that bounds the river, about eight miles above our last night's station, where I hope to procure a couple of canoes to proceed up the river, as far as my means will permit.

The river here expands to three miles in width; the banks have in some places low strips of soil and sand, with cliffs of clay slate, large masses of which are also scattered in the river, but do not in the least impede its navigation. In other parts low hills of gentle descent come down to the margin of the river; their summits clay, entirely bare of trees. Here we also found considerable masses of fine blue limestone; and a quantity of chalk was brought to us by one of the natives, which we were told was procured from hills on the opposite side of the river.

The population is here more considerable than what we have seen lower down. The gentlemen's towns forming a continued chain of buildings from the spot where we landed. Provisions seem to be also more plentiful. Several goats, pigs and fowls, with manioc, ground-nuts, and peas, having been brought to us for sale, as were also mats.

Amongst the croud that surrounded our tent, two or three of the foomoos or gentlemen only had any European clothes. The women were here the most horribly dirty looking wretches that can be conceived; equalling the New Hollanders in filth, and nothing superior to them except in the

mere article of covering their nakedness. The huts were still of the same formation as below. The palm trees were more abundant. Fish very plentiful, and of several species unknown, excepting that one was a small bream; they take them with pots, having neither nets, hooks, nor lines.

The great encrease in the number of Paria dogs denotes an encreased stock of provisions; though it would appear, from their being half starved, like those of an Indian bazar, that they were not well fed: they never bark, but howl like a jackal; they have pricked ears.

Sept. 5 I discovered to-day that the Inga men were determined to stay here for my return, being, as they asserted, afraid to go back themselves.

Finding it impossible to get canoes without the interference of the Chenoo of Yonga, I sent forwards one of the black men (the guide of Inga,) with a piece of chintz, as a present to be divided among his great men. Having given to the interpreter and to my other Embomma man a dress of chintz each, they amused us by performing Songa, which is a kind of war dance, and a hunting dance, a pantomime, and a love dance. In the war dance, the performer, with a sword, looks about from side to side as if expecting the enemy; at last he sees them, flourishes his sword half a dozen times towards the quarter in which they are sup-

posed to appear; advances; his eyes glowing fire; returns triumphant; while the spectators are clapping their hands and striking their breasts in turns; he then squatted down.

The only presents made by Europeans concerned in the slave trade, were brandy, musquets, and powder, all promoters of civilization and encouragers of population.

A foomoo waited on me with a present of a goat, for which I gave two fathoms of chintz and a necklace, and he promised to procure me two canoes at day-light the following morning.

Dr. Smith made an excursion along the bank of the river to the northward, limestone and clay slate alternating.

The women braid their hair, and in this state it looks well; but when the braiding is undone, horridly frightful, like a black mop.

Alligators are so plentiful hereabouts, and so frequently carry off the women, who at daylight go down to the river for water, that while they are filling their calabashes, one of the party is usually employed in throwing large stones into the river outside of them. Here I learn that they have two crops of Indian corn a year.

Several instances have occurred which shew the minute divisions of property: three or four people have usually a share in a goat; and even a fowl is seldom without two

owners. The division of the price usually creates a dispute, if there should happen to be an odd bead.

Sept. 6th. After a constant battle with the natives from daylight, and after using every possible means, by threats, persuasions, and promises, I at last, about two o'clock, got the canoes, which I was to have had at daylight, under way, having first paid eight fathoms, and given a present of two fathoms of chintz each to four different gentlemen.

As the canoes, though promised to carry twenty men each, would barely hold eight, I was obliged to walk along shore with a part of the people. About three miles from the place of departure we passed two small rapids, but the other side of the river was clear.

We came to a bay in which were ten hippopotami; as the canoes could not venture to come on until these huge creatures were dispersed, we were obliged to fire vollies at them from the shore, and although many shot evidently told, not one of the beasts seemed in the least to be affected by them. The noise however, together with the exorcism of our old guide, drove them away.

The river now, for the first time, bore a majestic appearance, having the land on each side moderately elevated, with little hills of lime-stone further back, but still almost without wood.

At six P. M., after having rounded a rocky peninsula, we anchored in a fine bay named Covinda, formed by this and another rocky peninsula a little higher up. The night presented a beautiful picture of repose; fine scenery, the moon, the stillness of the water. Alligators most abundant.

Sept. 7th. The morning set in with light rain. Here we observed the river to have risen three inches in the night, the total or highest rise by the rocks sixteen inches.

Some women brought us a large quantity of lime. Bought a goat for two and a half fathoms of chintz. The people very civil. Set off at eight A.M., rounded the marble peninsula, and opened out beautiful scenery, equal to any thing on the banks of the Thames; the bare stone rock in many places resembled ruined castles over-hanging the river; several fine grassy coves. Purchased a large bunch of plaintains for 1½ fathoms.

The teeth of both men and women were notched thus, The teeth of both men and women were notched thus, Saw a large flock of ducks, the precursors of rain.

Many marble promontories now jutted out on this side, round some of which the current sets three miles and half an hour. As it is necessary to take a long circuit round the bays by land, I hired another canoe where we stopped to dine at one o'clock, for four fathoms, to carry the rest of

the people. We were however tired of this mode of conveyance, the inconvenience of sitting being hostile, besides the tedious rate, the paddles giving three strokes, and then waiting until the canoe had lost her way, so that they did not go two miles an hour, nor had our persuasions any effect in making them get on a bit faster.

During our dinner a boxing match took place between two of the canoe men about a little salt, at which they both handled their fists with much science; and after drubbing each other heartily, the others interfered, and the business being made up, both the combatants performed Songa.

At four, reached one of the rocky promontories, round which the current set so strong, that the canoe men refused to attempt passing it, neither would they cross the river to get out of the current, pretending they were at war with the people on the other side. I was therefore under the necessity of attempting to haul the canoes up the stream by the rocks with our own people; and had succeeded in getting one of them past the obstruction into still water, when, by the neglect of one of the men, the stern of the second canoe stuck fast in the rocks, and the current taking her on the broadside, broke her right in two, and several of the articles that were in her sunk, and others were swept away,

among which were two swivels, my sword, a bundle of umbrellas, and all our cooking utensils, &c.

All was now confusion among the canoe men, who first ran off, and then, after a long delay, came back again, but nothing could induce them to go forward. I was therefore by this unlucky accident obliged to bring back the canoe which I had got up past the rocks; and to hire another to enable us to cross the water; which I effected without any assistance from the canoe men, who could not be prevailed upon to touch a paddle; though, when I landed on the opposite side, I found they were perfect friends with the people of this shore; consequently the story of enemies was nothing more than a pretence of the canoe rascals to go no further. Here I paid them their wages, and we encamped in a beautiful grassy cove, from which both ends of the reach being shut in by land, presented the appearance of a mountain lake. During the night hippopotami were heard in great abundance.

Sept. 8th. In the morning the Zanzy canoe man would neither go up himself with his canoes, nor would he let the people of this side of the river hire me their canoes, until he was paid for the one that was broken, threatening them with war if they afforded me any assistance; and as I had but little merchandize left, I wished to pay him on our

return at Inga. I was however at length, after three hours palavering, obliged to give him a piece and two fathoms, with which he set off; but the canoe men of this side had now gone off, and after three hours more palavering I at last procured six men to carry our baggage by land this day, and until to-morrow night, for which I paid them a piece of check and a bunch of beads. At length we set off at eleven o'clock, and at noon reached Masoondy, where the bearers lived, and where they laid down their loads, and set off to get their dinners; nor could I assemble them again. for two hours. We now passed over a very hilly country, with some fertile spots both on the summits, on the sides, and in the vallies, but the general feature is still that of extreme barenness, and a total want of trees, except in the ravines and round the great towns, which are here very The barren hills are composed of clay slate, lime-stone in different states, with some little quartz; red ochrey hills. Half past three, we reached the river about ten miles from our last night's halting place; the reach running S.S.E. and forming a fine expanse or sheet of water from four to five miles in breadth, free from all rocks, and having a counter-current on this side. The north shore rises gently from the river till it terminates in bare hills; it is lined by a fine sandy beach, behind which,

and at the foot of the rise, is a line of trees. The southern shore is steep and rocky.

Horrible face with the leprosy.

Natives extremely abstemious, a little raw manioc and water and their pipe, for a day: devour all the meat you will give them.

The wind always from the westward, inclining up the reaches, so that there is always either a free or leading wind; and yet the natives have not the least notion of applying sails to their canoes: indeed the wars of neighbouring tribes render the water intercourse as limited as that by land.

