES



WAYANG PLAYERS ENACT MYTHS AND LEGENDS OF THE LONG AGO

While motion pictures are popular in Java, they do not command the same degree of interest displayed in the native drama, or *wayang*. The actors at the extreme left and right represent, respectively, the Sun God and the King of the Devils (see also Color Plates VI and VII).



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Autochromes by W. Robert Moore

THE HIGH HAT BODYGUARD OF A NATIVE DIGNITARY

A few princes still maintain the outward show and trappings of their ancestors' estate, surrounded by numerous retainers who live within their palace inclosures, or *kratons*. At Djokja the Sultan's kraton is a mile square.





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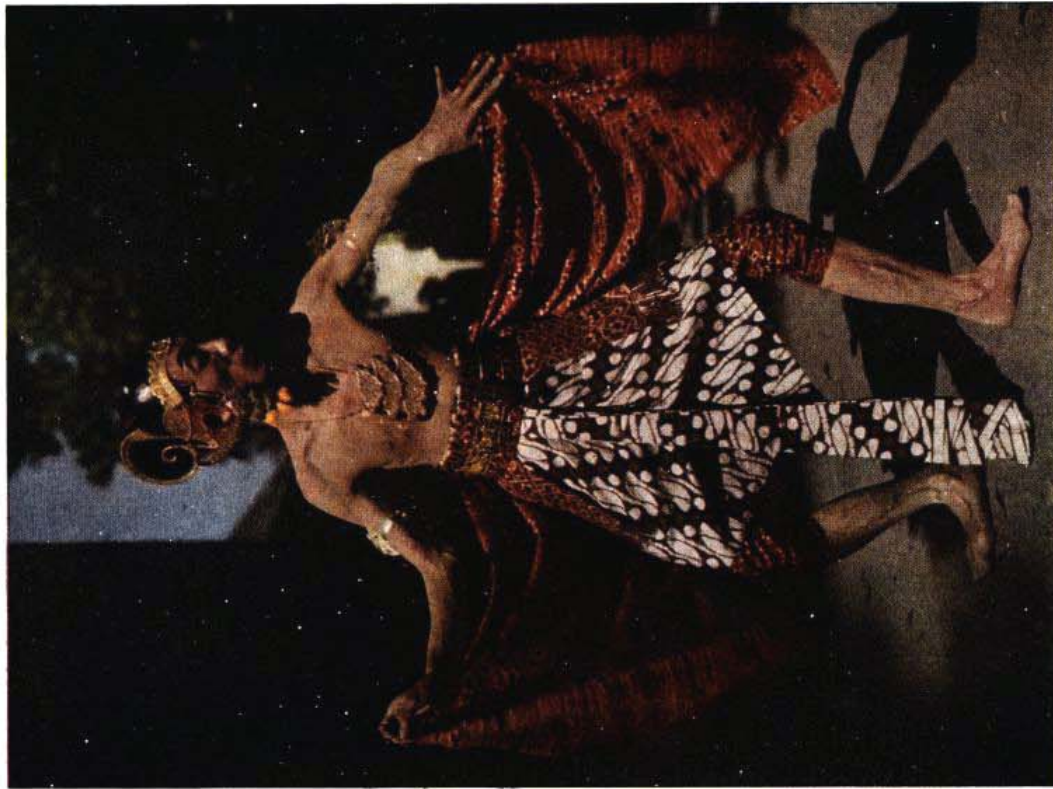


Autochromes by W. Robert Moore  
Autochromes by W. Robert Moore

#### ONE MUST BE WELL VERSED IN NATIVE FOLKLORE TO UNDERSTAND THE ACTIONS OF WAYANG PERFORMERS

The plays are of two kinds, the *wayang purwa*, performed with puppets and dating back to pre-Hindu days, and the *wayang orang*, a comparatively recent development in which human actors perform. The puppet shows had their origin in a sort of shadow play connected with an ancient native ancestor worship. The shadows on the screen represented the spirits of the departed, and the plays were built up around their great and noble deeds.





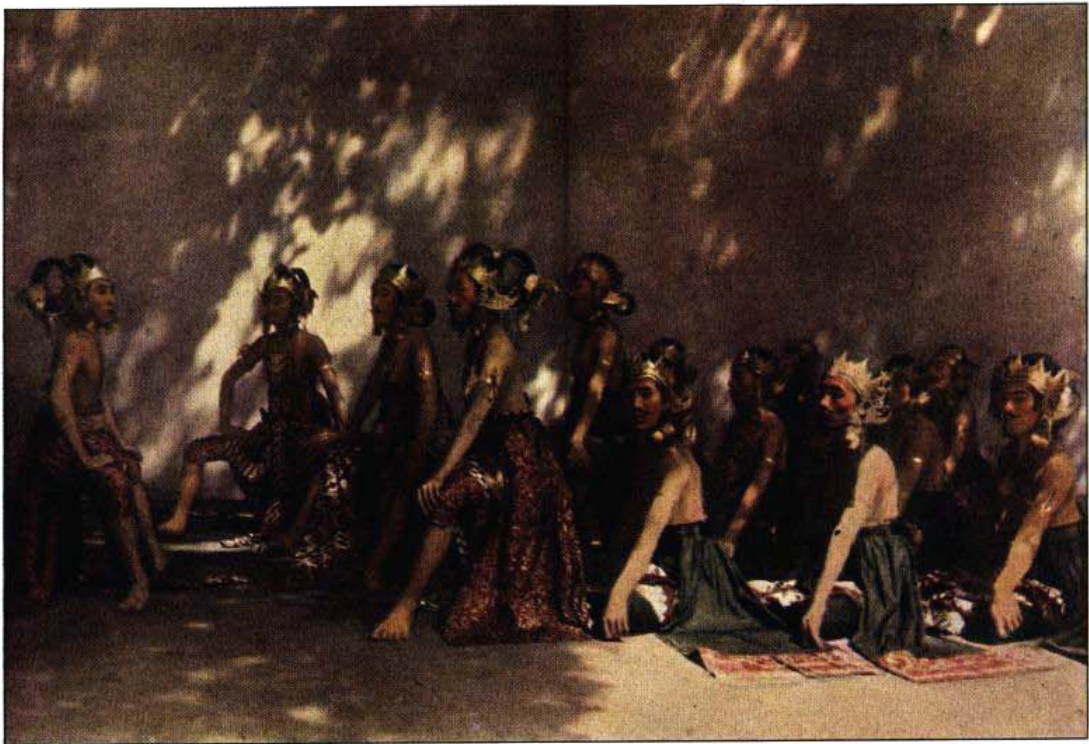
© National Geographic Society  
Autochrome by Tassilo Adam  
JAVANESE STAGE CONCEPTIONS OF A LEGENDARY PRINCE AND THE KING OF THE DEVILS



