easy. Parry's route was too direct northerly; had he penetrated a little further, he might have discovered land.

In concluding these remarks on the probable nature of the Polar Regions, I must crave your kind indulgence on account of the difficulties attending the subject.

III.—*Journey to Umzila's, South-East Africa, in* 1871-1872. By Mr. St. Vincent Erskine, Special Commissioner from the Natal Government to Umzila, King of Gasa.

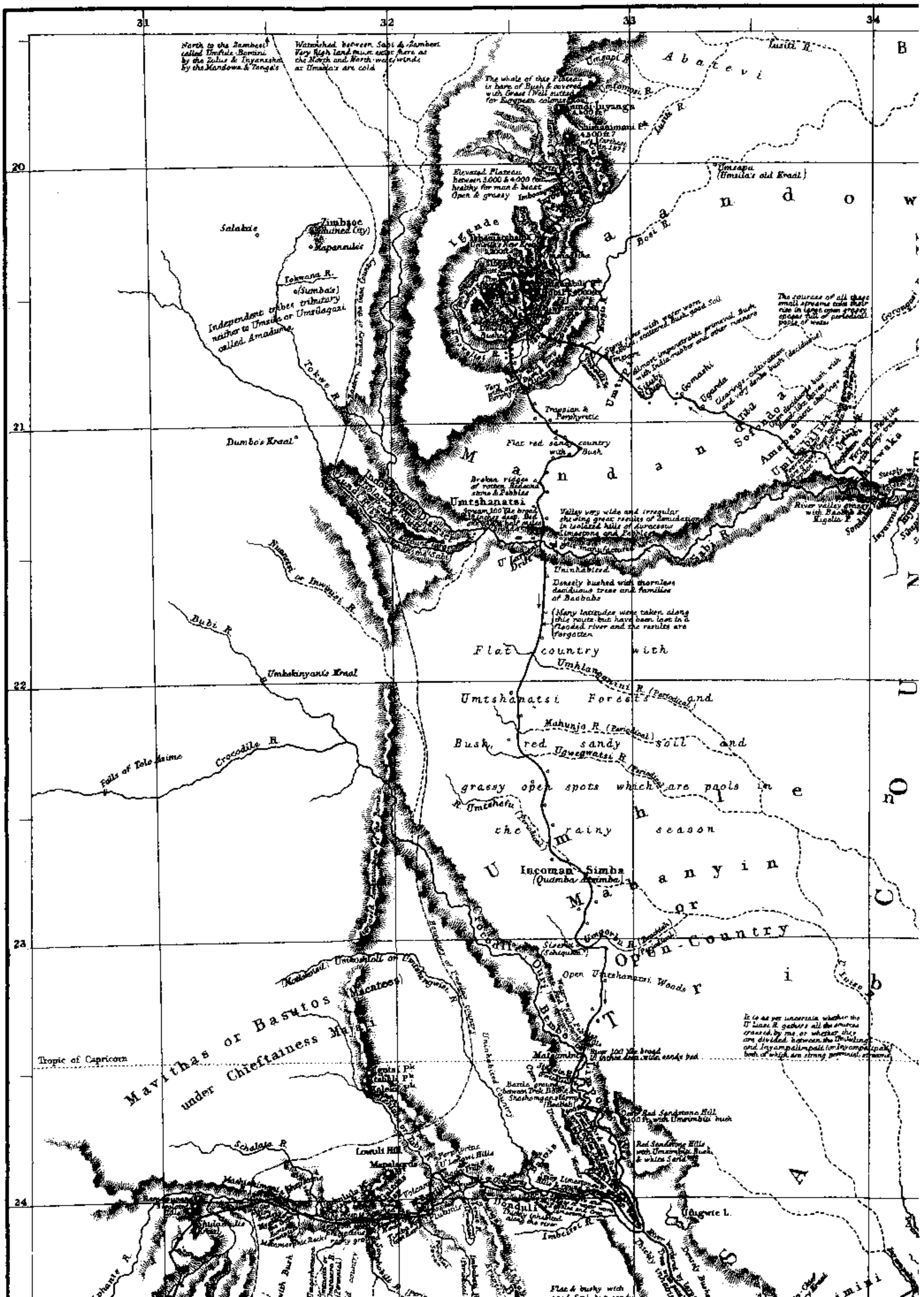
[Abridged.]

[*Read*, January 11th, 1875.]

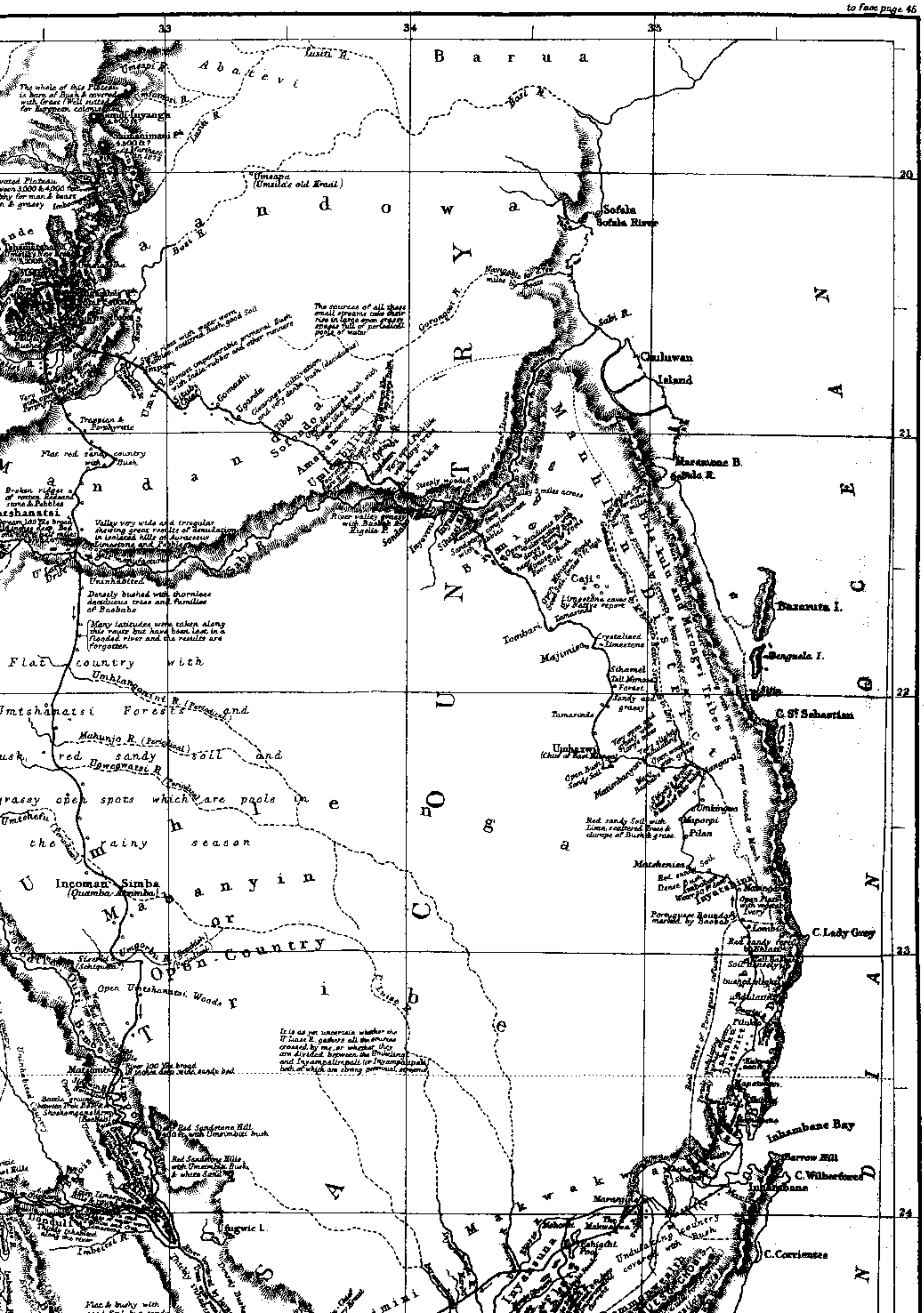
At the outset it will not be necessary to remark—as I shall farther on—upon Captain Elton's report of his journey. It is sufficient to premise that I differ from him in many particulars, especially as to the navigability of the Limpopo. Contemporaneously with my journey, of which this is an account, Mr. Carl Mauch, the noted German explorer, with whom I had the pleasure of travelling over some part of my former tour, discovered the ruins of Zimbabye or Zimbaoe, supposed to be the ancient city of the Queen of Sheba, which name is similar to that of the river Saba or Sabia, upon whose banks (or rather those of an affluent, named Tokwe) these ruins are said actually to stand.

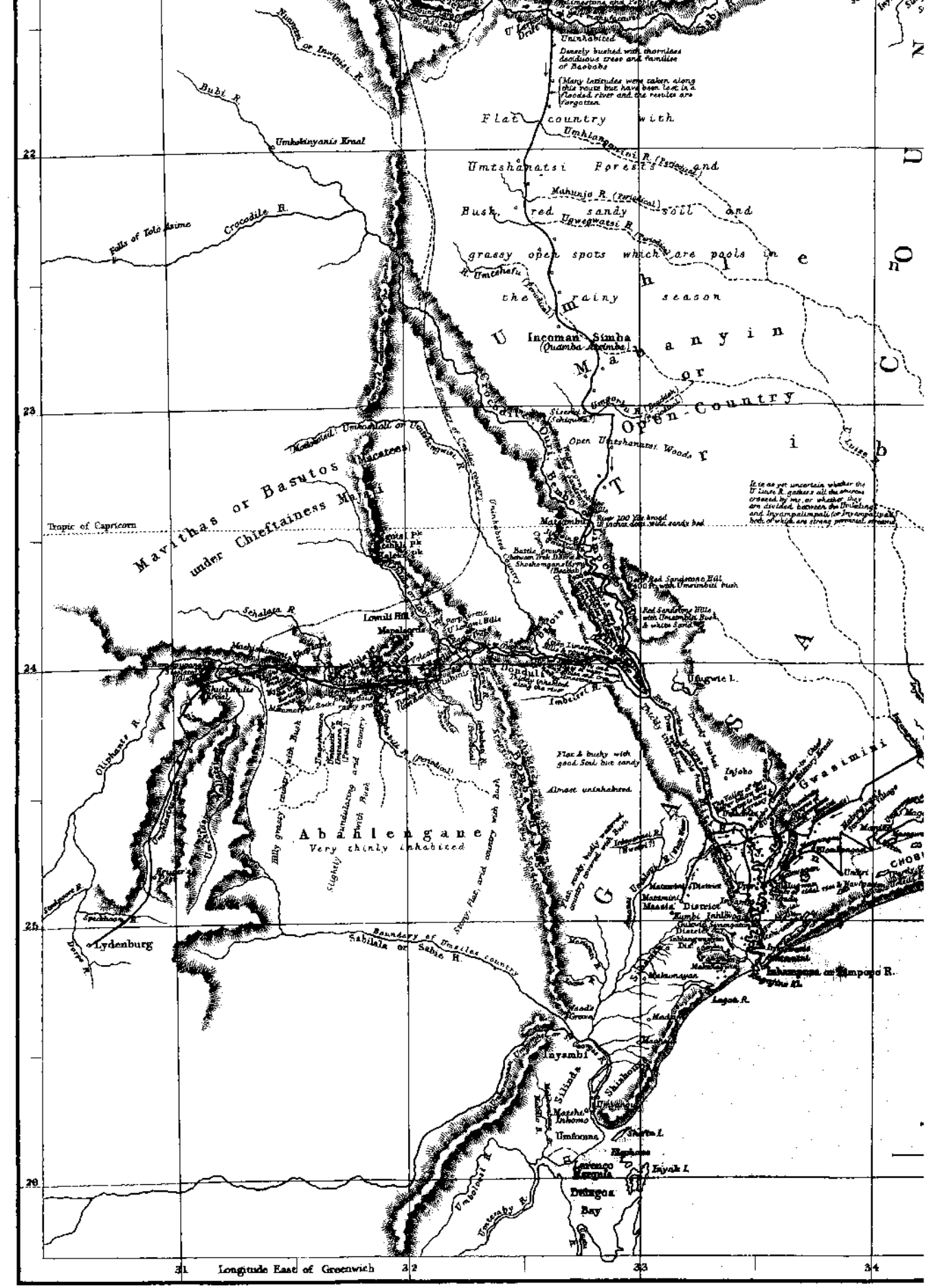
Mr. Mauch's researches place these ruins within 42 miles of my calculated position when at Umzila's kraal, which was determined by several celestial observations by the stars and sun, to be in lat. 20° 23′ s., and long. E. 32° 30′ by dead reckoning; about 25 miles to the east of the Sabi River. I neither heard anything of the ruins after repeated inquiries, nor of Mr. Mauch himself. I am therefore surprised to read in his account that he supposed himself only six days' walk from Sofala; whereas the natives informed me that I was at least eight days walk distant from Sofala, Mr. Mauch being still to the westward of my position by his own account, *i.e.* west of the Sabi. Unfortunately the lunar distances determining the true longitude of Umzila's kraal taken by me (being eighteen sights, or three sets east and three sets west), have been totally lost in a waggon, in crossing a flooded river in Natal, together with all my note-books except the map.

The following Journal is therefore composed entirely from memory. Such latitudes as are given are partly from recollec-

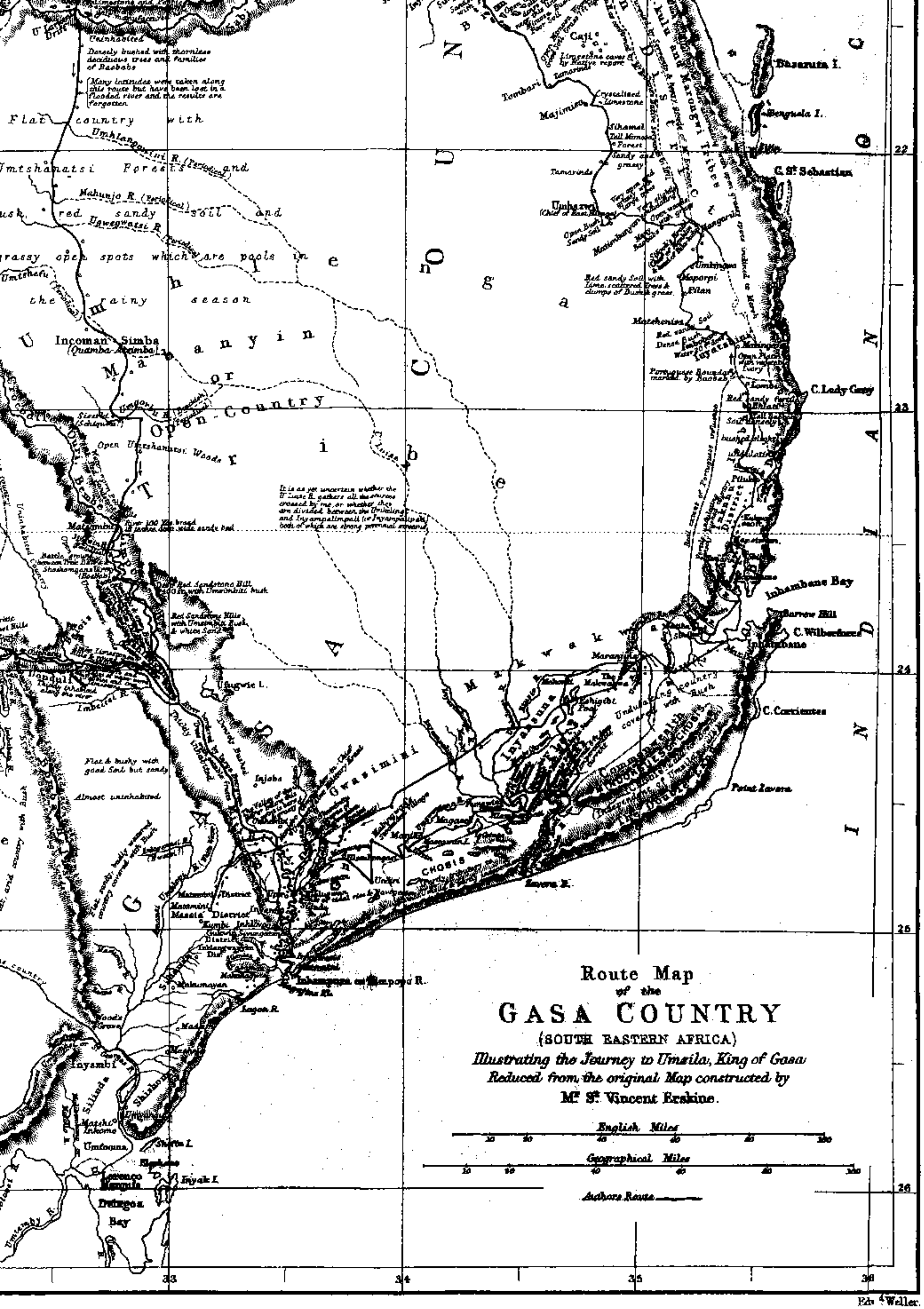


31
32
33
34
20
21
22
23
24
North to the Zambesi called Umfule-Bomini by the Zulus & Inyanzhai by the Mandowa & Tonga's
Watershed between Sabi & Zambesi. Very High land must exist here as the North and North-west winds at Umsila's are cold
Abatevi
Lusiti R.
Umsapi R.
The whole of this Plateau is bare of Bush & covered with Grass (Well suited for European colonization)
Umtamosi R.
Lusiti R.
Elevated Plateau between 3,000 & 4,000 feet healthy for man & beast Open & grassy
Umsapa (Umsila's old Kraal)
Bosi R.
Zimbaoe (Ruined City)
Mapanzule's
Salakai's
Tokwana R.
(Simba's)
Independent tribes tributary neither to Umsila or Umzilagazi called Amadume
Tokwe R.
The sources of all these small streams take their rise in large open grassy spaces full of periodical pools of water
Gorongosi
Gomashi
Uganda
Clearings-cultivation and very dense bush (deciduous)
Tropical & Porphyritic
Dumbo's Kraal
Flat red sandy country with Bush
Broken ridges of rotten Red sand stone & Pebbles
Umtshanatsi
Valley very wide and irregular showing great results of denudation in isolated hills of Auraceous Limestone and Pebbles
River valley grassy with Baobab
Sabi R.
Nuanetsi or Inwiwizi R.
Uninhabited
Densely bushed with thornless deciduous trees and families of Baobabs
Many latitudes were taken along this route but have been lost in a flooded river and the results are forgotten
Bubi R.
Flat country with
Umhlangantini R. (Periodical)
Umbekinyani's Kraal
Umtshanatsi Forests and
Mahunja R. (Periodical)
Bush red sandy soil and
Uswegwatsi R. (Periodical)
Crocodile R.
Falls of Tolo Azime
grassy open spots which are pools in
R. Umtshetu (Periodical)
the rainy season
Incoman Simba (Quamba Simba)
Umhlene
Umanyin
Open Country
Open Umtshanatsi Woods
Umboshlali or Umtshengwizi R.
Mavithas or Basutos (Macatees) under Chieftainess Majadji
Uninhabited Country
It is as yet uncertain whether the U'Lunz R. gathers all the sources crossed by me, or whether they are divided between the Umbelingi and Inyampalimpali (or Inyampalipali) both of which are strong perennial streams
Tropic of Capricorn
Matsumbi
Battle ground between Trek Boers & Shashomgan
Red Sandstone Hill 2000 Ft. with Umsimbiti bush
Red Sandstone Hills with Umsimbiti Bush & white Sand
Schalate R.
Lowalt Hill
Mapalagada
Porphyrytic U'Lombopi Hills
Hondoli
Imbeiisi R.
Umgwete L.
Flat & bushy with


33
34
35
20
21
22
23
24
B a r u a
Abatevi
Lusiti R.
Umtamadi R.
Busi R.
Lusite R.
The whole of this Plateau is bare of Bush & covered with Grass (Well suited for European colonisation)
Umeapa (Umzila's old Kraal)
Sofala
Sofala River
Y a n d o w a
Y R
N U
O
C
Garangwe R.
Navigable for 2 or 3 miles by boats
Sabi R.
Chuluwan
Island
The sources of all these small streams take their rise in large open grassy sponges full of perpetual pools of water
Stony rises with water worn Pebbles, scattered Bush, good Soil
Almost impenetrable primeval Bush with India-rubber and other creepers
Clearings, cultivation and very dense bush (deciduous)
Gomashi
Uganda
Sofundo
Amapan
Umtetsi
Tropic of Capricorn
Trappian & Porphyritic
Flat red sandy country with Bush
M a n d a n
Broken ridges of rotten Basaltic stone & Pebbles
Valley very wide and irregular shewing great results of denudation in isolated hills of Auraceous Limestone and Pebbles
Steeply wooded
River valley grassy with Baobab
Sabi R.
Uninhabited
Densely bushed with thornless deciduous trees and families of Baobabs
Many latitudes were taken along this route but have been lost in a flooded river and the results are forgotten
Flat country with
Umhlangonini R. (Periodical)
Umtshânatsi Forests and
Mahunjo R. (Periodical)
bush, red sandy soil and
Ugwegwatsi R.
grassy open spots which are pools in
the rainy season
Umtshefu
U m h l e n g a
U
Incoman Simba (Quamba Arimba)
M a n y i n
or
Open Country
Open Umtshanatsi Woods
T r i b e
Ungorlu R.
Inise R.
It is as yet uncertain whether the Ulinse R. gathers all the sources crossed by me, or whether they are divided between the Umbelingi and Inyampalimpali (or Inyampalipale) both of which are strong perennial streams
Matumbi
River 100 Yds broad 16 inches deep with sandy bed
Red Sandstone Hill Covered with Umsimbiti bush
Red Sandstone Hills with Umsimbiti Bush & white Sand
Battle ground between Tsik Bezi & Shoshongana
Bende
Imbelesi R.
Ungwie L.
S A
M a k w a k w a
Inyambane
Maranga
Mahosi
Makwakwa
Undulating country covered with Bush
Cajî
Limestone caves by Native report
Tombari
Majimisa
Crystalised Limestone
Tamarinds
Sthamel
Tall Mimosas Forest
Sandy and grassy
Umbazwi (Chief of East Maramba)
Open Bush Sandy Soil
Matimbanyane
Umkingwa
Maporpi
Pilan
Red sandy Soil with Lime, scattered Trees & clumps of Bush & grass.
Matshenisa
Dense Bush
Inyatshini
Portuguese Boundary marked by Baobab
Red sandy Soil Bush
Mangarane
Maramone B.
Sofala R.
Bazaruta I.
Benguela I.
C. St. Sebastian
C. Lady Grey
Inhambane Bay
Barrow Hill
C. Wilberforce
Inhambane
C. Corrientes
Inhambane District
N A C E G G N A N D N
Open Plain with wooded ivory



Published for the Journal of the Royal Geographical Society by J. Murray, Albemarle Street, London, 1875.



Published for the Journal of the Royal Geographical Society by J. Murray, Albemarle Street, London, 1875.

tion, but mostly from the map which I saved; and the longitudes from a remembrance of the dead reckoning. They can therefore have no pretensions to such exactness as otherwise might have been attained. In some cases my companion's notes have assisted me; but as they were not copious, I have obtained thence little more than dates and reminders.

It is my opinion that Zimbaoe is placed by Mr. Mauch at least 30 or 40 miles too far to the east; and that instead of being 164 miles from Sofala, it is distant about 200 nautical miles, as stated by the old geographers. Nevertheless, Mr. Mauch's route has filled up a great blank in the map of Africa, and doubtless his journey to Senna, whither I understand he afterwards went from Zimbaoe, will contribute still more. He started apparently about the 8th of June; but as I was at Umzila's from the end of March to the end of July, I should have heard if he had passed by near there; whereas I did not, though I was constantly inquiring for white travellers.

I had never ceased to regard the north of the Limpopo, and the large blank on the map between it and the Sabi, as my field of exploration. I had written to the Royal Geographical Society and to private friends, but with no immediate prospect of interesting them in the subject so far as to obtain the necessary funds, and beginning at last to despair, had arranged to settle down at home. In August of 1870, a deputation or embassy to Natal arrived from Umzila, King of Gasa (who ruled all the country from the Umkomogazi, or King George's River, at Delagoa Bay, to the Zambezi), making certain political representations, and requesting the Natal Government to send one of their officers to confer with him. The Lieut.-Governor, Mr. Keate, asked me whether I would undertake the mission, to which I readily consented. He informed Umzila's embassy that they could return to their own country, and that I should be sent thither, as I had formerly travelled in the southern part of his country, and did not dread the local fevers, or the necessity of travelling on foot; and as I was the son of one of the higher officers of his Government, I was fit to represent them.

Events did not go so smoothly as I had anticipated; but after numerous disappointments and delays, the Government agreed to send the expedition. They provided for it, however, in such an economical manner, that I was obliged to obtain goods for the purpose on my own private credit.

I sailed in the schooner *Congune*, on the 25th of June, 1871, from Durban. Our party consisted of Mr. Dubois, as my interpreter; Matthew Umzondo, a native, as our Induna, or head man; Ekaté, a little Zulu boy, servant to Mr. Dubois; and Samuel, a Zulu man, who spoke English, and was my factotum.

All our coin amounted to but 6*s.* 6*d.*; but as goods and not money are currency in a Kafir country, we were as light of heart as in purse. Calms and contrary winds delayed us some time; but after the usual accidents and incidents of a sea-voyage, we sighted Inyak Island at the mouth of Delagoa Bay on the 29th June, and came to an anchorage within the harbour of Lorenzo Marques, called English River on the charts. Here the water was calm as a mill-pond, and 8 fathoms deep within 150 yards of the shore.

On the north side, or right hand, stands out a mile or two a bluff of red, rotten sandstone, covered with clumps of bush and grass, alternating with patches of bare red sand; the base being strewn with masses of rock. A little cottage is perched upon the brow of a low range of hills behind the town; this is the Governor's villa, whence very lately an inroad of the natives made him beat a rather hasty retreat.

