

Through the district occupied by the Shoho is the nearest and the most practicable route to Abyssinia. It is indeed the only one desirable, seeing that it bears directly on Massowah, the only good harbour, as I believe, in the Red Sea from Sowakin to the Straits of Bab-el-Mandeb.

These tribes of Shoho furnish guides to all passers for half a dollar each, and even conduct a party for the same sum. Rich native caravans pay according to their numbers, but always moderately, and a white man is of course considered fair booty, to be fleeced according to the extent of his ignorance or his fears. Though vexatious by their delays, they are never known to rob or ill-treat any voyager. They fulfil strictly their contract of safe conduct through their territories into Abyssinia, and no reasonable man can find fault with their moderate charges for this. It is true that occasionally the Faltal tribes make an incursion and plunder travellers not well-armed, in spite of the Shoho, watching their opportunity when the warriors of the latter tribe are engaged elsewhere; but this impugns not their good faith, having never been suspected of collusion.

They acknowledge no superior save the elders of their tribe in council, now that the Naibs of Arkiko are politically extinct.

The Turkish Government occupying the island of Massowah, their Pasha here claims also the coast for 50 or 60 miles inland, and forces various feeble tribes in those limits to pay tribute; but, in return, affords them no protection when devastated by the Shoho or the ruthless soldiery of Obeay. These people are therefore sufficiently miserable and poor.

## XVI.—*Explorations into the Interior of Africa.* By the Rev. DAVID LIVINGSTON, LL.D. (*Gold Medallist.*)

(Continued from Vol. XXIV.)

Extracted from communications to the FOREIGN OFFICE from E. GABRIEL, Esq.; to the LONDON MISSIONARY SOCIETY; Sir RODERICK MURCHISON; CONSUL BRAND, and others.

*Read, Jan. 8 and Nov. 12, 1855.*

Pungo Andongo, 31st Dec., 1854.

[THE letter marked No. 1. is a copy from memory chiefly of one I sent under date of August last, which, with a map of the country travelled over, I have lately heard, was lost in the destruction of the 'Forerunner' off Madeira. I had the fever so frequently after leaving Cassangé, that I could only take latitudes, inserting them and my route in pencil, and I promised to send a better map of Angola back from Cassangé on my return. This I shall do from the last point to which the postal arrangements extend. I have been detained some time here reproducing the letters lost in the 'Forerunner;' and I leave for Cassangé to-morrow morning.

I naturally feel some little regret at the loss of my map, for, believing it safe in your hands, I had been rather free in giving away latitudes, longitudes, and sketches of the country, some of which have been copied and sent to other parts, and I have some ambition, as I am the only one who ever made astronomical observations in this part of the world, that my own country should have the preference. At present I give the following list:—

	S. LAT.			E. LONG.			REMARKS.
	°	'	"	°	'	"	
Golungo Alto . . . . .	9	8	30	14	59	21	Mean of seven lunar observations at the residence of the Commandant.
Confluence of the Luinha and Luce rivers . . . .	9	15	0	14	49	0	In Cazengo district. The longitude is approximate.
Confluence of the Luinha and Lucalla . . . . .	9	26	21				
Confluence of the Lucalla and Coanza . . . . .	9	37	50	..			Fort and town of Massem-gano is on this confluence. I could obtain no lunars, but I have bearings for an approximate longitude.
Ambaca . . . . .	9	16	35	15	23	15	At the residence of the Commandant.
Pungo Andongo . . . .	9	40	35	..			The residence of Mr. Piris on the south side of the rocks.
The Fort . . . . .	9	40	0	15	33	40	The longitude from three good observations.
Coanza River, at a point S.S.W. of the Fort of Pungo Andongo . . . .	9	47	3				
Cassangé . . . . .	9	37	29	17	43	30	From many observations. At the ford 150 yards wide.
The Quango river . . . .	9	51	28	..			
The Chikapa river . . .	10	38	0	..			Flowing W.N.W., 60 yards wide.
Confluence of the Chihuné and Longe . . . .	10	57	31	20	29	30	Both small streams. Canoes on the latter.
The Casai (Kasye) or Loké (at the ford) . .	11	17	0	..			Flowing N.E. and E.N.E., 120 yards broad.
Lake Dilolo, source of the Lotembwa, between and	11	30	0	..			W. end is $\frac{1}{2}$ mile broad. E. end is said to be 6 miles broad. Same longitude as Katema.
	11	32	0				
Katema town . . . . .	11	35	37	22	47	0	Near the river Lotembwa.
Lotembwa river, crossed in . . . . .	11	40	0	..			Above 100 yards broad.
Soana Molopo village . .	11	49	42	22	52	0	3 miles N.N.W. of the ford on the river Lokaloye.
Leeba river, crossed in	12	8	0	22	55	0	Flowing here from E. to W.*

*1. Journey from the Confluence of the Leeba and Leeambye to Loanda.*

*To Sir Roderick Impey Murchison.*

Pungo Andongo, Angola, 24th Dec., 1854.

SIR,—I have been in the habit of addressing my letters for the Royal Geographical Society to the care of Lieutenant-Colonel

\* Dr. Livingston's latest astronomical observations have since been received from Mr. Maclear, and will be given in the next Journal.—Ed.

Steele, but, from some notices which I have seen in the newspapers since my arrival in Angola, I conclude that that gentleman has gone to the seat of war in the East. On that account, and knowing the interest which you take in such matters, I beg you will allow me the liberty of sending my communications on geography to you.

In my last letter, dated 20th September, 1853, I reported my return to the town of Sekeletu, on the river Chobé, after having visited the country of the Barotsé, and the river Leeambye or Zambesi as far N. as its confluence with the Leeba; I enclosed also a sketch of the river, with the latitudes and longitudes of the different points at which I had made observations; and mentioned my intention of proceeding to Loanda, in order, if possible, to open a path whereby commercial intercourse might be maintained with the west coast, as a means of ameliorating the condition of the people in the interior. The present communication is intended to convey a sketch of the journey from the point at which my last terminated—viz., the confluence of the Leeba and Lecambye, lat.  $14^{\circ} 11' 3''$  S., long.  $23^{\circ} 40' 30''$  E.—to Loanda, the capital of the Portuguese possessions in Western Africa.