Autochrome by W. Robert Moore  
JAVANESE STAGE CONCEPTIONS OF A LEGENDARY PRINCE AND THE KING OF THE DEVILS

Although not quite as popular as the puppet shows, wayang orang performances are well patronized. The actors travel about in troupes and the myths and legends they enact prove so interesting to their audiences that it is not uncommon for a single performance to last for several nights. Frequently the presentations are pantomimes and a reader accompanies the action with appropriate explanatory remarks (see also Color Plates V and VI).





A NATIVE SULTAN'S PRIVATE WAYANG TROUPE



© National Geographic Society

Autochromes by Tassilo Adam

BOY IMPERSONATORS TREAD THE SLOW, RHYTHMIC MEASURES OF A NATIVE DANCE

To the speed-loving West, their leisurely movements would probably seem a veritable slow motion picture. However, each posture assumed has a significance of its own and conveys a meaning to the interested Javanese onlooker. The seven boys are performers at the Court of Djokja.



Tosari weather certainly wasn't exactly as advertised.

Three o'clock the next morning we emerged from our hotel into a chilling dampness. The intense blackness and falling mist augured ill for our plan to see the sunrise over the famous "sand sea" and Bromo crater.

Once outdoors, we finally located the ponies awaiting us. They were in charge of two 14-year-old guides, who had their heads and shoulders muffled in blankets and resembled nothing so much as a couple of turtles drawn within their shells.

#### A GLIMPSE DOWN BROMO'S FLAMING THROAT

The trip to the volcano was a long, uncertain ride over a trail we could not see. Now and then we crossed ridges where cold blasts of wind-driven mist sent a chill to the bone. At other times we skirted a sharp mountain wall. On the other side was only the blackness of night, except where scattered groups of twinkling lights far off below us marked the presence of villages on the plain.

Our horses frequently pitched down some unseen slippery descent or scrambled up a rocky cliff, with the guides clinging to their tails. We, poor creatures, clung to the saddles and our heavy camera cases and hoped for the best.

After traversing unforgettable miles, we reached the pass, where the trail plunges an abrupt thousand feet to the level floor of the sand sea. As we dismounted to clamber down the precipitous path on foot, the brightening dawn revealed a spectacle such as one would expect if suddenly transferred to the pitted surface of the moon (see illustration, page 344).

Once this great plain of volcanic ash, cupped in the depression between the mountain walls, formed a vast erupting crater. On the far side of the plain stands the more recently burnt-out cone of Mount Batok, ribbed as if it had been cast in a giant custard mold. At Batok's side, uneasy, rumbling Bromo acts as one of the many present-day safety valves for the troubled interior beneath the wide-stretching East Indian Archipelago.

The Dutch have in recent years built some 250 cement steps up the ashy side of

Bromo. We climbed to the top and looked down into the yawning, sulphur-coated throat of the crater, where old Vulcan's blast furnace was roaring and spouting tongues of flame. Pungent sulphur-laden gas and steam came seething upward, and as the vapor plumed into the sky it caught the golden light of the morning sun.

It is told that the natives in the region hold Bromo sacred. Formerly once each year they were accustomed to cast a young maiden into the flames as a propitiatory offering to the god within. In these later days of Dutch influence offerings of chickens and corn have taken the place of human sacrifice, and some of the daring young moderns, I learned, even climb part way down in the crevices and cheat the fiery god by rescuing the offerings for themselves.

As I worked under the focusing cloth of my camera on the narrow crater rim to get photographs of the glowing pit, my companion saw the ashes crumble around the tripod and expressed his conviction that I would shortly be the next sacrifice to the temperamental god. Our young guides wanted us to toss in a few coins as an offering. They then crawled a little distance down the crevices into the crater to show us their bravery and to suggest the acceptability of a reward. Later, presuming beggars, they ate our morning lunch that we had entrusted to their care.

Before the late morning clouds again obscured the hillsides around Tosari, we saw that those sheer heights were almost completely under cultivation, as indeed we found nearly all mountain sides on our rambles across the island. It is much as the old Michigan farmer once said of his hilly ground: "It's turned up edgewise, so you can farm both sides." The rich soil of the island is a great volcanic ash heap, and this is one of the chief reasons for Java's fertility and prosperity.

#### THE RICE TABLE'S DELIGHTS

We hurried back through Soerabaja on our way to Soerakarta (Solo). Of our stay in the former city, I shall long recall our first introduction to the *rijst tafel*, or rice table. When the hotel boys pushed in two taxis, as they jokingly called the serving wagons, laden with condiments,





Photograph from Helmig and Co.—Kurkdjian

WITHIN JAVA'S VAST TENGGER CRATER LESSER VOLCANOES HAVE BURST FORTH

No more extraordinary panorama of weird and fantastic volcanic scenery exists anywhere else in the world. In the central foreground is the symmetrical cone of Mount Batok. In the left middle distance is Bromo, into whose seething pit at one time were hurled human sacrifices to the Fire God (see text, page 343). The smoking cone in the background is lofty Semeroc.



