
EASTERN GEOGRAPHY.

A GEOGRAPHY
OF
THE MALAY PENINSULA, INDO-CHINA,
THE EASTERN ARCHIPELAGO, THE PHILIPPINES,
AND NEW GUINEA.

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With a Map.

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areca, and gomuti. The nutmeg, cinnamon, and clove have been introduced, and thrive well, although the nutmeg is subject to a leaf disease. Indigo, gambier, pepper, the sugar-cane, tea, coffee, and tapioca have also been acclimatised. A species of climbing indigo and the wild nutmeg are indigenous, as are also the characteristic durian and mangosteen fruit trees. The most generally cultivated plants are rice, sugar-cane, cotton, tobacco, yams, batata, cocoa and areca palms. With the spread of agriculture and mining operations the primeval forests tend to disappear, and in many districts extensive tracts have already been cleared by the Chinese miners, who recklessly cut down the finest trees to serve as fuel for smelting the tin ores.

Fauna.—The Fauna of the Peninsula, which is unusually rich, is allied, like the flora and the inhabitants, partly to that of the Eastern Archipelago, partly to the Asiatic mainland. Here are the one-horned rhinoceros, Malay tapir (*teno*), elephant, and hog, all of the same species as those of Sumatra. Here are also a small bear (*bruang*), found elsewhere only in Borneo, and the Sunda ox of Java, besides two kinds of bison, said to be peculiar to the Peninsula. On the other hand, the Asiatic tiger has extended his range throughout the whole region, even crossing over to Singapore and other adjacent islands. Of quadrumana there are no less than nine species, including the kukang (*Lemur tardigradus*), a so-called chimpanzee (*Simia troglodytes*), the black and white unglea, but apparently not the orang-utan, although the term is in common use, and applied by the Malays in its natural sense of "wild men" to the wild tribes of the interior.

Of birds perhaps the most characteristic are the rhinoceros hornbill (*Buceros*), the bangau or Javanese stork, the argus and pencilled pheasants, some birds of paradise (*Paradisca regia* and *P. gularis*), the myna or grackle (*Gracula religiosa*), the murei or dial bird (*Gracula sularis*), besides kingfishers, fly-catchers, doves, and pigeons in endless variety. The islands are frequented by the *Hirundo caerulea*, or swallow that builds edible nests, and the forests swarm with coleoptera, lepidoptera, and other insects, including the magnificent butterfly, *Oranithoptera Brookiana*, till recently supposed to be peculiar to Borneo. The surrounding waters are inhabited by the halibore, or "mermaid," a sirenian, whose Malay name of *dugong* has been corrupted to *dugong* in English.

and various kinds of palms fringe the low-lying coastlands, while paddy fields and garden plots cover the plains stretching inland to the foot of the hills, which are in many places clothed with dense forests of teak, ironwood, lacquer, and other gum-yielding species, ebony and the precious eaglewood, burnt only in the palaces and temples of the gods. The natives, however, cultivate little except cotton, maize, bamboo, which is turned to endless domestic and industrial uses, rice, of which there are some forty varieties, and a vine, which yields a sour wine.

Fauna.—Most of the Indian animal species reappear in the region beyond the Ganges. Here elephants are very numerous, especially in Burmah; those of the Lao country are noted for their intelligence, and the natives everywhere display great skill in capturing and taming them. The rhinoceros also, of which three varieties are known in Burmah, is sometimes tamed, as in Assam. The tiger, which roams the Annamese forests, and reaches down to the extremity of Malaya, is seldom openly attacked, but mostly taken in snares. The Annamese fauna includes, besides the wild buffalo, the *dzin*, a species of ox perhaps allied to the Chinese *mithun*. The Burmese breed of horses is highly esteemed, while those of Cochin-China are too small and weak to serve as pack-animals. In Tonkin, Annam, and Camboja poultry, ducks, and geese are more numerous than in Europe, and every house has its pig. In Burmah rats are a great scourge, and the insect world is represented by innumerable species both here and throughout the peninsula. All the rivers and marine inlets, as well as the great Cambojan lake, teem with fish, which is a staple of food amongst all the inhabitants of Indo-China.

CHAPTER III.