Farther to the left, a few coco-nut trees and some reed fences protect what appears to be huts made of dead palm-leaves and grass, and of mixed character; these are the abodes of the slaves or half-castes. The next object is the *place d'armes*, a dilapidated old barrack exposed on the seaward side, though a few rotten poles, with frequent intervals between them, make it appear to have been once protected by a stockade. On the crumbling walls are a few rusty cannon (mere dummies) with a brass field-piece or two, having large wheels, and very incongruously mounted high up on the parapet. This noble defence is built, like all the rest of the town, of unhewn and shapeless pieces of the soft red sandstone, fixed into a mass of mortar. As each layer has to get dry before another is put on, in this system of construction, the building must have been a work of time. The mortar used is of good quality, and prepared from shell-lime. The builders are all slaves, and of the (so-called) Tonga race.

The next conspicuous building is the Custom House, which has some pretensions to architecture, and faces a square of loose sand, supposed to represent a market-place; for it is said in the ancient traditions of the town, that a pillar once stood in the middle of it, an indication to the Portuguese mind that a market may be held around its base. An untravelled Englishman's idea of a market implies a crowd of persons; that of a Cape or Natal colonist figures out a man mounted upon a sack of potatoes or onions, or a load of wheat, crying, "5*s.*, 5*s.*, going for 5*s.*, gone for 5*s.*," or some such like process. But a market in a Portuguese-East African, fever-stricken town, is a very different affair, and consists of a few negro women sitting, lying, or leaning on a basket or two; cigarettes made with banana-leaf outsides; cakes, like Kafir arm-rings; doubtful eggs and hungry fowls;

bananas, and a little grain. There are no cries, plenty of gossip, and no pressing to buy. A description of this market will suffice for all those in the other towns along this coast.

This square is flanked by some very respectable houses, generally whitewashed, and with a broad coloured margin like that of a mourning envelope round the doors and windows and the house itself. The tops are flat and the roofs invisible, being constructed of beams overlaid with wattle and daub, over that clay, and lastly mortar. They are thus so heavy, that all the beams are bent inwards by the weight of the superincumbent material.

The beams are cut out of mangrove poles with an adze; the doors and windows are constructed of a wood resembling mahogany, procured from a low deciduous tree, called "Umcheni" by the natives, which bears numerous pods containing large black seeds or beans, with a curious red, wax-like cap or eye in the end of each.

On one side of the market-place stands the Viceregal palace, distinguished from the rest only by its having a few loose panes in the upper part of the windows. I entered this noble edifice and presented my credentials and letters of introduction to his Excellency Major Loe e Limas, a dark gentleman in a shepherd's-plaid suit, who saw fit to refuse me his permission to allow the expedition to proceed into the interior. This put an end to my visits, and left me an opportunity of employing myself, until the vessel left for Inhambane, in exploring the town.

From the market-square two streets lead off westward, lined on either hand with substantially-built houses, whose rooms are large and airy. The floors are all cemented over with mortar; and the furniture is solid and plain, generally consisting of a square table of native wood, a settee or sofa, and some cane-bottomed chairs. There were no attempts at display or even at comfort; bare necessaries seemed to fulfil all their furnishing aspirations. These streets lead to the native quarter of the town, consisting of a confused mass of straw or palm-leaf huts, fenced in with tall reeds, and having a dangerously inflammable appearance.

As there never were any wheeled vehicles in the place, and the old slave-traders and house-builders never dreamt of living in Africa for aught but greed or necessity, they never conceived the possibility of European colonies springing up in their vicinity, nor that vigour and health could be sustained continuously in European constitutions.

The future of Delagoa Bay under the Portuguese rule can be but decay and death; but under a Teutonic race, a more

glorious future may await it. That it will fall under one or other of those races by force or diplomacy there can be little doubt. Europeans will not be ruled by half-castes, except of undoubted equality, which at all events those of Portuguese extraction are not.

This mass of grass huts, reed fences, decayed forts, rusty cannon, small proportion of Europeans, and large half-castes, Banyans, Mussulmans, Brahmins, Tongas, slaves, and freedmen, sand dunes, narrow streets, flat-roofed houses, and coco-nut trees and stench, is enclosed by a wall about 6 feet high, recently erected and protected by bastions at intervals, mounting heavy guns and showing a rifle tower or man-house on each; only a poor, but yet sufficient protection against the savages around.

The principal articles of export are orchilla-weed, gingelly seed, pistachio nuts, beeswax, hides, and a little ivory. Not one-fiftieth part of the trade that might be done exists.

Delagoa Bay is without doubt one of the most magnificent harbours to be found in Southern Africa, and shares with Inhambane this pre-eminence.

Some of the native boats are constructed on the European model, with lateen sails; but the most singular are the boats made by the natives on the Usutu, and which are brought down to Lorenzo Marques by river. They are sewn together throughout, and approach more or less the European model; as the planking permits, more or less straight or crooked. They have a flat stern and peaked prow, and leak considerably, despite a plentiful plugging of clay; yet the natives perform voyages of 100 miles in them by sea with safety. The oars are merely long poles, with a round piece tied on to represent the blade.

At one time the slave and ivory trade must have made this an important station; but the abolition of the former, and failure of the other by the retreat or death of the elephants, have reduced the place to a most miserable condition.

The Portuguese appear to have kept behind their walls, and had no knowledge of the elevated country behind them, now known as the South African Republic, which consists of hill and dale, and is elevated, healthy, good for sheep and horses, and even now grows wheat abundantly. On its eastern slope all tropical productions will thrive. Extensive tracts of it are as much as 6000 feet above the sea, and within less than 100 miles of their magnificent harbour. In other places an insalubrious seaport does not spoil the interior trade of more healthy regions, so that the fever and other drawbacks need not have confined their settlement to being a mere trading station.

As the Governor refused me permission to proceed to the interior, I landed my heavy goods; and Mr. Dubois went ashore with the intention of ascending the Umkomosi River, which is on the southern boundary of the Gosa country, and thus arriving in Umzila's territory, and procuring bearers to convey him towards the King's kraal.

The *Congune* sailed on the 8th of July for Inhambane; but the wind veered to an unfavourable quarter, therefore we were obliged to anchor off Shefin Island, which is situate at the mouth of the Umkomasi (or Umkomogazi) River, called St. George's on the charts. We were about 2 miles off shore; but were enabled to put off to the island, and found a good landing place. The island is low, and covered with scrubby bush on a ridge of blown sand facing the sea. We met with the "spoor" of small bucks, and were not long in seeing the animals themselves, and managed to kill one. It was the small red "bush buck," called *incumbe* by the natives, and which is common in Natal. On the other, that is, the river side of the island, the sand is considerably coloured and impregnated with vegetable matter. A native garden showed, from the reaped stalks, that the sand was fertile enough to grow cereals. There is only one family of natives on this island—placed there, it is said, by the Government to prevent the British from setting up a claim to it as an uninhabited place.

These natives procure water from a well, or rather hole, in the sand. The western side of the island is washed by the outflow from the river. The water is brown and discoloured, apparently by the ebbing and flowing of the tide.

A very picturesque little bay forms an expanse of smooth water, surrounded on every side by bushy land. Another small island is in the middle distance; the steep hills ranging one behind another along the course of the Umkomogazi break the monotony of the horizon. Over all hovers deadly fever.

On the 10th, the wind being still unfavourable, we persuaded the captain to put across to Inyak Island, on the southern entrance to the bay. This had some interest, as the British Government lays claim to it. On the faith of this, certain land speculators from the South African Republic had obtained permission from the Home Government to squat there, and use the Usutu (Mapoota) River as a means of approaching their lands, which lie between the 26th and 27th parallels of south latitude, and about 100 miles in the interior. This so alarmed the Portuguese, that they sent a guard of soldiers to occupy the island, and built on it a substantial barrack. On the Imperial authorities being appealed to, the troops were ordered off, and

the disputed possession submitted to the arbitration of the President of the French Republic.

We found the anchorage good, with 7 or 8 fathoms of water to the west of Elephant Island. A small piece of sand, connecting it with Inyak, was generally dry at low water, and helped to form a most commodious and safe harbour.

Water can be obtained from the centre of this small island, which will probably one day be a station for supplying large vessels. Those measuring 400 and 500 tons might perhaps seek an anchorage nearer to the main settlement. Between Elephant Island and Inyak there is a wide expanse of shoal water, with a flat rocky bottom of sandstone. The appearance of the island from this point is picturesque, and the land high and steep, with bluff-like promontories about 250 feet in height, covered with clumps of bush.

We landed on this island, and found it well inhabited by natives to the number of at least 1000, in about 250 huts. Water is procured from a sort of marsh in the centre, and though discoloured is palatable. At the southern end of the island there is a deep bay, mostly dry at low water, but which makes a pretty picture when full. Cape Collatto, a high ridge of white sand, with dark patches of bush, and a faint blue line across the bay like a cloud, are all that can be seen of the mainland. This island is said to be perfectly healthy, and altogether a very desirable habitation. It is within a day's sail of the mouth of the Limpopo. Should the British ultimately become its possessors, it would, no doubt, soon be well occupied. The soil is not sufficiently good for profitable farming, but would produce fruit and vegetables for a small town. The shores might be lined with coco-nut trees, which would bring in a handsome revenue, besides ornamenting the locality. Any other tropical productions would thrive luxuriantly. The whole available surface has evidently been at various times cleared and planted by the natives; who complain that now they can find no more virgin soil to till; but if ploughed up, it might perhaps be as good as ever. At one time it was a very favourite place for cattle; and, in fact, served the present King of the Tongas (so called) or, more properly, "King of Makasan," as a grazing ground. There are but few cattle there now, as the King has taken them nearer home; but they still do as well upon it as ever. The surface is about 15 square miles, or about 7 long by 2 broad; but it is irregular in shape.

On the 12th a fair wind sprang up, which soon freshened to a gale; and at 3 o'clock in the afternoon we passed the mouth of the Limpopo, Bembe, Miti, or Inhampura River.

We sailed about 5 o'clock in the morning, and reached

it, therefore, in about ten hours. The captain purposely stood as close to the shore as the gale would permit him; the sea appeared to be breaking heavily on the bar. The sailing-directions for this coast are extremely meagre; there are many conspicuous land-marks, which would be of great service to vessels visiting it for the first time, if they were inserted in the 'Pilot,' or other recognised authority. At last we sighted Barrow Hill on the southern entrance to Inhambane Bay, and passed it about 9 o'clock A.M.

The next morning, as the pilot did not put in an appearance, the captain made sail under directions of Mr. Beningfield, a passenger who had often visited the place before. There is a leading mark over the bar, and then the bay trends south-westerly. The pilot joined us at last. We passed slowly up the harbour; on our left some islands, covered with bush and cocoanuts, seemed to be the abode of flamingoes; one flock of which birds, as they took flight one after another, the captain estimated at two miles long. On the right hand there appeared to be a sort of river running down from the north, which I was told was the mouth of seven or eight small streams which keep open the entrance into the bay, as there are no others flowing into this harbour at the lower end. Were it not for these, the sea would soon bar the entrance with sand. Coco-nut trees bordered the right hand shore as far as the eye could reach, and then the view was bounded by the horizon; the bay being so long, that even at the town the end is only just visible; but it is only between 3 and 4 miles broad. The town makes itself known by a large church and a mosque prominent amongst its buildings. The bay is backed by comparatively lofty wooded hills. Between Point Zavora and Cape Corrientes we had passed the "Double Land" in the Chobi country, a bushy range backed by a higher one, respectively about 500 and 600 feet above the sea. North of Inhambane Bay there is also some lofty wooded land, and a rather conspicuous solitary hill at Cape Corrientes, which is about 800 feet high. The town is a considerable place built upon a hog-backed hill, which is almost surrounded by the sea at full tide. There are a number of European Portuguese in the place, who give a somewhat higher tone to society than what exists at Lorenzo Marques, where depravity pervades all classes. There is not a white female in either place.

The country to the west of Inhambane consists of a flat, sandy, bushy tract, until it reaches the Limpopo, a distance of 150 miles in a direct line, but it is badly watered, and quite incapable of being utilised for any purpose, except for India-rubber, bees'-wax, ivory, and an inferior kind of gum copal.

These are the natural productions, and are fast diminishing in quantity; yet Inhambane still exports a great deal more than Lorenzo Marques, though the latter has the trade of two navigable rivers, and is upon the edge of as fine and healthy a country as any in the world.

The reason why this anomaly exists may perhaps be because Inhambane possesses the rule over a tract of country north and south of the town about 70 miles long and 15 broad; whereas the Government at Lorenzo Marques can call nothing their own beyond the space within the range of their cannon.

The whole of this country seems to be retained now under Portuguese rule by the wisdom and justice of a single man, John Laforte, honorary colonel in the Portuguese Irregular Forces, who has armed his retainers, and keeps out the Zulu tribe under Umzila (son of Shoshongaan or Manukuza); thus enabling a peculiar tribe of people to the southward of the town, the Chobis or Mindongues, to maintain their independence. This part of Africa was formerly so overrun and oppressed by these Zulus that the conquered aboriginals preferred the Portuguese rule, and therefore fled into their territory for protection. Colonel Laforte has already taught Umzila to respect him; and has not only preserved the town many times from destruction, but has also defeated Umzila in all his encounters with the Portuguese or their allies. Besides this strip of country around Inhambane, the Portuguese do not possess an acre that they can call their own outside the walls of any of their stations south of the Zambesi.

The ancient inhabitants of the country around the bay call themselves Basigas, and boast of having once possessed cattle, though they have none now. They appear to have been a harmless and peaceable people of the Chobi race, and easily overcome by the Portuguese, who must have found conquest south of the Zambesi an easy matter when the country was entirely peopled by these industrious natives, called generally by the Zulus by the contemptuous title of Tongas; though having several separate nationalities, and speaking distinct languages.

Since the invasion of the Zulus, the Portuguese are neither feared nor respected. Having pure negroes for troops, they are held in the greatest contempt by the surrounding tribes.

Inhambane is environed by coco-nut palms, which also surround the bay. This fine sheet of water is 20 miles long and between 3 and 5 broad. Supposing that 170 trees can be planted on an acre, and that the belt is an acre wide all round the bay, or say for about 40 miles, there would be 1040 acres, and at least 177,000 coco-nut trees. A large amount of coir-

fibre and oil could be obtained from such a plantation; but the coir is only used for home consumption, and no oil is manufactured.

Some fine sugar-cane is grown near the mouth of the bay, and a little sugar manufactured by very primitive appliances. Agriculture is not practised by the civilised inhabitants. The free natives grow an immense quantity of ground nuts (*Arachis hypogæa*), which they sell readily to the French traders for about 4s. the hundredweight, when shelled. These are exported to France, and are there manufactured into a salad oil. Besides these, the natives grow a luscious fruit called "cazu," which they make into a fermented drink. They also use the sugar-cane for the same purpose, crushed in a rude kind of mill.

The water at Inhambane itself is drawn from a well, and is very bad; but good drinking-water can be procured from a spring in the neighbourhood.

We landed, and hired a cottage in the middle of the native quarter.

The abolition of the slave trade virtually deported the wealth and aristocracy of the population away out of these towns, but the evil influences and lazy disposition attending that traffic long kept them in a state of listlessness and poverty. The finer edifices are sometimes pulled down for the stone and timber to be used in building little hovels, indicating the degeneracy of the present inhabitants.

At length legitimate commerce has inaugurated a new era; and Inhambane is rapidly rising from degradation, and seeking its place in the world of free trade and progress. Already the French and others are engaged in building houses, and giving to the place an improving tendency. The streets, like those of all other Portuguese towns, are narrow and crooked, and naturally sandy.

I presented my credentials here, and was told that my dark friend, the Governor of Lorenzo Marques, had written to say that he had taken the responsibility of refusing me leave to proceed on my mission; and that therefore the Governor at Inhambane must not exercise his own prerogative in the matter. However, the latter told me that he would certify that I had presented my passport, which would enable me to travel anywhere within his district of Inhambane. He said that it extended a considerable distance, waving his hand around 180° of the horizon. The sea bounds it to the east. He added with a cynical smile, that if I went among the independent native states he would not be responsible for my safety. As this was all the permission I wanted, I made preparations for a start.

I started on Monday, the 31st July, and went about 6 miles

at a good foot pace, to a large kraal, where I stopped for the night. My party consisted of twelve porters (six of whom carried the pieces of my boat), my interpreter, and my servant Sam. This Tonga kraal will serve as a type of all the rest; and therefore I shall describe it in detail. The huts are not usually here built in a circle as they are by the Zulus, but in a long line, sometimes only on one side of a cleared space, and sometimes on both. In the centre of the space there is generally a shady tree—a tamarind or an umkooshlu, of which latter there are two kinds, a semi-deciduous and an evergreen. This umkooshlu bears a green pod, in which there are many red seeds with black ends. These the natives boil until a fat exudes, which in cooling assumes the consistency and appearance of soft, white wax; it has no smell, and is much valued by them for greasing their bodies, as the cold does not congeal it, or give them the scaly appearance that the hard fat of animals would. The tree is always very much gnarled and branched, and, though attaining a considerable size, could never be utilised as a timber producer.

The virgin forest is purposely kept untouched around the kraals; and creepers of all kinds form a verdant tapestry apparently impervious. Sometimes the trees are so trimmed, and the kraal so fenced by brushwood, that it is impenetrable, excepting by the gateway, the pathway up to which is cleared of bush, and kept scrupulously straight and wide for half a mile, so that everyone that approaches can be seen beforehand. This is a precaution against surprise. When any suspicious visitors are espied, the inmates escape into the bush, where it is impossible to follow them. Over a few yards of the path next the kraal, the creepers and bush usually form an arch, either purposely or accidentally; the effect is, on the whole, pleasing, though produced by simple causes. First, the clean and broad path, with the hot sun streaming down upon it, is a change from the crooked and often obstructed way hitherto traversed; and then the grateful coolness of the small piece of arcade covering the entrance introduces the visitor to the friendly shade of the "talk" tree with pleasurable feelings.

Altogether the Tongas are an improvable and improving race. They consider war to be an abnormal state of existence, to be avoided or terminated as soon as possible; differently from the more savage Zulu, who regards it as the only fitting state of life, and despises the arts of peace.

Whether the Tongas are Chobis, Basiga, Bila-Kulu, Mandanda, or Mandowa, or whether they are under Zulu oppression or Portuguese protection, they are one and all industrious and

capable of improvement; possessing great agricultural abilities, and many rude attempts at manufactures.

Objecting to military discipline, and preferring to be governed by petty chiefs, whom they obey more from moral influence than from force, few tribes would probably be more susceptible of the religious instructions of missionaries.

The native huts are constructed with walls about 4 feet high, usually made of stout poles driven in side by side, and strengthened with rings of lianas, or withes, round the top to prevent them from spreading outwards. The roof is constructed upon the ground first of all, with reeds or sticks, radiating from a centre, and others added and secured by rings as it grows larger; it is then raised on to the circle of stakes forming the wall. The next process is thatching, which is performed in a similar manner to that practised at Inhambane. The upright portion is then daubed with mud, and the floor smoothed and smeared with cow-dung, where that is possible, which is only in a very few localities. The hut is then complete; the palace of the local Zulu king and the hut of the meanest Tonga are alike; they are a great improvement on the grass, bee-hive shaped huts of the true Zulus and the Natal Kafirs.

Early next morning I left this kraal, and passed over a very densely wooded and undulating country, with many ancient clearings and much present cultivation. A thick mist overhung the landscape, and the herbage was dripping with dew. The cackling of francolins, the piping of guinea-fowls, and the chirping of partridges, with many weird sounds of strange birds and the singing of others were heard on all sides. In every native clearing the passenger is startled by the "whirr" of partridges or francolins, or of the heavier guinea-fowls, as they rise from under foot.

About ten o'clock I reached the kraal of a principal man, and was entertained for the first time by the really effective music of these Basigas. Four or five native pianos, or rather harmoniums, were produced, and several drums, large and small, with rattles containing the seeds of the Kaffir boom enclosed in reed cases; also other calabash rattles fixed on handles, and a peculiar kind fastened above the calf and ankle of the right leg. The pianos started the tune, which formed a sort of accompaniment to the singing or air; the little drums had their own part and the big drums theirs; the rattlers of one sort and the leg-rattles also took separate parts. Instruments of one kind were played in conjunction with each other, each in their turns, and at intervals, as it was deemed necessary; a clash of the whole came in a chorus together. The effect was good, and the music very regular. At times it died away almost to silence, and

then gradually grew louder as each instrument chimed in, till the big drums, hand-rattles, leg-rattles, bass voices and chorus came to the final *crescendo*, and then as gradually died away again. I never heard the native music again so effective, partly because on our return the men were absent on a warlike expedition. After being thus entertained, I presented the head man with some beads and went on. We still passed through the bush, and excepting on occasional rises of the land, seldom caught a view ahead. At last I reached apparently the top of a low ridge, and found a native kraal, where we decided to stop.

I endeavoured to get an observation for variation of the compass here by the amplitude, as the country is so extremely flat that the horizon seems almost as level and well-defined as at sea. It gave 21° w. The instrument I had was a new "multum in parvo" sort of compass and whatnot of Casella's, sent to me by the Royal Geographical Society, and was not so efficient as an ordinary prismatic compass would have been; but as I could buy no instruments in Natal, I had to trust to it entirely; and having also lost my pocket compass, it had to do double duty for route and azimuth.

August 2nd, 1871.—Eight o'clock saw us on our road to-day. We skirted along the rises bordering the Inyanombi, and at one place made quite a considerable ascent. Unfortunately my barometric readings have been lost with my journals.

This elevation commanded a fine view of the country to the south and east, which seemed more undulating than to the west, and in fact quite hilly. The isolated conical hill at Cape Corrientes was a good landmark in the view. We evidently now began to approach the Inyanombi; for a high and continuous ridge extended on the right hand, under which that river seemed to flow. Our path skirted a similar rise on the nearer side, and crossed a marshy stream, in which there was a considerable depth of water. We arrived at about 11 o'clock at the Inyantamini stream, an affluent of the Inyanombi, and which forms Umzila's boundary. Shortly after, we crossed the Inyanombi itself, flowing from left to right, or northerly.

Here I took a meridian altitude, and determined the latitude to be 23° 57′ s., the kraal being that of Maranjin, brother of Mahonti or Makwakwa. The whole valley of the Inyanombi appears to be fertile and well worth cultivation, though the soil is red and sandy.

We now descended to a lower level, from which the sea had apparently not long (in a geological sense) retired. Many of the higher parts consist of a white sandy soil covered with bush, and others are open grassy plains. In these sandy wastes no

large game is found, and even birds are scarce. In some of the more open spots where there is water to drink, brindled gnus and zebras, as well as impalas, seem to be plentiful. Occasionally indistinct traces of elephants are seen, and ostriches are said to be found here occasionally. The scenery was, on the whole, monotonous, as the country is not well peopled, and the sandy soil adds to the feeling of weariness. The bush often completely confines the view to some 20 or 30 yards; and when an unusually high rise in the land gives a prospect ahead, nothing but a level horizon greets the eye, with an expanse of bush that seems to extend indefinitely on all sides. It will be needless to describe these features of the country over and over again, and the whole of it from Inhambane to the Limpopo is of the same character. Such elevations as exist are parallel to the coast, and are mere undulations of the ground, having been evidently formed originally on a sea-beach or desert tract by the action of the wind, sometimes out of pure sea-sand, and at other times from arenaceous soil of a red and more fertile description. They are universally covered by deciduous thornless trees, without any undergrowth, and with but little grass, and that of a poor sort. Patches of the vegetable ivory palm, of a stunted description, are to be met with, and occasionally one of the desiccated lagoons is completely filled by them, to the exclusion of all other vegetation. These trees seem to prefer a damp situation, but do not affect the black alluvial soil of some of these ancient lagoons. Where these prevail, they are found along those margins where the soil partakes partly of the character of the arid rises, and partly of that of the more fertile flats.

Soon after starting on the 3rd August, we came to the Eshigibi stream, having arenaceous limestone in its bed. This rivulet seemed to flow from left to right, and rounding a sandy ridge, disappeared in a very large open flat, whence it had no visible outlet. The water had no perceptible motion, but appeared to be clear and good. The natives said that it did not run beyond the flat, but the noble savage is apt to enunciate some very curious geography at times. We crossed it, however, and then skirted along the marshy open flat, making a somewhat southerly deviation from our usual south-westerly course. Across the flat to the south there appeared a white bare sandy ridge. On reaching it, the sand just at the bottom of the rise exactly resembled those minor ridges beneath the higher ones which are so often seen along this coast, and are quite dry. It seemed therefore that the stream must flow westerly to some outfall that I should ultimately have to cross; but on the return route it was discovered that my native informants were quite correct, and that the centre of this flat contained

some brackish pools of water which received the stream and had no outlets.

On the western side of this flat is an outcrop of arenaceous limestone; from its size and peculiar form it is well known to the natives, and is a conspicuous feature in the scene. It gives its name to the district of "Myatsaki." It is nearly round, and about 7 miles in diameter. There was fearfully hot work required to get over this glistening waste under an almost vertical sun in a cloudless sky.

The country here is very thinly populated, as it is subject to inroads from the Chobis or Portuguese natives whenever they are at war with Umzila.

This part of the country is inhabited by the Makwakwa, a powerful Tonga tribe overcome by Manukuza (or Shoshongaan), Umzila's father. They are at present under Mahonti, "the Makwakwa," but a faction seems to have split off and put themselves under Mabingwan, whose country will be described further on.

Beyond this flat is a tract of more than usually loose sand, over which an hour's walk brought me to the edge of another large marshy plain stretching away interminably to the south and east. I found only one miserable kraal there; but farther on there was a woman planting sweet potatoes in the rich alluvial soil, of which the whole flat is composed, and which terminated abruptly at the edge of the sand on the rise. This is the district of Inyansuna, which is named from this extensive piece of open ground.