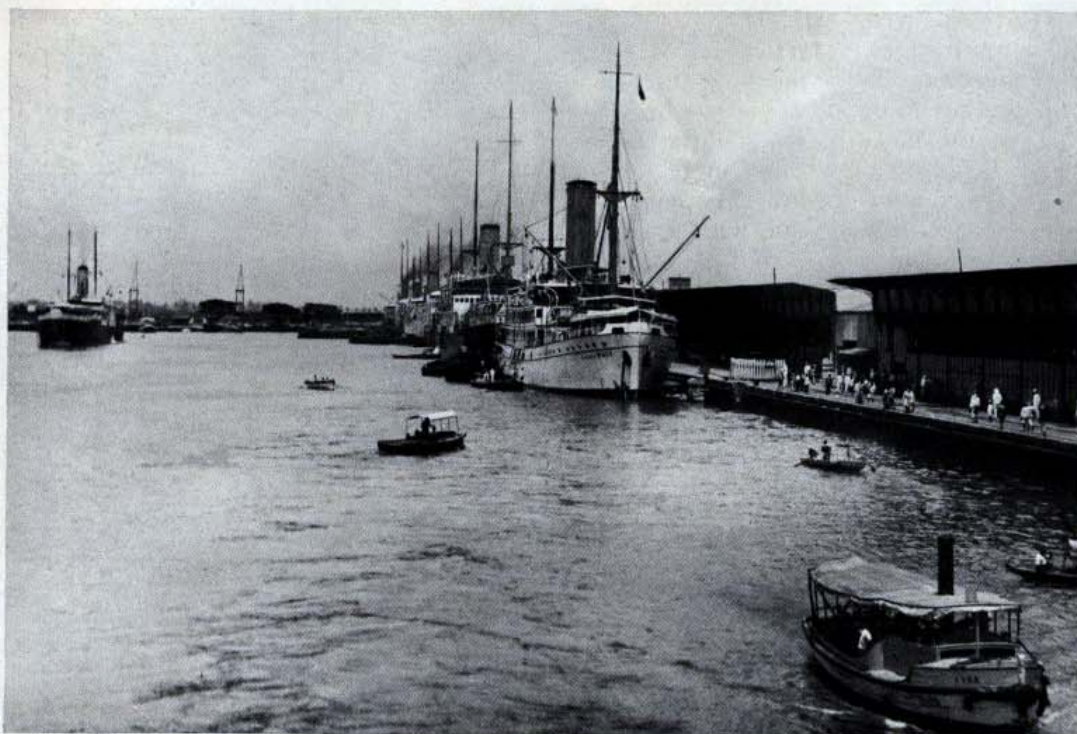


Photograph by De Cou from Galloway

#### BIRD AND CHICKEN PEDDLERS ALONG A JAVANESE HIGHWAY

Few indeed are the native homes in Java that have not some variety of feathered pet. Frequently a dove will be kept in a cage, which is raised each morning to the top of a high pole (see text, page 346). If the family goes on a journey, the bird goes, too.





Photograph by W. Robert Moore

#### GREAT OCEAN LINERS CALL REGULARLY AT BATAVIA'S HARBOR

Tandjoeng Priok, the port of Batavia, is about 6 miles from the city and is connected with it by rail and a canal. The port has a system of harbor basins, some of which will admit ships drawing 36 feet of water. In a recent year more than 4,000,000 tons of shipping cleared this port.

eggs, and meats variously prepared, together with many strange things, numbering in all upward of 20 varieties, to eat with our generous helping of rice, I soon learned the cause of the extreme popularity of long siestas and oversize waistlines. Decidedly, rijst tafel luncheons are a training for one's will power and one's judgment of capacities!

Traveling westward from Soerabaja over the flat countryside, with the high backbone of volcanic ridges to the south, one passes through the heart of the sugar-cane region. There are some 180 mills operating in Java, and these produce two and three-quarter million metric tons of sugar annually from the planted area of about 480,000 acres. The value represented by this one product is about 20 per cent of the exports of the whole Dutch East Indies. In fact, next to Cuba, Java is the most important cane-sugar producing country in the world. There is a large, efficient experimental station at Pasoeroean, where efforts are made to improve the cane as well as to combat its diseases.

As the train skirts the sugar town of Modjokerto one has to remind himself that the city was at one time decidedly more on the map than it is at present, for it was once the seat of the mighty Hindu Empire of Majapahit, which extended over Java and Sumatra. But, like many early capitals in other lands, only a few foundations and broken stones strewn about mark the historic ground.

#### A BIRD CAGE FOR EVERY HOME

I had begun to doubt that Java (including the closely adjacent island of Madoera) had the large population of 727 people per square mile that is ascribed to it, because I could not see their *kampongs*, or villages, but I was ready to acknowledge almost any total of bird farms. On these, unfortunately, I could discover no statistics, but I saw hundreds of cages hanging on tall poles above clumps of green bamboo and among the towering betel palms.

Then I discovered my error. The native *kampongs* of the rural districts are hidden within those very bamboo thick-



ets! Almost every native household has one or more cages of turtledoves or ring-tailed pigeons. Every morning the cages are pulled up on the poles and are brought down to the house again for the night.

The wants of a Javanese in regard to his home seem to be satisfied easily, for his house is usually built with walls of woven bamboo and the roof is thatched with leaves from the nipa palm. It is thus that someone has described him: "If a kindly Providence has blessed him with a virtuous wife, a couple of sons and daughters, a buffalo or two, and a *sawah* (rice field), the Javanese peasant has attained the zenith of his worldly desire."

Nearly all of the Javanese are Mohammedans; but in the eastern part of the island, where the Arab invasion had partially spent itself, there are still many traces of Hindu belief. Across the narrow strait, on the island of Bali,\* Hinduism was never routed. The Malay mind of the Javanese, however, keeps him from becoming too fiery a Moslem, and even though some do visit Mecca, this fact does not seem to prevent many from building altars to the good and evil spirits which surround them.

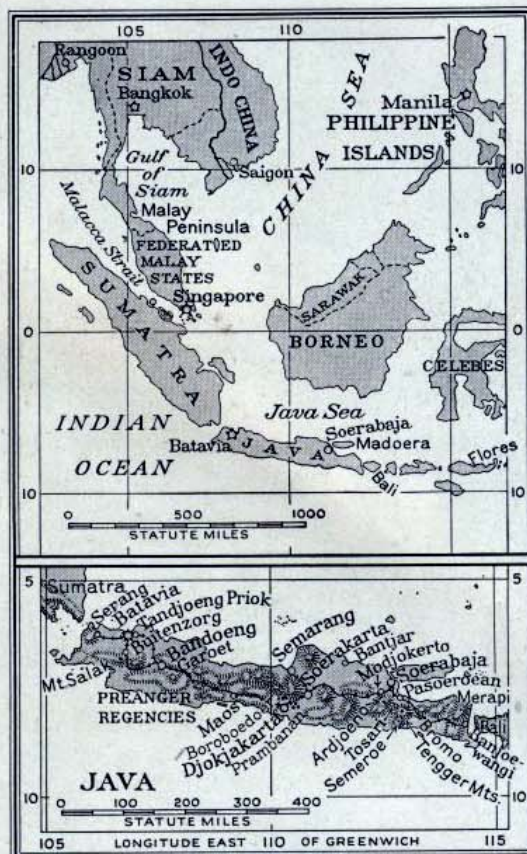
#### WAYANG PLAYS CHIEF DIVERSION

The wayang plays are the supreme delight of the Javanese (see Color Plates V, VI, VII, and VIII). Although in every town Wild West thrillers from American motion-picture studios are enthusiastically cheered—the more exciting the better—yet it is the old wayang plays, which they know by heart and in which they can anticipate every posture, that move them with unbounded appreciation.