INHABITANTS OF INDO-CHINA — BURMESE — TALAINGS — SIAMESE — ANNAMESE — CAMBOJANS.

Mongolic Races.—From the anthropological standpoint the great bulk of the Indo-Chinese people belong to the Mongolic family of mankind, and more directly to the Tibeto-Chinese sub-division of that group. Amid a multiplicity of national, historical, and tribal names, a substantial unity both in the physical and linguistic types

also less elevated, seldom rising above 5000 feet, and approaching at some points close to the west, at others close to the east coast, that is, to the Gulf of Siam. The average distance from the Bay of Bengal varies from 30 to 40 miles, with a coast line of about 500 miles, and a total area of nearly 47,000 square miles.

The sea-board is even more diversified than that of Arakan, being broken by the estuaries of the Salwin, Tenasserim, Tavoy, and some other considerable streams, and thickly studded throughout its entire length by the innumerable islands, rocks, and reefs of the Moscos and Mergui Archipelagoes. These insular groups which skirt the coast for over 300 miles, appear to be the scattered fragments of partly submerged mountain ranges, running parallel with the inland range, and, like it, consisting of conglomerates, porphyries, and granites. The inland range itself must be regarded as a northern extension of the Malayan mountain system, and also abounds in tin, which is now worked by Chinese miners. Elsewhere stratified sandstones, interspersed with quartz veins, and containing crystals of great beauty, are a predominant geological feature, replaced in the north by extensive tracts of rich alluvial soil, and in the lower hills by laterite. Besides tin, other useful metals, such as lead, iron, copper, and antimony occur in the metalliferous districts of Mergui and Tavoy. Coal of an inferior quality has also been discovered in the lower Tenasserim river basin.

Although rising near the coast, the Tenasserim rivers acquire a considerable development by flowing, not directly to the Bay of Bengal, but in long valleys disposed mainly north and south parallel with the backbone of the country. Thus the Atteran flows north to the Salwin estuary, and the Tavoy winds south for about 120 miles to its mouth opposite Tavoy Island in the Mergui group, while the Tenasserim develops a total length of 300 miles during an erratic course, first north-west parallel with the Tavoy estuary, then south to the town of Tenasserim, and again north-west to its delta at Mergui, opposite King Island. The Tenasserim is navigable for about 100 miles, and the Tavoy estuary affords good anchorage for shipping.

Being exposed, like Arakan, to the full fury of the south-western monsoons, Tenasserim has an extremely moist climate, with a rainfall seldom less than 120 inches in the year, and often exceeding that amount. But notwithstanding this excessive moisture, the climate is not unhealthy on the hills, where the temperature ranges from 70° to 90° F.; even on the plains the glass seldom rises higher than 98° or 100° F.

The uplands are still covered with dense forest growths, chiefly of teak, sapan, ironwood, rattan, bamboo, and several species of gummiferous plants. Lower down the alluvial plains are well suited for the culture of cotton, indigo, tobacco, sugar-cane, rice, and all kinds of tropical fruits. But owing to the scanty population, scarcely fifteen per square mile, very little of the land has been reclaimed, and the primeval jungle still continues to afford a refuge to the elephant, tiger, rhinoceros, wild boar, and large numbers of deer.

The great bulk of the lowland population appears to be of Burmese and Talaing origin, speaking the Burmese language, and practising Buddhist and Jain rites. There is, however, a large intermixture of natives of India, probably not less than 40,000, who are in about equal proportions Mohammedans and Hindus, and who usually speak Bengali. The hills are still occupied by a few scattered aboriginal communities, mainly of Karen stock, conterminous on the east side with the Siamese, and reaching northwards to the kindred tribes in East Pegu and the Karen-*ni* country. Along the coast are met a primitive race of fishers known as Silongs (Selongs), who also occupy most of the Mergui archipelago, encamping during the monsoons on the islands, and at other times living in their boats or on the beach. They appear to be an outlying branch of the Malay race, in the same low state of culture as the Orang-laut or seafaring Malays of the pre-Mohammedan epoch.

