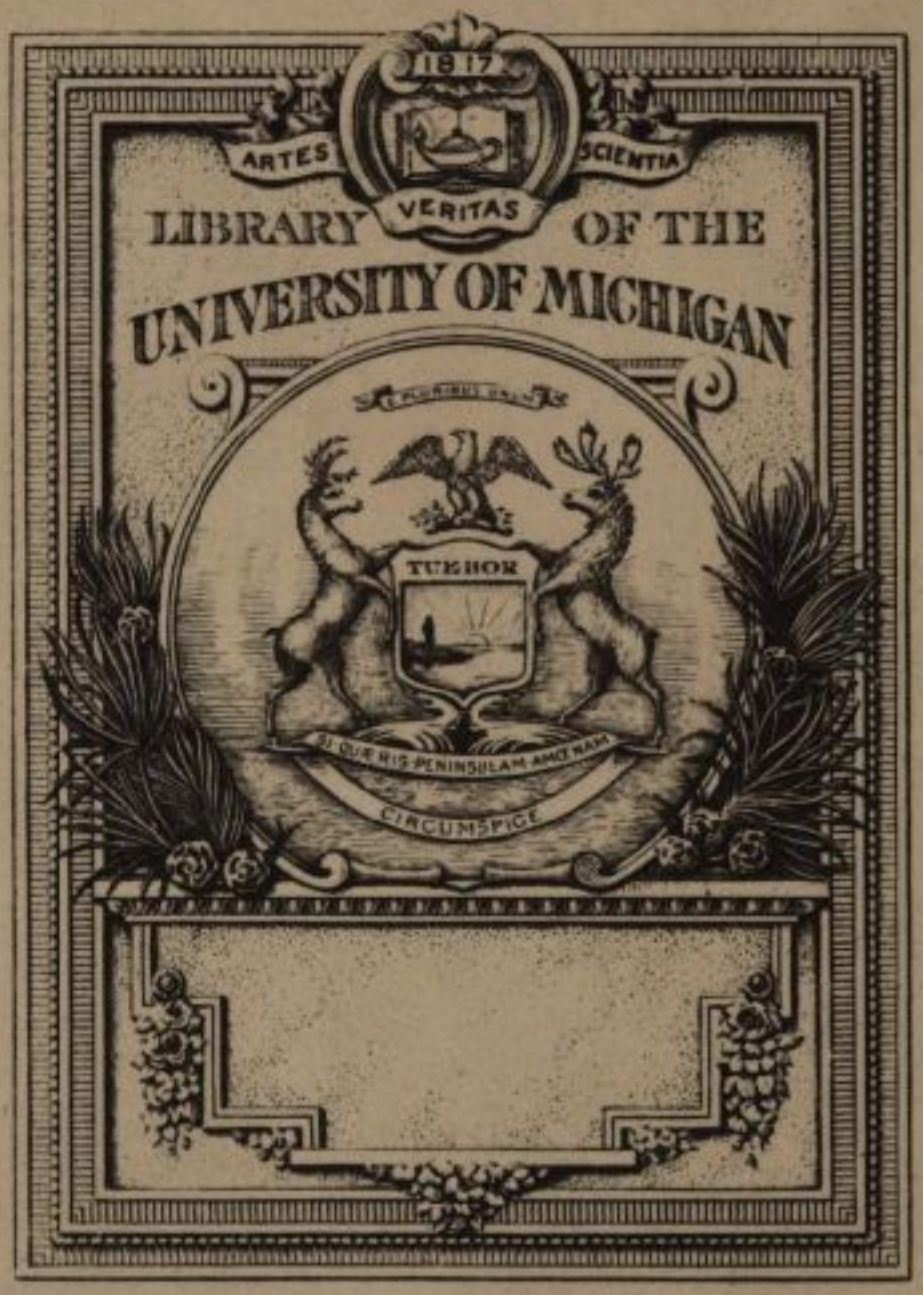
U. S. S. R.
SEA OF OKHOTSK
KAMCHATKA
SAKHALIN I.
KURIL IS.
MANCHUKUO
Vladivostok
SEA OF JAPAN
Peiping
CHOSEN (KOREA)
CHINA
Tokyo
JAPAN
P A
Shanghai
BONIN IS.
Canton
TAIWAN (FORMOSA)
Hong Kong
FRENCH INDO CHINA
THAILAND
SOUTH CHINA SEA
Manila
PHILIPPINE ISLANDS
MARIANAS IS.
GUAM
WAKE I.
MA
PALAU IS.
CAROLINE IS.
MALAY STATES
Singapore
SUMATRA
BORNEO
CELEBES
NETHERLAND INDIES
JAVA
NEW GUINEA
NEW IRELAND
NEW BRITAIN
SOLOMON IS.
GILBERT IS.
SANTA CR IS.
NEW HEBRIDES
Darwin
INDIAN OCEAN
AUSTRALIA
NEW CALEDONIA
Melbourne
Sydney
NEW

N G
S E A
GULF OF ALASKA
C A N A D A
UTIAN IS.
Vancouver
Seattle
U N I T E D
S T A T E S
San Francisco
I F I C
San Diego
IS.
M E X I C
HAWAIIAN IS.
O C E A N
PALMYRA I.
PHOENIX IS.
TOKELAU IS.
MARQUESAS IS.
SAMOA IS.
SOCIETY IS.
TUAMOTU ARCHIPELAGO
TONGA IS.
COOK IS.
TUBUAI IS.
PITCAIRN I.
RAPA I.
EASTER I.
MADEC IS.