There is much variety in wayang performances, ranging from marionettes with movable arms, throwing shadows on a screen (see Color Plate X and illustration, page 349), to the favorite *wayang orang*, in which human actors play the rôles of mythical characters.

Like the plays in Siam and Cambodia, the wayang is a series of postures, a "slow motion picture," where each step or turn of the hand has its meaning. In the swift-moving Western World, after curiosity

\* See "Artist Adventures on the Island of Bali," by Franklin Price Knott, in the NATIONAL GEOGRAPHIC MAGAZINE for March, 1928.



Drawn by C. E. Riddiford

#### THE ISLAND OF JAVA, AT THE HEEL OF ASIA

With approximately the same area as the State of New York, teeming Java has three and a half times as many inhabitants. It is four times as large and has five times as many people as the Netherlands, to which it belongs.

had been satisfied, such players would starve; yet in a pavilion in the zoological gardens of Soerakarta I found a troupe which in their thrice-weekly performances filled a "capacity house" and had large overflow audiences grouped outside.

One morning, through the kind help of the assistant resident magistrate and the owner of the wayang troupe, I was permitted to photograph the actors. As the grease paint softened on the face and arms of Woro Srikandi, the beautiful princess (see Color Plate XI) and her companions, and while Praboo Turondo Geni, the King of the Devils (see Color Plates V and VII), smothered behind his great curly beard in the open sunshine, I exposed color plates to my heart's content.

The most beautiful of the Javanese





Photograph by Dr. Edward Burton MacDowell

#### THE GAMELAN'S MUSIC SPEAKS THE SPIRIT OF THE EAST

From 8 to 15 musicians make up a *gamelan*, or native orchestra, in which crude fiddles, gongs, bells, xylophonelike instruments, and drums are played in a minor key. At times plaintive and weird and again with great spirit and much crashing of drums and gongs, this music possesses distinctive charm.

dances are those of the *srimpi* and the *bedoyo*, which are performed only in the royal *kratons*, or compounds (see Color Plate V), at Soerakarta and Djokjakarta (Djokja), where native sultans still cling to the formality and splendor of the court life of early Java. The *srimpi* dance is performed on special occasions by four young girls who are usually descendants of sultans. They, together with the equally beautiful *bedoyo* dancers, reveal that per-

fection of artistry which graceful feminine movement has attained in the interpretation of ancient Javanese mythology (see, also, Color Plates VIII and X). Unfortunately, during our visit in Soerakarta, the court of His Highness the Soesoehoenan, one of the two great native princes, was in mourning over the death of one of the royal sons, so that the weekly practice of the dancers was canceled for the time being.





Photograph by Dr. Edward Burton MacDowell

#### HISTORY AND LEGEND PROVIDE THE THEMES FOR SHADOW SHOWS

In the oldest form of Javanese drama, living actors are dispensed with and a man who is hidden behind a screen operates various mechanical puppets or jumping jacks in front of a strong light, thus throwing their shadows on the white sheet (see, also, Color Plate X, and text, page 347).

Mingling with the crowd that streamed in and out of the kraton gateway were many members of the court, clad in short, dark jackets and long-skirted sarongs of beautiful brown batik. On their heads were perched shiny black hats shaped like small inverted buckets, and slipped under the belt in the back was the large-handled *kris*, or dagger. In mid-Java one may have the *kris* of his choice. Some like the sharp blades wavy, others take theirs

grooved or straight; but, whatever the forging of the blade, all agree that the handle and sheath must be very ornamental.

#### THE BATIK FACTORY IS A SIMPLE ESTABLISHMENT

Present-day Java affects many strange combinations of foreign and native dress; but, from the Soesoehoenan to the servant, the sarong, or long, straight skirt,



with a single fold in front, is almost universally worn. The better sarongs are of the native batik, but for those with small purses glaring aniline prints from Manchester take their place.

The batik industry is in itself most interesting, and in Soerakarta and Djokja, which are the centers of the trade, there are numerous small "factories." A few vats for dye, some pots of wax, and little bamboo frames on which to hang the cloth while working, together with women who have endless hours of time, and there's your factory!

The design is first sketched on the cloth with a pencil; then all of the intricate portions which are to be protected from the first dye are carefully covered on both sides of the cloth with melted wax. This is done by hand, by means of a tiny spouted cup the size of a thimble. By dyeing, removing the wax, rewaxing, and redyeing several times (usually in yellow, brown, and blue), the piece of batik is done.

Simple! Yes; but weeks, or perhaps months, of patient labor have gone into its making. Many factories now increase their output by stamping all of the wax on the cloth with brass blocks; but the quality suffers. Workers in the kratons produce beautifully designed batiks, the use of which is restricted to royalty and the court dancers.

#### GAMELAN MUSIC A GIFT OF THE GODS

I tried my best one morning to photograph some of the batik workers at their tasks of waxing the cloths. I had to get them to sit out in the sunshine in order to obtain the proper exposure. Several times, when I was about ready to make the exposure, the women would pick up their batik frames and flee to the shade to keep the softening wax from melting. They had no desire to spoil a month's work just to let me get a good color photograph (see, also, Color Plate XIV).

I went down in the market place to get a picture of some "hatters" cleverly folding up table-cover squares of batik into the turbans that are "Fifth Avenue" styles for the mid-Javan man (see Color Plate IX). I stayed to haggle and bargain for hours with some batik saleswomen. In Djokja and in Garoet they thronged the hotels, and repeatedly I weakened when I saw their excellent displays.

