

which cannot probably be cultivated here. On the hills walnuts, chestnuts, and apples flourish, almost without culture. Pine-apples, mangoes, guanas, and bananas, grow almost spontaneously in the town. They have corn which is large-grained and fine, and it might be produced in plenty; but for want of being attended to, all they consume is imported from other countries. Beef, mutton, and pork are remarkably good, and the captain took some of the former on board for his own use.

*Funchiale* (which took its name from *Foncho*, signifying fennel in the Portuguese language) is situate at the bottom of a bay, and though it is extensive in proportion to the rest of the island, it is but poorly built, and the streets are narrow and badly paved. The churches are full of ornaments, with pictures and images of saints; the first are, for the most part, wretchedly executed, and the latter are dressed in laced cloaths. The taste of the convents, especially of the Franciscans, is better; neatness and simplicity being united in most of the designs of the latter. The infirmary also is a piece of good architecture, and one of the most considerable in this place. In this convent is a small chapel, the whole lining of which, both sides and ceiling, is composed of human skulls and thigh bones: the thigh bones are laid across each other, and a skull is placed in each of the four angles. When we visited the good fathers, just before supper-time, they received us with great civility. "We will not ask you," said they, "to supper with us, because we are not prepared, but if you will come to-morrow, though it is a fast-day, we will have a turkey roasted for you." This polite invitation it was not in our power to accept. There are many high hills in this island; Pico Ruivo in particular is near 5100 feet high. To a certain height these hills are covered with vines, above which are numbers of chestnuts and pine trees; and above these again whole forests of various sorts of trees. The Mirmulano and Paobranco which are found among them, are unknown in Europe. The latter of these is very beautiful, and would be a great ornament to our gardens. The number of inhabitants in Madeira are computed to amount to about eighty thousand; and the custom-house duties produce to the king of Portugal a revenue of 20,000*l.* a year, clear of all expences. But the balance of trade is against the people; for all their money going to Lisbon, the currency of the island is in Spanish. This coin consisteth of piteireens, worth about a shilling; bits about sixpence, and half bits worth about three-pence.

On the 19th of September the Endeavour sailed from Madeira, and on the 21st we saw the islands called the Salvages, northward of the Canaries. The principal of these was about five leagues to the south half west. On the 23d the Peak of Teneriffe bore west by south half south. Its appearance at sun set was very striking; for when most part of the island appeared of a deep black, the mountain still reflected rays, and glowed with a warmth of colour which no painting can express. There is no eruption of visible fire, but a heat issues from the chinks near the top, too strong to be borne by the hand when held near them. The height of this mountain is 15,396 feet, which is but one hundred and forty-eight yards less than three miles.

On the 30th we saw Bona Vista, one of the Cape de Verd islands, in latitude 16 deg. north, and longitude 21 deg. 51 min. west. In our course to Teneriffe, we observed numbers of flying fish, which appeared very beautiful, their sides resembling burnished silver.

On the 7th of October Mr. Banks went out in a boat, and caught what our sailors call a Portuguese man of war; together with several shell fishes, or testaceous animals, which are always found floating upon the water; and on the 25th this gentleman shot a black-toed gull, not described by Linnaeus, and whose dung is of a red colour. We had now variable winds, with some showers of rain, and the air was so damp as to damage our utensils considerably.

On the 25th we crossed the line with the usual ceremonies; and on the 28th when the ship was in the la-

titude of Ferdinand Noronha, longitude 32 deg. 5 min. west, we began to look out for the island, and for the shoals which are laid down as lying between it and the main; but neither the island nor shoals could be discovered. On the 29th we perceived that luminous appearance of the sea mentioned by navigators, which emitted rays like those of lightning. As Mr. Banks and Dr. Solander were not thoroughly satisfied with any of the causes hitherto assigned for this phenomenon, and supposing it was occasioned by some luminous animals, they threw out a casting net, in order to try by experiment whether they were right in their conjectures. A species of the *Medusa* was taken, which bore some resemblance to metalline substance greatly heated, and emitted a whitish light; they caught also some crabs which glittered very much; animals which had not before been taken notice of by the curious researchers into the secrets of nature.

As provisions by this time began to grow short, we resolved to put into the harbour of Rio de Janeiro; and on the 8th of November we saw the coast of Brazil. Upon speaking with the crew of a Portuguese fishing boat, we were informed by them, that the land which we saw was to the south of Santo Espirito. Mr. Banks, having bought of these people some fish, was surprized, that they required English shillings: he gave them two which he happened to have about him; for he imagined Spanish silver to have been the only currency, and it was not without some dispute that they took the rest of the money in piteireens. The fresh fish which was bought for about nineteen shillings, served the whole ship's company. We stood off and on along shore till the 12th, having in view successively Cape Thomas and an island just without Cape Frio, and then made sail for Rio de Janeiro on the 13th in the morning. Capt. Cook sent his first lieutenant in the pinnace before to the city, to inform the governor, that we had put into that port in order to procure refreshments, and a pilot to bring us into proper anchoring ground. The pinnace returned, but the lieutenant had been detained by the viceroy, till the captain should come on shore. When the ship had come to an anchor, a canoe loaded with soldiers approached, and rowed round her, but no conversation took place. Afterwards another boat appeared, which had several of the viceroys officers on board. They enquired from whence the Endeavour came? what was her cargo? what number of men and guns she carried? and to what port she was bound? which questions having been punctually and truly answered, the Portuguese officers apologized for having detained the lieutenant, and pleaded the custom of the place in excuse for their behaviour.

On the 14th Captain Cook went on shore, and obtained leave to furnish the ship with provisions; but this permission was clogged with the conditions of employing an inhabitant as a factor, and of sending a soldier in the Endeavour's boat every time she came from shore to the vessel. To these uncivil terms the Captain made many objections; but the viceroy was determined to insist on them, neither would he permit Mr. Banks and Dr. Solander to remain on shore, nor suffer the former to go up the country to collect plants. Captain Cook conceiving from these and other marks of jealousy, that the viceroy thought they were come to trade, used all his endeavours to convince him of the contrary; and acquainted him, that they were bound to the South Seas, to observe the transit of Venus over the disk of the sun, an object of great consequence to the improvement of navigation; but the viceroy by his answer seemed to be entirely ignorant of this phenomenon. An officer was now appointed to attend the captain, which order he was desired to understand as an intended compliment: however, when he would have declined such a ceremony, the viceroy very politely forced it upon him.

Dr. Solander and Mr. Banks were not a little chagrined on hearing that they would not be permitted to reside on shore, and still more so when they understood, that they were not even allowed to quit the ship: for the