ISLANDS OF THE EAST INDIES

By Hawthorne Daniel

ISLANDS OF THE PACIFIC

ISLANDS OF THE EAST INDIES

ISLANDS *of the* EAST INDIES

By

HAWTHORNE DANIEL

WITH SIX MAPS BY LUCIEN G. PICARD

G. P. PUTNAM'S SONS, NEW YORK

Second Impression

IMPORTANT

Government wartime restrictions on materials have made it essential that the amount of paper used in each book be reduced to a minimum. This volume is printed on lighter paper than would have been used before material limitations became necessary, and the number of words on each page has been substantially increased. The smaller bulk in no way indicates that the text has been shortened.

MANUFACTURED IN THE UNITED STATES OF AMERICA

TO

HER MAJESTY

QUEEN WILHELMINA

OF THE NETHERLANDS

AND TO HER HEROIC PEOPLE

THIS BOOK IS SINCERELY DEDICATED

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Foreword

FOR SUCH A BOOK as this, one's sources of information are certain to be diverse. Although complete acknowledgment is impossible, there are a few institutions and a few individuals to whom I am more than usually indebted.

Among the institutions that have been of especial help to me are the New York Public Library, the Netherlands Information Bureau, the British Library of Information, and the American Museum of Natural History.

Among the individuals who have so greatly aided me in compiling data or in checking my presentation of facts, I am particularly grateful to

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carefully prepared the maps that accompany the following text.

And, finally, I most gratefully acknowledge the consistent and invaluable assistance rendered by my wife throughout the entire period during which the data for this volume was being compiled as well as while the manuscript was being written, checked, and edited.

HAWTHORNE DANIEL

Introduction

THE VAST ARCHIPELAGO that lies between Australia and southeastern Asia is not easy to delimit. In fact, it has not even a name that is everywhere acceptable. An old Malay term calls this region of great islands Nusantara—the Empire of the Islands—but the expression means little to the Western mind. Instead we sometimes refer to these islands as the East Indies; or, relating them to the Malay Peninsula and other portions of southeastern Asia, we sometimes use the term Malaysia. And when we are inclined to feel the need for still another term we sometimes say that these islands form "Indonesia."

For the purposes of this volume "East Indies" serves best. Because the term has been variously used, sometimes including more and sometimes less of these widely scattered islands, it is essential to explain just what we mean by it.

"The East Indies" here will include all those islands that lie in the great triangle marked out by Sumatra on the west, Luzon on the north, and New Guinea on the east. This region measures approximately 2,000 miles from north to south and nearly 4,000 miles from east to west. In all, there are almost 12,000 islands scattered about these seas: islands that range all the way from the second largest in the world—New Guinea—down to tiny fragments of no consequence except as they form hazards to navigation.

To mark this huge region off from the regions that adjoin it on the east is not simple. East of the Philippines the nearest oceanic islands lie far out at sea, and so can readily

be accepted as belonging to Micronesia, not to the East Indies. East of New Guinea, however, the situation is different, for certain islands of the Bismarck Archipelago, the d'Entrecasteaux group, and others lie almost within sight of New Guinea, and yet belong to Melanesia.

To be clear about it: the line we are drawing to the east of New Guinea lies close to the very shore line of that great East Indian island. To the west of it we shall include everything. To the east of it we shall include literally nothing. Each of the Melanesian islands thereby excluded is described in some detail in *Islands of the Pacific,* the companion volume to the present book.

Thus the islands that form the subject of this volume include (a) about 3,000 that make up the Netherlands territories in the Far East; (b) the eastern half of New Guinea and the northern quarter of Borneo, which are parts of the British Empire; (c) the eastern half of the island of Timor and a lesser holding on the northwest coast of the same island, both of which are possessions of Portugal; and (d) the Philippine Islands.

In addition some attention is paid to the British Nicobar and Andaman groups which lie in the Indian Ocean; and in order that the relationship of the East Indian islands to their continental neighbors may appear, some information concerning Australia, the Malay Peninsula, Burma, Thailand, and French Indo-China has also been included.

Those who are acquainted with the East Indies only through small-scale maps may find it difficult to grasp the giant size of this distant portion of the world. The island of New Guinea alone, for instance, is almost as long as from New York City to Denver. Sumatra is as long as from New York to Des Moines. The island of Borneo is some 24,000 square miles larger than the state of Texas. Even the Philippines, which, being distant, seem small to many Americans, extend as far from north to south as from Min-

neapolis to New Orleans; and all in all, the lands and seas that go to make up the vast triangle lying between the Indian Ocean and the Pacific—between Asia and Australia —cover an area almost twice that of the whole United States.

Here, in other words, is a region that offers subject matter for a veritable library, and it is not the purpose of the present writer to mislead anyone into imagining that the limited text that follows supplies more than a fraction of the data that might have been compiled. It does present the essential data concerning size, location, and physical appearance, topography and climate, fauna and flora, peoples, languages, government, resources, and development. Necessarily the changes that have taken place since this region was overrun by the Japanese are left out, for little information has come from most parts since early in 1942.

By beginning with New Guinea and working to the west and north, we have reversed the usual tendency. Singapore, Batavia, and Manila are normally the major centers of activity in the East Indies. As this text was written, however, New Guinea, the least developed of all the greater islands of this region, was most prominently in the news, and was the only part of the East Indies in which we of the West still maintained a foothold. It was on that account, and for no other reason, that the order of presentation utilized in this book was adopted.

In other words, we'll begin where the doorway has stubbornly been held open against the Japanese, and from that opening we shall journey widely by means of words and maps through one of the most remarkable regions in all the world—a region that, because of its present difficulties, seems destined to play a greater part in the immediate future of the world than it has ever played in its long and colorful past.