Several interesting spots in this locality require further investigation, more especially the mouth of the Imbababa or Zavora River, and in another part of the country, the mountainous region between Umzila's and the Zambesi, including as it does the auriferous River Manica.

On these ridges the long pendant lichens hang down from the branches, and sometimes sweep on the ground. The soil now had a red and sandy character on the higher parts, and thither the natives seem mostly to resort, as the ground is sufficiently good for their purposes, and at the same time out of the general line of travel.

These natives seem to have a great objection to be near the water. Often their kraals are 3 miles away from any. They invariably have small clearings distributed through different parts of the bush, at long distances from their huts. These circumstances show the insecurity of life and property. Passing armies naturally seek the water, and therefore its immediate neighbourhood is bad for even the friends of these marauders. In case of surprise, the natives seek the bush, and trust to the

invaders' want of knowledge of their country for the saving of their corn. The native gardens, when first cleared, present a curious appearance. The smaller bushes and branches are cut down and laid around the roots of the trees; when this brushwood is dry it is fired, and the larger trees are killed. Felling trees is a work of some time with native tools, and is not undertaken. The crops are then planted amongst the dead trees. When the trees are sufficiently dry they are burnt down, and the white ants do the rest of the clearing in a few years. As in other countries, the same trees seldom spring up at first after these gardens (as they are called in Africa) are abandoned, though Umbinto woods are less easily destroyed than others.

Generally the country may be described as consisting of monotonous flats and slight rises covered with sand and bush, but yet affording new and changing scenes.

I tasted now for the first time of "buchem," the fermented drink made from the juice of the vegetable ivory palm called "lala" by the natives. In extracting this juice the natives first prepare a number of gourds, generally the shell of a species of *nux vomica*, called "Umkwakwa," but often those of the baobab fruit. Then they make a sort of conical cap of plaited palm-leaves, and sallying forth to their grounds, cut the leaves and young stems from the stalk, and sharpen the latter to a point. They then make a channel in the wood; stick in a little bit of the stiff leaf as a sort of spout for the juice to drip off by; hang the gourds over the head like a necklace, and cover the top with the conical cap. Men going solemnly about amongst trees thus prepared, moving a cap here and a cap there, seem like tree-worshippers who have dressed up their gods in this manner; but they are merely thus preparing a cool and palatable drink, resembling newly-made ginger beer. When in the proper state of fermentation it has the same biting taste as champagne.

August 4th.—Next morning early I crossed the Umkelingi River, near the kraal last named, and found the water about waist deep, with a clear and rapid current. There was some half-formed limestone in its bed. The native told me that his father was the chief of the district near its mouth, and that this river fell into the Eshicomi, that into the Utsharu, that into the U'Kweleli, and that again into the Imbababa, or in other words, that this river went by those different names at different parts of its course. This is the river marked by a dotted line on some maps, and called U'Luize, a name which none of the natives near the coast know at all. I particularly inquired for its name at the mouth, which the man said was Imbababa.

He further informed me that it was never dry there, but that at low tide, just where it went into the sea, it was fordable waist deep. This is so far of importance that it would give at high tide about 13 feet of water. Inside the debouchure he described it as wide and deep. This river is marked on maritime charts as the Zavora or Oro.

The land traversed by this river has quite a bold appearance; wooded bluffs obstructing the distant view to the east. A bathe in the stream was a great luxury; for except the Eshigibi and the Inyanombi, there is not another deep enough for the purpose between this and Inhambane. The country now began to change slightly; the hills becoming more defined, and the woods of larger growth. Open spots more frequently occurred, and water was found in ponds.

We passed through some densely wooded country, and made a slight descent to a regular camping ground under a large tree, where bones of the buffalo and other game clearly marked this as a favourite hunting spot. Water was found in a spring.

We then came upon some very extensive open flats, traversed in many places by the broad paths of hippopotami. In a pool were some ducks; but the water was over a man's depth, and too wide to get at the ducks in it.

About a mile further on we bivouacked for the night. Seeing some impalas (or pallahs) I stalked them, and got a good running shot at about twenty paces, but missed. The report startled a large herd of gnus (blue wildebeeste). They did not go far before their curiosity made them stop. I stalked them sufficiently near for a rifle shot; but having only a smooth bore, I was obliged to expose myself to get nearer across the open space, and they galloped off. The ground around the pond was quite bare with the tread of antelopes.

In the morning, a mile or two on our road, we came to a large marshy tract extending as far as could be seen. This was the bed of the Inyabulungu River, apparently joined here by a smaller stream on our side. Having been carried across the smaller stream, I skirted the larger one for some little distance, and found the path to lead through the reeds. The river contained nearly 100 yards of deepish water, the reeds growing out of it. I was as much surprised at the sight and size of this stream as I was at the body of water and swiftness of the current of the Umkelingi, a river not marked on the maps. Altogether I discovered on this trip about thirty considerable rivers or main drainages not yet found on any map, besides rivulets and subsidiary streams. The Inyabulungu is said to join the Umkelingi, and, as I afterwards only crossed one river lower down, this must be correct. Doubtless the

hippopotami here find deep enough holes amongst the reeds in which to wallow. The place apparently abounds with them, as their paths cross and recross each other in every direction.

After crossing the river, the path again entered the white sandy country. We passed many water-holes, some of which evidently had a perennial supply, as the water-lilies completely covered them.

Soon after starting next morning we came upon the Inyampalimpali, or Inyampalipali (sable antelope) River, a strong and rapid stream, about 30 feet wide.

How all these strong rivers rise so far in the interior, as I afterwards discovered they do, and that in a mountainless, flat, sandy country, is not at all clear. Though all the streams I crossed in my homeward journey a year afterwards were periodical, there can be no doubt they ultimately lead to these perennial streams. To which particular river these three streams go, I do not know, nor even which is the one called the U'Luize River. I believe the Umkelingi to be the principal one, as the natives at the sources mention the U'Luize River, though those nearer the coast do not know it by that name. Any traveller in these regions will do good service to geographical science by tracing the course of these streams between my two routes. Señhors Santa Anna de Rita Montanha and A. Texeira in 1856, while travelling from Inhambane to Zoutpansberg, crossed the U'Luize. The natives describe its bed as consisting of open marshy country with pools and grass here and there, and quantities of game, including giraffes and ostriches, in the higher parts of it.

On the ninth day I found myself at Umvuma's, at a place called Simini. It was only about 2 o'clock; but the kraal was large, and some fine evergreen trees (Umkooshlu) spread an inviting shade; so I determined to remain. These people were genuine Tongas, and seemed delighted to see me. The old chief was very chatty and communicative, and as he spoke Zulu, we got on well enough.

Soon after starting from this kraal we crossed a large open grassy flat with pools of water. After this we got no more water throughout the day's journey, which was a very long one. Toward the latter end of it we entered a very dense and heavy forest, altogether different from any hitherto met with; so thick, indeed, that I imagined there must be water near, but the natives said there was not. Here I saw the first "tsetse" fly on this journey, and the black-crested guinea-fowls, which I had never before seen.

Next day we had quite a pleasant walk through a thickly inhabited country.

I soon came to the brow of the rises that impend over the valley of the Limpopo, and had an extensive view spread out below. A faint blue line of low hills, on the other side of the valley (which lay beneath me as level as a bowling green), showed its breadth to be about 20 miles. To the left a gorge was evidently the channel of a stream running down to some large pools of water and masses of reeds that appeared to trend away to the south. Seeing such extensive sheets of water, I imagined that the river had overflowed its banks, but ascertained that this was the Shohozoli River, which emptied itself into the Limpopo above Sidudu's kraal, and which I remembered crossing at its confluence in 1868. The bellowing, or rather hoarse barking of hippopotami, was constantly heard. The base of the rise seemed to be bordered by marshy ground and pools of water.

As I stood there the valley seemed to be completely filled with native kraals, and here I saw the first cattle I had seen in the country. I did not think any Kafir country could be so thickly inhabited as this valley; though I have seen Natal of course, and the Zulu, and Amaswazi countries. It was densely inhabited when I was here in 1868; but it seemed never to have been filled up to a much greater extent. The rises on each side are sandy, and covered with bush. The valley is open, and covered with grass and cultivation. Descending to the plain I found the ridge, by the barometer, to be about 250 feet above the plain.

Skirting the marshy ground that lay between the foot of the hills and the alluvial deposit beyond, a few miles brought us to a deep and apparently stagnant stream. This is the Umsaguti, or Shengane River, which I had crossed at its confluence with the Limpopo in 1868. It is about 60 feet wide, and too deep to ford.

We reached Manjobo's at 9 o'clock on the 11th of August. Manjobo is the Commander-in-chief of the Biyin. He is of the Intshi-Intshi clan.

I sent to say that "Maskiu" had arrived for the second time, and that I should like to see him soon. He came that night, but did not speak to me till next day. I told him the purpose for which I had come, and that Mr. Dubois and the goods had gone up the Umkomogazi with the intention of coming here, and asked if he had heard anything of them. He said he knew nothing of my mission or of Mr. Dubois. I was rather astonished at this, as we had been directed to come to his kraal to obtain bearers from him for the goods. I had noticed along the road that none of Umzila's people had received any intimation of the expected arrival of a mission of

white people from Natal; but I conceived that the great man of the Biyin (as this country is called) would know all about it when I got there.

He admitted next day that he did know about the expedition, but that it was not sent through him; that he had nothing to do with it; and that if it was true that Umzila wanted to make friends with the white men, he did not.

15*th*.—I left to-day, crossing the river in a dug-out canoe, though I had forded it here on my previous visit.

We found plenty of inhabitants on the south bank, and struck across the bare grassy alluvial plain in a south-westerly direction. After going about 3 miles we found ourselves again near the bank of the river, at a new kraal which Manjobo is building there. Here, much against my will, I was obliged to wait patiently until the guides chose to come on.

Getting on the way again, we found the country more thinly peopled, and after about 4 miles more we crossed the Munuwane (salt) River, a semi-stagnant stream which, just at this point, could be crossed by a good running jump, but higher up and lower down spreads out into ponds and lakes. We now began to enter a country marked by low rises bordering the river, and found it poor and sandy, and covered with bush. The sand is sometimes apparently yet unreclaimed from the native barrenness of its marine origin, but is generally covered with open woods. Sometimes the Umcheni, the largest tree (except the baobab) in this part of the country, spreads its wide naked arms on high, and relieves the somewhat monotonous character of these shimmering sand-covered tracts. In one or two spots the bush presented quite a primeval character with its festooned lianas and damp shade. The Umcheni is deciduous, and has shining green leaves about the size of a crown-piece; it bears a large pod containing black seeds, about an inch long, each seed being capped with a red, wax-like artificial-looking end. The wood is used by the Portuguese for timber, and bears a very great resemblance to mahogany in colour, but the texture is slightly closer, and the wood altogether rather harder. The trunk does not present a very favourable block from its want of length and straightness, but suffices for the small demand for home consumption in the miserable Portuguese villages on the coast. It is an extremely handsome and lasting wood for cabinet purposes. The bark is suitable for canoes, as in fact are several others in this country, which is not the case elsewhere in Africa.

Next morning, after about two hours' walk, being attracted by some dogs barking on the other side of a swampy piece of

ground, we crossed to some kraals and found the first instalment of the goods there.

The loads continued coming into this kraal one at a time, some on women's heads; and on inquiry I found that they had come about three hours' walk from Massia's Kraal that day. My Induna, Matthew Umzondo, arrived at last, and gave me a history of the events that had happened since I had left Delagoa Bay, which was further added to by my companion Mr. Dubois on his arrival that evening.

Mr. Dubois informed me that he had never experienced so much difficulty and annoyance in his life as he had in getting the goods along on this journey.

He left Lorenzo Marques on the 8th of July in a launch (a boat of native construction) to go by water up the Umkomogazi (King George's River) to Silinda. He arrived there on the 12th. He sent a message to Umzimgulu, who used to live where Umyangu lives now, on the eastern bank of the river.

This Umzimgulu was the envoy that had been sent to Natal, and was to have taken charge of us on our arrival. A week afterwards he received an answer saying that Umzimgulu had gone to Umzila's place, but that his brother Umgishan would come to Mr. Dubois in a day or two.

He arrived on the 23rd, and canoes were produced on the 28th to convey the party up the river. The goods were landed near Umyangu's. It took the bearers three days to convey them through a bad swamp about 3 miles wide. On the 3rd of August he was enabled to make a start thence.

The system of carriage adopted being by levies of bearers (women included) from kraal to kraal, the longest day's journey thus made never exceeded four hours' walk; and oftener one hour's, or one and a half hour's walk only was accomplished. At this rate he completed the journey to Matamini's in fourteen days from Umyangu's, and forty-one from Lorenzo Marques; the whole of the goods not arriving until the next day after I got there.

The day they started from Lorenzo Marques they only made Shefin Island, and landed there.

The next day they attempted to get up the river; but as the wind was too strong, they were obliged to stop another day.

About 9 o'clock on the 10th they got off, but had to tack about to get up against the wind, and entered the actual mouth of the Umkomogazi at 2.30 P.M. They landed at 4 o'clock, as the water was too shallow for even this boat to get up. They proceeded again until 8 o'clock, and found the river deeper when once inside. They spent the night on Little

Shefin Island, about 5 miles up the river. Next day they made very little way; but on the 12th they passed several small islands. Lemon-trees were growing on the banks, and they procured a large sack full of the fruit.

At 2 o'clock they passed the last Banyan (East Indian Portuguese) station on the river. At 3 o'clock they passed the mouth of a creek from the north called Hlabawaan, and arrived at Guhlewaan, a kraal of the chief of Silinda, on the south bank, at 5 o'clock P.M. It is built on a sand hill called Umhoonweni. On the 13th they sent the boat back. On the 21st Mr. Dubois had a visit from the chief Matshi-Inkomo (beef-eater). Mr. Dubois then discovered that he should have gone 15 miles higher up the river, but that the natives had intimidated the boatmen, and made them stop here in hopes of extorting something from him. In this they were disappointed, since he was not to be frightened into giving, as would have been the case with a Portuguese.

On the 25th some of the native dug-out canoes arrived to convey him up the river. They are smaller and longer than those usually found on these rivers, and are consequently much more manageable affairs. Two men paddle them, one in the bow and one in the stern. They use long paddles shaped like marrow-spoons.

On the 28th he started again, but preferred walking along the river bank. He found many marshy streams, and other spots almost impassable. Here he saw many "mali palms," like gigantic date palms, but of quite a different family,—very handsome and umbrageous, and branching out from near the ground to a great height. This part is called the Silinda district. Next day he imagined he should cross the river to the destination of yesterday's boat cargoes; but found that a large island obstructed the passage. He had therefore to descend the river again in a canoe for an hour, and then ascend the other channel for two and a half hours to Umyangu's. After landing he passed through a deep marshy tract bordering the river for 3 miles. It was mostly up to his armpits. He estimated that the sea was only about 8 miles distant to the east, though he was about 50 miles from the mouth of the river. On the 3rd of August they started again, passing along the eastern edge of a large reedy and marshy flat, with pools of water, until they arrived at Maahela's, where they stopped. Next day, pursuing a north-easterly course, they crossed two swampy streams flowing to the west. This was the Showa tribe's country.

On the 5th, whilst out shooting, he crossed one branch of the Umkomogazi again (which is here not more than 25 yards

wide at the utmost, but deep) on to an island which he found to be covered with large ponds having hippopotami in them. He describes the natives as growing plenty of sugar-cane, of the variety called "China" in Natal. Next day they crossed two marshy streams flowing westward, and the next day four more.

On the 8th he crossed five streams flowing as usual to the left, or away from the sea. This part of the country, or Inhlangwanyan's district, he describes as being the best he had seen; it is open, grassy, and park-like.

On the 12th he passed two more streams, crossing as usual on fallen trees as the bottoms were not firm. They flowed westwards.

The whole of this part of the country was covered with bush, sometimes very dense, but mostly more open.

On the 16th we met, and his proceedings now merged in mine for many, many weary months to come. His ideas with regard to the Umkomogazi, or King George's River are, that though the mouth is only deep enough to admit boats, the channel itself is deep. It never exceeds 100 yards across, and is not 600 as stated by Captain Elton. The navigable part extends for about 70 miles, but at the greatest distance is only a few miles from the sea, as it runs parallel with the coast line from the north after the main stream (which rises near Lydenburg) has burst through the Bomba Mountains. The main affluents of this river are the Sabilala, the most northerly; upon the upper waters of which gold is now being found. It joins the parent stream below the Bomba Mountains, that is, on the eastern side of them. The next is the Umgwenia, which joins the main stream just at the passage through the mountains, and the last is the Umkomasi, which falls in above the Bomba on the west side. All these tributaries, and the river itself, rise in the neighbourhood of Lydenburg, at an altitude of between 5500 and 6000 feet above the sea, and in one of the finest and healthiest countries in the world. The coast lands, drained by this river, are fertile enough, but the climate is too unhealthy for European colonisation. Except for depôts of goods and produce *in transitu*, or perhaps for sugar and other tropical produce, they will never be valuable.

The day before we met Mr. Dubois, he had been joined by Dabulu, the second in command of the Natal Embassy, who had just come straight from Umzila with orders to bring us up to his kraal, and to levy bearers. Our complaints of this system of carriage were loud and deep, but he said it would be all right when we got to Manjobo's kraal. It was not until the third day after the baggage had arrived that we were enabled to

make a start. And then the bearers threw down the loads at the next petty chief's place, about 3 miles on.

We were enabled to make a further distance of 7 miles that day, but left several of the loads behind for want of bearers.

The succeeding day we were only able to cross from one rise to another, through a swamp, to the kraal of Madolo. This was a large one, with a capital old chief, who killed two goats for us.

On the 21st of August we were enabled to reach the Limpopo again, after what would have been two hours' walk if the bearers had gone all the way. We struck it about 4 miles higher up than where I had crossed on the downward journey. Skirting along its banks for about an hour-and-a-half, brought us opposite to Manjobo's. We noticed many spots in the river, even in this 5 miles' stretch, where the sand-bars would make it quite impossible to take a row-boat over them. Here, as elsewhere in this account, I can give an unqualified contradiction to Captain Elton's statement that the river is navigable "even at this, the dry season of the year," though I will do him the justice to say that he never saw the lower part of the river; his accounts refer to it higher up.

Arriving opposite Manjobo's, I determined to put my knowledge of the river to the test, and therefore ostensibly had a bathe, but privately determined to ford it. I then waded right across the river to the other side, and found it up to my ribs in the deepest place. The river was so altered since I was last here in 1868 that I should not have known it. Then it flowed in one clear stream between the sandy beaches on each side; now it was divided into three streams by low islands, the strongest being close to the left bank; but the main body of water passed near to the right bank, where it had cut quite a deep channel for itself out of the drift sand. The alluvial soil of the precipitous banks that apparently confine the river in summer were now some distance from the water on that side. Above Manjobo's there is a fine stretch of deep water, about 2 miles long and 400 yards wide, though just at the crossing the stream is confined to about 50 yards, and about 4 feet deep. A little below this it shoals to about 3 feet in a very narrow channel. The latitude of Manjobo's being 24° 41′ s., and the mouth of the river 25° 12′ s., the whole difference of latitude is 31 miles. As the difference in longitude is not more than 5 miles east, the whole distance in a direct line is 32 miles, so that there is not much margin for navigable water here.

The loads came in by driblets until the 24th, when my Induna arrived with the last. It was quite useless for me to wait until all the goods were forwarded on ahead, so that we

adopted the plan of getting together as many bearers as possible, and going with the first loads, at the same time leaving a message that we should not wait for the goods, but hurry on to the King and inform him that they would not carry his things.

Having now been recognised in my proper official position by the King's messenger, I told Manjobo that I expected to be made welcome to the country.

Several changes had taken place since 1868. At that time wood was as scarce near the river as it is now; but now there was a tolerable display of thorn trees near to the kraal, which I remembered noticing when they were growing in 1868. They were then five or six feet high, but now they were considerably larger. The country also seemed to be more traversed in all directions by paths, and cattle were to be found at every kraal on the left side of the river; whereas formerly there were but few domestic animals of any kind. The valley was, in 1868, almost uninhabited below Sidudu's, and even in the more thickly peopled parts cattle were scarce. Now the kraals were thickly dotted over the plains, and cattle were seen at every one of them.

We spent the time, until the month of September, in making up the canvas covering for the double canoe I had brought, and oiling it, making the sail, and so forth. During this time we also made inquiries as to our route, and the nature of the country we should have to pass through; and we then first heard that the country from the Limpopo to the Zambesi, due north from here, was one immense bush-covered plain, without mountains or even hills.

Being informed that there was some game in the neighbourhood, we went for a day's sport, but after walking a long distance to the north-west, and crossing a large pond, we saw only a few quaggas, and returned. We found the country here to consist of large, open, and once marshy spaces, but now quite dried up.

To the north was a considerable elevation, which the natives informed us was on the left bank of the Saguti River. Returning by a more easterly route, we came upon some brackish ponds, which evidently drained into the Saguti. To the left there was a very much larger one, where many water-fowl and waders of all kinds were disporting.

The soil throughout was of a very superior kind, and totally untilled and unoccupied by the natives, who seem to have preferred the river valley nearer the coast.

Following a well-beaten path, we unconsciously found our way to "Umkontwain," the Royal Military Kraal of Biyin. It was a very pretentious place. The cattle kraal was a very

creditable construction, built of thick, straight poles, driven into the ground, and crossing each other diagonally, like a number of the letter X placed side by side, and forming such a dense stockade that the cattle could not be seen inside. There was probably room in it for one or two thousand head, but it does not usually contain more than a hundred. There were not many huts there, as it had been only lately erected; but we were informed that it was intended to vie with Panda's royal residence, "Nudwengu," in the Zulu country, in which the huts are said to be six rows deep.

We were hospitably received, and asked into the great hut, to be entertained with beer, or *tyuala*, as it is generally called, which is a fermented decoction of the meal of the red *Holcus Sorghum*, or "Mabele." The hut had a floor polished like black marble, and nearly as hard. As usual with the Zulu section of the inhabitants, the door was made so low and small that one could barely get in easily on hands and knees, and when once inside nothing could be seen for some moments, until the pupil of the eye accommodated itself to the gloom. After our entertainment, we returned through open scrub, over red soil, and among euphorbias. We noticed quantities of a peculiar and beautiful pink flowering plant, very plentiful in this country, but with which botanical books are not yet familiar. The natives call it "Shimormyan," or the little baobab, and it certainly sometimes bears the same peculiar appearance that some of those gouty-looking stems do when seen in their winter nakedness; but instead of putting off its holiday attire at that season, as the baobab does, it wears a gorgeous livery of pink flowers, very much resembling the rhododendron, but brighter in the contrast of the red ribs of the petals, with the pale pink ground. They are quite leafless at all seasons; and when not in flower, are bare, dead, plethoric-looking things, growing up in a meaningless sort of way, from their bulbous roots. In favourable, sandy situations they attain to a height of about 7 feet, but usually they are about 3 feet high. The natives say that every part of them is very poisonous. They are pretty freely distributed over the whole region of the Umhlenga country and Limpopo, even to near Lydenburg. They are also found in stony spots as far south as the Pongola, in Zulu Land. Seed vessels are sometimes found upon them, shaped like an elongated military frog-baton, and of a dark purple-red colour.

Fish are plentiful in the Limpopo. Doubtless a naturalist furnished with proper nets could find sufficient objects in the undescribed and unknown inhabitants of the waters of the Lower Limpopo to form material for a good-sized volume. The river teems with aquatic birds.

We started from Manjobo's place on the 4th of September to go to the sea, which we expected to reach on the following day. We found the river so shallow, and the channels so tortuous, that we could not avoid running aground once or twice in rounding sharp corners, though our craft drew only a few inches of water. Sometimes a stretch of deep water afforded a little fair sailing; but the north and north-west winds, being only morning breezes, died away about 10 o'clock, and were followed by a calm. We then took to the oars, and found rowing to be harder work than we had expected. About 2 o'clock the sea-breeze began to spring up, and was usually adverse.

When in some bends of the river with the wind a-beam, we made good way, but in others we were delayed, and in one or two places there was not more than 2 feet of water. During the first day's journey the river was obstructed by sandbanks, often very crooked and altogether unnavigable at this season. The second day's voyage presented but little change. Sometimes hippopotami and crocodiles were met with and fired at; many water-birds and waders were seen. The natives were extremely astonished to see a boat impelled by a sail. They followed us for miles along the banks in dense crowds. Mr. Dubois interpreted many of their exclamations of surprise, such as, "There go the fathers of ships!" "There go ducks!" "There go fish!" "There go birds that sail on the waters!" "There go the children of the sea!" In the afternoon we passed the confluence of the Shohozoli and Shengane, or Saguti rivers. Towards the afternoon of the seventh, we crossed the limit of the tidal rise, which also limits the navigability of the river, and soon afterwards passed "Sidudu's" reach and island. Under the western bank of the river, and between it and the island, there are 7 feet of water, though the channel is not more than 300 feet across. After this there are 2 fathoms and upwards.

About 4 o'clock we put up at Inyama's kraal on the west bank, about 2 miles directly south of Sidudu's. Here I caught some fine *silurus*, or "barber," as they are called in Natal. The banks were now muddy and the water discoloured. The river was, however, a fine open sheet of water, extending 300 yards across from bank to bank, and from the swell that the wind got up, evidently continuing the same to the sea.

The next day, taking advantage of the morning breeze, we made good progress, but found the river extremely tortuous. The natives still continued to follow us, expressing their astonishment in their very original manner. It was evident that they had never seen a sailing vessel on that river before. The lead showed from 2 to 4 fathoms during the day.

Sixth day.—The soundings were 4, 5, and 6 fathoms, and

after this they varied between 5 and 6 to the sea. We saw some hippopotami, and thought that we had killed one, but did not get it. It ultimately died, and afforded the natives a feast.

