the core of the island consists of crystalline rocks ; but in the west there are shales, conglomerates, and sandstones ; and all round the island the valleys are filled with alluvial deposits on a much more extensive scale than might be looked for where none of the streams have a course of more than six miles, or attain to any considerable size except after heavy rains (see details in J. R. Logan’s “ Local and Relative Geology of Singapore,” in *Jour. Beng. Asi. Soc.,* vol. xvi., and “ The Geology of the Straits of Singa­pore,” in *Lond. Geol. Jour.,* 1851, vol. vii.). The south­western shores are fringed with coral reefs, and living coral fields are found in many parts of the strait. Being chiefly composed of red clays and laterite, the soil is not generally rich, and requires careful and liberal husbandry to make it really productive. When it was first occupied by the English the whole island was covered with forest and jungle ; and, although this was largely cleared off sub­sequent to 1837, when a mania for nutmeg plantations set in, the moisture and warmth of the climate have kept it clothed with luxuriant and perpetual verdure, in which palms, ferns, and orchids are conspicuous forms. “Near the shore, by the mouths of creeks, are grouped quaint dwellings of fishermen, built of wood or palm leaf standing on piles over the water. In the smooth sandy bays cocoa- nut palms shelter picturesque Malay houses. More inland we find groves of fruit trees, small patches of sugar-cane, Chinese gardens, tapioca and indigo fields. Neat bunga­lows—the residences of officials, merchants, and rich Chinese and Arabs—diversify the scene, particularly in the vicinity of the town. In the remote parts of the island more especially there are waste spaces which were formerly gambier plantations and are now covered with coarse lalang grass ” (Governor Wild). The nutmeg trees which had for twenty years been a main source of wealth were blighted in 1860; the plantations were completely given up ; and, though many of the abandoned trees recovered and nutmegs can still be gathered in Singapore, they have never again been cultivated. Cotton-planting was next tried, but without success, and though cinnamon grows well the labour necessary for its cultivation and manu­facture is too expensive. Gutta percha, originally intro­duced to England from Singapore, was so much run upon that all the trees of that kind in the island were exter­minated. Gambier and pepper, both at one time largely grown, have for many years been of little account. Liberian coffee, pine-apples, cocoa-nuts, and aloes are now the most important objects of cultivation. Quite recently districts have been enclosed for reforestation and the eucalyptus and other trees have been planted. Almost all kinds of fruits do well in the island,—the custard-apple, pine-apple, sour-sop, lime, orange, and plantain being in season nearly all the year, and the durian, blimbing, duku, langsat, man- gosteen, rambutan, tarrup, tampang, &c., in July and August and also for all or some of the months between November and February. The botanical and zoological gardens at Singapore, connected with the Agri-Horticul- tural Society, have been devoted to the introduction of economic plants, such as China and Assam tea, salt-bush or *Rhagodia,* which forms excellent fodder, &c.

In climate Singapore is wonderfully fortunate for a country within one degree of the equator. There is hardly any seasonal change, and the annual range of temperature is generally only from 70° to 90°. “The nights especially are very cool and refreshing, and enable people to sleep without difficulty.” The atmosphere is almost uniformly serene, and the face of the ocean is only disturbed by the swell of distant tempests in the China Sea or the Bay of Bengal. The north-east monsoon is the master wind from Novem­ber to April, but is generally neither persistent nor powerful, and the south-west monsoon is even less regular in its action. The southerly winds in May and June known as Java winds have very much the character of land and sea breezes, but are considered very enervating in spite of the pleasant feeling of freshness which they

at first produce. Rapid squalls (sumatras) also occur during the south-west monsoon and beneficially clear the air. Instead of periodical rains there are (on a sixteen years’ average) 167 wet days distributed throughout the year. The annual rainfall is 92∙27 inches ; 1885, a very dry year, showed only 69 inches, according to Dr Rowell’s report. The mean maximum temperature in the shade is 86°∙7, the mean minimum in the shade 73°. The highest temperature observed during the sixteen years was 94° in April 1878, and the lowest 65° in February 1874. Most of the domestic animals of Europe have been introduced, but not in great numbers. Deer, wild hogs, sloths, monkeys, and squirrels are the more note­worthy mammals ; and tigers, which formerly committed serious depredations among the natives, still occasionally find their way across the strait from the mainland. When the first census was taken in 1824 the settlement of Singapore was found to contain 10,603 inhabitants, and by 1850 this number had increased to nearly 60,000. The following figures show the more important components of the population in 1860, 1871, and 1881,—the totals for those years being 80,792, 97,111, and 139,208 respectively :—