H. D.

ISLANDS OF THE EAST INDIES

Five: Sumatra

SUMATRA IS THE westernmost and third largest of the East Indies. Its 1,060 miles of length stretch across the equator at an angle of 45 degrees. In shape it is more regular than any other important island in the archipelago, broadening gradually from its narrow, pointed northwestern end until, about midway of its length, where it is crossed by the equator, it is 248 miles in width. Southeastward of this point it almost maintains this maximum width until, within 150 miles or so of its southeastern end, the island narrows sharply to a point at Sunda Strait.

On its western side, where a chain of islands lies 40 or 50 miles offshore, Sumatra faces the Indian Ocean. On the east for almost half its length it faces long and narrow Malacca Strait. The southern half of the eastern coast looks out upon the South China Sea and the Java Sea. Across the Strait of Malacca lies the Malay Peninsula; and just to the south of the peninsula's southern tip, close beside Sumatra's eastern coast, lies an extraordinarily complicated archipelago of more than a thousand little islands, with other, larger islands just offshore farther to the south and east.

A high and remarkably straight mountain chain lies close to Sumatra's western coast throughout the island's length. In many places it rises sharply from the coast, and no lowlands of considerable width are to be found anywhere along the island's western side.

To the east of the mountains, however, there is a belt of

flat alluvial country which is narrow enough in the nor but grows much wider as it progresses southward.

The island's mountain system, which is called the Ba san Mountains, or the Bukit Barisan, is made up of t parallel chains with a valley between. The valley, howev is not continuous, for it is interrupted by volcanic form tions; and spaced irregularly along this broken valley is series of mountain lakes, the largest being (from south north) Ranau, Korinchi, Singkarah, Maninjau, and Tob Of these Lake Toba is the largest, measuring 45 miles length by 15 in extreme width. The lake, however, is n so large as these dimensions suggest, for it contains t island of Samosir which itself measures about 30 miles i length by 10 or 11 in extreme width.

The Barisan Mountains are not uniform throughou their length. In the south they consist of parallel chain lying close together and with small plateaux between. I the north the elevated region is broader and includes th major part of the island.

Volcanoes are to be found throughout the length of th island, usually close to the west coast. A number of thes are still alive and occasionally scatter scoriae and ash ove large areas. Lava streams, however, rarely flow from th craters. Among the most important of the Sumatra volcanoes are Dempo, 10,236 feet; Kaba, 6,528 feet; In drapura, . 12,484 feet; Talang, or Sulasi, 8,330 feet Singalang-Tandikat, 9,480 feet; Merapi, 9,485 feet; Pasa man-Teleman, 9,840 feet; Surik Berapi, 5,875 feet; Pusu Bukit, 6,562 feet; Dolok Sibayak, 7,075 feet; and Dolok S Nabun, 7,900 feet. A lake of boiling mud fills a crater o Mt. Merapi; and Mt. Kaba, not long before the Firs World War, blotted out most of the vegetation in a ver considerable area by an eruption that threw out enormou quantities of volcanic sand.

These volcanoes, of course, are not the only Sumatr peaks of consequence. Fully a score of others in the Barasi

Mountains surpass 6,000 feet, with the maximum elevations a little more than twice that high.

East of the mountains lie the great Sumatra lowlands. Except for about 150 miles of its most northern portion, the east coast of the island is made up of continuous areas of swamps and sandbanks. At the mouths of the many rivers the land is frequently broken into numerous low-lying islands by streams that wind so tortuously about through the waterlogged areas as to make it difficult to decide where the sea ends and real land actually begins. In fact, most of the east coast is a vast, interconnected series of deltas.

Because of the sediment that the rivers are constantly carrying, the whole coastline is slowly advancing, and this development is aided both by the vast growth of mangroves in the swamps and by the sand and ocean silt washed up to the low shore line from the easily stirred bottom of the very shallow sea.

This quaking, mangrove-ridden region is very largely uninhabited, for it is almost uninhabitable. There are, however, some natives who obtain a livlihood by fishing, and along the lower reaches of a few of the more important rivers (such as the Musi and the Jambi, or Djembi, on which, well upstream, the important cities of Palembang and Jambi lie) a few pile-supported villages exist.

In fact, the east coast is of value primarily because the island's many navigable rivers flow through it and form the watery highways that lead to seaports that frequently lie at considerable distances from the sea. Palembang, for instance, is more than 56 miles from salt water, by way of the crooked course of the Musi River. Jambi, Bengat, and Pelalawan are also well upstream from the low and watery east coast.

The east coast rivers have wide drainage areas, and the settlements are mainly beside them. Navigation is sometimes difficult in the lower reaches of these rivers because

of the wide mudbanks and of the changes in water depth due to the tides and to irregularity in the flow of the streams themselves.

Between the eastern seacoast quagmires and the western mountain ranges lies one of the most extensive and valuable agricultural regions to be found in the East Indies—a region that is often of great beauty and is also of great contrasts. Parts of it are utterly wild, while other parts form great plantations. Most of it is capable of enormously greater development than has yet taken place, despite the fact that Sumatra is already among the economically important sections of the far eastern empire of the Dutch.

This well-watered region of Sumatra is divided up among the drainage systems of the island's many eastward-flowing streams. From north to south the most important of these are the Deli, Serdang, Asahan, Panel, Rokan, Siak, Kampar, Kwantan, Jambi (or Djembi, or Batanghari), and the Musi. All of these are large rivers, and in general they increase in size from north to south.

On the west coast the streams, with one or two exceptions, are short, swift, and unnavigable. The Simpang-Kiri, which reaches the Indian Ocean directly west of Lake Toba, is the outstanding exception.

