continuation of one of the ranges of northern Siam, which, extending still farther southward, ultimately forms the backbone of the Malay Peninsula. Its ridge is the boundary between central Siam and Burma. The highest peak hereabouts is Mogadok, 5000 ft., close to the border. On the E. the Dorn Pia Fai throws up a point over 4000 ft., and the south-eastern range which divides the narrow, littoral, Chantabun and Krat districts from Cambodia, has the Chemao, Saidao and Kmoch heights, between 3000 and 5000 ft. The Meklong river, which drains the western parts of central Siam, rises in the western border range, follows a course a little E. of S., and runs into the sea at the western corner of the inner gulf, some 200 m. distant from its source. It is a rapid, shallow stream, subject to sudden rises, and navigable for small boats only. The Bang Pakong river rises among the Wattana hills on the eastern border, between the Battambong province of Cambodia and Siam. It flows N., then W., then S., describing a semicircle through the fertile district of Pachim, and falls into the sea at the north-east corner of the inner gulf. The whole course of this river is about 100m. long; its current is sluggish, but that of its chief tributary, the Nakhon Nayok river, is rapid. The Bang Pakong is navi­gable for steamers of small draught for about 30 m. The Menam Chao Phaya, the principal river of Siam, flows from the point where it is formed by the junction of the rivers of northern Siam almost due S. for 154 m., when it empties itself into the inner gulf about midway between the Meklong and Bang Pakong mouths. In the neighbourhood of Chainat, 40 m. below Paknam Poh, it throws off three branches, the Suphan river and the Menam Noi on the right, and the Lopburi river on the left bank. The latter two rejoin the parent stream at points considerably lower down, but the Suphan river remains distinct, and has an outlet of its own to the sea. At a point a little more than half­way down its course, the Menam Chao Phaya receives the waters of its only tributary, the Nam Sak, a good-sized stream which rises in the east of northern Siam and waters the most easterly part (the Pechabun valley) of that section of the country. The whole course of the Menam Chao Phaya lies through a perfectly flat country. It is deep, fairly rapid, subject to a regular rise and flood every autumn, but not to sudden freshets, and is affected by the tide 50 m. inland. For 20 m. it is navigable for vessels of over 1000 tons, and were it not for the enormous sand bar which lies across the mouth, ships of almost any size could lie at the port of Bangkok about that distance from the sea (see Bangkok). Vessels up to 300 tons and 12 ft. draught can ascend the river 50 m. and more, and beyond that point large river-boats and deep-draught launches can navigate for many miles. The river is always charged with a great quantity of silt which during flood season is deposited over the surrounding plain to the great enhancement of its fertility. There is prac­tically no forest growth in central Siam, except on the slopes of the hills which bound this section. The rest is open rice-land, alternating with great stretches of grass, reed jungle and bamboo scrub, much of which is under water for quite three months of the year.

Southern Siam, which has an area of about 20,000 sq. m., consists of that part of the Malay Peninsula which belongs to the Siamese kingdom. It extends from 10° N. southwards to 6° 35' N. on the west coast of the peninsula, and to 6° 25' N. on the east coast, between which points stretches the frontier of British Malaya. It is a strip of land narrow at the north end and widening out towards the south, consisting roughly of the continuation of the mountain range which bounds central Siam on the W., though the range appears in certain parts as no more than a chain of hillocks. The inhabitable part of the land consists of the lower slopes of the range with the valleys and small alluvial plains which lie between its spurs. The remainder is covered for the most part with dense forest containing several kinds of valuable timber. The coast both east and west is much indented, and is studded with islands. The rivers are small and shallow. The highest mountain is Kao Luang, an almost isolated projection over 50∞ ft. high, round the base of which lie the most fertile lands of this section, and near which are situated the towns of Bandon, Nakhon Sri Tammarat (Lakhon) and Patalung, as well as many villages.

*Geology@@1—*Very little is known of the geology of Siam. It appears to be composed chiefly of Palaeozoic rocks, concealed, in the plains, by Quaternary, and possibly Tertiary, deposits. Near Luang Prabang, just beyond the border, in French territory, limestones with *Productus* and *Schwagerina,* like the Productus limestone of the Indian Salt Range, have been found; also red clays and grau- wacke with plants similar to those of the Raniganj beds; and violet clays with *Dicynodon,* supposed to be the equivalents of the Panche senes of India. All these beds strike from north-east to south-west and must enter the northern part of Siam. Farther south, at Vien- Tiane, the Mekong passes through a gorge cut in sandstone, arkose and schists with a similar strike; while at Lakhon there are steeply inclined limestones which strike north-west.