The banks now began to show very evident signs of tidal action—sometimes by large stretches of fine mud left at low-water. The day was intensely hot, and during the middle part of it the usual calm occurred. We began to get very thirsty at last, when one of the "children of nature" kindly bethought himself of matubu, or Kafir beer, or rather, small beer. He paddled off in a dug-out canoe, and gave us a calabash full. This revived us until we got to a reach in the river that enabled the sail to be used, a grateful relief.

At last we reached Sivungatana's place, where I swam the river in 1868, and then a southerly stretch extended to Intshi-Intshi. Rowing down this against the wind took us a couple of hours. We arrived there at last just as the land party were crossing the river. This was the best day's voyage that had been made—altogether about 18 miles.

Intshi-Intshi in 1868 was uninhabited, but now we found the young chief—the Intshi-Intshi—at his kraal, where he had four or five cows. I asked him where all the people were in 1868. He said that all these people on the lower course of the river had fled into the Chobi country during the civil wars between Mawerwe and Umzila. Such cattle as they could get away they took with them, but, he said, they could not get them back again. The Chobis claimed nearly all. He had been eight or nine years living as a refugee. He averred that the most cruel tyranny in one's own home was preferable to living on the charity of others.

When I was here in 1868, I was obliged to skirt this reedy flat, and ascend the hills which are visible to the east, as there was then no path near the river; but now I was informed that there was a good path all the way to the sea, and that the country was thickly inhabited.

Starting early on the seventh day, we found the morning breeze carried us well through the fine open water of the river, and the outgoing tide added considerably to our way. About 2 o'clock the sea-breeze setting in stiffly made the wavelets too rough to beat against, and therefore we put up for the day at Zihlangu's kraal on the right bank of the river. The ground was being newly dug up, and the huts were evidently only recent erections. We were informed that the opposite bank of the river was as yet uninhabited, being more marshy than this. Here the water of the river is decidedly brackish, but the natives procure drinking-water from the ponds and almost

stagnant creeks flowing towards the base of the hills to the east, where the Inkuluzaan runs. The banks were now low and apparently marshy. On the west side small creeks were occasionally passed, but on the other bank the path was uninterrupted by any streams. Having been hospitably entertained as usual, we prepared for the last day's journey; but as the canoe might not be able to reach the sea before the ebb-tide, I determined to walk down, as I particularly wished to ascertain the tidal hour, and mark the rise and fall.

As the river wound about considerably, we struck across the grassy flats for 5 or 6 miles, and found only a few huts just being erected on the magnificent alluvial soil, which bore every appearance of being occasionally inundated. About 10 o'clock we came to a peculiar sandy ridge, running out into the plain from the main ridges in a very curious manner, for some 4 miles. From the appearance of some arenaceous limestone, it would seem that a substratum of compact limestone forms the spine of this sandy ridge, which has thus resisted denudation or degradation to the general level of the alluvial plain. Fresh-water springs are found along its sides, and the ordinary scattered bush of the country covers it; showing that it is part of the original line of blown sand which existed when the sea occupied this ancient delta. The presence of fresh water and the elevated site attract the inhabitants that are found plentifully upon it. They are Tongas; few Zulus being found much south of Sidudu's.

Buffalo spoor was seen, and many bones and horns were found strewn about the kraal.

Towards the sea, the high sandy ridges limited the view, and below them mangroves lined the banks of the Inkuluzaan river, as I supposed it to be. Passing over this rather picturesque spot, we again descended to the flat, and approached the river. The tide was now nearly out; and the current running along with a swift, smooth, determined appearance, seemed rather to embarrass some hippopotami when they got into the deep water. They apparently preferred to get a footing on a convenient mud-bank thrown down by the Silandaan river, which debouched into the main stream on the right bank, just above Matamini's kraal, where we had now arrived. The view from this kraal is the most picturesque that I had seen since I landed at Inhambane. The high ranges bordering the sea were dotted with clumps of bush and open grassy spots, breaking the monotony of this generally flat country. Directly opposite, a red sandy hog-backed hill, called Inandine, is very conspicuous, and appears to be connected with some broken country extending down to the sea; the view of which, however, is cut off by a range of hills,

one point of which is of considerable height, and capped with red soil.

The river itself has a margin of high mangroves, looking like fir-trees at a distance, and its wide and meandering tributary, the Silandaan, in the middle distance, backed by the green marshy plain and brown grassy hill, make a pleasing effect. On the left hand down the river, the rises are mostly covered with dense scrub, and have large bare patches of white sand glimmering in the sunlight.

The last ferry is situate at Matamini's, and is the one generally used by travellers between Inhambane and Delagoa Bay. I believe it to be the last ferry for practical purposes, though there is one more about 3 miles nearer the sea on the east side of the Inkuluzaan river. We crossed at Matamini's, and found two small creeks running into the river, as we passed along its banks for 3 miles. We then turned across the flat, and came upon a clear stream of water, completely filled and overshadowed by a kind of palm-tree, somewhat like gigantic grass, covered with a kind of large, blunt, thorn-like knob, and having roots standing out from the ground like those of the screw pine.

The water in this stream was about 2 feet deep and 50 yards wide, and was quite fresh. As I waded through it, with its luxuriant growth making over me a twilight gloom, and overrun by parasitic creeping ferns, throwing their slender offshoots across the beams of sunlight, it gave me an idea of the formation of the coal-beds when the world sweltered in the vapour-bath that is so congenial to this kind of vegetation. Immediately on crossing it I ascended the hill, and found the soil on the top red and sandy, but fertile. A broken and picturesque country now extended around. Away to the left and behind, the river ran between dark, straight, fir-shaped mangroves, gradually widening until a sand-spit on the left bank suddenly contracted it as it entered the inner bay behind the bars that impede its entrance, as the surf plainly showed. Goats were at all the huts, and several springs were passed on the way to the sea-shore. Skirting the ridge and descending to the marshy plain, I reached the bank of the river just as the tide was at its highest, at 4.34 P.M., so that that may be considered the "Tidal Hour," or "Establishment of the Port," as it is called in navigation.

Having watched it for some time and marked the place, I was glad to return inland to get away from the sea-breeze, which was now blowing cold and strong, and lashing the waters of the lagoon into waves.

On returning to Pazaman's kraal, the first I had reached on

the top of the ridge after crossing the stream, I found my companions had arrived.

Notwithstanding a severe attack of fever which I had here, we moved on to Magajin's kraal, the nearest to the sea, and which is situate at the back of the hill I have named "Unbeliever's Mount." The gardens passed through were apparently fertile. This district is called Makanagwin, and that on the other side, Intshi-Intshi.

There were a few goats here, a couple of which the natives presented to us. I ascended the highest points of the hill near here, but left the still higher one, called "Keate's Cap," unascended. The view of the bars was complete. The sandy spit called Erskine Point, running out from the east shore, appeared nearly to join the west bank. From its point a bar curved southwards and westwards, and ran outwards, which at low water is almost dry. Further to the east, down the beach, another bar with still heavier breakers on it seemed to enclose the smaller one, and ran out beyond it, both ending some distance short of the opposite shore. Inserted like a wedge between them was a very broad and heavy line of breakers, extending from the western point called "Clarkson," to within about 50 fathoms of the broken water of the opposite shore. There were no breakers through a space of about 10 fathoms in the centre of the outlet, the great waves rolling in curled over the bars and broke; but only made a great heave in the channel, and continuing forward unbroken, and tumbled over on the inner bar, the channel through which being near to the western shore, was protected by the outer bars.

An unbroken channel was invariably kept open through all the bars even during stiff gales; but it was unfortunately rather tortuous, and in fact nearly the shape of the letter *S*. A vessel entering would go through the first bar leading due north, until she passed completely through it. Broken water would then be directly in front of her, and she would have to turn towards the western shore until she sighted the opening through the inner bar, a few fathoms only, and then turn sharply round, keeping the centre of the channel in a N.N.E. course, until the entrance of the true river is reached. There would be 4 fathoms of water after passing the mouth of the inner bar, and the same in the river itself.

As my boat was not fit to go out to sea, even if I could have got a crew (which I could not), I cannot speak as to the depth of water, but I should think there were 3 or 4 fathoms to be found over the bars.

We had a stiff north-west breeze once whilst there, and the passage through the bars was still unbroken. Great caution

would have to be exercised in entering the river, as a strong current sets out at ebb-tide against the western shore (within the inner bar), which would inevitably run a vessel in it, as she has to approach within less than a stone's throw of it. The vessel must on no account enter except just before flood-tide, and not when the tide is running down. When once within the river there is plenty of water, even up to Inyama's, for a 200-ton vessel; that is about 60 miles by water. It is altogether a more navigable and larger river than the King George's (Umkomogazi), or the Mapoota (Usutu) in Delagoa Bay, and is singularly free from islands. Beyond the one at Sidudu's, which can scarcely be called one, there is not another on it, except a small patch of reeds just below Inyama's. As far as I can ascertain, the King George's River is never more than 200 yards, and usually only 100 broad (in this matter I again contradict Captain Elton's account); but the navigable portion of the Limpopo is usually between 300 and 400 yards across, and the upper part of it in the dry season 100 and 150.

Looking inland, the whole of the alluvial plain of the Limpopo can be seen in its green, grassy covering stretched out beneath.

On the right bank, between this river and the hills, is a flat, covered with reeds and palms, very marshy and unhealthy, I should think. Farther inland, patches of reeds betoken an occasional pool. On each side are sandy and bushy rises, of a dark grey colour in their winter nakedness, and far away on the faint blue horizon a little roughness is seen, indicating the elevations about the Saguti River. It is one of the richest valleys in the world, calling aloud for capital and energy to develop it. On each side of the river alluvial patches form the beginning of those bush-covered and worthless limestone plains that fill up 90,000 square miles of this part of South-east Africa. Worthless they are to all but the Kafir, who ekes out his miserable crops with rats and such other vermin as nature grants, and with such game as is found in the more favoured spots. To the left, Inandine and the other high hills near the sea complete the panoramic circle.

This point is nearly 450 feet above the river; but "Keate's Cap" is considerably higher, and is a well-marked point for maritime purposes. Two caps of bush, with a bright red, sandy patch between them on its very summit, make it a very conspicuous landmark. It is, in round numbers, about 600 feet above the sea. These hills, together with "Elton's Hummocks" on the large sandy flats at their bases, and the bare blown sand on the eastern shore, rising in one place to a high conical hill,

called Dubois' Dunes, mark the embouchure of the river beyond the possibility of mistake.

The latitude, as determined from the natural horizon in 1868, was S. 25° 15′; but the mist from the surf, and other circumstances incident upon such an observation from the shore, doubtless affected the result. Captain Owen's determination was 25° 11·6″, a difference of 3·4 miles. On this occasion the mean of several stellar and solar observations exactly agreed with the celebrated surveyor's determination, namely, latitude S. 25° 12′.

The longitude by lunar distance could not be determined on my former journey on account of adverse circumstances; but on this occasion was found to be 33° 45′ E.; disagreeing, therefore, with Captain Owen's chronometric determination by 14′; his being stated 33° 31′ E.

I pretend to no great practical acquaintance with the observation by lunar distances, so that doubtless Captain Owen's longitude is more correct than mine. I had brought a ship's chronometer with me, but the jolting on a Kafir's back, and the violent changes of temperature, threw it entirely out of order, so much so, that, although the rate was steady when stationary, it was eccentric and the error large when carried about. It was therefore quite useless to tell the Greenwich time, and thence the longitude, and was merely used to beat time for an observation. As our watches were stopped by their immersion when the boat upset, of course the chronometer proved invaluable, but not more so than an ordinary watch would have done.

We went down to the shore on the 18th, and stayed there until the 23rd. We crossed over and found the deepest water in the channels near the east bank, 4 fathoms. I made some soundings, but could get none of my party to venture in the crazy canoe more than twice, and therefore the survey was altogether spoilt.

I measured a base line of 250 fathoms, and threw together some rough triangles, to get a sort of general idea of the course of the river, and definitely and finally settled the question as to its breadth. It is, at the actual mouth, exactly 131¼ fathoms across at high-tide. Here again I contradict Captain Elton's hasty statements. The sandy spit named Erskine Point, enclosing the lagoon and harbour called Port Alice, is at times overflowed by the river when swollen, and even by the sea when high winds from the south and spring-tides set in together.

On the 24th, as soon as I had completed the survey, as well I could with this boat, and determined the position, Mr. Dubois returned to Magajin's kraal, and I with a Kafir went up the river in the boat about 6 miles to Matamini's; Mr. Dubois

agreeing to walk thither, ascending the hills so as to avoid the marshes.

As the constant and strong breeze which blows from the sea makes the ascent of the river much easier than the descent, though against the current, we went at a good speed, and got to Matamini's early in the day.

We reached Issigamby on the 26th.

27*th*.—Starting early next morning we arrived at Intshi-Intshi's. Though the day was showery we made the distance easily, and could have doubled it, showing how the sinuosities of the river had lengthened the journey by water.

28*th*.—The next day we crossed the river in a canoe, and passing through Sivungatana's, were warmly received by that fine fellow, and welcomed as an old friend. He is the only Kafir on this trip that sincerely asked me to stay at his kraal for friendship's sake; but we declined, and made a good day's journey, crossing the Mununuwane three times, and the last time in a canoe.

The day being drizzling and cool, we slept at Magoondan's on the Limpopo. The Limpopo is usually called Miti by the Zulus, Bembe by the Baloyia and Tongas, and Ouri by the Basuto. Here the river was narrowed by a sandbank to about 30 yards, but too deep to ford; therefore we crossed in a canoe. It is called the Ishidwasheni Drift. It was just below this place that I crossed the river with 3 feet 6 inches of water on this ford in 1868. We saw many cattle throughout to-day's walk, and several kraals. The soil was fertile, and there is no richer land in the world than the Valley of the Limpopo, filled up as it is by alluvial deposit.

In the heat of the day we rested in the shade. We reached Manjobo's in the afternoon, with a supply of two goats (which we had received as presents) beyond what we could eat; but we knew that Manjobo's kraal was a hungry place. On our arrival we found that the Christianised and educated native whom I had brought from Natal, and left in charge of the things at Manjobo's, had got rid of three hundred grains of quinine in solution that I had prepared just before I had left. I pointed the bottle out to him, and said, "If you get fever, take a couple of teaspoonfuls of that medicine after a purgative." It appeared that he thought that prevention was better than cure, as he had drunk the whole, with another fellow's assistance, in twenty-four days.

The navigable and commercial capabilities of the Limpopo may be summed up thus: It is difficult of entry, and has 60 miles of navigable water, reaching 25 miles in a direct line, and flowing through a fine alluvial valley 15 miles broad.

The productions are hides, horns, native furs, gums (including copal, I believe), ground-nuts, vegetable ivory, ivory, orchilla lichen, mangrove poles, perhaps a little cotton (which grows wild, and is used by the natives), honey, and beeswax. Its advantages of position are its proximity to Lydenburg, where bread-stuffs are grown. To the new gold regions there the distance is 170 miles in a straight line, and it is near to the northern parts of the South African Republic. Its principal disadvantage is the fever prevailing there, as well as at Delagoa Bay, Inhambane, and all the other towns on the east coast north of the 27th parallel of south latitude; but which does not extend beyond the foot of the mountain steeps that everywhere run more or less near to the coast as far as Abyssinia. These plateaux of Africa are (at all events in the southern parts) generally as healthy as Madeira.

Manjobo was not now at his kraal, and kept us waiting ten days before he returned. He still persisted that he had no power to provide bearers, and added that war, not goods, was his business.

On Monday, the 9th of October, we started; and as no bearers appeared we left the things behind, and travelled only a short stage.

Next morning sufficient men were procured to take us to the confluence of the Saguti, crossing that river at the same ferry where I had had a dispute with an extortionate ferryman. He never appeared for his fathom of calico adjudged to him by Manjobo.

Next morning we made a short stage to Hlalugwan's, at the confluence of the Shohozoli River with the Limpopo.

Hlalugwan's is not far from Sidudu's. As no bearers could be collected the next day we were obliged to stay; but on the second morning we made a good start, and almost immediately crossed the deep marshes and pools that everywhere settle at the bases of the hills. We found some papyrus-rush growing in them about 10 feet high. Ascending the slopes, we had a fine view of the country towards the sea, and of the valley. We found many inhabitants, and much cultivation of the ground-nut. The bush was dense and high, indicating a better description of soil than what is generally found on these plains away from the river alluvium. Here we found some of the magnificent Mali palms at the head of a stream named Mali, from the trees.

We had now apparently just touched upon the edge of the narrow strip of country near the coast in which the lagoons were not yet desiccated; for we passed a lake on the right-hand of the road, and the natives told us that there were many

others of the same kind nearer the coast. The country now began to reassume the same character as that observed on my southward journey.

On the 15th, Mr. Dubois and some Kafirs being ill with the fever, we made very little way, but began to see evidences of Chobi industry in large clearings of bananas and some acres of pine-apples. The air was laden with the scent of the greenish-white flowers of a runner, which we afterwards discovered was the umtshanjowa, a sweet and agreeable fruit, growing in bunches of red berries, from which the natives make a very palatable wine, of a deep rich red colour. A more beautifully-scented shrub could scarcely be found. While in health no one could but enjoy the scent, but under the influence of fever it seems insufferably oppressive.

We now had attacks of fever regularly every fifteen or sixteen days, and had to lay up for two or three days at each time. I shall, therefore, not mention them except incidentally. Calomel, Dover's powder, emetics, and quinine always proved effective remedies. We each passed through about thirty attacks during this journey; and generally it was obliging enough to take one of us at a time.

On the 16th we got to Undiri's place, where we were obliged to drink water caught off the smoke-begrimed thatch of the native huts in the bark troughs already described. It was simply abominable. The country being but a sandy waste, there is no running water except in the summer.

Whole acres of pine-apple gardens were passed through by us, and we also saw some of the Umshalu fig-trees.

We now passed through a belt of fine forest, with some trees sufficiently straight and tall to have cut timber from them. Many india-rubber vines were also seen, but mostly tapped and therefore valueless.

This india-rubber vine is similar to that on the west coast of Africa, as described by Du Chaillu. It has a very rough, warty bark, and a very few leaves at the extremities of the uppermost branches, which are small and round. The fruit is about the size of a lemon, mottled with green and white when young, and yellow when ripe, and has a pleasant acid flavour. The natives make a palatable fermented drink from it. The outside rind is apparently hard, though it can be broken by the fingers. It contains about a dozen large seeds enclosed in a yellow mucilaginous matrix or pulp. The stem of this vine sometimes measures six inches in diameter, and occasionally lies along the ground for some distance before it finally ascends. It is only found in the densest forests, and in company with other lianas and creepers, and frequently on good soil.

On the 17th, a 9-mile walk brought us to Mabingwan's, who is a Chobi, but tributary to Umzila, and chief of a large district. He is a fine old savage, and has the reputation of having the finest wives and daughters on this coast. Mr. Dubois being sick, we could not go on for two days.

The whole of this country about Mabingwan's is very sandy and worthless, though close around his kraal there appears to be a ridge of slightly better soil. It is also very heavily timbered, but soon opens out again into the dreary Umtonto sand. The spring is at the head of a long open grassy flat that looks like the bed of some ancient river or estuary. We met here some Portuguese Kafirs trading india-rubber and beeswax. Hitherto we had made no northing, or rather had been veering to all points of the compass, gradually getting more east. Stellar latitudes at Mabingwan's showed me that I was in lat. 24° 41′ s., and therefore exactly in a line with Manjobo's residence, which we had left eleven days before, and which was only 24 miles (of longitude) distant. This is a specimen of the rate at which we travelled with the Royal bearers of Umzila.

On the 20th we made about 8 miles to Bitin's Kraal, where I had fever, but was able to push on to another kraal. On the 23rd, we passed through the Umtemby district, called after that south of Lorenzo Marques by the inhabitants, who are emigrants thence. There are several sheets of water or lakes there; but there are more further to the south-east or coastwards, as the natives said. We were going parallel with the coast at about 20 miles' distance. The first lake we passed was called Masegwan.

On the 24th we struck upon a reedy lake called Isibingo, about 4 miles long. It is salt, and contains hippopotami. The natives say that there is game in its neighbourhood, consisting of gnus, pallahs, and sable antelopes; but we saw none.

We now struck across a white sandy ridge, covered with Umtonto wood, and came to another open spot, where we found excellent water, and put up at Pungwin's Kraal. There is game near here, and hippopotami are in the lakes that abound between this and the sea. The soil, excepting in these old lagoons, is worthless sand; but the country seems to be open and pleasant.

The next morning (27th), after the usual delays about bearers, we procured about thirty. Leaving the remainder of the goods to follow, we got to Hlambangati's that afternoon, through larger and denser forests than usual.

This was the first stockaded kraal in this district of thus fortified villages. The stockade here was old and worm-eaten;

but the huts were of a better description than we had hitherto met with. They had side walls about 4 feet 6 inches high, and doors on hinges. These doors were usually made of the dried stems of the Mali palm put into a wooden framework, which worked at one end on a pin at the bottom and top, fitting into holes in the lintel and threshold. To the height of the knees the doorway was blocked up by two planks, to keep out the dogs, fowls, &c. These planks are often curiously carved. The huts, though high, were obstructed by a sort of wicker-work staging for storing grain lower than the head; so that often forgetting this, in getting up, a blow on the pericranium made them somewhat uncomfortable for any but Kafirs.

This stockade was but a small one, containing only about 150 huts.

We did not leave next day, but the day after we made a start, and soon came in sight of the Eshicomi River (which is the Umkelinzi under another name). As it was unfordable in a straight line, and the native boats were too slight for the packages, we had to go up some distance to the ford, which we found to be about chest deep, and about 40 yards across.

Blue water-lilies in bloom and with large round leaves covered the stream in all directions, at times completely hiding it. Near the ford great quantities of the Mali palm were seen, making quite an imposing sight.

After fording, we passed down the stream again, and ascended the hills that border the river on the opposite side, where we discovered outcrops of limestone. In the drift there was a reed fence for fishing purposes. The natives often obstruct the stream with these fences, leaving only small openings, into which they insert creels or fishing-baskets, which the fish coming up enter and are caught.

We arrived at Mangorby's stockade the same evening. This was built on the bank of the river, which had now widened to about 600 yards, and took the name of Inyarhimi. There were about 1000 inhabitants in this stockade.

The Chobis are a fine race, lighter in colour than either the Tongas or the Zulus, and with more finely-cut lips and features. They are decidedly of the Basuto type, and do not belong to the same stock as most of the other natives of the country. They disfigure themselves frightfully by lines of lumps (less protuberant than knobs) down the centre of the forehead and nose, from ear to ear across the upper lip, and from ear to ear across the chin. They have a loin-cloth hanging almost to the ground, a round shield, a powerful bow, and barbed iron arrows, thoroughly poisoned.

The women wear heavy brass rings round the neck, wrists and ankles, with a short petticoat of blue calico, over which they put on what is now fashionable, called a "pannier" or "peplum" amongst us, namely, a piece of bark blanket cut into a V shape behind and before, so that the pointed ends shall hang down on each side. Where the country is less disturbed, they cultivate oranges, lemons, cabbages, and so forth, and possess cattle.

After about four hours' walk, we reached Matshunkulu's stockade. This walk was along the Inyarhimi River, on the banks of which we found the village.

Next day we made about five hours' walk, to Singabagapa's stockade, which was a very large one. Just before getting there we crossed a stream flowing into the Inyarhimi.

This was the last stockade we stopped at; but Matshunkulu's is the largest and most densely inhabited. It contains, I should think, 1500 inhabitants. They all have great numbers of domesticated bees, whose hives are kept in the dwelling-huts. The bees fly about, and do not seem to be at all ill-tempered or hasty with their stings.

The Inyarhimi River bears, as is usual amongst all these tribes of other than Zulu origin, a number of names until it enters the sea. From the ford downwards, for the 12 or 13 miles which I saw, it is about 600 yards broad, and 10 feet deep. Near the banks floating reeds grow, showing that there is but an imperceptible current. The natives describe it as continuing thus to the sea, but as being at Inkumbi's fordable. The left bank is bordered by densely-bushed bluff-like rises; but the other bank (though also densely wooded) appears to be more level. The country is of little value near the river, being mostly of white sand; but it is thickly inhabited, and apparently produces great quantities of beeswax. There is no danger to white travellers in this country, and altogether the small strip known as the land of the Chobis is a most interesting part. It is altogether undescribed, and almost unknown to civilised men. Whether the Inyarhimi (or the Zavora of the charts) is sufficiently navigable at its mouth for the entrance of large decked boats is uncertain; but should it be, a good trade could be carried on between it and Inhambane. Higher up the Umkelingi and Imyampalimpali gather the drainage, and one of these passes under the name of the U'Luize, but which of the two I have not yet been able to determine.

The whole course of this river and its confluents seems to be bordered by open grassy spaces, with pools of water and trees of vegetable ivory, where game is to be found.

These natives work well in wood and iron. Their wooden drinking bowls are celebrated throughout the country. They seem to live principally on manioc or cassava, which they eat both roasted and boiled. For summer use, when the manioc is apt to be watery and uneatable, they break up the root and dry it in the sun. In this state, when raw, it tastes like arrow-root biscuit, and when pounded into flour, it makes a good sort of bread, and is, in fact, the only native production that is sufficiently glutinous to form bread in our sense of the word.

A day's delay now occurred, as the next stage was a very long one. About fifty men had arrived, with whom we started, leaving some loads behind. We ascended the rises that border the river, and found them about 200 feet above its level. Passing on first through native clearings, and then through dense bush, we came to a marshy stream, which is the same as that formerly described as entering the Inyarhimi near Singabagapa's, but now about 5 miles back. It appears to rise in the flats a few miles farther on.