Sekeletu, who, by the abdication of his sister, now possesses the chieftainship, and the principal men of the tribe, entered cordially into the project of opening a new road for commercial purposes.

The commerce of the country over which Sekeletu now reigns, and that of numerous tribes situated more to the E., have been until lately completely neglected by Europeans. A large waterfall, called Mosioatunya, is conjectured to have prevented the Portuguese from ascending the Zambesi; and the Desert presented an insurmountable obstacle to commercial enterprise in the south. Accordingly, when we first visited the country we saw many instances in which valuable ivory had been allowed to rot with the other bones, just where the animal had fallen. Indeed, tusks went by the name of "mere bones" (*marapohela*=bones only); and, though the inhabitants soon acquired an idea of their superior value, they have not, up to the present time, received prices sufficient to stimulate them to proper efforts to procure large supplies. Elephants abound in the land, and there are many daring hunters; but a few pieces of cloth present only a very small indication that the tusks are of more value than the flesh. The elephants have always been killed more for food than for profitable barter; and other articles of trade, such as beeswax, which abounds in some parts of the country, are thrown aside as useless.

The common methods of killing elephants may be mentioned. The hunters having observed the path by which certain elephants or a herd go to water, select the highest overhanging trees as best adapted for their purpose. They are armed with spears having

very long handles, made of very light wood, and blades about two feet long, furnished with a barb on the shaft. As the animals generally drink during the night, the men perch themselves on branches hanging nearly over the path, and, when the elephant comes unsuspectingly along, plunge their spears into his body. The wounded animal rushes madly away, and, as the spear is held in by the barb, the motion of the body causes the long handle to swing in different directions. Contact with trees produces the same effect; and, as the motions of the blade are uniform with those of the handle, the numerous internal gashes soon bring this strong animal to the ground. Another method is by means of a log of wood, having a poisoned spear-head inserted. It is suspended on a branch above the elephant's path by means of a cord, which again is secured to a small wooden catch on the ground. When the catch is touched by the foot of the elephant in passing along, the beam falls on his back, and the barbed spear-head remains. In this case the trust of the hunter lies in the poison. Still another method is that of deep, wedge-shaped pitfalls, carefully covered over and plastered, so as to have the same appearance as the rest of the path. Many females and young animals are destroyed by this last means; but it is evident that with better arms and the prospect of a speedy and profitable sale of the ivory, much more produce would appear. The present means are often rendered futile by one elephant helping another out of a pitfall, or by the sagacious beast snuffing danger in the wind, and abruptly leaving the country. Even when successful, it can only be with one animal, for the others at once forsake the district if one of their number falls a victim.

A variety of considerations having induced me to try Loanda first, Sekeletu showed his cordiality by furnishing men, oxen, and canoes; and, being desirous of ascertaining the value of ivory among the white men in that direction, he committed four tusks to our care for the purpose, which we subsequently disposed of at Cassangé to his advantage. Taking leave of the chief and principal men on the banks of the Chobé, my company consisting of none but men of Zambesi, and these chiefly Barotsé, we descended that tortuous river to its junction with the Leeambye, which we ascended, visiting Sesheké and the different villages on its banks, at each of which orders had previously been issued "that we must not be allowed to become hungry." On reaching the country of the Barotsé, we learned that a foray had been made by one of the under-chiefs, and that several villages had been destroyed in the very direction we intended to take. Having demanded the return of the prisoners, as the only means of ensuring our safety, I succeeded in getting eighteen into my charge, and these were restored to their relatives as we approached their different habita-

tions in our progress up the river. As we had previously seen, the Leeambye makes a sharp bend away to the eastward from the confluence of the Leeba, and flows from E. to W. But the Leeba comes from the N., so we supposed that by ascending it we should approach the source of the Coanza, and, by descending the latter, might at last reach Loanda. We discovered afterwards that the Portuguese map, which represents the Coanza as rising in the E., is erroneous. With the above impression, however, we ascended the Leeba for 40 or 50 miles, when a cataract preventing farther progress in canoes, we remained a few days waiting for a party which had been detached at the confluence, before commencing the journey on oxback. The party was sent from the junction with five captives belonging to Masiko, a Barotsé chief, who lives E. of that point, and proceeded in the same direction during five days. Two of the prisoners being little girls, shorter marches than usual were made; and the actual distance may, therefore, be not more than 80 miles. Though travelling eastward thus far, the party did not again come near the Leeambye. From this, and the fact that we could get no more information about it in the north, it may fairly be inferred that this noble river, the Leeambye, holds an easterly and westerly course for a considerable distance beyond where we left it.

The party having returned together with an embassy of Masiko's principal men, bearing a present and friendly message, we left the river, and proceeded N.N.W. through a portion of the country called Londa, the paramount chief of which is well known to the Portuguese by the title of Matiamvo. The inhabitants, called Balonda, belong to the true woolly-headed negro race, and differ remarkably from the Bechuanas and other tribes in the south in their treatment of females and in the practice of idolatry. They swear by their mothers, and never desert them; they allow the women a place and voice in their public assemblies, and frequently elevate them to the chieftainship. Near every village we observed an idol, consisting either of an image formed of grass and clay, intended to represent a lion or alligator,—or a block of wood, on the top of which the human face was rudely carved. In cases of sickness or of non-success in hunting, offerings are made and drums beat before these idols during whole nights. The Bechuanas, on the contrary, swear by their fathers, glory in the little bit of beard which distinguishes them from the sex which they despise, and, though they have some idea of a future state, it exerts but little influence on their conduct. Their supreme God is a cow, and they never pray.