Topography.—By far the most valuable part of Tenasserim is the northern division of Amherst, which borders on East Pegu, and comprises the fertile alluvial plain of the Lower Salwin and its delta. Here is situated the formerly important but now much reduced town of *Martaban*, which gives its name to the neighbouring gulf. Facing it on the Salwin estuary lies the present capital, *Maulmain*, a flourishing seaport, sheltered from the south-west monsoons by the adjacent island of Belu, or Belugyun (Bhilu-ghaiwon). The motley Burmese, Indian, Chinese, and European inhabitants of *Maulmain* are mostly engaged in trade, exporting rice, teak, cotton, and other local products in exchange for European and Indian wares. Some thirty miles down the coast lies the little health resort and watering-place of *Amherst*, which gives its name to the northern district of Tenasserim, and affords a refuge to the rich traders of *Maulmain* during the oppressive summer heats.

The only other noteworthy centres of population are the small inland town of *Tenasserim*, on the lower Tenasserim, whence both the river and province take their name, and the small ports of *Meryui*, on the delta of the same river, and *Tavoy* at the head of

The temperature, rainfall, winds, natural phenomena generally, and the diseases, are, for a tropical country, of the most mild and temperate types. The country is visited by the regular monsoons at the ordinary times; the rainfall near the coast ranging from 156 to 101, and averaging 124 inches, and the temperature lying between 67° and 94° F. As might be expected, there are neither typhoons nor earthquakes, the only present indication of volcanic action being a hot spring reported to exist in an islet off the coast.—*North Borneo Herald*, July, 1886.

Flora and Fauna.—Thanks to its position in the midst of a vast sea heated by the tropical sun, the Eastern Archipelago presents almost everywhere the aspect of a forest region overgrown with a rich and varied vegetation, from sea-level to the summits of its highest mountain ranges. This is mainly true of Sumatra, Borneo, the Philippines, the Moluccas, and New Guinea, as well as Java and Célèbes, in all their unreclaimed districts. The chief exceptions are Timor and the Lesser Sunds group, where forest tracts are rather the exception than the rule, a contrast sufficiently explained by the proximity of the Australian mainland, and the hot, dry south-east winds blowing from that region for the greater part of the year.

Another and more striking contrast is that presented by the vegetable forms respectively characteristic of the Asiatic and Australian divisions of the Archipelago. Here all resemblance and analogy cease abruptly, a narrow marine channel being sufficient to separate the two organic worlds in some places, and notably between Bali and Lombok, where the Asiatic sub-marine tableland suddenly ceases.

Nor is the contrast limited to the vegetation, but also extends to the animal kingdom, and even in some respects to man himself. The elephant and tapir of Sumatra and Borneo, the rhinoceros of Borneo, and the allied Javanese species are also found in the neighbouring Asiatic lands, pointing to a time when these great islands still formed part of the continent. These analogies, which extend to birds and insects, may also be traced as far as the Philippines, although here longer isolation has greatly diminished resemblances and intensified divergencies.

But when we pass over to the Australian division all is different, and the contrasts become more marked at every step. Here no elephants, no members of the canine and feline groups, no orangs, gibbons, or other apes, no deer, sheep, or oxen, in a word, no large mammals of any sort; but in their place the lower mammals and marsupials, or pouched animals, of which the kangaroo is typical. Here also the lorie and flying fox, and still more curious ornitho-

the southern districts rainy days occur throughout the year, and in 1879 a rainfall of 282 inches was recorded at Padang.

Flora.—Sumatra being largely alluvial and volcanic, most of the soil is highly fertile, and suited for the growth of most tropical plants. Large tracts, however, are still held by rude tribes, who possess little knowledge of agriculture, depending for their existence nearly altogether on the spontaneous products of nature. The soil on the west side of the island is a stiff, reddish clay, while extensive districts, especially towards the south, are still under primeval forest.

Although still comparatively little known, the researches of Raffles, and more recently of von Rosenberg and H. O. Forbes, show that the Sumatran flora abounds in a great variety of tropical and sub-tropical species, on the whole more allied to those of Borneo than of Java or the mainland. Amongst the most useful are rice, sago, camphor, dammar, gutta, benzoin, dragon's blood, yielded by a species of rattan, bamboos, pepper, and tobacco. Peculiar to this region is the curious *Rafflesia Arnoldii*, discovered by Sir Stamford Raffles, a parasitic plant, with a flower over three feet in diameter, with very large brick-red petals, but possessing neither stem nor leaves, and simply adhering by minute fibres or roots to a species of vine. Other curious plants described by Forbes are a species of *Sambucus*, producing near its florets, little cups full of rich yellow honey, and the giant Arum (*Amorphophallus titanum*), with enormous tubers over six feet round, and forming "a load for twelve men." But, notwithstanding the presence of *Melastomas* and some other beautiful flowering shrubs, the forest vegetation is remarkable rather for its bright green, pink, or scarlet, and autumn-tinted foliage, than for its gay floral adornments.