Size of their canoes.

Their distribution of time consists of a week of four days, or a sona; the first day of which is named Sona, and on this day they refrain from working in the plantations, under the superstitious notion that the crop would fail; they however perform any other kind of work. The second day is named Candoo, the third Ocoonga, and the fourth Cainga. The month, or Gonda, is thirty days; the year, M'Voo, consists of the rainy and dry season, that is to say several Gondas.

They believe in a good and evil principle, the former they call - - - - and the latter Codian Penba, both supposed to reside in the sky; the former, they say, sends.

them rain, and the latter withdraws it; however, they invoke their favour in the dry season, but it does not seem that they consider them as in any other manner influencing human affairs; nor do they offer them any kind of worship. Their ideas of a future state seem not to admit of any retribution for their conduct in this world; good and bad going equally after death to the sky, where they enjoy a sort of Mahommedan paradise.

Sept. 9th. In the morning some rain. Set off at eight, A. M. through a country more fertile, and having more land prepared for cultivation. The manner of preparing it is first by cutting down the long reedy grass, and placing it in small heaps, which are then covered with a layer of mold, and then set fire to; in the little spots of ashes thus formed, the Indian corn and peas are planted, and the manioc in the unmanured places between them; these ashes are the only kind of manure made use of. They never burn down the long reedy grass until it has shed its seed, so that the next rains bring a stronger crop than before. ————— very soon blossomed, as well as the long reed grass twelve feet high, and the thorny sensitive plant.

Passed some fine lime-stone springs, the first we had seen,

At ten, reached the gentleman's town of Vooky filou, where our bearers had a long palaver for palm wine, which I was obliged to purchase at a high rate before they would stir a step further. Unfortunately I happened to spill some of it at the foot of our gentleman guide, on which he set off in the most violent rage, taking all his men along with him; and I now learned that, next to pointing a musquet, the spilling of palm wine was the grossest insult that could be offered to a gentleman. It was full two hours, and after making an ample apology for my accidental impoliteness, and a present of three bunches of beads, that he deigned to shake hands with me, and call his men back.

The houses here are larger than below.

Two gentlemen with heavy iron chains and rings on their legs and necks.

At two P.M. we reached the head of a deep reachnamed Soondy N'Sanga, running W. by N. and E. by S.; here we stopped to dine. After dinner I wished to proceed, but our bearers refused, asserting that they had already walked two days.

Finding all persuasions useless, I was obliged to pitch the tent at this place, and with Dr. Smith and Lieutenant Hawkey walked to the summit of a hill, where we perceived the river winding again to the S. E. but our view did not extend above three miles of the reach: the water clear of rocks, and, according to the information of all the people, there is no impediment whatever, as far as they know, above this place.

And here we were under the necessity of turning our back on the river, which we did with great regret, but with the consciousness of having done all that we possibly could.

On my return to the tent, I found that the bearers said they would not carry back the luggage unless they got another piece; and I was at last obliged to give to each of the two head men two fathoms of chintz and beads.

Plenty of bees: the natives eat the wild honey when it comes in their way.

The rise of the river was marked at  $3\frac{1}{10}$  inches.

The natives appear to be less civilized as we go on, totally ignorant of the relative value of European goods; exorbitant in their demands.

Employed Peter to buy palm wine and fowls with the beads which I gave him.

Sept. 10th. At eight A.M. set out on our return; our stock, two pieces of baft, two pieces of chintz, a few beads; no brandy, no sugar, nor any thing else.

Dawson taken ill, and reaching the top of the first hill,

was obliged to be carried; got a canoe for him for four fathoms; and put all the baggage into her, though so small; another palaver about sharing the fathoms; at last, after three hours waiting in a burning heat on the beach, (therm. 86°) we got the canoe off with one man besides Dawson. Set off ourselves to return by land to

Went a different road from that we came, through the ravines of barren hills; lost three hours over the only fine place we have seen for an European town, being a plateau of ten miles in extent, descending gradually into a plain of double that size, all fertile. Pine apple plants growing close to the path; which descends gently through a small grove to the river side, at -- -- --, which we reached at -- -- --, and found the canoe but just arrived, having been nearly swamped by her smallness. Here we were therefore obliged to change her for a larger. The gentleman guide was in a great passion at Hawkey for touching his kissey, and also at our people for carrying the fowls with their heads downwards. Gave one umbrella for six fowls, and another for a small goat.

Inhospitality of the fellow with palm wine: obliged to give my handkerchief, baft, beads, &c. Tantalizing state with the palm wine, and not allowed to touch it for half an hour.

Sept. 11th In the morning got two canoes for six fathoms to go down to Yanza, where we had left the Inga men. Half way down we found one of the hippopotami dead, lying on a bank, in a putrid state. The people of this part of the river having been fetished from eating it. At Embomma a good hippopotamus is worth a - - - -; its flesh is sold in the markets.

Here our boatmen wanted to stop, pretending they were unacquainted with the river below. I punished them by carrying them six miles lower down.

The rapids we had before been obliged to haulthe canoes over were now smooth, the river rising about six inches a day. The velocity must be greatly increased in the rainy season, but still the canoes are said to work on it. Total rise as marked by the rocks eleven feet. The clouds charged, and the barometer falling; temperature of the river decreasing; at Condo Yango it was 77°, and now but 74°; the lime stone springs 73°

At one, stopped to procure men to carry our things to Inga, the Inga men having returned thither without waiting for us.

Sept. 12th With great difficulty got a foomoo and four of his boys to go down for two fathoms each, paid before hand, and a canoe to ferry us across the creek to Condo

Yango. A long palaver about a pig detained us till nine o'clock. Discovered that the barometer was stolen. Purchased ten fowls for empty bottles. Found the river so greatly risen that the creeks we had crossed in our way upwards, were now filled, and we were obliged to go high up and cross them on fallen trees.

At noon we dined at the brook Sooloo Looanzaza, and at three encomped at Cainga to wait for Dawson, who was obliged to be supported by two men. I now found that besides the barometer we had lost our silver spoons, great coat, remnant of cloth, &c. In the night we were driven out of the tent by ants.

Sept. 13th. This morning we found that our bearers had gone off during the night, and left us in the lurch. Got a foomoo and four men of Cainga to go on, for two fathoms each; ascended the Mango Enzooma hill, the highest yet passed, covered with fern; and the transition from it between the mica and clay slate.

At eleven reached the brook Looloo: at three got to Keilinga, where we could procure nothing by purchase. Here we found the Mafook of Inga, who informed us that a goat which we were carrying was fetiched at Inga, and that we must not carry it there on any account, dead or alive, or even a bit of its skin; we therefore exchanged it

it for two fowls, which we left for Dawson's use, and pushed on.

At five we arrived at Inga, where the Inga men had reported that one half of us had been drowned in canoes, and the rest killed by black bushmen. Greeted with Izacalla moudela by the people, but greatly shocked on learning the deaths and sickness on board the Congo.

Sep. 14. Sent off Mr. Hawkey with ten men and as many loads of baggage: though ill myself, I intended to proceed; but Dr. Smith and two of our people are too ill to be moved; remained therefore this day, and passed it most miserably.

After dark, the corporal of marines arrived with intelligence of Galwey's death. I passed a miserable and sleepless night, and at day-light mustered the boys with the intention of proceeding; but after paying them two fathoms each, the usual price, they refused to go without receiving three. Gave them three; being very weak myself and wishing to get on before the sun became too hot, I set off with Dr. Smith, leaving Mr. Hawkey behind to bring on the people; at noon he joined me, and from him I learnt that he had a terrible business to get the people off.

Four of the bearers of the sick men ran away and carried off a canteen of brandy and a case of preserved meat: a squabble for salt. Could not get a single fowl for eight

bunches of beads. Terrible march; worse to us than the retreat from Moscow.

Arrived at Cooloo at five P. M. Hospitality of these people. Got a goat from the Chenoo, fowls and eggs; all ran cheerfully to assist us; brought us grass for our beds; water; wood for our fire.

At dark Dawson arrived; Inga men left him on the return of the people. Butler did not come in. Passed a good night; it rained hard, but the tent kept it out.

Sept. 15. At day-light sent two men to wait for Butler. Dr. Smith very ill; Dawson better.

Having arranged every thing for the men, I set off at eight, A.M. leaving Mr. Hawkey to bring up the sick. Reached the river at eleven. Thank God for his great mercies in bringing me on thus far!