The first Londa chief of importance whom we visited is called Shinté, or Kabompo. His town stands in latitude 13° S. (13° 0' 21"). We were received in what they consider grand

style. The old chief sat under a species of *Ficus Indica*, on a raised seat, having some hundreds of women behind him, all decked out in their best, and that best was a profusion of red baize. Some drums and primitive instruments made of wood, were powerfully beaten; and different bands of men, each numbering about fifty or eighty persons, well armed with large bows and iron-headed arrows, short broadswords and guns, rushed yelling towards us from different quarters. As they all screwed up their faces so as to look very fierce and savage, I supposed they were trying whether they could not make us take to our heels. But they knelt down and made their obeisance to Shinté, which in all this country consists in rubbing dust on the upper and front part of the arms and across the chest. When several hundreds had arrived, speeches were delivered, in which my history, so far as they could extract it from my companions, was given. "The Bible containing a message of peace," "The return of two captives to Shinté," "The opening of a new path for trade," &c., were all described. "Perhaps he is fibbing, perhaps not; they rather thought he was."—"But as they were good-hearted, and not at all like the Balobale, or people of Sekeletu, and had never done any evil to any one, Shinté had better treat him well and send him on his way." The women occasionally burst forth with a plaintive ditty, but I could not distinguish whether it was in praise of the speakers or of themselves; and when the sun became hot the scene closed.

Shinté came during the night and hung around my neck a particular kind of shell, which is highly valued as a proof of the greatest friendship; and he was greatly delighted with some Scriptural pictures which I showed him from a magic lantern. The spirit of trade is strong in all Africans, and the Balonda chiefs we visited, all highly approved of our journey. Each expressed an earnest hope that the projected path might lead through his town. Shinté facilitated our progress to the next important chief, named Katema, and we again reached the Leeba, in lat.  $12^{\circ} 8' S.$ , and  $22^{\circ} 55' E.$  long. It had assumed the same easterly and westerly course as the Leeambye. After crossing it we were obliged to go almost due N., in consequence of the plains of Lobalé on our W. being flooded and impassable. It happened to be the rainy season, and never did twenty-four hours pass without frequent drenching showers. All the streams were swollen, so as to appear considerable rivers; but as they were generally furnished with rustic bridges, we may infer their flow to be perennial. Several extensive plains were crossed with the water standing more than a foot deep; and broad valleys also, along which the water flowed fast towards the Leeba, deep enough to wet our blankets, which we used as pads on the oxen instead of saddles.

Both this and the water in the rivers was so clear, that, in using the bridges over the latter, though they were submerged breast-deep, we could easily see the sticks on which to place our feet. This clearness of the water, which we observed in the Zouga, Chobé, and Leeambye, at the times of inundation, is the result of the rains falling on a mat of grass so thick as to prevent the abrasion of the soil. As the tropical rains cause the plains of Lobalé to present a similar phenomenon, it may not be unreasonable to conclude that the water of inundation of the Barotsé valley and lower parts of the Zambesi, is supplied by copious rains in the north, and, as the natives reported, comes chiefly from Lobalé.

We suffered less detention than might be expected from the swollen state of the rivers; for, though we had to swim some of them, all except two boys knew the art; and we never stopped to dry our clothes, unless it were in the afternoons. We got drenched, either by rains or rivers, two or three times every day; but the sun was hot, and we suffered no inconvenience. If, however, we arrived at our sleeping-place damp, or got our blankets wet, intermittent fever was sure to follow.

The more important rivers, or those we crossed in canoes, were the Lokaloye (the village of Soana-Molopo, about 3 miles N.N.W. of the ford, stood in lat.  $11^{\circ} 49' 42''$  S., and long.  $22^{\circ} 52'$  E.); the Lotembwa, upwards of 100 yards broad, and one of the principal feeders of the Leeba, was crossed in  $11^{\circ} 40'$  S. lat. The town of Katema stands a short distance beyond, in  $11^{\circ} 35' 37''$  S. lat., and  $22^{\circ} 47'$  E. long. The lake Dilolo, from which the Lotembwa takes its rise, is 3' or 4' N. of Katema's town, and consequently may be reckoned in nearly the same longitude, and between  $11^{\circ} 30'$  and  $11^{\circ} 32'$  S. lat. We went round the western or smaller end of this lake, where it was not  $\frac{1}{2}$  a mile broad; but the other end is said to be broader (perhaps 6 miles), and, as it has large waves, it is probably deep. It contains many fish, and we saw marks of many hippopotami on its banks. Repeated attacks of intermittent fever had at length made me so weak and giddy, that I could with difficulty sit on the ox; and, as Katema did not appear very willing to let me sleep at the broad part, I did not feel much inclined to press the subject. The giddiness and confusion of mind were, combined with the excessive cloudiness of the weather, great annoyances in making observations; but I took as many as possible at every important point. After crossing a water-covered plain beyond Dilolo, we came to streams flowing in a totally different direction from those we had left. These were the feeders of the Casai (Kasye) or Loké, which we found flowing N.E. and E.N.E. The Casai is about 120 yards broad, and flows in a deep valley, finely wooded and beautifully green. The latitude of the ford was  $11^{\circ} 17'$  S. The confluence of the

Chihune and the Longe, both small streams (the latter, however, had canoes on it), is  $10^{\circ} 57' 31''$  S. lat.,  $20^{\circ} 29' 30''$  E. long. The Chikapa (lat.  $10^{\circ} 38'$ ), about 60 yards wide, flows W.N.W.; and, when entering upon Portuguese territory, the Quango or Coango, about 150 yards wide, flows nearly due N. The latitude of the ford was  $9^{\circ} 51' 28''$ . I waited four days for a lunar observation, but in vain, as the sky was always covered with clouds. To these may at present be added Cassangé, the farthest inland station of the Portuguese, where I had a clear sky, and made many observations, lat.  $9^{\circ} 37' 29''$  S., long.  $17^{\circ} 43' 30''$  E.

The country of the Balonda through which we passed was both fertile and beautiful. Dense forests alternate constantly with open valleys covered with grass resembling fine English meadows. The general surface, though flat, seems covered with waves disposed lengthways from N.N.E. to S.S.W. The crest of each of these earthen billows is covered with forest 4 or 5 miles broad; while the trough, about a mile wide, has generally a stream or bog in the centre, with the habitations and gardens of the inhabitants on the sides. The forests consist of lofty evergreen trees, standing close together, and interlaced with great numbers of gigantic climbers. The trees, covered with lichens, and the ground with mosses and ferns, indicate a much more humid climate than is to be found in the south. The only roads through these dense thickets are small winding footpaths; and as an attempt to stop an ox suddenly, only makes him rush on, we were frequently caught by the overhanging climbers, and came to the ground head foremost. On this account I never trusted to the watch alone for longitudes.