|  |  |  |  |
| --- | --- | --- | --- |
|  | I860. | 1871. | 1881. |
| Europeans and Eurasians. | 2,445 | 3,207 | 2,769 |
| Malays | 10,888 | 19.250 | 22,155 |
| Klings, &c | 10,241 | 12,058 |
| Chinese | 50,043 | 54,098 | 86,766 |
| Javanese | 3,408 | 3,239 | 5,881 |

The total is estimated to be now well over 150,000. The pre­ponderance and rapid increase of the Chinese is a most striking feature, mainly due, however, to a steady stream of immigration. The death-rate in Singapore is very much higher than the birth­rate—4473 being the average number of deaths in 1881-83 against 1919 births. This is largely to be ascribed to the paucity of women —33,785 females to 105,423 males in 1881. In the small number of Europeans proper—1283—there are nineteen nationalities re­presented.

The only town in the settlement is the city of Singapore, the general capital of the Straits Settlements. It lies on the south side of the island in 1° 16' N. lat. and 103° 53' E. long., a bright, picturesque, prosperous, and progressive place, with a sea-frontage extending for about 6 miles from New Harbour north-east to the Rochore and Kallang suburbs. Under the control of its munici­pality, which has a yearly revenue of more than 300,000 dollars, a great variety of improvements have been effected—the river dredged and deepened, foreshores reclaimed, bridges built, trees planted, and public buildings erected—within the last six or seven years. The principal churches, the court-house, and the European quarters generally are situated on the north side of the river, while on the south side extend the warehouses and shops of the European and Chinese traders. On Peel Hill, 170 feet high, stands a citadel ; and on Government Hill is the Government house—a palatial residence in park-like grounds. The cosmopolitan character of the popula­tion gives great brightness of colour to the crowded streets and is reflected in the architectural peculiarities of the native quarters —where Mohammedan mosques, Chinese joss-houses, and Hindu temples are equally at home. Among the more important European edifices are St Andrew’s cathedral (first consecrated in 1838, present building erected in 1861, became cathedral in 1870), the Roman Catholic cathedral, the supreme court-house, the new post office (1883-84), the new police courts (1884), the European hospital, the jail, the Tanglin barracks, and the Raffles school (dating from 1823). The Raffles public library and museum had 320 subscribers in 1885 and 34,250 visitors, the books issued numbering 16,348. Several English papers, as well as one Chinese and one Malay, are published at Singapore. As a trading-port Singapore has great ad­vantages over and above its position on the Straits. The harbour is safe and has good anchorage, and it can be approached without the assistance of pilots from three directions. New Harbour is the name of the channel which lies between the southern projection of the main island and the small island of Blakan Mati, and is divided by the still smaller island of Ayer Brazi. It is there that the Peninsular and Oriental Steam Navigation Company and the Mes­sageries Maritimes have their docks and depôts. At Tanjong Pagar there are two graving docks,—Victoria Dock having a length of 450 feet, a breadth of 65 feet, and a sill-depth at spring-tides of 20 feet, and the corresponding figures for Albert Dock being 470 feet, 60 feet, and 21 feet. The two New Harbour Docks are respectively 415 and 459 feet long, and 42 and 62 feet broad, and have sill- depths of 14-151/2 and 19-20 feet. At Pulo Brani, Bon Accord Dock has a length of 330 feet, a breadth of 50, and a sill-depth of 17. A large admiralty dock for the use of ships of the British navy is being constructed. Opposite Singapore proper the sea shallows to a few fathoms. The tides (tables of which were first published in 1884) are as yet imperfectly registered, but in general they consist of a principal high-water and low-water succeeded by a secondary high water and low water of the most limited range.