Found no canoes; waited till two o'clock, when I learnt that the Chenoo of Bibbi, in whose district the landing place is, had forbidden his people to furnish any more canoes; according to some, on account of the commanding officer on board the Congo having ill treated one of the canoe men, who went down with the sick; while others said it was because he was not paid his customs for using his landing place; and I was told I must send my interpreter to him with a present before any canoes would be given. As I knew this

would occupy the whole of the next day in palavering, and as Dr. Smith, Dawson, and Butler, were so very ill, that an hours delay in reaching the ship might prove fatal, I seized all the canoes, and a foomoo.

Sept. 16. Unable at day-light to procure any canoe men, I set off with our own people, and at 3 P.M. reached the Congo.

Terrible report of the state on board : coffins. - - - -

Sept. 17. At day-light sent off all the sick in double boats, as well as the people who had been up with me, to the transport; hired fifteen black men to assist in taking the Congo down the river below Fetish rocks. The river bordered by a level plain, four miles deep, to hills of little elevation. Good place for a settlement

Mangroves commence at the east end of Tall Trees island.

Muddiness of water and red colour begins at the - - - - land, which latter is a bar of sand covered with clay, and under water when the river is at its heighth.

Extraordinary quiet rise of the river shews it, I think, to issue chiefly from some lake, which had received almost the whole of its water from the north of the line.

Commencement of its rise was first observed above Yellala, on the 1st of September; on the 17th of September, at Tall Trees it had risen seven feet, but the velocity was not at all encreased. Hypothesis confirmed. The water -----

Mistaken idea of anchoring ships out of the current for any length of time; the current always creating a current of air.

Palm wine in the dry season only. Palm trees, when two years old, begin to give out wine.

Sept. 18 Reached the transport; found her people all in health; her decks crowded with goats, fowls, pigeons, pumpkins, plantains, flaskets of palm wine; in short, the greatest appearance of abundance.

The difference of atmosphere perceptible between this place and Embomma. Fresh sea breezes.

Mangrove trees fit for?

No fish but cat-fish. Few hippopotami below Yellala.

Quartz sand in vast quantities on the banks of the river; must come from a great distance.

Maucaya - - - - - child, child-birth.

Different foods fetished. Children fetished for eating the food which their fathers had been forbidden to eat. Women fetished for eating meat the same day that it is killed—with the men. When a man applies to a Gangam for a domestic fetish, he is at the same time instructed from what foods he must abstain; some from fowls, others from plantains.

Lindy N'Congo resides at banza Congo, far inland to the south.

In war the Chenoo of Embomma musters 1000 muskets; fire into the enemies houses at night. Cut off the heads of the prisoners and burn the bodies. All the women sent away before a war is begun. Some Foomoo makes up the business, and each party keeps, the trophies, and puts up with the losses. All the men of a Chenooship obliged to go to war. Commanded by the Macaya, next brother to the Chenoo, and civil magistrate; Mambouk, relative of the Chenoo, war minister.

Chenon of Inga dead, blind man substituted.

Dress. Old men, long thin aprons; young men, catskins; tyger cat most valuable; each costs a piece; common cat skins at Embomma for six fathoms

Canoes made of camba fuma (bombax)

Spoons, and mouth pieces of pipes made of lemanzao, and pacabanda.

Flocks of flamingos going to the south denote the approach of the rains.

THE END.

## PROFESSOR SMITH'S JOURNAL.

and we began to form a more favourable idea of the vegetation of the island, than its first appearance from the vessel seemed to promise. The shore was covered with Convolvolus soldanella, resembling Ipomæa; and half a dozen unknown plants, which were successively found growing among the palms, made us soon regret, in our joy, that we had so short a time to stay here. We took a view of the structure of the rocks, which on this side the town form a perpendicular precipice, and every where along the coast consist of five or six strata in the following order. 1st. Conglomerate. 2d. Tufa of pumice-stone. 3d. Pumice-stone. 4th. A stratum consisting of an uniform and somewhat blistered substance. 5th. Basalt. 6th. The uppermost stratum, which is similar to the 4th, and by its concentric formation, globules &c. made it evident that it had been in a fluid state. It resembled the same corresponding stratum in the Canaries. We went into the town, which consists of a few rows of miserable huts, situated on , a flat rock, about an English mile in circumference, and surrounded by the lower part of the valley of Trinidad. Most of the inhabitants here, as indeed on the whole island, are negroes. Although we discovered nothing but naked rocks and withered fields, wherever we turned our eyes, yet many different sorts of fruit, poultry, &c. were offered to our view, which proves, that the interior of the country must have a different appearance. We descended and crossed the other valley of palms, travelling over level and scorched plains, in order to join our comrades of the fishing party. The night was fast approaching. We made

## SECTION I

Notices from England to our departure from St. Jago.

On the 22d of February, I set out from Charing-cross for Sheerness, to which port the vessels belonging to the expedition had proceeded some days ago. Paul Hafgaard, with several others, accompanied me till I got into the coach. People who were nearly strangers to me, here bade me farewell with tears in their eyes, and looks that expressed their doubt of seeing me any more. Von Buch accompanied me as far as Sheerness. It was for the first time I saw this part of the Thames. Its beautiful windings, and the farying scenery on and around its waters, afforded us great pleasure. The view from Shooter's hill is of an immense extent. At Rochester, the Medway displays its greatest beauty. During our whole journey, those hills of Kent, which terminate in the chalk hills of Dover, were seen by us. On the other side of Rochester the country becomes more level, barren, and uniform. Orchards of cherry trees, for which this county is celebrated, were seen on all sides in great number. but distant treasures I was going to enjoy occupied my thoughts.

On the 23d, in the morning, I took leave of Von Buch, and went on board. I had been expected for some days. Captain Tuckey came on board a few hours afterwards; on the 25th we weighed anchor. An unsteady wind carried us to the Downs, where we anchored, and remained there the 26th and 27th. On the 28th we passed through the Downs, and round Beachy Head. On the 29th we were cruising with variable winds. The S.W. wind at last prevailing, we were obliged, on the 2d of March, to anchor in the harbour of Plymouth, on the identical spot where Napoleon Bonaparte had been in the Northumberland. Here we remained to the 6th. On the 3d, Galwey, Tudor, and myself went on shore to see the beautiful country-seat of Lord Mount Edgecombe. The prospect from the highest hill has greater variety, and is more beautiful, than any I had seen in England. The great number of limestone-cliffs projecting in groups into the sea; the numerous bays; the two rivers that empty themselves into the harbour; the three different towns of Plymouth, Stonehouse, and Dock; the great number of ships of commerce and of war; the hills of Mount Edgecombe covered with wood,-and all this, comprehended in one view, forms a most striking, lively, and picturesque landscape. The immense Break-water, which is constructing across the harbour, is now nearly finished.

On the 5th, Lieutenant Hawkey accompanied us again on shore to see the men of war in the harbour. We went on board the three-decker St. Vincent, which had lately left the dock-yard, and is considered as the most perfect

vessel that ever was built. She carries 128 guns. Such an immense machine, for the first time seen floating on the water, makes a striking impression. The cabins are as large as ball-rooms, with galleries as spacious as balconies. The construction of the pump-works (qu. chain-pump?), and of the powder-room is remarkable. I was refused entrance into the dock-yards as being a foreigner, though in the English service. In the house of Lieutenant Taylor I waited patiently for the return of the other gentlemen, and amused myself in the mean time with reading the travels of Bruce. We passed through Stonehouse town, where they are breaking down a rock of limestone in order to level the ground for the convenience of the increasing towns in the vicinity of Plymouth. We visited the castle, &c. On returning, we dined in Stonehouse. somewhat tempted to remain on shore during the night, but gave it up, and returned on board late in the evening. On the 5th we put to sea again, and the wind proving contrary, we anchored in the evening of the 6th in the harbour of Falmouth. The 7th, all went on shore. Tudor and myself hired horses with the intention to travel about in the country, to see mines, &c. ing through Penryn we arrived in Truro, which is one of the mining towns in Cornwall. On the way we saw a furnace for melting tin, the construction of which was very simple . . . . . without bellows. I dined in company with two Dutch ordnance officers, who had made all the campaigns of Napoleon, and having been at last taken prisoners at Beresina, had been sent to Archangel,

where they were detained a year and a half. They were now ordered out to Batavia in a rotten frigate, which is here repairing.

From Truro we proceeded to the mines in its neighbourhood, by the way of Sherwater. I descended one of the copper-mines to the depth of about 56 fathoms. shafts, as also the adits are very narrow. Only a few men were at work in each of them, making constantly use of the pick-axe. The steam engines are in high perfection, and indispensable on account of the vast quantity of water in the mine. These engines have therefore been constructed in several places. The appearance of the country is that of a vast heath. 'The formation seems to be principally mica and clay-slate, with large veins of quartz, in which the ores of tin and copper occur between and at the side of each other. Long ranges of stones heaped upon one another are to be seen. The friends of Tudor in Truro detained us till late in the evening.