The best Sumatran harbors are about midway of the west coast. Emma Harbor, or Emmahaven, a small port which is so close to Padang as almost to be a suburb, possesses one of the safest. In this vicinity there are several inlets which, though not landlocked, have small islands lying across their seaward sides, thus providing safe, smooth anchorages. Emma Harbor is one of these. Except between Tapanuli on the north, however, and Indrapura on the south (the middle third of the west coast) none of the coastal indentations provide protection from the southwest monsoon. Coral reefs are present along some sections of this coast, and the surf is frequently very heavy.

On the east coast of the island there are almost no har-

bors whatever, their place being taken by the rivers beside which—generally just inland from the extensive swamps—fairly solid land permits the construction of cities.

At the southern extremity of the island, and overlooking Lampung Bay, is the seaport of Telokbetong with a population of 25,170; and at the island's northern tip is Kutaraja, with 10,724.

Other important Sumatran cities, with their population figures, are as follows:

Cities Near the East Coast

Menggala, on the Tulangbawang River	14,174
Palembang, on the Musi River	108,145
Jambi, on the Jambi River	22,071
Medan, inland near the port of Belawan	76,584

Cities on the West Coast

Padang	52,054
Benkulen	13,418

Inland Cities

Fort de Kock	14,657
Sawahlunto	15,146
Tebingtinggi	14,026
Pematang Siantar	15,328

Palembang, in the southern part of the island, is by all odds the greatest port and trade center. It is located on both banks of the 1,000-foot-wide Musi River 56 miles from the sea. The population included only 1,895 Europeans in 1940. There were, however, 15,492 Chinese, and the remaining 90,000, while predominantly Sumatran, also included Arabs, Javanese, Macassarese, Buginese, and others from other parts of the Far East. In recent years the appearance of the city has been greatly improved, and many of its newer structures and streets are handsome and

imposing. On the other hand, many Chinese and Arab merchants long ago learned to build their houses on large rafts that they tied up at the river's edge and frequently took far upstream into the interior when they felt it advisable to make the journey. Many such houses are still to be seen on the Musi River at Palembang.

Not a little of Palembang's importance in trade is due to the fact that the oil center of Pladjoe is near by. The city is also the capital of the residency of Palembang and is the eastern terminus of the railroad system of southern Sumatra.

Medan, the second largest city, is in the northern part of the island and is not a port. But it is the capital of the island and province of Sumatra. More than a third of its population (27,287 of a total of 76,584) were Chinese in 1940, while only 4,293 Europeans were resident there. Medan is notable because it was created in order to become the capital of this great island. On this account it has an atmosphere all its own. Its architecture is admirably suited to the needs of the tropics. Its hotels and shops, its cafés and handsome white business buildings, its wide shaded streets, its clubs, and its fine residences, all contrast sharply with much that is to be seen in other cities and towns of the island.

By way of the near-by port of Belawan at the mouth of the Deli River, a small stream on which Medan is also situated, Medan normally ships large quantities of tobacco and rubber from the great plantations in the vicinity. Furthermore, Medan, as the center of government of so important a division of the East Indies, is a modern city normally in constant communication by air and sea with Singapore and Batavia.

Communications are more thoroughly developed in Sumatra than in any other portion of the Netherlands East Indies except Java. Not only do the principal cities normally have airplane service that connects them with

each other as well as with Singapore and Batavia, but also the air service that is operated in times of peace between Europe and Australia is readily available to them.

Sumatra also has railroads, though as yet the three separate systems on the island are not connected. One of these systems is in the most southern part and connects Palembang with many inland points as well as with Telokbetong, at Sumatra's southern tip. Another system runs inland from Padang and Emma Harbor, and the third runs through Medan, following the east coast to Kutaraja at the island's northern tip, and extending south and inland from Medan about 150 miles.

All these lines are narrow-gauge (42-inch), and the original plan was that they would ultimately become interconnected. The building of motor roads, however, was being carried on at a rapid rate at the time of the Japanese invasion, and the return of peace may see motor trucks performing much of the work originally planned for the railroads.

In the northern quarter of the island good roads extend all along the coasts and well into the interior. In the more central portions the roads are fewer and are principally in the interior. They reach the west coast north of Padang, however, and from there roads run south along the west coast and in the interior all the way to the island's southern end. There are no roads whatever at or near the east coast except throughout the northern third of the island. The swamps and the lack of population in the more southern coastal region are the causes. In fact, throughout the southern two-thirds of the island, roads that could support a motorcar rarely run very much east of the center of the island except to Palembang, Jambi, and a couple of other river ports.

Lying directly under the equator, and in no part more than 6 degrees north or south of the line, Sumatra is obviously tropical. The heat, however, is usually somewhat

tempered by the seas. Humidity in the less elevated sections of the island is likely to be high, the average at Medan being 84 per cent.

Except as much lower temperatures are experienced in the mountains, the thermometer varies remarkably little throughout the year.

At Padang the maximum recorded temperature is 93 degrees Fahrenheit, and the minimum 69.8. The mean temperature the year around is 79.7, and the mean daily range is 13.3. As one climbs the mountains one experiences a drop in temperature of about 1 degree for each 300 feet of altitude. Thus the temperatures at some of the more elevated towns are quite within the range of comfort at midday and are definitely cool at night.

In the northern part of the island the winds differ from those in other parts of the Netherlands Indies. The January winds are northeast, and the July monsoon is southwest. Along Malacca Strait land and sea breezes are regular. Even the monsoons are regular in the strait when they are at their height in near-by seas.