In Djokja we were allowed to make photographs in the kraton of the Sultan. On the morning of our visit some 50 men were rehearsing a wayang performance in the pavilion where the Sultan witnesses the plays and dances of the court. A gamelan orchestra toned an accompaniment to their recital, emphasizing portions with mellow gongs or softening other effects with dulcet, murmuring tones.

According to the Javanese tale, the gamelan was created by the great god Batara Goeroe when he sought to relieve the monotony of his long, uneventful life in heaven. The beauty of the music that he produced caused the gods and goddesses to perform the first joyful movements of the dance. Whatever its origin, the music is most appealing.

His Highness Sultan Hamangkoe Boewono VIII ordered a group of his bodyguard to appear in their full scarlet and white dress before my color lens as a gesture of friendliness toward the National Geographic Society in its effort to portray Java (see, also, Color Plates V and XI).

Almost every visitor to Djokja goes for a short trip to the ruins of Tamansarie, the old "water castle" of the Sultan who ruled in the middle of the 18th century. I followed the procession. Many of the rooms of this subterranean palace have been sadly wrecked by frequent earthquakes, which have had such far-reaching influence on the history of this island.

The walls of the castle are now covered with mossy-green fungi instead of tapestries; the gardens are grown up to vines and coconut trees, and in the pool which once served as the bath of the favorite princesses I found several urchins sporting about in the scum of the green water plants which covered its surface (see Color Plate IV).

All around Djokja the countryside is covered with Hindu ruins, and especially important are those of Prambanan and the famous Boroboedoe. The 26-mile motor ride out to the Boroboedoe temple was a delightful run through the cane plantations and rice fields.

Along the way we passed many two-wheeled bullock carts, with long roofs and colored sides of woven bamboo, hauling stalks of sugar cane to the mills. As we sped past one cart, which shortly before had had its fancy sides freshly redecorated,



# JAVA, QUEEN OF THE EAST INDIES



DJOKJA IS THE CENTER OF AN INTERESTING NATIVE LEATHER INDUSTRY



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Autochromes by W. Robert Moore

## BATIK CLOTHS ARE FASHIONED INTO HATS FOR THE MEN OF MIDDLE JAVA

In addition to these turban models, other strange styles are encountered. Some are like inverted flowerpots, while fezzes and a kind of sugar-loaf creation are also popular. Members of the police force sometimes wear what appears to be a section of black iron pipe.



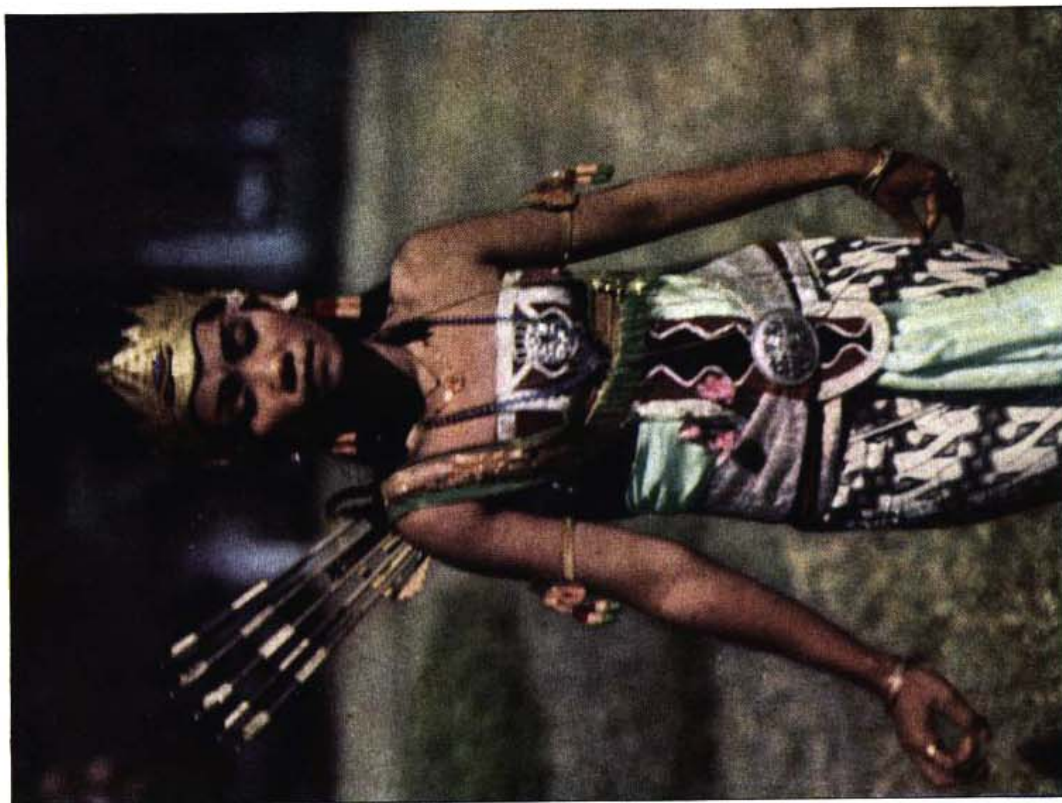


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PUPPET SHOWS ARE THE FAVORITE NATIONAL PASTIME



Autochromes by W. Robert Moore  
A YOUTHFUL DISCIPLE OF THE STAGE





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THE WAYANG PRINCESS PORTRAYS EMOTIONS BY  
THE POSITIONS OF HER ARMS AND HANDS



Autochromes by W. Robert Moore  
NATIVE TROOPERS ATTACHED TO THE COURT  
OF THE SULTAN OF DJOKJA