On the 8th, in the evening, we made an excursion to St. Maws, situated in the neighbourhood. It is an inconsiderable fishing-town; but it is probable, that, before the growing importance of Falmouth, it was a considerable borough, because it has the right of sending two members to Parliament, who however at present may be said to be chosen by the Marquis of Buckingham. The manners of the inhabitants seemed to indicate that the spot is not much frequented.

March 9th. The wind veering towards N.W. we weighed anchor with hopes that the S.W. wind has now left us.

March 10th. We are off Scilly. The wind changed again to S.W. We made the signal in vain for pilots, they having already returned to Falmouth. In the morning of the 12th we anchored, for the second time, between Pendennis and St. Maws.

March 19th. All this time we have been detained in the harbour of Falmouth, partly from the stormy weather, and partly in order to take in water and provisions, and to fit the Congo with new rigging. We weighed anchor in the morning. I have written twice to Von Buch and to Hafgaard, to whom I have given a commission to send all my letters to St. Helena. A strong gale from N.E. has to-day (the 20th) carried us to the 49° 17′ latitude, and 60° longitude. The weather is now almost calm. The Congo sails almost as well as the transport.

March 25th. For the first five days we have been favoured by a steady N.E. wind, which has carried us to the latitude of Cape Finisterre.

April 1st. The wind having been very favourable, brought us yesterday within sight of Madeira, which we passed on its eastern side; and to-day I expect to see once more my old friends Palma, and the Peak of Teneriffe. The weather, as is usual in the vicinity of these islands, has continued for some days very squally. Unfortunately we are to pass, as it would seem, the Canaries, without stopping before we arrive at St. Jago. Being again so near to a place, where the last year I enjoyed so many delightful hours, which I never must forget, they were now as forcibly recalled to my memory as when present, but with a feeling of regret that they never more

can be renewed. I had reckoned for certain on being able to fill up several deficiences in the observations that have been made on these islands. For the last few days we have seen but little that could be considered as remarkable on the ocean. A number of porpoises tumbling about the vessel; two large birds, the species of which, at the distance we observed them yesterday, could not be determined; some Medusæ, probably Medusa pellucida, but of which we have not been able to catch any, were all of the animal creation we got sight of. On board the Congo I saw a small whale, also a small turtle covered with two or three species of Lepas, which we dissected, and a small species of Cancer, probably the Cancer fulgens of Sir Joseph Banks.

On the 3d, at day-break, the majestic ridge of rock that skirts the shores of Palma was discovered. We passed its western side, at a distance of from two to three leagues from Punte-de-fuen-zabiente. The two highest summits, particularly that of Roche de la Mustachos, were covered with snow, and irradiated by the reflected beams of the sun a glittering light from the upper region of the air. In the course of the afternoon we came in sight of Tino, though it was inveloped in a dense foggy air. I considered its greatest height to be a little more than 4000 feet. We had not the pleasure of seeing the Peak of Teneriffe again. The weather is now very agreeable; the temperature between 15° and 20° of Reaumur. We have a favourable wind, which, however, has not yet changed to the tropical or trade wind, but is more inclined to the N.E. The night was star-light. Galwey and myself amused

ourselves by studying the constellations, of which the northern ones will soon leave us. The sea begins to exhibit a greater abundance of animals. Cranch is at length preparing to fish up whatever he can catch. In the last few days we have constantly seen and caught a great number of Portuguese men-of-war (Holothuria physalis); also a small eatable Velilla (which I sketched); a Salpa? which emits light, and a Medusa, with four tentacula. On board the Congo I saw a Loligo vulgaris, and a fragment of a small Nautilus, covered by a species of Lepas.

The Congo has for some days been sailing at a slow rate, and is now again taken in tow. Cranch, I fear, by his absurd conduct, will diminish the liberality of the Captain towards us. He is like a pointed arrow to the company.

April 5th. To-day the deep azure colour of the water has suddenly changed into a dark sea-green colour. Last night we crossed the Tropic of Cancer. The latitude to-day at noon is 22°.

April 7th. The water of the sea has again resumed its usual colour. The anomalous temperatare of the sea, its green colour, and the great number of *Mollusca* that were seen, seemed to indicate that we were in soundings, but a line of one hundred fathoms was tried without success.

April 8th. We got in sight of the island of Bonavista, and passed its S. E. side at the distance of . . . leagues. Its appearance resembled that of the eastern Canaries. Its height can scarcely be greater than theirs, but none of its higher hills had a volcanic form.

April 9. In the morning we were under the island of Mayo, which appeared to be lower than Bonavista; and soon after we got sight of St. Jago. It is only a few days since the Captain informed us that we were to touch at Porto Prava, though we had reason to suppose this to be the plan long ago. All eyes were therefore with double eagerness bent towards the island as we approached it. After having for so long time seen nothing but the heaven and the ocean, even the barren rocks, which were the first objects that met our scrutinizing eyes, conveyed an agreeable impression: though, in looking through the telescope, it was with difficulty I could discover the least vegetation, and scarcely expected on these rocks a richer harvest than in the deserts of Lonzocolo last year. This island appeared much higher than either of the two we had just passed. In itsgeneral formation it resembles the Ca-It is surrounded by a perpendicular wall of rock without any strand, and it rises gradually up to the summit of the hills. The highest mountain is about the middle of the island. Its shape is that of an oblique cone, the top of which rears its head above the clouds, appearing at a distance like a black spot. The harbour soon opened out between the rocks, in the form of an half circle. On both sides batteries have been erected, but merely for the sake of appearance. Guns without carriages, negro-soldiers having muskets without locks, and the barrels tied to the stocks with twine, constitute the defence of the harbour. At the bottom of this circular inlet is situated the principal sea-port town of the island, which is nearly in the same

condition as the batteries. It is built on a flat rock, with the third and principal battery in front of it, surrounded by a continuation of the valley la Trinidad, which on each side of the town forms a level plain, overgrown with groups of the date-palm; and terminating in a sandy beach. rock situated towards the western battery, forms the west side of the entrance. In the harbour were two vessels, one of which having English colours, made us hope for a conveyance of letters to England; but we were afterwards informed that this vessel was to be very much delayed in its passage, being previously destined to touch at Lisbon. At 12 o'clock the anchor was dropt, and we were immediately ready to go on shore. It had been signified to us, that the expedition would have to remain here two days only; we were therefore anxious to make the best use we could of our limited time. Most of the officers, Tudor, the gardener and myself, went on shore. Our plan was to ramble about in the neighbourhood the whole of the afternoon, afterwards to join Fitzmaurice, Galwey and Cranch, who had set out on a fishing-party in a small bay situated to the eastward; then to return with them on board; and, before day-break the next morning, to make an excursion to the higher mountains of the island, and not to return till the last moment of our allotted time. Unfortunately, in consequence of this plan, we had not provided ourselves with more apparatus than would be necessary for an excursion of a few hours only. Captain Tuckey and the rest waited upon the Governor. Lockhart and myself soon found of course objects enough to attract our attention:

signals in vain for a boat from the east battery, under which the ships were lying at anchor. We ran back to the town and down to the other place of landing, hoping to find them there, but were now informed, to our great astonishment, that the boat, which had brought us on shore, had been upset in the surf when going out again, with all the officers. Captain Tuckey succeeded in reaching the shore by swimming, and escaped with the loss of his sword. Lieut. Hawkey's foot was entangled in a rope, and he was with much difficulty and almost lifeless brought on shore by Captain Tuckey and a negro. The fat purser wisely saved himself on the bottom of the boat. Thus they all got pretty well off, but their fright had made them forget us entirely. We were therefore once more obliged to return to the town, and take up our lodgings at a kind of public-house, kept by a fat negro woman, to whom we left the care of providing for our dinner, of washing our linen, &c. We were better accommodated than we expected. Before day break we were upon the alert, looking out for the landing of the gentlemen from the ship, with instruments, books, &c. for our excursion to the interior of the island. We waited impatiently till ten o'clock, but were disappointed. In the mean while we took a walk round the town, and descended into the plain to the east side. Here are several wells, one of which in particular supplies the town with water. It is about three fathoms deep, and its water was the temperature of 76° of Fahrenheit.