We now passed over a sandy and bushy ridge to extensive open ground, or rather a grassy flat with stunted ivory palm, called Inyansuna. Four miles over this brought us to a running stream flowing from the north, called Monjo, 18 feet wide and 12 inches deep. It enters the Inyarhimi. The waters are brackish. The flat now became covered with pools, sometimes fresh and sometimes salt. The formation was arenaceous limestone. A large lagoon or salt lake had evidently been the former occupant of this tract. Some game was seen, consisting of quaggas and gnus. We were not able to get across to the habitations on the other side that night, and were therefore obliged to camp out under a clump of trees. Next morning's walk, still over the flat, brought us again to the sandy ridges that surround it, and to my former path. We rested at a kraal during the heat of the day, and towards afternoon started again. We had not gone more than a mile on this fearfully sandy tract before we espied a bare stretch of loose sand, extending, as we imagined, 4 or 5 miles in front of us. This staggered us altogether, and therefore we determined to wait for the cool of the day. When we did cross it we discovered that it was the bed of a desiccated lake, the bottom being quite hard, and composed of the usual sandy clay of the limestone formation that crops out in all directions. It is called Inyatsaki. It appears that I had skirted it on my former downward journey, and crossed the Eshigibi stream, which flows into it, and was then spread out into a large brackish pool, which we now passed. A few minutes more brought us to the kraal,

where we stayed for the night. Next day we made Mahonti's Kraal. He is the Chief of Makwakwa, which district we had now entered. A strong stream—the Etusin—flowed from the north, past the kraal, and doubtless joins the Umkelingi River.

The next two days, fever attacking me, we were delayed. As the goods travelled slowly, we arranged that they should go straight from Mahonti's to a place called the Manhlin, about 80 miles distant in a north-easterly direction; as there were no Kafirs of Umzila's between this station and that, the country being under Portuguese rule.

We left for Inhambane, striking my former route again at Maranjin's on the Inyanombi River, and passing through the usual bush, and over sandy soil which was now (being in the Inhambane basin) more fertile. After leaving Mahonti's, we passed up the reedy River Etusin to its source, and then entered a dense bush covering a rise on the road. We had water out of a hollow tree called Intokwi, which forms a landmark for miles around, as it overtops the rest of the bush. On the 17th of November we again arrived at Maxixe, Mr. Laforte's farm, on the side of the bay opposite the town of Inhambane.

We started again on the 25th of November, but did not go far. On the 26th, early, we arrived at Umzulumbu's, a chief tributary to Umzila.

I have omitted to mention that about 7 miles after leaving Maxixe we crossed the Inyanombi River, lower down than Maranjin's, and soon after the Pipan stream flowing into it.

After a long and tedious dispute with a chief about bearers, it was not until the 27th of December that Mr. Dubois was able to get any, and then only fifty-eight. They arrived on the 1st of January, and, on the 3rd I started, leaving my man Matthew in charge of the remainder of the goods.

Immediately after leaving, I began to ascend a high ridge or hill through dense bush and clearings of red sandy soil. On the top a fine view of the ocean was obtained. This spot the barometer showed to be 860 feet above the sea, which is quite an unusual elevation when the extraordinary general flatness of the country is considered. The whole coast, from Natal upwards, is bordered by a ridge corresponding to that near Durban, and called "the Berea." At times portions of this ridge lie detached from the mainland, and form islands, such as Inyak and Bazaruta. In Natal, and throughout the Zulu country, this ridge is backed by hills rising higher, step by step, towards the interior; but from St. Lucia Bay northward, towards the Zambesi, the back country is a sandy flat, covered with bush; the mountainous country lying farther away towards the in-

terior, until the Limpopo is reached, when it is distant 200 miles from the coast. This coast-ridge is composed of blown sea sand, fertilised in some places by the decomposition of iron-stone and vegetable débris, and thus assuming a red colour. At other places, again, it remains in its original sterility. This ridge encircles Inhambane, in a kind of basin of fertile soil; but, as a rule, this vast plain may be characterised as a "mitigated desert." This great limestone plain of South-east Africa is hemmed in by the mountains to the west, and is somewhat curtailed towards the north by an extensive spur thrown out by them towards the coast, and called Gorongosi, to the north of Sofala, and near the Zambesi. It seems also, from different travellers' accounts, to extend northwards, along the coast, even to Abyssinia, being more or less broad in different localities.

On the other side of this rise the view was terminated by a sea of bush, extending to the horizon, and there drawing a straight line similar to that seen on the ocean. The blue colour of the distance adds to the illusion of its being a sea-view, the ridge apparently falling away here, and rising again a few miles farther on.

The next day's walk was, as usual, through bush, sand, and open spaces, with grass and ivory palms. The succeeding day, about noon, we crossed a marshy stream called Kita, or Umatshi (lat. s. 23° 16′), which goes into the sea to the east. I notice this particularly, because the maps extant are entirely wrong with reference to this coast. Such information as is given is incorrect as to position, and many mythical streams and mountains ornament the sheets. This country is called the Dibin. To find out the name of any district rightly is usually a difficult task, as I have been told, by the most astute scholars of the native tongue. That fact, together with the loss of my Journals, will account for the paucity of district names throughout my travels.

On the 4th of January I came to some people of quite another tribe, and, in fact, of different race, calling themselves Malongwe, or Marongwi, and being of the Basuto type; those in the Portuguese territory being runaways from the "Manhlin" and "Hlengin" adjoining. They build the walls of their huts of bark. Stakes are driven in, two and two together, in a circle the size of the intended hut, and a piece of bark having been stripped from a tree is flattened by the action of heat, and bent into the shape required, and when placed between the two uprights it is kept in its shape. The circle being completed thus forms the walls, which are about 3 feet high. The roof is then placed upon it, and the hut is complete. These huts are usually very small. The insides are often so filled with *impedi-*

menta, the floor, withal, so broken, and the walls so buggy-looking, that I always declined sleeping in them; and now made my bed under some fine baobabs, that stood in the clearing, dwarfing, by their giant proportions, men into ants.

Another curious custom is to draw snuff up their nostrils through a long hollow bone (from a bird's wing), about 18 inches long, which they hold in their right hand, and having previously thrown the snuff into their left, they thus take it up. Several can, of course, snuff at once by this plan from the same palm. They usually wear the bone on their necklace of charms and other dirty-looking rubbish, each piece of which is an infallible "fetish" for some purpose or other. They wear the loin-leather of the interior tribes of this type. This loin-leather has a most curious appendage, or ornament, as I suppose they would call it, sticking out behind like a tail or stump. It is composed of one, or sometimes two, heart-shaped leathers, the size of the palm of the hand, ornamented with brass, and projecting in a most obtrusive manner, which must be seen to be realised.

No water was to be had at this kraal except that procured from the hollows in the baobab trees. I had heard of the "Hlenga" country as a term synonymous with thirst and hunger, and every privation pertaining to a desert; but until now I had not realised their proximity. As the water was stinking, I did not enjoy my very simple meal so well as usual. In these waterless tracts the natives take advantage of the natural aptitude of the baobab to form large hollows, and enlarge these artificially by fire and adze, to catch the rainwater. When the supply fails they go to the river, and live there until their reservoirs are filled by the next wet season's rain, such as it is; but this is an almost rainless country, though the sky, from 10 o'clock in the day till sunset, is constantly filled with cumulus clouds. These clouds, however, float onwards towards the hills, leaving to these thirsty lands only the benefit of their fleeting shadows. I account for it in this way: the forests, or woods, which universally cover these plains, are mostly scattered, and the trees of a straggling, ill-leaved description, called either Umtonto, or Umtshanatsi (Mopani), which throw little shade, even in the summer season when they are in leaf. The land, being but of slight elevation above the sea, becomes intensely heated by the sun, which causes a great ascent of rarefied air, and consequently a vacuum. The air from the sea being cooler drifts along, and being moist, forms these heavy masses of cloud which, meeting no elevations in their passage westward, sail through an equalised temperature, and deposit none of their moisture until they meet the hills, where being forced into a

colder stratum, they condense, and fall in the form of drizzling rain. Such was actually the case, as I found when I afterwards reached the mountains. After sunset, until the early morning hours, a calm prevails, the sea and land becoming of equal temperature.

Towards morning, the land having radiated its heat more rapidly than the sea, is actually the colder of the two, and sends forth a feeble breeze, which dies away again as the sun heats the earth. In the mountains plenty nearly always reigns; though perhaps, as was the case when I went past, the people of the plains had reaped no crops for two or three years, except in favoured localities.

The route now passed out of the actual territory of the Portuguese, which ends about lat. 22° 50′ s. into the Manhlin, or Umzila's country. Next day I passed over a large grassy space, which the Kafirs said had been at one time full of cattle, until Shoshongane (Manukuza) attacked and plundered them of their property. I saw the remains of old cattle kraals. There was an old well about 4 miles from the kraal.

Proceeding over a sandy, bushy tract, bearing traces of the passage of elephants, I came, on the 11th of January, to Imboban's Kraal. Matshenisa was the petty chief in charge of the district, and his kraal was still 12 miles more to the west. The chief of the whole of Manhlin was Sifooku, or Siconyan.

The water at this kraal was brought from a well about 2 miles away, and was clear and good. The well itself was about 20 feet deep, showing a loose, chalky formation above, and a hard limestone below, in long blocks, lying imbedded in stuff like the upper débris. When the water is first drawn from the well, though apparently clear and good, it smells most abominably; but when exposed to the air for 24 hours becomes sweet.

There is a fine outcrop of hard limestone here, with great quantities of fossils, of which I broke off some specimens; but the rock itself was too tough to break, and I had no cold chisels to cut them out with.

The natives here have a novel way of hunting. They procure a vegetable resin, or gum, and lay it in the paths frequented by the smaller antelopes. They say that the game step in it, and that after a time their hoofs crack and become sore, and then they can be caught with the hand. I think a more feasible explanation is that they get their feet so clogged with leaves and sticks that they cannot run. Mr. Dubois says that he himself has caught game running over pot clay after heavy rain, so that it is credible that they may hunt in this way.

Great quantities of different kinds of drinks are made out of the wild fruits, which ripen mostly at this season. One, from

the seed of the india-rubber creeper, is slightly acid, but very palatable on a hot day, and is called Imbunga. Another, called Umtshanjowa, I think I have already described. Then there is that from the fruit of the water-boom, and others too numerous to mention. In fact, fruit in a Tonga's mind is synonymous with drink, and they turn everything of that kind into it. My list of the wild fruits is lost.

There were two Albino children at this kraal, a boy and a girl, the latter about 15 years of age. I only mention this fact to remark that there are an extraordinary number of them amongst the Tongas in this country.

It appears that the whole district was disturbed because its Zulu governor (Inhlamvogazi) was in it; which meant, further, that 200 hungry Zulus were running about in all directions, plundering the Tongas; and, besides, that the chief was demanding tribute. The only kraal that had a goat in its possession was the one we were staying at, and that was only because, when Inhlamvogazi's messenger came to demand goats and fowls, we told him to right about face and go back, or we would thrash him On the 17th I went to the chief's kraal, and saw this Inhlamvogazi, the Zulu governor, and taxed him with stopping our road, and so on. He denied it, and said he was desirous of assisting us. He gave us a goat, and appeased our wrath by a smooth tongue.

Nevertheless, we got no men, and therefore we determined to leave the goods to their fate, and proceed to Umzila's by ourselves, and complain that we could not get on. No one was to be hired, or otherwise procured, to go there instead, so that we had no alternative. Accordingly, on the 28th, we started alone, as both Umzila's messengers, who had the general direction of the route, refused to leave the packages. All the baggage we had amounted to ten loads, so that, though the usual system of carriage from kraal to kraal was adopted, we made pretty good walking, but were, of course, obliged to submit in our course to such roundabout ways as the bearers chose to take us. As we left the coast, the country, though still as flat as ever, became more interesting, and the soil was apparently better. Sometimes dense bush was met with; but generally the country was covered with scattered trees, in many instances attaining to the dignity of a forest. Some fine families of baobab trees were passed almost daily.

Water was extremely scarce, especially from Matshenisa's westwards. In many places it is procured entirely from the hollows in the larger trees; an uncertain source of supply. Consequently in the drier season many of the more direct paths between places are closed, and travellers have therefore to sub-

mit entirely to the natives' guidance, though the compass shows that they are turning and twisting about from day to day. For several days together we had to drink the tree-water, and at other times the water caught off the smoky thatch of the huts, which was still more horrible.

The Tonga (common) Kafirs invariably build their huts 5 or 6 miles from any permanent water, though in summer pools supply their wants more readily. In the dry seasons these pools evaporate; thus bodies of Umgonis, or Zulus, that roam over the country in the dry season, levying tribute upon the Tongas, are too much encumbered by the burden of carrying water to stop long. They cannot make the Tongas do it for them, for beyond the head man of the kraal, and one woman, none are to be found, as they run away to distant parts of the bush until their neighbourhood is rid of these marauders, and then return to their homes again.

We came again across much fresh elephant spoor, but saw nothing in the shape of game. Occasionally strips of fine black land would be passed, but as a rule the soil was red and sandy. We saw many outcrops of limestone-rock which would make respectable marble.

Several places were infested by a large grasshopper, like a cricket, which lives in holes in the sand. The noise they make is quite distracting at times, and the tremor they cause in the air and the ground was sometimes so great as to shake the surface of my mercury in the artificial horizon to an inconvenient degree. They are exceedingly alert and difficult to catch, but with a lantern and a heavy stick I usually managed to despatch the forty or fifty in my immediate neighbourhood, and then make my observations in peace.

The 1st of February found us at Pilan's Kraal, where they were celebrating a "wake," much to our disgust. It is customary when a native dies for all his friends and relatives to the last degree of consanguinity to assemble and cry over his corpse. No matter if he is buried, and they arrive a month afterwards, they still cry. When the death is announced, the women immediately cry, "My baboo, ta, ta, ne!" and keep up a sort of low song all the time, breaking out at intervals with the "My baboo!" The men sit calmly by, looking on; but the women keep up a constant howl, and every now and then run frantically about the kraal, dragging an old piece of rag or skin (which is supposed to represent their clothes) in the dirt. This is kept up till the new moon appears, with which the wake ceases. They are considered unclean until they have taken potions from the wizard of the district, who attends to administer them. Usually the beginning of the wake is plentifully supplied with

goats and beer; but both these in this district are as scarce as the rain.

On the 3rd, having arrived at Umkingwa's Kraal, they said we could not go direct, but must turn up to Sifook's, as there was no water on the other road for three days' walk. We calmly submitted. The country again became poor and sandy, though the water was better and more plentiful; but still always some miles distant from the kraals.

On the 4th we arrived at Sifook's, the head of the Bila-Kulu tribe, and chief of the Manhlin. We found the kraal situate on the banks of the Gabulu (not Gavuru, as the Portuguese persist in calling it), lat. s. 22° 16′. In the most recent maps there are several considerable streams placed between this and the Sabi, running in separate courses to the sea direct, and which are entirely mythical. The Gabulu rises about the 23rd parallel of lat. s., and flowing parallel with the sea, empties itself north of Bazaruta Island, into a place marked Maramone Bay on the charts, about lat. s. 21° 7′. Doubtless the river has been touched at several places by traders, and being generally within 10 or 15 miles of the coast, was thought to be a separate river at each place, and to go straight to the sea. Thus this one river has been cut up into several in the maps. As I before remarked, the coast is bordered by a ridge of hills. The Gabulu, being merely a long reedy marsh, though deep, has no current, and could not force this rampart until approaching the Sabi, whose more powerful waters had levelled the passage, and it was thus enabled to find an exit. It is navigable for boats some distance up to the Makoban district, not far from here. The island of Bazaruta being too barren for cultivation, the inhabitants depend entirely upon this district for their supplies. There are no rivers flowing into the sea between Inhambane and the Gabulu mouth, except the little stream Kita.

On the night of our arrival we witnessed a most magnificent aurora australis, a very unusual thing in so low a latitude. The whole of the southern sky for 60° round the pole, and more still towards the zenith, was of a brilliant rose-colour, with waving bands of white that waxed and waned alternately, and almost extended to the zenith itself at one time in broad belts, and then in narrow but more brilliant stripes. It lasted until the morning light obliterated it.

The river here is about 8 feet deep; but, with the exception of a small open space in the middle, no water is to be seen for reeds. It is about 70 yards wide. We noticed stages here about 6 feet high, with ladders to them. We were discussing their use, when we saw the men and women make fires beneath, and ascend into the smoke to sleep. This was to keep

the mosquitoes away. We did not find them at all troublesome; but perhaps there are seasons when they may be so. A party of hunters came back from the chase with several small antelopes killed with their poisoned arrows. The wound is simply cut out. The meat is quite eatable and good. If the wound is not cut out the meat becomes bitter, but is still wholesome.

On the 7th of February we left Sifook's, and struck to the west, passing through park-like scenery, the trees being large and scattered, and the soil and grass better. But it was a land of thirst, so much so, that we had an extra supply of bearers to carry water. On our arrival at Matimbanyana's in the afternoon, we found that we had entered the Hlenga tribe, and that he was one of them. To our surprise the water was good, and (what was more remarkable) obtained from the hollows in the baobab trees. There were some fine ones here. One I measured was 85 feet high and 35 feet in circumference; but another, though not so high, measured 61 feet round. The soil was red and sandy, and (though the climate is arid) it appeared to be fertile.

It is a curious circumstance in the district that baobabs generally indicate habitations. Even in those cases where there are no inhabitants now, traces of ancient cultivation about them can always be discovered. The probability is that these trees naturally collect in groups at distances apart, and that in this universally flat and bushy country they serve as landmarks, around which the natives congregate even where the water is no inducement for them to do so.

The Hlenga tribe are essentially people of the bush, more so than any others. In most parts of it they live almost entirely upon meat, and are like bloodhounds in the chase. Should an animal be hit so as to drop blood, they follow it, and sleep on the spoor until they get it. They seem able, like vultures, to find meat apparently beyond human ken. Many a time I have had great difficulty in keeping even one to guide me when they saw vultures like specks in the sky trending in straight lines to carrion perhaps miles away.

They have an ingenious way of laming elephants, and then shooting them with poisoned arrows. In the elephant tracks they make holes about the size of an elephant's foot, in the centre of which they plant a stake. The elephant steps upon it, and is lamed. The stick coming out of the ground rather than out of the foot, remains protruding, and of course hurts the animal every time he attempts to walk. He remains, therefore, standing until they approach and shoot him.

On the 8th and 9th we passed over some fine undulating country, with a chocolate-coloured soil and magnificent grass.

Water was still scarce, and usually obtained from trees in the winter; though from the green rushy dips in the ground plenty could probably be procured by digging a few feet. The crops appeared to be shrivelled up by drought, and past all recovery.

We arrived at Umhazwi's, Chief of North-east Hlenga, and found the whole place full of Umgonis, and the poor Tonga Chief at his wit's end. Nevertheless, we were treated well, and had good though muddy water. As a rule, we slept in the open air.

On the 11th we slept at a kraal which got its water from one of those deep limestone wells that seem beyond the powers of the present inhabitants to dig. Apparently a superior race once lived here, and left these tokens of their former presence, together with the rough handicrafts that the Hlengas and Mandandas are celebrated for now; such as the manufacture of knives and other iron work, and of cotton-stuffs. The kraal was quite 4 miles from the well.

The country continued good, with large out-crops of marble-like limestone, which was in one place regularly crystallised and well formed.

Arriving in the evening at a kraal, we found it deserted, and could discover no water. We therefore had to go about 24 hours without any;—no joke with the thermometer at 108° in the shade, and after perspiring so freely from walking.

On the 14th the soil became poorer, but water more plentiful. The country was now varied by mounds, made apparently by ants originally, but which were now quite equal to small hills. Thorns became more plentiful; the bush hitherto having been thornless. We made a good march of 12 hours, and got to Inyampamban's Kraal, where we had been told Messrs. Beningfield and Skilbeck were staying, shooting elephants. We found them both in good health, and enjoying themselves greatly. As we were in want of rest, we stayed until after they had left for home on the 2nd of March, and on the 6th we continued our journey.

The early mornings now became so cold that we were glad of a blanket, an article that had been cast aside since September last. A good warm coat was also found acceptable at starting in the mornings.

A 15-mile walk, over a grassy and sandy country dotted with clumps of bush, brought us to the Sabi, the descent to which was down precipitous limestone bluffs some 250 feet in height. Having been so long on dreary flats, these bluffs presented a pleasing contrast; backing one another until lost in the dim horizon, and with the Sabi flowing between them forming a

fine view; the water so blue and its bare sandy bed so yellow; and the whole framed in by hills covered by forest. A peculiarly deep valley, with a dry gully at the bottom, joins the river here. The district is called Impanzi. Umgonis live in the valley, so that we had no difficulty in getting fowls and other food, as we had amongst the Tongas, who are robbed of everything by these Umgonis.

The bed of the Sabi was about 1000 yards across; but the stream of water in it was not more than 100 broad and 4 feet deep; the rest of the width being sand.

The hills on the banks of the Sabi are but slightly raised above the plain, and can only be ascertained to be so by the view obtained on each side, east and west, to the horizon over a sea of rolling bush.

Soon after starting on the 7th we crossed the Korwah on a fallen tree, which is a stream flowing from the south. On the 8th we reached Sondaba's Kraal at Inyaveni, a spot well known from a large marsh or pond in the valley on this side of the Sabi, and bearing that name. We found here a good host, who gave us a sheep, and offered me a tusk of ivory, which I declined accepting.

Here, for the first time since leaving the Limpopo, our coffee was ground between stones. Hitherto, the country being stoneless, the natives used for this purpose the wooden pestle and mortar in which they pound their corn.

On the 9th we crossed the Sabi, which is here in lat. 21° 18′ s., and runs apparently east. It was waist deep. It is quite unnavigable; for although the bed is about a mile broad, there is very little water in it, being mostly sand.

We now entered the Mandanda tribe, who extend all up the north bank of the river to the hills, but not much farther north, as the Mandowa reach from Sofala to the hills. Whenever the country was well inhabited we made but little progress, because the bearers only carried from kraal to kraal, and consequently we suffered many delays.

The valley of the Sabi is bordered on each side by limestone bluffs, one of which is very conspicuous on the north side of the river, and about 3 miles above the point where we crossed it. Our route lay westward, not far from the banks of the Sabi; though the drainage emptied itself to the north-east into the Gorongosi.

On the 11th we crossed the source of the Upimbi, an affluent of the Gorongosi, and on several succeeding days drank the water of other affluents, though we did not cross or see them. Low rises running north-east seem to divert their waters towards the sea.

The latest maps, those of Dr. Petermann, erroneously give the Gorongosi as running into the sea at Sofala. It empties itself into the sea at about lat. 20° 28′ s., some 9 or 10 miles south of that place. The cape at its entrance can be seen from the north point of Chuluwan Island. The river is navigable for some distance; but no trade is carried on there, as the Portuguese are afraid of the Umgonis or Zulu inhabitants. It drains the plains between the Bosi and Sabi rivers, an area of about 6000 square miles, and a poor sandy district of alternate bush and open grassy spots with pools of water. Game, including elephants, is plentiful in it. Hippopotami inhabit the deeper pools and stretches of the river.

Immediately on crossing the Sabi we entered the Mandanda tribe, who dress with the Basuto loin-leather, and file their upper teeth to a point. On the forehead, between the eyes, they mark themselves with a V-shaped series of bumps, and also sometimes on their cheeks.

Just along our route water was extremely scarce, though to the left was the Sabi, and to the right the Gorongosi. We were, however, on account of the necessity for bearers, obliged to proceed along the line of Tonga kraals, and, as before remarked, these people purposely live as far away from the water as is compatible with existence.

At Tibil's Kraal we witnessed the making of cotton cloth. The cotton is an indigenous plant. Three species are found growing wild: one the real cotton of commerce, another a creeper, and a third a small tree; all having the true leaf and flower of the cotton plant. The yarn is spun by hand with a piece of stick, having a square piece of tortoiseshell or lead on the end. The loom (if such it can be called) consists merely of a few pronged sticks driven into the ground, and having the web stretched from end to end on cross-pieces. The woof, being wound on a stick resembling a large netting-needle, is alternately passed to and fro. The only ingenious part is the method of getting the web to cross and recross, which is done with a flat stick threaded through each alternate strand, and pressed down to allow the woof to pass to and fro as required. The manufacture is limited to making the long strips worn by the men as loin-cloths, 3 feet in length by 18 inches wide. The cloth is strong and coarse, but clean and white.

On the 14th we entered Umtupi's district, called Magwasha, on account of the dense bush which prevails in it. This bush is full of untapped india-rubber creepers. Besides the dense bush and want of water, the most noticeable features are the swarms of red ants, which literally cover the ground, being attracted thither by the equally plentiful white ants upon which

they prey. No sooner does a tree fall in these regions than it is immediately eaten up, and converted into a skeleton of red sand by the termites. The natives are so harassed by leopards that the women are even afraid to weed their gardens in the daytime. At night every door is shut and fastened, and the hut doors there are built of hewn wood, purposely strong to resist these animals. In the morning, just as we were starting, a leopard of some kind took a fowl from the gate, and rushed into the bush with it.

Since leaving Makwakwa, near Inhambane, we had scarcely seen a thoroughly open Umtonto wood; and lately the bush had been so dense that our sticks and hands found constant employment in protecting our eyes; but on the 17th we entered a long stretch of open Umtonto woods, and felt quite relieved, and able to stretch our limbs. The barometer indicated a steady rise of level for the last two days, though it was quite imperceptible to the senses; but now we began to fancy the air became lighter, and at last we were refreshed by the sight of high, grassy hills to the west, about 30 miles away. This was the timber-clad Sipungambili, some few miles beyond which lay Umzila's Kraal. On the left hand was a depression, or valley, called Intembila, and on the right ridges of pebble and concrete limestone. The path crossed many torrent-beds, dipping to the left. The crops looked splendid, and all was fresh and green. Here I first saw my predictions as to rainfall confirmed; for the first rain fell from these masses of cumulus that daily flew over the face of the thirsty plains below.

