streams, but gives them a more steady and uniform cur­rent, than where the torrent rolls immediately from the mountains. Those rivers on the eastern shore are the Siak, Indragiri, Jambi, and Palembang. They convey *a* large body of water into the ocean. They labour however under this inconvenience, that, owing to the continual action of the heavy surf from the great Indian Ocean, which is more powerful than the ordinary force of the stream, a bank of sand is thrown up at their mouths, which diverts their course to a direction parallel with the shore, till the accumulated waters at length force their way wherever there is least re­sistance. In the dry season, which is that of the southerly monsoon, the parallel course of the rivers is of the greatest extent ; but during the rainy season, being in flood, they, by the greater force of their current, break through all ob­structions, and recover their natural channel. The rivers on the western shores are Kataun, Indrapura, Tabuyong, and Sinkel, which, though not so large as those on the east­ern shore, are still considerable streams.

The diversified surface of Sumatra gives rise to a consi­derable variety of climate; but it is remarkable, that on the sea-level near the shore the heats are more moderate than in other countries within the tropics. At the most sultry hour in the afternoon the thermometer fluctuates between 82 and 85 degrees: Marsden, whose work contains the full­est information concerning this island, mentions that he never saw it higher than 86 in the shade, and at sun-rise it is usually as low as 70. Inland, as the country ascends, the heat decreases rapidly, so that beyond the first range of hills the inhabitants find it expedient to light fires in the morning, and to continue them till the day advances. Frost, snow, and hail are unknown to the inhabitants in any quarter. The hill-country is liable to a fog, which is dense to a surprising degree ; it is observed to rise every morn­ing among the distant hills ; the extremities of it when near at hand are perfectly defined ; and it is seldom observ­ed to disperse till about three hours after sun-set. The island is subject to the monsoons. Southward of the equi­noctial, the south-east monsoon, or dry season, begins about May, and abates in September ; the north-west monsoon begins about November, and the hard rains cease about March. For one half of the year the island is deluged with almost constant rains. Besides the monsoons, which vary every six months, there is a daily variation in the winds, which blow from the sea to the land during so many hours of each day, and during the night in the opposite direction, from the land to the sea, excepting only when the monsoon rages with remarkable violence ; and even, says Marsden, “ at such times the wind rarely fails to in­cline a few points, in compliance with the subordinate cause, which has not power, in these circumstances, to pro­duce an entire change.” On the west coast of Sumatra, the period of the setting in of the sea-breeze is about ten in the morning, after an hour or two of calm ; and it con­tinues till near six in the evening. The commencement of the land-breeze is about seven in the evening, when it pre­vails during the night, and dies away about eight in the morning. The land-wind in Sumatra is cold, chilly, and damp ; an exposure to it is consequently dangerous to health, and sleeping in it is almost certain death. Thunder and lightning prevail in Sumatra in all their terrific grandeur, especially during the north-west monsoon, when the ex­plosions are extremely violent : the forked lightning is seen in all directions, and the sky seems on fire, while the ground appears to tremble. The island is unfortunately subject to earthquakes, which often prove most destructive. Sir Stamford Raffles mentions, that a day previous to his

arrival, a violent earthquake had occurred, which had nearly destroyed every building in the place. The shocks were experienced at intervals for several weeks. But the most violent of them happened on the 18th March 1818, during the night, and was truly awful. Every building in the town of Bencoolen suffered more or less ; some were laid in ruins, and others so shattered that it was found scarcely worth while to repair them. The house which was occu­pied by Sir Stamford he describes as being rent from top to bottom, the cornices broken, and every thing unhinged. These earthquakes are said to occur every five or six years. An earthquake occurred in 1797, which continued for three minutes with vibratory shocks. At Padatang the houses were almost entirely destroyed ; about 300 lives were lost ; some were crushed under the ruins of falling houses, some were swallowed up by the earth opening and closing over them, and others were drowned by the sudden irruption of the waters of the ocean.@@1

The soil has been celebrated for its fertility ; but, ac­cording to Marsden,@@2 it is rather sterile than rich. It is generally a stiff, reddish clay, covered with a stratum or layer of black mould, of no considerable depth, and burn­ed to the state of a brick where it is exposed to the influ­ence of the sun. From this there springs a strong and perpetual verdure of rank grass, brushwood, or timber trees, according as the country has remained for a longer or shorter period uncultivated ; and this forest or jungle, as there is but a scanty population, affords abundant cover for wild beasts of the most ferocious kind, by which the country is infested. “ There is nothing,” says Sir S. Raffles, “ more striking than the grandeur of the vegetation ; the magnitude of the flowers, creepers, and trees, contrast strikingly with the stinted, and I had almost said pigmy, vegetation in England. Compared with the forest-trees of these tropical regions, your largest oak is a mere dwarf. Here we have creepers and vines entwining larger trees, and hanging suspended for more than 100 feet, in girth not less than a man’s body, and many much thicker ; the trees seldom under 100, and generally approaching 160 to 200 feet in height. One tree that we measured was, in circumference, nine yards, and this is nothing to one I measured in Java.”@@3 The most important article of cultivation is rice, of which there are many different species, which may be ranged under two kinds, namely, the upland rice, which grows on the high and dry grounds, and the lowland or marshy rice, which grows in the low and marshy grounds. The cocoa-nut tree may also be esteemed an important object of cultivation ; it serves as an article of food, and is in universal consumption, being an ingredient in most of the dishes, and the oil being employed as an article for anointing the hair, and for burn­ing in lamps. There are also large plantations of the betel­nut tree and the bamboo. The latter, growing thick into an impenetrable mass, is used in the fortification of villages. The sago tree also flourishes, and there is a great variety of palms. The sugar-cane is cultivated, but such is the indolence or ignorance of the inhabitants, that all the su­gar which they require is imported from Java; all the use they make of the sugar-cane is to chew it. Maize, Chili pep­per, turmeric, ginger, coriander and cummin seed, are raised in the gardens of the natives. Pepper is an important arti­cle of cultivation. The plant appears to flourish in any of the different soils that are found in this island, and it is a great article of commerce. The pepper plants, which are in even rows, running parallel and at right angles with each other, present a fine contrast to the wild scenes of nature which surround them. The camphire tree, which grows in the northern parts of the island, is valued for its juice,

@@@, Memoir of the Life and Public Services of Sir Stamford Raffles, p. 294.

@@@\* Marsden's History of Sumatra, p. 68.

@@@\* Memoir of the Life and Public Services of Sir Stamford Raffles, p. 317.