A great number of half-naked negro men and women flocked down to fetch water from this well. Tudor, in his

journal, speaking of the latter, observes, that their whole figure, their hanging breasts, and other personal accomplishments, made our young gentlemen of the party dream of the Venuses we should have to admire in the kingdom of Congo.

No boat was yet to be seen. We had hired a negro corporal for our guide, and that we might not loose more time we determined to set out on our inland journey, though without instruments, and though our boxes, which were not calculated for a long tour, were already filled with plants. Our plan was, if possible, to proceed this evening to the foot of Pico Antonio (the highest mountain in the island), and having reposed ourselves in some hut during the night, to ascend the summit the following morning; then to cross the mountain in a S. W. direction, down the valley Publico Grande and Cividad; and lastly, to return by the road leading to El Matheo. That part of the island, through which we had to pass, is unfortunately the most level. From the cliffs near the sea, rising perpendicularly some scores of feet, large tracts of land, scorched by the sun, extend themselves upwards. They are intersected by level barrancoes, of which the valley la Trinidad is the largest, running from two and three leagues from the harbour up to the mountains in a W. N. W. direction. Through this valley, as being the most fertile, we took our way. lower end is horizontal, and at first sandy and naked. Some solitary trees of a Mimosa were the first pleasing objects that occurred; and soon afterwards we observed, for the first time, a huge Adansonia, divided into three large trunks, thick in proportion to their height, with bended

branches, and the fruit (Calbufera?) hanging on long stalks. Though destitute of leaves, the sight of such a tree made an agreeable impression, and the fruit I found to be refreshing. In the upper part of the valley luxuriant thickets of Jatropha curcas, and thorny Zizyphi, covered with ripe and somewhat acid fruit, were found growing. After these followed lofty fig trees, Annona, with ripe fruit, &c. Our first stay was at a hut on the border of the valley, where we refreshed ourselves with delicious goat's milk. The scenery became more and more delightful. Shadowy mimosæ, oranges and fig-trees increase in number. A multitude of small Fringilla, an Alcedo with tropical plumage, and many other birds fluttered about us. The valley continued to expand itself. New plants occurred in quick succession, and different kinds of cultivated trees became more and more frequent. For the first time we discovered a whole thicket of Cassia fistula with ripe fruit, and for the first time had Tudor the striking sight of Bananas, Cactus opuntia, &c. Of all the plants I have hitherto seen, none appeared more interesting to me than Asclepias procera, which here grows half wild like the shrubs in a thicket.

All at once we were called from out of the valley by Tudor. It seemed that our guide, John Corea, had no great inclination of venturing too far, without partaking of some refreshment, and that he had discovered a convenient spot for us to eat our dinner. A fowl, with the root of cassava and some eggs, supplied us with a very good meal. While it was preparing, we took a ramble up the rising ground to the westward; afterwards, having finished

our meal, we proceeded on our journey in the valley, which, from the eminences, was seen most to its advantage. A part of it, which was wider than usual, was planted with indigo, cassava, and sugar-canes of light green colour, and interspersed with groups of Pisang, oranges, Annona, &c. mixed with solitary tall cocoa-palms. Farther on, the valley winded up the mountains, and lost itself on their eminences. We had soon descended and pursued our way between the gardens along a rivulet, that ran from the upper end of the valley, and after having watered and fertilized this beautiful spot, here lost itself. We found the inhabitants very hospitable and good-natured. A rich farmer invited us into his house to drink tamarind lemonade; on arriving at it, we soon observed that it indicated a wealthy owner. He was governor, it seemed, of this district, and possessed a great part of the valley and the above-mentioned plantations. Here we saw the only vineyard which had yet occurred, and a large Ailanthus in flower.

The barranco now became narrower. We proceeded along its eastern bank across its lower part and upwards on a gently rising and naked ground. It grew dark before we had advanced further than three leagues. The numerous objects in our way, and the tardiness of my fellow travellers, had much delayed us. We came to another barranco well watered and fertile, and soon arrived at a group of houses, where we were well received; entertained as usual with goat's milk and cheese, and had mats for our sleeping upon. The name of this place is Faaru.

Close to the houses was a steep rock, upon which I found several interesting plants, and among them a beautiful new Lavendula, and several others met with in the Canaries. Below was a clear spring, overshadowed by Pisangs and cocoa-trees. Its temperature was one degree higher than the well at Porto, though we had ascended to the height of about 1000 feet.

At day-break we heard a shot from the harbour, which made us doubtful whether we should proceed on our journey, but not perceiving, on looking through the telescope, any blue flag hoisted, we continued leizurely to walk upwards. We had not advanced far when the appearance of the country became entirely changed. After having for some time seen nothing, on the other side of the cultivated ground, but tracts of land scorched by the sun, and in some places overgrown with Spermacoce verticillata and a few Sida, it was an unexpected sight to perceive the hills covered with grass, from one to two feet high, being a species of Panisetum whose tropical nature was discovered by its ramifications. Innumerable herds of goats, sheep, and cattle were feeding all around. It had struck me that of the whole family of the Euphorbiaceae, which are peculiar to a great part of the African countries, from the Canaries to the Cape of Good Hope, the Jatropha only is here to be met with, and this too is a foreign importation. In the small level valleys on the sides of the grassy mountains, I perceived groups of a shrub, which had something new in its appearance, and on approaching it, I found at last an Euphorbia, that bore so near a resemblance to piscatoria, as scarcely to be distinguished from it. I met successively with several old acquaintances on the hills, as for instance, a Bupthalmum sericeum; most of them however, in the Canaries, are growing in the lowest region.

Another beautiful view opened to the east. The valley of St. Domingo lay under our feet, between perpendicular rocks. South American and tropical fruit trees, plantations of sugar and other vegetables, in various places, and at the bottom a rivulet, formed by several streams springing from the steep rocks around, afforded a most delightful view of contrasting objects. We had now reached the ridge of the mountains, and followed it for some time over valleys and hills partly covered with high grass, and interspersed Euphorbiæ, Jatrophacurcas, and some solitary Mimosæ.

The day was already far advanced, and on seeing the Peak again before us, we found the ascending it would take the remaining part of our time, and that the way we had followed, though it was the most commodious, was at the same time the longest. We resolved, therefore, to limit our farther journey to the ascent of one of the conical hills that surrounded us, in order to take as extensive a view of the island as possible, and then to return. Corea was dispatched to the nearest shepherd's hut to procure us some milk. We gave up our first plan with less regret, by considering that we had brought no barometer with us; but in return we missed many interesting plants, the number of which continued increasing as we walked on. We had soon reached the summit of the nearest hill to the left; and to the south-west, the

level land through which we had travelled, comprehending the whole barranco of Trinidad down to Puerto, was spreading itself under our feet. Farther on to the west some hills were seen, between which another barranco was winding its course down to Publico grande. The ridge of mountains runs in the direction of the longest diameter of the island from S.E. to N.W., but it runs nearer the sea and with steeper declivities at the N.E. than at the opposite side. The valley of St. Domingo is one of the deep barrancos to this side, and there are probably more of them farther on. Their steep side towards the ridge of the mountains, as also the Pico Antonio itself have a complete basaltic appearance. No trace of real volcanoes were to be seen. The hills to the W.S.W. have a more volcanic form, and it is in this direction that the high peak of the island of Fogo is situated, but this we unfortunately could not discover through the clouds. Pico Antonió is very steep at its western side. At the opposite side it would be easy to ascend it; the highest summit perhaps, only excepted. Its perpendicular height is scarcely more than 5000 feet, and from the place where we stood, about 3000 feet. Pico occupies about the middle of the ridge of the mountains, which is continued to the N. and N. W. by mountains more rounded, but not much lower. Its geological features, to conclude from the structure of the mountains, do not in any essential point deviate from those of the grand Canaria. All the specimens of minerals which I collected, are principally the same as those found in the latter island.