We crossed the first affluent of the Bosi, the Timbelili, now standing in pools, but in the rainy season a running stream. Following this down through a fertile and well-inhabited country, we crossed the Murgis at the confluence of the two streams, and slept at Zunumbu's. The Murgis flows directly into the Bosi over a bed of trap, with eruptive dykes of another igneous rock of a serpentine character. This black trap dyke is the only one visible in the district, though this rock is doubtless the elevating agent, and the serpentine or phosphoritic eruption appears to have broken through and overlaid it. The next day, after crossing a small stream, an extremely stony ridge of porphyry and serpentine was ascended, until the path at the highest point was 1500 feet above the sea, as indicated by the barometer. There were peaks 200 or 300 feet higher; so that this ridge may be stated as between 1500 and 1800 feet above the sea-level. The view from the western slope was one of the finest I have seen. Due west the valley seemed to open out into the plain, and nought but the horizon bounded the prospect. To the north, abrupt, wooded mountains, capping each other,

were seen, until closed in by the grass-clad Sipungambili with its cap of timber. Turning to the east, the ridges appeared to end abruptly in a densely wooded cañon, which debouched into the Bosi, whose abrupt and wooded banks seemed to close the view. Nearer at hand the broken ridge became less and less bushy, and ended in a rough, grassy knoll, with masses of grey rock in the foreground. Beneath, the valley of the Umswelisi lay, rolled out flat as a picture, with its meandering waters fringed by evergreen trees; and it looked smiling and peaceful in the chequered frame. Descending the ridge we came to the banks of the river, and slept that night at Guegwekwi's Kraal, nearly 800 feet above the sea.

This valley of the Umswelisi is destined some day to be one of the most productive spots on this side of the continent. Sugar and coffee would succeed admirably here; and from its elevated position I believe it will be found to be quite healthy.

The Mandowa tribe, which inhabits all the hill country and the plains as far as Sofala, appears at one time to have been very powerful, though it submitted without fighting to the Zulu chief 'Cnaba, of Umsan, who fled hither from the Zulu country in Chaka's time, and who was afterwards driven out by Manukuza, Umzila's father. These people have a peculiar manufacture of coarse stuff made from the baobab bark, worked entirely by hand into large coverings. These are immensely heavy, but apparently of everlasting wear. The bark is steeped, beaten, and rubbed between the hands until it is properly triturated. It is then twisted on the thigh into strings, and woven or plaited without mechanical aid into any sized cloth that may be required.

On the 20th we crossed the Umswelisi, and ascended the densely bushed rise on its left bank. The Umswelisi is a fine clear stream, flowing over a rocky bed of porphyry and basalt. The flow of water was good, and would be sufficient to irrigate this great and fertile flat, and to turn mills; for which latter purpose its rapid fall is admirably adapted.

The path over the range on this side of the river is 1800 feet above the sea, and points on it are quite 2000 feet. The formation is still the same, and the soil red clay.

Descending 400 feet we crossed the Shinike River, also a strong, rocky stream, waist deep, and ascended the rise on the opposite side. Here we found kraals, and cultivations of bananas, gingelly, and cereal crops, all in the highest state of productiveness. Passing two more streams, we ascended to a valley-like plateau, and stopped at Makuwan's Kraal, in the Gwingi district. From this kraal, 2000 feet above the sea, three timber-clad peaks were seen to the west, called Urobi,

Sipungambili, and Silindi. Behind the latter lay Umzila's Kraal. Having sent to announce our arrival to the King, we received a message that we were to remain where we were until he was prepared to receive us. Having waited a fortnight, we sent to say that unless placed nearer to him we should return home, as we were being starved here, and he was too distant to send to about it. We were at last allowed to come on to his kraal, situated at the sources of the Umswelisi, and called Tshamatshama, or Nodwengu: Tshamatshama being its ancient and Tonga appellation, and the latter a Zulu innovation imitated from the name of the dwelling of Umpanda, the King of the Zulus.

On leaving Makuwan's we crossed one stream, and ascended the valley of another, until we neared its source under the Sipungambili Peak, and then struck across the neck 3000 feet above the sea. From this neck a fine view is obtained. The bush-covered plains, more than 2000 feet below, seemed, from their flatness and dark-blue colour, more to resemble sea than land; and the dead level of the horizon, more than 50 miles distant, added to the illusion. To the north a cloud-capped range of mountains burst upon the view, their sides appearing bare, and seamed with crevices. Apparently this range was at least 8000 or 9000 feet above the sea-level; but, as the narrative will show, I afterwards discovered that it could not be more than 5000 feet. It is a striking landmark. Behind it appear other peaks, becoming more and more misty as their distance increases. This range is the Sita Tonga, and the highest point is Shimanimani, or Sibovia's Mountain.

The most elevated plateau was now reached by us, ranging between 3300 and 3600 feet above the sea. The formation was sandstone—red in the lower parts, resting on the igneous rocks, and white above. On descending a ravine I found a bluish and green clay shale intervening between the red sandstone and the volcanic rocks; those rocks being still of the usual phosphoritic character, red or bluish-green, with numerous little round white crystalline spots throughout their substance.

One thing that disagreeably impresses the traveller is the height and size of the grass growing on the slopes. So high, in fact, is it, that no view can ever be obtained of the country, and it forms quite an arched way, under which you pass along, opening a path with your stick and hands. The grass seeds, like javelins, descend in showers, and fill your clothes until you are nearly driven mad with the itching, and blinded as well. I thought a glass helmet would have been a useful headdress here. One cannot walk through it until 10 o'clock without getting as wet through as if you had been through a river, the dews are so heavy.

We descended 800 feet into a ravine that night to sleep at some Mandowa huts. The next morning, descending yet another 400 feet (1200 in all), we crossed a stream flowing to the right, and re-ascended the heights on the opposite side to 3600 feet above the sea; passed on, descending slightly, to the Umswelisi again, and halted within 500 or 600 yards of Umzila's Kraal on the 8th of April, 1872.

In the afternoon a number of drunken councillors came down, and gave me two goats and much insolence, saying the King could not see us until his messenger arrived with the goods. In the evening the King sent me a present of a forty-pound tusk of ivory, and to my companion three small ones. We asked where we were to sleep, but received no answer, and were left to take shelter under the canopy of heaven. Next day a messenger arrived, saying that we must return to the kraals in the hole; but this I flatly refused to do. All the other kraals about being Royal ones, we were not allowed to go to them. At last, on the matter being reported to the King, he issued instructions that we were to have the assistance of all the Tongas to build huts wherever we liked, so long as it did not overlook his palace. Accordingly we selected a spot near a running stream, and put up a hut. Here we stayed until Saturday the 22nd of June, 1872, when we moved to the King's immediate vicinity after two months and a half of waiting.

The latitude of Umzila's Kraal is 20° 23′ S., and longitude by dead reckoning 32° 30′ E.; elevation by barometer and boiling-point 3200 feet above the sea.

The long weary weeks at Tsamatshama were passed in forced idleness; for so soon as the position was fixed by observation nothing more could be done. The grass was too high for successful sport, and moreover the work was too dangerous, as the buffaloes wounded on former occasions would lie in wait for the hunter on the next.

Umzila occasionally sent over a cow or a goat; and what with fowls, Kafir corn, meal, and honey, we managed to subsist. Sometimes a buffalo would be shot, or the lions kindly provided us with part of one.

The view of the "Sita Tonga" range was so attractive that, although I knew that I should not get any guide or help from Umzila if I asked, I determined to find my way to it. Having so few Kafirs, I could only take one, who was to carry my sextant and mat. I started on the 20th of May. Following a path leading along a ridge running north, it ultimately faded to nothing, and left us the alternative of returning, or forcing our way through gigantic grass. The only means of getting along was to press the grass down first, and stand upon

it; while the sarsaparilla runners distributed throughout it several yards in length, with small hooked thorns, made it doubly difficult thus to break through. Proceeding thus for an hour we struck upon a path which apparently led to some kraals far in the valley 1500 feet below. Luckily, as we were about making the descent, we stumbled upon a Mandowa, who had been in a drunken sleep since the night before. He guided us north-west across by buffaloes' tracks, until we descended into the valley of the Umkurumatsi Stream—the same that we crossed in the deep gorge when we first passed up to the King's residence. We slept at his huts that night, and had some umgoza for supper.

Umgoza is a kind of canary-seed plant, which, though tasteless and indigestible, makes a most intoxicating beer. Before being ground into meal it is roasted to soften it, or rather make it more brittle, as I suppose. The porridge is of a deep red colour. The Tongas originally grew it solely for drinking purposes; but now that the Zulus rob them of their crops they cultivate nothing else, as it is almost uneatable, and, in fact, even to a Zulu, unpalatable. They are thus less bothered by their distinguished visitors, who would otherwise quarter themselves upon them until they had eaten up everything.

Starting next morning early, we passed upon the banks of the Bosi in a deep valley. The river is here bordered by steep precipices of sandstone and volcanic rocks; the formation along the path being a red clay slate, with eruptive porphyritic rocks. After again losing our way and wandering about, the day drew towards a close. Seeing smoke across the river, we made for it, and found some hunters feasting on a buffalo they had killed. The meat, with water from the Bosi, made a late meal. The Bosi is a strong, rocky stream, knee-deep, and 30 yards wide even here, near its source.

Next morning these men guided us to the main path to Umshadsiha's Kraal, skirting the deep precipitous gorge of the Bosi, below a deep waterfall hard by. Passing on, we struck up the east side of the Bosi towards its source, passing two or three little streams bursting from the high stony ridge on the right hand. On the left, across the Bosi, extended the bare grassy plateau, gradually rising until it overhung the valley of the Sabi, only about 25 miles to the west. This fine high plateau is totally uninhabited, though the huts still remaining testify to the recent flight of the Tonga inhabitants. Turning to the right over a neck, or rather along a ridge, taking a bend towards the north-west, the path crossed the flat, and passed along its side, with the waters now running towards the right into a large drain that skirted the foot of high hills bounding

the view eastwards. Following this valley down, and emerging on a fine plain, we came upon a stream flowing from the west through a gap in the ridge which I crossed, and emptying itself into the Bosi. I had now descended more than 1000 feet; this plain being just 2000 feet above the sea.

It immediately struck me as being admirably adapted for a township. At the back, rolling hills dipped eastwards, and a fine strong river drained it completely, and afforded a fall for water supply, for irrigation, and for mill purposes. This journey also further developed its suitability on account of its accessibility from the plains. Passing on 2 or 3 miles, and slightly ascending, we were suddenly brought into view of a stony but well-inhabited valley, with a strong stream flowing along its bottom. Descending by an easy slope, and occasionally passing a block of porphyry or serpentine, we came to the bottom amongst fertile fields of maize and sorghum. This is the Inyowtshia (or Inyahaoxo, or Inhaoxo of the Portuguese), and was formerly under an independent Queen named Mafussi, who is now subject to Umzila. Having no one with me from Umzila, I was almost refused accommodation for fear I might be running away from him. Ultimately, however, I was provided with one of their peculiar huts, built on poles about 6 feet above the ground. The inside, though small, was scrupulously clean, and the floor was of earth laid on poles and reeds. Here I had supper on Kafir-corn porridge, with a relish of ground gingelly seed. As it is difficult even for a native to swallow porridge down "neat," the sauce was the more acceptable to me. These people invariably have some relish to their farinaceous food, which they call "umtshobila," and which is more often a stewed rat than anything else. Their mode is to screw up a bit of porridge and dip it into the sauce, and then swallow it.

In Dr. Petermann's map, Inhaoxo and Mafussi are both shown, but near the sea; whereas this Mafussi and Inhaoxo (or Inyowtshia, as we should pronounce it) is at least 120 miles from Sofala. This stream or river empties itself into a larger one, which we crossed next day, and which runs into the Lusiti at no great distance ahead. The mountains called Shimanimani, which are the higher peaks of the range called Sihoyia's Mountain, formed a grand background to the scenery of each day's walk. But already I began to feel that I had over-estimated their height, as I had now descended to about 1200 feet above the sea.

Turning to the left, or north-west, into a bushy or broken country, and crossing a steep ridge, we descended to some kraals in a most picturesquely-wooded glen, with a gurgling stream splashing along its sinuous course. Here they were reaping an

early crop. I was hospitably entertained, and had a feast of thick-skinned lemons, which are found in most of the valleys of the streams running into the Lusiti. These formed the sauce to my porridge on this occasion.

While on the Lusiti we heard vague rumours of ruins existing; and these lemon-trees seem to warrant the supposition.

At Tsamatshama, or rather at the Igandi Kraal, there is a very fine lemon-tree at least fifty years old. I could ascertain nothing definite about these ruins, as directly any inquiries were made the narrators immediately ceased to discuss them, or became aware that they were talking on a forbidden topic. I think there can be but little doubt but that Mahommedan ruins of the ancient Monomatapa's people exist between this and the Gorongosi. Being in an official capacity and without attendants, I thought it best to desist from creating suspicions, with the hope of approaching the subject at some future time, when I might be better prepared.

Right under the Shimanimani, in one of the most picturesque spots that I have seen in South Africa (and I have seen most of them), I found Imboougwan's Kraal. Imboougwan is the Zulu governor of the district around Sofala, and the terror of the Portuguese. His late removal to this place has relieved the "Sofalans" from a constant tremor of fear that used to possess them. He gave me nothing to eat, and put me into a hunter's temporary shanty to sleep; I therefore arose in the morning with an unpleasing lightness about the stomach, and in no enviable temper. He came down to have a look at the Englishman, upon which I spit upon the ground (a dire insult), and called him every ill Kafir name I could think of, and walked off. He hallooed after me, "Here, white man; there are a few hippopotami in the Lusiti; they are my cattle; you must not shoot them." I replied that I would shoot every one, and marched on.

A mile from the kraal we struck the Lusiti, a fine large stream, flowing over a bed of boulders. Passing up the bank about 2 miles, we reached the confluence of the Haroni River with it; the Lusiti taking a great bend here to the left, and apparently coming through the hills in a westerly direction, and the Haroni coming from the north or north-west along the side of the Shimanimani, from whence it takes its rise. Behind the Shimanimani another great peak—Gundi-Inyanga (Shave-the-Moon) is seen. I fancy the Lusiti takes its rise in that mountain. A finer scene than the Shimanimani can scarcely be imagined.

I had now descended to between 1100 and 1200 feet above the sea. This mountain then shot up quite 3500 feet above me

in a sheer wall. I went up the Haroni Valley some distance, crossing the Lusiti and Haroni at their confluence; but seeing the gigantic precipices and confused mass of mountains and rocks, I came to the conclusion that a month's or six weeks' hard work would only make a commencement of their complete exploration. I therefore determined to leave that field for the future operations of myself, or for some more fortunate explorer. To say that this piece of country is full of interest is but expressing a tame opinion of its geographical and geological features. I consider this peculiar basin of mountains as forming the source of the Bosi, one of the most interesting problems of modern geography. By its proper exploration a knowledge will be obtained of vast regions of healthy country closely adjoining the Port of Sofala; and if taken in hand by Portugal, and offered to emigrants on some liberal scale, it would immediately abolish the native difficulty for ever in Southern Mozambique, and form a source of wealth and commercial activity to Portugal, such as she has not known since the days of those heroes who founded her colonial empire, of which only the fragments remain to her now.

If the streams descended to the plains in a direct course to the sea, it would be impossible to ascend this plateau without gigantic road-works; but these affluents of the Lusiti run north, and descend so gradually, that even railway works could be successfully carried up them as far as to Tshamatshama and the highest points of the plateau. The Bosi breaks through the ridge more directly eastwards, and is quite inaccessible. The Umswelisi Valley may be more practicable; but I have not explored it. Artillery and transport waggons could be taken up the Lusiti and the Inyowtshia Valley with little or no difficulty. Having once ascended the plateau, the broken country is so narrow that it could be cleared by shelling from the heights.

On the 27th of May, having ascended to the foot of the Shimanimani, I slept on the banks of the Haroni River, lat. (by observation) 19° 56′ s. This can, therefore, be marked as "Erskine's furthest in 1872."

I found Imboougwan's hippopotami asleep, and had a fine shot at 20 yards; but though I hit them I did not get any. I easily made the camp again in four days from Shimanimani. Umzila's new kraal is in a bee line distant from the following places as under noted:—

From Lydenburg	.	about	345	miles.
„ Zoutpansberg	.	„	174	„
„ Matabili's Kraal	.	„	180	„

From Cape Town	. .	about	1190 miles.
„ Durban	. . .	„	580 „
„ Delagoa Bay	. .	„	335 „
„ Inhambane	. .	„	250 „
„ Chuluwan	. .	„	140 „
„ Sofala	. . .	„	125 „
„ Quilliman	. .	„	300 „
„ Senna	. . .	„	250 „
„ Tete	. . .	„	260 „
„ Lake Ngami	. .	„	680 „

The two nearest points, Sofala and Chuluwan, also afford the greatest facility of approach in every way, and with less physical difficulty than any other. The bar at Sofala is a great obstruction to the port. It must be borne in mind that all domestic animals die from some mysterious poison taken in on the bushy plains; though only a small percentage of donkeys are lost. Camels and elephants have not been tried. The low country is healthy during July, August, September, and October; so that in these months European forces could traverse them. Chuluwan is a safe and convenient harbour, and offers waterway some distance into the interior, where the country is open and free from swamps, and is altogether a very desirable "*point d'appui*." Large running streams can be followed quite up to the mountains. Wood is sometimes too plentiful, though the denser bushes could be avoided, and the route taken through park-like country. There is no scarcity of grass, so that fodder need not be carried. In fact, a country more adapted to easy conquest by Europeans could scarcely be found; and when once on the plateau a climate superior to that of Europe prevails. The country can also be entered with transport animals from the back or west side, traversing Umziligasi's country.

Umzila has no regular army; but the Zulu or Umgoni section of his people are divided into regiments, and duly officered. They are not called out for drill at regular periods as the Zulus are, but only for action when war is threatened. The only attempt at regular movement is the arrangement of different companies into a mass, or sort of phalanx for charging purposes. They are kept compact by the indunas, or captains, making a plentiful use of the stick, which is applied to any part of the body that is open to a blow. They do not keep step, but run along like so many ants, making a somewhat similar hissing noise that large ant armies do when disturbed. Such as can afford it, are clothed in loose skins, feathers, tails of the blue gnu, and also that of domestic cattle; but the greater part

can only muster a few pieces of goat-skins to hang round the neck, the elbows, and knees.

An army of our own southern Zulus is an impressive sight, but these, their degenerate kinsmen, make a sorry figure in their war dress.

On Thursday, the 18th of July, at 8.37 A.M., an earthquake from the north-west passed by to the south-east. The ground did not shake much, but there was a loud rumbling noise. It lasted three minutes. The next morning, at 4.41 the shock was repeated. We were asked by Umzila if we caused it; I wished to say it was the growl of the Government at our waste of time, but my companion advised otherwise. I therefore replied that I knew no more about it than he did.

It would be wearisome to detail the ridiculous behaviour of these people; so I shall pass on to say that I announced my wish to return to Natal viâ Zoutpansberg, and asked for carriers. The King consented; and it was arranged that Mr. Dubois, with the ivory, should pass out viâ Inhambane and the sea route, whilst I returned by land. On further inquiry, Umzila requested that I would alter my determination to go viâ Zoutpansberg, and go by Lydenburg, on account of the great scarcity of water on the former route. I could not but consent.

On the 30th, I started for home.

In consequence of the system of carrying from kraal to kraal, it took me five days to reach Malungu's Kraal. The route I took from Umzila's passed down the "Zone" Valley, descending from the Silindi Mountain, passing down the stream until near its junction with the Shinike, sleeping the first night at Injakazan's Kraal. Next day we crossed the Shinike rivulet, and then passed over another ridge into the valley of another stream flowing down to the Umswelisi. I crossed the Umswelisi near Inyagufella's Kraal about 5 or 6 miles above my upward route, and then passed a small stream flowing to the left into the Umswelisi, and slept at Hlambula's Kraal.

Here I shot two does of a new species of hartebeeste, called nondo.

After passing over a ridge of porphyry, I crossed two small streams flowing to the right into the Umswelisi; and on the third day came upon a ridge of pebbles bordering the valley of the Sabi here at about 10 miles distant, showing that at one time either the Sabi, or an arm of the sea of great extent, rolled between these ridges. From the masses of pebbles completely rounded and water-worn, and forming hills, it would seem that nothing but the roll of the ocean could account for them.

The country, after descending the mountains, assumed its flat bushy character, with a red sandy soil.

Hitherto, my companion's notes have furnished dates; but henceforth I can only write from unassisted recollection. Up to Umzila's Kraal I laid down my route on a map, on a scale of 8 miles to an inch, which was saved when my notes were lost; but the route now depends solely on memory, and was only written in my note-books, and not mapped out. The books are lost as before remarked; necessarily the account henceforward will be less exact, and more general even than it has hitherto been, which is also less methodical and detailed than it would have been had I saved my copious journals.

On the fourth day we slept at a kraal in the bush, and on the fifth got to Malungu's. This Malungu was ordered by Umzila to furnish me an Umgoni, and to proceed himself also as far as Donduli, on the Upaluli, or Oliphant's River. He could not be found for five days; but at last turned up, and we started.

Arriving at a kraal in the evening, where we intended to sleep, we were much annoyed by the tsetse flies which abounded. Nevertheless, there were many dogs at the kraal which had been born and bred there.

Leaving next morning early, we reached the Sabi about mid-day. As the country ahead was reported to be a land of famine, I stopped to shoot some game, and bagged two water-bucks the first day, and two the next. I found the river here bordered on this side by bluff-like ridges of limestone and pebble. In many instances, only isolated hills remained to testify to the great denuding action that had formerly taken place. The bush was that called Umtshanatsi (Mapani of the Matabili), and here mostly in tall open woods. The Sabi differed little from its appearance lower down, except that perhaps there was a little less water in it; though I think even this deficiency was only apparent and not real, as the river receives no affluents of any moment between this and Sondaba's. The sandy bed was quite a mile wide, and the water about knee deep, divided into several channels, and altogether perhaps amounting to 300 feet across. A heavily-timbered island marks the spot of my crossing.

Along the valley on the north side many pools are found, which contain saline water. The natives resort from far and near to manufacture the salt. The process followed is to scoop out the muddy surface, where the efflorescence is most plentiful, dissolve it, and boil off the water until the salt only is left. It is then whiter and purer than one would expect from its rough manufacture.

I was informed that if I started early in the morning I should get to the confluence of the Lundi with the Sabi about

mid-day. I therefore judge it to be about 10 miles above this point. I remember the result of cross observation by stars north and south placed this part of the river in lat. 21° 19′ s., agreeing pretty closely with the latitude of Sondaba's lower down. I believe, however, that between these two points the river attains a still more southerly latitude, perhaps as much as 21° 25′.

The route pursued was calculated daily by traverse tables, and checked by latitude; but beyond the recollection that it did not deviate much from due south until it reached the Limpopo, I am not able now to be more exact. Occasional latitudes I recollect and shall state; but the greater part have escaped my memory. I, luckily, ran my pencil daily over a small map of Petermann's that I had with me, and thus identified some latitudes which I remember by the names marked on that map; the errors of it serving to fix some points in my recollection. This map I also lost; but the exercise of marking it fixed the points somewhat better on my memory than would otherwise have been the case.

Crossing the Sabi, I stayed another day to shoot, and killed a water-buck. I also saw sable, antelope, and impala. There was plenty of spoor of elephants, buffalos, gnus, and elands, as well as of rhinoceroses.

The right or south bank of the Sabi here is quite uninhabited, the Hlengas purposely avoiding the vicinity of water; so that the Umgonis may not make resting-places of their kraals.

On leaving the Sabi, we entered a red sandy country, covered with dense bush. It is needless to repeat again and again that the country is flat; for since crossing the Umswelisi, and leaving the mountains behind, the whole of the land is as level as the ocean, having nearly everywhere red sandy soil until the Limpopo is reached.

Leaving these people, who were living in the bush, we arrived at Mandundari's Kraal, and still passing among dense deciduous woods we passed on to Halata's Kraal. Here the dense bush ends, and alternate woods of Umtonto or Umsimbiti prevail; the Umtonto generally growing on the more white sandy soil, and the Umsimbiti invariably growing on the deepest red soil.

After leaving Halata's, we struck west for a few miles, and slept at Pagadi's Kraal; and it was not until the next day that we crossed the Umhlanganini and Mahunjo. No rock or stone was visible until we neared the Mahunjo River, after crossing the Umhlanganini. Near it a coarse red sandy sort of ironstone crops out. The Umhlanganini is totally destitute of water on the surface, though wells dug in its bed reach water of

good quality. The Mahunjo River was now reduced to a few isolated pools at long intervals; but from the mud and its general appearance I have no doubt it runs for the greater part of the year.

At the Mahunjo we stayed with people in the bush. It is the practice of the Hlengas to desert their kraals during the dry season, and seek some spot in the bush near perennial water frequented by game. They there live entirely on meat and the root of an evergreen shrub, called umtshungutsi, from which they also manufacture a drink, tasting like sugar and water. The root when used for food is pounded into a coarse meal.

Seeing none of those large wooden mortars used by the natives for the purpose of pounding their corn, or stones to grind it with, I was led to inquire how they triturated it. I was shown holes in the ground which they had artificially hardened with ant-heap earth that apparently contains so much lime and sand in its composition as to form a perfect cement. In these holes, with a pestle of umsimbiti (African iron-wood) they were enabled to pound the corn I carried into fine meal, without even filling it with grit as might be expected.

Umsimbiti now prevailed even in dense forests for a mile or two at a stretch.

Leaving these parts, we struck the Ugwegwatsi River, now only standing in pools: but found that the people had heard of our approach and had run away.