The streams with which the country is well supplied differ remarkably in the directions in which they flow. Many were flowing southwards; but a distance of about 20 miles brought us to streams running N.E., and in much deeper valleys. I suspected that we were travelling on an elevated table-land, because the current of the Zambesi and other rivers was rapid, and we had large Cape-heaths and rhododendrons, which grow on elevated positions, together with a wonderful lack of animal life. This proved to be the fact, for when we were about 40 miles E.S.E. of the Quango we came upon a sudden descent, perhaps about 2000 feet, which to me seemed about the same height as Table Mountain at the Cape. Ninety or one hundred miles W. from this descent appeared as it were a range of mountains; but it is only the edge of similar table-land, identical with that on the margin of which we stood. This presents the same mountainous appearance to a person coming from the west. The intervening valley is called Cassangé, and through it flows the Quango and other rivers.



Only when we reached the declivity which forms the valley of Cassangé could I conceive why all the rivers that flowed N., N.E., or N.W., ran in much deeper valleys than those which followed an opposite course. The slopes down to the feeders of the Casai and Quango are more than 500 yards long and pretty steep, while the beds of the branches of the Leeba are never more than 10 yards below the level of the surrounding country. The whole valley of Cassangé seems to have been a work of denudation, for on all sides the declivity presents the same geological peculiarities, viz., a covering of brown hæmatite, mixed with quartz pebbles, lying upon bright-red friable clay slate. This, differing only in hardness and paleness of colour, continues to the bottom; but towards the centre of the valley it takes the form of argillaceous schist. A detached mountain, 7 or 8 miles S.S.W. of Cassangé, called Kasala, and having perpendicular sides all round, possesses the same structure. I regret much having no instruments to measure the elevations of these parts; but, after ascending again at Tala Mungongo, we appeared to descend again all the way to Ambaca, where we met primitive and secondary rocks, the latter containing metals.

This country, as compared with that to the S., is well peopled. We came to villages every few miles, and often passed as many as ten in a day. Some were extremely neat; others were so buried in a wilderness of weeds, that, though sitting on the ox in the middle of the village, we could see only the tops of the houses. There is no lack of food; manioc or the tapioca plant is the staff of life, and requires but little labour for its cultivation. The seasons seemed to allow of planting or reaping all the year round. The Balonda were all extremely kind; and, indeed, had they been otherwise, we should have starved; for there is no game, and all the goods which I had brought from the Cape were expended before we started, excepting a few beads.

When we came near to the Portuguese possessions, the tribes altered very much for the worse; and the Chiboqui so annoyed us by heavy fines levied on the most frivolous pretences, that we changed our course from N.W. to N. This did not relieve us long, for, when we came nearer Cassangé, we found our route obstructed by the M'bangala, who demanded payment of "a man, an ox, or a gun," for leave to pass at all. A refusal on our part was sometimes followed by a whole tribe surrounding us, brandishing their swords, arrows, and guns, and tumultuously vociferating their demands. The more we yielded, the more unreasonable the mob became, till at last, in order not to aid in robbing ourselves, we ceased speaking, after telling them that they must strike the first blow. My men, who were inured to fighting by Sebituane, quietly surrounded the chief and councillors. These

felt their danger, and usually became more amicable. They never disputed the proposition that the ground they cultivated alone belonged to them, and all the rest of the country to God. This being the idea in the native mind, they readily admitted that they had no right to demand payment for treading on the soil of our common Father. But they pleaded custom; "slave-traders always gave them a slave." My companions being all free subjects of Sekeletu, had as good a right to give me as I had to give one of them; and the affair usually ended by our agreeing to give each other food in token of friendship. I had to part with an ox; and their part of the contract was sometimes fulfilled by sending us two or three pounds of the meat of our own animal, with many expressions of regret at having nothing else to give. It was impossible to avoid laughing at the coolness of the generous creatures. I had paid away my razors, shirts, and everything I could dispense with; but, though I showed these extortioners the instruments and all we had, as being perfectly useless to them, the oxen, men, and guns still remained. "You may as well give what we ask for, as we shall get the whole to-morrow, after we have killed you;" or, "You must go back from whence you came, and say we sent you;" were some of the witticisms, which, with hunger, were making us all sulky and savage. If Sekeletu had allowed my companions to bring their shields, I could not have restrained them; but we never came into actual collision, and, as far as we are concerned, the way is open for our return. On the last occasion on which we parted with an ox, objections were raised against one which had lost his tail, because they imagined a charm had been inserted in the stump, which might injure them; and the remaining four, still in our possession, very soon exhibited the same peculiarity of their caudal extremities. Attempts have frequently been made by the Balonda and other distant tribes to open up commercial intercourse with the Portuguese, and these have always been rendered abortive by the borderers.

In order not to tire you with a longer account of vexations which were making us misanthropic, and more anxious to pass than visit a tribe, I may mention that, having in the beginning of April reached the banks of the Quango, which was swollen, and its muddy waters flowing rapidly, I had at length made up my mind to part with my blanket and coat to the ferrymen for a passage. But a young Portuguese serjeant, Cypriano de Abreu, made his appearance, and enabled us to enter Portuguese territory without further annoyance. Senhor Neves of Cassangé performed a brother's part to me in the time of need, and indeed the Portuguese everywhere exhibited the greatest kindness all the way to Loanda.

I approached Loanda labouring under severe illness, and ex-

tremely anxious as to what I should do for the support of my companions, who, without exception, are the best I ever travelled with; and who bravely followed me, though told by the blacks of every village W. of Cassangé, that "the white man was taking them down to the coast for sale, and they would all be taken on board ship, fattened and eaten."