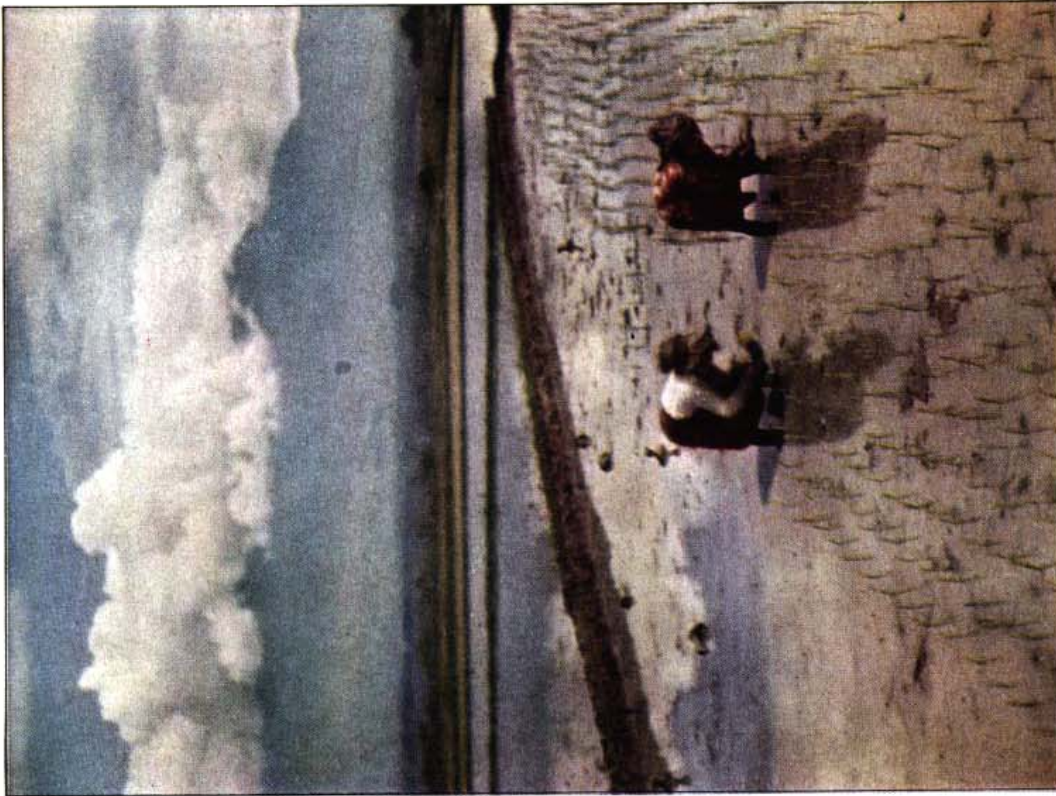
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THEIR TASK IS AS OLD AS THE AGES

Autochrome by W. Robert Moore

The eternal quest for food is a vital problem for Java's teeming millions. Rice provides the solution, and the Javanese have cultivated it and relied principally upon it to sustain life for countless generations. They begrudge it no labor and flooded paddy fields are everywhere, rising like steps up the mountain sides and glittering in the tropical sunshine of the valleys.





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#### PLANTING JAVA'S PRINCIPAL CROP AND HARVESTING HER MOST FAMOUS PRODUCT

The women wading in the rice field are transplanting shoots of that staple crop. At the right a coffee picker rests with baskets of the berries that have spread the fame of Java around the world. At one time the island produced more than 100,000,000 pounds of coffee annually, but because of the ravages of a blight some of the land that was formerly devoted to growing the savory berries has now been turned to other uses.



Autochromes by W. Robert Moore





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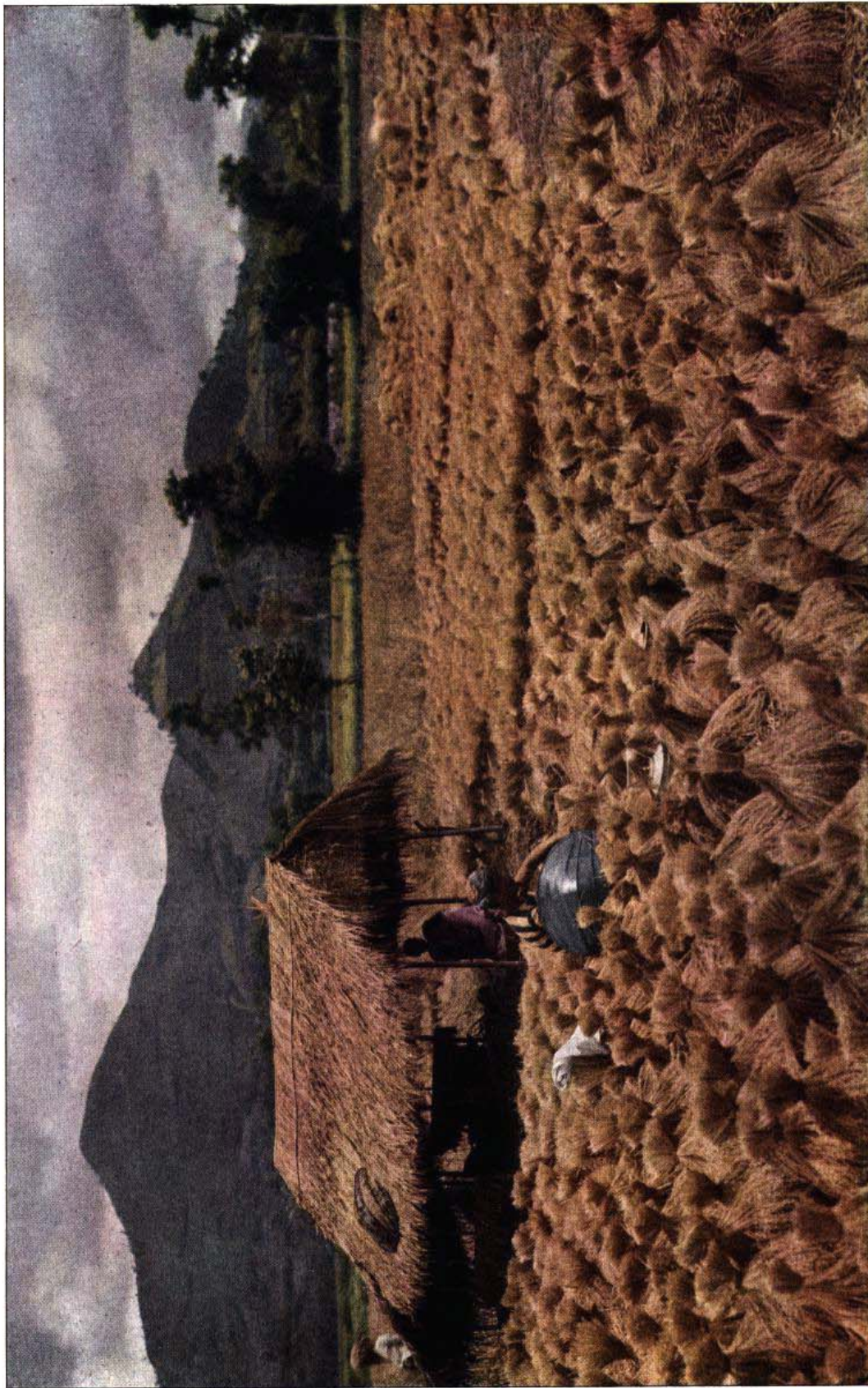
#### BATIKING REQUIRES A LARGE MEASURE OF SKILL, PATIENCE, AND ARTISTRY