Fauna.—The Sumatran fauna present far more numerous points of contact with those of the Malay Peninsula and Borneo than with the Javanese. Here are represented all the great mammalian forms of the mainland, such as the elephant, rhinoceros, and tiger, besides the tapir, the Siamang, a large ape found elsewhere only in Malaya, and the Bornean orang-utan; this last confined to the wooded plains opposite Malacca. Of large domestic animals the most valuable is the buffalo, which as live stock takes the place of the European ox. There are several varieties of the monkey tribe, and Sumatra also possesses nearly all the beautiful and remarkable forms of birds common to Malacca and Borneo, besides a few species peculiar to itself. Very characteristic are the lovely Argus pheasant, which here takes the place of the peacock in Java; the *Rhododytes diardi*, a species of cuckoo, with green bill and velvet scarlet eye-wattle; green and black barbets; scarlet Pieridæ, and the Buceros. Butter-

employed in field operations. The Javanese fauna is in other respects mainly Asiatic, including the tiger, panther, leopard, jackal, polecat (*mydaus meliceps*), rhinoceros, wild ox, deer, two species of wild boar, the wau-wau gibbon, and other members of the ape family. But the elephant and tapir are absent, or have long been extinct, if their range ever extended so far south. Of reptiles the most formidable are the crocodile and python, both numerous and of large size, besides upwards of twenty venomous snakes. The ornithology is very rich, including the cassowary, peacock, weaver, two species of parrot, the minute butterfly hawk, falcon, golden oriole, yellow crowned bulbul, fairy blue-bird, jungle-fowl, and many other rare and beautiful species. The rivers also and neighbouring seas are well stocked, and the fisheries along the coasts highly productive. But the rivers' mouths are infested by alligators, and the surrounding waters by still more voracious sharks.

Inhabitants.—All the natives belong to the Malay stock, speaking three distinct but allied languages: *Sundanese* in the west; *Javanese* proper in the central and eastern provinces; *Madurese* in Madura and adjacent parts of the larger island. In physical appearance they present little differences, except that the Javanese are somewhat taller and perhaps more refined than most other branches of the Malay race. All are naturally inoffensive, peaceful, docile, of frugal habits, truthful and straightforward. They bear the impress of a people that has long enjoyed the benefits of a stable government, of social order, and a considerable degree of general culture. Their husbandry is careful and orderly, and they betray much skill and taste as workers in wood, iron, and other metals. Their boats and canoes are unsurpassed for speed and elegance, their krissees of excellent temper and graceful design, their woven fabrics of fine quality, with tasteful patterns and harmoniously blended colours, derived from a few simple vegetable and other dyes. As musicians they have always excelled amongst Malay peoples, with whom, however, they share the love of gambling, of cock-fighting, and some other characteristic vices.

The Javanese language, current in the greater part of the island, is derived directly from the *Āvāṭī*, a highly developed form of Malay speech, of which there are inscriptions and records dating from the twelfth century. It is written in a peculiarly elegant syllabic character, which was introduced in an older form from India, and which has held its ground even after the Hindu religions were supplanted by Islām in the fifteenth century. Since that time the bulk of the people are reputed Mohammedans, although really believers in the primitive animism of their forefathers.

ironwood, cedar, sapan, teak, and many other valuable species, clothing all the slopes to a height of some thousand feet. In general the vegetation from 5000 feet upwards is identical or closely analogous to that of Borneo at the same altitude. Conspicuous amongst the cultivated plants are the sugar-cane, of which over twenty varieties are enumerated, tobacco, rice, hemp, coffee, all of excellent quality and great economic value. The bamboo, especially the so-called *Canayang-laloo* variety, is also of great importance for the endless social and industrial uses to which this indispensable graminaceous plant is put.