I arrived in the city nearly knocked up, and suffering from fever and dysentery. Edmund Gabriel, Esq., Her Majesty's Commissioner for the suppression of the slave trade, most generously received me and my twenty-seven companions into his house. I shall never forget the delicious pleasure of lying down on his bed after sleeping six months on the ground, nor the unwearied attention and kindness, through a long sickness, which Mr. Gabriel invariably showed. May God reward him! My companions were struck with awe at the sight of a city, and more especially when taken on board Her Majesty's ships of war. The kindness of the officers of the cruisers removed the last vestige of fear from their minds, for, finding them to be all my countrymen, they saw the fallacy of the declarations made to them on the road. They were afterwards engaged in discharging coals from a ship for wages, and will marvel to the end of their lives at the prodigious quantity of "stones that burn," one ship could contain. They previously imagined their own little canoes on the Zambesi the best vessels, and themselves the most expert sailors in the world.

His Excellency the Bishop of Angola, then the acting governor of the province, received my companions with great kindness, and assured them of his protection and friendship, as well as desire to promote commercial intercourse with the country of Sekeletu. He also sent a present of a horse and handsome dress for that chief, and showed very great attention to myself in my sickness. The merchants, too, of Loanda took the opportunity of our return to send presents to Sekeletu; and, as they give much more for the produce of his country than can be or is done by merchants from the Cape colony, it is to be hoped that intercourse with either Cassangé or Loanda will promote the civilization of the interior.

I return, because I feel that the work to which I set myself is only half accomplished. The way out to the eastern coast may be less difficult than I have found that to the W. If I succeed, we shall at least have a choice.

My present intention is to proceed to Matiamvo's town before turning southward. Taking it for granted that I shall come into his good graces, our progress through his country will be comparatively easy, and the route, upon the whole, not much longer than the zigzag way we were forced to adopt in coming here. The only thing which may hinder the execution of this plan

will be the wishes of my companions to return as speedily as possible by the path we already know. It is the first time they have gone into other lands, except for plunder; and they have followed my wishes so implicitly hitherto, it would not be right in me to thwart theirs.

After making any arrangements with Sekeletu that may be deemed necessary, I propose to descend the Leeambye to Quilimane. It may be advisable, in order to avoid the waterfall of Mosioatunya, to cross overland from Sesheké to the river Maninché or Loengé (Bashukulompo river), buy or beg a canoe, and descend in it to the Leeambye. The confluence of the Chobé is only two days distant from the waterfall, but the river is very rocky and dangerous before reaching that point.

In order that, should I succeed in reaching Mosambique or Quilimane, I may not suffer the same dejection of spirits on my approach, I presume to request that any of our officers who may be on that coast, be directed to make inquiries respecting my arrival towards the end of 1855. I am known to some of the subjects of the Imaum of Muscat by the name "Naka" (doctor).

In conclusion I cannot omit mentioning the very great courtesy of the Portuguese authorities; and, as their habitual politeness was in strict accordance with the wishes of the Government of Portugal, it is of the greater value.

Begging to be excused for presuming to make an alternative of you in the absence of my friend Colonel Steele,

I am, Sir,

Your most obedient servant,

DAVID LIVINGSTON.

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## 2. *On the Province of Angola.*

Cassangé, 13th February, 1855.

THE province of Angola possesses great fertility and beauty, and its capabilities, both agriculturally and commercially, are of a very high order; indeed, I do not fear contradiction in asserting it to be the richest in resources of Western Africa.

As I have now had the advantage of passing through the province twice, and have honestly endeavoured to obtain correct knowledge of the country, I venture to give you my impressions, as not calculated to mislead any except those whose general views of the world are much more gloomy than mine.

As we proceed from the coast inland, the country, except in the vicinity of rivers, presents a rather arid appearance. There are not many trees, but abundance of hard, coarse grass. But the low meadow-lands, of several miles width, lying adjacent to the rivers, are sufficiently fertile, and yield annually fine crops of

sugar-cane, different vegetables and manioc (the staff of life through all this part of Africa), also oranges, bananas, and mangoes, of excellent quality. Proceeding eastwards, we enter on a different sort of country, about longitude  $14^{\circ}$  E. It is mountainous, well watered with perennial streams, and mollified by fogs deposited from the western winds, which come regularly to different places at different hours every day. Near the Muria we enter dense forests, whose gigantic trees, covered with scarlet or other coloured blossoms, and giving support to numerous enormous climbers, with the curious notes of strange tropical birds, present the idea of excessive luxuriance, and recall the feelings of wildness produced when standing in similar sylvan scenery in the interior of Brazil. The palm which yields the oil of commerce grows everywhere. Pineapples, bananas, and different kinds of South American fruit-trees first introduced by the missionaries, flourish in the woods, though apparently wild and totally uncared for. Most excellent coffee, from a few seeds of the celebrated Mocha, propagates itself spontaneously in the forests which line the mountain-sides. Cotton of rather inferior quality finds itself so well suited with climate and soil, that it appears as if indigenous. Provisions are abundant and cheap. Ten pounds of the produce of the manioc plant, which, under the *classical* appellation "Revalenta Arabica," sells in England for twenty-two shillings, may, in the district referred to, be purchased for one penny. Labour, too, is abundant and cheap; two-pence per day is considered good wages by carpenters, smiths, potters, &c., as well as by common labourers. The greatest drawback the population has in developing the resources of the country, is the want of carriage-roads for the conveyance of produce to markets. The slave-trade led to the neglect of every permanent source of wealth. All the merchandise of the interior was transported on the shoulders and heads of the slaves, who, equally with the goods, were intended for exportation. And even since the traffic has been effectually repressed by our cruisers, human labour for transport has alone been available. This is a most expensive and dilatory system, as the merchants and persons of smaller means, on whose industry access to a proper market would have a most beneficial effect, possess no stimulus for exertion in cultivation. Some use is made of the river Zenza by means of canoes, and considerable trade is carried on between the districts on the Coanza and Loanda by the same means; but the bars at the mouths of both rivers present serious obstacles to speedy transit.