On the east coast of Sumatra regular land and sea breezes sometimes extend inland for 30 miles, generally blowing northeast by day and southwest by night throughout the year. There are certain irregular squalls that are called Sumatras, and these appear more often on the east coast than on the north.

Along the northern part of the west coast the southwest monsoon blows from May to October, and the northeast monsoon from December to March. A little farther south is a region of calms and light variable winds. At Padang, near the middle of the west coast, northwest and west winds, with fair weather, prevail during February and March; southwest winds with thunder and rain squalls are usual during May, June, and July; from August to December west and northwest winds with much rain and heavy squalls are usual; and January is mostly calm.

In general Sumatra has its heaviest period of rains from December to March, with an annual average of 122 inches in the west and 106 in the east. In the northern part of the island rainfall is slightly less, averaging about 96 inches annually. No weather station in Sumatra has ever reported less than 39 inches of rain in a single year, while 4 per cent of the stations have reported more than 177 inches—nearly 15 feet!

Sumatra has a none too enviable reputation in connection with malaria. This, of course, is due in large part to the great mosquito-bearing swamps. The high country is much more healthful. North Sumatra, too, is less subject to fever, though epidemics develop now and then. One of the most healthful spots about Sumatra is We Island, or Pulu Weh, just off Sumatra's northern tip, but the islands off the west coast are especially unhealthful, as are certain portions of the west coast itself. Padang, however, is more healthful than most coastal towns.

Dysentery, beriberi, and hookworm are much more under control than they formerly were. Cholera is endemic, and the health services are constantly watchful to prevent cholera epidemics. Typhus and smallpox are rare. Tuberculosis, typhoid fever, and leprosy are present, but the administration has greatly improved the health service in recent years, and, for a tropical region, Sumatra is not especially unhealthful for those willing to take the necessary precautions.

The forests of Sumatra cover about 115,000 square miles and are especially rich in trees of value. Ebony and sandalwood, various oaks, chestnut, and many varieties of palms grow proliferously. Trees producing gutta percha, camphor, benzoin, and dammar gum are numerous. Bamboo grows in great impenetrable clusters. Rattan twines its long barbed vines through the forests and, together with other vines, often ties the whole into an almost solid mat of vegetation. In the northern part of the island a species

of pine tree *(pinus merkusii)* has spread southward almost to the equator. The natives have sometimes been very careless in the way they have cut down valuable trees, or in creating openings in the forest where some of Sumatra's rank grasses have taken root.

Much of Sumatra is made up of wide, rolling grasslands which chiefly produce *alang-alang* and *glaga,* the wild sugar cane. These and other grasses grow from 3 or 4 to 10 or 12 feet tall and are so strong and so assertive that, given an opportunity in almost any forest opening, they gain too strong a hold to permit the forest to regain the ground it has lost. So rank are these grasses that, once fully rooted, it is all but impossible to eradicate them, even with the plow. Furthermore, the Sumatra varieties of these grasses grow at lower levels than similar grasses on other islands do, and so have a wider potential field in which to spread.

The coastal lowlands, of course, are largely covered with mangroves and nipa palms that stand in swamps made up of the vast mudbanks that lie within the tidal zone or just above it.

In the region intermediate between the coastal swamps and the mountains, coconut, sago, areca, and areng palms grow abundantly. Oranges and lemons, pomegranates and guavas, papaws and tamarinds are widely raised. Pepper has been raised in Sumatra for centuries, and formerly the island supplied most of world's pepper needs.

In recent years the island has been much improved, and agricultural development has been continuous since the final pacification of the northern natives about 1910. Rubber and tobacco were introduced and have come to be important crops. Rice, tea, and sisal are also grown in large quantities, and palm oil is an important product.

Sumatra is productive of a number of minerals. The Ombilin coal mines in the mountains above Padang are important, the mines being worked by the government.

This field, which covers an area said to be little more than 6 miles square, is thought to contain 200,000,000 tons of excellent coal, the seams, in some places, being 75 feet thick. And there are coal deposits in other portions of Sumatra as well.

Copper exists on the west coast. Gold has long been successfully mined in the Rajang Lebong district about 50 miles north of Benkulen, and silver comes from the same mines. Iron is found in a number of localities on the west coast. Manganese, tungsten, and lead also occur.

The most valuable mineral product of Sumatra, however, is petroleum, which is found in two widely separated fields. The Palembang-Jambi field is the more important of the two, and when it was supplying 80,000 barrels a day it accounted for more than half of all the oil produced in the Netherlands East Indies. The other Sumatran field lies just to the north of Medan near the northern tip of the island.

The mammals of Sumatra are numerous and are frequently remarkable, especially in contrast to those of Java and the islands farther to the east. The Sumatran elephant is held by some students to be a distinct species. The Sumatran rhinoceros differs from the rhinoceros of near-by Java in having two horns instead of one. It is most commonly found in low, marshy country but sometimes is reported at elevations as high as 6,500 feet. Tapirs are common. One of the most remarkable of Sumatran animals is the banteng, a large oxlike animal. Antelopes live among the higher mountains, and the Malay deer is common, while other deer exist but are less numerous. In the northern part of the island the orangutan sometimes is seen, and the siamang *(Siamanga syndactyla)* is a large ape known only in Sumatra. There is a langur locally called the simpai, and an ape that is often tamed is the "chigah" *(Cercocebus cynomolgus)*, while the so-called pig-tail ape *(Macacus nemestrinus)* is often trained by the natives to

climb coconut trees and throw down the nuts. The so-called flying cat—a flying lemur—is common.

Royal tigers are not infrequent in certain parts of the island, though the clouded tiger *(Felis macrocelis)* is rare. At least two species of hares are found, and there is a pangolin, or scaly anteater.