According to the notices which are to be found on some maps, there can be no doubt that the four islands to the N.W.N. are of the same submarine volcanic nature. Mayo and Bonavista may be compared with the lower part of St. Jago, and Fogo is in all likelihood the only volcanic one. The climate of the island is delightful, and considering its situation within the tropics, it is remarkably temperate. Of this the nature of the vegetation gave evident proofs. There were found very few tropical plants in proportion to the number of those which are common in temperate countries. The temperature which has been given for its wells probably does not much differ from the mean temperature (isothermos) of the island It was with difficulty I could draw the information from the inhabitants that it is now about a month or six weeks since the rainy season commenced. The Adansonia, Jatropha, and Ziziphus were already stripped of their leaves, and the Mimosa was producing new ones. Almost all annual plants were decayed by drought. The rainy season was said to last from five to six months, and to continue to the end of September. The atmosphere, after being heated in traversing the continent of Africa, is afterwards fully saturated in passing over the sea, and arrives at this island in a humid state, so that the fog comes down at the slightest degree of cooling. The mountains, even those of less height, are almost constantly covered with clouds. At the height of 1400 to 1500 feet, the appearance of the country is completely changed. The hills are covered with grass of a tropical form and magni-

tude. A number of small streams spring up in the barrancos and water the valleys. 'The cultivation is extended' with success to the tops of the hills. This sudden transition was, as usual, very striking in the plants, which induced me to represent in a table their physical and geographical distribution.\* Whether the still higher parts of Pico Antonio might possess a third physical diversity we could not determine, but this is hardly probable. The whole number of the different plants collected did not exceed eighty, among which about a dozen are new species, and perhaps one new genus. We did not see any of the green monkeys that inhabit the steep hills in great number, but many of them were brought on board by the inhabitants. It was near noon. We waited a long while for Corea, and sent Lockart to fetch him. Corea returned by another road, and we waited again a long while for Lockhart, but resolved at last to leave a direction for him to follow, and to hasten back on our return. At Faaru we hired two jack-asses in order to save time, and galloped off by a shorter way across the plain. But I almost swore never more to make use of these animals, because by being obliged to beat them continually, our arms were as much fatigued as our feet would have been by running. Lockhart arrived nearly as soon as ourselves. The officers and the marines were on shore; and on being informed that the vessels were not to put to sea until the wind was fair, we walked quietly back again to the town, to remain there during the night. It was on the eve of Maunday Thursday.

See Table at the end of the Section:

A procession with wretched music moved round the market-place. We understood from the officers, that several curious circumstances had taken place. The governor had been washing the feet of some of the poor inhabitants. Judas Iscariot was hanged in effigy, and had received some hard thumps by way of chastisement, and so forth. The governor had invited Eyres and Galwey to dinner, an hospitality which proved to be rather interested, he himself and the noble lady, his consort, begging as presents for every thing they saw or could imagine to be on board the ship. All the provisions that are brought to market, pass in a manner through the hands of the governor, and their price is enhanced by the duty, which is applied to the defraying the expenses for maintaining the garrison and the civil government. The colony probably does not afford any revenue to the government, nor charge it with any expenses; for which reason the communication with the mother-country is very little, or none at all. Almost all the inhabitants of the lower classes are black people. Eyres came the following morning ashore, in order to fetch the remainder of the provisions, consisting of goats, sheep, fruits, &c. to which we added a quantity of oranges, peaches, &c. Captain Tuckey, Hawkey, and Galwey had been at the end of La Trinidad, and in another small barranco which is the country-seat of the governor. Cranch had been rambling about the plain, and shot a number of birds. Fitzmaurice and Galwey, on the first morning, had been very successful in fishing in the bay, but the boat was upset, by which they lost the fishes.

The last of these misfortunes happened to Fitzmaurice and Galwey in the morning of the day of our departure. As they were going on shore with a view of making trigonometrical obsesvations, the boat was again upset. The instruments nearly escaped being lost, and the gentlemen saved themselves at the expense of some bruises only.

DISPOSITIO GEOGRAPHICA plantarum quas legi in insula Sti. Jacobi die x<sup>mo</sup> et xi<sup>mo</sup> Calend. Aprilis; circa portum Prayæ in convalle Trinidad et montibus Pico St. Antonio confinibus ad altitudinem circiter 3000 pedum.

## A. Regio inferior: arida, 1500 ped. circiter alta.

1. Plantæ tropicæ.

a Dronnice

a. Propriæ.			
Mimosa glandulosa.		-	MS.
Convolvolus jacobæus.			do.
affinis eriospe	ermo.	-	- do.
Boerhavia suberosa. sp. n	ov	-	do.
——— depressa. ditt	· 0	=	do.
Glycina punctala.		-	do.
Smilacina anomala genus	forté no	vum.	do.
b. Senegalenses.			
Adansonia digitata.			
Achyranthes tomentosa.	-	3 <b>-</b> 3	MS.
Spermacoce verticillata;	etiam in	Jamaic	<i>a</i> .
Momordica Senegalensis.			
Cardiospermum hirsutum	•		
Sonchus goreénsis			
Kk			

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c. Introductæ Americanæ	num	quasi	indigenæ	
propartes tropicas.				
Jatropha curcas.				
Anona tripetala.				
Tribulus cistoïdes.				
Argemone mexicana.				
Solanum furiosum?				
Datura metel.				
Cassia occidentalis.				
Ipomea pilosa.				
Eclipta erecta b.				
Malva ciliata? -	-	-	<del>.</del>	MS.
Sida polycarpa?	-	×. <del>-</del>		do.
—— repens? -	-	=	XX.	do.
—— micans? -	٠.		-	do.
d. Introductæ Asiaticæ num	quasi	indig	enæ.	
Justicia malabarica.		*		
Calotropis procera.				
Abrus precatorius.				
Plumbago.				
2. Plantæ Zonæ temperatæ.				
a. P.ropriæ.				
Herniaria illicebroide	s. sp.	nov.		MS.
Zygophyllum stellulat	um, s	p. nov	1	do.
Lotus jacobæus.		53	ert.	12
Zyzyphus insularis.	-8	-		MS.
Antirhinum molle.	-	-	-	do
Borago gruina	-		-	do.
Lavendula apiifolia, s	p. nov	7.	-	do.
Polycarpia glauca, d	0.	-	• ,	do.

#### b. Canarienses.

Sideritis punctata?

Heliotropium plebeium. Banks. Herb.

Lotus glaucus.

Eranthemum salsoloïdes.

Sacharum Tenerifæ.

Physalis somnifera.

Polygonum salicifolium.

Sida Canariensis?

#### c. Boreali - Africanæ, quæ simul Canarienses.

Cucumis colocynthis.

Aloe perfoliata.

Tamarix gallica, var. canariensis.

Phœnix dactylifera.

Cenchrus ciliatus.

Celsia betonicæfolia.

Comelina africana.

Achyranthus.argentea.

Corchorus trilocularis.

#### d. Capenses.

Sarcostemma nudum.

Forskohlea candida.

# B. Regio superior: humida graminosa; inter altis 1500 3002 ped. et forsan ad summa cacumina usque.

a. Propriæ.

Euphorbia arborescens, sp. nov.			MS.
Pennisetum ramosum.			do
Campanula jacobæa sp. r		MS	
Polygala?			
Lotus lanatus sp. nov.	-	•	MS.

Spermacoce? divers. genus. videter.

MS.

Festuca?

b. Canarienses.

Bupthalmum sericeum.

Thymus therebinthinaceus.

Sideroxylon marmulana? (Madeira)

Festuca gracilis.

c. Meridionali-Europeæ, quæ etiam in Canarien.

Silene gallica.

Oxalis corniculata.

Sisymbrium nasturtium.

Centaureum autumnale.

Anagallis cerulea.

Radiola milligrana.

**Gnaphalium?** 

d. Capenses.

Crotalaria procumbens?

Hedyotis capensis.

e. Americanæ introductæ?

Evolvolus lanatus.

Tagetes elongata,

Indeterminabiles absque flore et fructu.

Compositæ annuæ, (duo)

Liliacea.

Convolvolus.

Trutex. No. 90.

Cenchrus.

Crypsis.

Bilabiata.

MS.

### SECTION II.

From St. Jago to the Mouth of the River Zaire.