Fauna.—The Philippine fauna is remarkable especially for the total absence of rhinoceros, elephant, tiger, tapir, and all the larger animals common to other parts of the Indo-Malayan world. On the other hand, amongst the smaller forms special types are met in constantly increasing numbers. These indigenous varieties are in fact numerous enough to impart a peculiar stamp to the local fauna (*Jordana y Morera*). Thus the presence of many mammals akin to those of the adjacent lands shows that the isolation of the Archipelago cannot date from extremely remote geological times, while the absence of others of the same group may be due to the devastations caused by the tremendous volcanic and seismic convulsions, as well as by the subsidence and upheavals, of which these islands have always been a chief centre.

Characteristic animals are the *macacus cynomolgus*, a species of ape spread over the whole group, a small panther, confined to Palawan, a wild cat, a mouse-deer, and flying mammals, which are exceptionally numerous, including a squirrel, a lemur, and over twenty species of bats. Many kinds of birds common to other parts of Malaya are also wanting, and partly replaced by a large variety of parrots and pigeons, besides cockatoos and mound-builders. The reptile class includes crocodiles, lizards, an enormous python over 40 feet in length, and many other snakes. "Some of the butterflies are remarkable for their intense and variable metallic gloss, and the Philippines are celebrated above all other eastern countries for the variety and beauty of their land-shells, of which there are about 400 distinct species, of varied form, and often of exquisitely delicate colouration" (*Wallace*).

Inhabitants.—Excluding the already described few surviving *Aetas*, or Negrito aborigines (see p. 120), the whole of the native population belongs fundamentally to the Malay stock, which, however, here presents a far greater variety of type and speech than in any other Malay region proper. Besides the larger nations, such as the *Tagalas* of Luzon and Mindoro, the *Bisayans* widely diffused throughout the central islands, the *Bicol*s of South Luzon and *Maabate*, the *Mandayas* and *Manobos* of Mindanao, there are many

uplands and the sea. These plains are in some places covered with dense primeval forest, and elsewhere overgrown with herbs and grass, affording excellent pasture for horses and cattle. (Temminck.)

Rivers and Lakes.—Owing to its fragmentary character, Célèbes affords no space for the development of great rivers. The largest is the Sadang, which enters Mandhar Bay on the west coast, after a southerly course of 160 miles: but the most useful for navigation is the Chinrana, accessible for good-sized native craft to the large Lake Luboya, some 20 miles from its mouth on the west side of the Gulf of Boni. Besides the Luboya, there are several other lacustrine basins of considerable size in every part of the island, Célèbes in this respect resembling Sumatra and the Philippines. Tondano in Minahassa, and Limbotto in the Gorongtalo district farther west, send their overflow to the Célèbes Sea and Gulf of Tomini respectively, and most of the lakes stand at a considerable elevation in the midst of wild and romantic scenery.

Climate.—Notwithstanding its equatorial position, Célèbes enjoys a relatively cool and healthy climate, thanks partly to the high relief of the land, partly to the sea-breezes, by which the tropical heats are everywhere tempered. But for the violent earthquakes and volcanic eruptions of the northern peninsula, this island would be in every respect one of the most favoured regions in the world.

Minerals.—Iron, salt, and gold are found in abundance, the latter being widely disseminated throughout the northern districts, and more extensively exported than from any other island except Borneo. Tin and copper also occur, and mines of both are worked in several places. But although the carboniferous strata are well developed, they have hitherto yielded nothing but coal of poor quality.

Flora and Fauna. The chief vegetable products are maize, rice, cassava, tobacco, coffee, yams, sugar, and sago, while the forests contain a great variety of valuable trees, from one of which the well-known badean or Macassar oil is extracted. Other useful species are the oak, teak, cedar, ebony, sandalwood, pepper, betel, areca, besides the clove and nutmeg, which grow wild, and the *upas* or "poison" tree, and bamboos in great abundance.

The Célèbes fauna differs from those of Borneo and Java in the absence of tailed monkeys, feline and canine animals, insectivora, the elephant, tapir, and rhinoceros. They are replaced by a large black tailless baboon, two kinds of cuscus (an opossum-like marsupial), two rats, five squirrels, and the already-described babirusa and sapi-utan, altogether peculiar to this