Many bats, including the large, fruit-eating flying foxes, are common over most of the island. There is a wild dog, and the Malay bear is known. Rats, especially the so-called coffee rats, are numerous, as are mice and squirrels.

Large crocodiles are common and usually live at the mouths of rivers in salt or fresh water. They not infrequently go upstream, however, and are a potential danger. Lizards that grow to lengths of 6 or even 8 feet live in the marshes, while little geckos frequently enter houses, where they catch flies. Monitor lizards, too, are found, and there are many chameleons. Frogs of many kinds are numerous. Turtles and tortoises are common. Snakes exist in considerable numbers and live in rivers and streams, in trees, and in the undergrowth. Some are poisonous but are not considered to be especially dangerous, for they are said to use their fangs more in defense than in attack. Pythons are common but are not dangerous. Sea snakes from 2 to 6 feet in length are found in the waters about Sumatra, and fish of hundreds of species swarm in the rivers, lakes, and swamps, as well as in the sea.

Birds are numerous and of many varieties. Crows, orioles, cuckoos, doves, hornbills, and honey birds are common. Weaverbirds and ricebirds are very troublesome to the farmers. Owls, kites, falcons, and hawks are some of the birds of prey; but the eagle, which is found in Borneo, is not known in Sumatra, despite the limited distance that separates the two islands.

The fauna of Sumatra is definitely Asiatic in character, just as that of New Guinea is Australian.

At the time of the Japanese invasion the population of

Sumatra was about 8,500,000, only about 30,000 of whom were Europeans. There were nearly half a million Chinese, however, and about 35,000 "other Asiatics." * Thus the natives, including those on the near-by islands, now probably number about 8,000,000.

Those on Sumatra are usually said to be divided into five groups, as follows:

1. Menangkabaus, who live in the central western part of the island and number something more than 2,000,000.
2. The Bataks, who live in the country about Lake Toba and on the west coast in the region to the northwest of the Menangkabaus.
3. The Achinese, who occupy northwestern Sumatra on both the eastern and the western sides.
4. The Palembangese, who occupy the southwestern section of the island.
5. The coastal Malays, who occupy the entire eastern coast and penetrate fully three quarters of the way across the island just below its middle.

In addition to these there are a few scattered and primitive tribes known as the Kubu; and in central northern Sumatra, almost surrounded by the Achinese, are about 50,000 rather primitive people called the Bayo-Alas.

Undoubtedly the Achinese and the coastal Malays are the most advanced of the people of Sumatra. The coastal Malays form the largest single group on the island and are identical with the Malays of the Malay Peninsula across the Strait of Malacca. Furthermore, many of these same people have settled on the coast of Borneo and in other parts of the East Indies, where they are more widespread than any other people. This explains why it is their lan-

* The 1931 census gives the Sumatra population as follows: Natives, 7,745,000; Europeans, 27,000; Chinese, 449,000; other Asiatics, 33,000; total, 8,254,000. Each category increased during the next decade; but no precise figures exist, since the census of 1941 was prevented by the Japanese invasion.

guage which, in a simplified form, has become the lingua franca of most of the East Indies. They are Mohammedans, though most of them do not take their religion too seriously.

The Achinese, on the other hand, are very devoutly Mohammedan; and they proved themselves especially unwilling to be controlled politically by the Dutch. The very last of all the peoples of the Netherlands East Indies to accept control, they kept up their struggle until 1910, when, finally, they accepted the inevitable. They number about 800,000.

The Bataks, of whom there are more than 1,000,000, were cannibals not so very long ago, and though that custom has disappeared, many of their old habits are still followed. For the most part they are pagans. Mohammedanism never gained a foothold among them, though some have now been converted to Christianity.

The Menangkabaus, who number about 2,000,000, are an energetic people more advanced culturally than some of their neighbors. Nevertheless, they still cling to the custom of tracing descent through the female line, despite the fact that they have become Mohammedans. In the past they have been greatly interested in self-government. It remains to be seen how their contact with the Japanese will affect their political ideas.

The Palembangese, a people with a considerable admixture of Javanese blood, number about 800,000. Most of the tribes who make up this group have adopted Mohammedanism. Among them are some with cultures that are fairly well advanced, but in general they are not on a par in that respect with most of the people of Sumatra.

The peoples of Sumatra offer a complicated ethnological problem. For many centuries those on the coasts have been in contact with foreigners, while the inland tribes have remained aloof and largely uninfluenced. In past centuries Arabs, Chinese, Hindus, Bengalis, and others

have settled on the Sumatran coasts. Both Palembang and Jambi long ago supported Hindu and Javanese colonies, and there has consequently been much mixing of races. In the interior, however, this has occurred to a much lesser degree.

In the beginning, apparently, the population was wholly of Malayo-Polynesian origin. Now, however, there are two main ethnical groups, the Indonesians and the Malays. (In this sense the term Malay has a much wider application than when it is used in reference, for instance, to the coastal Malays of the island.) The differences in appearance and physique between these two groups are slight, and all the peoples of the island, except for the most primitive ones, closely resemble the Malay type.

Many languages, and even a number of scripts, are used by the different peoples of the island. Some of these are of Malay origin, and some stem from the Hindu. Dutch is used only by the Europeans. Malay, being fairly simple and widely used, forms a lingua franca known, or partially known, throughout much of the island. Menangkabau Malay is spoken on much of the west coast. Achinese, which is related to Malay, is divided into four dialects and is spoken in the north. The Bataks have many dialects and use a Hindu script. Lampong is spoken in the southern end of the island, and this language is related both to some Java dialects and to the Batak.