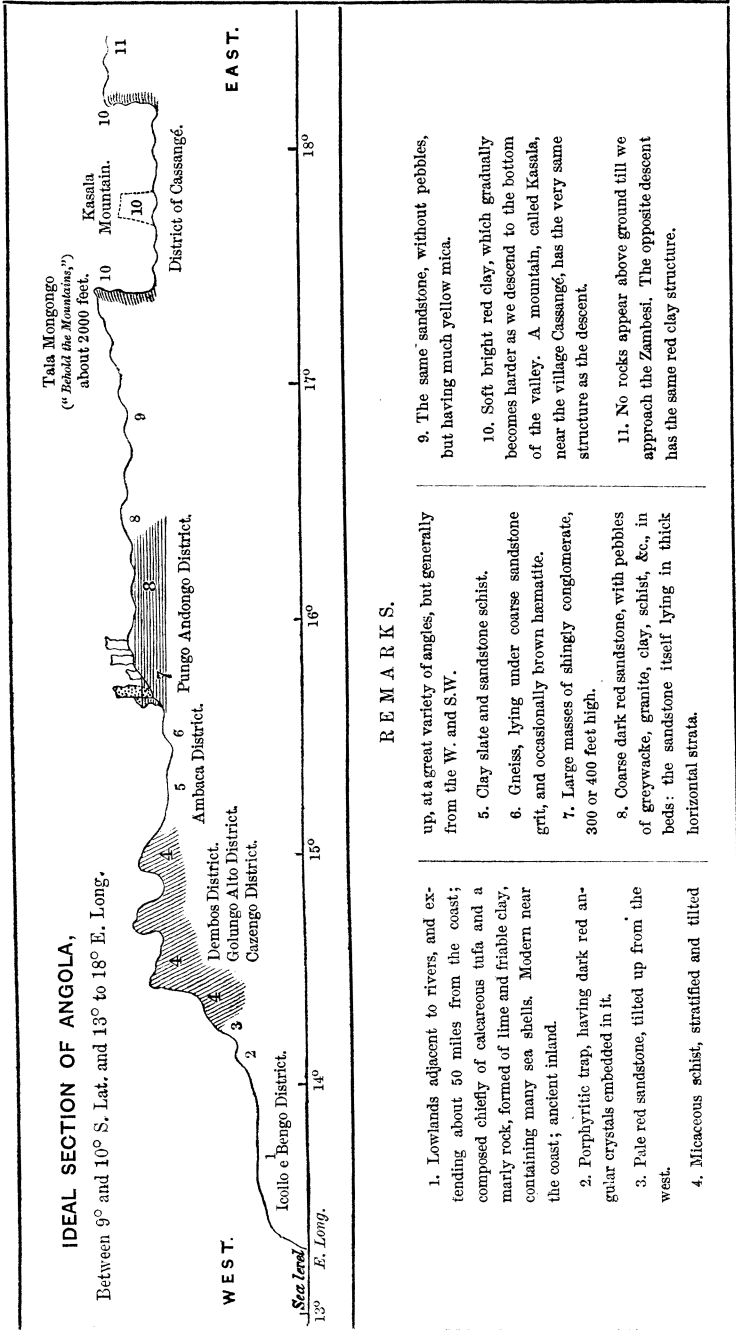
The country still farther inland becomes gradually more open. Ambaca presents an undulating surface, with ranges of mountains on each side in the distance. It possesses a great number of fine little streams, which might be turned to much advantage for

water-power and irrigation. Both it and Pungo Andongo abound in cattle. The latter seems more elevated; for, as we cross the Lotete, the boundary between the two districts, we enter upon the same vegetation and trees which characterise Lunda. Wheat, grapes, and European vegetables, grow in nearly the same spots with bananas and other tropical fruits. Indeed, by selecting proper localities, cotton, sugar, coffee, and other products of hot climates, might be raised to any amount in this fine and beautiful country, together with many of the grains and fruits of colder regions. No attempts have hitherto been made to develop its internal resources. It is but lately that coffee-plantations were turned to as a source of wealth. Some were discovered during my progress, and the actual extent of the tree is still unknown: I saw it at Tala Mungongo, nearly 300 miles from the coast. Different kinds of gum abound, as gum elemi, *India rubber*, &c.; and, among metals, very superior iron all through the country. Rich copper ore exists in the interior of Ambriz, and there are indications of coal.

Cassangé is at present the farthest inland station of the Portuguese. It may be called the commercial capital of the interior. Trade in ivory and wax is carried on with great vigour and success; and large quantities of English cotton goods are sent into the country beyond, by means of native or half-blood Portuguese. The merchants treat their customers with great liberality. At the time I write, Captain Neves is preparing presents, consisting of cloth, beads, carpets, furniture, &c., of upwards of 50*l.* value, for Matiamvo, the most powerful potentate east of this. This chief lives about long. 24°, and monopolises the trade which, but for him, might pass to tribes called Kanyika beyond him.

The deep valley of Cassangé is wonderfully fertile, but success in trade prevents the merchants from paying any attention to agriculture. The soil, so far as present experience goes, would place Mr. Mechi's pipes for liquid manure at a discount, for it requires nothing but labour; the more it is worked, the more fruitful it becomes.

The following is an ideal section of the country between 9° and 10° S. latitude, and 13° to 18° E. longitude, and is sent with a full knowledge of its imperfections. I would scarcely have ventured to remit it at all in its present state, but, having once indulged the hope of forming a geological map of the country N. of the Orange River as far as Lake Ngami, I made a very extensive collection of specimens of rocks for the purpose. As I did not know many of them, while waiting for further information I lost both specimens and papers in the destruction of Kolobeng by the Boers. This misfortune makes me anxious to send any information I can obtain as early as possible. The following additional remarks may be serviceable.



R E M A R K S.