Leaving this river, I struck the Umtshefu, and found some people under Mahonti (not him of Makwakwa) in the bush. The next day, going along down the river, we passed his deserted kraals, and found Inkoman Simba also in the bush on the same river. This Inkoman Simba is the Quamba Assimba of Petermann's map. The mistake in the name occurred thus: a native on being asked where shall we sleep, would answer "Qua," or "Gwa." Man Simba, short for "Gwa Inkoman Simba," the "Qua," or "Gwa," being the word "at" or "be." Petermann's position appeared to be correct; for though I did not reach his kraal it was not far off.

Leaving this, we struck across some very open country with Umtshanatsi woods, being the head of a series of open grassy spots draining to the U'Luize river to the east, and called Mabanyin, or open country, and came to the Umgorbu River, very salt, and now standing in stagnant pools. Much limestone lined all these pools, and they glistened with the white efflorescence of soda salts. Here we found Siserki, who I believe is identical with Schiqueta of Petermann's map on the route of Santa Anna Montanha. He was living in the bush apparently

on the exact spot where Petermann's Schiqueta is; but he told me his kraal was about 30 miles to the west.

Next day I went to these people's camp, and on the next following made a long march to a well near a deserted kraal. We were forced to go on next morning to Inyantshytshy's Kraal. The bush was still Umtonto and Umsimbiti. Inyantshytshy gave me a small tusk. Of course I returned him suitable presents. Leaving this, we slept at Inyarigormi's Kraal, where they were "waking" over the death of a young man just killed by a buffalo. Next day we passed through Umtshanatsi woods and found the dry torrent beds dipping to the west, towards the Limpopo, all the minor rivers hitherto crossed draining south-eastwards and ultimately forming the U'Luize river marked by Petermann. We again slept at a kraal, and next day soon after starting came to the commencement of an ancient bed of the Limpopo, as was shown by masses of water-worn pebbles. The bush or forest was now very tall and open, and the descent quite perceptible. About mid-day we reached the edge of the rises that border the river-bed, and saw stretched out below us the open grassy valley, the heavy evergreen timber skirting the stream and the river itself. A considerable rise was visible beyond it to the right, and to the left down its course on this side was another high land-mark, with almost precipitous sides of recent red stone, covered with Umsimbiti bush.

On entering the evergreens bordering the river, we found people engaged in collecting a cherry-like fruit called "Inhlanspha" which drops from these trees when ripe. It has a sweet mealy taste, and contains two long seeds. The natives dry them in the sun, after squeezing out the seeds, and then pound the fleshy parts into meal, which is made into porridge or drink; very palatable. As the fruit whilst drying gets fly-blown, it is about as full of maggots as rice soup is of rice. If the skins of the uncooked fruit are eaten in any quantity, violent attacks of windy colic ensue. I suffered terribly from it. On cooking the fruit in the ashes and carefully rejecting the skins I found no ill results. Another fruit also found along the rivers and growing on a large tree, called Umtorma, is also eaten and is very refreshing, tasting like fruit jelly. During the season of these fruits the natives eat nothing else, so as to save their corn. Those natives who live away from the river resort to it from great distances to collect these fruits.

We crossed the river to some kraals. It is about a mile wide, but mostly sand, the water being confined to about 300 feet broad and 2 feet deep. This place is called Matsambu, after the Tonga chief thereof, and is a well-known locality.

For the information of sportsmen I will add that it is the beginning of the game country. Even at the kraal good sport is to be had. Hippopotami are in the river. Giraffes, elands, koodoos, sassabyes, zebras, wild-pigs, gnus, and rhinoceroses are found in the adjoining bush. A few miles below the kraal they literally swarm. Nowhere in this part of Africa have I seen so much game. Game in Africa is not universally distributed. It is only found in localities perhaps accidentally discovered, as this place was by me.

Elephants also drink at the river, and if followed up energetically are sure to be found. The Tabi or Lehlaba, an affluent of the Upaluli, is about the southern limit of this game country. I shot a sassabye, a zebra, and a waterbuck, and wounded several gnus, sassabyes, and zebras. Impala, rooibucks or pallahs, abound in troops, but (as is usual with this kind) are exceedingly wild. One may often come upon them unawares, and thus procure them, but if they once see you pursuit is useless. There are no great physical obstacles to overcome in getting here from Lydenburg. Doubtless now that the Zulu country is shot out this will become the favourite resort of English sportsmen. With some difficulty we procured some corn here. Next day on my way I shot a waterbuck, and could have bagged several head of game had my ammunition not been so scant. We made a good march, and put up at some deserted kraals on the bank of the river.

At Matsambu I first began to suspect an error in my former determination of the latitude of "the meeting of the waters" of the Upaluli and Limpopo, called Mahlangini by the natives. For I found Matsambu by cross star observation to be in lat. 23° 27′ s., and therefore as the former point was formerly determined to be 23° 34′ the river must either take a great easterly course or the latitude of the confluence be in error; in passing along it was found to flow nearly due south, and intermediate latitude confirmed my opinion that an error of the original position of the meeting of the waters must exist to a considerable extent.

Leaving Matsambu, we made a good march, but found no people along the river, and therefore put up in the bush. In the early morning many of the Insimangu monkeys were discovered in the trees. Taking my rifle I made a capital shot and knocked one over. The next day, crossing the river just below a conspicuous red sandy rise, we soon reached a kraal. We now slept nightly at kraals, and found the country well inhabited. On the fifth day after leaving Matsambu I came upon a pool deep enough for hippopotami, and found some.

We stayed a day here to shoot. On the next day an easy walk brought us to "the meeting of the waters." Here my latitude observation by the sun gave 24° 8′ s., and the check by two stars north and south confirmed it. My 1868 determination is evidently, therefore, erroneous, being lat. 23° 34′ s., that is to say, this point is 34 miles more to the south than I formerly placed it. I find that an error in the reading of the entry in my journal fully accounts for it, as I took "overlapping rising" to mean the lower instead of the upper limb; making the necessary correction they both agree perfectly. The former determination depended upon a meridian altitude of the sun repeated next day, in which a similar error of reading occurred. This error is fully established by three separate and distinct observations now in 1872; one by the meridian altitude of the sun, one by the meridian altitude of the star south, one by the meridian altitude of the star north. Moreover, daily determinations along the Upaluli, being lat. 23° 57′, 24°, 23° 55′ s., and the Ulongwi hills in 23° 56′, place this point beyond further doubt, and demonstrate that I made a considerable error in my former determinations: though the observation is entered in my printed 1868 journal, it was calculated improperly. All my other 1868 determinations were confirmed by subsequent observations in 1871 and 1872; this one alone showing any error. This demonstrates the necessity for a traveller using cross stellar latitudes in preference to single solar ones. Moreover, the dreadful heat and glare at mid-day on land almost forbids the traveller using the sun. The inconvenience of the delay at mid-day for the solar observation also argues against it. I stayed at the meeting of the waters a whole day purposely to establish this fact. I placed its former longitude by dead reckoning in 33° 42′, which depended on Lydenburg being in long. 31° 30′ E. In my present journey I have moved it to 33° 2 —′. I believe that that town is more westerly in long. 30° 37′ E., so (by Petermann's last map it is removed to long. 30° 44′ E.) that this longitude would undergo a similar movement westward together with Mauch's, and my routes, and also the confluence of other important rivers, such as the Limvubu, Inwinisi (Nuanetsi), &c., &c. I suspect even the present, 1872, longitude of Schoemansdal to be too easterly. It depends simply on Mauch's usual method of dead reckoning carried up from Potchefstroom, or Pretoria. These longitudes sadly require to be fixed, but I had not the necessary instruments, or even practical experience, or dexterity sufficient to do it.*

* See Appendix.

I have formerly described the richness of the land at this place, which, indeed, is universally the case in the alluvial valley of the Limpopo. The limestone and pebble rises that border the Sabi are again found here; and our next day's march up the river discovered them in greater proportions as to height and more pebbly in composition; in fact, hills of pebbles, the stones being generally larger than a turkey's egg. I found no real granite amongst them. Quartz, gneiss, eurite, porphyry, and basalt were their main components. The country became now slightly undulating, though still bushy. Away from the river Umtshanatsi (Mopani) woods prevailed; but along the river minosas and some evergreens are found.

On the third day after leaving the meeting of the waters, we arrived at Donduli, which is really only two easy days' walk distant from that point. The country on the north of the Upaluli, and from Matsambu downwards, is inhabited by the Baloia.

The Chief of Donduli, Sifumbata, was the man who had to furnish me with bearers to go to Natal; but, as I formerly stated, Mahungu having turned back, we anticipated some difficulty. Sifumbata said he would discuss the matter. After talking three days, he came to the conclusion that I should have the men. On starting, though, we found all the kraals deserted, the people having run off to avoid this levy. We went along slowly, picking up one man here and another there. Coming to our resting-place, we found it like a cattle-kraal, from the great herds of buffaloes found there. My hunters shot one. Next day we made Sifumbata's induna, or secretary's kraal, and here procured all but two of our complement of bearers. Next morning we started, crossed the Upaluli, now bordered by rocky hills of rounded pebbles, and occasionally precipitous porphyritic rocks; and recrossed again. Here is, perhaps, the last considerable rocky hill on the river. It is covered with Umsimbiti bush; I have christened it "Reeves' Mount," as my unfortunate friend Reeves turned back here in 1868, and thence sent me some of the luxuries of civilization. He afterwards (in 1870) near Zoutpansberg met with his death by a gun accident.

We slept at Mahungu's Upaluli Kraal that night, and found the Dondulans feasting on crocodile, which they catch by baiting a stick tied in the centre. The crocodile gulps the whole, and on the string being pulled the stick strands across his entrails or gullet, and he is captured. Here my hunter shot another buffalo. The country was now becoming quite broken and stony, and the banks of the river were bordered by precipitous rocks. Open deciduous woods still prevailed.

The limestone bluffs hitherto skirting the river below Mahungu's now ceased, and the country became stony and undulating, or even hilly. As I can now be precise by having my note-book from this date, it may be as well to state that I left Mahungu's Kraal on Sunday, September 15th, and crossed the Upaluli to the left bank. The bed is here about a mile and a half across, but the stream of water was not more than 80 yards broad and about 2½ feet deep. When I describe the depth of these African rivers, it must not be understood to be that depth all through; but generally in some narrow channel, usually tortuous in the extreme, and often entirely barred by sand to within a few inches of the surface. The bed of this river is here pebbly, with sand. On either hand are low bushy hills, and on the north, or left bank, a small extent of red precipitous porphyritic rock, called jingivin, which forms an upland mark on the river. Striking slightly away from the river, we ascended the hills, which proved to be about 300 feet above it. They are apparently entirely composed of water-worn pebbles. In some places these pebbles are so assorted in size, and so evenly and thickly spread over the surface, that it might be supposed they had been laid out by art and not by nature. The prevailing precipitous rocks along the river, and the occasional outcrops along the route, appear to be composed of porphyry, showing that the pebbles are merely a superficial deposit torn from the neighbouring rocks, and rolled and triturated by a vast ocean. These pebbles are usually of the prevailing rock, but many are of gneiss, basalt, quartz, and different varieties of porphyry. Granitic pebbles alone seemed wanting. On ascending to the higher ground and plateaux, the pebbles give place to angular fragments of clinkstone porphyry, generally of one size, about a foot square, and usually oblong. The walking then was extremely disagreeable, and even more so than over the pebbles. Passing on, we began to descend to the Tabi River, and found the rocks still larger and more angular, and consequently the labour of walking increased. Though a much-travelled path was pursued throughout, this did not much mitigate the evil. About 8 miles on a large outcrop of this porphyritic rock was reached, in the hollows of which good water was found, which is permanent. The rocks are called Matabin. After passing this place, the path crossed a very flat country, with Umtshanatsi woods and grass, and descended by a very rocky path to a dry torrent-bed, called Munuwin (brackish), which had a little stagnant water in the hollows. On the right hand were some conspicuous rocky hills, called U'Longwi, whence this torrent takes its rise about 4 miles off. The path, then taking a southerly direction, led

over a stony rise and turned back towards the right, descending to the Tabi River, which was now in sight, and appeared to be a vast bed of green reeds. This Tabi River is also called Lehlaba by the Basutos, or Mavithas further up. A path skirting the river was struck, and pursued up until it passed up under the high precipitous sides of the U'Longwi rocks which overhang the river; and on emerging into the more open country, turned sharply to the right, and ascended the hill over the rocks. A short, sharp climb brought us to the kraal of Sisani Mashali, a Mavitha or Basuto, almost on the top. It was, by the barometer, 300 feet above the river, and gave a fine view of it and of the surrounding country, laid out like a map below. The surface appeared of a red colour from the dry grass, and was dotted with stones and bush, but flat. To the north-west, three isolated hills were visible, called Igotsi, Itshali, and Kaleka. The Tabi flows under them. They are distant about 30 miles. The view from the top of the hills, which are still about 100 feet above the kraals, 1100 feet above the sea, and 400 above the plain, comprised three-quarters of the horizon, which appears almost as level as that of the ocean. To the west, the country appears more undulating, and in the extreme distance a small elevation denotes the Drakensberg near the Mallatsi River, and the point where I descended those mountains in 1868. The Tabi supplies about one-third of the water of the Upaluli, and is a strong, rapid, rocky stream, rising in the country called Spelunken by the Boers, being the easterly face of the Drakensberg, near Schoemansdal.

This Basuto Kraal is the only one for many days' walk around this spot.

Up the river towards the Berg there are no people for five days' walk; and towards the north-west, four.

On the latter route are the people of Umjaji, a Basuto Chief, tributary to Umzila. Adjoining him to the west is Majaji, the Basuto Queen, of whom I wrote in my 1868 journal. To the east, about a day and a half's walk, is Imbonduna's place. On my 1868 route, farther southwards, about eight days' walk, is Delagoa Bay and Lorenzo Marques. The country has been depopulated by Umzila's armies, and such Basutos as live in it conceal themselves amongst the precipitous rocks in these peculiar hills rising so abruptly from the plain. Due west from this is a low isolated hill distant 15 miles, called Lowuli, a good landmark. During the day we passed the spoor of buffaloes and rhinoceroses, and saw impalas, quaggas, elands, and giraffes. On the 17th of September we left Sisani's and crossed the Tabi, finding it waist deep, rapid, and about 40 yards wide. By native accounts, the confluence of the Tabi and the Upaluli

bears from this kraal south, 50° E., distant 8 miles. We struck south-west to cut the Upaluli.

We made a move on the 19th, though the weather was threatening. We passed Timba Mati, and forded a streamlet just above it. Clambering over the rocks, we encamped just beyond them.

We crossed several dry torrent beds, and next day we crossed the affluence of the Imbabati River, which has the same sandy character as it has above where I crossed it in 1868. The country near the river was very rocky, with hills bordering it on either hand. Large quartz reefs and basaltic dykes broke up the stream into rapids and islands. In many places the route passing along the river wound round large masses of igneous rocks, consisting of quartz and a kind of quartzose conglomerate of mica. In many instances this latter rock was entirely black, and would answer to the German term schwarzglimmer. Gneiss and mica schist abounded.

On the 20th, at 7 miles on the stage, a pair of huge rocks in the river were passed, looking like elephants drinking. I have called them "Elephant Rocks." These rocks are at the foot of a long series of swift rapids, about 3 miles long. At the bend of them, on the left bank, is a well-marked hill having a solitary round rock resting on its crest; this I have named "Rawlinson's Cap," after the President of our Geographical Society. The river above is less rapid and broken, but still contains masses of rock and broken water. The rocks here are entirely quartzose. The river henceforward is a broken and rocky torrent; so that it is not necessary to repeat the description. It is quite impassable for any beast of burden, and altogether impracticable as a road. The country on either hand, 5 or 6 miles from the river, is flat and unobstructed by rocks, with open deciduous bush, and practicable for a vehicle.

We now saw the peaks of the Drakensberg to the south-west quite plainly. The banks of the river were now so precipitous that we had some difficulty in finding a suitable place for our camp. Ultimately, we settled down in the dry bed of a torrent.

The lions collected around us during the night, and kept up deafening roars. I stayed here next day to dry the skin of a lion which I had shot. Latitude by α Aquilæ on Meridian, 24° 6′ S.

On the 22nd we struck across a ridge that faced the river towards the north, and found a rocky, bushy country, with much quartz. The river is now reduced to a mere mountain stream, with many tree-stumps and debacles.

An hour after starting we passed over the Sorghobili River of my 1868 journey, here standing in pools amongst the rocks, but higher up the water is entirely hidden by sand, and only to be had by digging. The route taken kept about 2 miles from the river bank in the early part of the day, and at about 4 miles upon it we passed a solitary hill of solid quartz with an evergreen tree growing on the summit; a good landmark. I called it "Hoar Head," from its remarkable appearance. Ahead Mashishimani's hills were seen, a precipitous rocky ridge running out from the Drakensberg, and apparently turning the Upaluli westwards. Finding the country becoming more rugged and broken we preferred to return to the river. Accordingly we struck down a stream leading to the Upaluli again.

We passed the deserted kraals of Sumbani, and after passing through a precipitous gorge, here confining the river, and crossing a small perennial stream, we put up for the night. Lat. 24° 6′ s., by cross observation of *a* Aquilæ and *a* Pavonis.

On the 23rd, immediately at starting we crossed the Umgoshomera River, the Umtasera or Umtasiti of my 1868 journey, and found some limestone capping the rocks along its banks. It is a strong stream with a sandy bed, and rocks occasionally obstructing its passage. We then struck across some quartzose hills, to avoid the broken and precipitous rocks along the river which is here overhung on the northern bank by the lofty needle-like peak of Umhulula, an offshoot of Mashishimani's mountains, rising 900 feet sheer out of the river, and a most conspicuous landmark. The summit is about 1500 feet above the sea. It is crowned by points of bare rock, and stands exactly at the confluence of the Schalata and Upaluli. This range of Mashishimani's appears to run out from the Drakensberg skirting the north bank of the river, and terminating gradually in isolated peaks until lost below the horizon to the N.N.E. Ahead is a hog-backed broken ridge of the same range, and away northwards Mapalora's lofty peak was seen. Umhulula has two smaller companions adjoining it on the banks of the river.

Having again approached the stream, we re-entered amongst the precipitous rocks, finding signs of habitations, and soon afterwards some deserted kraals. We met a man at last, who guided us to some Basutos living amongst the rocks. He first, however, took us up a high rocky hill, so as to expose us to the view of all around—that they could prepare if necessary, should we be enemies. We passed under high precipitous rocky hills on the north bank with an immense mass of isolated rock separated from them, doubtless by the fierce action of this

torrent-like river extended over ages. This is called Myaki (the gate). Crossing the river here, we found the Basuto huts of Makati; lat. 24° 4′ s., by cross observation by the stars, *a* Aquilæ, and *a* Pavonis. There were some other Basutos here smelting iron; and from them I ascertained that this is a very celebrated place, and that they had come all the way from Majajis to get their iron, on account of its superior quality. The country is interesting from its peculiar appearance; being broken in all directions by these singular isolated peaks.

Near these kraals there is a path, but since leaving the Tabi there had been none; and now, on the 24th, soon after leaving these kraals, it faded away again. As rocky hills abut on the river, it was difficult walking. Sometimes there was firm ground above the river, at other times it was necessary to go along the sand of the river-bed, or to climb over the débris of the rocky precipices. The walking was thus very trying and disagreeable. Moreover, the river being so tortuous, and the rate of progress from time to time so unequal, the dead reckoning was quite thrown out.

On the 25th, as the Upaluli appeared to turn by a great bend from the northwards, I determined to strike straight for the Cañon of the Mallatsi, or Umchlasi, and the "Giant Stairs" of my 1868 route, now in view to the south-west. Telling my men, therefore, to desert the path along the river, as it was bad and stony, and make for the lofty peaks of the Drakensberg, I left them behind and went across the hills with the hunter and his boy. After leaving the Upaluli to the right, the country became more flat and less stony, and at last resolved itself into long undulations with Umgana trees and grass. The formation was quartzose, with coarse sandstone and occasional outcrops of basalt. At 17 miles distance we crossed the Umtlabi stream, which is that marked at Imperani's Kraal on my 1868 route; and at 19 miles, and about half-past 2 in the afternoon, we reached the Mallatsi, or Umchlasi River. Both these streams had trappean beds.

The other Kafirs never came on. Therefore bedding, utensils, and clothing were deficient; they did not catch me up until I had been in Lydenburg for several days.

On the 26th, thinking my men might come up, we made a short march to the foot of the precipice of the Drakensberg and found some Basuto huts, where we slept.

The barometer, since leaving the Limpopo, showed a gradual and steady decline, greater or less of course, according to the nature of the ascent, and now, at the Umchlasi River, read 28·8 inches, equal to an altitude of 1441 feet above the sea, as my aneroid at the sea level has a mean reading of 30·35 inches

(barometer reduced for error from 30 inches would be 28·45). From the hills a fine view of the country traversed was obtained. Near us, to the north-west, a range of high hills on the left bank of the Upaluli appeared to continue in a line of isolated peaks upwards to the Drakensberg. This is the Mashishimani Range. Beyond, northwards, it was seen to continue to Umhulula, together with its companion and Mapalora's mountain. The Inyaki Hills and lower ranges seem to take a more easterly direction, until in the blue distance of the horizon they seemed to join U'Longwi and the Bomba Mountains. In front, in the course of the Upaluli in the Drakensberg, a long saddle-back mountain appeared, and the course of the Mallatsi was well marked by a huge bluff on the west, and apparently a large isolated mountainous buttress on the east. This apparently isolated buttress of the Drakensberg is not really so; but forms the great elbow where that range takes its westerly bend; and forms the basin of the Upaluli and Limpopo. It is called Ufangi.

Between these two peaks the Mallatsi flows, and affords a panoramic view of mountains piled on mountains until closed in the blue distance by those near Origstadt.

We ascended the mountain by the Inyamitsi Pass, and found it better than the "Giant Stair," though also impracticable for beasts of burden. I ascertained afterwards that, still more to the west, there was a road traversible by waggons down to the plains. From the top of the berg a most extensive view is obtained, as it is roundly 3350 feet above the Mallatsi River, the barometer on the top reading 25·5 (reading sea level 30·35), therefore this pass ascends to 4785 feet above the sea. Many of the peaks were 400 or 500 feet higher, so that this part of the Drakensberg seems to be no lower than its more southern extension in Natal, but there it descends in gradual steps to the sea; here it drops in one clean precipice to the plain, which has a gradual dip, quite imperceptible to the senses, to the ocean. The path was so faint that we lost it amongst the rocks. Following down a stream until it became impassable from rocks, we crossed and ascended to a fine piece of table-land hemmed in by mountains. We then found a path with foot-prints. We followed this for a short distance, but found it going down into a fearful chasm, and striking away towards the north-east. Telling my men that Lydenburg was to the south, and that I had no desire to go to Delagoa Bay, I turned back and struck across country south. I was soon rewarded by coming on waggon tracks. Next morning we crossed the Umchlasingwana six times, and reached Scoeman's at "Kruger's Post."

Next day being Sunday, the 29th of September, 1872, six hours' walk brought me to Lydenburg, where I was hospitably entertained by my old friend Thomas Maclachlan.

The valley of the Umchlasingwana is very rich, and grows wheat and all other cereals as well as fruit to perfection. The formation is red clay slate with sandstone and eruptive basalt. Lime is found and prepared by the white people near Origstadt. There is iron ore and slight outcrops of quartz. The valley begins at Scoeman's, where the Umchlasingwana rises and is enclosed on either hand by precipitous mountains, which gradually close and form a gorge or cañon narrowing down the river until they abut upon the water. The river then escapes into the Umchlasi, or Mallatsi, to the right, which also passes through a deep cañon into the plains below. After passing Scoeman's, you ascend a ridge and come upon the drainage of the Lydenburg plateau, the first stream being the Speckboom River, which falls into the Dorp River, which, nearer its sources, waters the town of Lydenburg. The combined streams flow into the Steelpoort River, which is hidden behind the high mountain ridge called Steenkamp's Berg to the west. The Steelpoort then joins the Oliphant or Upaluli amongst the mountains.

APPENDIX A.

Ancient Travels.

No doubt search amongst the Portuguese annals would disclose some very valuable information about this country, now called Gasa, according to the Zulu fashion of christening countries after the grandfathers or great-grandfathers of the reigning King.

I was shown by Mr. Phipson, of Pietermaritzburg, a copy of Pinkerton's work, 'Voyages and Travels—Africa,' published in 1814; containing a translation of the travels of the Rev. Father De Santos, a Dominican monk, in the regions about what he calls the River of Sofala; this river is the Bosi of the present, not the Sabi River. The account is somewhat confused as to dates, but treats of periods about the years A.D. 1560 or 1570, not in 1506 A.D., as stated in the narrative.

The expression the River of Sofala is indefinite, inasmuch as there is no river of importance entering the harbour of Sofala, though the Bosi enters the sea about eight or nine miles to the north-east of Sofala in a large bay or arm of the sea. I have considered the text with respect to which of the two larger rivers in this region is likely to be the river referred to, whether the great Sabi or the Bosi, and am led by reference to the nature of the country and the mention of certain known localities to adopt the Bosi as the River of Sofala.

The Gorongosi River marked by Petermann as entering at Sofala, enters the sea considerably lower down at a deserted Moor settlement in lat. 20° 27′ s. (nearly).

The Portuguese army, which was to be sent into this country under

Francisco Baretto, apparently arrived at Mozambique in August, 1586 (1506 in the work ?), and probably landed at Sofala in the early part of 1587.

At present the coast is divided along the sea-board into South, South-east, and East Africa; or otherwise, into South Africa, Mozambique, and Muscat. Apparently in those days they classed it more generally as Eastern Ethiopia from the Cape of Good Hope to the Red Sea.

Sofala is described as a small maritime kingdom dependent on the Sovereign of Quitera, and was situate between the river Cuama (Zambesi) and Mount Manica, about lat. 20½° s. It extended along the sea-board to a river a league in breadth, which flowed through a country called Mocarangua, by Zimboe, the capital and residence of the Quiteva. This river, a league in breadth near the sea, was evidently the Bosi, which empties itself into a very large estuary. The Sabi is narrow at the mouth.