WE weighed anchor about noon of the 12th, the wind blowing fresh from off the island. At 5 o'clock, the fog at the horizon having disappeared, we got sight of the peak of Fogo, which reared itself above the skies. Though at a distance of 14 leagues, the sun, which was setting behind the island, afforded us a distinct and beautiful view of its form. The height of the peak probably is not less than 7000 feet, which is considerable for a spot of so small a circumference. The following days we proceeded at a moderate rate towards S.E. till the 19th, when the wind dying away, veered somewhat to the south. We had calm weather and squalls alternately. Thus we found ourselves in that miserable region which has been so much spoken of as exposed to an everlasting calm and violent The wind that accompanied them generally blew rains. from the south, which obliged us to turn the ship's head towards the coast of Africa. The horizon was constantly In the evening dark clouds arose from the east, and flashes of lightning gleamed all the night. The west was generally clear, sometimes with scattered dark clouds, which at the setting of the sun, being tinged with an in-

finite variety of colours, presented an interesting appearance never witnessed in the northern hemisphere without the tropic. The other parts of the canopy of heaven were mostly bright, except when they were overcast with a squall. The wind that preceded and followed the latter was seldom strong, but the rain fell in such torrents and in such large drops, as to keep the surface of the water smooth. We had not any opportunity of making observations on the depth of the sea. The polar-star was sinking low towards the horizon, and it was with difficulty we could discover it for the fog, in order to bid it farewell, for God knows how long a time. New constellations were making their appearance towards the south. bright-glimmering stars of the Cross and the beautiful form of the Scorpion, were seen in the course of the night. The heat during the day was intense, but I did not feel greater inconvenience from it, than I had experienced upon former occasions. The evenings were cool and During the last fourteen days I was occupied with examining the plants I had collected in St. Jago, and this employment being now finished, I am about to make some sketches of the physical objects of that island. On the evening of the 28th, Fitzmaurice and myself set out in a boat to make observations on the current. sea was quite smooth, but a gentle swelling from the west, and an uncommonly dark cloud from that quarter, indicated an approaching change in the state of the weather. In the night I was awakened by the motion of the vessel, and on arising, I saw the Congo again taken in tow, and the

vessels proceeding with a brisk and cool westerly wind. We are now at the distance of 14 to 15 leagues only from the coast of Africa. Should the wind continue as it is, we shall soon reach the latitude of Cape Palmas, and probably then be out of this hot and tedious pacific ocean, and approach the line, when, I suppose we shall have to go through the usual ceremony of being shaved by Neptune. Our whole party continues to be cheerful and agreeable. Poor Cranch is almost too much the object of jest. Galwey is the principal banterer.

April 30. To day we had the most violent squall we yet had witnessed, and the Captain himself owned that he had never seen a horizon so dark as that, towards which we were now sailing this afternoon. At the horizon flashes of lightning crossed each other in the deep darkness, which soon surrounded us. The rain, falling in torrents, and accompanied by flashes of lightning in rapid succession, approached us. We could no longer gaze at this dreadful phænomenon, but were obliged to retreat into the cabin. After somewhat more than the half of the squall had passed us, we ventured up again, and enjoyed the most sublime scene of the whole heaven beautifully illuminated by flashes of lightning. It generally darted forth from two points, now rising like spouts of water, now running in zigzag, and spreading itself into innumerable branching shapes. No lightning I had seen in Europe bore any resemblance to this.

From the third to the tenth of May we had a southerly wind, that carried us far into the Bay of Guinea. Innu-

merable shoals of fish of different kinds, but chiefly Albicore and Bonitos, were swimming in all directions. Every day some of them were caught. Flocks of birds belonging to the tropical regions and now and then some men-of-war birds were seen. From the 10th, the weather has been frequently calm, but the squalls have somewhat abated. To day a man died on board, who had been sick a long time. On opening him, a quantity of coagulated and extravasated blood was found in the pericardium. It was not without some emotion that I witnessed for the first time a burial at sea. Tuckey read the prayers, and two sailors in white shirts lowered him over the side. The common story that the sick recover, when the ship comes in soundings, was not in his case verified.

14th. In the afternoon we had the very amusing sight of a great multitude of fishes, flying over the surface of the water and chased by albicores, which hurried after them with the swiftness of an arrow. The chase took place close to the vessel.

15th A number of brown - - - indicated that we were not far from land; and on the 16th in the morning, we came in sight of Prince's island, at the distance of about ten leagues. This island had a singular appearance. Steep rocks of a cubical and conical form arose towards N. E. and E., some of which, on the side we passed, were perpendicular, and white as chalk. It is difficult to assign a reason for this white colour. Their forms prove that they are basaltic rocks, but no white substance, as far as I know, occurs in such large masses in this formation. Some of the

gentlemen supposed this colour to be owing to the multitudes of water-fowls which frequent these rocks; but the number is scarcely conceivable that would be requisite to supply matter for covering rocks of the height of 2000 to 3000 feet, and of such a substance as to make it appear at so great a distance. The next two or three days we endeavoured to get to the westward, in order to pass St. Thomas on the west side, that we might not make the coast of Africa before we had passed the latitude of Cape Lopez.

May 18. This day we got sight of the island; and on the 21st we passed its north-west side, at the distance of two or three leagues, and were now arrived at the lowest degree of the northern hemisphere. The island is uncommonly high, its ridge of mountains rising in a peak (St. Anna), which cannot be of less height than 8000 feet: yet, on looking through the telescope, we discovered the mountains covered with trees up to their very summits. an inviting sight! how many new and interesting objects the natural historian has passed for centuries, without bestowing a moment's notice on them! We know little or nothing of these islands, though they are situated as it were in the midst of a track which has been for ages one of the most frequented by vessels of all nations, while immense collections of plants and animals have been brought together from Australia, China, the East Indies, and South-America. For the last eight days we made a cruise, which was perhaps unnecessary, in order to pass to the westward of St. Thomas. How I could have wished to have spent these days on the island!

May 23. In the course of this morning we crossed the line. All the sons of Neptune were now busy in their preparations for a visit from his Tritons; who soon made their appearance with their hair dressed with hempen tails, their backs striped with tar, their heads covered with large caps, and gave notice to the Captain of the arrival of the God of the Sea, which was instantly announced by the sound of fifes and drums.

[Here follows a long detailed account of the ridiculous ceremonies performed on those who for the first time cross the Equator, which, new and amusing as they were to Dr. Smith, do not deserve insertion here.]

We continued to steer towards the west till the 26th, but the wind veering more and more to the eastward, it was resolved to try the other course along the coast. The sea is here uncommonly abundant in fish. The whole surface is often put in motion by the flying-fishes, when chased by others. Their number is immense. Shoals of them constantly surrounded the vessel, and at night they give out a white light, resembling that of the moon, when reflected by the sea. It was also chiefly at night that we were enabled to catch, with the net, the greatest number of mollusca and crustacea. Many different substances contribute to make the surface of the sea light. Some parts of the bodies of most of the crustacea have certain glittering points, and two or three species of crabs were perceived to give out the most brilliant light. The points, which are to be seen on the mollusca are larger, but less bright. But that luminous appearance which diffuses itself over the whole surface of the sea, arises from a dissolved slimy matter, which spreads its light like that proceeding from phosphorus. The most minute glittering particles, when highly magnified, had the appearance of small and solid spherical bodies.

May 28. We saw for the first time this day one of those floating islands, often mentioned, and which probably come out of one of the rivers of Africa. The Captain permitted us to put out a boat, in order to examine it. It was about 120 feet in length, and consisted of reeds, resembling the *Donax*, and a species of *Agrostis?* among which were still growing some branches of *Justicia*; and in the midst of these were seen a number of animals (Sepix)? For many days past the sea-water has been uncommonly cold. We were probably in soundings, though we could not reach the bottom with a line of 120 fathoms. I am often up at night fishing for marine animals, of some of which I make sketches.

June 2d. We this day got sight of the continent of Africa for the first time. The land was very low, but we did not approach it sufficiently near to be able to describe its appearance. The 3d and 4th we continued under the land with a southerly wind. The Captain resolved to stand out again to the westward, which course we followed, cruising till the 14th, but found that the wind was veering more and more against us, and becoming the steady tropical westerly (? easterly) wind. We stood in a second time for the coast, and got in sight of it on the 18th. In the morning we descried a large vessel. All

on board believed it to be one of His Majesty's ships, which were known to be stationed here for the preventing of the slave trade. All were immediately busy with writing letters. On coming up, however, we felt no small disappointment on being informed that it was an East Indiaman going to St. Helena. I had indulged a hope of soothing my poor mother's anxiety on my account. We were now at a distance of two or three leagues from the coast, of which we had a distinct view. The shore consists of black perpendicular rocks, with yellowish streaks running in the same direction, and mixed with larger spots of the same colour; and lower down resembling beds of pumicestone. Behind these rocks a broad ridge arises covered with trees, some of which scattered here and there greatly over-topped the rest. In some places we observed plains of considerable extent, and of a yellowish colour, probably owing to the dry grass; we observed also clouds of smoke, proving that the custom of setting dry grass on fire is even here prevalent. Several leaves and pieces of wood floated past on the water. About the parallel of Cape Yamba, and at some distance from the shore, is a conical hill, the height of which, though it is the highest part of an extensive ridge, did not appear to exceed 1000 feet. The longitude of this coast is very erroneously marked on the charts, so that according to the most recent, and we may suppose the best, it appeared from several good lunar observations, we should have been sailing inland to a considerable distance.