Sumatra has undergone much development since the end of the First World War. Its population has never been large but in the past half century has shown considerable increase. Whereas in 1900 the population was 3,168,000, the 1930 census accounted for 8,254,000. This increase is due not only to the elimination of old intertribal quarrels and to improved health conditions, but also to the migration of native farmers from other East Indian islands to Sumatra. Because of the crowded conditions in Java the government has encouraged the migration of certain Jav-

anese to Sumatra. This policy, prior to the Japanese invasion, had been meeting with increasing success, and in 1939 more than 145,000 such colonists arrived in Sumatra. No doubt the policy will be continued once peace returns to the East Indies, and if it is, both the population and the wealth of Sumatra are certain to increase rapidly.

Islands Off Sumatra's West Coast and Northern Tip

Off the west coast of Sumatra at distances of 25 to 80 miles offshore is a long row of islands, ten or a dozen of which are large. The northwesternmost of these is Simalu, a hilly and forest-covered island with a central ridge that reaches 1,870 feet. The island is about 46 miles in length by 14 in greatest breadth, and is surrounded by reefs, which makes it difficult of access. Coal has been found on the island, but it is not worked. Most of the lowlands about the coast are cultivated. The people are partly Achinese and partly Menangkabaus who, though they have adopted Mohammedanism, are still culturally in a state of savagery.

About 20 miles southeast of Simalu are the two small and undeveloped Tapa Islands, the larger of which measures about 4 miles by 10.

Some 30 miles east of the Tapa Islands, and closer than that to the Sumatran coast, are the 66 scattered islands of the Banjak group. Great Banjak, about 7 miles by 22 in size, is quite the largest of these, all the others, with two or three exceptions, being very small indeed. The people of these islands are no more advanced than are the natives of Simalu. Copra is their principal product. Among the natives of the near-by coast of Sumatra these islands are said to be haunted.

About 30 miles south of the Banjak group and about 70 miles from Sumatra lies Nias, the largest of the west coast islands. About 76 miles long from northwest to southeast,

Nias has an area of 2,796 square miles and an extreme elevation of 2,300 feet. A number of islets lie off the north and west coasts.

Formerly well forested, the island lost most of its trees by fire during the native wars that used to be frequent, and the new growth is much inferior to the first. The climate is good, but earthquakes are frequent and often severe. Many coconut palms grow on the south and southeast coast.

Gold, copper, iron, and coal have been reported on the island, but the deposits are probably small, and landing is dangerous. Thus no serious attempt has been made to develop them, and the rice, copra, and sago grown by the natives are the island's principal products.

The pagan natives seem to be of pre-Malay origin and are primitive but competent. Until very recently both slavery and head-hunting were universal, and human sacrifices were not uncommon. On the other hand, these people are skilled at weaving and metalwork. They are good agriculturists as well, and coconut oil is one of their principal products. The population is heavy, being estimated at more than 250,000.

The village of Gunong Sitoli is on the east coast. It houses a few Chinese and Malay traders besides a Dutch commissioner.

About 45 miles southeast of Nias are the Batu Islands. In all there are 48 islands in this group, but only three of them are large. These, in the order of their size, are Batu, 23 miles by about 15; Pulautelo, about 25 miles by 4 to 5; and Pini, about 22 miles by 7. The islands are hilly and have some good timber, but the natives are little interested in work, and no development of consequence has taken place.

About 27 miles southeast of Batu lies the northernmost and largest of the Mentawa Islands. In all there are about 70 islands in this group, if all the islets are counted, but

only four are large. These, from north to south, are Siberut, about 54 miles by 27; Sipora, about 27 by 12; North Pagi, about 19 by 18; and South Pagi, about 42 by 13. The last two are sometimes called the Nassau Islands.

The group is volcanic in origin, and all the islands are subject to earthquakes. Coral reefs surround them, making landing difficult. The people, like those of Nias, seem to be of some stock that antedates most of the near-by people. It is even said that they have some Polynesian characteristics, and it has been held that they are remnants of some eastward-migrating Caucasian stock that occupied these islands long before the other peoples of the region had arrived. They produce some coconuts, timber, sago, and trepang, and do most of their trading at the villages of Siberut and Saibi on the island of Siberut.

The southernmost of the islands west of Sumatra are those that make up the Engano group. There are seven, in all, but six are tiny islets and only Engano Island itself is of considerable size. It is about 18 miles in length by 11 in extreme width, has a maximum elevation of 1,180 feet, and is covered almost to the water's edge with heavy forests. Copra is the principal product. The output is small, however, for there are only a few hundred inhabitants, though formerly the population was heavier.

About 14 miles off the northwestern tip of Sumatra, and directly north of the Sumatran town of Kutaraja, is the very irregular little island of We, or, as the Malays have it, Pulu Weh. Made up of about 65 square miles which, for the most part, consists of hills and ridges, the island nowhere attains an elevation of more than 2,000 feet. Its highly irregular outline creates a very large bay on the north coast and a somewhat smaller one on the south.

Opening off the eastern side of the large northern bay is an excellent harbor beside which the town of Sabang lies, and here has been created a fairly important free port which serves all of northern Sumatra. With its busy water

front surrounded closely on the landward side by heavy tropical forests that seemed intent on crowding the little town into the water, the low, one-storied, peak-roofed warehouses and the docks were, until the Japanese invasion began, busy with incoming and outgoing freight. Freighters, barges, and coasting steamers lay at the landing stages, anchored offshore, or were lifted out of water by the port's floating drydock.