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| <p>1. Lowlands adjacent to rivers, and extending about 50 miles from the coast; composed chiefly of calcareous tufa and a marly rock, formed of lime and friable clay, containing many sea shells. Modern near the coast; ancient inland.</p> <p>2. Porphyritic trap, having dark red angular crystals embedded in it.</p> <p>3. Pale red sandstone, tilted up from the west.</p> <p>4. Micaceous schist, stratified and tilted up, at a great variety of angles, but generally from the W. and S.W.</p> <p>5. Clay slate and sandstone schist.</p> <p>6. Gneiss, lying under coarse sandstone grit, and occasionally brown haematite.</p> <p>7. Large masses of shingly conglomerate, 300 or 400 feet high.</p> <p>8. Coarse dark red sandstone, with pebbles of greywacke, granite, clay, schist, &amp;c., in beds; the sandstone itself lying in thick horizontal strata.</p> | <p>9. The same sandstone, without pebbles, but having much yellow mica.</p> <p>10. Soft bright red clay, which gradually becomes harder as we descend to the bottom of the valley. A mountain, called Kasala, near the village Cassangé, has the very same structure as the descent.</p> <p>11. No rocks appear above ground till we approach the Zambesi. The opposite descent has the same red clay structure.</p> |
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Between 3 and 4 in the district of Cazengo the igneous rocks indicated at 2 have evidently run through gorges in the mountain-ranges 4 4 4 4, and have tilted up schist, gneiss, &c.; and, in the latter, veins may be seen, or rather cracks, filled with a dark blue rock exactly like clay slate. Between 3 and 4, too, in the districts of Cazengo and Golungo Alto, abundance of excellent iron-ore occurs, some strongly magnetic, other parts not, but all very largely impregnated with the metal. To the N. of 2 and 3, near the river Dande, petroleum is reported, and so it is said to occur southwards of 5, from under the dark red sandstone which forms the crust of the country. The spot reported is on the banks of the Coanza, and near Cambambe. Veins of copper appear on the banks of the Coanza in the same district, but I did not see them. The rocks of Pungo Andongo (7) are large masses of conglomerate, about 300 or 400 feet above the surrounding country. They stand in parallel lines nearly N. and S. in direction, and rather more than a mile in length. The conglomerate stands on horizontal strata of dark red sandstone, and this, in a very small proportion to the other materials, forms the matrix. There are granite, gneiss, porphyry, schist, clay, and sandstone, trap, syenite, greenstone, quartzite, &c., all rounded and water-worn, and forming immense masses of shingle. There is also a kind of soft limestone containing sea-shells on the tops of some of the rocks.

The government of the country may be described as a military one, and closely resembles that which Sir Harry Smith endeavoured in vain to introduce among the Caffres. The imposts are exceedingly light, consisting of a tax of eightpence on each hearth, and sixpence on each head of cattle. Something is also levied on gardens near the coast, and on weavers and smiths. The population is large, between 500,000 and 600,000 souls being under the sway of the Portuguese; and of this large number, the majority are free-born. In those districts to the statistics of which I had access, the slaves did not form 5 per cent. of the entire population, and a very large proportion was dependent on agriculture alone. There are very few whites comparatively; and, from the polite way in which persons of colour are addressed and admitted to the tables of the more affluent, it might be inferred that there is as little prejudice against colour as in any country in the world. Nothing struck me as more remarkable than the change produced on convicts by their residence in this colony. No sooner do they arrive than they are enlisted into the 1st regiment of the line, and perform similar duties to our Foot Guards in London. The 11,000 inhabitants of Loanda go comfortably to bed every night, although they know that the citadels and all the arms of Loanda are in the hands of convicts, many of



whom have been transported for life. The officers are not supposed to have been guilty of any offence against the laws of their country, and probably they may have considerable influence with the men; but their testimony even is, that the men perform their duty well, and are excellent soldiers. Some ascribe the remarkable change to the utter hopelessness of escape, the certainty of detection and punishment of any crime, and the fear of being sent to the deadly district of St. José de Encoge (something like our Norfolk Island, but not so bad); but, however accounted for, the beneficial change in the men is unquestionable.

Another pleasing feature in the population is the ability of many to read and write. It is considered a disgrace in Ambaca for a free man of either colour to be unable to write. This general diffusion of education is the result of the teaching of the Jesuit missionaries, who were expelled the country by the Marquis of Pombal. If the results of their teaching have been so permanent, without anything like a proper supply of books, we may be allowed to indulge the hope that the labours of Protestants of all denominations, who endeavour to leave God's word behind them, will be not less abiding.

The commerce of Angola has been remarkably neglected by the English; for, though the city of Loanda contains a population of 11,000 souls, clothed chiefly in the produce of English looms, and though, in many parts of the interior, cheap Glasgow and Manchester goods constitute the circulating medium, there is not a single English house established at the capital. For this anomaly various reasons are assigned: the most cogent of these appears to be, that those who first attempted to develop a trade, unfortunately accepted bills on Rio Janeiro in part payment of their cargoes, at a time when the increased numbers and vigilance of our cruisers, caused the bankruptcy of many houses both in Rio and Loanda. Heavy losses were sustained, and Angola got a bad name in the mercantile world in consequence. No attempt has ever been made since. Still, with the same difficulties and burdens as the English encountered, the Americans carry on a flourishing trade with Loanda.\* A very large proportion of the goods imported in other ships are English manufactures, taken in exchange for colonial produce, which has gone by the expensive and circuitous route of Lisbon, *i. e.* produce on which the expense of port-dues, freight, commission, &c., is paid from Loanda to Lisbon, and again thence to London. As the same round of expenses is incurred on English manufactures, a British merchant carrying merchandise direct to and from England, and dealing in Loanda

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\* The Americans, it is said, do not hesitate to co-operate with slave-traders, which English merchants may not do.

in a liberal spirit, would almost certainly establish a lucrative trade.

In connection with this subject I may be allowed to call your attention to the rivers Casai and Quango. These are reported by intelligent natives who profess knowledge of the country, and are believed by Portuguese traders, to join somewhere N. of Cassangé, and form the Congo or Zaire of Captain Tuckey. The directions in which I saw those rivers flowing appear to favour the idea. The Casai, according to the report of Matiamvo's people, whom we met, flows E.N.E. even beyond the residence of their chief; and as that is a month or 300 miles from the ford, if it really makes a large bend round to the N.W. after that, we can form an idea of the great importance of the attempts of Lieut. Commander Bedingfield and others to establish commerce on the Congo. It is scarcely possible to estimate the ultimate effect which success in this most laudable effort would produce. These rivers drain such a vast extent of populous slave-producing territory, that they assume features of peculiar interest. The influence of the English squadron on the coast is powerfully felt throughout the country. Of this I have observed ample evidence; and no wonder this is the case, for it makes one proud of his countrymen to witness the zeal and energy with which the officers of our cruisers apply themselves to the suppression of the trade in slaves.