June 14th. A dead albatros (a bird rarely to be met

with so far to the north,) was fished up. On the 20th, a whale was swimming close to the vessel. For the last eight or ten days the weather has been humid and foggy. The Captain now communicated to us his instructions relative to our conduct in our future excursions. They are such as to afford a satisfactory proof of his liberal conduct towards us. We have two Congo negroes on board, both of whom speak English. One of them, named Ben, acts as my servant; but as Ben left his native country when twelve years of age, and as the other is but very little acquainted with the English language, we have not profited much by their information.

We have for some days past been proceeding at a regular but slow rate along the coast. The sea-breeze generally sets in at noon from S.W., and carries us somewhat forwards to the south. We now anchor in shallow water at the distance of two or three leagues from the shore. The country here is very low, and thickly covered with wood. The coast has a sandy beach, on which we can distinctly see the breakers, and hear them roar at night.

June 23. We anchored at a distance of three leagues from the shore, and had a beautiful view of it. The thick forests, which rise in two, and sometimes three successive ranges behind one another, varied by plains covered with grass of a light green colour, though they present an interesting appearance, nearly resembling that of the woody shores of the Danish islands, indicate at the same time, as far as may be judged at a distance, a great uniformity of the country itself, and of its natural productions. By looking

through the telescope I did not discover any difference in the form or colour of the trees. Some of them scattered about towards the beach appeared higher than the rest, and were probably palms of the cocoa tribe. The pieces of wood which we have fished up, do not present any variety in their appearance. Ben asserts that the banks of the river Congo are perfectly similar to this shore. Whales (probably Physeter . . . . ) are seen daily swimming near the vessel. We catch every day a number of Sparus resembling Pagrus. Its flesh, though dry, has a very good taste. On the 28th we had passed that vast tract of land, the appearance of which has been here described, extending from Cape Mayambo through Malambo and Guilango down to the bay of Loango. In the two last days the aspect of the country has changed. The trees do not form themselves into forests, but are scattered in groups only, or stand singly, having uncommonly large These groups might be discovered from a great distance, even when the whole country presented itself only as a blue line, bordered by a gently rising ground apparently naked, with banks of a greyish white colour, which probably are banks of clay that have fallen down.

To-day we made several attempts before we could weigh the anchor. The current was very strong, and the bottom, which before consisted of a sandy clay, was here uncommonly uneven, with banks of coral rocks and mud alternately. Although the sea-breeze blew fresh, the vessel made not the least progress. On weighing the anchor for the fourth time, we found it now to be so difficult, that

we were obliged at last to cut the cable. To-day, the 29th, in the afternoon, we are again under sail. We have ascertained that we already must have passed the southern point of the bay of Loango, although this point on all our charts is placed much farther to the southward. The weather is clearing up and the heat is again encreasing. The nights are resembling those we had in the bay of Guinea, the atmosphere being clear, except at the horizon, where it is foggy. The sea-breeze enables us to get to the southwards, and we shall soon see a new hemisphere, with new constellations appearing at night. The seabreeze generally continues until midnight, but is not followed by any land-breeze at all, the weather continuing calm until the sea-breeze sets in again at noon, or somewhat later. This may be partly explained by supposing, that by the returning current of the air in the higher regions of the atmosphere, the eqilibrium is restored; a supposition which is the more probable from the fact, that the fog, which had been driven together towards the shore, as soon as the calm-comes on, again covers the heavens, which before were clear; but the principal reason of the want of the land-breeze may probably be this, that the great current of air setting from the two coasts of this narrow part of Africa towards the interior, is deflected towards the north, where the continent is greatly extended, and where the heat is much more intense.

Some days ago the sea had a colour as of blood. Some of us supposed it to be owing to the whales, which at this time approach the coasts in order to bring forth their known, has often been described, and is owing to myriads of infused animalculæ. I examined some of them taken in this blood-coloured water: when highly magnified, they do not appear larger than the head of a small pin. They were at first in a rapid motion, which however soon ceased, and at the same instant the whole animal separated into a number of small spherical particles. The sea has again assumed a reddish appearance; but this is probably owing to mud, that has been dissolved. We have of late not had any sick on board. When we were in the bay of Guinea, several symptoms of a putrid fever were discovered; but this disorder, as also a peripneumonia that frequently occurred, and sometimes was very violent, were easily cured,

July 1st. This morning we found ourselves near the coast at the large mouth of the river Loango Luisa, on the south side of it. This river is called Caconga in the chart; and in the place where Loango Luisa is marked, no river exists. The coast before us had perpendicular cliffs towards the sea. Its banks consist of a reddish substance, which, as far as may be judged from a piece of about one footin length, which was taken up with the anchor, is a hardened chalky clay or marl. Their upper part, which is flat, is over-grown with scattered groups of palms and other solitary trees. The bay of Malambo is situated lower down within the banks. The harbour of Malambo, as also that of Cabenda, which is next to it, were formerly the principal trading-places of the French on this coast.

At noon we went all upon deck on hearing the Captain hailing some cances that were in sight. They soon came along-side. This circumstance, more than the aspect of the country, reminded us of the place in which we were. On looking at the hollow trunks of which their canoes were made, each pushed forwards by two or three naked negroes, who stood upright in them, the figures resembling those I had seen in South-sea voyages were brought to my mind. The canoes were from twelve to fourteen feet in length, and from one to one foot and a third in breadth, and about as much in depth; the upper part of the sides were somewhat bent outwards, the bottom was flat, and both ends pointed. The oars were made of a rounded flat piece of wood, fastened to a staff. A half-dressed negro addressed us in English, and appeared very much pleased by being answered in the same language, and invited on board. He called himself Tom Liverpool, and said he was the interpreter of the Mafook, whose visit he came to announce; but he appeared to be greatly astonished on being told that we were not come for the sake of trade. The Mafook came soon after in an European boat, bearing a small white flag, and he had an umbrella over his head. He welcomed us in the English language. They were all invited into the cabin, and the conversation became general, partly in broken English, and partly in somewhat better French. They were very much alarmed on hearing from us, that hereafter no other nation except the Portuguese, could carry on the slave-trade with them; and one of them, considering the King of England as the

cause of it, broke out into a violent passion, abusing and calling him "the devil." The inhabitants of Malambo, who were formerly wealthy, since the abolition of the slave trade, have become very poor, because their town was little more than the general market-place for the disposal of slaves, having no other source of profit, than what those slaves from the interior and the trade of the harbour afforded them.

After having refreshed themselves with a glass of brandy, and with great appetite partaken of our biscuit, filling their pockets with it at the same time, it was resolved that the Mafook, with some of his gentlemen, should remain on board during the night, and that in the mean time the boat should be sent on shore, and return with refreshments the next morning. They now put on their court-dresses, which they had brought with them. One appeared in the coat of an American officer, another in a red waistcoat, a third in a sailor's red jacket, the Mafook himself in a red cloak. All of them had a piece of coloured stuff wrapped round their loins, and a skin worn as an apron. Their legs were naked. Those, who called themselves gentlemen, wore caps of several sorts, mostly red caps with tops, but the Mafook and two others were round caps, that were made in the country itself, and neatly embroidered. They were presents from the king, who gives them on appointing any one to the office of Mafook. The Mafook (Tamme Gomma) had worn his cap six months only, but his predecessor, who was with him and retained the title, had worn his cap for ten years. On showing them the plate in the

voyage of Grandpré, it was found that Tatu Derponts, at that time Mafook of Malambo, who is represented on this plate, was the uncle of Tamme Gomma. But the luxurious - - - and polite manner with which Grandpré was received by the former, was very much contrasted with the poverty of the latter. Tamme Gomma was a man of the middle age, tall and well formed, with an interesting and noble countenance, which resembled more that of an Arab, than of a Negro. This was the case with several of his retinue. He wore over his shoulders a riband with a fetishe of some inches in length and breadth, representing two figures in a sitting posture, each of them holding a globe in their arms: they were tolerably well executed. Grandpré observes of these figures that they have European features, and the resemblance struck us immediately. They had high bare foreheads, aqualine noses, painted white, and bore some resemblance to the Egyptian, and in some parts to the Etruscan figures. Those of the better sort of people wore skins of a kind of tiger, but the rest wore simply skins of calf. All of them wore round their necks pieces of cord twisted from the hair of elephants' tails, and above the wrist a thick ring of iron or copper, with figures, the execution of which proved that they have some skill in working these metals. Most of them however wore rings of iron. They told us, that both these metals were abundant in the interior, but that the country produced no gold dust. We showed them samples of beads and small looking-glasses, &c. in order to be informed of what value they considered them to be, which, as merchants, they un-