Sabang Bay is an excellent one, with almost complete protection from wind and sea at every season of the year, and with a depth of 70 to 120 feet. The inner harbor is at the head of the bay, and ships with a draft of 30 feet can go alongside the landing stages.

The whole island is especially healthful, and epidemics are unknown.

Islands Off Sumatra's East Coast

Lying just east of the central portion of Sumatra's eastern coast is an archipelago that is probably the most intricate in the whole East Indian region. In fact, about a thousand islands—one-third in number of all those that make up the great East Indian empire of the Dutch—lie here just off the Sumatran coast and just south of the tip of the Malay Peninsula. Yet this whole region measures only about 125 miles from north to south and no more than 100 from east to west.

This is the Riouw Archipelago, or, as it is sometimes called, the Riouw-Lingga Archipelago.

The island of Riouw, or Bintan, or Bintang, is the largest in the group. It lies only 28 miles southeast of Singapore, having been set up by the Dutch in 1828 as a free port to compete with its neighbor. Singapore, however, was too well established, and Riouw has never played a very important economic part.

The island of Lingga, about 50 miles south of Riouw,

is second in size in the whole group. Also, it has the greatest elevation, a peak that reaches 4,400 feet.

Scattered between and about these two islands are the lesser islands and islets that crowd the shallow waters. The soil of the archipelago is not fertile, and though some of the islands are hilly, most of them are low, and many are marshy. Tin is mined on the island of Singkep, which lies immediately south of Lingga, and bauxite is mined on Riouw.

The archipelago is amazingly intricate, and the presence of coral almost everywhere greatly complicates the use of the many channels and waterways. In fact, the coral growth is so considerable, the islands are so numerous and close together, and the waters so shallow that by the growth of coral alone the islands are tending to "grow together."

The population of the group consists of about 100,000 Indonesians of many types, together with many Chinese. The town of Tandjungpinang, on the island of Riouw, is the administrative headquarters of the archipelago.

A few of the Benua, the very primitive original natives of these islands, survive. They are a timid people who live in the marshy woods, and they are quite different in type from the Malays. Because the Benuas have long, wiry hair, and noticeably heavy growths of body hair, they are called orangutan—that is, "wild men"—by the other natives, who use the same name for the great ape of the Sumatra and Borneo forests.

Less than 10 miles across Banka Strait from the eastern coast of southern Sumatra lies the large island of Banka, with Billiton Island lying about 45 miles across Gaspar Strait to the east of Banka.

Banka is 138 miles in length by 62 in greatest breadth, while Billiton measures 55 by 43. Together they total 6,320 square miles, and their combined population is about 281,000. But it is neither their size nor their population that makes them important. It is rather that these

two islands form one of the most important tin-producing regions in the world.

Geologically Banka and Billiton, as well as the Riouw Archipelago, which lies to the north and west, are continuations of the Malay Peninsula, though politically they are a part of Sumatra. The tin ore, which is mined under government control, is found in alluvial deposits and is worked in open cuts with Chinese labor, the local natives not being interested in performing such work. The output of tin from these two islands was 28,817 tons in 1939.

A few small islands lie about and between Banka and Billiton, but all of them are very small except Lepar, Liat, and Mendanau in Gaspar Strait, and even these three are moderate in size and unimportant.

The administrative headquarters of these islands is Pangkalpinang, on Banka. Its total population in 1939 was 11,970, of whom 7,233 were Chinese and 245 were Europeans. The principal town on Billiton is Tandjungpandan. Its total population was 15,708 in 1939, of whom 10,771 were Chinese and 507 were European.

The natives of Banka and Billiton are Malays of very mixed origin. Both intellectually and physically they are of a low type, though they are mild and honest. They are lacking in energy, are of small intelligence, and have little interest in work. They live mostly by hunting and fishing, their attempts at agriculture being limited and not notably successful. They are Mohammedans but still hold to many old pagan beliefs.

Sumatra has other islands near its coasts in addition to those listed on the preceding pages, but they are either river-and-sea-surrounded sections of the half-drowned eastern lowlands or are tiny fragments such as those that lie in Lampung Bay at the southern end of the main island. In either case they are not, in reality, separate entities, and so will not be listed in detail.

Throughout the islands off the east coast of Sumatra,

and elsewhere in these regions, the Orang Laut—that is, the Sea People—are frequently to be seen. The term is often used for all the fishermen of this region who go frequently to sea, but in its more specific sense it refers to a remarkable group of seafaring people who are to be found all about the China Sea and even elsewhere in the East Indies.

These people are sturdy and strong, and they are the direct descendants of the very fierce pirates who formerly almost controlled these waters. Many of them are now peaceful fisherfolk who live in stilt-supported houses that rise above the shallow water, and they sometimes work as wood choppers or even as coolies.

They are most at home, however, in their boats, which are usually from 18 to 26 feet in length, with a beam of 5 or 6 feet. The boats are decked and are equipped with masts and sails, and in them these people do not hesitate to make very long voyages. Each boat supports a family —husband, wife, children, cats, dogs, and all—and a number of such boats always voyage in company.

Known also as Sea Gypsies, and as Orang Rajat, Orang Tambus, Orang Bajo, or Orang Seka, they are often to be seen along the coasts of Borneo, Celebes, Java, the Lesser Sunda Islands, and even the Moluccas. In a strange nautical sort of way they are nomads, and it is difficult even to estimate their numbers. It is said that they probably do not exceed 10,000 or 12,000.

Malay in costume, and usually able to speak Malay, they nevertheless include many other strains. Because they wander so widely, and because their beliefs forbid marriage between two members of the same tribal family, it is likely that the Orang Laut are more or less related with most of the coastal peoples of the East Indies.