This is accompanied by a map, intended to replace that lost in the 'Forerunner.' I have sent all my observations to Thomas Maclear, Esq., of the Royal Observatory at the Cape, and beg that my positions may be considered *sub judice* till he gives his opinion.

I am, Sir,

Your most obedient servant,

DAVID LIVINGSTON.

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3. *Edmund Gabriel, Esq., to the Earl of Clarendon.*

Loanda, 5th August, 1855.

MY LORD,—I have the honour to report to your Lordship that I have just received a letter from the Rev. Dr. Livingston, communicating to me his progress from the date of his leaving Cassangé and crossing the present boundary of this province, to the 18th May last. He left Cassangé on the 16th February, and after having met with much detention owing to sickness amongst his men, forded the river Quango between the latitudes of  $9^{\circ} 48'$  and  $9^{\circ} 52'$  S., where it winds between the meridians of  $18^{\circ} 25'$  and  $18^{\circ} 30'$  of E. long.

Dr. Livingston was desirous of visiting Matiamvo, the paramount

chief of the Lunda country, as well with a view of entering into amicable relations with him, as for the purpose of ascertaining whether the river Casai is navigable in his country, and forms with the Quango the Congo or Zaire of Capt. Tuckey. He therefore kept more to the eastward than he had done in his journey from the Zambesi to this place, and crossing the river Chekapa in lat.  $10^{\circ} 10' S.$ , and long.  $19^{\circ} 42' E.$ , and another river, called the Maomba, in lat.  $9^{\circ} 38' S.$ , and long.  $20^{\circ} 13' 30'' E.$ , arrived at Cobango, a large trading station on the river Chihombo, situated in lat.  $9^{\circ} 31' S.$ , and long.  $20^{\circ} 31' E.$ , from whence Matiamvo's place is E.N.E. about 100 miles.

His companions here expressed a most anxious wish to return home, a feeling in which, looking at them and their circumstances, Dr. Livingston says he could not but sympathise with them, although, still faithful and obedient as they had always been, they were ready to proceed on to the eastward if he had insisted upon it. He however having attained at Cobango the chief object he had in view in desiring to visit Matiamvo, viz. information as to the Casai being navigable in his country, and finding that his funds were so far exhausted, that he had not, to use his own words, "the wherewithal to appear before that potentate," resolved on proceeding southwards to Katema, and thence direct to the Zambesi and Sekeletu's town.

Dr. Livingston having obtained good lunar observations at a spot 2 miles W. of the river Quango, finds that that river is 15 miles farther to the E. than he had placed it on the map which he drew of his journey to this place, he having on that occasion passed it in excessively cloudy weather. He finds also that he was misinformed respecting the course of the Chekapa, which, together with several important geographical points on the route, he has been enabled to establish more accurately from numerous observations taken during his present journey.

His corrections will be forwarded to the Royal Geographical Society by an early opportunity.

In all the letters that I have received from Dr. Livingston during his progress through this province, he speaks in terms of gratitude of the kindness and hospitality which he received at the hands of the several Portuguese authorities through whose jurisdiction he passed.

I am grieved to add that this excellent man's health had suffered a good deal from his having been obliged, after leaving Cassangé, to sleep for several nights on a plain, on which the water was flowing ankle deep. He had at length been compelled to form trenches around his berth, and having been detained 25 days in this situation, became much enfeebled by his sufferings



Longitude E. from Greenwich



M a i a s

M a t a b a

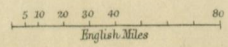
L u b a

H o l i o

Exploration of Africa.

Sketch of a Route from the  
BAROTSE VALLEY, ON THE RIVER LEEAMBYE, TO LOANDO:  
Performed by the  
Rev<sup>d</sup> D<sup>r</sup> Livingston.

D<sup>r</sup> Livingston's Route -----



L u n d a C o u n t r y

of which Matiamvo is the Paramount Chief

Cheboque  
or  
Quiboque

Plains of Lobalé,  
reported impassable during the rainy season

L o b a l é

Longitude E. from Greenwich

during that time. He nevertheless wrote in cheerful spirits, sanguine of success in "doing his duty" under the guidance and protection of that kind Providence who has already carried him through so many perils and hardships. He assures me that since he knew the value of Christianity, he has ever wished to spend his life in propagating its blessings among men, and adds that the same desire remains still as strong as ever.

I have, &c.

EDMUND GABRIEL.

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4. *Edmund Gabriel, Esq., to Consul Brand.*

(Extract.)

Loanda, Aug. 28, 1855.

"I have just received my last letter for the present from him (Dr. Livingston), dated 18th May, lat. 9° 31' S., long. 20° 31' E., at a place called Cobango. Having now left the high-road, as it were, and altered course to the southward, he is gone entirely out of my reach. I am grieved beyond measure to find that my last letters, in consequence of some foolish excuses about runaway slaves, did not overtake him. However, as my *very* last letter,—in which I enclosed him the newspaper extracts received with your December letter, one of them announcing the honour so deservedly conferred on him by the University of his native town, Glasgow,—is not yet returned from Cassangé, I still live in hopes that it may have gone after him, and I have offered a reward of twenty milreis to any one who will bring me an acknowledgment of its receipt by Dr. Livingston."

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XVII.—*Mission to Central Africa.*

- (1. Extracts from Letters received from ED. VOGEL, Phil. Dr.
2. Geographical Positions of Places between Murzúk and Kuka, and in Mandra, Bornu, and Sudán.
3. Remarks on the Meteorological Observations taken.)

Communicated by the EARL of CLARENDON.

Read, March 12 and May 14, 1855.

*H. U. Addington, Esq., Foreign Office.*

Kuka, July 14, 1854.

SIR,—At the end of March I joined an expedition going out under the command of the Sheik Abdelrachmán to Musgo. Up to that time the Sheik had always refused me permission to