Now, in the country drained by the Bosi, between lat. 18° and 20½° s., there is a country or a tribe still called Tebi or Tevi, in the plural, Abatevi. The country might be referred to as Gwa-Tevi or Quitevi, that is "at" or "in" Tevi.

This would point to Zimboe being situate on an affluent of the Bosi, not on those of the Sabi, as pointed out by Herr Mauch.

Great commerce apparently took place between Sofala and Manica for gold-dust, which, however, the Rev. Father quaintly says, "is not so easily obtained as is imagined." And further: "When they saw what toil was requisite for extracting the precious metal from the bowels of the earth, and the danger incurred by those who worked in the mines, they were speedily undeceived, and no longer regarded their fortunes as instantaneously made. At the same time they were induced to reflect that the labour and risk of digging the gold from abysses from whence it is drawn are such as with justice to stamp that value on it which it bears from its consequent rarity." This passage is borne out entirely by native report, which says that in that country there are great holes in the ground which are so deep that the darkness therein necessitates a torch to be used in their exploration. Within very recent periods these mines were worked by the natives, even after C'naba of Umsan destroyed the Portuguese settlements at Manica, until Umzila, to obliterate all knowledge of them, killed every aboriginal inhabitant. The country is now depopulated.

The rivers in Manica—I was told by natives who had been there—run toward the Zambesi, which they call Inyantsha, or Umvula Imbomvu.

Sofala is described as then of considerable importance, and possessing a stone fort of a square shape. The site of this ancient fort can still be found near the present town of Sofala.

Pedro de Naya sailed to Sofala with six ships. Four only of these ships were able to enter the harbour, the other two being of too great draft of water. This would show that the harbour has not much decreased in depth since that time, although it is stated to the contrary by the present inhabitants. Probably the channels shift from time to time.

Sofala was then governed by a Moorish Sovereign, called Ruffe, or Russi. I think this is meant for Fussi, as there is at present a chieftainess in Inyowtshia, called Fossi, or Mafussi, a celebrated rain-maker, and once was queen of a large territory extending even down to Sofala. I visited this lady, as I have mentioned in my Journal.

It is mentioned that Sofala was very fertile, and produced abundance of fruits, flowers, and cattle; moreover, that fifteen fowls could be purchased for 11*d*. It is very fertile, but cattle are few, and five fowls only can now be bought for that sum.

He describes beer-making, which he calls wine, out of millet and rice, just as seen at present. Also the manufacture of oil—he calls it butter—from

gergelinés; doubtless he means gingelly seed, from which they now extract it. They also use the ground-nut for this purpose when required for cooking; but when they want grease for the purpose of greasing their bodies, they use the seed of the Umkooslu, an evergreen tree like a chestnut.

He mentions also palm-wine. At present the natives extract a toddy from the vegetable ivory palm, called bushem.

He notices that the natives dip their food into their wine as he calls it. I have observed the natives dip their food into a kind of sauce, called Umtshobila, as often prepared from rats as anything else by the Tongas;—this custom is not practised by the Kafirs of the south.

Many of their ancient customs, as described in the narrative, resemble those practised by the Zulus and their offshoots at the present day.

It is a Zulu custom, for instance, to employ Court flatterers to shout the praises of Royalty, such as: "Here comes the great lion;" "The jackal of Manukuza;" "A huge elephant, that eats the tops of the trees;" "The great black one," &c., &c.; just as described in the old narrative.

The Zulus still address their Sovereign in a bent attitude and with bated breath, similar to the manner of the Quiteva Court. He describes the King holding levées, and the customary distribution of beer after them. Umzila, though an emigrant from the south, together with other Zulus, follow this practice.

It was customary for the King of Quiteva to hold saturnalia, or a wake for the souls of his departed ancestors, at the first new moon of September. It is a Zulu custom to hold an annual dance about the first new moon of December: it is called U'clui. Moreover, military, or full-dress manœuvres, are described at this dance very similar to those indulged in at present at the U'clui.

It is an almost universal native custom to "wake," or cry for the dead at present, as they apparently did in those days; and sacrifices to the spirits of forefathers, called "Tete Mahlosi," are likewise presented.

Many of the customs mentioned by him do not pertain to the Zulus of the present day, but are all represented by one or other of the Tonga tribes inhabiting the country. For instance, it is an entirely Tonga custom to permit the chiefs cohabiting with their sisters and daughters. I believe it is very common amongst the Chobi tribe. The rules of succession to the chieftainship more resemble those followed by the Tongas than by the Zulus. Most Tonga tribes seem to prefer female Sovereigns. Zulu succession is regulated by the King himself, inasmuch as he appoints such of his children as he may choose to succeed him.

The chiefs were then supposed, as they are at present, to be able to converse with departed spirits both of men and beast. At the present day, native hunters and traders believe that if they quarrel with the chief of the district he can forewarn by means of the departed spirits men and animals to your disadvantage.

He describes presents being made to the Quiteva to obtain rain, or to cause it to cease. This is practised at present; even the conqueror Umzila sends payment for rain-making to any of the Tonga chiefs celebrated in this line. These rain-makers appear to be hereditary, as Mafussi.

Apparently, Zimboe was near to Sofala, and beyond the usual residence of the Quiteva. Mauch places it in lat. 20° 14′ s., nearly in the parallel of Sofala, but on the Tokwe, an affluent of the Sabi. I think it must be on an affluent of the Bosi.

He notices that people sent on the King's services levied black mail wherever they went. It is curious that Umzila's Zulus are proverbial for the same propensity, differing in this respect from the southern Zulus, who merely take the tribute due from one chief to the other.

When the Quiteva ordered an execution, the executioners called out "In-

hama, Inhama" (pronounced Inyama, Inyama), as they would now-a-days, meaning Black, that is, "The Great Black One," their manner of thanking—which is usual when the King administers punishment.

He describes the disputants in a case submitting to the ordeal of poison, just as practised at present by the Tongas. The guilty party falling dead and the other escaping.

He mentions that the Quiteva granted the island of Maroopa to Rodriguez Lopo. This would identify the river of Sofala, the Sabi having no island of importance in its course; I do not know whether the Bosi has.

The systems of hunting and ensnaring game do not appear to have altered since that time.

He notices the practice of casting chances, and prognosticating the future by round pieces of wood with a hole in the centre. This is still done, these pieces of wood being the half-shells of a kind of almond which is peculiar to the bush of these plains. Sometimes, together with these almond-shells, they have a piece of tortoise-shell, and some sea-shells, which have certain definitions according to the manner in which they fall after being shaken together in the hands and thrown down.

He refers to a peculiar fish, which he calls a mermaid, or woman-fish with breasts. There is some foundation for this fact, as a kind of manatee is sometimes washed up on the coast of a very peculiar form; I have not seen it myself. Marsh fishes are also described, apparently of the Silurus species, so common in the country. He sometimes deals in the marvellous, after the manner of these ancient travellers. He states, on the failure of moisture these fishes devour themselves. It evidently did not occur to him who would then digest the meal.

He mentions that Quiteva was the King of Sofala, as Monomatapa was of Mongas. These were not their names but their titles, similar to the Pharaohs.

Mongas was rich in gold and silver mines, in pursuit of the discovery of which the Portuguese General Francisco Baretto entered the kingdom. It appears that it was necessary to pass through the kingdom of Sofala under the Quiteva to get to Manica under the Chichanga (Shishanga), where the gold lay.

These kings appear to have been Moors of the Mahommedan persuasion.

Mongas can be identified as situated somewhere near the Lapata Mountains, which in the narrative is referred to as the forest of Lapata. It says the river Zambesi, beating with violence against these rocks, in lapse of time has wrought itself a passage through the forest, and rushes with such violence over its craggy bed that all who hitherto have had the temerity to attempt its course have been shipwrecked.

He mentions the water at Fort Tete, on the Zambesi, six score leagues from the sea (360 miles), as being salt; we know this is not so.

The open country is constantly referred to, and the fact of the natives abandoning it for the bush when attacked by the Portuguese. There can be little doubt that these operations took place on the open plateau lands, where little bush is found.

Moreover, it shows that Baretto made considerable advance into the interior, even considerably beyond the sources of the Sabi. There is no mention made of his troops suffering from the fevers of the country which prevail at present on the plains; this would also go to prove that he confined himself to the healthly uplands.

Baretto left a garrison of 200 men apparently in the kingdom of Mongas, and on the open elevated country they strongly fortified and entrenched themselves; they were afterwards led into an ambush and destroyed.

It is my opinion that the ruins which Mauch discovered, and seems to think are the ancient Zimboe, is really nothing but this old fort of Francisco Baretto.

Zimboe was probably merely a grass palace, it was destroyed by the Portuguese about 1590.

Such parts of the Rev. Father's account as are given on his own observation are such accurate descriptions of the present state of things, that they are stamped with truth, though those parts given on the authority of others are as apparently misleading and ridiculous. I am led to believe that some of the people described in this narrative are the ancestors of our Zulus; most probably they emigrated southwards after their defeat by Baretto. It has often been surmised that the Zulus have Arab blood in them, hence it might be accounted for.

I see Dr. Petermann endeavours to make out that Sabi and Sheba are probably synonymous, and that the Scriptural queen was Queen of Sabi, or Sheba; or, in other words, Queen of the Sabi River. Not at all probable I think.

There is a tribe or class of Zulus whose "sobonga," or family name, is Sheba.* It is possible that they came from the country under discussion, so that there might be some ground for connecting these regions with those ruled over by Solomon's visitor.

It is more probable that the gold was taken by the Moors to Zanzibar, and there traded away. It afterwards found its way up the Red Sea.

I cannot see any ground for changing Sofala into Sophyra or Ophir.

APPENDIX B.

Remarks on Captain Elton's *Journey on the Limpopo River.*

The 'Journal,' Vol. 42, of the Royal Geographical Society contains a paper on the middle course of the Limpopo River by Captain Elton. It is necessary that I should make a few remarks upon it.

Much of the information given in the latter part is from hearsay, and not from actual observation, consequently it is in many instances incorrect. His remarks in a foot-note would lead one to suppose that the natives can as effectually resist the Boers, or emigrant Dutch farmers from the Cape and Natal, as they can the Portuguese. Such is not the case. The natives never have and never can for a moment withstand the onward movement of the Dutch Republics. The Boers are universally regarded by the natives as a great and powerful people. Their aggressive tendency in search of new lands causes them to be feared and disliked. Even Umzila fears the Boers more than the English.

It is the custom in Umzila's country for one tusk of the elephant killed by a hunter to be left for the King. It originated with the Portuguese; and though the Boers are obliged to submit to it, it is not from any fear but merely from custom. In Umzila's country the elephant grounds are strictly preserved. The shooting must be purchased from the King.

In another foot-note it is remarked that the Mindongas, or Chobis, extend to the mouth of the Limpopo. Such is not the case. The mouth of the Limpopo, and 20 miles to the north, or rather east of it, is under the dominion of Umzila, and inhabited by his people.

The Mindongas, or Chobis, have no head chief, as I have described in my Journal, though Captain Elton calls him Inhamtumbu (pronounced Inyamtumbu). If such a person exists, he is probably merely the head of a large

* So I am informed by Mr. Robert Dubois.

stockaded village. The Chobis, with few exceptions, pay tribute to the Portuguese.

The information given with reference to Umzila's family is entirely incorrect. Umzila is sole King. Madumelan was his cousin and subject; he is now dead. Moreover, Madumelan was not the governor of the whole of the land between the Limpopo and the Umkomogazi (King George's River). He had separate districts in different parts of the country, but none so low down as the Umkomogazi. He certainly was a great sub-chief and military commander.

As I have already stated in my Journal, after a third inspection of the river, I entirely disagree with Captain Elton as to its navigability in "the driest season of the year." I found only about 1 foot of water at Matsambu in lat. 23° 27′ s., 50 miles above the "Meeting of the Waters," in August 1872. In summer doubtless there is abundance of water, but then there would be a current to overcome of about 4 knots an hour; moreover, much danger would be incurred from the descent of large trees, which feature the natives have remarked to me is especially noticeable in the flood season, that is from December to April.

He remarks that he is not inclined to think the country unhealthy. From much greater experience than he possesses, I am enabled to say it is extremely so, though perhaps not deadly to the prudent and acclimatised European.

I cannot endorse his statement as to the large timber on the banks of the river, though large trees are found there fit for ordinary purposes in the construction and repair of large boats, though in sufficient quantities to be of commercial value.

Many of the proper names given by this writer are confusing, inasmuch as the prepositions "gwa" or "qwa," "at" or "to," are often prefixed to names; for instance, "Qualikoto," is meant for "Likoto," or "Lukorto." Likewise Quanyambi should be Inyambi; Quasilinda, Silinda; Cunyana is meant for Mankanyana. The Nwetzi River for the Inwenetsi.

He attempts to define the limits of the Amatongas, Butongas, Tongas, &c. These are not trivial appellations; he might as well try to define the limits of the "Kafirs." Tonga simply means something which is not a Zulu.

He remarks the river known as the Umkomogazi is also called Uhluauhle. This latter word is meant for Luauhla, or the sea, and does not pertain to the river at all. He says, further, that this river is 600 yards wide. Mr. Robert Dubois, my companion, who proceeded up it in a boat from Lorenzo Marques, says that it is not nearly so wide, in fact, though deep when once over the shallows at the mouth, seldom exceeding 100 yards across.

Mr. Dubois remarks that the name Manissa, or Maniça, given to it by the Portuguese, is the name of Magudu's district on its banks, and was the name of his great-great-grandfather, probably the first chief of these emigrant people.

Captain Elton mentions Quonquondyan's: he probably means Manyanganye; the river there, the name of which he does not give, is called Samban.

He says the ground-nut, or *Arachis hypocarpogea*, has a heart-shaped leaf; not so; it has a quarter-foil leaf.

Though I have now been in Africa nearly 16 years, I have never heard of the native women elongating their breasts artificially as they are stated to do by this traveller. Since the publication of his Journal, I have made inquiries on this subject, and have not been able to confirm this statement.

I must conclude these remarks by mentioning that "The Meeting of the Waters" was determined in 1868, by two observations of the sun or the meridian, as under:—

August 1st.—Dbl. alt. ⊙ sun's upper limb overlapping, rising 96° 29′ 55″.

In calculating these observations, an error was made by adding instead of deducting the semi-diameter of the sun, in consequence of a misconception as to which limb of the object had been taken; but as it is stated in the 1868 journal, no other than the sun's upper limb can be meant, though the lower limb was erroneously adopted. The result, as stated in my 1868 Journal, was lat. 23° 34′ s.; on recalculation now, taking the upper limb instead of the lower limb, the result will be lat. 24° 8′, which latter result was reconfirmed in 1872, by observation of the sun on the meridian, and of the stars on the meridian north and south.

On reference to the printed Journal of 1868, it is stated that the images "were overlapping whilst the sun was rising," or shortly, "ov^{g}. ris^{g}." Thus it will be seen that this error is fully and satisfactorily accounted for.

All my other 1868 determinations were reconfirmed in 1871 and 1872.

Nevertheless, as Captain Elton took *no astronomical observations*, and adopted my erroneous position for "The Meeting of the Waters," that point must be transferred in his map from lat. 23° 34′ s., to lat. 24° 8′ s.

The longitude of Lydenburg is undecided. In 1868, I took a single observation, and told Mr. Mauch the result, namely, 31° 30′ E. He told me it agreed with his observations. Consequently, it has been adopted both by our Society and Dr. Petermann. I afterwards recalculated my observation, and found the original calculation erroneous. Mr. Mauch evidently misinformed me, and adopted my single and, therefore, valueless observation. Dr. Petermann being informed of this, saw fit to move Lydenburg in his map, 'Originalkarte der neuesten Entdeckungsreisen in Süd-Afrika, &c., 1872,' to 30° 44′ E.

By the map which accompanies this it will be seen that my bearings and distances carried down to Newcastle, in Natal, which is sufficiently determined for the purpose, makes Lydenburg in long. 30° 34′ E., or if the difference of departure and longitude be taken into account, in long. 30° 37′ E.; so that Dr. Petermann's last position is sufficiently near for all practical purposes of the pioneer explorer.

All positions, therefore, depending upon the original position of Lydenburg in long. 31° 30′ E., will have to be amended by its new and more correct position.

I may as well state here that Mauch's positions in longitude depend on dead reckoning only after carried up from places also undetermined, though his latitudes are from observation.

APPENDIX C.

Itinerary of Mr. St. Vincent Erskine, from Lydenburg to Newcastle, Natal, with Bearing and Distances, taken to establish the Longitude of Lydenburg.

Date.	Direction.				Time.	Rate.	Estimated Miles.	Reduced Distance.	Traverse.				Remarks.
	Magnetic Direction.	Magnetic Declination.	Compass Index Error.	True Direction.					N.	S.	E.	W.	
1872.		W.	Deduct for Magn. Var.		hrs.								
Oct. 11	S. 50° W.	24°	12°	S. 38° W.	3½	6	21	19	..	15·0	..	11·7	Leave Lydenburg, pass up Dorp's River. Barometer at Lydenburg, mean of 13 daily observations, 25·2. Altitude 4781 feet. Trappean formation. Latitude by observation of sun and stars N and S., confirming 1868 determination, 25° 5′ S. Bearing of Delagoa Bay magnetic south-east, distant 134 geographical miles. Steenkamps Berg, very high to the west, long continuous range. Dorp's River rises at Spiven Koss 12 miles by road. Altitude of highest point on road between Dorp's River and Umgwenia at 12 miles, 5237 feet; Barometer reading, 24·8. Abrupt descent to Valley of Umgwenia. River Valley. Shale and Trachyte. Cross three small streams and put up at Avetyee's under Koppie Aleine.
,, 12	S. 20° W.	..	..	S. 8° W.	1½	..	9	8	..	7·9	..	1·1	Barometer at Umgwenia 25·9 = 4034 feet. Barometer at 8 miles on plateau, dividing drainage of Umgwenia and B. B. Kraal Spruit 24·4 = 5650 feet. Precipitous mountains on right hand. View of Falls of Umgwenia, off high precipices of Steenkamp's Berg. Low land; Diorite Plateau; red shaly sandstone; red soil.
,,	S. 50° W.	..	..	S. 38° W.	1½	..	9	8	..	6·3	..	4·9	Cross Blue Bok's Kraal Spruit at end of stage. C. Fouvie's Farm.
,,	S. 35° W.	..	..	S. 23° W.	2	..	12	11	..	10·1	..	4·3	At 4 miles and 8 miles cross two streams; and at end of stage, Eland's Spruit, Potgeiter's Farm.
,,	S. 20° W.	..	..	S. 8° W.	2	3½	7	6	..	5·9	..	0·8	At 6 miles pass Eland's Koss, about 270 feet relative to the road. Barometer 24·2 = 5821 feet. End of stage, Stultz's Farm. Barometer 24·6 = 5438 feet.
,,	S. 10° W.	..	..	S. 2° E.	2	5	10	9	..	9·0	0·3	..	Valley of Umkomáti. Open, with bold undulating country around. River at drift, about 5300 feet. Formation white sandstone.
13	S. 50° W.	..	..	S. 38° W.	2	6	12	11	..	8·7	..	6·8	Cross Umkomati at starting after crossing a small stream, ascend plateau at 11 miles. Barometer 24·0 = 6111 feet. Freestone. At 4 and 6 miles cross affluents of Kloss Spruit, first waters of Vaal or Likwa River, to Atlantic Ocean by Orange River. At end of stage reach Clarke's Store and Lake Chrissie. Barometer 3 miles back, highest on whole road, 23·8 = 6335 feet.

,,	S. 15° W.	..	..	S. 3° W.	1¼	..	9	8	..	8·6	..	0·4	Barometer at lake 24·2 = 5821 feet. Lake impregnated by soda and salt, undrinkable. Bluff of white sandstone on south side, horseshoe shaped.
,,	S. 15° W.	25°	..	S. 2° W.	2	..	12	10	..	10·0	..	0·3	
14	N. 70° E.	..	..	N. 57° E.	3	..	18	17·5	0·3	..	15·1	..	Hamilton, Barometer 24·1 = 6000 feet. Formation, granite-gneiss, eruptive basalt and sandstone, &c. Umpilosi River said to run into Usutu. Doubtful; probably identical with Umbolosi of 1868 journey, and the Dundas or Lorenzo Marques River, of Delagoa Bay. Many lakes; the largest, Lake Chrissie, 36 miles in circumference. Extensive patches of flat bare sandstone. Finest country on the road.
15	S. 30° W.	..	..	S. 17° W.	3	..	18	16	..	15·3	..	4·7	To Botmas, drainage still to Umpilosi.
16	S. 30° W.	..	..	S. 17° W.	1½	..	9	8¼	..	7·9	..	2·4	Barometer at 6 miles 24·0 = 6111 feet. Watershed between rivers to east and west. Cross stream at end of stage, following to Vaal River, and pass Joubert's Farm.
,,	S. 50° W.	..	..	S. 37° W.	1½	..	9	8¼	..	6·6	..	4·9	At end of stage another Joubert, and a stream to Vaal River.
,,	S.	..	..	S. 13° E.	1	..	6	5	..	4·9	1·1	..	To a house.
,,	S. 20° E.	26°	..	S. 34° E.	1	..	6	5½	..	4·5	3·1	..	Then pass down Stony Valley and stream to a house; ascend stony hills, and cut off road to Smidts in a deep gorge, with a strong stream with sandstone bed and over a rise to Bubrman's.
,,	S. 60° W.	..	..	S. 46° W.	3	..	18	16	..	11·1	..	11·5	Cross Vaal 2 miles from start. Sandstone bed. Barometer at drift, 24·8 = 5438 feet; ascend stony rise. At 8 miles barometer 24·2 = 5821 feet. Cross stream at 12 miles and to Robinson's Winkle.
,,	S. 60° W.	..	..	S. 46° W.	1½	..	9	8¼	..	5·8	..	6·0	Cross Weld Spruit at starting. End of stage. Village of Amersford on Spbollop Spruit, and passing through Poort.
,,	S. 25° W.	..	..	S. 11° W.	1¼	..	9	8½	..	8·3	..	1·6	Cross Sand Spruit to Costrop's stone on Verzamelberg Range. Here Verzamelberg starts out from Drakensberg, and thence takes a westerly direction.
17	S. 20° W.	..	..	S. 6° W.	1	..	6	5¼	..	5·5	..	0·5	To Harrison, Junr.; fifteen minutes after leaving Harrison's, cross a stream, the Natal boundary.
,,	S. 20° W.	27°	..	S. 5° W.	2¼	5	12	11	..	11·0	..	0·1	Lang, Junr., descending Drakensberg between Harrison and Lang.
,,	S.	..	..	S. 15° E.	1¾	..	6	5¼	..	5·0	1·0	..	Pass Lang, Senr., and to a river on the Buffalo or Umzinyati.
,,	S. 20° W.	..	..	S. 5° W.	1¼	6	8	8	..	8·9	..	0·7	Arrive at Newcastle. Barometer 25·8 = 4050 feet.
..	..	..	..	..	..	..	235	213	9·8	174·8	20·6	62·7	
..	..	..	..	..	..	..	..	..	..	9·8	..	20·8	
..	..	..	..	..	..	..	..	..	..	165·0	..	42·7	

NOTES.—My original map was constructed by common scale of equal parts 8 to the inch throughout. No allowance made for difference of longitude and departure. Consequently the longitude by the map, as the miles of departure represent more than the miles of longitude, is less than the true longitude; i.e., longitude by the map being 30° 34′ E., by calculation 30° 37′ E.

ST. VINCENT ERSKINE.

Course S. 14½° W. (nearly) 171 miles.
Diff. Lat. 2° 45. Dep. 42′ .. .. } Lat. left. 25° 5′ { Mer. pts. 1556
Middle Lat. 26½°. By Mercator's sailing .. .. } Lat. in 27° 48′ { Mer. pts. 1738 / Mer. Diff. 182

Course 14½° Diff. Lat. 182 = True Difference of Longitude .. 45′ over the 52′
Consequently given Longitude, Newcastle .. .. 29° 52′
The Longitude of Lydenburg .. .. 30° 37′

APPENDIX D.

ABSTRACT of all that remained of Mr. ST. VINCENT ERSKINE'S ASTRONOMICAL JOURNAL of 1871 and 1872.

			°	′	″
1872. September 16.—Tabi River. Sisani Mashali's :—					
	Double Meridian Altitude	α Aquilæ N.	115	5	10
		Result	23	56	0
,, ,, 21.—Upaluli River. Lions Donga :—					
	Double Meridian Altitude	α Aquilæ N.	114	45	30
	,,	Index error			−30
		Result	24	6	0
,, ,, 22.—Stream west of Sumbani's old kraals, on Upaluli River :—					
	Double Meridian Altitude	α Aquilæ N.	114	43	30
	,,	Index error			30
	,,	α Pavonis S.	113	52	30
	,,	Index error			−30
		Mean result	24	6	0
,, ,, 23.—Basutos, near Myaki. Upaluli River :—					
	Double Meridian Altitude	α Aquilæ N.	114	46	43
	,,	α Pavonis S.	113	49	0
	,,	Index error			−30
		Mean result	24	4	0

IV.—*On the Central Provinces of Madagascar.* By JOSEPH MULLENS, D.D., Foreign Secretary of the London Missionary Society.

[*Read*, January 25th, 1875.]

THE travellers who, in recent days, have visited Madagascar, have (as a rule) landed on the east coast of the island, have proceeded to the capital by one particular route, and by that same route have returned. A few others have also visited the ports on the sea-coast; have given us brief descriptions of the towns and villages named in the coast surveys; and have told us something of the manners of the coast tribes, their rude life, their low superstitions, and their continual feuds. On these points we are indebted to French travellers and naval officers, as well as to Englishmen. What they have told us, however, does not amount to much. They describe chiefly that narrow strip of Madagascar, 25 miles wide, which lies on the east coast, between the mountains and the sea, along the whole