Because of the tedious hand operations that go into its manufacture, a good batik may take several weeks to complete. This time element gives it a value which is beyond the reach of the poorer classes, and instead of using their handsome native product for sarongs and turbans, they turn to much cheaper and less attractive imported prints.



Autochromes by W. Robert Moore





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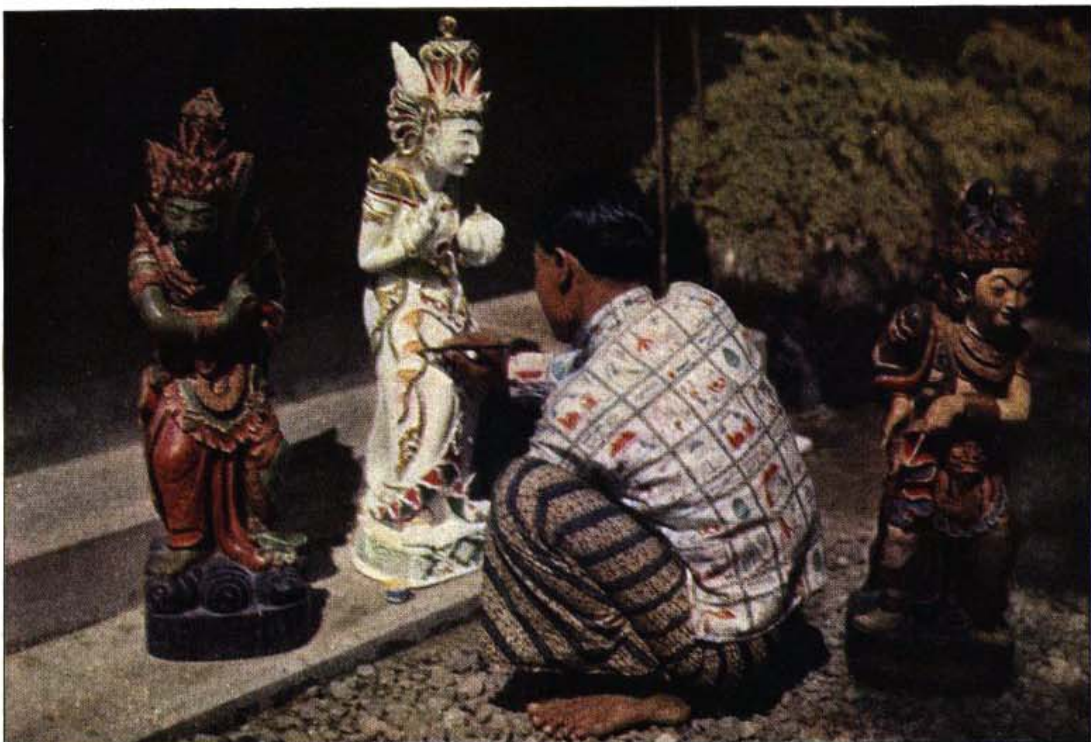
BUNDLES OF RICE HEADS BROUGHT IN TO DRY BEFORE THRESHING

Native women separate the grain from the chaff by beating it with a pestle in a wooden trough. Modern threshing machinery is practically unknown. The enormous yield of her fertile acres has earned for Java the title of "Granary of the East."





THE VENDER OF COOL DRINKS CARRIES HIS ESTABLISHMENT WITH HIM AT SOERAKARTA



© National Geographic Society

Autochromes by W. Robert Moore

PAINTING STATUES FOR THE TOURIST TRADE

These figures are not a native product, but are imported from near-by Bali and retailed to travelers from the Western world.



I called a halt. I had to record those brilliant red, yellow, and blue pigments in their banded black and white frame. But getting the picture was a longer story.

When I asked the cart driver to stop, he spurned my suggestion and continued down the road. Gathering up the sprawling tripod legs under one arm and carrying the flying focusing cloth and plateholders in my other hand, I hurried after him, pleading "*Portret, portret,*" at every bound.

I like to think that it was his final comprehension of what I wanted, rather than the softening of his heart to humor someone who seemed mentally unbalanced, that finally led him to stop his two white bullocks to let me expose my plates! But, whatever the debate in his mind regarding my sanity, I got the picture (see Color Plate III) and we whirled on to Borobodoer.

#### JAVA'S FAMOUS TEMPLE CROWNS A RICE-ENCIRCLED HILL

"It looks like a fancy wedding cake," said my companion, as the dagoba-topped ruins swung into view through the palm trees. "But really, you know, the Borobodoer would go in Angkor Vat's waistcoat pocket," he later added, as he compared this monument with that old Cambodian temple.\* Borobodoer, which was constructed about A. D. 850, is more weathered than Angkor, as it antedates the Khmer ruin by three centuries; but it was never as pretentious in its construction or as delicately elaborate in its chiseled decoration.

The appealing feature of massive Borobodoer is its situation. It crowns a small hill which rises alone out of palm-fringed rice fields, though not far distant from the slumbering volcano of Merapi. Angkor loses in impressiveness because it is built on a level plain. Many visitors have written about the Borobodoer† and its moods, and I would but add my own appreciation for the efforts of those long-gone hewers

of stone and my admiration for the creative sponsors of its building (see, also, Color Plate I).

From Djokja we hurried westward through the low, flat country near the southern coast, which is the most unhealthy region of Java.

Later the train climbed among beautiful mountains, but the view was unhappily soon blotted out by a heavy rain. On a branch line we spiraled around through the hills and rice terraces and dropped down to Garoet, still at the stimulating altitude of 2,335 feet above sea level.