*Climate.—*Although enervating, the climate of Siam, as is natural from the position of the country, is not one of extremes. The wet season—May to October—corresponds with the prevalence of the south-west monsoon in the Bay of Bengal. The full force of the monsoon is, however, broken by the western frontier hills; and while the rainfall at Mergui is over 180, and at Moulmcin 240 in., that of Bangkok seldom exceeds 54, and Chiengmai records an average of about 42 in. Puket and Chantabun, being both on a lee shore, in this season experience rough weather and a heavy rainfall; the latter, being farther from the equator, is the worse off in this respect. At this period the temperature is generally moderate, 65° to 75° F. at night and 75° to 85° by day; but breaks in the rains occur which are hot and steamy. The cool season begins with the commencement of the north-east monsoon in the China Sea in November. While Siam enjoys a dry climate with cool nights (the thermometer at night often falling to 40°—50° F., and seldom being over 90° in the shade by day), the eastern coast of the Malay Penin­sula receives the full force of the north-easterly gales from the sea. This lasts into February, when the northerly current begins to lose strength, and the gradual heating of the land produces local sea breezes from the gulf along the coast-line. Inland, the thermometer rises during the day to over 100° F., but the extreme continental heats of India are not known. The comparative humidity of the atmosphere, however, makes the climate trying for Europeans.

*Flora.—*In its flora and fauna Siam combines the forms of Burma and the Shan States with those of Malaya, farther south, and of Cambodia to the south-east. The coast region is characterized by mangroves, *Pandanus,* rattans, and similar palms with long flexible stems, and the middle region by the great rice-fields, the coco-nut and areca palms, and the usual tropical plants of culture. In the temperate uplands of the interior, as about Luang Prabang, Hima­layan and Japanese species occur—oaks, pines, chestnuts, peach and great apple trees, raspberries, honeysuckle, vines, saxifrages, *Cichoraceae,* anemones and *Violaceae;* there are many valuable timber trees—teak, sappan, eagle-wood, wood-oil *(Hopea),* and other *Dipterocarpaceae, Cedrelaceae, Pterocarpaceae, Xylia,* iron­wood and other dye-woods and resinous trees, these last forming in many districts a large proportion of the more open forests, with an undergrowth of bamboo. The teak tree grows all over the hill districts north of latitude 15°, but seems to attain its best develop­ment on the west, and on the east does not appear to be found south of 17°. Most of the so-called Burma teak exported from Moulmein is floated down from Siamese territory. Among other valuable forest products are thingan wood (*Hopea odorata),* largely used for boat-building; damar oil, taken throughout Indo-China from the *Dipterccarpus levis;* agilla wood, sapan, rosewood, iron­wood, ebony, rattan. Among the chief productions of the plains are rice (the staple export of the country); pepper (chiefly from Chantabun); sirih, sago, sugar-cane, coco-nut and betel, Palmyra or sugar and attap palms; many forms of banana and other fruit, such as durian, orange-pommelo, guava, bread-fruit, mango, jack fruit, pine-apple, custard-apple and mangosteen.

*Fauna.—*Few countries are so well stocked with big game as is Siam. Chief of animals is the elephant, which roams wild in large numbers, and is extensively caught and tamed by the people for transport. The tiger, leopard, fishing-cat, leopard-cat, and other species of wild-cat, as well as the honey-bear, large sloth-bear, and one- and two-horned rhinoceros, occur. Among the great wild cattle are the formidable gaur, or seladang, the banting, and the water-buffalo. The goat antelope is found, and several varieties of deer. Wild pig, several species of rats, and many bats—one of the commonest being the flying-fox, and many species of monkey— especially the gibbon—are also met with. Of snakes, 56 species are known, but only 12 are poisonous, and of these 4 are sea-snakes. The waters of Siam are particularly rich in fish. The crocodile is common in many of the rivers and estuaries of Siam, and there are many lizards. The country is rich in birds, a large number of which appear to be common to Burma and Cambodia.

@@@1 See E. Joubert in F. Garnier, *Voyage d'exploration en Indo­Chine* (Paris, 1873), vol. ii. ; Counillon, *Documents pour servir à l'étude géologique des environs de Luang Prabang (Cochinchine), Comptes rendus* (1896), cxxiii. 1330-1333.