"If you are fond of volcanoes, go to Garoet," advises a guidebook, "for active and dormant cones tower on every hand." And if you want to see the terraced rice fields at their best and beautiful Javanese girls, you'll also find them in Garoet.

We spent hours on the steep terraces outside the city, photographing the people as they raked the water-flooded fields in preparation for planting, and as they repaired the breaks in the narrow dikes where the water was cascading down into rice plots below.

In other fields the farmers were removing the rice seedlings from the nursery beds, and dozens of men and women were standing nearly knee-deep in the mud and water, busily transplanting the young green shoots into the narrow fields. In a nearby district we found numerous harvesters—more than 100 in one group—clipping off the ripened heads of rice stem by stem. Every stage of rice cultivation can be seen simultaneously in Java (see Color Plates III, XII, XIII, and XV).

The great mountain terraces and the famous wide-stretching plain of Leles, together with other rice lands in the fertile Preanger Regencies, have given Java the pseudonym "Granary of the East," yet every year she is forced to import large quantities of rice for her own consumption.

#### BATIK SALESGIRLS PROVE DISASTROUSLY CAMERA-SHY

Batik salesgirls, it seems, keep themselves well informed regarding new arrivals at the Garoet hotels, for by breakfast time the morning after our arrival several had already gathered around our veranda. All were attractive, some were

\* See "The Enigma of Cambodia," a natural-color series of photographs by Gervais Courtellemont, in the NATIONAL GEOGRAPHIC MAGAZINE for September, 1928; also, in the same issue, "Four Faces of Siva," by Robert J. Casey.

† See, also, "A Traveler's Notes on Java," by Henry G. Bryant, in the NATIONAL GEOGRAPHIC MAGAZINE for February, 1910.





WHERE JAVANESE ART REACHES ITS HIGHEST PINNACLE

Boroboedoer was probably built as a reliquary to house some fractional portion of the Great Buddha's remains. Its skillfully conceived and executed galleries and terraces are unsurpassed in the field of Buddhist art (see, also, Color Plate I).



Photographs by W. Robert Moore

MUCH OF THE WORLD'S RUBBER COMES FROM THE EAST INDIES

When a rubber tree comes to bearing age, a tapper shaves off small areas of bark with a knife especially designed for this purpose. The latex flows from these wounds into small cups.





Photograph by Karl W. Scheufler

#### EXQUISITE CARVINGS ADORN BOROBOEDOER

A remarkable feature of the hundreds of bas-reliefs which embellish this magnificent structure (see opposite page) is that they are made up, for the most part, of numbers of comparatively small stone blocks, carved separately and set together like a picture puzzle.

beautiful, and each carried herself with queenly grace and poise. Long hours they pleaded with us to purchase their locally made batiks (many of them with Soerakarta stamps). I promised to buy if they would pose before my camera. At last one of them consented. When I developed the color plate that night she looked like a two-headed Janus, so much had she moved during the long exposure. When she returned the next morning I showed her the failure, tried to stir her pride, and offered to boost her sales for the day, hoping thus to induce her to pose again. But she turned me down with "Verree goot," and went to hunt up some other might-be purchaser.

Other pretty maidens, bold in making batik sales, but disastrously shy before the camera, caused me to leave Garoet almost in tears, bearing quantities of batik, but my exposed color plates hopeless failures all! I shall never forgive those Preanger queens.

Had anyone told me before I visited Garoet that there is music in bamboo I

should have smiled at the attempt at humor. I was heartily surprised one afternoon when several youngsters appeared at my door and began playing on some bamboo instruments and dancing for my benefit. What? The famous *angklong* of the Preanger? There they were, just hollow bamboo tubes of different lengths, held in frames of bamboo which when shaken sounded the pipes.

The music produced by those youthful musicians was truly delightful. We fell so much in love with it that my companion bought all the instruments for a guilder (40 cents) or so. In a little while the boys were back with a new set, and as long as we stayed there they came several times a day to entertain us, hoping for more pennies.

Just off from the motor road between Garoet and Bandoeng are the fish ponds of Tjipanas. Such a delightful spot it is! At every turn a new vista met our eyes—sweeping coconut palms, tall, slender betel-nut trees, small bamboo houses, flowering green hedges, fishermen, all





Photograph by W. Robert Moore

MOUNTAIN, FOREST, AND FLOODED FIELD REFLECT THE CHARM OF JAVA

Water buffalo plod patiently through the muck of the rice fields, lending their tremendous strength to the production of food for the island's teeming millions.

doubled in the reflection cast on the mirror surfaces of the pools. Never before had I seen such a fascinating combination. We spent happy moments seeking yet new vantage points of the mirrored waters.

The ponds are used for cultivation of fish for market. Some are filled with salt water and others fresh, so that both kinds of fish may be raised. Among the most beautiful of the fish is the large goldfish, a species of carp, usually 12 or 18 inches in length when marketed (see Plate IV).

Much of the hill district in the Preanger Regencies is devoted to tea and cinchona plantations. The cinchona groves of Java, which have been developed from a few imported South American trees, now produce nine-tenths of the world's supply of quinine. Behind barricaded walls in a factory at Bandoeng, quantities of the invaluable malaria specific are produced, and the Dutch are protecting their secret formulas by garnishing the walls with barbed wire, as if it were a diamond-mine compound.

At this boom city of Bandoeng the rail-

way, air service, and many other Government and private business concerns are establishing their headquarters.

We passed on to Buitenzorg, with its world-famous botanical gardens and the palace of the Governor General of the Dutch East Indies (see Color Plate II). One could spend weeks in the gardens, visiting the Natural History and Economic museums and in seeing the Government agricultural gardens, but other lands were calling.

As we moved out of Buitenzorg toward Batavia, there was one last picture that I wish I might have recorded on a color plate. The late afternoon sun's rays were touching the quiescent volcanic pyramid of Mount Salak (see Color Plate II). A group of slender, laughing maidens in flashing sarongs were filing homeward along the gleaming fields of tender rice; and an aged farmer, guiding an ancient plow, was urging two lazy water buffalo through the oozing mud in a near-by field—thus flashed the final picture before our eyes, epitomizing Java.